

Arizona Health Care Cost Containment System



# Arizona Section 1115 Waiver Evaluation

*Summative Evaluation Report*

September 2024



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## Commonly Used Abbreviations, Acronyms, and Definitions

The following list contains commonly used abbreviations, acronyms, and definitions used throughout the report.

- Admission-Discharge-Transfer (ADT)
- Affordable Care Act (ACA)
- Arizona Health Care Cost Containment System (AHCCCS)
- AHCCCS Complete Care (ACC)
- Arizona Long Term Care System (ALTCS)
- Arizona State University (ASU)
- Behavioral Health (BH)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Centers for Medicare & Medicaid Services (CMS)
- Children’s Health Insurance Program (CHIP)
- Chronic Illness & Disability Payment System (CDPS)
- Code of Federal Regulations (CFR)
- College of Health Solutions (CHS)
- Comprehensive Health Plan (CHP)
- Comprehensive Medical and Dental Program (CMDP)
- Confidence Interval (CI)
- Coronavirus Disease 2019 (COVID-19)
- Corrective Action Plan (CAP)
- Cost Price Index (CPI)
- Delivery System Reform Incentive Payment (DSRIP)
- Department of Child Safety (DCS)
- Department of Economic Security/Division of Developmental Disabilities (DES/DDD)
- Developmental Disabilities (DD)
- Designated State Health Programs (DSHPs)
- Difference-in-Differences (DiD)
- Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)
- Elderly and Physical Disabilities (EPD)
- Electronic Health Record (EHR)
- Electronic Medical Record (EMR)
- Emergency Department (ED)
- External Quality Review Organization (EQRO)
- Federal Fiscal Year (FFY)
- Freedom to Work (FTW)
- Frequently Asked Questions (FAQs)



- Geographical Service Areas (GSA)
- Hypothesis (H)
- Home- and Community-Based Service (HCBS)
- Healthcare Common Procedure Coding System (HCPCS)
- Healthcare Cost Report Information System (HCRIS)
- Health Information Exchange (HIE)
- Health Services Advisory Group, Inc. (HSAG)
- Integrated Practice Assessment Tool (IPAT)
- Intellectually and Developmentally Disabled (IDD)
- Institution for Mental Disease (IMD)
- Integrated Public Use Microdata Series (IPUMS)
- Long-Term Care (LTC)
- Long Term Services and Supports (LTSS)
- Medication Assisted Therapy (MAT)
- Mercy Maricopa Integrated Care (MMIC)
- National Committee for Quality Assurance (NCQA)
- National Core Indicators (NCI)
- Non-Inferiority (NI)
- Opioid Use Disorder (OUD)
- Per Member Per Month (PMPM)
- Per Utilizing Member Per Month (PUMPM)
- Primary Care Provider (PCP)
- Physical Health (PH)
- Prior Quarter Coverage (PQC)
- Public Health Emergency (PHE)
- Quality Improvement Collaborative (QIC)
- Regional Behavioral Health Authority (RBHA)
- Request for Proposal (RFP)
- Research Question (RQ)
- Serious Mental Illness (SMI)
- Special Low-Income Medicaid Beneficiary (SLMB)
- Special Terms and Conditions (STCs)
- Social Determinants of Health (SDOH)
- Substance Abuse and Mental Health Services Administration (SAMHSA)
- Substance Use Disorder (SUD)
- State Fiscal Year (SFY)

- Targeted Investments (TI)
- Tax Identifier Number (TIN)
- Transformed Medicaid Statistical Information System (T-MSIS)
- Whole Person Care (WPC)

Medicaid is a joint federal-state program created by the Social Security Act of 1965 that provides free or low-cost healthcare coverage to 73 million qualifying low-income Americans, including pregnant women; families with children; people who are aged and have a disability; and, in some states, low-income adults without children. The Centers for Medicare & Medicaid Services (CMS) and federal law established standards for the minimum care states must provide Medicaid-eligible populations, while also giving states an opportunity to design and test their own strategies for providing and funding healthcare services to meet those standards. Section 1115 of the Social Security Act permits states to test innovative demonstration projects and evaluate state-specific policy changes with the overall goals of increasing efficiency and reducing costs without increasing Medicaid expenditures. As of January 2023, Arizona is among the 47 states that have an approved Section 1115 Waiver Demonstration to test new methods of care delivery or provision among its Medicaid population.<sup>1</sup>

Pursuant to the Special Terms and Conditions (STCs) of Arizona's Section 1115 Waiver Demonstration (Demonstration), the Arizona Health Care Cost Containment System (AHCCCS) contracted with Health Services Advisory Group, Inc. (HSAG) as an independent evaluator to conduct a comprehensive evaluation of Arizona's Demonstration programs. The goal of this evaluation is to provide CMS and AHCCCS with an independent evaluation that ensures compliance with the Demonstration requirements; assist in both State and federal decision making about the efficacy of the Demonstration; and enable AHCCCS to further develop clinically appropriate, fiscally responsible, effective Medicaid demonstration programs. This is the Summative Evaluation Report for the six programs implemented under Arizona's Demonstration.<sup>2</sup>

## Demonstration Overview

On September 30, 2016, CMS approved an extension of Arizona's Demonstration for an additional five-year period from October 1, 2016, through September 30, 2021. On September 30, 2021, CMS approved a temporary extension of the Demonstration to expire on September 30, 2022,<sup>3</sup> followed by an additional temporary extension of the Demonstration on September 27, 2022, to expire on October 28, 2022. On October 14, 2022, CMS approved a five-year extension of the Demonstration with the current Demonstration concluding immediately.<sup>4</sup> The Demonstration was inclusive of the following six distinct, yet coordinated programs:

- AHCCCS Complete Care (ACC)
- Arizona Long Term Care System (ALTCS)
- Mercy Care Department of Child Safety (DCS) Comprehensive Health Plan (CHP)<sup>5</sup>
- Regional Behavioral Health Authority (RBHA)

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<sup>1</sup> Kaiser Family Foundation. Medicaid Waiver Tracker: Approved and Pending Section 1115 Waivers by State. Jan 19, 2023. Available at: <https://www.kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state/>. Accessed on: Dec 4, 2023.

<sup>2</sup> Two additional components, AHCCCS Works and AHCCCS Choice Accountability Responsibility Engagement (CARE) program, were approved by CMS but were not implemented and were not included in this evaluation report.

<sup>3</sup> Centers for Medicare & Medicaid Services. Waiver extension [letter]. September 30, 2021. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/az-hccc-temp-extension-approval-letter.pdf>. Accessed on: Dec 4, 2023.

<sup>4</sup> Centers for Medicare & Medicaid Services. *Waiver extension*. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/az-hccc-ca.pdf>. Accessed on: Dec 4, 2023.

<sup>5</sup> On April 1, 2021, CMDP was replaced by Mercy Care DCS CHP.

- Prior Quarter Coverage (PQC) Waiver
- Targeted Investments (TI) Program

Each of these programs, apart from PQC, covered a unique population or otherwise sought to move AHCCCS toward the integration of physical health (PH) and behavioral health (BH) services for all beneficiaries.

The overarching goal of the Demonstration was to provide quality health care services delivered in a cost-effective manner through the use of managed care models. The specific goals of the Demonstration were to provide quality health care to beneficiaries, ensure access to care for beneficiaries, maintain or improve beneficiaries' satisfaction with care, and continue to operate as a cost-effective managed care delivery model within the predicted budgetary expectations. Each of the separate Demonstration components (ACC, ALTCS, CHP, RBHA, PQC, and TI) incorporate key objectives that support the overarching goals of AHCCCS' Demonstration.

AHCCCS embarked on a three-stage journey to provide integrated care for its beneficiaries over the last 10 years: (1) administrative integration, (2) payer integration, and (3) provider integration.<sup>6</sup> Four of these Demonstrations (ACC, CHP, ALTCS, and RBHA) promote AHCCCS' goal of payer-level integration by providing one plan for both BH and acute care services for its beneficiaries. Prior to this payer-level integration, multiple payers were responsible for a beneficiary's care. The TI program is the first step towards a broader effort of provider integration by allocating incentive payments for participating providers who meet key milestones in developing an integrated practice and/or key outcomes among beneficiaries.

The Demonstration health plans reach across diverse communities with different needs, encompassing relatively healthy adults and children, individuals with serious mental illness (SMI), seniors and individuals with disabilities, and children in foster care. The healthcare provided to these communities employs a common approach that incorporates the objectives of (1) providing quality healthcare to beneficiaries, (2) ensuring access to care for beneficiaries, (3) maintaining or improving beneficiary satisfaction with care, and (4) continuing to operate as a cost-effective managed care delivery model within the predicted budgetary expectations. To achieve these objectives, each of the Demonstration health plans incorporates methods for improving the integration of PH and BH; the coordination of care; and the medical management of care using best practices, along with continuous quality improvement; and promoting engagement and communication across the continuum of care. The TI program supported integration of care by providing financial and organizational support to encourage providers to integrate PH and BH services, for example, through modernizing their electronic health record (EHR) systems to make use of Arizona's health information exchange (HIE). The PQC waiver was designed to build a bridge to independence for low-income beneficiaries by encouraging them to apply for Medicaid while healthy through the elimination of a lengthy retroactive enrollment period (the PQC waiver).

## Results

The Summative Evaluation Report presents results for all performance measures with available data,<sup>7</sup> beneficiary surveys, key informant interviews, and provider focus groups across all six programs during the baseline and evaluation periods. In total, this report addresses all 35 hypotheses. Among the hypotheses tested, 22 involve statistical testing of quantitative performance measure rates, beneficiary survey data, and State/national survey

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<sup>6</sup> Arizona Health Care Cost Containment System. Targeted Investments Program Sustainability Plan. March 29, 2019. Available at: <https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/az/Health-Care-Cost-Containment-System/az-hccc-target-stability-plan-20190812.pdf>. Accessed on: Dec 4, 2023.

<sup>7</sup> Immunization data were not available at time of analysis.

data. Six hypotheses relate to descriptive reporting and synthesis from qualitative data collection—one for each program. Six hypotheses relate to assessing the cost-effectiveness of each program, and one hypothesis related to TI provides a descriptive analysis of quantitative data. Thirteen hypotheses represent expectations that the Demonstration will either maintain or improve care and outcomes for beneficiaries and utilize non-inferiority statistical testing to draw conclusions.

The coronavirus disease 2019 (COVID-19) public health emergency (PHE) impacted the healthcare industry and the entire population on a global scale, requiring substantial changes to the processes used in the delivery of healthcare. In Arizona, as in other locations, health care utilization was significantly reduced in 2020, and the impact on performance measure rates is evident in this Summative Evaluation Report. Because the COVID-19 PHE generally led to a reduction in routine care and elective procedures,<sup>8</sup> measures such as *Annual Dental Visit* experienced the largest impact compared to measures that required a specific diagnosis or service to qualify for the denominator (e.g., *Plan All-Cause Readmissions*, and *Follow-Up After Hospitalization for Mental Illness*).

Table 1 through Table 6 present a summary of results from statistical testing for performance measures and beneficiary surveys. Most measures have a defined desired direction, wherein an increase in rates indicates a favorable change, or for other measures a decrease in rates may indicate a favorable change. Certain measures, however, are dependent on context and do not necessarily have a favorable direction such as emergency department (ED) visits (a higher rate may indicate unnecessary utilization while a low rate may indicate inadequate access to care).

The results in Table 1 through Table 6 indicate that of the 104 measures with a defined desired direction evaluated, 53 measures (51 percent) supported the hypothesis, five (5 percent) measures did not support the hypothesis, and 46 measures (44 percent) were inconclusive.

**Table 1—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for ACC**

Hypothesis	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
ACC Hypothesis 1: Health plans encourage and/or facilitate care coordination among PCPs and BH practitioners.	0	1	0	0
ACC Hypothesis 2: Access to care will maintain or improve as a result of the integration of PH and BH.	4	1	3	0
ACC Hypothesis 3: Quality of care will maintain or improve as a result of the integration of PH and BH.	12	0	1	3
ACC Hypothesis 4: Beneficiary self-assessed health outcomes will maintain or improve as a result of the integration of PH and BH.	1	1	0	0
ACC Hypothesis 5: Beneficiary satisfaction with their health care will maintain or improve as a result of the integration of PH and BH.	1	1	0	0
<b>Total</b>	<b>18</b>	<b>4</b>	<b>4</b>	<b>3</b>

<sup>8</sup> See, e.g., Moynihan, R., Sanders S, Michaleff AZ, et al. Impact of COVID-19 pandemic on utilisation of healthcare services: a systematic review, *BMJ Open*. 2021 Mar 16;11(3):e045343. doi: 10.1136/bmjopen-2020-045343. PMID: 33727273; PMCID: PMC7969768; Available at <https://pubmed.ncbi.nlm.nih.gov/33727273/>. Accessed on: Nov 27, 2023.

**Table 2—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for ALTCS (Integration Period)**

Hypothesis–Integration	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
ALTCS-DD Hypothesis 1: Access to care will maintain or improve over the waiver demonstration period.	3	0	0	0
ALTCS-DD Hypothesis 2: Quality of care will maintain or improve over the waiver demonstration period.	6	5	1	3
ALTCS-DD Hypothesis 3: Quality of life for beneficiaries will maintain or improve over the waiver demonstration period.	1	0	0	0
<b>Total</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>3</b>

**Table 3—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for CHP (Integration Period)**

Hypothesis–Integration	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
CHP Hypothesis 1: Access to care will be maintained or increase during the demonstration	1	1	0	0
CHP Hypothesis 2: Quality of care for beneficiaries enrolled in CHP will be maintained or improve during the demonstration	4	2	0	3
<b>Total</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>3</b>

**Table 4—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for RBHA**

Hypothesis	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
RBHA Hypothesis 1: Access to care for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or increase during the demonstration.	2	4	0	0
RBHA Hypothesis 2: Quality of care for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or improve during the demonstration.	9	4	0	3
RBHA Hypothesis 3: Health outcomes for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or improve during the demonstration.	0	2	0	0
RBHA Hypothesis 4: Adult beneficiary satisfaction in RBHA health plans will be maintained or improve over the waiver demonstration period.	1	2	0	0
<b>Total</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>3</b>

**Table 5—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for PQC**

Hypothesis	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
PQC Hypothesis 1: Eliminating PQC will increase the likelihood and continuity of enrollment.	2	6	0	2
PQC Hypothesis 5: Eliminating PQC will not adversely affect access to care.	1	0	0	0
PQC Hypothesis 7: Eliminating PQC will generate cost savings over the term of the waiver.	0	1	0	0
<b>Total</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>2</b>

**Table 6—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for TI**

Hypothesis	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
TI Hypothesis 1: The TI program will improve PH and BH care integration for children	1	4	0	0
TI Hypothesis 2: The TI program will improve PH and BH care integration for adults.	4	3	0	2
TI Hypothesis 3: The TI program will improve care coordination for AHCCCS enrolled adults released from criminal justice facilities	0	8	0	2
<b>Total</b>	<b>5</b>	<b>15</b>	<b>0</b>	<b>4</b>

Additionally, results were separately summarized to assess the renewal of the Demonstration for the ALTCS-DD, ALTCS-EPD, and CHP programs. The results in Table 7 and Table 8 indicate that of the 47 measures with a defined desired direction evaluated for the renewal period, 25 (53 percent) supported the associated hypothesis, five (11 percent) measures did not support the hypothesis, and 17 measures (36 percent) were inconclusive. Full results for the evaluation of the renewal period for the ALTCS-DD, ALTCS-EPD, and CHP programs can be found in Appendix A.

**Table 7—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for ALTCS (Renewal Period)**

Hypothesis—Renewal Period	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
ALTCS-DD Hypothesis 1: Access to care will maintain or improve over the waiver demonstration period.	4	4	0	0
ALTCS-DD Hypothesis 2: Quality of care will maintain or improve over the waiver demonstration period.	6	5	1	3
ALTCS-DD Hypothesis 3: Quality of life for beneficiaries will maintain or improve over the waiver demonstration period.	2	1	4	0
ALTCS-EPD Hypothesis 1: Access to care will maintain or improve over the waiver demonstration period.	1	0	0	0
ALTCS-EPD Hypothesis 2: Quality of care will maintain or improve over the waiver demonstration period.	5	5	0	3

Hypothesis—Renewal Period	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
ALTCS-EPD Hypothesis 3: Quality of life for beneficiaries will maintain or improve over the waiver demonstration period.	0	1	0	0
<b>Total</b>	<b>18</b>	<b>16</b>	<b>5</b>	<b>6</b>

**Table 8—Summary of Measure Rate Changes Between Baseline and Evaluation Periods for CHP (Renewal Period)**

Hypothesis—Renewal Period	Supports the Hypothesis	Inconclusive	Does Not Support the Hypothesis	No Desired Direction
CHP Hypothesis 1: Access to care will be maintained or increase during the demonstration	1	1	0	0
CHP Hypothesis 2: Quality of care for beneficiaries enrolled in CHP will be maintained or improve during the demonstration	6	0	0	3
<b>Total</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>3</b>

## Conclusions

### Quantitative Findings

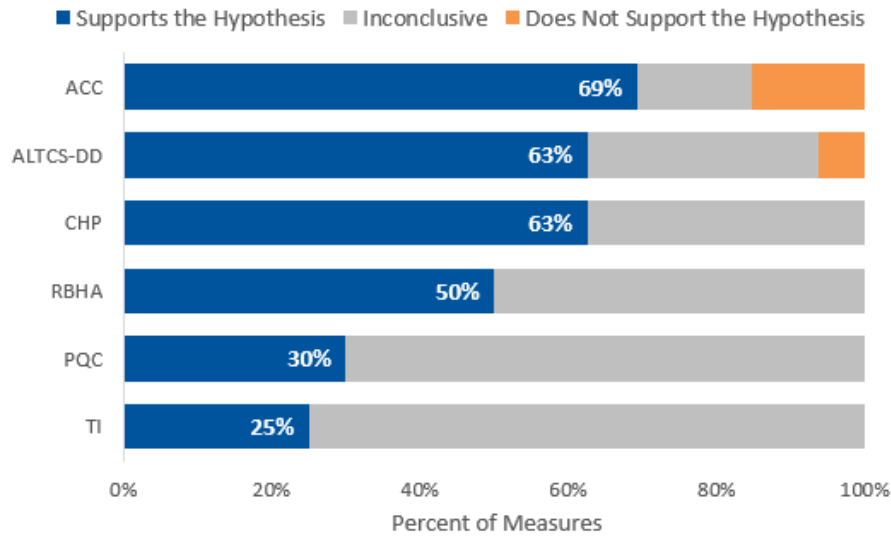
The results from the statistical analysis of performance measure rate changes between baseline and evaluation periods show general support for the research questions. Of the 104 measures evaluated for the integration of care wherein the desired direction of change was defined, 53 measures supported the hypothesis, while only five did not support the hypothesis. It is important to note that a decline among many service-based measures was driven by the COVID-19 PHE, which may have contributed to an observed decline or worsening in the rates if the impacts extended beyond federal fiscal year (FFY) 2020.<sup>9</sup>

The AHCCCS programs evaluated demonstrate substantial variability in the proportion of measures consistent with research hypotheses, as illustrated in Figure 1. In addition to the evaluation of the integration period, separate analyses were performed to evaluate the renewal periods for the ALTCS-DD, ALTCS-EPD, and CHP Demonstration groups. Figure 2 shows the percentage of measures consistent with their hypothesis for the renewal periods for ALTCS-DD, ALTCS-EPD and CHP.

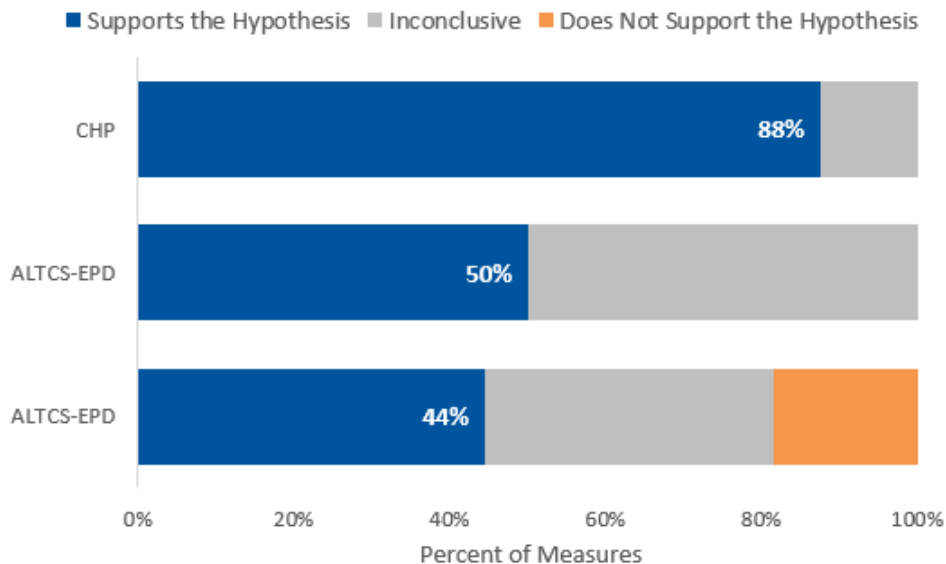
<sup>9</sup> Statistical analyses included an indicator variable for FFY 2020 to control for the peak impact of COVID-19 on quantitative outcomes.



**Figure 1—Percentage of Measures Consistent With Research Hypothesis, Integration**



**Figure 2—Percentage of Measures Consistent With Research Hypothesis, Renewal**



- Results measuring the integration of care for CHP beneficiaries showed that 63 percent of measures supported their hypothesis. A notable finding of the integration analysis was that rates were markedly higher in 2022 for the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness*, possibly indicating improvements following the integration of care. These findings were in line with CHP’s primary goal of promoting continuity of care through integration and coordination of services.
- About half of all measures with a desired direction supported their respective hypotheses among the **ALTCS-EPD** population, suggesting that there were improvements related to preventive care, including preventive visits and screening for breast and cervical cancer, and management of prescription opioids. No measures failed to support the hypothesis. Observed improvements related to preventive care promoted a key ALTCS goal of improving access to primary care services.

- There was varying support for hypotheses among measures related to BH care among the **ALTCS-DD** group during the integration period. While there were higher rates in the integration period for *Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)*, findings for antidepressant medication management for 180 days were inconclusive. Additionally, follow-up visits within 7-days after hospitalization for mental illness remained consistent in the integration period when compared to the pre-integration period. This provides some evidence that the ALTCS goals of improving management of BH conditions were met.
- Four hypotheses were tested for the **RBHA** program. Results for half of all measures with a desired direction supported their hypotheses. All five measures related to management of BH conditions supported their respective hypotheses. These findings demonstrated the transition of SMI beneficiaries across levels of BH care, a major goal of the RBHA program.
- Results for the **ACC** program showed that over two-thirds of all measures supported their associated hypotheses, including measures relating to substance abuse treatment, preventive or wellness services, management of opioid prescriptions, and management of chronic conditions. Of the four measures that failed to support their hypotheses, three measures were related to access to care and declined sharply following the COVID-19 PHE in 2020. Rates for these measures did not recover to pre-PHE levels in the remaining evaluation years. These results demonstrated support of their associated hypotheses and were in line with ACC's goal to reduce fragmentation of care through care coordination efforts to improve a person's whole health outcomes.
- Analysis of the **PQC** waiver showed that many measures had inconclusive findings, including those related to the continuity of enrollment, which were impacted by the COVID-19 PHE and the continuous eligibility requirement associated with the PHE. Results for measures related to the likelihood of beneficiary enrollment and service utilization supported their respective hypotheses. These findings were in line with the PQC waiver's goal of promoting beneficiaries' engagement in their own healthcare and providing the benefits of managed and preventive care to improve health outcomes.
- Statistical analysis of the **TI** program also showed many measures had inconclusive findings, as is often the case with the more robust difference-in-differences (DiD) methodology. Fewer than one-third of measures with a desired direction supported their hypotheses, including all three measures related to alcohol and drug abuse treatment and adherence among the adult TI group, as well as measures related to adolescent well-care visits and adult follow-up after hospitalization for mental illness. No measures failed to support their hypotheses. Notably, for the ALTCS-DD population, those attributed to TI participating providers had costs that were half of the costs attributed to non-TI participating providers by the end of the demonstration period. As a result, there was some evidence that the TI program met its goal of reducing fragmentation between care systems for acute and BH needs amongst TI beneficiaries.

While the results of the statistical analysis can be interpreted as providing support or failing to support the hypothesis, one limitation is an inability to explain why performance measure rates increased or decreased. A comparison group of similarly situated Medicaid beneficiaries who did not receive the programming changes delivered by AHCCCS is critical for obtaining a proper counterfactual comparison. The analyses in this Summative Evaluation Report did not include a comparison group for any of the demonstration programs other than for the TI program and measures that utilize NCI data for the ALTCS-DD program. The comparison strategy used for the remaining programs generally used a pre/post comparison with a statistical control for FFY 2020 to account for initial and peak impacts of the COVID-19 PHE. Consequently, the results indicate whether the performance measure rates increased or decreased, and whether the results represent statistically significant changes in performance. As the pre/post-analyses did not include a comparison group, the results do not allow for drawing any direct causal conclusions regarding program impact. In comparison, measures calculated using DiD

analyses in the ALTCS and TI Results sections used a comparison group, allowing for a determination of causality.

## Qualitative Findings

Qualitative analysis of transcripts from key informant interviews and limited focus group data provided critical pieces of context about the implementation of the Demonstration when interpreting the results. Two main points emerged from the qualitative analysis that were reported in the Interim Evaluation Report and retained importance for the Summative Evaluation Report. First, there was a general consensus that during the planning and development phases of the Demonstration, AHCCCS provided stakeholders with excellent information and communication, maintaining transparency about what each program would do and what issues would need to be addressed. AHCCCS also facilitated collaboration among all stakeholders, encouraging the health plans to work together to develop resolutions for data sharing. One exception to this was the implementation of the CHP program wherein key informants described some confusion and lengthy communication processes; however, after collaboration of involved entities, AHCCCS developed a plan forward and the program was successfully implemented.

The second main theme was obtained from ACC focus group participants, who indicated that operational differences across health plans created challenges that impacted all providers and may be particularly detrimental to smaller provider organizations. Providers generally indicated agreement that increased competition was beneficial in the marketplace. However, the operational differences and flexibility provided by the health plan contracts created administrative burden among some providers that prevented them from achieving AHCCCS' goals of improving integration and care coordination.

## Interpretations

In comparison to the Interim Evaluation Report, the Summative Evaluation Report analysis included additional years of demonstration data and non-inferiority statistical testing to more accurately assess whether the outcomes during the Demonstration period were maintained or improved. Moreover, additional data during and after the peak impact of the COVID-19 PHE provided a more robust assessment of impacts related to the PHE. Several themes emerged from the analysis of quantitative performance measures for the Summative Evaluation Report.

- Non-inferiority statistical testing revealed that the CHP and ACC programs demonstrated the greatest success in maintaining or improving rates during the demonstration period.
- Certain measures primarily dependent on beneficiary action that demonstrated a worsening in the Interim Evaluation Report appear to have stabilized or reversed.<sup>10</sup>
- The COVID-19 PHE had a profound impact on measured outcomes, primarily those related to preventive visits and access to care during the first several months and quarters of the PHE as both patients and the healthcare system were adjusting to its impacts. Some of these impacts remained in the following years, but findings suggest the CHP and ALTCS-DD beneficiaries may have been insulated from longer-term impacts to maintaining routine care, particularly for dental visits and well-child visits.

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<sup>10</sup> For example, the *Percentage of adult beneficiaries who remained on an antidepressant medication treatment (AMM)* increased among the ACC population from 2019 through 2022, and the *Percentage of beneficiaries with a follow-up visit within 7 days after hospitalization for mental illness (FUH)* increased among the ACC population from 2020 through 2022.

- Rural beneficiaries utilized telehealth at a higher rate compared to their urban counterparts prior to the COVID-19 PHE but did not increase their usage of telehealth to the same degree as urban beneficiaries during the COVID-19 PHE. This could be indicative of access and technological capability issues if beneficiaries in rural areas who had the capability of utilizing a telehealth setting were already doing so prior to the PHE.
- Prior to the demonstration, rural beneficiaries had substantially higher rates of concurrent use of opioids and benzodiazepines; however, by the end of the Demonstration, these beneficiaries had closed the gap such that rates were similar to those of their urban counterparts. Likewise, disparities in rates of cervical and breast cancer screening began to close among the ALTCS-EPD and DD populations.
- Measures related to preventive care and child or adolescent well-care visits which showed disparities within rural areas also often contained disparities within the American Indian/Alaskan Native (AI/AN) racial group potentially due to the high proportion of AI/AN beneficiaries residing in rural counties. Disparities for AI/AN beneficiaries were not equal across Demonstration programs with RBHA and ALTCS-EPD groups displaying rates more aligned with other racial categories providing a potential blueprint for other Demonstration groups to follow in alleviating this disparity. Racial data should be interpreted with caution as measure calculation within this Summative Evaluation Report utilizes encounter data which may not capture all services rendered to AI/AN beneficiaries, who are also served under a fee-for-service system. Additionally, approximately 30 percent of racial data provided is unknown which may introduce further uncertainties or bias in rates when stratified by race.
- Measures related to management of opioid prescriptions continued to improve throughout the demonstration period. There were substantial reductions in the use of opioids at high dosage and concurrent use of opioids and benzodiazepines across all relevant Demonstration groups throughout the demonstration period, with the exception of the rate of concurrent use of opioids and benzodiazepines among the ALTCS-DD population, which was not significantly lower and remained approximately at the same level as the ALTCS-EPD population by the end of the demonstration period.

## Policy Implications

### Integration of Care

One of AHCCCS' primary objectives and activities during the 2017–2022 demonstration period was the integration of PH and BH under one plan. Interviews with key informants at AHCCCS and health plans described a general pattern of success.

**ACC:** The integration of the ACC program, which involved the transitioning of 1.5 million beneficiaries to different plans, was the most ambitious. Key informants noted administrative challenges with the volume of beneficiaries transitioning in the first few months, but issues were handled quickly with collaboration between the health plans and AHCCCS. Additional challenges were described for health plans with less experience in BH care, or those who had developed different systems for PH and BH, but two-thirds (69 percent) of ACC measures still supported their respective hypothesis.

**ALTCS:** For the integration of care among the ALTCS-DD population, AHCCCS and ALTCS drew on their experience providing integrated care for the EPD population. Key informants described how the efforts of both AHCCCS and DES/DDD staff led to a successful transition to integrated PH and BH coverage, reflected in 56 percent of measures showing support for their respective hypothesis.

**CHP:** Successes of integrating care for the CHP population included rapid response meetings held within the first 24 hours of a beneficiary's placement to accurately assess their PH and BH needs, followed by comprehensive

evaluations within 30 days of placement and monthly BH visits for the first six months. However, key stakeholders also noted several challenges with the transition and initial implementation of providing integrated care. Transitional challenges included three-way discussions among State administrators, Mercy Care, and DCS leading to duplicative efforts, confusion around requirements, and lengthy communication processes. Following the transition, initial challenges with implementation still remained, such as lack of preparedness and communication for transportation to routine office visits, and staff turnover among contracted providers. Analysis of quantitative performance measures largely demonstrated support for their respective hypotheses.

## ALTCS-DD

Results from the National Core Indicators (NCI) survey showed substantive declines in rates between the 2015/2016 baseline period and the 2018/2019 demonstration period, particularly for measures related to feeling engaged in the community and satisfaction of living arrangements. Although the COVID-19 PHE led to challenges in collecting more recent survey data for NCI, AHCCCS also identified approximately 27,000 quality incident reports between June 1, 2017, and August 8, 2018, and issued a corrective action plan (CAP) to the Department of Economic Security/Department of Developmental Disabilities (DES/DDD).<sup>11</sup> These incidents may have contributed to the worsening rates of community engagement as manifested in the NCI survey collection during and shortly following the audit period. AHCCCS is encouraged to continue participation in the NCI-Intellectually/Developmentally Disabled (IDD) survey efforts to examine whether the CAP led to material improvements in the quality of life for its beneficiaries enrolled with DES/DDD.

## Rural Healthcare Challenges

Analysis of rates stratified by demographic factors including beneficiaries residing in rural versus urban counties revealed several patterns.

- Although beneficiaries residing in rural counties utilized telehealth for receiving BH services at a higher rate compared to their urban counterparts before the PHE, their use did not increase by as much as urban beneficiaries during the PHE. This could indicate those capable of utilizing telehealth were already doing so, revealing potential technological barriers among beneficiaries. Although analysis of telehealth settings was limited to mental health services, AHCCCS could collaborate with its rural providers to identify any potential technological limitations their patients may experience when utilizing telehealth.
- Rural counties fell short of urban counties in rates of follow-up visits after ED visits for mental illness and alcohol and other drug abuse or dependence, particularly among the ACC population. However, the rate of *Follow-up visits within 7-days after a hospitalization for mental illness* was slightly higher among rural counties than urban counties, suggesting AHCCCS and providers could leverage similar strategies for following up after ED visits as they do for inpatient stays, where possible. This may be evidence of success for Arizona's HIE, which supplies contracted providers with automated admit-discharge-transfer (ADT) alerts that notify them when beneficiaries are admitted, discharged, or transferred to and from hospitals or other care settings.
- Among BH outcomes, rural counties demonstrated widening disparities in the rates of initiation of treatment for alcohol, opioid, and other drug abuse or dependence. These rates improved among beneficiaries in urban counties throughout the demonstration period, but rural beneficiaries did not see similar measurable

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<sup>11</sup> Arizona Health Care Cost Containment System. *Release from Notice to Cure—Quality Management and Performance Improvement*. Available at: [https://www.azahcccs.gov/Resources/Downloads/AdminActions/DDD/Notices/2023\\_5\\_19\\_DESDDD\\_OM\\_NTC.pdf](https://www.azahcccs.gov/Resources/Downloads/AdminActions/DDD/Notices/2023_5_19_DESDDD_OM_NTC.pdf). Accessed on: Nov 21, 2023.

improvement. Similarly, there were notable disparities among utilizing BH services in the ED and intensive outpatient/partial hospitalization settings compared to other settings, suggesting a potential gap in accessing care for these settings.

## Lessons Learned

Throughout the demonstration period, AHCCCS made several substantive program and policy changes. The first was integration of care through providing beneficiaries with a single plan to cover their PH and BH needs. The second was the TI program, a \$350 million initiative aimed at providing integrated care at the practitioner level and encouraging care coordination between PH and BH providers. The final policy change was the waiver of retroactive eligibility. A consistent theme throughout each of these is the importance of communication.

Through assessment of qualitative key informant interviews and application of theory of change, there were several lessons learned related to communication and coordination of efforts for programs involving multiple stakeholder entities. AHCCCS either learned these lessons from experience or successfully leveraged certain strategies that could be applied to similar demonstrations in the future.

### *Integration of Care at the Health Plan Level (ACC, ALTCS-DD, CHP, and RBHA)*

#### **Recommendations:**

- Clearly define the roles and expectations of involved entities.
- Minimize the hierarchical structure and number of channels communications must pass through before decisions are made.

### *Integration of Care at the Provider Level (TI Program)*

#### **Recommendations:**

- Create alternate avenues for engaging providers that increase the likelihood of continued participation, particularly among smaller provider organizations.
- Consider special information sessions to proactively prepare for potential key staff turnover among participating entities to ensure new staff are aware of the program and its requirements, and to share enthusiasm for program success.
- Outline how providers may be able to make improvements to reach intended milestone targets at the beginning of the program.
- Coordinate health plans' key elements to ensure comparability across health plans.
- Align health plan initiatives with TI program objectives.



## 1. Background

The following section outlines the history, guidance, and application of the Centers for Medicare & Medicaid Services (CMS) Medicaid Section 1115 waiver demonstrations. The historical context of Medicaid Section 1115 waiver demonstrations is introduced, followed by CMS guidelines to develop and implement demonstration programs by states. A discussion of Arizona’s Medicaid agency, Arizona Health Care Cost Containment System (AHCCCS), is included, containing information on the waiver evaluation deliverables and timelines, the Summative Evaluation Report milestones, and historical background of Arizona’s Section 1115 Waiver Demonstration (the Demonstration). Additionally, a detailed overview of the following AHCCCS demonstration programs is provided:

- AHCCCS Complete Care (ACC)
- Arizona Long Term Care System (ALTCS)
- Mercy Care Department of Child Safety (DCS) Comprehensive Health Plan (CHP)<sup>1-1</sup>
- Regional Behavioral Health Authority (RBHA)
- Prior Quarter Coverage (PQC) Waiver
- Targeted Investments (TI) Program

Finally, demographic enrollment information on AHCCCS beneficiaries, both in total and program-specific, is discussed.

### Historical Background of Medicaid Section 1115 Waiver Demonstrations

Medicaid is a joint federal-state program created by the Social Security Act of 1965 that provides free or low-cost healthcare coverage to 73 million qualifying low-income Americans, including pregnant women; families with children; people who are aged or have a disability; and, in some states, low-income adults without children. CMS and federal law set standards for the minimum care states must provide Medicaid-eligible populations, while also giving states an opportunity to design and test their own strategies for providing and funding healthcare services to meet those standards.

The Social Security Act authorizes several waiver and demonstration authorities that allow states to operate their Medicaid programs outside of federal rules. The primary Medicaid waiver authorities include Section 1115, Section 1915(b), and Section 1915(c). Section 1115 of the Social Security Act permits states to test innovative demonstration projects and evaluate state-specific policy changes with the overall goals of increasing efficiency and reducing consumer costs without increasing Medicaid expenditures. States use this waiver authority in a variety of ways; for example, it is used to change eligibility criteria to offer coverage to new groups of people, condition Medicaid eligibility on an enrollee’s ability to meet work or other community engagement requirements, provide services that are not otherwise covered, offer different service packages, and implement innovative service delivery systems. As of January 2023, Arizona is among the 47 states that have an approved Section 1115 Waiver Demonstration to test new methods of care delivery or provision among its Medicaid population.<sup>1-2</sup>

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<sup>1-1</sup> On April 1, 2021, CMDP was replaced by Mercy Care DCS CHP.

<sup>1-2</sup> Kaiser Family Foundation. Medicaid Waiver Tracker: Approved and Pending Section 1115 Waivers by State. Jan 19, 2023. Available at: <https://www.kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state/>. Accessed on: Nov 30, 2023.

Generally, Section 1115 demonstrations are approved for an initial five-year period and can be extended for up to an additional three to five years, depending on the populations served.<sup>1-3</sup> States are required to conduct evaluations to assess whether their demonstrations are achieving the state's goals and objectives. After a demonstration is approved, states are required to submit an Evaluation Design to CMS for review and approval. The Evaluation Design must discuss the hypotheses that will be tested, the data that will be used, and other items outlined in the Special Terms and Conditions (STCs). If a state wishes to extend its demonstration, the state's extension application must include a report presenting the evaluation's findings to date, referred to as an Interim Evaluation Report. States are also required to submit a Summative Evaluation Report within 500 days of the demonstration end.

CMS posted its most recent evaluation criteria for Section 1115 Waiver Demonstration applications on November 7, 2017. Applying these criteria, CMS will consider whether a demonstration application is designed to:

- Improve access to high-quality, person-centered services that produce positive health outcomes for individuals.
- Promote efficiencies that ensure Medicaid's sustainability for beneficiaries over the long term; support coordinated strategies to address selected health determinants that promote upward mobility, greater independence, and improved quality of life among individuals.
- Increase beneficiary engagement in their personal healthcare plan, including incentive structures that promote responsible decision-making.
- Enhance alignment between Medicaid policies and commercial health insurance products to facilitate smoother beneficiary transition.
- Advance innovative delivery systems and payment models to strengthen provider network capacity and drive greater value for Medicaid.

## CMS Evaluation Guidance

On November 6, 2017, CMS released an informational bulletin outlining improvements to the monitoring and evaluation of Section 1115 Waiver Demonstrations. These enhancements were designed to target evaluation resources to maximize cost-effectiveness of the evaluation, improve and standardize measurement sets, improve developmental feedback to identify implementation challenges, and strengthen evaluation designs to produce robust analysis that may be used to inform future Medicaid policies within and across states.<sup>1-4</sup>

In January 2018, the Government Accountability Office (GAO) issued a report describing shortcomings in Section 1115 Waiver Demonstration evaluations that had been conducted to date.<sup>1-5</sup> Identified shortcomings included gaps in important measures, omissions of key hypotheses, and limited utility in informing policy decisions. While the November 2017 bulletin on evaluation process improvements addressed many of these

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<sup>1-3</sup> Centers for Medicare & Medicaid Services. *About Section 1115 Demonstrations*. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/about-section-1115-demonstrations/index.html>. Accessed on: Nov 30, 2023.

<sup>1-4</sup> Centers for Medicare & Medicaid Services. November 6, 2017, CMCS Informational Bulletin: Section 1115 Demonstration Process Improvements. Available at: <https://www.medicaid.gov/federal-policy-guidance/downloads/cib110617.pdf>. Accessed on: Nov 3, 2023.

<sup>1-5</sup> Government Accountability Office. Report to Congressional Requesters, January 2018. Medicaid Demonstrations: Evaluations Yielded Limited Results, Underscoring Need for Changes to Federal Policies and Procedures. Available at: <https://www.gao.gov/assets/690/689506.pdf>. Accessed on: Nov 30, 2023.



shortcomings, CMS and its subcontractor, Mathematica Policy Research, elaborated on these process improvements through a series of guidance documents and white papers designed to improve and standardize Section 1115 Waiver Demonstration evaluations nationwide.<sup>1-6</sup>

CMS provided guidance materials for states and evaluators to use in developing evaluation designs and preparing evaluation reports.<sup>1-7</sup> The development of an Evaluation Design is crucial in performing an effective evaluation for several reasons. First, planning an evaluation allows the state and its evaluators the opportunity to consider what measures and outcomes would be important to assess, thereby allowing the state to begin collecting any data that may be necessary outside of routine administrative data. Second, working with CMS to approve the Evaluation Designs helps ensure that evaluations will be aligned across states. This increases the utility of evaluations to inform Medicaid policy nationwide. Finally, the Evaluation Design provides a roadmap for the evaluator to focus its resources to produce a cost-effective evaluation.

In conjunction with general guidance on developing the Evaluation Design, CMS has provided detailed descriptions for states and evaluators to use in strengthening the research designs of evaluations to allow for causal inferences when possible. This includes identifying analytic approaches and comparison groups that can assist in isolating the impact of the demonstration on measured outcomes. The CMS guidance documents provide recommendations custom-tailored to evaluating Medicaid programs and policies.<sup>1-8,1-9,1-10,1-11</sup> CMS released guidance addressing the implications of the coronavirus disease 2019 (COVID-19) public health emergency (PHE) on Section 1115 demonstration evaluations in response to the COVID-19 PHE.<sup>1-12</sup>

In addition to this general guidance for strengthening evaluations, CMS included guidance for specific types of Section 1115 Waiver Demonstrations, such as community engagement, retroactive eligibility, substance use disorder, and serious mental illness (SMI)/serious emotional disturbance demonstrations. These guidance documents were utilized in informing the hypotheses, research questions, analytic approaches, and data sources for this evaluation.

## Arizona's Demonstration Evaluation Deliverables

In accordance with the STCs of Arizona's Demonstration, AHCCCS contracted with Health Services Advisory Group, Inc. (HSAG), as an independent evaluator to conduct a comprehensive evaluation of Arizona's Demonstration programs. The goal of this evaluation was to provide CMS and AHCCCS with an independent

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<sup>1-6</sup> 1115 Demonstration State Monitoring & Evaluation Resources. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/1115-demonstration-monitoring-evaluation/1115-demonstration-state-monitoring-evaluation-resources/index.html>. Accessed on: Nov 30, 2023.

<sup>1-7</sup> Centers for Medicare & Medicaid Services Press Release. March 14, 2019. CMS Strengthens Monitoring and Evaluation Expectations for Medicaid 1115 Demonstrations. Available at: <https://www.cms.gov/newsroom/press-releases/cms-strengthens-monitoring-and-evaluation-expectations-medicaid-1115-demonstrations>. Accessed on: Nov 30, 2023.

<sup>1-8</sup> See, e.g., Contreary K., Bradley K., & Chao S. June 2018. *Best practices for causal inference for evaluations of Section 1115 Eligibility and Coverage Demonstrations*. White paper: Mathematica Policy Research.

<sup>1-9</sup> Reschovsky, J. D., Heeringa, J., & Colby, M. June 2018. *Selecting the best comparison group and evaluation design: A guidance document for state section 1115 demonstration evaluations*. White paper: Mathematica Policy Research.

<sup>1-10</sup> Pohl RV, and Bradley K. October 2020. *Selection of Out-of-State Comparison Groups and the Synthetic Control Method*. White paper: Mathematica Policy Research.

<sup>1-11</sup> Felland L., and Bradley K. October 2020. *Conducting Robust Implementation Research for Section 1115 Demonstration Evaluations*. White paper: Mathematica Policy Research.

<sup>1-12</sup> Centers for Medicare & Medicaid Services. Implications of COVID-19 for Section 1115 Demonstration Evaluations: Considerations for Sates and Evaluators. August 2020. Available at: <https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/1115-covid19-implications.pdf>. Accessed on: Nov 30, 2023.

evaluation that ensures compliance with the Demonstration requirements, assists in both State and federal decision-making about the efficacy of the demonstration, and enables AHCCCS to further develop clinically appropriate, fiscally responsible, and effective Medicaid demonstration programs.

## Evaluation Design

The Evaluation Design is the State’s plan for how to accomplish the evaluation required by CMS. CMS provides expectations for the contents of the Evaluation Design, requiring the State to explain how its plan is expected to achieve the objectives of the Demonstration, specifying the State’s hypotheses, evaluation questions, and associated measures and analytic methods. The State must outline how it believes these components work together to provide evidence that its approach is working as expected. Upon approval by CMS, the Evaluation Design is posted on the State’s website as a public comment document.<sup>1-13</sup>

The Evaluation Design covers the six Demonstration components outlined in the executive summary. A separate Evaluation Design was created and submitted to CMS for evaluating the AHCCCS Works demonstration, which was withdrawn from federal approval in June 2021.<sup>1-14</sup> This decision was informed by the changing national Medicaid community engagement programs and ongoing related litigation.<sup>1-15</sup> The AHCCCS Choice Accountability, Responsibility, and Engagement (CARE) program, which would have required eligible adult expansion beneficiaries to make strategic coinsurance payments and premium payments, was also described in the approved STCs.<sup>1-16</sup> However, AHCCCS did not implement the CARE program.<sup>1-17</sup> Since AHCCCS did not implement this program, no Evaluation Design was drafted or submitted to CMS.

## Interim Evaluation Report

As described in STC 76, an Interim Evaluation Report was submitted “...for the completed years of the [Demonstration] and for each subsequent renewal or extension of the [Demonstration]....”<sup>1-18</sup> The final version of the Interim Evaluation Report was submitted to CMS in April 2022 and approved in October 2022. The report discussed evaluation progress and findings during the interim demonstration period. The results and findings presented in the report were derived from the mixed-methods approach outlined in the CMS-approved Evaluation Design. Quantitative analyses were conducted across the six programs utilizing administrative claims/encounter data and beneficiary survey data. Qualitative findings garnered from key informant interviews and provider focus

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<sup>1-13</sup> Arizona Health Care Cost Containment System. Arizona’s Section 1115 Waiver Independent Evaluation–Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>1-14</sup> Arizona Health Care Cost Containment System. AHCCCS Works Community Engagement Program. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/AHCCCSWorksCommunityEngagement/>. Accessed on: Nov 30, 2023.

<sup>1-15</sup> AHCCCS. *Arizona Demonstration Renewal Proposal (2021-2026)*. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/1115WaiverRenewal\\_Final.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/1115WaiverRenewal_Final.pdf). Accessed on: Feb 2, 2023.

<sup>1-16</sup> Centers for Medicare & Medicaid Services. Special Terms and Conditions Arizona Health Care Cost Containment System (AHCCCS) Medicaid Section 1115 Demonstration. *AHCCCS*. 2019; 11-W-00275/09, 21-W-00064/9; Section V [19-25]. Available at: <https://www.azahcccs.gov/Resources/Downloads/WaiverAnd%20ExpenditureAuthoritiesAnd%20STCs.pdf>. Accessed on: Nov 30, 2023.

<sup>1-17</sup> Arizona Health Care Cost Containment System. Arizona Demonstration Renewal Proposal. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/1115WaiverRenewal\\_Final.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/1115WaiverRenewal_Final.pdf). Accessed on: Nov 30, 2023.

<sup>1-18</sup> Centers for Medicare & Medicaid Services. Special Terms and Conditions Arizona Health Care Cost Containment System (AHCCCS) Medicaid Section 1115 Demonstration. *AHCCCS*. 2019; 11-W-00275/09, 21-W-00064/9. Available at: <https://www.azahcccs.gov/Resources/Downloads/WaiverAnd%20ExpenditureAuthoritiesAnd%20STCs.pdf>. Accessed on: Nov 30, 2023

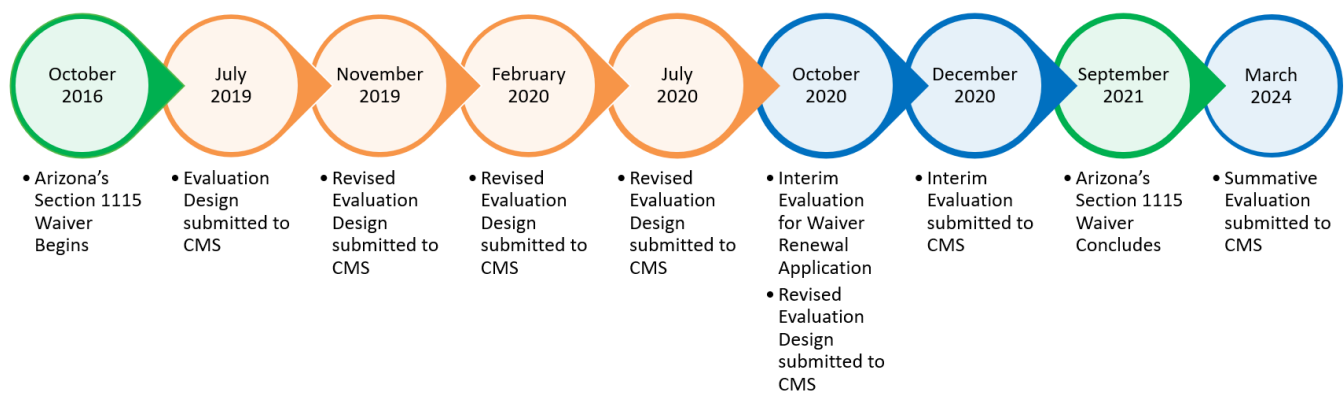
groups assessed barriers and facilitators to implementation and were included to supplement findings from quantitative analysis.<sup>1-19</sup>

### Summative Evaluation Report

This Summative Evaluation Report follows the same structure as the Interim Evaluation Report for the entirety of the demonstration period. If data for appropriate comparison groups have been identified, the Summative Evaluation Report may also present results from more robust analyses for measures beyond the TI program.

Figure 1-1 provides an overview of the evaluation activities for the Demonstration.

**Figure 1-1—Timeline of Evaluation Activities**



## Historical Background of Arizona’s Section 1115 Waiver Demonstration

Arizona’s Medicaid program was founded on the idea that close partnerships between government and private enterprises provide the most cost-efficient model to deliver quality healthcare to the State’s most vulnerable citizens. Although Arizona was the last state in the country to launch its Medicaid program, it was the first to create a healthcare delivery system wherein most beneficiaries were served by managed care health plans. Since its inception in 1982, AHCCCS, Arizona’s single state Medicaid agency, has operated a statewide managed care program under its Demonstration.<sup>1-20</sup> Over time, Arizona’s Demonstration expanded to cover other population groups such as the Children’s Health Insurance Program (CHIP) population, and other Medicaid-covered services including long-term care and behavioral health (BH) services. Throughout all the expansions, the AHCCCS core service delivery model remained the same—the utilization of a managed care model to deliver high-quality healthcare throughout the State.

The original AHCCCS Acute Care demonstration program allowed AHCCCS to operate a statewide managed care system that covered acute care services and 90 days post-hospital skilled nursing facility care. All individuals eligible for Medicaid and children in the CHIP population were required to enroll. As part of the AHCCCS Acute Care program, AHCCCS established two programs that served children with special needs. The Comprehensive Medical and Dental Program (CMDP) was implemented in 1982 and provided healthcare services to Arizona’s

<sup>1-19</sup> Felland, L., and Bradley, K. October 2020. *Conducting Robust Implementation Research for Section 1115 Demonstration Evaluations*. White paper: Mathematica Policy Research.

<sup>1-20</sup> American Indians/Alaska Natives and individuals enrolled in the Federal Emergency Services program are not subject to mandatory managed care.

children in foster care. The Children’s Rehabilitative Services (CRS) program, originally created in 1929 but implemented as part of Medicaid in 1982, provided specific services for children with special health needs, including a medical interdisciplinary team approach to care.<sup>1-21</sup>

In 1988, the original Demonstration was substantially amended to create the ALTCS program, a capitated long-term care program for beneficiaries who are elderly and/or who have physical disabilities (EPD) population and for the beneficiaries with developmental disabilities (DD) populations. Effective by 1989, the ALTCS program began providing acute, long-term care and BH services to the Medicaid-eligible EPD population at risk of institutionalization. The program focused on maintaining its beneficiaries in the community by covering the delivery of a wide array of home- and community-based services (HCBS).

In October 1990, AHCCCS began to cover comprehensive BH services. These services were phased in over a five-year period, beginning with children who had serious emotional disabilities. While BH services were integrated as a part of the benefit package for the ALTCS-EPD population, the services were carved out for all other beneficiaries and were managed by the Arizona Department of Health Services (ADHS), Division of Behavioral Health Services (DBHS). AHCCCS entered managed care contracts with individual BH organizations, referred to as RBHAs, to deliver BH services.

In July 2013, Arizona passed legislation to expand Medicaid under the Affordable Care Act (ACA). Effective January 2014, Arizona officially implemented the ACA, expanding Medicaid eligibility for all children up to 133 percent of the Federal Poverty Level (FPL), childless adults up to 100 percent of the FPL, and adults up to 133 percent of the FPL. This increased AHCCCS’ enrollment by 78 percent since January 2014 (933,151 people), to reach 2.3 million Medicaid/CHIP beneficiaries as of September 2023.<sup>1-22,1-23</sup>

On September 30, 2016, CMS approved an extension of Arizona’s Demonstration for a five-year period from October 1, 2016, to September 30, 2021 (“Demonstration renewal period”). The Demonstration allowed AHCCCS to continue providing many of the existing demonstration initiatives to maintain current efficiencies and flexibilities. These included statewide mandatory managed care, the provision of HCBS in Arizona’s long-term care program, and integrated physical health (PH) and BH plans for individuals with an SMI designation.<sup>1-24</sup> On September 30, 2021, CMS approved a temporary extension of the Demonstration to expire on September 30, 2022.<sup>1-25</sup> CMS approved an additional temporary extension of the Demonstration on September 27, 2022, to expire on October 28, 2022. On October 14, 2022, CMS issued an approval for a five-year extension of the Demonstration, with the Demonstration concluding immediately on October 14.<sup>1-26</sup> During these temporary extension periods, the State was expected to continue monitoring its Demonstration as stipulated in the STCs. Additionally, the State was required to include the temporary extension period in its Demonstration evaluation.

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<sup>1-21</sup> Arizona Health Care Cost Containment System, “What is a Children’s Rehabilitative Services (CRS) Designation?” Available at <https://www.azahcccs.gov/AHCCCS/Initiatives/CareCoordination/CRS.html>. Accessed on: Nov 30, 2023.

<sup>1-22</sup> Health Insurance & Health Reform Authority. *Arizona and the ACA’s Medicaid expansion, Nov 2, 2023*. Available at: <https://www.healthinsurance.org/medicaid/arizona/>. Accessed on: Nov 30, 2023.

<sup>1-23</sup> Please note that from March 2020 to April 2023, States were unable to disenroll beneficiaries from Medicaid due to the COVID-19 PHE.

<sup>1-24</sup> Arizona Health Care Cost Containment System. *Arizona Section 1115 Demonstration Waiver*. Available at: <https://www.azahcccs.gov/Resources/Federal/waiver.html>. Accessed on: Nov 30, 2023.

<sup>1-25</sup> Centers for Medicare & Medicaid Services. Waiver extension [letter] September 30, 2021. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/az-hccc-temp-extension-approval-letter.pdf>. Accessed on: Nov 30, 2023.

<sup>1-26</sup> Centers for Medicare & Medicaid Services. Demonstration Approval. October 14, 2022. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/az-hccc-ca-10142022.pdf>. Accessed on: Nov 30, 2023.

Arizona also proposed a beneficiary engagement initiative called the AHCCCS CARE program, designed to encourage health literacy and appropriate care choices and added limited cost sharing.<sup>1-27</sup> This program proposed the use of financial incentives to encourage beneficiaries to manage preventive healthcare and chronic illness to improve their health. The new adult group population consisted of individuals with an income from 100–133 percent of the FPL. Although CMS approved the program, AHCCCS did not implement the CARE program.

Prior to and during the Demonstration renewal period, AHCCCS took steps to integrate PH and BH coverage. By 2013, most AHCCCS beneficiaries received PH care coverage through health plans known as Acute Care plans, while BH coverage was provided by RBHAs. The only group receiving integrated care was the ALTCS-EPD population. In 2013, AHCCCS began integrating PH and BH coverage for other populations with the integration of CRS and in March, the award of the RBHA contract for Mercy Maricopa Integrated Care (MMIC). Effective April 2014, MMIC provided integrated PH and BH coverage for individuals with an SMI in Maricopa County, Arizona's most populous county. In October 2015, RBHA contractors statewide began providing integrated care for their beneficiaries with an SMI.<sup>1-28,1-29</sup> On October 1, 2018, AHCCCS enacted its largest care integration initiative by transitioning all acute care beneficiaries who did not have an SMI designation to seven ACC integrated healthcare plans, which provided integrated coverage for PH and BH services.

On October 1, 2019, AHCCCS began providing integrated coverage for ALTCS beneficiaries enrolled with the Department of Economic Security/Division of Developmental Disabilities (DES/DDD). On April 1, 2021, AHCCCS integrated coverage for children in the custody of DCS and replaced CMDP with CHP.

The transition to integrated delivery of BH and acute care was supported by the TI program, which was authorized by CMS on January 18, 2017.<sup>1-30</sup> The TI program funded time-limited, outcome-based projects aimed at building the necessary infrastructure to create and sustain integrated, high-performing healthcare delivery systems that improved care coordination and drove better health and financial outcomes for some of the most complex and costly AHCCCS populations.

On January 18, 2019, CMS approved Arizona's request to amend the Demonstration to allow AHCCCS to waive PQC retroactive eligibility. With implementation of the ACA on January 1, 2014, individuals who were applying for Medicaid coverage received retroactive coverage for up to three months prior (the prior quarter) to the month of the application if they had been eligible for Medicaid during that time. The amended PQC allowed AHCCCS to limit retroactive coverage to the month of application, which was consistent with the AHCCCS historical waiver authority prior to the ACA. The terms of the amendment allowed AHCCCS to implement the PQC waiver no earlier than April 1, 2019, with an effective date of July 1, 2019.<sup>1-31</sup> The Demonstration would apply to all

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<sup>1-27</sup> Centers for Medicare & Medicaid Services. Special Terms and Conditions Arizona Health Care Cost Containment System (AHCCCS) Medicaid Section 1115 Demonstration. *AHCCCS*. 2019; 11-W-00275/09, 21-W-00064/9: Section V [19-25]. Available at: <https://www.azahcccs.gov/Resources/Downloads/WaiverAnd%20ExpenditureAuthoritiesAnd%20STCs.pdf>. Accessed on: Nov 30, 2023.

<sup>1-28</sup> NORC. *Supportive Service Expansion for Individuals with Serious Mental Illness: A Case Study of Mercy Maricopa Integrated Care*. August 18, 2017. Available at: <https://es.mercycareaz.org/assets/pdf/news/NORC-MercyMaricopa-CaseStudy.pdf>. Accessed on: Nov 30, 2023.

<sup>1-29</sup> Arizona Health Care Cost Containment System. *Draft Quality Strategy, Assessment and Performance Improvement Report*. July 1, 2018. Available at: <https://www.azahcccs.gov/PlansProviders/Downloads/DraftQualityStrategyJuly2018.pdf>. Accessed on: Nov 30, 2023.

<sup>1-30</sup> Arizona Health Care Cost Containment System. *Targeted Investments 2.0 Program Overview*. Available at: <https://www.azahcccs.gov/PlansProviders/TargetedInvestments/>. Accessed on: Nov 30, 2023.

<sup>1-31</sup> Centers for Medicare & Medicaid Services. *CMS Approval Letter*. Jan 18, 2019. Available at: <https://www.azahcccs.gov/Resources/Downloads/CMSApprovalLetter.pdf>. Accessed on: Nov 30, 2023.



Medicaid beneficiaries except pregnant women, women who are 60 days or less postpartum, infants, and children under 19 years of age.

In addition to the PQC waiver approval, CMS approved Arizona’s Demonstration amendment request to implement AHCCCS Works, which was designed to encourage low-income adults to engage in their communities through employment, job training, education, or volunteer service experience. An estimated 120,000 AHCCCS beneficiaries were projected to be subject to the community engagement requirements; however, this Demonstration amendment was withdrawn from federal approval in June 2021.<sup>1-32</sup>

On March 13, 2020, the President of the United States declared COVID-19 a nationwide emergency pursuant to Section 501(b) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121-5207 (the “Stafford Act”). The President’s declaration gave the Secretary of the U.S. Department of Health and Human Services (HHS) the authority to enhance states’ ability to respond to the COVID-19 outbreak, including the power to temporarily waive or modify Medicaid and CHIP requirements under Section 1135 of the Social Security Act.

During the COVID-19 PHE, HHS extended authority to state Medicaid agencies to augment services to address the healthcare needs caused by the COVID-19 PHE. AHCCCS received authority to waive certain Medicaid and CHIP requirements to enable the State to combat the continued spread of COVID-19, including mitigating any disruption in care for AHCCCS beneficiaries during the emergency declaration. These temporary “flexibilities” were granted through policy changes or various legal authorities, including a Section 1135 waiver (established to address PHEs), the Section 1115 waiver, an Appendix K contract specific to HCBS, and State Plan Amendments.

AHCCCS’ response included streamlining provider enrollment and preadmission screenings for Medicaid-certified nursing facilities, providing continuous eligibility to enrolled beneficiaries, specifying waiver beneficiary premiums and co-pays, reimbursing COVID-19 testing, and expanding respite care.

Effective October 1, 2022, RBHA contracts were renamed and updated to ACC-RBHA, a service that placed ACC contracts with RBHA services. Under ACC-RBHA plans, individuals with an SMI designation could receive both PH and BH benefits under one health plan. Additionally, ACC-RBHA geographic service areas (GSAs) were aligned to match previous ACC and ALTCS GSAs.<sup>1-33</sup>

## AHCCCS’ Quality Strategy

AHCCCS has had a formal quality assessment and performance improvement (QAPI) plan in place since 1994 and a Quality Strategy in place since 2003. The most recent Quality Strategy was posted to the AHCCCS website on July 1, 2021.<sup>1-34</sup> This Quality Strategy requires health plans to have their Medicaid lines of business National Committee for Quality Assurance (NCQA) accredited by October 1, 2023. With the 2018–2023 Strategic Plan and Quarterly Quality Assurance Monitoring Activity Reports, AHCCCS has taken a comprehensive approach to quality of care.

AHCCCS’ Quality Strategy is a coordinated, comprehensive, proactive approach to drive improved health outcomes by utilizing creative initiatives, ongoing assessment and monitoring, and results-based performance improvement. AHCCCS designed the Quality Strategy to ensure that services provided to beneficiaries meet or

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<sup>1-32</sup> Arizona Health Care Cost Containment System. AHCCCS Works Community Engagement Program. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/AHCCCSWorksCommunityEngagement/>. Accessed on: Nov 30, 2023.

<sup>1-33</sup> Arizona Health Care Cost Containment System. ACC-RBHA/TRBHA Map. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/CareCoordination/behavioralhealth.html>. Accessed on: Nov 30, 2023.

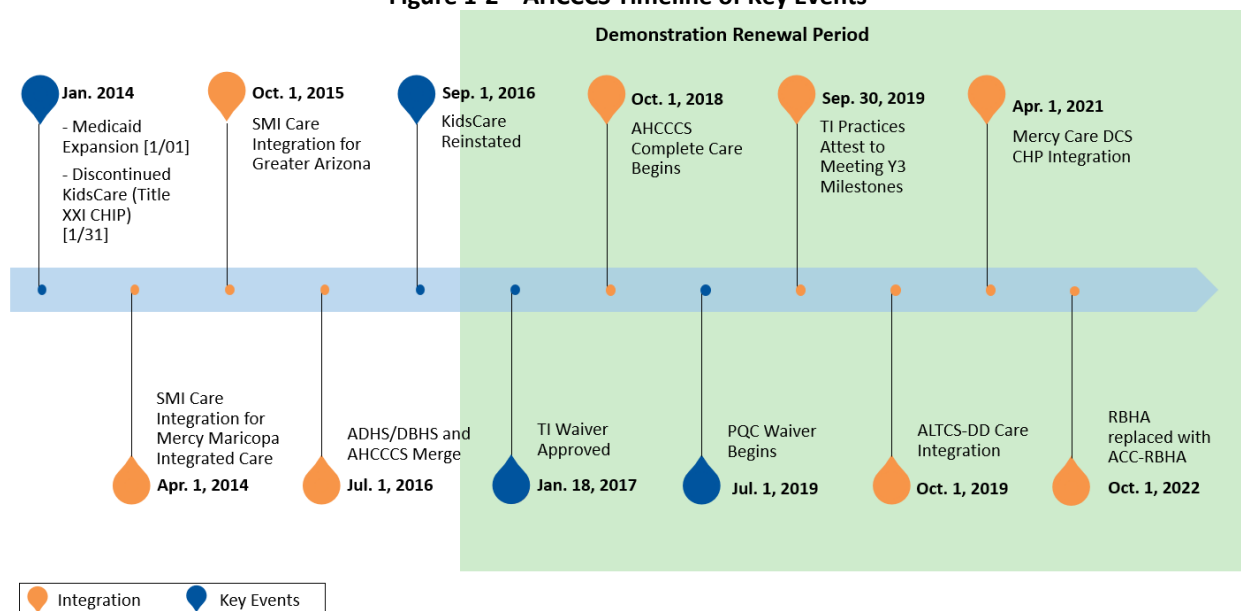
<sup>1-34</sup> Arizona Health Care Cost Containment System. AHCCCS Quality Strategy. July 2021 Available at: <https://www.azahcccs.gov/PlansProviders/Downloads/QualityStrategyJuly2021.pdf>. Accessed on: Nov 30, 2023.

exceed established standards for access to care, clinical quality of care, and quality of service. AHCCCS’ Quality Strategy identifies, and documents issues related to those standards and encourages improvement through incentives or, when necessary, through regulatory action. The Quality Strategy provides a framework for improving and/or maintaining beneficiaries’ health status, providing focus on resilience and functional health for beneficiaries with chronic conditions.

## Demonstration Background

In 2016, CMS approved an extension of the Demonstration for a five-year period from October 1, 2016, to September 30, 2021. On September 30, 2021, CMS approved a temporary extension of the Demonstration to September 30, 2022.<sup>1-35</sup> On September 27, 2022, CMS approved an additional extension of the Demonstration to October 28, 2022. On October 14, 2022, CMS approved a five-year extension of the Demonstration with the current Demonstration concluding immediately.<sup>1-36</sup> The overarching goal of the Demonstration was to provide quality healthcare services delivered in a cost-effective manner using managed care models. Specific goals of the Demonstration’s approach were providing quality healthcare, ensuring access to care, maintaining or improving beneficiary satisfaction with care, and continuing to operate as a cost-effective managed care delivery model within the predicted budgetary expectations (Figure 1-5). AHCCCS believed that a comprehensive plan to implement continuous quality improvement while driving toward an integrated healthcare system that consistently rewards quality while engaging healthcare providers, patients, and communities will result in better outcomes and an efficient, cost-effective healthcare system. Thus, the implementation of the Demonstration encompassed six distinct, yet coordinated, programs. Figure 1-2 displays a timeline of integration efforts and key events for AHCCCS.

Figure 1-2—AHCCCS Timeline of Key Events



<sup>1-35</sup> Centers for Medicare & Medicaid Services. Waiver extension [letter]. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/az-hccc-temp-extension-approval-letter.pdf>. Accessed on: Nov 30, 2023.

<sup>1-36</sup> Centers for Medicare & Medicaid Services. Waiver extension [letter]. Available at: <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/az-hccc-ca.pdf>. Accessed on: Nov 30, 2023.

The Demonstration evaluation will determine whether AHCCCS met the research hypotheses and program goals for ACC, ALTCS, CHP, RBHA, PQC waiver, and TI program.

Figure 1-3 illustrates that the populations covered by ACC, ALTCS, CHP, and RBHA were mutually exclusive and that each of these may have a subset impacted by PQC and/or TI.

**Figure 1-3—Population Relationships Across Demonstrations**



## Timeline of Behavioral and Physical Healthcare Integration

The four broad populations, with a few exceptions, were distinct and mutually exclusive. For example, beneficiaries with an SMI may opt-out of RBHA coverage and instead choose an ACC plan available in their region. Children in the custody of DCS with an intellectual or developmental disability were covered through the ALTCS intellectual or developmental disability (ALTCS-DD) program.

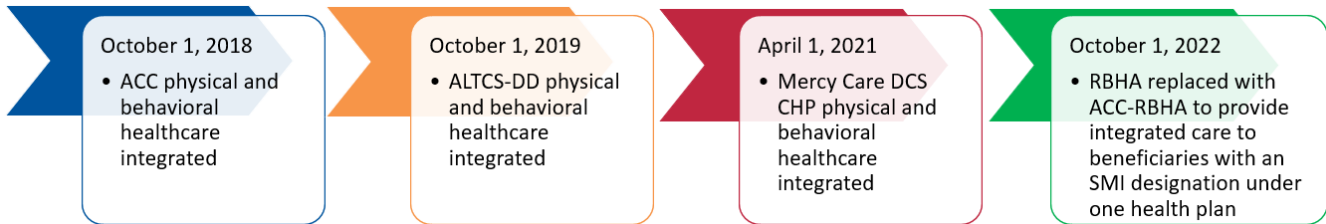
Before the Demonstration renewal, RBHAs provided BH coverage for much of the AHCCCS population, while PH was provided through other plans. Prior to and during the Demonstration renewal period, AHCCCS made several structural changes to care delivery by integrating PH and BH at the payer level. This integration process began with the award of the MMIC contract in 2013, effective

April 2014. MMIC was a RBHA that, in addition to providing BH coverage for most AHCCCS beneficiaries in central Arizona, provided integrated PH and BH coverage for adult beneficiaries with an SMI in Maricopa County. In October 2015, RBHA contractors statewide began providing integrated care for their beneficiaries with an SMI. On October 1, 2018, AHCCCS conducted its largest care integration initiative by transitioning all acute care beneficiaries who did not have an SMI to seven integrated health plans, which provided coverage for PH and BH. Beginning October 1, 2019, AHCCCS integrated PH and BH for the DES/DDD population covered through ALTCS-DD. Beneficiaries enrolled in CMDP transitioned to integrated PH and BH services under Mercy Care DCS CHP beginning April 1, 2021. On October 1, 2022, RBHA contracts expired and were replaced with expanded ACC contracts with RBHA services. RBHAs were renamed to ACC-RBHAs.<sup>1-37</sup> Figure 1-4 depicts a timeline of the payer-level integration of PH and BH for the ACC, ALTCS-DD, and CHP populations.

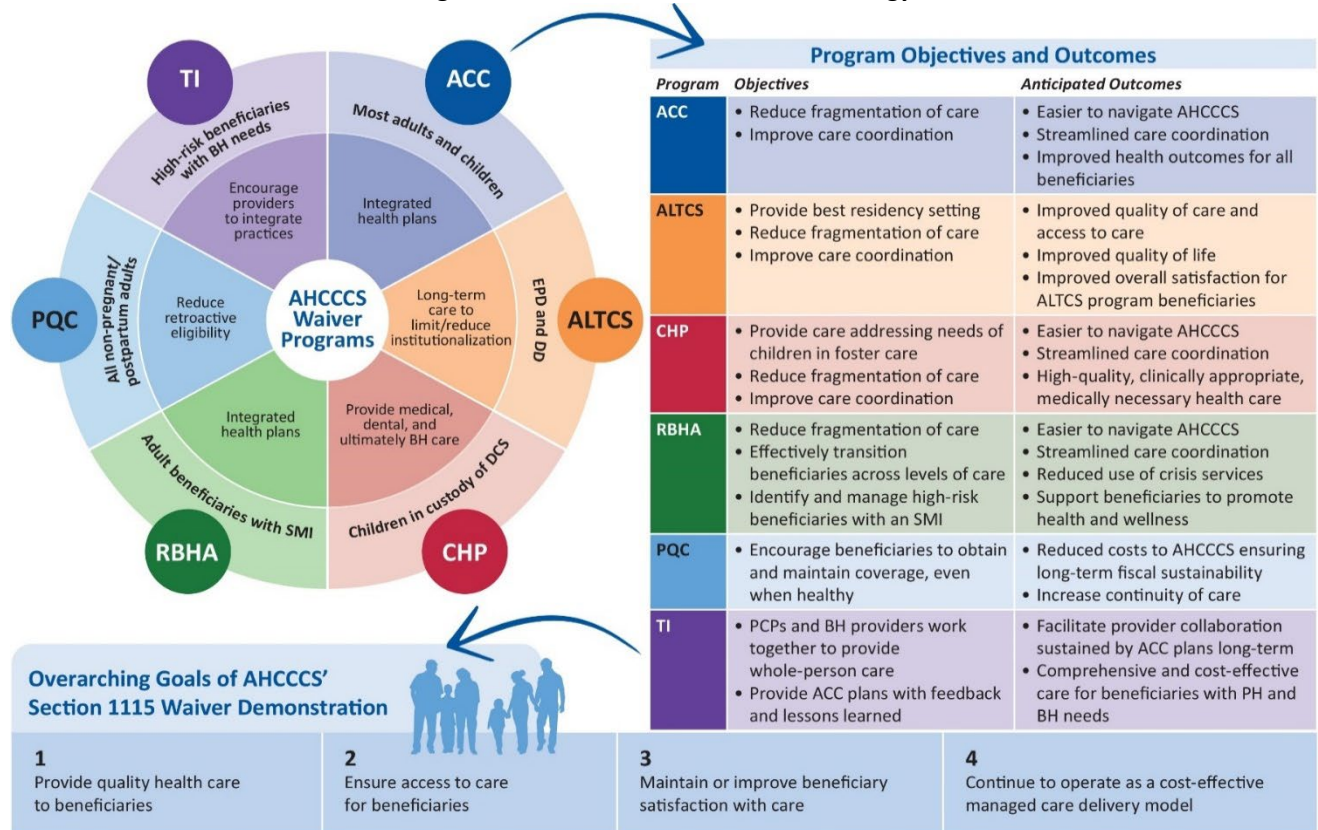
<sup>1-37</sup> Arizona Health Care Cost Containment System. ACC-RBHA/TRBHA Map. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/CareCoordination/behavioralhealth.html>. Accessed on: Nov 30, 2023.



**Figure 1-4—PH and BH Integration**



**Figure 1-5—AHCCCS Demonstration Strategy**



ACC: AHCCCS Complete Care; AHCCCS: Arizona Health Care Cost Containment System; ALTCS: Arizona Long Term Care System; BH: behavioral health; CHP: Comprehensive Health Plan; DCS: Department of Child Safety; DD: intellectually/developmentally disabled; EPD: elderly/physically disabled; PCP: primary care provider; PH: physical health; PQC: Prior Quarter Coverage; SMI: serious mental illness; RBHA: Regional Behavioral Health Authority; TI: Targeted Investments

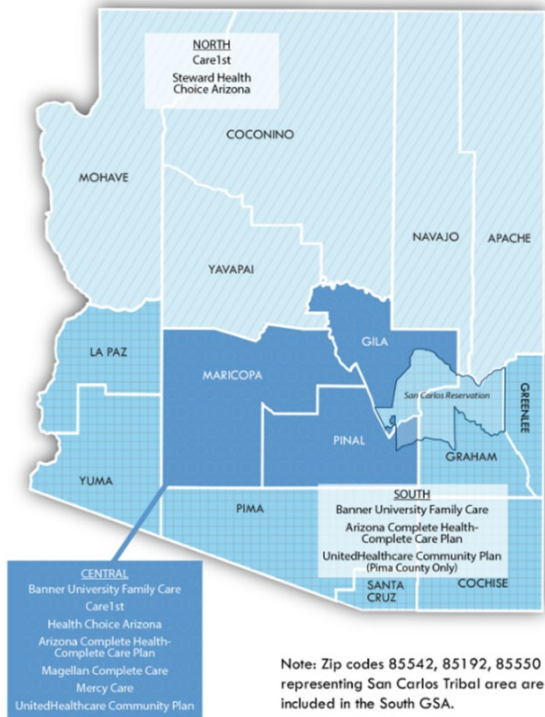
## ACC

Over its existence, AHCCCS made continual strides to integrate PH and BH among its Medicaid beneficiaries. Evidence-based studies demonstrate that PH and BH influence one another, and that optimal care acknowledges that relationship. Moreover, studies demonstrate significant cost savings resulting from integrating care.

Prior to October 1, 2018, most of the 1.8 million AHCCCS beneficiaries in Arizona were enrolled in at least two managed care health plans—one for PH services (acute care plans) and a second for BH services (through RBHAs). On October 1, 2018, AHCCCS took its largest step yet in delivery system reform. With seven new health plan contracts, ACC transitioned 1.5 million beneficiaries to health plans that fully integrated PH and BH services. On November 26, 2018, AHCCCS submitted a request to amend the STCs of the previously approved

Demonstration to “reflect the delivery system changes that results from the ACC managed care contract award.”<sup>1-38</sup>

**Figure 1-6—ACC Service Map, October 2018**



The seven ACC plan contracts were awarded by GSAs: all seven plans were available in the Central GSA (Maricopa, Pinal, and Gila counties); two plans served the North GSA (Coconino, Yavapai, Mohave, Navajo, and Apache counties); and two plans served the South GSA (Cochise, Greenlee, Graham, La Paz, Pima, Santa Cruz, and Yuma counties) plus a third plan in Pima County (Figure 1-6).<sup>1-39</sup>

Effective October 1, 2022, AHCCCS updated its contracts with ACC health plans to include RBHA services for those with an SMI designation. The new contract, named ACC-RBHA, was aligned to match previous ACC and ALTCS GSAs.<sup>1-40</sup>

ACC plans were responsible for providing integrated PH and BH services for the following populations:

- Adults who were not determined to have an SMI (excluding beneficiaries enrolled with DES/DDD).
- Children, including those with special healthcare needs (excluding beneficiaries enrolled with DES/DDD and DCS/CHP).
- Beneficiaries determined to have an SMI who opt out and transfer to an ACC for the provision of PH services.

In federal fiscal year (FFY) 2022, acute care plans served 1.9 million Arizonans, with eight out of 10 insured for a full year or more, as shown in Figure 1-7. As shown in Figure 1-8, 42 percent of all male beneficiaries were children, while only about 35 percent of female beneficiaries were children.

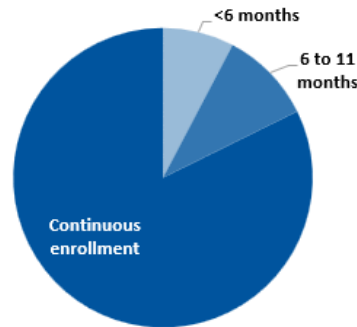
<sup>1-38</sup> Arizona Health Care Cost Containment System. Re: Arizona’s 1115 Waiver. AHCCCS Complete Care Technical Clarification [email]. November 26, 2018. Available at: [https://www.azahcccs.gov/Resources/Downloads/ACC\\_TechnicalAmendmentCorrection\\_11262018.pdf](https://www.azahcccs.gov/Resources/Downloads/ACC_TechnicalAmendmentCorrection_11262018.pdf). Accessed on: Nov 30, 2023.

<sup>1-39</sup> Arizona Health Care Cost Containment System. AHCCCS Complete Care: The Future of Integrated Healthcare. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/AHCCCSCompleteCare/>. Accessed on: Nov 30, 2023.

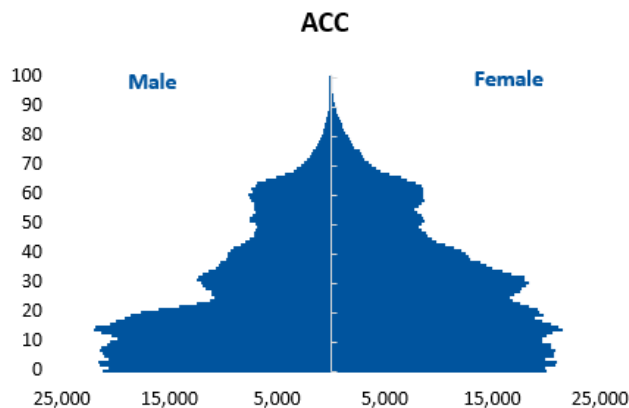
<sup>1-40</sup> Arizona Health Care Cost Containment System. Behavioral Health Contracts. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/CareCoordination/behavioralhealth.html>. Accessed on: Nov 30, 2023.

**Figure 1-7—ACC Beneficiaries’ Continuity of Coverage, 2022**

82 percent of ACC beneficiaries were continuously enrolled in FFY 2022



**Figure 1-8—ACC Beneficiaries by Age and Gender, 2022**



Each ACC health plan was required to provide beneficiaries with medically necessary PH care integrated and coordinated with BH services in accordance with AHCCCS policy and regulations. Medically necessary services included active treatment of current conditions, and screening and preventive care deemed necessary by a primary care practitioner (PCP) or appropriate healthcare professional. BH treatment services were provided or supervised by BH professionals to reduce symptoms and improve or maintain function. These treatments consisted of BH assessments, evaluation and screening services, counseling and therapy, and other necessary services. BH covered treatment services included crisis, hospitalization, day programs, and residential facilities. Rehabilitation services such as skills training, cognitive rehabilitation, supported employment, and job coaching were also provided. Health plans provided for the integration of this array of services by making appropriate support services available to targeted individuals. This included case management, personal care services, family support, peer support, respite care, and transportation.

The seven ACC health plans were expected to “develop specific strategies to promote the integration of PH and BH service delivery and care integration activities.”<sup>1-41</sup> Such strategies included:

<sup>1-41</sup> AHCCCS Complete Care Contract for Contractors #YH19-0001, Section D. Available at: [https://www.azahcccs.gov/PlansProviders/Downloads/RFPInfo/YH19/ACC\\_RFP\\_11022017.pdf](https://www.azahcccs.gov/PlansProviders/Downloads/RFPInfo/YH19/ACC_RFP_11022017.pdf). Accessed on: Nov 30, 2023.

- Implementing care coordination and care management best practices for PH and BH.
- Proactively identifying beneficiaries for engagement in care management.
- Providing the appropriate level of care management/coordination of services to beneficiaries with comorbid PH and BH conditions and collaborating on an ongoing basis with both the beneficiary and other individuals involved in the beneficiary's care.
- Ensuring continuity and coordination of PH and BH services and collaboration/communication among providers.
- Operating a single beneficiary services toll-free telephone line and a single nurse triage line, both available to all beneficiaries for PH and BH services.
- Developing strategies to encourage beneficiaries to use integrated service settings.
- Considering the PH and BH needs of beneficiaries during network development and contracting practices that consider providers and settings with an integrated service delivery model to improve beneficiary care and health outcomes.
- Developing organizational structure and operational systems and practices that support the delivery of integrated services for PH and BH.

The health plans were required to meet AHCCCS stated Performance Measure Performance Standards (PMPSs),<sup>1-42</sup> which identify a set of required performance measures with a minimum expected level of performance. Any health plan that failed to meet the PMPS was required to submit a corrective action plan (CAP), participate in performance improvement projects (PIPs) and/or face the possibility of significant monetary sanctions for each deficient measure.

In addition to the State PMPS, federal regulations required an external quality review organization (EQRO) to complete annual reviews and reports analyzing the performance of the health plans.<sup>1-43</sup> These reports provide regular evaluations by an objective third party into the quality, timeliness, and accessibility of healthcare services. In addition, the EQRO identifies opportunities for improvement and collaborates with ACC health plans to design appropriate PIPs to improve the quality, accessibility, and timeliness of care.

AHCCCS established an objective, systematic process for identifying priority areas for improvement and selecting new performance measures and PIPs. This process involved reviewing data from both internal and external sources, while also considering factors such as the prevalence of a particular condition and population affected, the resources required by both AHCCCS and health plans to conduct studies and impact improvement, and whether the areas are current priorities of CMS or State leadership and/or can be combined with existing initiatives. AHCCCS also sought health plan input in prioritizing areas for improvement.

In selecting and initiating new quality improvement initiatives, AHCCCS:

- Identified priority areas for improvement.
- Established realistic, outcome-based performance measures.
- Identified, collected, and assessed relevant data.
- Provided incentives for excellence and imposed financial sanctions for poor performance.
- Shared best practices with and provided technical assistance to the health plans.

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<sup>1-42</sup> Prior to CY 2021, PMPSs were known as Minimum Performance Standards.

<sup>1-43</sup> 42 Code of Federal Regulations (CFR) Section (§)438.3641.

- Included relevant, associated requirements in its contracts.
- Regularly monitored and evaluated health plan compliance and performance.
- Maintained an information system that supported initial and ongoing operations and review of AHCCCS' Quality Strategy.
- Conducted frequent evaluation of the initiatives' progress and results.

Value-based purchasing (VBP) was a core component of AHCCCS' strategy to contain healthcare costs while improving quality of care. AHCCCS adopted several initiatives to move toward value-based healthcare systems wherein beneficiaries' experience and population health are improved, while healthcare costs are limited by providing aligned financial incentives and standards for continuous quality improvement. AHCCCS implemented an initiative designed to encourage quality improvement and cost savings by aligning incentives for health plans and providers through alternative payment model (APM) strategies. This approach combined a withhold and quality measure performance incentive with a systematic shift from traditional fee-for-service (FFS) payment.<sup>1-44,1-45</sup> The former withheld a specified percentage of health plans' prospective payments that could be earned back if the health plan met standards for quality measure reporting and performance. The latter provided a series of incentives for the staged reform of payment models, from infrastructure improvements, pay for reporting, payment for performance improvement (Learning Action Network [LAN]-APM Category 2); to adoption of models for sharing of risk and cost savings generated by APMs (LAN-APM Category 3); and development of condition-specific population-based bundled payments (LAN-APM Category 4). Health plans were permitted to pay providers a bonus based on successful completion of goals/measures in accordance with the contract. Like the federal system, AHCCCS' program set minimum requirements for performance that gradually increased over a period of years and encouraged expansion of the models by increasing the percentage of different and more advanced types of APM strategies applicable to the contract.

AHCCCS' Centers of Excellence initiative rewards facilities or programs that provided the highest level of leadership, quality, and service. These facilities were encouraged to achieve higher value by focusing on appropriateness of care, clinical excellence, and beneficiary satisfaction focusing on situations most likely to generate cost savings, i.e., treatment of high-volume procedures or conditions, or those with wide variation in cost or outcomes.<sup>1-46</sup>

Thus, the Demonstration-specific goals of ACC were to reduce fragmentation of care by providing beneficiaries with a single health plan, payer, and provider network to cover their PH and BH needs. In addition, health plans were expected to conduct and manage care coordination efforts among providers to create a Medicaid system that was easier to navigate, offered streamlined care coordination, and ultimately improved a person's whole health outcomes.

## ALTCS

ALTCS provided acute care, long-term care, BH services, and HCBS to Medicaid beneficiaries at risk for institutionalization. Services were provided through contracted prepaid, capitated arrangements with health plans. Health plans that were contracted with the State under ALTCS provided care to eligible EPD beneficiaries. These plans were referred to as ALTCS-EPD health plans. ALTCS also contracted with DES/DDD. Health plans that

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<sup>1-44</sup> AHCCCS Contractor Operations Model Section 306.

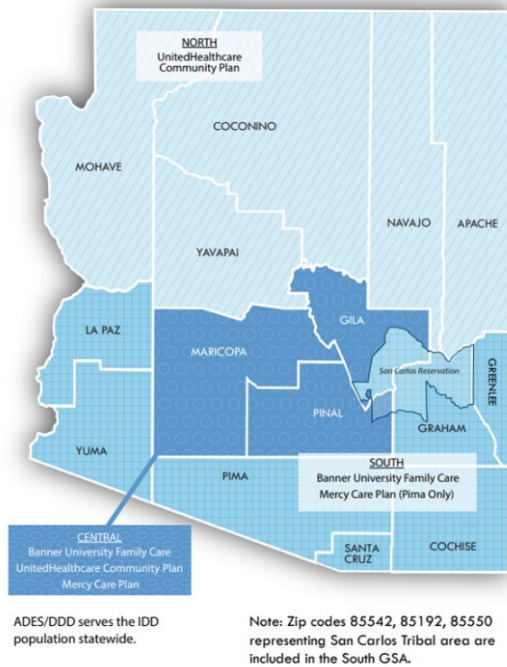
<sup>1-45</sup> AHCCCS Contractor Operations Model Section 307.

<sup>1-46</sup> RFP pp. 201–202.



contracted with DES/DDD, referred to as ALTCS-DD health plans, provided care to Medicaid beneficiaries who were DD.<sup>1-47</sup> The ALTCS contracts were awarded based on geography, as shown in Figure 1-9.<sup>1-48</sup>

**Figure 1-9—ALTCS Services Map, October 2018**

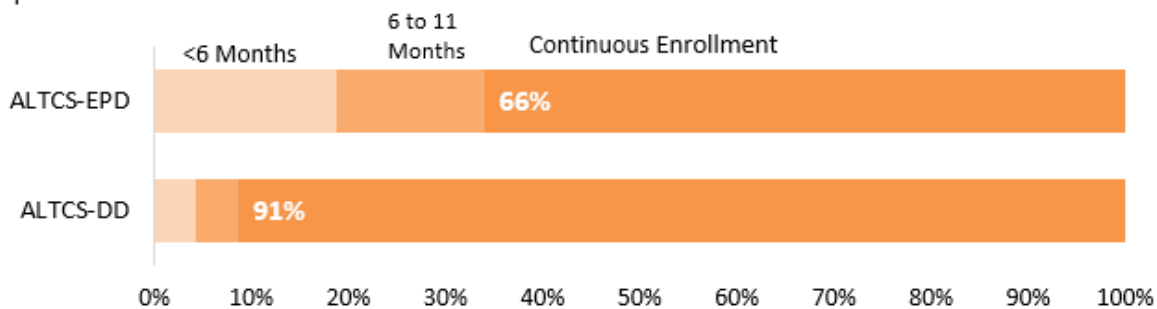


On October 1, 2019, BH services for DD beneficiaries were transitioned into ALTCS-DD health plans. BH services, PH services, and certain long-term services and supports (LTSS) (i.e., skilled nursing care, emergency alert system services, and habilitative physical therapy for beneficiaries 21 years of age and older) were subcontracted by DES/DDD to ALTCS-DD health plans. Therefore, part of this Demonstration evaluation assessed whether this change resulted in any changes in this population’s outcomes attributable to the integration of PH and BH.

In FFY 2022, ALTCS-EPD and ALTCS-DD plans served 26,275 and 38,995 Arizonans, respectively. The DD population had longer continuity of care established with a health plan, with 91 percent enrolled continuously compared to the EPD population, with only 66 percent enrolled continuously compared to the EPD population, as illustrated in Figure 1-10.

**Figure 1-10—ALTCS Beneficiaries’ Continuity of Coverage, 2022**

66 percent of **ALTCS-EPD** beneficiaries were continuously enrolled in FFY 2022 compared to 91 percent of **ALTCS-DD**

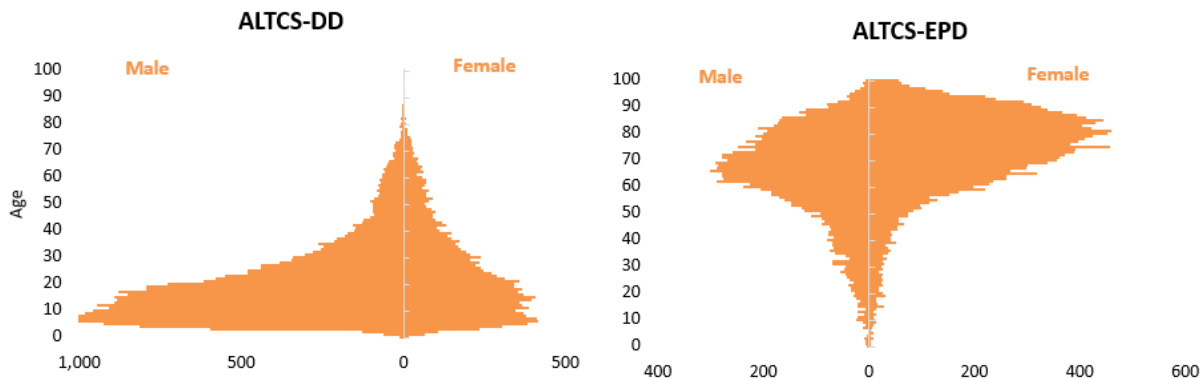


<sup>1-47</sup> Arizona Health Care Cost Containment System. Arizona’s Section 1115 Waiver Demonstration Annual Report. Available at: <https://www.azahcccs.gov/Resources/Downloads/FY2017AnnualReportCMS.pdf>. Accessed on: Nov 30, 2023.

<sup>1-48</sup> Arizona Health Care Cost Containment System. ALTCS: Health Insurance for Individuals Who Require Nursing Home Level Care. Available at: <https://www.azahcccs.gov/Beneficiaries/GetCovered/Categories/nursinghome.html>. Accessed on: Nov 30, 2023.

As expected, the two populations exhibited very different gender and age distributions, with DD beneficiaries tending to be younger and male, while EPD beneficiaries were older, and more were female as shown in Figure 1-11.

**Figure 1-11—ALTCS Beneficiaries by Program, Age, and Gender, 2022**



The EPD beneficiaries were more likely to live in an institutional placement than in a home- or community-based setting compared to DD beneficiaries, as seen in Figure 1-12. However, more EPD beneficiaries resided in a home- or community-based setting compared to an institutional setting.

**Figure 1-12—Beneficiaries by Placement Setting, FFY 2022**

Program	HCBS	Institutional
ALTCS-DD	38,088	109
ALTCS-EPD	19,494	5,796
<b>Total</b>	<b>57,582</b>	<b>5,905</b>

Source: AHCCCS Annual HCBS Report – Contract Year Ending (CYE) 2022;  
<https://www.azahcccs.gov/Shared/Downloads/HCBS/HCBSAnnualReportforCYE2022.pdf>

The goals of the ALTCS program for both DD and EPD populations were to ensure that beneficiaries were living in the most integrated settings possible and were actively engaged and participating in community life. More specifically, the ALTCS program’s goals were to improve:

- Quality of care for ALTCS program beneficiaries through improvement in providing consistent medically necessary services.
- Access to care for ALTCS program beneficiaries through improvement in access to primary care services and a reduction in preventable hospitalizations by focusing on providing an accessible network.
- Quality of life for ALTCS program beneficiaries through emphasizing beneficiary-centered case management, providing beneficiary-directed options, using person-centered planning, and focusing on beneficiaries living in the most integrated settings.
- Beneficiary satisfaction for those enrolled in the ALTCS program by focusing on collaboration with stakeholders.

AHCCCS employed guiding principles for serving these populations, including:

Beneficiary-centered case management	Focusing primarily on assisting each beneficiary in achieving or maintaining his or her highest level of self-sufficiency and attaining their individually identified goals.
Beneficiary-directed options	Affording beneficiaries the opportunity to manage their own personal health and development and make decisions about what services they need, who will provide services, and when and how they will be provided.
Person-centered planning	Creating a Person-Centered Plan for each beneficiary, maximizing beneficiary direction and supports to make informed decisions, to gain full access to the benefits of community living to the greatest extent possible, and to respond to the beneficiary’s needs, choices, personal goals, and preferences; and making the plan accessible to the beneficiary and appropriate family/representatives.
Consistency of services	Developing network accessibility and availability to ensure delivery, quality, and continuity of services in accordance with the Person-Centered Plan agreed to by the beneficiary and health plan.
Accessibility of network	Ensuring choice in beneficiary care and that provider networks are developed to meet the needs of beneficiaries with a focus on accessibility of services for aging beneficiaries and those with disabilities, cultural preferences, and individual health needs of beneficiaries, with services available to the same degree as for individuals not eligible for AHCCCS.
Most integrated setting	Affording beneficiaries the choice of living in their own home or choosing an alternative HCBS setting, living in the most integrated and least restrictive setting to have full access to the benefits of community living.
Collaboration with stakeholders	Collaborating with beneficiaries/families, service providers, community advocates, and health plans to continuously improve the ALTCS program.

HCBS services were provided in different settings such as a beneficiary’s own home, a group home, an assisted living setting, a developmental home, or a BH residential facility. Since 2008, AHCCCS implemented Self Directed Attendant Care (SDAC), which offers ALTCS beneficiaries or their guardians the option to directly employ their direct care worker. Options include hiring and supervising their own direct care workers, with a range of support from ALTCS in performing employer payroll functions, training in how beneficiaries can exercise their authority as employer, and the provision of training for the direct care worker necessary to meet the unique needs of the beneficiary. Besides attendant care, SDAC beneficiaries were permitted to direct their direct care workers in performance of limited tasks that could previously could only be performed in skilled nursing facilities, such as bowel care, bladder catheterizations, glucose monitoring, and insulin injection.

To promote beneficiary preference of direct care workers, HCBS services included permitting a spouse to be paid for up to 40 hours per week of attendant care services. In addition, AHCCCS implemented the community Transition Services option, which provided limited financial assistance to beneficiaries to move from an ALTCS long-term care institutional setting to their own home or apartment, including assistance with essential furnishings, moving expenses, and set up fees or deposits.

Each health plan serving this population was required to meet AHCCCS stated PMPS, which identifies a set of required performance measures with a minimum expected level of performance. If a health plan failed to meet the PMPS, it had to submit a CAP, participate in PIPs, and face the possibility of significant monetary sanctions for each deficient measure.

Federal regulations required an EQRO to complete an annual review and reports analyzing the performance required of health plans.<sup>1-49</sup> These reports provided regular review and evaluation by an objective third party of

<sup>1-49</sup> 42 CFR §438.3641.



the quality, timeliness, and accessibility of healthcare services that health plans provided. In addition, the EQRO identified opportunities for improvement and collaborated with AHCCCS and health plans to design appropriate PIPs to improve the quality, accessibility, and timeliness of care.

Like ACC, the ALTCS program utilized VBP and Centers of Excellence to encourage health plans to improve quality by aligning plan and provider incentives using quality withholds and adoption of the Health Care Payment LAN APM framework discussed above. Health plans were directed to develop strategies to guide beneficiaries to providers who participated in VBP initiatives and to offer value as determined by outcomes on appropriate measures. Facilities were selected as Centers of Excellence, recognizing their high performance in areas of leadership, quality, and service to act as examples and help identify best practices for both quality and cost outcomes.

### CHP

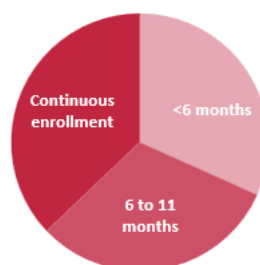
Prior to integration, CMDP operated as an acute care health plan under contract with AHCCCS for children who were Medicaid eligible and who were in the custody of DCS. CMDP provided PH services (i.e., medical and dental services) for children in foster homes, children in the custody of DCS and placed with a relative, placed in a certified adoptive home prior to the entry of the final order of adoption, in an independent living program, or in the custody of a probation department and placed in out-of-home care. CMDP was administered by DCS and complied with AHCCCS regulations to cover children in foster care who were eligible for Medicaid services before being replaced by CHP.

Arizona’s historical bifurcation of its publicly funded healthcare system into separate systems for acute care for PH and BH persisted for these children and their guardians, leaving them to navigate coverage between two separate health plans: the health plan contracting with CMDP and the RBHA. For several years, the State took incremental steps in collaboration with the BH advocacy community to integrate the PH and BH delivery system for children. On April 1, 2021, AHCCCS integrated PH and BH and replaced CMDP with CHP for beneficiaries under a single plan, Mercy Care DCS CHP.

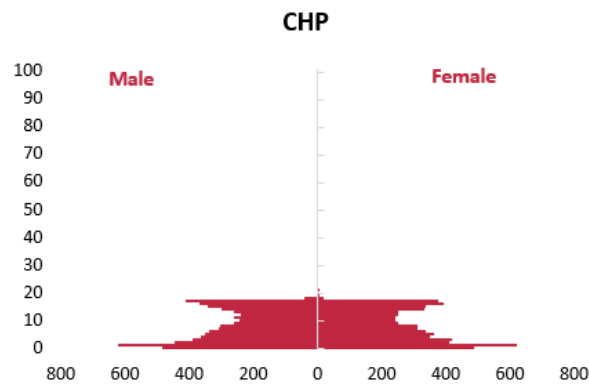
The children covered by CHP had varied enrollment patterns throughout FFY 2022, with about one-third enrolled less than six months, six to 11 months, and a full year or more, as shown in Figure 1-13. The age and gender distributions of children covered were similar between males and females, with the highest numbers being young children, dropping off as children aged to adolescence, and then increasing again throughout the teen years as illustrated in Figure 1-14.

**Figure 1-13—CHP Beneficiaries’ Continuity of Coverage, 2022**

37 percent of CHP beneficiaries were continuously enrolled in FFY 2022



**Figure 1-14—CHP Beneficiaries by Age and Gender, 2022**



AHCCCS was committed to providing comprehensive and quality healthcare for these children, who were eligible for physical and dental care; inpatient, outpatient and behavioral healthcare; and other services through CHP and prior to April 2021, through a combination of CMDP and the RBHAs. CMDP and its successor, CHP, promoted the well-being of Arizona’s children in foster care by ensuring, in partnership with the foster care community, the provision of appropriate, quality healthcare services. CHP’s primary objectives were to:

- Proactively respond to the unique healthcare needs of Arizona’s children in foster care.
- Ensure the provision of high-quality, clinically appropriate, medically necessary healthcare in the most cost-effective manner.
- Promote continuity of care and support caregivers, custodians, and guardians through integration and coordination of services.

Requests for care were met by DCS or a caregiver, and according to standards, required that children in foster care, kinship, and adoptive care be able to schedule an appointment within 72 hours of a request, or within two hours if the need was urgent. Initial assessments had to take place within seven days of the child’s entry into DCS custody, or within 24 hours for an urgent need. Following a BH need assessment, the first regular appointment for BH services had to be available within 21 days of the initial assessment, and ongoing services were provided at least monthly for at least the first six months after the child entered DCS custody. If regular services were not initiated within 21 days, the caregiver sought care outside the health plan network from any AHCCCS registered provider after notifying AHCCCS and the health plan of the failure.

The providers that contracted with CHP health plans provided services such as case management, skills training and development, BH counseling and therapy, and respite care and home care training. Proactive steps to improve integration of care were required, such as participation in delivery system reform initiatives for PCPs and community BH sites to improve clinical treatment protocols; to provide training in trauma-informed care; and to create protocols for sharing information, referrals, and recommendations with foster parents/guardians and case workers.

To encourage providers to treat children who were covered by this program, CHP funded staff to assist and support providers through a range of activities, such as help managing beneficiaries (i.e., guardians or caseworkers) who did not follow through on appointments and/or treatments for the children in their care, facilitating clean claims for authorized services within 30 days, providing information regarding referrals to CHP registered providers, assisting with beneficiary referrals to community programs, and coordinating medical care for at-risk children.

The same standards and practices for developing and implementing CAPs and PIPs for ACC and ALTCS health plans applied to CHP.<sup>1-50</sup> Federal regulations required an EQRO to conduct annual reviews and reports analyzing the performance of health plans.<sup>1-51</sup> These reports provided regular review and evaluation by an objective third party of the quality, timeliness, and accessibility of healthcare services that health plans provided. In addition, the EQRO identified opportunities for improvement and collaborated with AHCCCS and health plans to design PIPs to improve the quality, accessibility, and timeliness of care. The same system of financial incentives applied to encourage integration of care.

## **RBHA**

Adult AHCCCS beneficiaries with an SMI received acute care and BH services through a geographically designated RBHA contracted with AHCCCS. Historically, RBHAs provided coverage for BH services for all AHCCCS beneficiaries with a few exceptions. BH services were covered separately from PH services. It became evident to AHCCCS that a fully integrated health system would benefit individuals with an SMI by improving care coordination and health outcomes while achieving efficiencies of cost and time. Integration would also increase the ability of AHCCCS to collect and analyze data to better assess the health needs of their beneficiaries with an SMI from a holistic approach and was anticipated to decrease hospital admissions and readmissions and decrease lengths of stay. Effective on October 1, 2022, RBHA contracts expired and were replaced with expanded ACC contracts with RBHA services. RBHAs were renamed and updated to ACC-RBHA. Additionally, RBHA GSAs were realigned to match ACC and ALTCS GSAs.<sup>1-52</sup> RBHAs were responsible for integrating PH and BH for beneficiaries with an SMI designation.<sup>1-53</sup>

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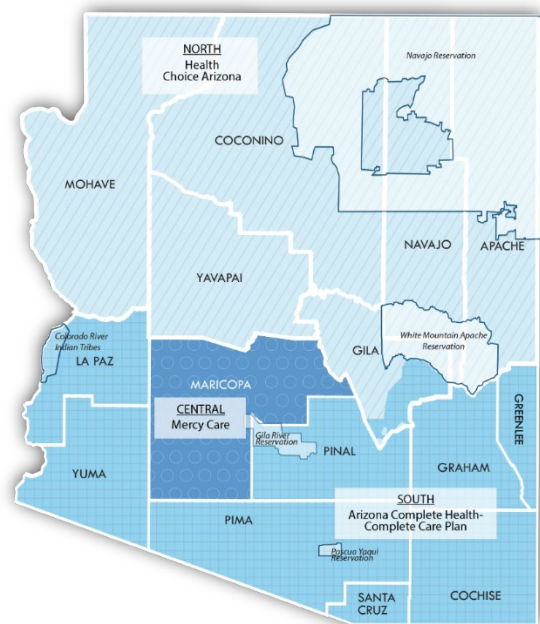
<sup>1-50</sup> AHCCCS Medical Policy Manual chapter 900, Quality Management and Performance Improvement Program.

<sup>1-51</sup> 42 CFR §438.3641.

<sup>1-52</sup> Arizona Health Care Cost Containment System. *ACC-RBHA/TRBHA Map*. Available at: <https://www.azahcccs.gov/Beneficiaries/BehavioralHealthServices/>. Accessed on: Nov 30, 2023.

<sup>1-53</sup> Arizona Health Care Cost Containment System. *Building an Integrated Health Care System and Improving Care Coordination*. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/CareCoordination/>. Accessed on: Nov 30, 2023.

**Figure 1-15—RBHA Services Map, October 2018**



Note: Zip codes 85542, 85192, 85550 representing San Carlos Tribal area are included in the South GSA.

In March 2013, AHCCCS took the first step toward integrated care by awarding one health plan the RBHA contract for Maricopa County, Arizona’s most populous county, to take effect April 2014. This contract required that the RBHA add PH services for the SMI population it covered for BH services. In October 2015, RBHA contractors statewide began providing integrated care for their beneficiaries with an SMI, as shown in Figure 1-15.<sup>1-54</sup>

On October 1, 2018, AHCCCS conducted its largest care integration initiative by transitioning all acute care beneficiaries who did not have an SMI to seven ACC integrated healthcare plans, which provided coverage for PH and BH services. Following the implementation of the ACC integration, the RBHAs provided specific services for several well-defined populations: integrated PH and BH services for beneficiaries determined to have an SMI, BH services for beneficiaries in the custody of the DCS and enrolled in CHP, and BH services for ALTCS beneficiaries enrolled with the DES/DDD.

On October 1, 2019, AHCCCS integrated PH and BH for the ALTCS-DD population. Beginning April 1, 2021, AHCCCS integrated BH coverage for its CMDP beneficiaries into a new

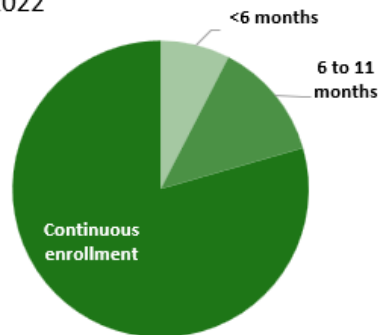
plan called Mercy Care DCS Comprehensive Health Plan. Due to these integration initiatives, the focus of the evaluation of the RBHA component assessed outcomes only among adult beneficiaries with an SMI. Measures and outcomes for the other populations will be included in the respective Evaluation Designs—BH-related measures for children covered by CHP were incorporated in the evaluation of CHP, and measures for DES/DDD beneficiaries covered through ALTCS were encompassed in the Evaluation Design for ALTCS.

Most beneficiaries with SMIs were with their current RBHA carrier for at least a full year, as illustrated in Figure 1-16. The age and gender distributions were similar, with females skewed slightly older compared to males, as shown in Figure 1-17.

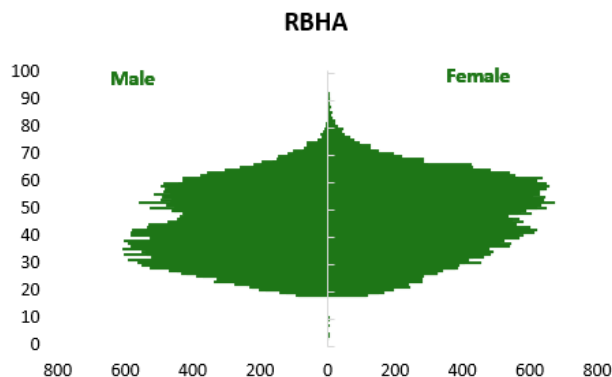
<sup>1-54</sup> NORC at the University of Chicago. *Supportive Services Expansion for Individuals with Serious Mental Illness: A Case Study of Mercy Maricopa Integrated Care*. August 18, 2017. Available at: <https://es.mercycareaz.org/assets/pdf/news/NORC-MercyMaricopa-CaseStudy.pdf>. Accessed on: Nov 30, 2023.

**Figure 1-16—Continuity of Coverage, 2022**

79 percent of RBHA beneficiaries were continuously enrolled in FFY 2022



**Figure 1-17—RBHA SMI Beneficiaries by Age and Gender, 2022**



The primary goals of the RBHAs were to identify beneficiaries with an SMI and transition them across levels of care effectively. RBHAs aimed to streamline, monitor, and adjust care plans based on progress and outcomes, reduce hospital admissions and unnecessary emergency department (ED) and crisis service use, and provide beneficiaries with tools to self-managed care to promote health and wellness by improving the quality of care.

RBHA health plans were required to provide a wide variety of services to beneficiaries with an SMI, including the following:

- BH day program services
- BH residential facility services
- Crisis services that are community based, recovery-oriented, and beneficiary focused, as well as ensure timely follow-up and care coordination, including medication-assisted treatment (MAT) where appropriate
- Court ordered treatment
- Inpatient BH services in an Institution for Mental Disease (IMD) (i.e., a sub-acute facility providing psychiatric, or substance use disorder inpatient care)
- Inpatient PH services including hospitals, sub-acute facilities, and residential treatment centers
- Rehabilitation services, including:
  - Skills training and development
  - Psychosocial rehabilitation living skills training

- Cognitive rehabilitation
- BH prevention/promotion education and medication training and support
- Supported employment (pre-job training and job deployment) and ongoing support to maintain employment (job coaching and employment support)
- Support services including provider case management, personal care services, family support, peer support, home care training to home care client, unskilled respite care, sign language or oral interpretation services, and transportation
- Treatment services including BH assessment, evaluation and screening services, counseling and therapy, and other professional treatment
- Dialysis
- Early and periodic screening, diagnostic and treatment (EPSDT) services
- Early detection health risk assessment, screening, treatment, and primary prevention
- Emergency services
- End-of-life care
- Family planning services

The services required of RBHA health plans included an improved and standardized Crisis System, general mental health, substance abuse, and children’s services. The goal of integration was to give beneficiaries with an SMI a single source for coordinated PH and BH services, as well as housing and employment support and any Dual Eligible Special Needs Plans (D-SNP) benefits for dually eligible beneficiaries. The RBHA health plans administered certain non-Title XIX funds, such as grant funds and housing services. These included providing residential, counseling, case management, and support services.<sup>1-55</sup> Substance abuse services for priority populations were provided, including childcare services, some forms of traditional healing, acupuncture, room and board, and supportive housing through rent or utility subsidies and relocation services.

PMPS standards and practices for developing and implementing CAPs and PIPs apply to RBHA health plans as to the other AHCCCS plans.<sup>1-56</sup> Federal regulations require annual review and reports by an EQRO analyzing the performance required of health plans.<sup>1-57</sup> These reports provide regular review and evaluation by an objective third party of the quality, timeliness, and accessibility of healthcare services that health plans provide. In addition, the EQRO identifies opportunities for improvement and collaborates with AHCCCS and health plans to identify appropriate PIPs designed to improve the quality, accessibility, and timeliness of care. The same system of financial incentives applies to encourage integration of care.

## **PQC Waiver**

On January 18, 2019, CMS approved Arizona’s request to amend the Demonstration to waive PQC retroactive eligibility established by the ACA on January 1, 2014. CMS allowed individuals who were applying for Title XIX retroactive coverage for up to three months prior to the month of application, if the individual was eligible for Medicaid during that time. The Demonstration allowed AHCCCS to limit retroactive coverage to the month of

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<sup>1-55</sup> Grant funding for covered services applies to beneficiaries who are not Title XIX.

<sup>1-56</sup> AHCCCS Medical Policy Manual chapter 900, Quality Management and Performance Improvement Program.

<sup>1-57</sup> 42 CFR §438.3641.



application, consistent with AHCCCS' historical practice prior to January 2014.<sup>1-58</sup> AHCCCS provided outreach and education to eligible beneficiaries, current beneficiaries, and providers to inform those who would be impacted by the change.

AHCCCS designed the program to discourage individuals from waiting until they had a health crisis to enroll in the program. By limiting the period of retroactive eligibility, beneficiaries were encouraged to apply for Medicaid as soon as they became eligible. Education and support from AHCCCS and health plans promoted beneficiary's accountability for and engagement in their own healthcare while improving continuity of enrollment and providing the benefits of managed and preventive care to improve health outcomes and reduce costs. In turn, this provided support for the sustainability of the Medicaid program while more efficiently focusing resources on providing accessible high-quality healthcare and limiting the resource-intensive process associated with determining PQC eligibility.

## TI

The TI program provided up to \$300 million across the initial Demonstration approval period (January 18, 2017, through September 30, 2021) to support PH and BH integration and coordination for beneficiaries with BH needs who were enrolled in AHCCCS. CMS approved a one-year extension to the TI program replicating the funding, performance measures, attention, and Quality Improvement Collaborative (QIC) requirements through September 30, 2022.<sup>1-59</sup> These beneficiaries included adults with BH needs, children with BH needs including children with autism spectrum disorder (ASD), children engaged in the child welfare system, and individuals released from incarceration who were AHCCCS eligible.

AHCCCS designed the TI program with input from a variety of stakeholders to reduce fragmentation between historically siloed systems delivering care for acute and BH needs. The program encouraged development of integrated systems that provided holistic care for individuals while improving efficiencies and outcomes. The program fostered collaboration between providers to develop information-sharing tools, data analysis standards, and clinical and administrative protocols to enable managing and coordinating patient care across multiple providers. In recognition of the comprehensive system reforms necessary to achieve these goals, funding was provided from several sources to serve as a catalyst and encourage provider networks to invest in the needed infrastructure.

The TI program focused on what AHCCCS identified as its most complex and costly beneficiaries: adults and children with both PH and BH needs and individuals transitioning from incarceration into the community. It targeted three types of providers: PCP sites, BH providers, and hospitals. Only providers who demonstrated a minimum threshold of AHCCCS beneficiaries among their patients were permitted to take part. These providers also had to attest that they had an electronic health record (EHR) system in place and were required to complete a BH integration assessment using an AHCCCS-specified tool.

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<sup>1-58</sup> Arizona Health Care Cost Containment System. *Arizona Section 1115 Waiver Amendment Request: Proposal to Waive Prior Quarter Coverage*. April 6, 2018. Available at:

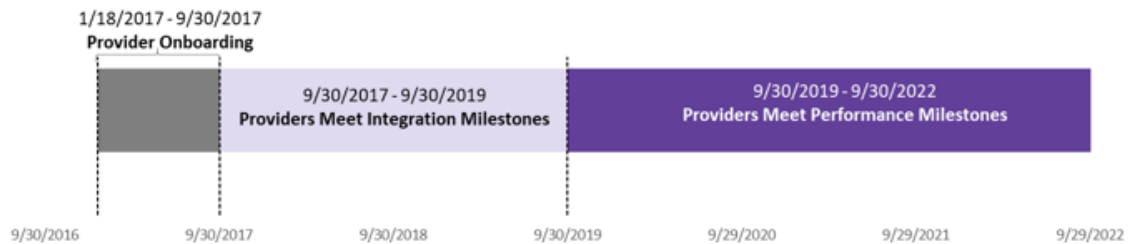
[https://www.azahcccs.gov/Resources/Downloads/PriorQuarterCoverageWaiverToCMS\\_04062018.pdf](https://www.azahcccs.gov/Resources/Downloads/PriorQuarterCoverageWaiverToCMS_04062018.pdf). Accessed on: Nov 30, 2023.

<sup>1-59</sup> Arizona Health Care Cost Containment System. Targeted Investments 2.0 Program Overview. Available at:

<https://www.azahcccs.gov/PlansProviders/TargetedInvestments/>. Accessed on: Nov 30, 2023.



**Figure 1-18—Phases of Targeted Investments Program**



The TI program roughly comprised three phases, as depicted in Figure 1-18. The first year of the program, January 2017 through September 2017, providers were recruited and onboarded for the program. Throughout FFYs 2018 and 2019, providers were expected to meet integration milestones. Beginning FFY 2020, performance metrics were calculated for each provider and payments were made based on performance.

### Integration Milestones

Specific integration milestones that were applied depended on the provider type and required the provider to meet a set of core requirements such as:

- Identifying beneficiaries as high risk based on identified criteria.
- Utilizing registries to monitor those beneficiaries.
- Training case managers.
- Being able to perform and communicate appropriate screening depending on the population.
- Identifying community-based resources for referrals.

Pediatric providers were also required to develop procedures for communicating and treating children with ASD, obtain records for children in the foster care system, schedule office visits with children in foster care, and confidentially communicate with foster parents/guardians/case workers. Providers for adults transitioning from the criminal justice system were required to meet the basic milestones for adults; establish integration with the probation/parole officer; develop outreach plans, create peer/family support plans; and, if appropriate, utilize Arizona Opioid Prescribing Guidelines for acute and chronic pain as well as create access to MAT as appropriate.

### Performance Milestones

Beginning in demonstration year (DY) 4, FFY 2020 through DY 6, FFY 2022, participating providers were required to engage in the TI Program QIC offered by the Arizona State University (ASU) College of Health Solutions and Ira A. Fulton School of Engineering. The QIC provided TI participants with updates on their performance milestones and assisted with quality improvement. Table 1-1 outlines performance measures applicable to each provider by area of concentration. The results presented in this report and future evaluation reports for measures in this table will not be used to assess whether providers are meeting performance measure targets for purposes of incentive payments.

**Table 1-1—Performance Measure Applicable to Each Provider<sup>1-60</sup>**

Year 4 Milestone Measure	Pediatric		Adults		Justice
	BH	PCP	BH	PCP	
Follow-up after hospitalization for mental illness (30 day) <sup>1</sup>	✓		✓	✓	✓
Follow-up after hospitalization for mental illness (7 day) <sup>1</sup>	✓		✓	✓	✓
Diabetes screening for people with schizophrenia or bipolar disorder who are using antipsychotic medications			✓	✓	✓
Engagement of alcohol and other drug abuse or dependence treatment (34 day)					✓
Metabolic monitoring for children and adolescents on antipsychotics	✓				
Well child visits in the third, fourth, fifth, and sixth years of life		✓			
Adolescent well-care visits		✓			
Well child visits in the first 15 months of life		✓			

<sup>1</sup>Ages 6-17 for pediatric providers. Ages 18 and over for adult providers.

Performance measure targets for these measures were established for each participating organization based on baseline performance, as calculated by ASU.

The TI program directed the health plans to provide financial incentives to eligible Medicaid providers who met these performance measure targets and benchmarks for integrating and coordinating PH and BH for Medicaid beneficiaries.<sup>1-61</sup> This program was funded by up to \$350 million over six years from multiple sources, which include a maximum of \$90,824,900 from CMS-approved time-limited expenditures from the Designated State Health Programs (DSHPs). This one-time investment of DSHP funding was phased down over the demonstration period and provided a short-term federal investment. AHCCCS sought expenditure authority to renew the TI program with overhauled initiatives from 2022 through 2027.

To participate in the TI program and receive incentive payments, providers and hospitals were required to meet specific programmatic milestones and performance benchmarks. A key step in the integration process for participating TI providers was to establish an agreement with Contexture, Arizona’s health information exchange (HIE), previously known as Health Current, to receive Admission-Discharge-Transfer (ADT) alerts.<sup>1-62</sup> Providers who received ADT alerts received an automated clinical summary in response to inpatient admission, ED registration or ambulatory encounter registration, and a comprehensive continuity of care document that contains the patient’s most recent clinical and encounter information. This allowed providers to receive key information to improve patient care.

<sup>1-60</sup> Arizona Health Care Cost Containment System. *TI Year 4-6 Metrics with Methodology*. Available at: [https://www.azahcccs.gov/PlansProviders/Downloads/TI/TI\\_Yr4-6\\_Final\\_Performance\\_Measures\\_2021-10-27.pdf](https://www.azahcccs.gov/PlansProviders/Downloads/TI/TI_Yr4-6_Final_Performance_Measures_2021-10-27.pdf). Accessed on: Nov 30, 2023.

<sup>1-61</sup> On April 27, 2020, AHCCCS announced the advancement of \$41 million in previously allocated incentive payments to TI providers in order to address the COVID-19 PHE. “Arizona Medicaid Program Advances \$41 Million in Provider Payments to Address COVID-19 Emergency”. Available at: <https://azahcccs.gov/shared/News/GeneralNews/AHCCCSAdvancesFortyOneMilProviderPayments.html>. Accessed on: Nov 30, 2023.

<sup>1-62</sup> Contexture. *Arizona Health Information Exchange*. Available at: <https://contexture.org/arizona-health-information-exchange/>. Accessed on: Dec 4, 2023.

Participating providers were expected to establish numerous protocols, policies, and systems of care that supported the provision of whole-person care through the integration of PH and BH, informed by screening and intervention for social determinants of health (SDOH) and other psychosocial factors affecting health status. The integration activities required of participating providers were expected to continue and be sustained systemwide by the ACC health plans that were accountable for whole-person systems of care.<sup>1-63</sup>

The number of providers by area of concentration that participated in the TI program at the end of Year 6 (September 2022) are provided in Table 1-2.

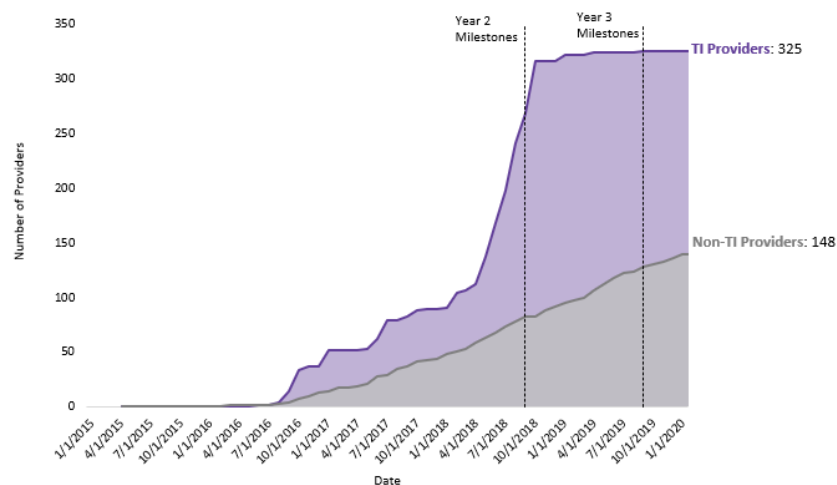
**Table 1-2—Number of Provider Sites Participating by Area of Concentration**

Participating Area of Concentration	Number of Sites
Adult BH	143
Adult Primary Care	144
Pediatric BH	106
Pediatric Primary Care	83
Hospital	17
Justice	12

Information collected indicated that TI providers met most milestones, and the majority began receiving ADT alerts between May and October 2018.<sup>1-64</sup> Their performance is compared to that of non-TI providers in Figure 1-19.

**Figure 1-19—Number of TI and Non-TI Provides Receiving ADT Alerts, March 2016–March 2020\***

Approximately 2 out of 3 providers receiving ADT alerts by March 2020 were participating in the TI program.



\*Figure 1-19 captures information on the ADT alert milestone in Year 3; therefore, no further updates have been made to the underlying data.

<sup>1-63</sup> Arizona Health Care Cost Containment System. Targeted Investments Program Sustainability Plan. March 29, 2019. Available at: <https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/az/Health-Care-Cost-Containment-System/az-hccc-target-stability-plan-20190812.pdf>. Accessed on: Nov 30, 2023.

<sup>1-64</sup> TI-aligned hospitals were excluded from analysis.

## Demographics

**Table 1-3—Enrollment by Program**

Program	2016	2017	2018	2019	2020	2021	2022
ACC	1,525,894	1,533,639	1,478,443	1,488,240	1,623,185	1,822,960	1,921,606
ALTCS-DD	29,774	31,191	32,857	34,598	36,120	37,681	38,995
ALTCS-EPD	27,086	27,496	28,401	29,520	27,677	28,186	26,275
CHP	17,142	14,753	13,158	13,216	13,643	15,997	12,643
RBHA	42,020	43,146	41,806	42,532	45,020	49,057	48,984
<b>Total</b>	<b>1,641,916</b>	<b>1,650,225</b>	<b>1,594,665</b>	<b>1,608,106</b>	<b>1,745,645</b>	<b>1,953,881</b>	<b>2,048,503</b>

Table 1-3 shows that at the beginning of the Demonstration, most AHCCCS beneficiaries were covered through Acute Care plans, which transitioned to ACC in 2018, as described above. In 2016, the ALTCS-DD and ALTCS-EPD populations were approximately equal in size; however, by 2022 the DD population had increased 31 percent, while the EPD population remained relatively stable. Although CHP showed the lowest enrollment counts among beneficiaries throughout the Demonstration period, CHP beneficiaries also had the lowest rates of enrollment continuity, meaning a substantial number of CHP beneficiaries could have been enrolled for shorter durations throughout the year.<sup>1-65</sup>

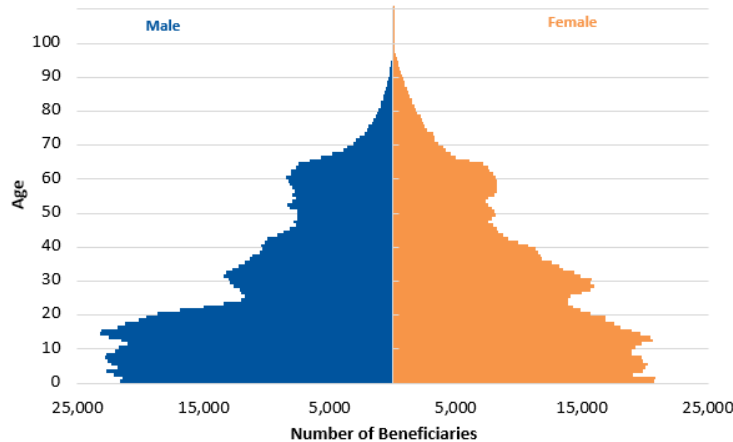
Figure 1-13 shows that approximately one-third of CHP beneficiaries were enrolled in CHP for fewer than six full months in FFY 2022, another third were enrolled for between six and 11 months, and the final third were enrolled for the full year. Many CHP beneficiaries who were not enrolled in CHP for the full year were also enrolled in an ACC plan. As such, these beneficiaries may have been covered through Medicaid for the full year, partly through CHP and partly through ACC depending on their circumstances. In these cases, the beneficiary contributed to partial enrollment for ACC and CHP in Figure 1-7 and Figure 1-13, respectively. ALTCS-DD beneficiaries had the greatest continuity of enrollment, with 91 percent of beneficiaries enrolled for the full year. Between 66 percent and 82 percent of beneficiaries in ACC, RBHA, and ALTCS-EPD were enrolled continuously during the year prior to the Demonstration renewal.

Figure 1-20 compares the age distribution among all AHCCCS beneficiaries by gender. Like most state Medicaid populations, children are split approximately equally between males and females.

<sup>1-65</sup> Demographic characteristics among beneficiaries impacted by the TI and PQC programs are not reported in this section because these populations overlap with the four primary AHCCCS programs.

**Figure 1-20—AHCCCS Age Distribution by Gender**

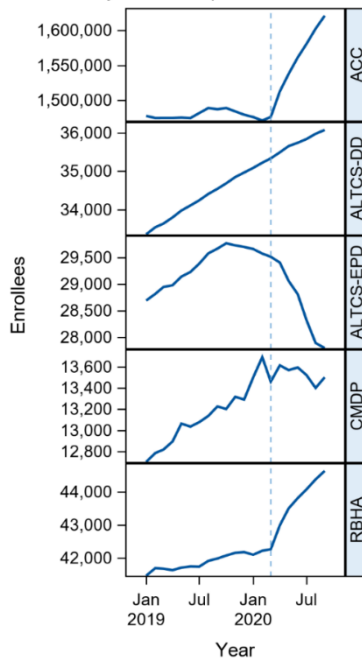
Approximately 41 percent of males on AHCCCS are children compared to 35 percent for females



## Enrollment Trends due to COVID-19

**Figure 1-21—AHCCCS Enrollment During COVID-19 PHE**

Monthly Enrollment by Population Group  
January 2019 to September 2020



Dashed vertical line indicates COVID-19 Public Health Emergency

Like most states, COVID-19 impacted Arizona’s Medicaid program substantially in a multitude of aspects including Medicaid enrollment. Figure 1-21 shows that Medicaid enrollment for the ACC population was stable throughout 2019 and the first few months of 2020 until the COVID-19 PHE in approximately March 2020. Between March 2020 and September 2020, ACC enrollment jumped from 1.48 million beneficiaries to 1.62 million, nearly a 10 percent increase in a matter of months. Membership in RBHA also increased during this timeframe, from 42,274 to 44,638, a 5.6 percent increase. Enrollment in each of the other programs was not as heavily impacted by the PHE. This is unsurprising, as most beneficiaries would have qualified for Medicaid regardless. Membership among the intellectually/developmentally disabled (ALTCS-DD) continued to rise unabated by the PHE. Conversely, a decline in ALTCS-EPD membership accelerated in the months following the PHE.<sup>1-66</sup> Membership among children in custody of DCS (CHP) appeared to stabilize following an increase in the pre-PHE period.

<sup>1-66</sup> It is important to note that ALTCS-EPD has a historically high percentage of beneficiaries that pass away.

## 2. Evaluation Questions and Hypotheses

The purpose of the Summative Evaluation Report is to determine whether the Arizona Health Care Cost Containment System (AHCCCS) Section 1115 Waiver Demonstration (the Demonstration) achieved the goals outlined in the Background section. This section provides each program’s logic model, hypotheses, and research questions, which focus on evaluating the impact of these goals.

There are several concurrent programs and components to the Demonstration that may affect certain groups of beneficiaries. The logic models presented below depict each program’s interaction between the Demonstration components, the Demonstration programs and policy changes, and populations covered by AHCCCS.

Most AHCCCS beneficiaries in the managed care system have coverage through four different programs (Table 2-1).

**Table 2-1—Beneficiary Coverage**

AHCCCS Program	Population
<b>AHCCCS Complete Care</b>	<ul style="list-style-type: none"> <li>• Adults who are not determined to have an SMI (excluding beneficiaries enrolled with DES/DDD).</li> <li>• Children, including those with special health care needs (excluding beneficiaries enrolled with DES/DDD and DCS/CHP).</li> <li>• Beneficiaries determined to have an SMI who opt out of a RBHA and transfer to an ACC for the provision of PH services.</li> </ul>
<b>Arizona Long Term Care System</b>	<ul style="list-style-type: none"> <li>• Beneficiaries with an intellectual or developmental disability (ALTCS-DD) and beneficiaries who are elderly and/or have a physical disability (ALTCS-EPD).</li> </ul>
<b>Comprehensive Health Plan</b>	<ul style="list-style-type: none"> <li>• Beneficiaries in custody of DCS.</li> </ul>
<b>Regional Behavioral Health Authority</b>	<ul style="list-style-type: none"> <li>• Adult beneficiaries with an SMI.</li> </ul>

Note: ACC: AHCCCS Complete Care; ALTCS-DD: Arizona Long Term Care System—Developmentally Disabled; ALTCS-EPD: Arizona Long Term Care System—People who are elderly and/or who have a physical disability; CHP: Comprehensive Health Plan; DCS: Department of Child Safety; DES/DDD: Department of Economic Security/Division of Developmental Disabilities; PH: physical health; SMI: serious mental illness.

Two of the six Demonstration programs, Prior Quarter Coverage (PQC) and Targeted Investments (TI), impact multiple populations. The PQC waiver impacts all adults on AHCCCS;<sup>2-1</sup> therefore, evaluations that only cover children (i.e., Comprehensive Health Plan [CHP]) will not be affected by PQC, and evaluations that only cover adults (i.e., Regional Behavioral Health Authority [RBHA]) will be impacted by PQC (with few exceptions). The TI program is designed to encourage participating practitioners to provide integrated care for their beneficiaries. This impacts all children and adult beneficiaries attributed or assigned to TI-participating practitioners; however, it does not affect beneficiaries who are not attributed or assigned to practitioners who were not participating in TI. Therefore, the TI program will in theory impact every eligibility category.

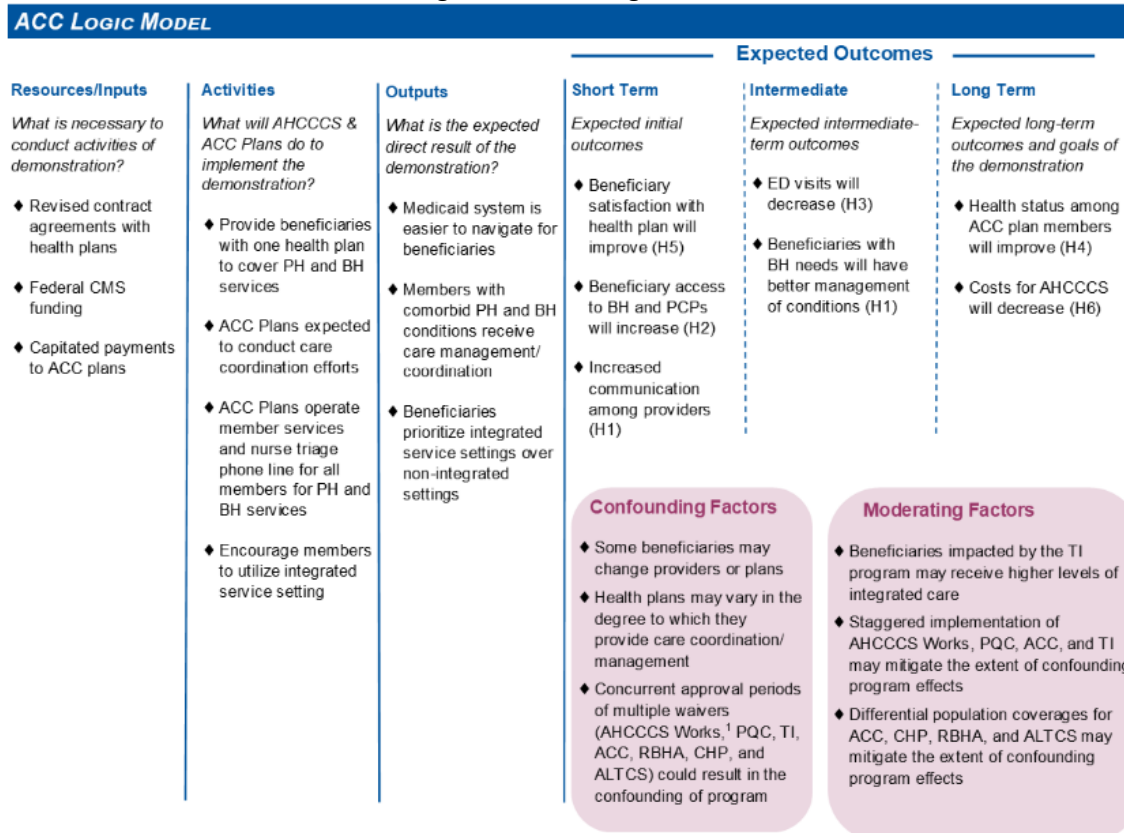
<sup>2-1</sup> Exceptions include children under the age of 19 and women who are pregnant or 60 days postpartum.

## ACC

### Logic Model

Figure 2-1 illustrates that with additional funding to support integration and fund the AHCCCS Complete Care (ACC) plans, beneficiaries will find the Medicaid system easier to navigate, those with physical health (PH) and behavioral health (BH) comorbidities will receive care coordination/management, and beneficiaries will prioritize practices with integrated services over those with non-integrated services. With an easier-to-navigate Medicaid system, beneficiary satisfaction will improve. With better care coordination/management, beneficiaries with complex needs will see improved health outcomes. In the short term, this will be shown by increased access to care and reduced utilization of emergency department (ED) visits. In the long term, this will improve beneficiaries' health and well-being while providing cost-effective care. Hypotheses associated with these outcomes are denoted in parentheses in the logic model (hypotheses descriptions can be found in Table 2-2).

Figure 2-1—ACC Logic Model



1: AHCCCS Works was approved by CMS but was not implemented and not included in this evaluation.

Note: ACC: AHCCCS Complete Care; AHCCCS: Arizona Health Care Cost Containment System; ALTCS: Arizona Long Term Care System; BH: behavioral health; CMS: Centers for Medicare & Medicaid Services; CHP: Comprehensive Health Plan; ED: emergency department; H: hypothesis; PCP: primary care provider; PH: physical health; PQC: Prior Quarter Coverage; RBHA: Regional Behavioral Health Authority; TI: Targeted Investments



## Hypotheses and Research Questions

To comprehensively evaluate the ACC program, six hypotheses will be tested using 18 research questions (Table 2-2).

**Table 2-2—ACC Hypotheses and Research Questions**

<p><b>H1: Health plans encourage and/or facilitate care coordination among PCPs and BH practitioners.</b></p>	<ul style="list-style-type: none"> <li>● RQ1.1: What care coordination strategies did the plans implement as a result of ACC?</li> <li>● RQ1.2: Did the plans encounter barriers to implementing care coordination strategies?</li> <li>● RQ1.3: Did the plans encounter barriers not related specifically to implementing care coordination strategies during the transition to ACC?</li> <li>● RQ1.4: Did AHCCCS encounter barriers related to the transition to ACC?</li> <li>● RQ1.5: Did providers encounter barriers related to the transition to ACC?</li> <li>● RQ1.6: Do beneficiaries perceive their doctors to have better care coordination as a result of ACC?</li> </ul>
<p><b>H2: Access to care will maintain or improve as a result of the integration of PH and BH.</b></p>	<ul style="list-style-type: none"> <li>● RQ2.1: Do beneficiaries enrolled in an ACC plan have the same or better access to primary care services compared to prior to integrated care?</li> <li>● RQ2.2: Do beneficiaries enrolled in an ACC plan have the same or better access to substance abuse treatment compared to prior to integrated care?</li> </ul>
<p><b>H3: Quality of care will maintain or improve as a result of the integration of PH and BH.</b></p>	<ul style="list-style-type: none"> <li>● RQ3.1: Do beneficiaries enrolled in an ACC plan have the same or higher rates of preventive or wellness services compared to prior to integrated care?</li> <li>● RQ3.2: Do beneficiaries enrolled in an ACC plan have the same or better management of chronic conditions compared to prior to integrated care?</li> <li>● RQ3.3: Do beneficiaries enrolled in an ACC plan have the same or better management of BH conditions compared to prior to integrated care?</li> <li>● RQ3.4: Do beneficiaries enrolled in an ACC plan have the same or better management of opioid prescriptions compared to prior to integrated care?</li> <li>● RQ3.5: Do beneficiaries enrolled in an ACC plan have equal or lower ED or hospital utilization compared to prior to ACC?</li> </ul>
<p><b>H4: Beneficiary self-assessed health outcomes will maintain or improve as a result of the integration PH and BH.</b></p>	<ul style="list-style-type: none"> <li>● RQ4.1: Do beneficiaries enrolled in an ACC plan have the same or higher overall health rating compared to prior to integrated care?</li> <li>● RQ4.2: Do beneficiaries enrolled in an ACC plan have the same or higher overall mental or emotional health rating compared to prior to integrated care?</li> </ul>

<b>H5: Beneficiary satisfaction with their health care will maintain or improve as a result of the integration of PH and BH.</b>	<ul style="list-style-type: none"> <li>● RQ5.1: Are beneficiaries equally or more satisfied with their health care as a result of integrated care?</li> </ul>
<b>H6: The ACC program provides cost-effective care.</b>	<ul style="list-style-type: none"> <li>● RQ6.1: What are the costs associated with the integration of care under ACC?</li> <li>● RQ6.2: What are the benefits/savings associated with the integration of care under ACC?</li> </ul>

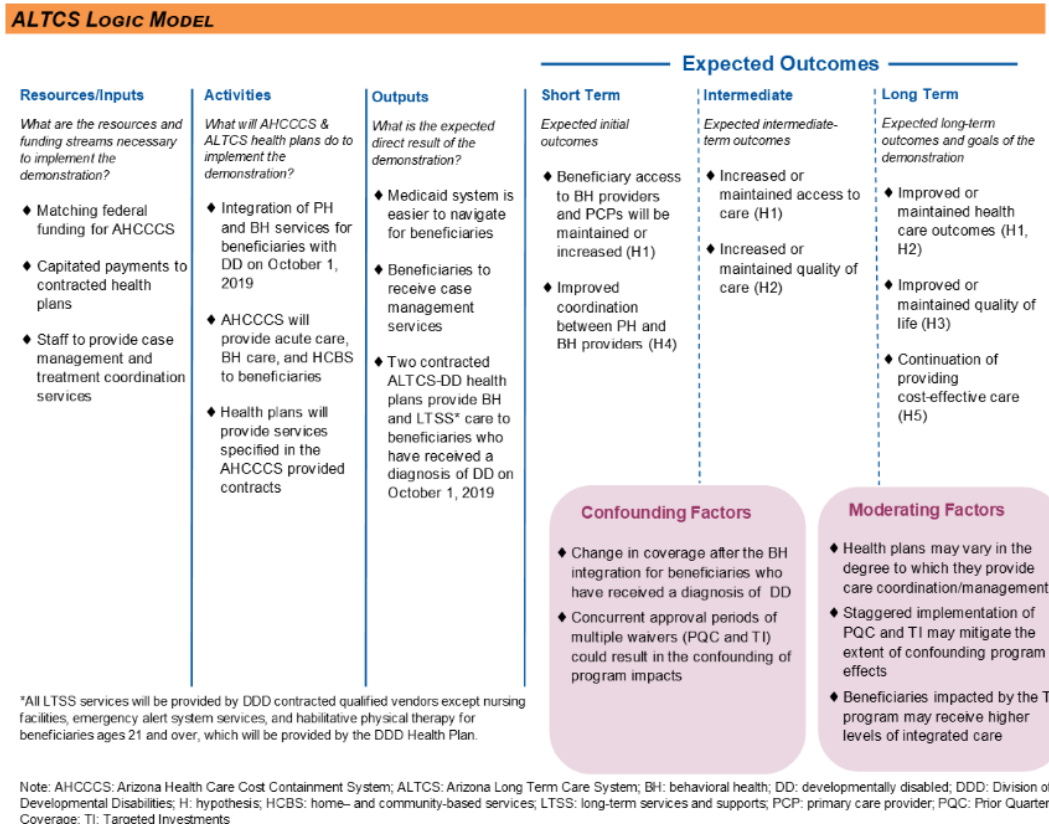
Note: ACC: AHCCCS Complete Care; AHCCCS: Arizona Health Care Cost Containment System; BH: behavioral health; ED: emergency department; H: hypothesis; PCP: primary care provider; PH: physical health; RQ: research question.

## ALTCS

### Logic Model

Figure 2-2 illustrates that, with additional funding to support integration and fund the Arizona Long Term Care System (ALTCS) plans, beneficiaries will find the Medicaid system easier to navigate, continue to receive case management, and prioritize practices with integrated services over those with non-integrated services. With improvements to the navigation of the Medicaid system, beneficiary access to care will improve. With better case management, beneficiaries will see improved health outcomes, first shown by an increase in the quality of and access to care. In the long term, this will improve beneficiaries’ health outcomes and well-being while providing cost-effective care.

Figure 2-2—ALTCS Logic Model



## Hypotheses and Research Questions

To comprehensively evaluate the ALTCS program, five hypotheses will be tested using 18 research questions (Table 2-3).

**Table 2-3—ALTCS Hypotheses and Research Questions**

<p><b>H1: Access to care will maintain or improve over the waiver demonstration period.</b></p>	<ul style="list-style-type: none"> <li>• RQ1.1: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?</li> <li>• RQ1.2: Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?</li> <li>• RQ1.3: Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?</li> </ul>
<p><b>H2: Quality of care will maintain or improve over the waiver demonstration period.</b></p>	<ul style="list-style-type: none"> <li>• RQ2.1: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?</li> <li>• RQ2.2: Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?</li> <li>• RQ2.3: Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?</li> <li>• RQ2.4: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?</li> <li>• RQ2.5: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-of-state comparisons?</li> </ul>
<p><b>H3: Quality of life for beneficiaries will maintain or improve over the waiver demonstration period.</b></p>	<ul style="list-style-type: none"> <li>• RQ3.1: Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?</li> <li>• RQ3.2: Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?</li> <li>• RQ3.3: Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?</li> </ul>

<p>H4: ALTCS encourages and/or facilitates care coordination among PCPs and BH practitioners.</p>	<ul style="list-style-type: none"> <li>• RQ4.1: Did DES/DDD or its contracted plans encounter barriers during the integration of care for beneficiaries with DD?</li> <li>• RQ4.2: What care coordination strategies did DES/DDD and its contracted plans implement as a result of integration of care?</li> <li>• RQ4.3: Did DES/DDD or its contracted plans encounter barriers to implementing care coordination strategies?</li> <li>• RQ4.4: Did AHCCCS encounter barriers related to integration of care for beneficiaries with DD?</li> <li>• RQ4.5: Did providers encounter barriers related to integration of care for beneficiaries with DD?</li> </ul>
<p>H5: ALTCS provides cost-effective care.</p>	<ul style="list-style-type: none"> <li>• RQ5.1: What are the costs associated with the integration of care under ALTCS?</li> <li>• RQ5.2: What are the benefits/savings associated with the integration of care under ALTCS?</li> </ul>

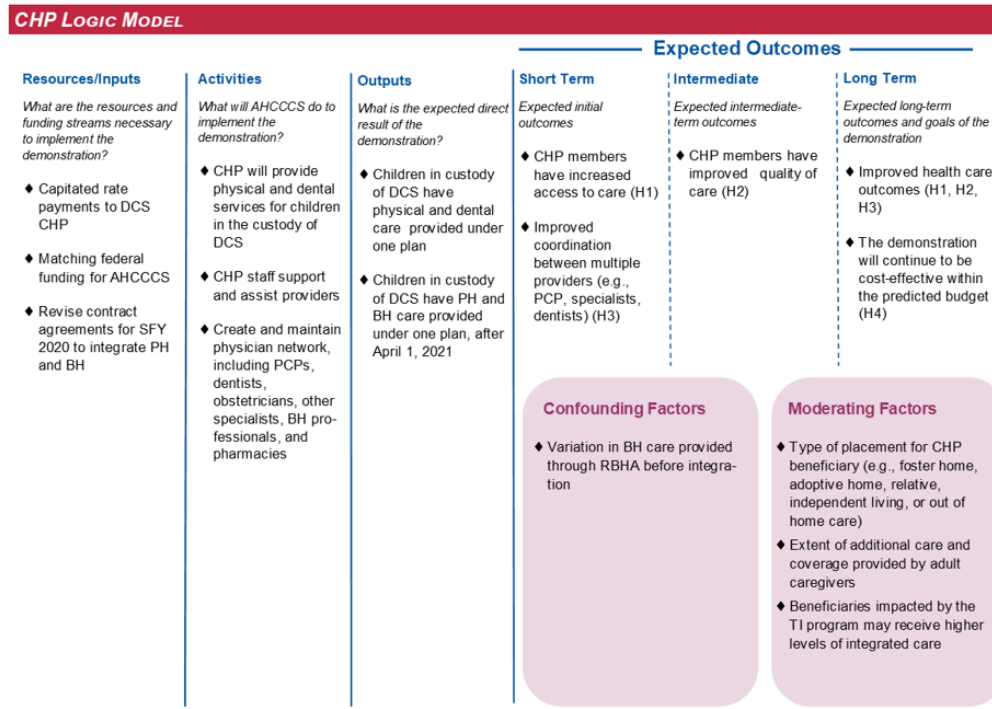
Note: ALTCS: Arizona Long Term Care System; BH: behavioral health; DD: developmentally disabled; DES/DDD: Department of Economic Security/Division of Developmentally Disabled; EPD: people who are elderly and/or who have a physical disability; H: hypothesis; RQ: research question.

## CHP

### Logic Model

Figure 2-3 illustrates that, with additional funding to support integration and fund the CHP, children in custody of the Department of Child Safety (DCS) had physical and dental care provided under a single plan prior to April 1, 2021, and integrated PH and BH services provided under a single plan thereafter. With improved access to and integration of care, children covered by the CHP will experience improved health outcomes under a cost-effective care model. Hypotheses associated with these outcomes are denoted in parentheses in the logic model (hypotheses descriptions can be found in Table 2-4).

Figure 2-3—CHP Logic Model



Note: AHCCCS: Arizona Health Care Cost Containment System; BH: behavioral health; CHP: Comprehensive Health Plan; DCS: Department of Child Safety; H: hypothesis; PCP: primary care provider; PH: physical health; RBHA: Regional Behavioral Health Authority; SFY: state fiscal year; TI: Targeted Investments

### Hypotheses and Research Questions

To comprehensively evaluate the CHP program, four hypotheses will be tested using 10 research questions (Table 2-4).

Table 2-4—CHP Hypotheses and Research Questions

<p><b>H1: Access to care will be maintained or increase during the demonstration.</b></p>	<p>RQ1.1: Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period compared to the baseline?</p>
<p><b>H2: Quality of care for beneficiaries enrolled in CHP will be maintained or improve during the demonstration.</b></p>	<ul style="list-style-type: none"> <li>RQ2.1: Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?</li> <li>RQ2.2: Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period compared to the baseline?</li> <li>RQ2.3: Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period compared to the baseline?</li> <li>RQ2.4: Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?</li> </ul>
<p><b>H3: CHP encourages and/or facilitates care coordination among PCPs and BH practitioners.</b></p>	<ul style="list-style-type: none"> <li>RQ3.1: What barriers did CHP anticipate/encounter during the integration?</li> </ul>

<p><b>H4: CHP will provide cost-effective care.</b></p>	<ul style="list-style-type: none"> <li>• RQ3.2: What care coordination strategies did CHP plan/implement during integration?</li> <li>• RQ3.3: What barriers to implementing care coordination strategies did the CHP anticipate/encounter?</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• RQ4.1: What are the costs associated with the integration of care in the CHP?</li> <li>• RQ4.2: What are the benefits/savings associated with the integration of care in the CHP?</li> </ul>
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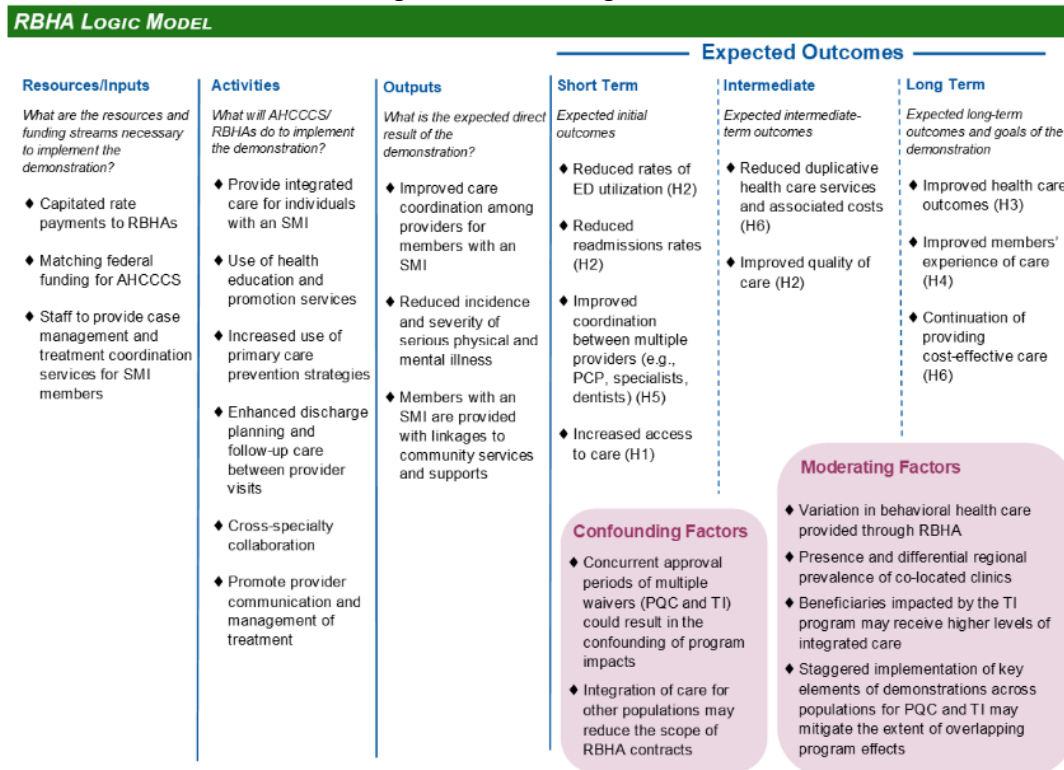
Note: BH: behavioral health; CHP: Comprehensive Health Plan; H: hypothesis; PCP: primary care provider; RQ: research question.

## RBHA

### Logic Model

Figure 2-4 demonstrates that, given resources to fund the RBHAs, adult beneficiaries with a serious mental illness (SMI) will continue to receive care coordination/management, and their providers will follow enhanced discharge planning guidelines, and conduct cross-specialty collaboration, thereby promoting communication among providers. By integrating PH and BH, beneficiary satisfaction will be maintained or improved during the demonstration period. With better care coordination/management, beneficiaries will have equal or improved access to care and utilization of ED visits resulting in equal or better health outcomes, overall health, and satisfaction with their healthcare experiences. In the long term, this will improve beneficiaries' health and well-being while providing cost-effective care.

Figure 2-4—RBHA Logic Model



Note: AHCCCS: Arizona Health Care Cost Containment System; ED: emergency department; H: hypothesis; PCP: primary care provider; PQC: Prior Quarter Coverage; RBHA: Regional Behavioral Health Authority; SMI: serious mental illness; TI: Targeted Investments



## Hypotheses and Research Questions

To comprehensively evaluate the RBHA program, six hypotheses will be tested using 17 research questions (Table 2-5).

**Table 2-5—RBHA Hypotheses and Research Questions**

<p><b>H1: Access to care for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or increase during the demonstration.</b></p>	<p>RQ1.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to primary care services compared to prior to the demonstration renewal?</p> <p>RQ1.2: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to substance abuse treatment compared to prior to the demonstration renewal?</p>
<p><b>H2: Quality of care for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or improve during the demonstration.</b></p>	<p>RQ2.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rates of preventive or wellness services compared to prior to demonstration renewal?</p> <ul style="list-style-type: none"> <li>• RQ2.2: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of chronic conditions compared to prior to the demonstration renewal?</li> <li>• RQ2.3: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of BH conditions compared to prior to the demonstration renewal?</li> <li>• RQ2.4: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of opioid prescriptions compared to prior to the demonstration renewal?</li> <li>• RQ2.5: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower tobacco usage compared to prior to the demonstration renewal?</li> <li>• RQ2.6: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower hospital utilization compared to prior to the demonstration renewal?</li> </ul>
<p><b>H3: Health outcomes for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or improve during the demonstration.</b></p>	<ul style="list-style-type: none"> <li>• RQ3.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rating of health compared to prior to the demonstration renewal?</li> </ul>
<p><b>H4: Adult beneficiary satisfaction in RBHA health plans will be maintained or improve over the waiver demonstration.</b></p>	<ul style="list-style-type: none"> <li>• RQ4.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher satisfaction in their health care compared to prior to the demonstration renewal?</li> <li>• RQ4.2: Do adult beneficiaries with an SMI enrolled in a RBHA perceive their doctors to have the same or better care coordination compared to prior to the demonstration renewal?</li> </ul>
<p><b>H5: RBHAs encourage and/or facilitate care coordination among PCPs and BH practitioners.</b></p>	<ul style="list-style-type: none"> <li>• RQ5.1: What care coordination strategies are the RBHAs conducting for their SMI population?</li> <li>• RQ5.2: Have care coordination strategies for the SMI population changed as a result of ACC?</li> <li>• RQ5.3: What care coordination strategies is AHCCCS conducting for its SMI population?</li> <li>• RQ5.4: What care coordination strategies and/or activities are providers conducting for their SMI patients served by the RBHAs?</li> </ul>

**H6: RBHAs will provide cost-effective care for beneficiaries with an SMI.**

- RQ6.1: What are the costs associated with providing care for beneficiaries with an SMI through the RBHAs?
- RQ6.2: What are the benefits/savings associated with providing care for beneficiaries with an SMI through the RBHAs?

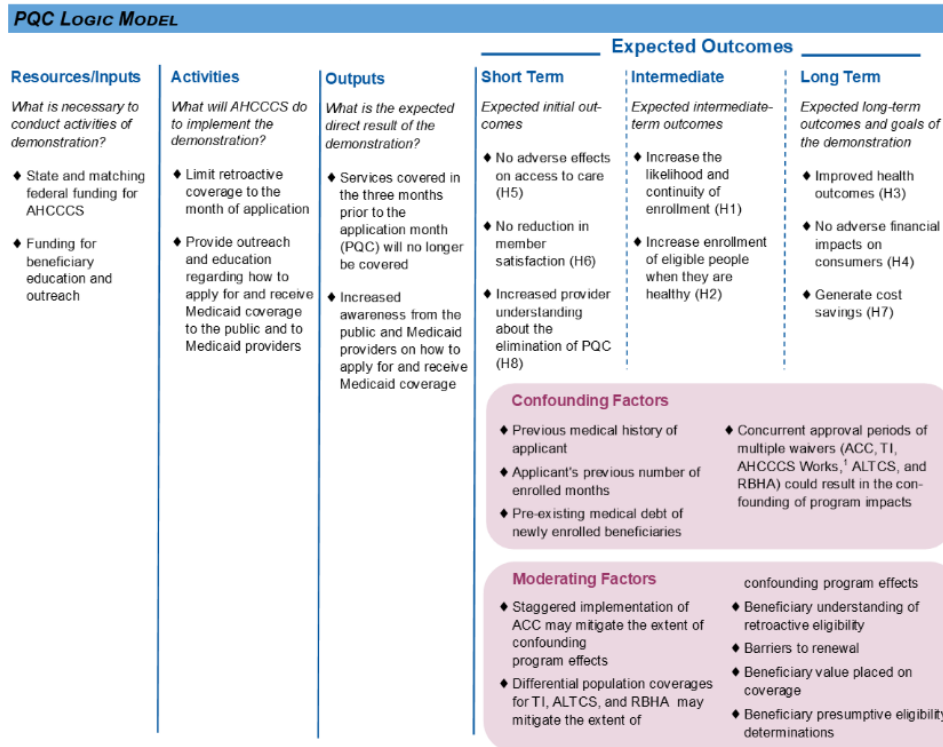
Note: ACC: AHCCCS Complete Care; BH: behavioral health; H: hypothesis; PCP: primary care provider; RBHA: Regional Behavioral Health Authority; RQ: research question; SMI: serious mental illness.

## PQC

### Logic Model

Figure 2-5 illustrates that providing outreach and education to the public and providers regarding the demonstration and limiting retroactive eligibility to the month of application will lead to improved health outcomes, while having no negative effects on access to care and beneficiary satisfaction, as well as no negative financial impact to beneficiaries. These expected outcomes will not all happen simultaneously. Any effects on access to care and beneficiary satisfaction are expected to occur first. Later, it is expected that there will be an increase in the likelihood and continuity of enrollment and in the enrollment of eligible people while they are healthy. This aligns with the set objectives of the amendment. There should be no long-term financial impact on beneficiaries while generating cost savings to promote Arizona Medicaid sustainability. Ultimately, this led to improved health outcomes among beneficiaries. Hypotheses associated with these outcomes are denoted in parentheses in the logic model (hypotheses descriptions can be found in Table 2-6).

**Figure 2-5—PQC Logic Model**



1. AHCCCS Works was approved by CMS but was not implemented and not included in this evaluation.

Note: ACC: AHCCCS Complete Care; AHCCCS: Arizona Health Care Cost Containment System; ALTCS: Arizona Long Term Care System; H: hypothesis; RBHA: Regional Behavioral Health Authority; PQC: Prior Quarter Coverage; TI: Targeted Investments

## Hypotheses and Research Questions

To comprehensively evaluate the PQC waiver, eight hypotheses will be tested using 14 research questions (Table 2-6).

**Table 2-6—PQC Hypotheses and Research Questions**

<p><b>H1: Eliminating PQC will increase the likelihood and continuity of enrollment.</b></p>	<ul style="list-style-type: none"> <li>• RQ1.1: Do eligible people without PQC enroll in Medicaid at the same rates as other eligible people with PQC?</li> <li>• RQ1.2: What is the likelihood of enrollment continuity for those without PQC compared to other Medicaid beneficiaries with PQC?</li> <li>• RQ1.3: Do beneficiaries without PQC who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries with PQC?</li> </ul>
<p><b>H2: Eliminating PQC will increase enrollment of eligible people when they are healthy relative to those eligible people who have the option of PQC.</b></p>	<ul style="list-style-type: none"> <li>• RQ2.1: Do newly enrolled beneficiaries without PQC have higher self-assessed health status than continuously enrolled beneficiaries?</li> </ul>
<p><b>H3: Health outcomes will be better for those without PQC compared to Medicaid beneficiaries with PQC.</b></p>	<ul style="list-style-type: none"> <li>• RQ3.1: Do beneficiaries without PQC have better health outcomes compared to baseline rates and out-of-state comparisons with PQC?</li> </ul>
<p><b>H4: Eliminating PQC will not have adverse financial impacts on consumers.</b></p>	<ul style="list-style-type: none"> <li>• RQ4.1: Does the PQC waiver lead to changes in the incidence of beneficiary medical debt?</li> </ul>
<p><b>H5: Eliminating PQC will not adversely affect access to care.</b></p>	<ul style="list-style-type: none"> <li>• RQ5.1: Do beneficiaries without PQC have the same or higher rates of office visits compared to baseline rates and out-of-state comparisons with PQC?</li> <li>• RQ5.2: Do beneficiaries without PQC have the same or higher rates of service and facility utilization compared to baseline rates and out-of-state comparisons with PQC?</li> </ul>
<p><b>H6: Eliminating PQC will not result in reduced beneficiary satisfaction.</b></p>	<ul style="list-style-type: none"> <li>• RQ6.1: Do beneficiaries without PQC have the same or higher satisfaction with their healthcare compared to baseline rates and out-of-state comparisons with PQC?</li> </ul>
<p><b>H7: Eliminating PQC will generate cost savings over the term of the waiver.</b></p>	<ul style="list-style-type: none"> <li>• RQ7.1: What are the costs associated with eliminating PQC?</li> <li>• RQ7.2: What are the benefits/savings associated with eliminating PQC?</li> <li>• RQ7.3: Do costs to non-AHCCCS entities stay the same or decrease after implementation of the waiver compared to before?</li> </ul>

**H8: Education and outreach activities by AHCCCS will increase provider understanding about the elimination of PQC.**

- RQ8.1: What activities did AHCCCS perform to educate beneficiaries and providers about changes to retroactive eligibility?
- RQ8.2: Did AHCCCS encounter barriers related to informing providers about eliminating PQC?

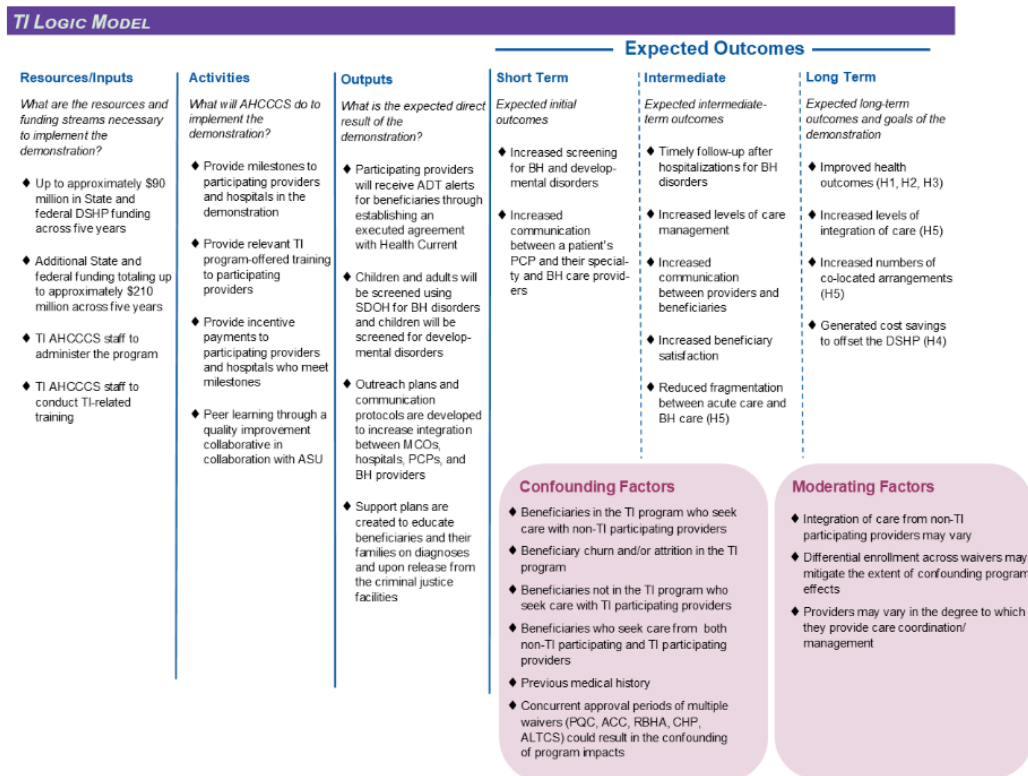
Note: AHCCCS: Arizona Health Care Cost Containment System; H: hypothesis; PQC: Prior Quarter Coverage; RQ: research question

**TI**

**Logic Model**

Figure 2-6 illustrates how providing financial investments to participating providers and hospitals in the demonstration will lead to improved health outcomes and increased levels of integration of care and generate cost savings that will offset the time-limited federal Designated State Health Program (DSHP). By providing milestones that must be met at specific time frames to earn financial incentives, AHCCCS expects to encourage increased levels of integration of care among participating providers. In the short term, AHCCCS expects that there will be increased communication between a patient’s primary care provider (PCP) and specialty and BH providers. This will lead to increased levels of care management, which in the long term will lead to improved health outcomes among targeted beneficiaries. Hypotheses associated with these outcomes are denoted in parentheses in the logic model (hypotheses descriptions can be found in Table 2-7).

**Figure 2-6—TI Logic Model**



Note: ACC: AHCCCS Complete Care; ADT: admission-discharge-transfer; AHCCCS: Arizona Health Care Cost Containment System; ALTCS: Arizona Long Term Care System; ASU: Arizona State University; BH: behavioral health; CHP: Comprehensive Health Plan; DSHP: Designated State Health Program; H: hypothesis; MCO: managed care organization; PCP: primary care provider; PQC: Prior Quarter Coverage; RBHA: Regional Behavioral Health Authority; SDOH: social determinants of health; TI: Targeted Investments

## Hypotheses and Research Questions

To comprehensively evaluate the TI program, six hypotheses will be tested using 21 research questions Table 2-7.

**Table 2-7—TI Hypotheses and Research Questions**

<p><b>H1: The TI program will improve PH and BH care integration for children.</b></p>	<p>RQ1.1: What is the percentage of providers that have an executed agreement with Health Current and receive ADT alerts?</p> <p>RQ1.2: Do children subject to the TI program have higher rates of screening and well-child visits compared to those who are not subject to the demonstration?</p> <p>RQ1.3: Do children subject to the TI program have higher rates of follow-up after hospitalization or an ED visit for mental illness than those who are not subject to the demonstration?</p> <p>RQ1.4: Do parents/guardians of children subject to the program perceive their doctors have better care coordination than those not subject to the demonstration?</p>
<p><b>H2: The TI program will improve PH and BH care integration for adults.</b></p>	<ul style="list-style-type: none"> <li>• RQ2.1: What is the percentage of providers that have an executed agreement with Health Current and receive ADT alerts?</li> <li>• RQ2.2: Do adults subject to the TI program have higher rates of screening than those who are not subject to the demonstration?</li> <li>• RQ2.3: Do adults subject to the TI program have lower rates of ED utilization than those who are not subject to the demonstration?</li> <li>• RQ2.4: Do adults subject to the TI program have higher rates of follow-up after hospitalization or an ED visit for mental illness than those who are not subject to the demonstration?</li> <li>• RQ2.5: Do adults subject to the TI program have higher rates of alcohol and drug abuse treatment and adherence than those who were not subject to the demonstration?</li> <li>• RQ2.6: Do adults subject to the TI program perceive their doctors have better care coordination than those not subject to the demonstration?</li> </ul>
<p><b>H3: The TI program will improve care coordination for AHCCCS-enrolled adults released from criminal justice facilities.</b></p>	<ul style="list-style-type: none"> <li>• RQ3.1: What is the percentage of providers that have an executed agreement with Health Current and receive ADT alerts?</li> <li>• RQ3.2: Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of access to care than those who were not subject to the demonstration?</li> <li>• RQ3.3: Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of alcohol and drug abuse treatment and adherence than those who were not subject to the demonstration?</li> <li>• RQ3.4: Do adult beneficiaries recently released from a criminal justice facility and subject to the TI program have</li> </ul>

	<p>lower rates of ED utilization than those who were not subject to the demonstration?</p> <ul style="list-style-type: none"> <li>• RQ3.5: Do adult beneficiaries recently released from a criminal justice facility and subject to the TI program have better management of opioid prescriptions than those who were not subject to the demonstration?</li> </ul>
<p><b>H4: The TI program will provide cost-effective care.</b></p>	<ul style="list-style-type: none"> <li>• RQ4.1: What are the costs associated with care coordination provided under TI?</li> <li>• RQ4.2: What are the benefits/savings associated with care coordination provided under TI?</li> </ul>
<p><b>H5: Providers will increase the level of care integration over the course of the demonstration.</b></p>	<ul style="list-style-type: none"> <li>• RQ5.1: Do providers progress across the SAMHSA national standard of six levels of integrated health care?</li> <li>• RQ5.2: Do providers increase the level of integration within each broader category (i.e., coordinated, co-located, and integrated care) during the demonstration period?</li> </ul>
<p><b>H6: Providers will conduct care coordination activities.</b></p>	<ul style="list-style-type: none"> <li>• RQ6.1: Did AHCCCS encounter barriers related to the pre-implementation and implementation phases of TI?</li> <li>• RQ6.2: Did providers encounter barriers related to the pre-implementation and implementation phases of TI?</li> </ul>

Note: ADT: admission-discharge-transfer; AHCCCS: Arizona Health Care Cost Containment System; BH: behavioral health; ED: emergency department; H: hypothesis; PH: physical health; RQ: research question; SAMHSA: Substance Abuse and Mental Health Services Administration; TI: Targeted Investments.



### 3. Methodology

The primary goal of an impact assessment in policy and program evaluation is to establish a causal relationship between the introduction of a policy or program and related outcomes. To accomplish this, a comparison of outcomes between the intervention group and a valid counterfactual—the intervention group had its beneficiaries not been exposed to the intervention—must be made. The gold standard for experimental design is a randomized controlled trial which would be implemented by first identifying an intervention population, and then randomly assigning individuals to the intervention and the rest to a control group, which would serve as the counterfactual. However, random assignment is rarely feasible in practice, particularly as it relates to healthcare policies.

As such, a variety of quasi-experimental or observational methodologies have been developed for evaluating the effect of policies on outcomes. The research questions presented in the previous section will be addressed through at least one of these methodologies. The selected methodology largely depends on data availability factors relating to (1) data to measure the outcomes, (2) data for a valid comparison group, and (3) data collection during the time periods of interest—typically defined as one or two years prior to implementation and annually thereafter. Table 3-1 illustrates a list of analytic approaches that will be used as part of the evaluation and whether the approach requires data gathered at the baseline (i.e., pre-implementation), requires a comparison group, or allows for causal inference to be drawn. It also notes key requirements unique to a particular approach.

**Table 3-1—Analytic Approaches**

Analytic Approach	Baseline Data	Comparison Group	Allows Causal Inference	Notes
Difference-in-Differences	✓	✓	✓	Trends in outcomes should be similar between comparison and intervention groups at baseline.
Interrupted Time Series	✓		✓	Requires sufficient data points prior to and following implementation.
Pre-test/post-test	✓			

### Evaluation Design Summary

This Summative Evaluation Report provides a comparison of outcomes between the baseline period and the demonstration period across each of the six program components. A mixed-methods approach was used to assess each program, with a majority of qualitative data collection centered on the demonstration renewal period and Arizona Health Care Cost Containment System’s (AHCCCS’) overarching strategic goal of integrating physical health (PH) and behavioral health (BH) care. Table 3-2 outlines the quantitative and qualitative methods employed in this report for each program component. For details on the measure definitions and specifications, please reference the approved Evaluation Design.<sup>3-1</sup>

<sup>3-1</sup> Arizona Health Care Cost Containment System. Arizona’s Section 1115 Waiver Independent Evaluation–Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

**Table 3-2—Quantitative and Qualitative Methods**

Program	Quantitative Analytic Approach	Interviews/Focus Groups	Beneficiary Surveys
ACC	<ul style="list-style-type: none"> <li>Pre/post-analysis</li> <li>Comparison to national/regional benchmarks</li> <li>Subgroup analysis of children and adults</li> </ul>	✓	✓
ALTCS	<ul style="list-style-type: none"> <li>Pre/post-analysis</li> <li>Difference-in-differences</li> </ul>	✓	
CHP	<ul style="list-style-type: none"> <li>Pre/post-analysis</li> </ul>	✓	
RBHA	<ul style="list-style-type: none"> <li>Pre/post-analysis</li> </ul>	✓	✓
PQC	<ul style="list-style-type: none"> <li>Pre/post-analysis</li> <li>Interrupted Time Series</li> </ul>	✓	✓
TI	<ul style="list-style-type: none"> <li>Difference-in-differences</li> </ul>	✓	✓

The time periods covered in this report are delineated in Table 3-3.

**Table 3-3—Time Periods**

Program	Baseline Period	Summative Report Demonstration Period <sup>1</sup>
ACC	<ul style="list-style-type: none"> <li>October 1, 2015 – September 30, 2018</li> </ul>	<ul style="list-style-type: none"> <li>October 1, 2018 – September 30, 2022</li> </ul>
ALTCS	<ul style="list-style-type: none"> <li>October 1, 2014 – September 30, 2016 (pre-renewal)</li> <li>October 1, 2014 – September 30, 2019 (pre-integration)</li> </ul>	<ul style="list-style-type: none"> <li>October 1, 2016 – September 30, 2022 (renewal)</li> <li>October 1, 2019 – September 30, 2022 (integration)</li> </ul>
CHP	<ul style="list-style-type: none"> <li>October 1, 2014 – September 30, 2016 (pre-renewal)</li> <li>October 1, 2014 – September 30, 2020 (pre-integration)</li> </ul>	<ul style="list-style-type: none"> <li>October 1, 2016 – September 30, 2022 (renewal)</li> <li>October 1, 2021 – September 30, 2022 (integration)*</li> </ul>
RBHA	<ul style="list-style-type: none"> <li>October 1, 2011 – September 30, 2013</li> </ul>	<ul style="list-style-type: none"> <li>October 1, 2013 – September 30, 2022</li> </ul>
PQC	<ul style="list-style-type: none"> <li>July 1, 2017 – June 30, 2019</li> </ul>	<ul style="list-style-type: none"> <li>July 1, 2019 – June 30, 2022</li> </ul>
TI	<ul style="list-style-type: none"> <li>October 1, 2014 – September 30, 2016</li> </ul>	<ul style="list-style-type: none"> <li>October 1, 2019 – September 30, 2022</li> </ul>

Note: ACC: AHCCCS Complete Care, ALTCS: Arizona Long Term Care System, CHP: Comprehensive Health Plan, PQC: Prior Quarter Coverage, and TI: Targeted Investments.

<sup>1</sup>The demonstration approval period ends on October 14, 2022; however, to facilitate calculation of annual rates, the demonstration period for all programs except PQC will end on September 30, 2022.

\* Although integration efforts for CHP began April 1, 2021, to facilitate calculation of annual rates, the demonstration period for CHP integration will begin October 1, 2021. The period October 1, 2020, through September 30, 2021, will be treated as a ramp up period and therefore be excluded from statistical modeling.

## Analytic Approaches

### Pre/Post-Analysis

Due to limitations of available and appropriate comparison groups, a one-group pre/post-analysis was utilized for AHCCCS Complete Care (ACC), Arizona Long Term Care System (ALTCS), Comprehensive Health Plan (CHP), Regional Behavioral Health Authority (RBHA), and Prior Quarter Coverage (PQC). Average rates during

the baseline period were compared against average rates during the demonstration period using a Chi-square test, t-test, or other statistical test appropriate for the given data. Specifically, comparisons were made using this model:

$$Y = \beta_0 + \beta_1 * post + \beta_2 * covid + \varepsilon$$

where  $Y$  is the rate of the outcome being measured each year;  $\beta_0$  captures the average rate in the baseline years; the coefficient  $\beta_1$  for the dummy variable, *post*, represents the evaluation years; and the coefficient  $\beta_2$  for the dummy variable, *covid*, represents the difference between the rate in federal fiscal year (FFY) 2020 and the average during all other years in the post period. This model captures the change in average outcome between the baseline and evaluation time periods.

Binomial logistic regression was utilized to evaluate measures that are binary outcomes, and a negative binomial or Poisson regression was used to evaluate measures that are count outcomes (e.g., inpatient stays or emergency department [ED] visits). Due to the lack of a comparison group, it is difficult to conclude whether the changes in rates are a direct result of the specific program, as simultaneous external factors occurring during the same time period may have also had an impact that could not be accounted for.

Survey measures for ACC and RBHA were evaluated using binomial logistic regression and incorporated non-inferiority statistical testing. Targeted Investments (TI) survey measures were evaluated using two-proportion z-tests to test differences between groups.

### Non-Inferiority Testing

To determine whether measure rates in the demonstration period were meaningfully different from rates in the baseline period (i.e., to statistically test whether rates were “the same or better” than baseline rates), non-inferiority testing was performed. Non-inferiority testing allows for an assessment of meaningful difference in rates by comparing the change in rates between the baseline and demonstration period to a predetermined threshold. This threshold represents the greatest difference between the baseline and demonstration period that can exist while still being considered “equivalent.” Specifically, the predetermined threshold ( $\delta$ ) was calculated using the following variation of the Cohen’s  $h$  equation:

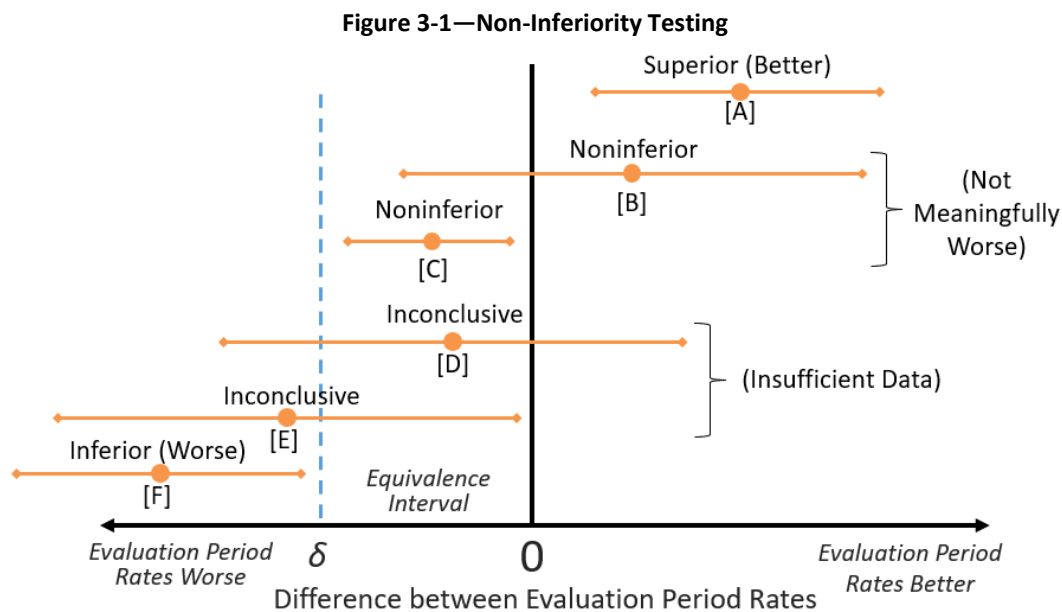
$$\delta = P_2 - \sin\left(\frac{2 * \arcsin(\sqrt{P_2}) \pm h}{2}\right)^2$$

Where  $P_2$  is the baseline average rate and  $h$  is the chosen Cohen’s  $h$  effect size. While an effect size of 0.20 has commonly been deemed to represent a “small” effect as originally suggested by Cohen, Cohen writes, “the terms ‘small,’ ‘medium,’ and ‘large’ are relative, not only to each other, but to the area of behavioral science or even more particularly to the specific content and research method being employed in any given investigation” (p. 25). Because the application of effect size in this context is to identify a minimum acceptable difference between proportions while still considering them “equal” for practical purposes, a stricter threshold than what may be typically used is appropriate. Therefore,  $\delta$  for each measure was calculated based off Cohen’s  $h$  of 0.05 (differences between proportions).

Although not present in the approved Evaluation Design, the inclusion of non-inferiority testing in this evaluation allows for the assessment of research questions which, in addition to hypothesizing directionality of the rates, also require testing if the rates have remained the same between the baseline and evaluation periods. While the Pre/Post-Test allows for testing of statistical significance, the non-inferiority test provides context to how clinically meaningful the calculated changes in rate are by determining if the changes surpass a set threshold

indicating the rates are no longer meaningfully the same. Statistical testing for the non-inferiority test was conducted by assessing whether the observed difference between the average baseline and demonstration period rates was different from  $\delta$ . The calculated change in rate threshold is compared to the 95 percent confidence intervals (CI) from performed Pre-Test/Post-Test results to determine whether rates were meaningfully different in the demonstration period.

Non-inferiority testing characterizes results in one of four ways as shown in Figure 3-1 below: superior (better), non-inferior (not meaningfully worse), inconclusive (insufficient data), or inferior (worse). Superior results [A] indicate the CI from the Pre/Post-Test is entirely above both the predefined threshold value and zero (i.e., the Pre/Post-Test is found to be statistically significant). Non-inferior findings [B/C] indicate that while results from statistical testing may be inconclusive or significantly worsening, non-inferiority testing shows any worsening in rates are not practically/clinically significant and therefore can be characterized as being not inferior to baseline rates. Inconclusive findings [D/E] occur when the 95 percent CI captures the non-inferiority threshold value. Inferior results [F] indicate the CI from the Pre/Post-Test is entirely below the predefined threshold value. Figure 3-1 presents both the technical terms and the simplified terms utilized to interpret non-inferiority findings. The results utilize the simplified terms for ease of interpretability.



### Interrupted Time Series

The ITS design included annual or quarterly observations of each measure over time, beginning at least one year prior to the Demonstration implementation. The counterfactual for the analysis was the trend as it would have happened without being “interrupted” by the Demonstration. Specific outcome measures were collected for multiple time periods both before and after the first demonstration period, demonstration renewal, and related interventions. The measurements collected after the Demonstration were then compared to the projected outcome to evaluate the impact the Demonstration had on the outcome. The generic ITS model is:

$$Y_t = \beta_0 + \beta_1 time_t + \beta_2 post_t + \beta_3 time \times post_t + \gamma D'_{it} + \varepsilon_t$$

where  $Y_t$  is the outcome of interest for the time period  $t$ ,  $time$  represents a linear time trend,  $post$  is a dummy variable to indicate the time periods post-implementation, and  $time \times post$  is the interaction term between  $time$

and *post*, the vector  $\mathbf{D}'$  represents the PHE and quarterly indicator covariates, and  $\gamma$  is a coefficient vector. The coefficient,  $\beta_0$ , identifies the starting level of outcome  $Y$ ;  $\beta_1$  is the slope of the outcome between the measurements before the program;  $\beta_2$  is the change in the outcome at a various point in time; and  $\beta_3$  is the change in the slope for the measurements after the program.

For measures calculated quarterly, indicator variables were added to the ITS model specified above for each quarter of the year to adjust for seasonality in the trend. Adjustment for the coronavirus disease 2019 (COVID-19) public health emergency (PHE) was conducted by creating an indicator variable for quarter 2 (Q2) 2021 to represent the initial wave of the COVID-19 PHE-related shutdowns and stay-at-home orders, and a separate indicator variable for Q3 2020 through the end of Q1 2021 to reflect subsequent Arizona-specific public health orders. For measures calculated annually, an indicator variable for 2020 was included in the model to adjust for the COVID-19 PHE.

## Difference-in-Differences

### Targeted Investments

A difference-in-differences (DiD) analysis was performed for all measures using claims/encounter data for evaluating the TI program as data were available for both the TI population (intervention group) and the non-TI group (comparison group). This approach compared the changes in outcome rates between the baseline period and the demonstration period, across the intervention and comparison groups. The DiD approach was used where possible, as it controls for any factors external to the TI program that are applied equally to both groups, such as the COVID-19 PHE. However, the method is still susceptible to external factors that may differentially impact one group and not the other.

For the DiD analysis to be valid, the comparison group must accurately represent the change in outcomes that would have been experienced by the intervention group in the absence of the program. To construct the most appropriate comparison group, a logistic regression model was used to predict the probability that each provider would participate in TI, conditional on the provider's observed characteristics (i.e., the propensity score). These provider-level characteristics included number of beneficiaries, indicators for provider type (group payment, BH outpatient, integrated clinic), proportion of patients enrolled in each program (ACC, CHP, RBHA, ALTCS), average patient age, average number of beneficiary-months, an indicator for patient gender, a weighted Chronic Illness & Disability Payment System (CDPS) risk score, and indicators for the top disease conditions among provider's respective patient populations.

DiD analysis was conducted with provider-level rates, using a logistic regression model for measures that were binary outcomes and a negative binomial model for measures that were count outcomes. Only non-TI providers with a non-zero weight were included in the comparison group. Due to sparseness in outcome data for the non-TI group, which led to prohibitively small sample sizes after propensity score matching for some measures, propensity score weighting was used to retain all eligible non-TI providers in the comparison group. Weights based on the propensity score were applied to the non-TI provider rates, allowing for estimation of the average treatment effect among the treated (ATT).<sup>3-2</sup> Specifically, weights for non-TI providers were defined as  $\frac{e_i}{1-e_i}$ , where  $e_i$  denotes the propensity score for the  $i^{\text{th}}$  provider, and capped at 1 to prevent providers with large weights from disproportionately influencing the model results.

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<sup>3-2</sup> Austin, P. An Introduction to Propensity Score Methods for Reducing the Effects of Confounding in Observational Studies US National Library of Medicine National Institutes of Health, Multivariate Behavioral Health Research. 2011 May; 46(3): 399-424. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3144483/>. Accessed on: Nov 30, 2023.

The general form of the DiD model used was:

$$Y_{it} = \beta_0 + \beta_1 * Group + \beta_2 * post + \beta_3 * (post * Group) + \varepsilon$$

where  $Y$  is the outcome for group  $i$  in year  $t$ ,  $Group$  is a binary indicator of the intervention group (e.g., TI),  $post$  is a binary indicator for the demonstration period, and  $\varepsilon$  is an error term. The coefficient  $\beta_1$  identifies the average difference between the TI and non-TI groups during the baseline period prior to the implementation of the TI program. The time period dummy coefficient  $\beta_2$  captures the change in average outcome between the baseline and evaluation time periods for the non-TI group. The coefficient on the interaction term  $\beta_3$  represents the DiD estimate of interest in this evaluation. In other words, it is the difference in the average outcome between the baseline and evaluation time periods for the TI group, compared to the difference in average outcome between the baseline and evaluation time period for the non-TI group.

### ALTCS-DD National Core Indicators

Data from the National Core Indicators-Developmental Disabilities (NCI-DD) survey are available for both Arizona respondents and those nationally, allowing for use of the DiD approach for measures that rely on these data. To accurately model percentages, binomial logistic regression was used following the generic DiD equation described above.

### Disparity Analysis

To better understand how measure rates varied across demographic groups, effect sizes and relative percentage differences were calculated for beneficiaries by race, urbanicity, and sex.

Stratifications for race include Black, American Indian/Alaska Native, Unknown, and All Others, with White as the reference group. For urbanicity stratifications, the average rate across rural counties provides a comparison group, and the average rate across urban counties acts as the reference group. For gender stratifications, the rates of female beneficiaries were treated as the comparison group, with the rates of male beneficiaries making up the reference group.

Demographic data utilized in this report may not provide a full picture of the racial makeup of AHCCCS as the race for 34 percent for AHCCCS beneficiaries is listed as “Unknown” according to AHCCCS’ October 2023 Population Demographics report.<sup>3-3</sup> AHCCCS is aware of the issue and is working to use supplemental demographic data, which will be utilized in future evaluations.

Cohen’s  $h$  was utilized to determine the effect size between comparison and reference group rates in 2016 and 2022.<sup>3-4</sup> This method is applicable to measures with a desired direction and where the rate is bounded between 0 and 1.

The formula for Cohen’s  $h$  is given by:

$$h = (2 * \arcsin\sqrt{P_1}) - (2 * \arcsin\sqrt{P_2})$$

<sup>3-3</sup> Arizona Health Care Cost Containment System. AHCCCS Population Demographics. [https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2023/Demographic\\_10012023.pdf](https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2023/Demographic_10012023.pdf). Accessed on: Nov 30, 2023.

<sup>3-4</sup> Cohen, J. Statistical Power Analysis for the Behavioral Sciences, 2nd Ed. Hillsdale, N.J.: L. Erlbaum Associates; 1988:25



Where  $P_1$  is the annual rate for the comparison group and  $P_2$  is the annual rate for the reference group. The effect size is displayed with shaded boxes indicating the magnitude and direction of the results.

For measures where the rates are not bounded between 0 and 1 or have no desired direction, the relative percent difference between each demographic stratification and the appropriate reference category was calculated for 2016 and 2022. The relative percent difference is calculated by subtracting the reference group rate from the comparison group rate and then dividing by the reference group rate. The relative percent difference is displayed using arrows indicating the magnitude and direction of the results.

Comparisons involving denominators or numerators smaller than 11 beneficiaries are suppressed due to potentially unreliable statistical testing and rate calculation and to ensure anonymity.

### Financial Analysis Trend and Cost Development

The goal of the financial analysis was to compare the costs to the State for the programs covered under the Demonstration against the estimated expected costs had the Demonstration not been implemented. The financial analysis compares the cost at two levels, costs to the health plans and costs to the program through capitated arrangements.

Costs to the health plans were the actual costs associated with providing care to beneficiaries covered under the Demonstration. These costs were compared to the estimated expected costs had the Demonstration not been implemented. Expected expenditures were estimated based on changes in beneficiary demographics, population health condition-based risk score, and the medical cost price index (CPI) percentage from the Bureau of Labor Statistics. Total actual expenditure costs for providing care to beneficiaries covered by the Demonstration were compared to the estimated expected expenditures which were calculated by applying annual demographic and inflation factors to the baseline costs for each program. Note that the cost analyses do not refer to nor attempt to replicate the formal Budget Neutrality test required under the Demonstration, which sets a fixed target under which Demonstration expenditures must fall that was set at the time the Demonstration was approved.

Cost impact analysis to the program through capitated arrangements were based on the annualized changes in utilization per 1,000 and unit costs values certified by AHCCCS's actuaries. These annualized impact trends were compared to the estimated annualized trends had the Demonstration not been implemented. Expected trends were estimated based on changes in beneficiary demographics, population health condition-based risk score, and the medical CPI.

To accomplish this, costs and trends were developed two ways, normalized and un-normalized. Un-normalized and normalized claim/encounter costs and trends were calculated and analyzed at two levels. Level one analysis reviews the per member per month (PMPM) cost and trend by year and compares the average annual trend from the baseline period, the average normalized annual trend from the baseline period, and the expected average annual trend. The second level of analysis for un-normalized and normalized claims/encounters was completed on a per utilizing member per month (PUMPM) basis. A utilizing member month was any month in a calendar year during which a beneficiary utilized services. For the level two analysis reviews, the PUMPM cost and trend by year was compared to the average annual trend from the baseline period, the average normalized annual trend from the baseline period, and the expected average annual trend.

Un-normalized claim trends and costs represent the cost from the reported utilization data. The information presented was aggregated for all Medicaid populations. Un-normalized data analysis does not account for known demographic differences from one DY to the next. When completing an evaluation by comparing year to year changes of the un-normalized costs, program impacts and results may be biased due to the demographic changes

in the underlying population. In an un-normalized analysis, cost changes were not adjusted to account for changes in the underlying population.

Normalization is the term used to describe the process of adjusting cost data for the known quantifiable changes that impact utilization and cost such as demographic changes, risk, and inflation. Normalization analysis is employed with the goal of removing all known and quantifiable variation by analysis period, leading to a more accurate comparison between time periods. Below are the high-level steps of the normalization process. Detailed descriptions of each step are outlined further below.

1. Calculate the risk-adjusted PMPM for the analysis cohort.
2. Calculate the age-band/gender factor for the analysis cohort.
3. Calculate the race category factor for the analysis cohort.
4. Calculate the area factor for the analysis cohort.
5. Apply risk, age-band/gender, race, and area factors to paid claims to calculate the normalized PMPMs for the analysis cohort.

**Normalization Factor Development**

To account for demographic differences throughout the Demonstration, all claims/encounters were normalized for condition-based risk score, combined age and gender variation, race variation, and variation in cost by geographic area. HSAG employed the Chronic Illness & Disability Payment System (CDPS) model version 6.5 to develop person-level condition-based risk scores.

**Risk Factor Trend**

CDPS is a diagnostic-based risk adjustment model widely used to adjust capitated payments for health plans that enroll Medicaid beneficiaries. CDPS uses International Classification of Diseases (ICD) codes to assign CDPS categories that indicate illness burden related to major body systems (e.g., Cardiovascular) or types of chronic disease (e.g., Diabetes). Within each major category is a hierarchy reflecting both the clinical severity of the condition and its expected effect on future costs. Each of the hierarchical CDPS categories were assigned a CDPS weight. CDPS weights were additive across major categories. The condition risk score output from CDPS was applied to the member-level claims by dividing the condition risk score into the claims PMPM to develop a risk-adjusted PMPM.

$$R_t = \frac{M_t}{C_t}$$

where *R* represents the risk-adjusted member level individual claim cost, *t* is time, *M* is actual member-level expenditure, and *C* is the condition based CDPS risk score for the beneficiary.

Average annual risk trend represents the average annual growth in the average member weighted CDPS risk score throughout the analysis period.

$$Average\ Annual\ Risk\ Trend_t = \left( \frac{Member\ Weighted\ CDPS\ Risk\ Score_t}{Member\ Weighted\ CDPS\ Risk\ Score_0} \right)^{\left(\frac{1}{t}\right)} - 1$$

### Age Factor Trend

The risk adjusted PMPM was used to develop the combined age/gender factors utilizing the largest populated county, Maricopa, to remove any bias in the claims cost due to variance by geographic area. Category of service level risk-adjusted PMPM costs were calculated at an age-band and gender grouping level as well as at the total level for the entire population.

$$A_x = \sum R_x / D_x$$

where  $A$  represents the annual risk-adjusted claim cost PMPM for an age-band/gender grouping,  $X$ ;  $R$  is risk-adjusted member-level individual claim cost and  $D$  represents corresponding eligible member months for the represented age-band/gender grouping. The risk-adjusted individual claim level expenditures and corresponding eligible beneficiaries for a selected age-band/gender grouping were summed across each year. The annual risk-adjusted member-level PMPM claims were developed to calculate age-band/gender ratios, also referred to as age-band/gender factors, between each stratification comparing the risk-adjusted, age-band/gender grouping PMPM to the total population-level annual risk-adjusted member level claim cost PMPM. For example, if female members ages 20–24 have an annual risk-adjusted claims cost PMPM of \$105 and the entire population has an annual risk-adjusted claims cost PMPM of \$100, then the age-band/gender factor would be 1.05 for the female 20–24 cohort.

Age-band/gender factors were calculated based on the annual risk-adjusted member-level claim cost PMPM. The factors were calculated for each year in the Demonstration by dividing the age-band/gender grouping risk-adjusted claim cost PMPM by the overall annual risk-adjusted population level claim cost PMPM. The annual age-band/gender factors are as follows.

$$AB_x = A_x / A_T$$

where  $AB$  represents the annual age-band/gender factor and age-band/gender grouping,  $X$  is the age-band/gender grouping,  $A_x$  is risk-adjusted member-level individual claim cost, and  $A_T$  represents the annual risk-adjusted claim cost PMPM for the entire population. The calculated factors were reviewed over multiple time periods, and final factors were developed to ensure highest statistical  $R^2$  for a given age-band/gender grouping. A single set of age-band/gender factors were developed ensuring that changes in age factors were applied consistently across all areas and years.

Once consistent age factors were developed, they were applied to the member-level annual risk-adjusted claim cost PMPM for members in each age-band/gender grouping by dividing the calculated age-band/gender factor into the corresponding claims PMPM to develop an age-band /gender and risk adjusted PMPM. At this point the age-band/gender and risk-adjusted PMPM represents a PMPM that has been netted of any impact of age, gender, and risk.

Average annual aging trend represents the average annual growth in the average age-band/gender factor,  $AB$ , throughout the analysis period.

$$\text{Average Annual Aging Trend}_t = \left( \left( \frac{AB_t}{AB_0} \right)^{\left( \frac{1}{t} \right)} \right) - 1$$

### Race Factor Trend

The age-band/gender and risk-adjusted PMPM was used to develop the race category factors utilizing the largest populated county, Maricopa, to remove any bias in the claims cost due to variance by geographic area. Category

of service level age-band/gender and risk-adjusted PMPM costs were calculated at a race category grouping level as well as at the total level for the entire population.

$$J_x = \sum R_x / AB_x$$

where  $J$  represents the annual age-band/gender and risk-adjusted claim cost PMPM for a race category grouping,  $X$ ;  $R$  is risk-adjusted member-level individual claim cost, and  $AB$  represents the annual age-band/gender factor for an age-band/gender. The risk-adjusted individual claim level expenditures and corresponding eligible members for a selected age-band/gender grouping were summed across each year. The annual risk and age-band/gender factors adjusted claim PMPM output was developed to calculate race category factors, between each stratification comparing the age-band/gender, risk-adjusted, and race category grouping PMPM to the total population level annual age-band/gender and risk-adjusted member level claim cost PMPM. The annual race category factor was calculated as:

$$JF_x = J_x / J_T$$

where  $JF$  represents the annual race category factor,  $X$  is the race category grouping,  $J_x$  is risk and age-band/gender factors adjusted claim cost and  $J_T$  represents the annual risk and age-band/gender factors adjusted PMPM for the entire population. The calculated factors were reviewed over multiple time periods and final factors were developed to ensure highest statistical  $R^2$  for a race category grouping. A single set of race category factors were developed ensuring that changes in race category stratifications were applied consistently across all areas and years.

Average annual race factor trend represents the average annual growth in the average race factor,  $JF$ , throughout the analysis period.

$$\text{Average Annual Race Trend}_t = \left( \left( \frac{JF_t}{JF_0} \right)^{\left( \frac{1}{t} \right)} \right) - 1$$

**Area Factor Trend**

Once consistent race category factors were developed, they were applied to the member-level annual risk-adjusted and age-band/gender claim cost PMPM for members in each race category grouping by dividing the calculated race category factor into the corresponding claims PMPM to develop an age-band /gender, risk, and race category adjusted PMPM. At this point the age-band /gender, risk, and race category adjusted PMPM represents a PMPM that has been netted of any impact of age, gender, risk, and race. This allows for a focus on the variation of cost in order to develop an adjustment factor by geographic region as outlined below.

$$G_x = \sum R_x / AB_x / JF_x$$

Where  $G$  represents the annual risk, age-band/gender and race category factors adjusted claim cost PMPM for a geographic area,  $X$  is the geographic area,  $R$  is risk-adjusted member-level individual claim cost,  $AB$  is the annual age-band/gender age factor for an age-band/gender, and  $JF$  is the annual race category factor for a race category. The risk-adjusted individual claim level expenditures and corresponding eligible members for a selected age-band/gender and race category grouping was summed across each year. The annual risk, age-band/gender, and race category factors adjusted claim PMPM output was developed to calculate relativities between geographic regions and the overall annual risk, age-band/gender and race category adjusted member-level claim cost PMPM. The annual geographic factor was calculated as:

$$GF_x = G_x/G_T$$

where  $GF$  represents the annual geographic factor,  $X$  is the geographic grouping,  $G_x$  is risk, age-band/gender, and race category factors adjusted claim cost and  $G_T$  represents the annual risk, age-band/gender, and race category factors adjusted PMPM for the entire population. The calculated factors were reviewed over multiple time periods and final factors were developed to ensure highest statistical  $R^2$  for a geographic grouping. A single set of geographic factors were developed ensuring that changes in geographic stratification of the enrolled population were applied consistently across all years.

Average annual area factor trend represents the average annual growth in the average area factor,  $GF$ , throughout the analysis period.

$$\text{Average Annual Area Trend}_t = \left( \left( \frac{GF_t}{GF_0} \right)^{\left( \frac{1}{t} \right)} \right) - 1$$

### Service Category Distribution Trend

The service category distribution represents the total actual paid claims cost impact of members utilizing services differently throughout the evaluation period. Services include inpatient, outpatient, emergency department, professional, and pharmacy. The annual risk, age-band/gender, race category, and area factors adjusted claim PMPM output was developed to calculate relativities between service categories and the overall annual risk, age-band/gender, race and area category adjusted claim cost PMPM. The annual service category distribution factor was calculated as:

$$SF_x = S_x/S_T$$

where  $SF$  represents the annual service category distribution factor,  $X$  is the service category grouping,  $S_x$  is risk, age-band/gender, race, and area category factors adjusted claim cost and  $S_T$  represents the annual risk, age-band/gender, race and area category factors adjusted PMPM for the entire population.

Average annual service category distribution factor trend represents the average annual change in the average service category distribution factor,  $SF$ , throughout the analysis period.

$$\text{Average Annual Service Category Distribution Trend}_t = \left( \left( \frac{SF_t}{SF_0} \right)^{\left( \frac{1}{t} \right)} \right) - 1$$

### Cost and Trends

Costs and trends were calculated and reviewed seven ways:

- **Actual Total Cost** represents the total expenditure for each review period.

$$X_t = \sum MC_t$$

Where  $X$  represents the actual total cost for the population or time period under review, and  $MC$  represents the costs at a member level for the time period under review.

- **Actual PMPM** represents the per member per month cost over the review period.

$$Y_t = \sum X_t / \sum Z_t$$

Where  $Y$  represents the claims PMPM cost,  $t$  represents the annual review period,  $X$  represents the actual total cost for the population or time period under review, and  $Z$  represents the total enrolled population for the analysis cohort.

- **Counterfactual PMPM** represents the expected per member per month cost over the review period. It was calculated by multiplying the ratio of the age-band/gender factor between the review period and the year prior, the ratio of the race category factor between the review period and the year prior, the ratio of the geographic factor between the review period and the year prior, and the inflation rate for the review period.

$$E_t = E_{t-1} \left( \frac{AB_t}{AB_{t-1}} \right) \left( \frac{JF_t}{JF_{t-1}} \right) \left( \frac{GF_t}{GF_{t-1}} \right) \left( \frac{C_t}{C_{t-1}} \right) \text{ where } t \geq 1$$

$$E_t = Y_t \text{ where } t = 0$$

Where  $E$  represents the counterfactual PMPM cost,  $t$  represents the review period,  $AB$  represents the annual age-band/gender age factor for an age-band/gender,  $JF$  represents the annual race category factor,  $GF$  represents the annual geographic factor,  $C$  represents the annual condition based CDPS risk score,  $i$  represents the inflation rate, and  $Y$  represents the claims PMPM cost.

- **Counterfactual Total Cost** represents the expected total expenditure for each review period. It was calculated by taking the total enrolled population for the analysis cohort and multiplying by the expected claims PMPM.

$$EC_t = E_t Z_t$$

Where  $EC$  represents the counterfactual total expenditure for each review period,  $t$  represents the review period,  $E$  represents the expected PMPM cost, and  $Z$  represents the total enrolled population for the analysis cohort.

- **Average Annual Trend** represents the average annual growth in cost of care between the baseline and each year. The annualized trend was adjusted to smooth the individual annual trends to determine the average across the represented time period.

$$L_t = \left( \left( \frac{Y_t}{Y_0} \right)^{\left( \frac{1}{t} \right)} \right) - 1$$

Where  $L$  represents the average annual trend,  $t$  represents the review period,  $Y_t$  represents the claims PMPM cost for the review period at time  $t$ , and  $Y_0$  represents the claims PMPM cost for the baseline year.

- **Counterfactual Average Annual Trend** represents the average annual growth in cost of care for the expected cost between the baseline and each year. The expected annualized trend was adjusted to smooth the individual annual trends to determine the average across the represented time period.

$$K_t = \left( \left( \frac{E_t}{E_0} \right)^{\left( \frac{1}{t} \right)} \right) - 1$$

Where  $K$  represents the counterfactual average annual trend,  $t$  represents the review period,  $E_t$  represents the expected claims PMPM cost for the review period at time  $t$ , and  $E_0$  represents the expected claims PMPM cost for the baseline year.



- **Year-Over-Year Trend** represents the annual growth in cost of care between each year the previous year.

$$P_t = \left( \frac{Y_t}{Y_{t-1}} \right) - 1$$

Where  $P$  represents the year-over-year trend,  $t$  represents the review period,  $Y_t$  represents the claims PMPM cost for the review period at time  $t$ , and  $Y_{t-1}$  represents the claims PMPM cost for the previous review period.

## Population Identification

### ACC, ALTCS, CHP, and RBHA

Identification of beneficiaries for these programs was determined through Medicaid eligibility and health plan enrollment data.

### PQC

Medicaid eligibility and demographic data were used to identify beneficiaries subject to the PQC waiver (i.e., adults who are not eligible through pregnancy or 60-days postpartum).

### TI

TI-participating providers were identified as those participating in the program in demonstration year 4 (federal fiscal year [FFY] 2020) through demonstration year 6 (FFY 2022). From the list of participating providers, Health Services Advisory Group, Inc. (HSAG) identified providers' patient panels in each year using two years of claims/encounter data; for example, in FFY 2020, claims/encounters from FFY 2019 and FFY 2020 were used to attribute beneficiaries to all providers. Beneficiaries transitioning from the criminal justice system were released in the year prior to each measurement year (e.g., released in FFY 2019 to be included in FFY 2020 measurement).

Provider attribution excluded hospitals and labs, and beneficiaries with the most visits to a particular provider during the two-year period were attributed to that provider. If a tie occurred, the beneficiary was assigned to the provider with the most recent visit. A beneficiary was included in the TI (intervention) group if they were attributed to a TI-aligned participating provider for the measurement year. Likewise, a beneficiary was included in the non-TI (comparison) group if they were attributed to a provider who had never participated in the TI program and had never had an encounter with a TI provider during the years of the study period (2015–2022). The comparison group was limited to providers of the same provider types as TI providers: group payment, BH outpatient, and integrated clinics.

## Performance Measure Rates Weighted Calculations

All beneficiaries enrolled in their respective program during each baseline year were included in measure calculations provided they met defined continuous enrollment requirements. Continuous enrollment requirements were applied using overall enrollment in Medicaid, irrespective of program enrollment. Because beneficiaries could have switched programs during the year and still meet defined continuous enrollment criteria, rates presented in this report were weighted by duration in the program. For example, rates for an individual enrolled in CHP for six months and in an Acute Care plan as part of the ACC population would contribute 50 percent to CHP and 50 percent to ACC.

## Data Sources

A combination of national survey, administrative, and qualitative data sources were used to evaluate the 35 research hypotheses for the evaluation. Data collected include administrative claims/encounter, Medicaid recipient files, Centers for Medicare & Medicaid Services (CMS) 64 files supplied by AHCCCS, beneficiary survey data, national survey-based data such as the Integrated Public Use Microdata Series (IPUMS) and National Core Indicators (NCI), key informant interviews, and provider focus groups. Capitation rate certification files publicly available on AHCCCS' website and budget neutrality workbooks publicly available on Medicaid.gov were obtained for the cost-effectiveness review. Administrative data sources include information extracted from the Prepaid Medical Management Information System (PMMIS). PMMIS was used to collect, manage, and maintain Medicaid recipient files (i.e., eligibility, enrollment, demographics) and managed care encounter data. Qualitative data were collected through key informant interviews and provider focus groups to capture information about program implementation, care coordination strategies, barriers to and drivers of success, unintended consequences, and perceived impacts of the COVID-19 PHE on the programs.

### IPUMS

Data from the IPUMS American Community Surveys (ACS) were used to estimate the number of Medicaid-eligible individuals in Arizona, as part of the analysis of *Percentage of Medicaid Enrollees by Eligibility Group* (PQC Measure 1-1) and *Percentage of New Medicaid Enrollees by Eligibility Group* (PQC Measure 1-2). The IPUMS ACS is a “database providing access to over 60 integrated, high-precision samples of the American population drawn from 16 federal censuses, from the ACS of 2000–present.”<sup>3-5</sup> The data executed will include demographic information, employment, disability, income data, and program participation such as Medicaid enrollment information.

### Administrative

Administrative data extracted from the PMMIS were used to calculate most measures presented in this Summative Evaluation Report. These data include administrative claims/encounter data, beneficiary eligibility, enrollment, and demographic data. Provider data were used as necessary to identify provider type and beneficiary attribution.

Use of managed care encounters was limited to final, paid status claims/encounters. Interim transaction and voided records were excluded from all evaluations because these types of records introduce a level of uncertainty (from matching adjustments and third-party liabilities to the index claims) that could impact reported rates and cost calculations.

Program administrative data pertaining to the TI program were used to identify TI providers who were initially eligible for the program and assess providers' self-reported scores from the Integrated Practice Assessment Tool (IPAT).<sup>3-6</sup> The self-reported IPAT scores were used to assess TI Hypothesis 5: *Providers will increase the level of care integration over the course of the demonstration.*

Form CMS 64s provided by AHCCCS were used as part of the cost-effectiveness review and contain statements of expenditures for which states are entitled to Federal reimbursement under Title XIX.

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<sup>3-5</sup> IPUMS. What is IPUMS USA? Available at: <https://usa.ipums.org/usa/intro.shtml>. Accessed on: Nov 30, 2023.

<sup>3-6</sup> Waxmonsky J, Auxier A, Romero PW, et al. (2014) Integrated Practice Assessment Tool Version 2.0. Available at: [https://www.thenationalcouncil.org/wp-content/uploads/2021/11/IPAT\\_v\\_2.0\\_FINAL.pdf](https://www.thenationalcouncil.org/wp-content/uploads/2021/11/IPAT_v_2.0_FINAL.pdf). Accessed on: Nov 30, 2023.

## NCI

The NCI surveys national Medicaid beneficiaries with intellectual or developmental disabilities (IDD). These surveys are conducted annually in-person, and it is expected that half of states participate annually. Survey periods cycle annually between July 1 to June 30, with states submitting data by June 30. Each state is required to survey at least 400 individuals, allowing for a robust comparison. However, beneficiary-level data are not publicly available, and information is not publicly provided on the methodology and survey administration which could vary across states. State participation is voluntary, and states may elect to participate or not participate annually. In addition to state-specific reports, NCI provides aggregate data that may be stratified by demographic factors, such as race/ethnicity, gender, and age, as well as certain diagnoses and living arrangements. As of the writing of this Summative Evaluation Report, rates for Arizona respondents are available for 2015–16 as the baseline time period and for 2017–18 and 2018–19 as the evaluation time period. Additionally, while stratified data were available in 2015–16 and 2017–18, these data were not available in 2018–19.

## Beneficiary Surveys

Beneficiary surveys were administered among ACC and SMI beneficiaries in spring/summer 2021 for analysis of the ACC, RBHA, PQC, and TI programs. These surveys consisted of the Healthcare Effectiveness Data and Information Set (HEDIS<sup>®</sup>)<sup>3-7</sup> Consumer Assessment of Healthcare Providers and Systems (CAHPS<sup>®</sup>)<sup>3-8</sup> survey questionnaire with four additional questions specific for the evaluation of PQC. An oversample of approximately 6,540 beneficiaries released from the criminal justice system in 2020 was used to evaluate the TI justice program. This oversample was split into two groups of 3,270; one group consisting of beneficiaries with a claim from a TI participating provider (TI group), and the other group consisting of beneficiaries with a claim from a non-TI participating provider and no claims from a TI provider (non-TI group). The adult and pediatric TI and non-TI populations were identified through linking respondents from the survey data to the groups used in performance measure calculation for 2020.

Respondents for the ACC population consisted of adults and children surveyed across the seven ACC plans, and the RBHA population consisted of adults surveyed across the three RBHA plans. The PQC population was defined as adult survey respondents meeting the PQC eligibility criteria across ACC and RBHA plans. Responses were reweighted in summary statistics by overall plan enrollment to account for disproportionate oversampling of the RBHA plans relative to the overall Medicaid population.

Responses from CAHPS surveys administered to the Acute Care and RBHA populations during winter 2016/spring 2017 were utilized to provide an assessment of ACC and RBHA program performance prior to ACC integration and at the beginning of the Demonstration renewal.

## Key Informant Interviews and Focus Groups

Administrative data, national surveys, and beneficiary surveys provide metrics capturing processes and outcomes of interest in the evaluation. However, these data sources do not provide a clear window into the implementation of the Demonstration programs as experienced by key stakeholders. Key informant interviews were performed with AHCCCS staff knowledgeable about each of the Demonstration programs and with staff from each of the health plans contracted by AHCCCS. Additionally, provider focus groups and interviews were conducted to capture the experience of providers delivering care to AHCCCS beneficiaries before, during, and after the

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<sup>3-7</sup> HEDIS<sup>®</sup> is a registered trademark of the National Committee of Quality Assurance (NCQA).

<sup>3-8</sup> CAHPS<sup>®</sup> is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).

implementation of these programs. Key informant interview and focus group data were collected between October 2020 and March 2023.

In total, 11 AHCCCS staff members, five representatives from the Arizona Department of Economic Security, and three staff members from the Arizona Department of Child Services, were interviewed about their experiences in planning and implementing the Demonstration. Additionally, 40 leaders from AHCCCS' contracted health plans were interviewed about their perspectives working with AHCCCS and implementing the Demonstration programs. Finally, 72 providers delivering services across the six Demonstration programs participated in focus groups and interviews to present the provider perspective on the implementation of the Demonstration. The participating provider specialties included primary care, BH, substance use, integrated clinics, hospital systems, psychiatric hospitals, home and community-based services (HCBS), housing and employment supports, skills training, day treatment, trauma/crisis support, assisted group living, pediatric therapy, IDD, peer support, and foster care and family reunification.

Responses obtained to questions asked during key information interviews and provider focus groups were used to provide context for how the Demonstration implementations evolved over time, drivers of success, challenges experienced, unintended consequences, and to better understand how the COVID-19 PHE may have impacted operations during the Demonstration.

All interviews and focus groups were recorded for accuracy in note taking and transcription. Notes and transcriptions were analyzed using open coding techniques to identify key themes and concepts raised by interviewees and focus group participants. Axial coding techniques were subsequently used to identify relationships between concepts identified during open coding. The results of the analysis do not provide a statistically representative sample of experiences with the Demonstration implementation. The responses obtained through key informant interviews and focus groups are intended to provide the context for the breadth and variety of experiences among key stakeholders. With respect to provider responses, experiences of other providers may differ from those described in this report.

### **Publicly Available Financial/Actuarial Files**

Budget neutrality workbooks downloaded from Medicaid.gov were utilized in the cost-effectiveness assessment and consist of a standardized reporting form that consolidates financial data for each Demonstration program into a unified report, to reduce redundancy—while simultaneously strengthening and enhancing CMS reviews.

Actuarial capitation certification documents were downloaded from AHCCCS' website, comprising of documentation of the capitation rate development aligning with State and federal regulations. The requirements apply to comprehensive risk-based Medicaid managed care plans as well as risk-based limited-benefit plans, such as those providing only dental or BH benefits.

States must demonstrate compliance with the actuarial soundness requirements by documenting the rate-setting methodology and the base utilization data used to set rates. CMS staff use a checklist to verify states' compliance with these requirements that includes statutory and regulatory citations for specific requirements, and descriptions of acceptable methods for complying with the requirements.

## 4. Methodological Limitations

The Summative Evaluation Report includes multiple data sources, methods, and metrics, each with strengths that support the validity and reliability of the results. In contrast, each of these elements also has weaknesses that limit the ability of this report to provide a comprehensive evaluation of the Arizona Health Care Cost Containment System (AHCCCS) Demonstration programs under review. This section elaborates on the strengths and weaknesses of the data sources, methods, and metrics used in the Summative Evaluation Report.

### Strengths and Weaknesses

In this Summative Evaluation Report, Health Services Advisory Group, Inc. (HSAG), presents baseline and demonstration period rates for performance measures chosen to represent key processes and outcomes expected to be impacted by the six AHCCCS programs included. HSAG selected the data sources and performance measures because of particular strengths that contribute to a robust, multi-modal program evaluation. The quantitative analyses presented in this Summative Evaluation Report are intended to assess the change in performance measure rates and beneficiary survey responses associated with the implementation or continuation of the six AHCCCS programs included in the evaluation. The performance metrics included in the evaluation were selected because of their relevance to the processes and outcomes intended to be impacted by the AHCCCS programs evaluated. Additionally, the performance measures in this report are based on standardized, well-validated metrics from recognized measure stewards including the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS®)<sup>4-1</sup> metrics and the Centers for Medicare & Medicaid Services (CMS) Core Sets.<sup>4-2</sup> The Summative Evaluation Report also leverages external survey data from the National Core Indicators (NCI) and Integrated Public Use Microdata Series–American Community Surveys (IPUMS–ACS) data. The data, measures, and methods also have limitations that must be understood to contextualize the results within Arizona’s Section 1115 Waiver Demonstration (Demonstration).

Two key limitations exist for the methods used for this Summative Evaluation Report. First, there was no comparison group identified for any of the demonstration programs except for the Targeted Investment (TI) program and Arizona Long Term Care System (ALTCS)-Developmental Disabilities (DD) measures that utilize NCI data. An appropriate comparison group serves as the basis for understanding what may have happened to the healthcare and health outcomes of AHCCCS beneficiaries if the programs being evaluated were not put in place. The Evaluation Design proposed the use of either the Transformed Medicaid Statistical Information System (T-MSIS) data from CMS, or data obtained from other states to form a counterfactual comparison group for AHCCCS’ statewide programs. The T-MSIS data, however, were unavailable to be used in this report. Additionally, data could not be obtained from another state with similar population characteristics and Medicaid policies and procedures in place. Therefore, the counterfactual comparison used in this report was the comparison of performance measure rates across the baseline and evaluation periods of the Demonstration. The results indicate whether the performance measure rates increased or decreased, and whether the results represented statistically significant changes in performance.

A second limitation of the results presented in this Summative Evaluation Report was the impact of the global coronavirus disease 2019 (COVID-19) public health emergency (PHE). The COVID-19 PHE impacted the

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<sup>4-1</sup> HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

<sup>4-2</sup> Both HEDIS and CMS Core Set measures follow HEDIS 2019 technical specifications. This was done primarily to provide a more comprehensive picture of the program by including all available ages, increase statistical power in future analyses, allow for comparisons to NCQA benchmarks which are audited, and include only managed care rates yielding a more accurate comparison to the AHCCCS populations.



healthcare industry and the entire population on a global scale, requiring substantial changes to the processes used in the delivery of healthcare. In Arizona, as in other locations, health care utilization was significantly reduced in 2020, and the impact on performance measure rates is evident in this Summative Evaluation Report. Although the impacts of the COVID-19 PHE in FFY 2020 were controlled for in the statistical analysis performed, ongoing impacts beyond 2020 could influence the findings from statistical analyses that did not utilize a comparison group.

## Data Sources

The data used in the Summative Evaluation Report include administrative data about the program implementation, Medicaid enrollment, demographic data, claims and encounter data, and national survey data obtained from the NCI, Healthcare Cost Report Information System (HCRIS), and IPUMS–ACS data. This section presents the strengths and weaknesses associated with each of these data sources.

The data sources used in the Summative Evaluation Report have several strengths making them suitable for the evaluation. First, administrative data about program implementation provide the only source of information about the participation of providers in the TI program. The AHCCCS Complete Care (ACC), Prior Quarter Coverage (PQC), Regional Behavioral Health Authority (RBHA), Comprehensive Health Plan (CHP), and ALTCS Demonstration programs target specific beneficiary populations that receive services from health plans contracted with AHCCCS and providers accepting Medicaid coverage. In contrast, the TI program requires provider participation in the form of an application and annual attestations of progress toward integration. Administrative program data are therefore necessary for the TI program to identify the participating providers and populations receiving services.

Second, the IPUMS–ACS data are well-suited for identifying the size of the eligible Medicaid population in Arizona. While AHCCCS determines Medicaid eligibility during the beneficiary application process for enrollment, the agency does not routinely identify the population of Medicaid-eligible individuals on a statewide basis. To identify the eligible Medicaid population within the State, a representative data source containing information about age, family income, the presence and number of children, disabilities, institutional group quarters, and pregnancy status would provide a number of key data elements. The IPUMS–ACS survey data are collected by the U.S. Census Bureau and represent a 1 percent sample of the population. The data for the State of Arizona can be aggregated to provide a statewide estimate of the size of the eligible Medicaid population. This data source was used for two measures in evaluating the PQC program.

Third, the NCI data represent another national survey effort. The data for the NCI are collected from states that choose to participate and consist of at least 400 randomly sampled respondents from the eligible population of adults with intellectual or developmental disabilities (IDD) to yield statistically valid comparisons across states with 95 percent confidence and a margin of error of  $\pm 5$  percent. These in-person surveys are conducted annually in-person. The NCI data therefore allow the estimation of a limited number of health and health care-related outcomes for the evaluation of the ALTCS program, specifically among those with IDD. Because data from participating states are available both before and after Demonstration renewal, this provides a unique opportunity to utilize a comparison group in a difference-in-differences (DiD) approach.

While each of the data sources used in this Summative Evaluation Report has strengths that are desirable to include in the Evaluation Design, each also has weaknesses that are important to understand within the context of the evaluation. For example, the claims/encounter data used to calculate performance metrics are generated as part of the billing process for Medicaid and, as a result, may not be as complete or sensitive for identifying specific



healthcare processes and outcomes as may be expected from a thorough review of a patient’s medical chart.<sup>4-3</sup> This weakness may be mitigated in part if the lack of sensitivity in the claims/encounter data remains relatively stable over time and if the measures calculated from these data follow trends consistent with the underlying processes and outcomes of interest.

The IPUMS–ACS data do not include all the covariates necessary to precisely identify the eligible Medicaid population in Arizona. This was particularly true when attempting to identify the proportion of individuals with a serious mental illness (SMI), women who are currently pregnant, or individuals in long-term care (LTC) facilities. The IPUMS–ACS data are also self-reported and may be susceptible to measurement error such as inflation of income by respondents, and different definitions of what constitutes difficulty when ambulating, with self-care, or independent living (e.g., running errands, going to a doctor’s office). Finally, the IPUMS-ACS data do not include a set of health outcomes or healthcare processes that the current evaluation can leverage to test the associated hypotheses and answer specific research questions.

In contrast to the IPUMS-ACS data, the NCI-DD data include a limited number of health outcome measures that can be used in the context of the current evaluation of the ALTCS-DD program. Although data are available both before and after Demonstration renewal, data from in-person surveys in Arizona were not available during the COVID-19 PHE, limiting the ability to identify recent changes in measured outcomes, particularly after the integration of care efforts in October 2019. Subsequent evaluations may address this limitation if Arizona participates in in-person survey efforts. Additionally, data collection was dependent on the participation of individual states in each time period. As a result, changes in state participation over time may influence DiD results.

Additionally, certain data sources outlined in the Evaluation Design were not used for a variety of reasons, outlined below.

- AHCCCS Customer Eligibility (ACE): ALTCS Research Question 3.1, *Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?* did not utilize data from ACE as the State provided the necessary data in the form of ALTCS placement data files.
- Healthcare Cost and Utilization Project, State Inpatient Databases (HCUP-SID): PQC Research Question 7.3, *‘Do costs to non-AHCCCS entities stay the same or decrease after implementation of the waiver compared to before?’*, did not utilize data from HCUP-SID as the data was cost-prohibitive and required additional training. Instead, data from Healthcare Cost Report Information System (HCRIS) was used as it was readily available and provided the necessary data.
- Provider Focus Groups for PQC: PQC Research Question 7.3 was supposed to use data from provider focus groups, but instead interviews were used with providers. The format of these interviews allowed the providers to focus on issues that were most relevant to them. Generally, spokesmen for providers were rarely in a position to address cost issues in an interview setting. As such, there was insufficient qualitative data to provide meaningful insights on uncompensated care costs.

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<sup>4-3</sup> For example, the administrative specifications for CMS Adult Core set measure CDF-AD: *Screening for Depression and Follow-Up Plan* (generally referred to in this Summative Evaluation Report as: the percentage of beneficiaries with a screening for clinical depression and follow-up plan) rely on Level II Healthcare Common Procedure Coding System (HCPCS) G-codes to identify numerator compliance. Without electronic health record data, rates for this measure will be underreported, as these codes are not generally reimbursable; therefore, providers have little incentive to report these procedures on the claim.

## Methods

The methodology used in the Summative Evaluation Report relies primarily on the comparison of performance measure rates representing the average baseline and average evaluation period rates. The results give the reader an understanding of whether the measures exhibited statistically significant changes after AHCCCS implemented the demonstrations. The analysis, however, does not provide a sufficiently strong comparison to definitively conclude whether the AHCCCS demonstrations caused changes in the performance measure rates. Other factors outside of the Demonstration may have contributed to changes in performance measure rates, such as the COVID-19 PHE, changes in coding and reporting practices in the claims/encounter data, and changes in prescribing practices for opioids. The exception to this limitation was in the TI program, wherein a DiD approach was used because a proper comparison group could be identified. The results from this analysis allow the reader to draw stronger conclusions about program impacts because the providers participating in the TI program are compared to similar providers that did not participate in the program. DiD was also performed for measures utilizing NCI data wherein data from similar individuals nationally could be obtained.

An additional limitation of the methodology was the inability to speak to why specific measures may have improved, worsened, or remain unchanged. The statistical analysis performed in this Summative Evaluation Report characterizes the direction, magnitude, and statistical significance of measure rate changes. In contrast, the qualitative analysis performed focuses on the implementation of the Demonstration and challenges or barriers to success that were experienced by relevant stakeholders such as AHCCCS and the health plans. The qualitative and statistical analyses, however, are not aligned so that the qualitative data may explain why specific measures changed in the ways that they did. Therefore, the causes of changes in specific measure rates, or the lack thereof, cannot be identified.

The following section details measure results by research question and related hypotheses for the Arizona Health Care Cost Containment System (AHCCCS) Complete Care (ACC) Demonstration program. This Summative Evaluation Report provides results from the baseline period and the demonstration period. For details on the measure definitions and specifications, reference the approved Evaluation Design.<sup>5-1</sup> Full measure results with denominator data are presented in Appendix A.

The findings presented in this Summative Evaluation Report focus on quantitative performance measure calculations during the baseline and the demonstration period, qualitative data obtained from key informant interviews, provider focus groups, and beneficiary surveys. Because ACC began on October 1, 2018, two years after the start of the Demonstration renewal period, the baseline period extends from October 1, 2015 (the year prior to the Demonstration renewal), through September 30, 2018.

### Results Summary

Results presented in this section are organized by hypothesis and by research question within each hypothesis. Most hypotheses include multiple research questions, and most research questions use multiple measures. Results for claims-based measures are separated into three components: (1) a comparison of rates for each year compared to national benchmarks where available, (2) a descriptive component reporting the rates for each year delineating the baseline and demonstration period, and (3) results from statistical analyses. A pre-test/post-test statistical analysis was conducted as part of the evaluation of ACC, which examined the change in average rates between the baseline and demonstration periods. Additionally, non-inferiority testing<sup>5-2</sup> was performed to determine if rates in the demonstration period were the same or better than the baseline period based on a defined threshold. Results for survey-based measures were also analyzed through a pre-test/post-test and non-inferiority testing. Pre-test data were derived from a survey of AHCCCS Acute Care beneficiaries in winter 2016/spring 2017. Post-test data were derived from more recently administered surveys of ACC beneficiaries in spring/summer 2021.

In total, 29 measures were calculated between federal fiscal years (FFYs) 2016 and 2022.<sup>5-3</sup> Due to effects of the coronavirus disease 2019 (COVID-19) public health emergency (PHE) impacting the U.S. health care system beginning in approximately March 2020, results for this time period must be interpreted with caution, as many changes in rates may not be indicative of program performance. For ACC, an assessment of trends, pre/post-averages, and comparisons to 2019 National Committee for Quality Assurance (NCQA) or the Centers for Medicare & Medicaid Services (CMS) Core Set benchmarks are reported. For each figure presented in this section, NCQA benchmarks are indicated in orange and benchmarks calculated from the CMS Core Set are indicated in green.<sup>5-4</sup> Table 5-1 presents the number of measures by research question that support the research question, do not support the research question, or were inconclusive.<sup>5-5</sup> The table also shows the number of

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<sup>5-1</sup> Arizona Health Care Cost Containment System. Arizona's Section 1115 Waiver Independent Evaluation–Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>5-2</sup> Non-inferiority testing appears as “NI” in tables and figures throughout this section.

<sup>5-3</sup> Additional indicators were calculated for certain measures and are reported in full in the ACC Results section and in Appendix A.

<sup>5-4</sup> Benchmarks for measures that utilize a hybrid methodology are reported where available using CMS Core Set data from states that reported administrative only methodology. Additionally, benchmarks for *Percentage of children and adolescents who accessed primary care practitioners (PCPs)* (Measure 2-2) were calculated as a grand total across all age indicators, and benchmarks for *Percentage of adult inpatient discharge with an unplanned readmission within 30 days* (Measure 3-18) were calculated from the observed readmissions rate.

<sup>5-5</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.

measures for which there is no desired direction, such as emergency department (ED) or inpatient utilization measures.

Evidence shows that measures related to substance abuse treatment, preventive or wellness services, management of opioid prescriptions, and management of chronic conditions support their respective research questions. Of the four measures that failed to support these questions, three (Measure 2-1, Measure 2-2, and Measure 2-3) are related to access to care. Rates for each of these measures declined sharply following the COVID-19 PHE in 2020, contributing to the decline in rates during the demonstration period.

Due to limitations of available and appropriate comparison groups, methods used in this analysis do not allow for description of causal effects. Measures characterized as improving or worsening may have been influenced by factors other than the ACC program that have not been statistically controlled for in these results. Additional details can be found in the Methodology Limitations section.

Results for qualitative analysis from key informants and focus groups are included under Hypothesis 1.

**Table 5-1—ACC Results Summary**

Research Questions	Number of Measures				National Percentiles			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>	Below 25th	25th to 50th <sup>2</sup>	50th to 75th <sup>3</sup>	75th and Above
<b>1.6:</b> Do beneficiaries perceive their doctors to have better care coordination as a result of ACC?	0	1	0	0	-	-	-	-
<b>2.1:</b> Do beneficiaries enrolled in an ACC plan have the same or better access to primary care services compared to prior to integrated care?	2	1	3	0	2	1	0	0
<b>2.2:</b> Do beneficiaries enrolled in an ACC plan have the same or better access to substance abuse treatment compared to prior to integrated care?	2	0	0	0	0	0	2	0
<b>3.1:</b> Do beneficiaries enrolled in an ACC plan have the same or higher rates of preventive or wellness services compared to prior to integrated care?	4	0	0	0	1	2	0	0
<b>3.2:</b> Do beneficiaries enrolled in an ACC plan have the same or better management of chronic conditions compared to prior to integrated care?	1	0	0	0	0	0	0	1
<b>3.3:</b> Do beneficiaries enrolled in an ACC plan have the same or better management of BH conditions compared to prior to integrated care?	4	0	1	1	2	1	1	2
<b>3.4:</b> Do beneficiaries enrolled in an ACC plan have the same or better management of opioid prescriptions compared to prior to integrated care?	2	0	0	0	0	0	0	0

Research Questions	Number of Measures				National Percentiles			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>	Below 25th	25th to 50th <sup>2</sup>	50th to 75th <sup>3</sup>	75th and Above
<b>3.5:</b> Do beneficiaries enrolled in an ACC plan have equal or lower ED or hospital utilization compared to prior to ACC?	1	0	0	2	1	0	1	0
<b>4.1:</b> Do beneficiaries enrolled in an ACC plan have the same or higher overall health rating compared to prior to integrated care?	1	0	0	0	-	-	-	-
<b>4.2:</b> Do beneficiaries enrolled in an ACC plan have the same or higher overall mental or emotional health rating compared to prior to integrated care?	0	1	0	0	-	-	-	-
<b>5.1:</b> Are beneficiaries equally or more satisfied with their health care as a result of integrated care?	1	1	0	0	-	-	-	-

Note: National Percentiles are unavailable for some measures. Demonstration period average rates are utilized for comparisons to national percentiles.

<sup>1</sup> Determination of support is not applicable or is dependent on context.

<sup>2</sup> At or above the 25th percentile but below the 50th percentile

<sup>3</sup> At or above the 50th percentile but below the 75th percentile

**Hypothesis 1—Health plans encourage and/or facilitate care coordination among primary care providers (PCPs) and behavioral health (BH) practitioners.**

Hypothesis 1 was designed to identify activities conducted to further AHCCCS’ goal of care integration by implementing strategies supporting care coordination and management.

Measures in Hypothesis 1 were evaluated through beneficiary surveys, provider focus groups, and key informant interviews with ACC health plan staff, AHCCCS State administrator staff, and provider organizations. These methods allowed for an in-depth analysis detailing activities focused on care integration and any potential successes or barriers surrounding these activities.

Research Questions 1.1 through 1.5 contain key findings on specific topics raised by health plan representatives regarding their care coordination strategies and by State administrators and health plans regarding encountered barriers, related or unrelated to ACC. The full results summary can be found in Appendix C.

**Research Question 1.1: What care coordination strategies did the plans implement as a result of ACC?**

Health plans utilized several care coordination strategies as they integrated PH and BH. During key informant interviews, health plans outlined common strategies, successes, and barriers to care coordination. Key findings included:

- Health plans collaborated with outside entities, focusing on facilitating communication to integrate beneficiaries’ care.

**Research Question 1.2: Did the plans encounter barriers to implementing care coordination strategies?**

Key informants encountered several barriers to implementing care coordination strategies as a result of ACC. Commonly discussed barriers included:

- Health plans struggled to communicate with providers to obtain necessary beneficiary information, such as substance use disorder (SUD) status.
- Providers struggled to work with seven ACC health plans and manage variations in the health plans' administrative requirements.

**Research Question 1.3: Did the plans encounter barriers not related specifically to implementing care coordination strategies during the transition to ACC?**

Health plans shared several barriers that they encountered during the transition to ACC that were not specifically related to or a result of the care coordination strategies implemented, including:

- Barriers unrelated to integration included rural pharmacy shortages, difficulties transitioning operations between geographical areas of the State, poor cellular phone coverage in northern Arizona, and issues raised by Title 42 Code of Federal Regulations Part 2 (42 CFR Part 2) requirements for consent related to SUD data.

**Research Question 1.4: Did AHCCCS encounter barriers related to the transition to ACC?**

State administrators identified barriers encountered before, during, and after ACC integration primarily related to communication and education regarding integration. Key findings included that:

- AHCCCS State administrators conducted broad public outreach, education, and communication campaigns to educate on the differences between PH and BH systems.

**Research Question 1.5: Did providers encounter barriers related to the transition to ACC?**

In key informant interviews, providers also reported several barriers specifically encountered during the transition to ACC. Key findings included:

- Providers recounted that working with seven health plans was burdensome, especially as health plans had different levels of experience providing BH services.
- There was a steep learning curve to transition to ACC.
- Despite extensive planning sessions, providers felt that the integrated system did not work as intended.
- There were difficulties obtaining BH related data due to the opt-in requirement of 42 CFR Part 2.
- BH providers were paid rates that did not reflect the higher costs and risks associated with BH services. Providers reported that health plans that did not historically work with BH providers were unaware of financial challenges BH providers faced.
- Despite the difficulties providers encountered related to the transition to ACC, there was an increase in the *Percentage of survey respondents who reported their doctor seemed informed about the care they received from other health providers* (Measure 1-6) between the pre-ACC survey and post-ACC survey.

**Research Question 1.6: Do beneficiaries perceive their doctors to have better care coordination as a result of ACC?**

One measure from beneficiary surveys was used to assess Research Question 1.6 in Table 5-2, which shows an improvement in perceived coordinated care following the implementation of ACC.



**Key Findings:**

- The *Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers* increased 2.5 percentage points between the pre-ACC survey and post-ACC survey overall; however, this change was not statistically significant ( $p=0.124$ ).

**Table 5-2—Research Question 1.6**

Do beneficiaries perceive their doctors to have better care coordination as a result of ACC?			
	2016-2017 Survey	2021 Survey	Pre/Post Change in Rate
1-6 Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers	78.1%	80.6%	2.5pp (0.124)
Adult	77.2%	79.8%	2.6pp (0.192)
Child	79.5%	82.5%	3.0pp (0.281)

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

**Measure 1-6 Conclusion:** Neither supports nor fails to support the hypothesis

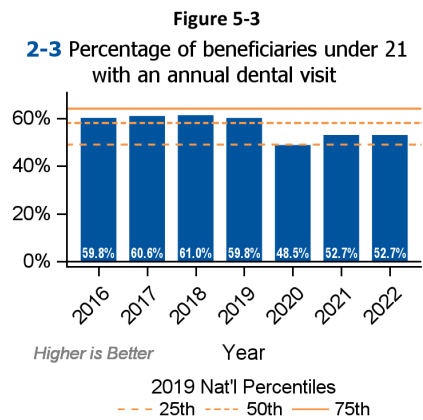
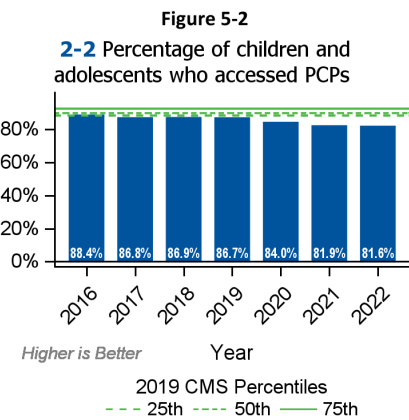
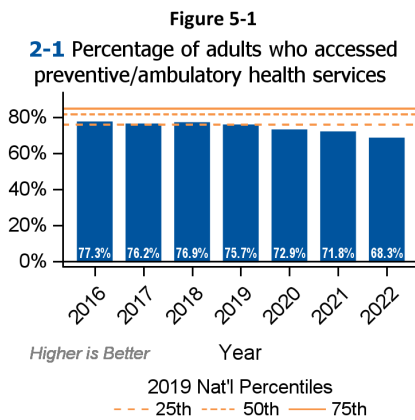
**Hypothesis 2—Access to care will maintain or improve as a result of the integration of PH and BH.**

**Research Question 2.1: Do beneficiaries enrolled in an ACC plan have the same or better access to primary care services compared to prior to integrated care?**

Figure 5-1 through Figure 5-3 display the benchmarks for Measures 2-1, 2-2, and 2-3. Table 5-3 shows that rates for access to primary care and preventive services generally declined shortly following the implementation of ACC. Rates of access to care decreased in FFY 2020 and continued decreasing throughout the remainder of the demonstration period potentially because of immediate and ongoing effects of the COVID-19 PHE.

**Key Findings:**

- The *Percentage of adults who accessed preventive/ambulatory health services* decreased by 5.4 percentage points between the baseline and demonstration period ( $p<0.001$ ).
- The average *Percentage of children and adolescents who accessed PCPs* decreased by 4.2 percentage points between the baseline and demonstration period ( $p<0.001$ ).
- The average *Percentage of beneficiaries under 21 with an annual dental visit* decreased by 5.8 percentage points between the baseline and demonstration period ( $p<0.001$ ); however, much of this decline was driven by exceptionally low rates due to ongoing impacts of the COVID-19 PHE in FFY 2021 and 2022.



**Table 5-3—Research Question 2.1**

Do beneficiaries enrolled in an ACC plan have the same or better access to primary care services compared to prior to integrated care?

	Weighted Rate <sup>1</sup>								
	Baseline Period			Evaluation Period					
	2016	2017	2018	2019	2020	2021	2022		
<b>2-1</b>	Percentage of adults who accessed preventive/ambulatory health services	77.3%	76.2%	76.9%	75.7%	72.9%	71.8%	68.3%	
<b>2-2</b>	Percentage of children and adolescents who accessed PCPs	88.4%	86.8%	86.9%	86.7%	84.0%	81.9%	81.6%	
<b>2-3</b>	Percentage of beneficiaries under 21 with an annual dental visit	59.8%	60.6%	61.0%	59.8%	48.5%	52.7%	52.7%	
	Adult	37.4%	37.7%	38.7%	38.2%	30.8%	33.2%	31.8%	
	Child	62.6%	63.5%	63.7%	62.6%	51.0%	55.8%	56.2%	

Do beneficiaries enrolled in an ACC plan have the same or better access to primary care services compared to prior to integrated care?

	Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI		
					Threshold	Non-Inferiority <sup>3</sup>	
<b>2-1</b>	Percentage of adults who accessed preventive/ambulatory health services	76.8%	71.4%	-5.4pp (<0.001)	-5.5pp to -5.3pp	-2.1pp	Worse
<b>2-2</b>	Percentage of children and adolescents who accessed PCPs	87.3%	83.2%	-4.2pp (<0.001)	-4.3pp to -4.1pp	-1.7pp	Worse
<b>2-3</b>	Percentage of beneficiaries under 21 with an annual dental visit	60.5%	54.7%	-5.8pp (<0.001)	-5.9pp to -5.7pp	-2.5pp	Worse
	Adult	37.9%	33.9%	-4.1pp (<0.001)	-4.3pp to -3.8pp	-2.4pp	Worse
	Child	63.3%	57.9%	-5.4pp (<0.001)	-5.5pp to -5.3pp	-2.4pp	Worse

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Measure 2-1 Conclusion: Does not support the hypothesis**

**Measure 2-2 Conclusion:** Does not support the hypothesis

**Measure 2-3 Conclusion:** Does not support the hypothesis

Beneficiary surveys were administered to assess beneficiaries’ experience in getting needed care in a timely manner and ability to schedule appointments in a timely manner.

**Key Findings:**

- The *Percentage of beneficiaries who reported they received care as soon as they needed* increased for children by 5.9 percentage points ( $p=0.003$ ). This rate decreased among adults by 3.3 percentage points ( $p=0.070$ ).
- The *Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor’s office or clinic as soon as they needed* increased by 0.8 percentage points ( $p=0.438$ ). Non-inferiority testing shows that rates in the 2021 survey were the same or better than rates in the 2016-2017 survey.
- The *Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed* increased by 1.0 percentage points ( $p=0.500$ ). Rates in the 2021 survey were the same or better than rates in the 2016-2017 survey based on non-inferiority testing.

**Table 5-4—Research Question 2.1, Surveys**

Do beneficiaries enrolled in an ACC plan have the same or better access to primary care services compared to prior to integrated care?							
		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
2-4	Percentage of beneficiaries who reported they received care as soon as they needed	87.3%	86.3%	-1.0pp (0.466)	-4.0pp to 1.6pp	-1.7pp	Insufficient Data
	Adult	85.5%	82.1%	-3.3pp (0.070)	-7.6pp to 0.3pp	-1.8pp	Insufficient Data
	Child	89.6%	95.6%	5.9pp (0.003)	2.8pp to 8.0pp	-1.6pp	Better
2-5	Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor’s office or clinic as soon as they needed	82.4%	83.2%	0.8pp (0.438)	-1.3pp to 2.7pp	-1.9pp	Not Meaningfully Worse
	Adult	78.8%	80.5%	1.7pp (0.260)	-1.3pp to 4.4pp	-2.1pp	Not Meaningfully Worse
	Child	85.8%	86.9%	1.0pp (0.467)	-1.9pp to 3.5pp	-1.8pp	Insufficient Data
2-6	Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed	80.2%	81.2%	1.0pp (0.500)	-2.0pp to 3.6pp	-2.0pp	Not Meaningfully Worse
	Adult	80.8%	81.4%	0.7pp (0.683)	-2.8pp to 3.7pp	-2.0pp	Insufficient Data
	Child	79.1%	80.5%	1.4pp (0.614)	-4.5pp to 6.4pp	-2.1pp	Insufficient Data

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-4 Conclusion:** Neither supports nor fails to support the hypothesis  
**Measure 2-5 Conclusion:** Supports the hypothesis  
**Measure 2-6 Conclusion:** Supports the hypothesis

Table 5-5 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 5-5—Research Question 2.1, Demographics**

	Black	A/IAN	All Others	Unknown	Rural	Female
2-1 Percentage of adults who accessed preventive/ambulatory health services	Orange	Orange	Orange	Orange	Orange	Blue
2-2 Percentage of children and adolescents who accessed PCPs	Orange	Orange	Orange	Orange	Orange	Orange
2-3 Percentage of beneficiaries under 21 with an annual dental visit	Orange	Orange	Orange	Orange	Orange	Orange

Note: Reference groups are White/Caucasian, Urban, Male. A/IAN=American Indian/Alaska Native



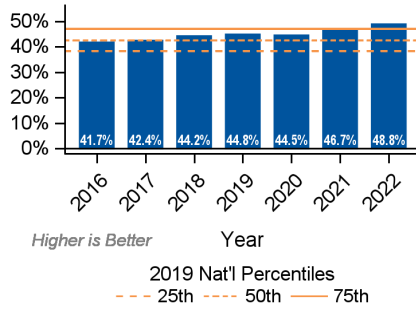
**Research Question 2.2: Do beneficiaries enrolled in an ACC plan have the same or better access to substance abuse treatment compared to prior to integrated care?**

Figure 5-4 and Figure 5-5 shows the benchmarks for Measure 2-7 and Measure 2-8. Table 5-6 shows that the percentage of ACC beneficiaries who initiated and engaged in alcohol and other drug abuse or dependence treatment generally increased across all baseline and evaluation years.

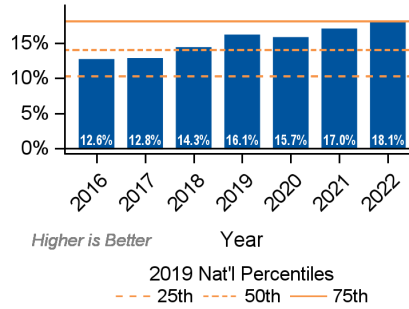
**Key Findings:**

- The average *Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment* increased by 4.2 percentage points between the baseline and demonstration period ( $p<0.001$ ).
- The average *Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment* increased by 3.9 percentage points between the baseline and demonstration period ( $p<0.001$ ). This increase was largely driven by adult ACC beneficiaries.

**Figure 5-4**  
**2-7** Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)



**Figure 5-5**  
**2-8** Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)



**Table 5-6—Research Question 2.2**

Do beneficiaries enrolled in an ACC plan have the same or better access to substance abuse treatment compared to prior to integrated care?

		Weighted Rate <sup>1</sup>							
		Baseline Period			Evaluation Period				
		2016	2017	2018	2019	2020	2021	2022	
<b>2-7</b>	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	41.7%	42.4%	44.2%	44.8%	44.5%	46.7%	48.8%	
	Adult	41.9%	42.7%	44.4%	45.1%	44.6%	46.8%	48.9%	
	Child	36.9%	36.1%	38.5%	40.1%	41.3%	43.5%	46.4%	
<b>2-8</b>	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	12.6%	12.8%	14.3%	16.1%	15.7%	17.0%	18.1%	
	Adult	12.7%	12.9%	14.5%	16.3%	16.0%	17.2%	18.3%	
	Child	10.7%	10.5%	10.1%	11.0%	9.6%	11.0%	11.0%	

**Do beneficiaries enrolled in an ACC plan have the same or better access to substance abuse treatment compared to prior to integrated care?**

	Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>2-7</b> Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	42.8%	46.9%	4.2pp (<0.001)	3.8pp to 4.6pp	-2.5pp	Better
Adult	43.0%	47.1%	4.1pp (<0.001)	3.7pp to 4.5pp	-2.5pp	Better
Child	37.2%	43.3%	6.1pp (<0.001)	4.1pp to 8.1pp	-2.4pp	Better
<b>2-8</b> Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	13.2%	17.1%	3.9pp (<0.001)	3.6pp to 4.2pp	-1.6pp	Better
Adult	13.4%	17.4%	4.0pp (<0.001)	3.7pp to 4.3pp	-1.7pp	Better
Child	10.4%	11.0%	0.6pp (0.368)	-0.6pp to 1.9pp	-1.5pp	Not Meaningfully Worse

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Measure 2-7 Conclusion:** Supports the hypothesis

**Measure 2-8 Conclusion:** Supports the hypothesis

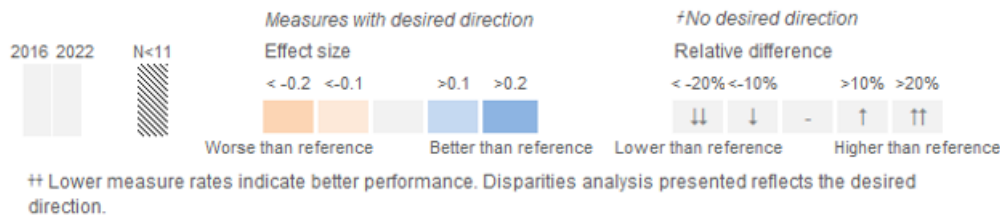
Table 5-7 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.



**Table 5-7—Research Question 2.2, Demographics**

		Black	A/AN	All Others	Unknown	Rural	Female
2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Alcohol)						
	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Opioid)						
	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Other Drug)						
	<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)</b>						
2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Alcohol)						
	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Opioid)						
	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Other Drug)						
	<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)</b>						

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Hypothesis 3—Quality of care will maintain or improve as a result of the integration of PH and BH.**

**Research Question 3.1: Do beneficiaries enrolled in an ACC plan have the same or higher rates of preventive or wellness services compared to prior to integrated care?**

Figure 5-6 through Figure 5-9 display the benchmarks for Measures 3-1, 3-2, and 3-3. Table 5-8 shows that rates of well-child and adolescent well-care visits generally increased until FFY 2020 before recovering at the end of the demonstration period. The decrease in the FFY 2020 rates was possibly attributable to the COVID-19 PHE and can be seen in other Demonstration groups including the Arizona Long Term Care System (ALTCS)-program for Beneficiaries with Developmental Disabilities (DD) and Comprehensive Health Plan (CHP). Rates for childhood and adolescent immunizations (Measure 3-4 and Measure 3-5) are not presented in this report due to the unavailability of immunization registry data.

**Key Findings:**

- The *Percentage of beneficiaries with a well-child visit in the first 15 months of life (6+ Visits)* decreased by 0.1 percentage points between the baseline and demonstration period ( $p=0.761$ ). Rates in the demonstration period were the same or better than rates in the baseline period based on non-inferiority testing.
- The *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* decreased by 1.8 percentage points between the baseline and demonstration period ( $p<0.001$ ). Although

traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.

- The *Percentage of beneficiaries with an adolescent well-child visit* decreased by 2.0 percentage points between the baseline and demonstration period ( $p < 0.001$ ). Although traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.
- Compared to 2019 benchmarks calculated from the CMS Child Core Set,<sup>5-6</sup> the evaluation average for adolescent well-child visits of 37.4 percent falls firmly below the 25th percentile.

Figure 5-6

**3-1** Percentage of beneficiaries with a well-child visit in the first 15 months of life - 0 Visits

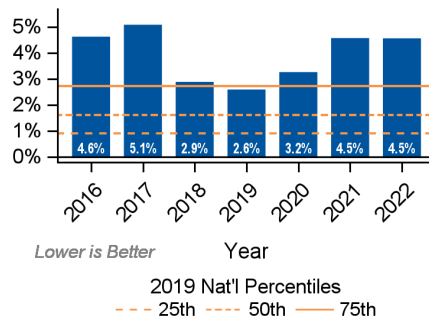


Figure 5-7

**3-1** Percentage of beneficiaries with a well-child visit in the first 15 months of life - 6+ Visits

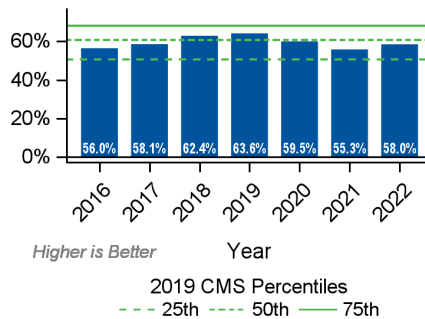


Figure 5-8

**3-2** Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life

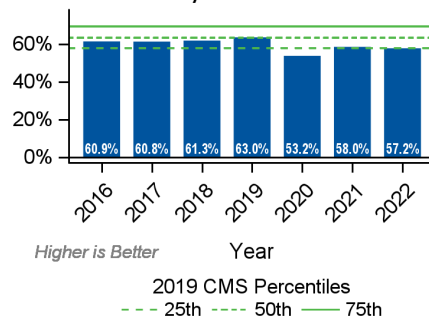
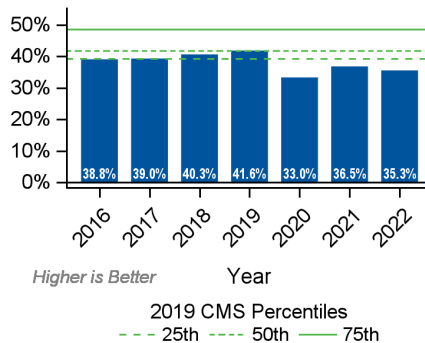


Figure 5-9

**3-3** Percentage of beneficiaries with an adolescent well-care visit



<sup>5-6</sup> Benchmarks for measures that utilize a hybrid methodology are reported where available using CMS Core Set data from states that reported administrative only methodology.

**Table 5-8—Research Question 3.1**

		Weighted Rate <sup>1</sup>							
		Baseline Period			Evaluation Period				
		2016	2017	2018	2019	2020	2021	2022	
<b>3-1</b>	Percentage of beneficiaries with a well-child visit in the first 15 months of life								
	0 Visits (lower is better)	4.6%	5.1%	2.9%	2.6%	3.2%	4.5%	4.5%	
	1 Visit	3.8%	3.9%	3.0%	2.9%	3.2%	4.8%	4.0%	
	2 Visits	4.6%	4.3%	3.9%	3.5%	4.4%	4.9%	4.8%	
	3 Visits	6.6%	5.9%	5.5%	5.4%	5.5%	6.9%	6.1%	
	4 Visits	9.7%	8.9%	8.7%	8.5%	9.1%	9.6%	8.9%	
	5 Visits	14.7%	13.8%	13.7%	13.5%	15.1%	13.9%	13.6%	
	<b>6+ Visits (higher is better)</b>	<b>56.0%</b>	<b>58.1%</b>	<b>62.4%</b>	<b>63.6%</b>	<b>59.5%</b>	<b>55.3%</b>	<b>58.0%</b>	
<b>3-2</b>	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	60.9%	60.8%	61.3%	63.0%	53.2%	58.0%	57.2%	
<b>3-3</b>	Percentage of beneficiaries with an adolescent well-care visit	38.8%	39.0%	40.3%	41.6%	33.0%	36.5%	35.3%	

**Do beneficiaries enrolled in an ACC plan have the same or higher rates of preventive or wellness services compared to prior to integrated care?**

	Baseline Average	Evaluation Average	Pre/Post	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
			Change in Rate <sup>2</sup>			
<b>3-1</b>	Percentage of beneficiaries with a well-child visit in the first 15 months of life					
	4.2%	4.0%	<b>-0.2pp (0.016)</b>	<b>-0.4pp to 0.0pp</b>	<b>1.1pp</b>	<b>Better</b>
	3.6%	4.0%	<b>0.4pp (&lt;0.001)</b>	<b>0.2pp to 0.6pp</b>	--	--
	4.3%	4.5%	<b>0.2pp (0.037)</b>	<b>0.0pp to 0.4pp</b>	--	--
	6.0%	6.2%	<b>0.2pp (0.085)</b>	<b>0.0pp to 0.4pp</b>	--	--
	9.1%	9.0%	<b>-0.1pp (0.467)</b>	<b>-0.3pp to 0.2pp</b>	--	--
	14.1%	13.7%	<b>-0.4pp (0.011)</b>	<b>-0.7pp to -0.1pp</b>	--	--
	<b>58.6%</b>	<b>58.6%</b>	<b>-0.1pp (0.761)</b>	<b>-0.5pp to 0.4pp</b>	<b>-2.5pp</b>	<b>Not Meaningfully Worse</b>
<b>3-2</b>	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life					
	61.0%	59.2%	<b>-1.8pp (&lt;0.001)</b>	<b>-2.0pp to -1.5pp</b>	<b>-2.5pp</b>	<b>Not Meaningfully Worse</b>
<b>3-3</b>	Percentage of beneficiaries with an adolescent well-care visit					
	39.4%	37.4%	<b>-2.0pp (&lt;0.001)</b>	<b>-2.1pp to -1.8pp</b>	<b>-2.4pp</b>	<b>Not Meaningfully Worse</b>

Note: Indicators in bold denote inclusion for evaluation in summary table for Measure 3-1. pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

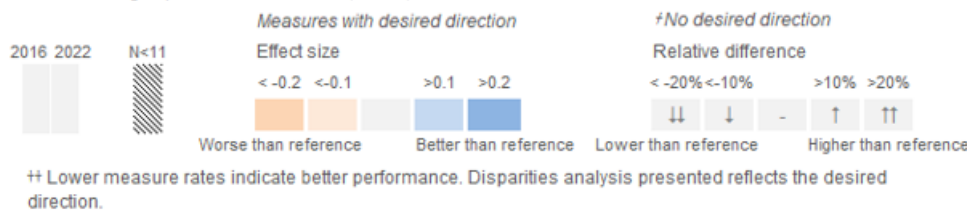
**Measure 3-1 Conclusion:** Supports the hypothesis  
**Measure 3-2 Conclusion:** Supports the hypothesis  
**Measure 3-3 Conclusion:** Supports the hypothesis

Table 5-9 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 5-9—Research Question 3.1, Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
3-1 Percentage of beneficiaries with a well-child visit in the first 15 months of life (0 Visits) <sup>††</sup>						
Percentage of beneficiaries with a well-child visit in the first 15 months of life (1 Visit) <sup>†</sup>	↑↑	↑↑	↑↑	↑	↑↑	-
Percentage of beneficiaries with a well-child visit in the first 15 months of life (2 Visits) <sup>†</sup>	↑↑	↑	↑↑	↓	↑↑	-
Percentage of beneficiaries with a well-child visit in the first 15 months of life (3 Visits) <sup>†</sup>	↑↑	↑	↑	-	↑	-
Percentage of beneficiaries with a well-child visit in the first 15 months of life (4 Visits) <sup>†</sup>	↑	-	-	↓	↑	-
Percentage of beneficiaries with a well-child visit in the first 15 months of life (5 Visits) <sup>†</sup>	↑	-	-	↑	-	-
Percentage of beneficiaries with a well-child visit in the first 15 months of life (6+ Visits)						
3-2 Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life						
3-3 Percentage of beneficiaries with an adolescent well-care visit						

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



Beneficiary surveys were administered to assess the rate of flu shots following ACC implementation.

**Key Findings:**

- The *Percentage of adult beneficiaries who reported having a flu shot or nasal flu spray since July 1* increased by 5.8 percentage points following the implementation of the ACC program to 45.0 percent in 2021 ( $p<0.001$ ).

**Table 5-10—Research Question 3.1, Surveys**

Do beneficiaries enrolled in an ACC plan have the same or higher rates of preventive or wellness services compared to prior to integrated care?		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
3-6	Percentage of adult beneficiaries who reported having a flu shot or nasal flu spray since July 1	39.1%	45.0%	5.8pp (<0.001)	2.9pp to 8.8pp	-2.4pp	Better

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

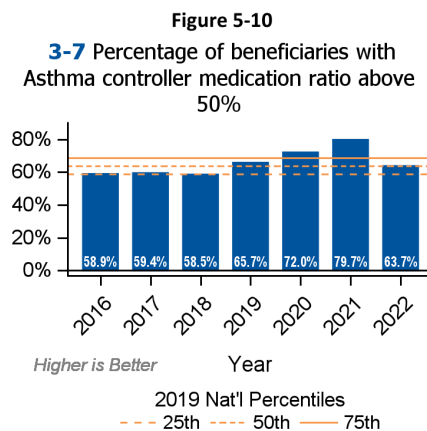
**Measure 3-6 Conclusion:** Supports the hypothesis

**Research Question 3.2: Do beneficiaries enrolled in an ACC plan have the same or better management of chronic conditions compared to prior to integrated care?**

Figure 5-10 displays the benchmarks for Measure 3-7. Table 5-11 shows that the *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased substantially between FFY 2019 and FFY 2021 before decreasing in FFY 2022. This trend can also be seen in the ALTCS- EPD (people who are elderly and/or who have a physical disability), ALTCS-DD, CHP, and Regional Behavioral Health Authority (RBHA) Demonstration groups.

**Key Findings:**

- The average *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased by 10.8 percentage points between the baseline and demonstration period ( $p < 0.001$ ).



**Table 5-11—Research Question 3.2**

		Weighted Rate <sup>1</sup>						
		Baseline Period			Evaluation Period			
		2016	2017	2018	2019	2020	2021	
3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	58.9%	59.4%	58.5%	65.7%	72.0%	79.7%	63.7%
	Adult	50.2%	51.1%	50.5%	58.3%	65.0%	75.0%	60.7%
	Child	66.5%	67.7%	67.4%	74.1%	80.9%	87.0%	69.7%

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
3-7	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	59.0%	69.8%	10.8pp (<0.001)	10.2pp to 11.4pp	-2.5pp	Better
	Adult	50.6%	64.9%	14.3pp (<0.001)	13.5pp to 15.1pp	-2.5pp	Better
	Child	67.2%	77.1%	10.0pp (<0.001)	9.2pp to 10.7pp	-2.4pp	Better

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

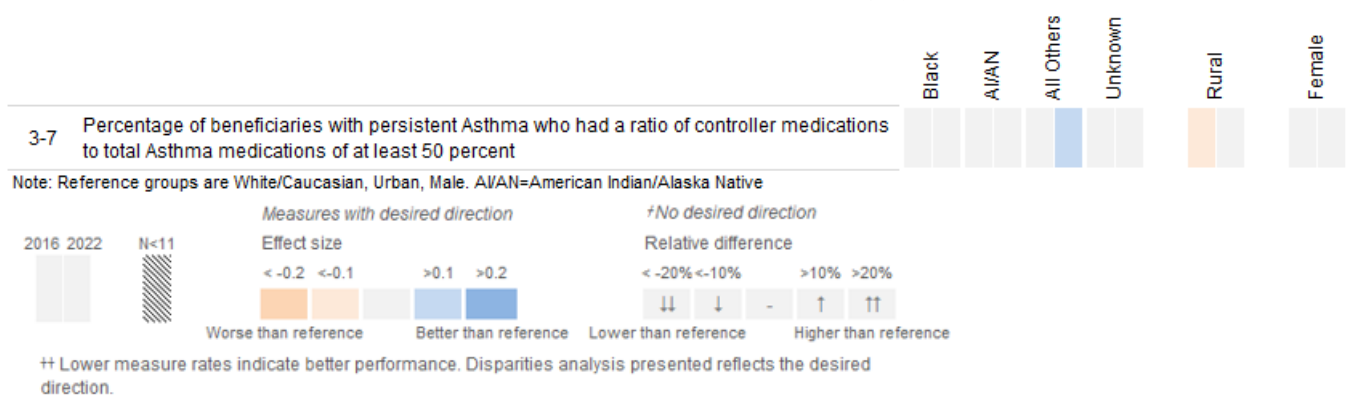
<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Measure 3-7 Conclusion:** Supports the hypothesis

Table 5-12 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 5-12—Research Question 3.2, Demographics**





**Research Question 3.3: Do beneficiaries enrolled in an ACC plan have the same or better management of BH conditions compared to prior to integrated care?**

Figure 5-11 through Figure 5-15 displays the benchmarks for Measures 3-8, 3-9, 3-10, and 3-11. Table 5-13 shows that the *Percentage of beneficiaries who remained on an antidepressant medication* increased throughout the demonstration period. Additionally, treatment rates of follow-up visits after hospitalization for mental illness also generally increased throughout the demonstration period, while percentages of follow-up visits after an ED visit for mental illness or substance use decreased in the demonstration period. Although rates for screening for clinical depression (Measure 3-12) were calculated, as described in the Methodology Limitations section, this measure relies on level II Healthcare Common Procedure Coding System (HCPCS) codes to identify numerator compliance, which yields artificially low rates calculated through administrative data; therefore, no results for this measure are displayed.

**Key Findings:**

- The average *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* increased by 4.1 percentage points for the 84-day period ( $p<0.001$ ) and by 1.4 percentage points for the 180-day period ( $p<0.001$ ) between the baseline and demonstration period.
- The average *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased by 1.4 percentage points from the baseline to demonstration period ( $p<0.001$ ).
- The average *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness* and *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence* decreased by 0.8 percentage points ( $p=0.234$ ) and 3.9 percentage points ( $p<0.001$ ) from the baseline to demonstration period, respectively. Non-inferiority testing shows that the *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness* in the demonstration period was the same or better than the baseline period.

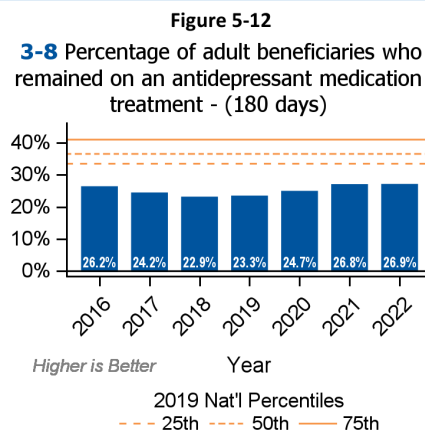
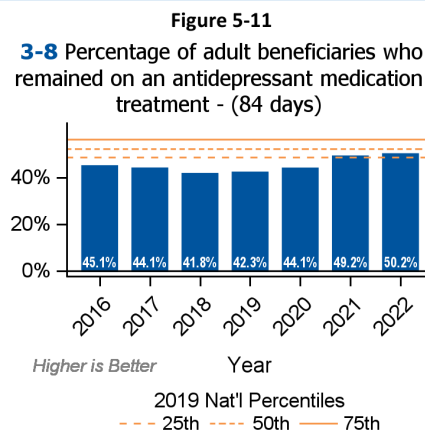


Figure 5-13

**3-9** Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness

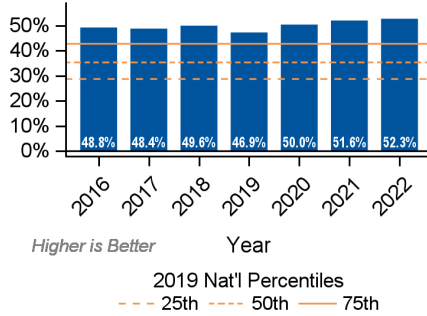


Figure 5-14

**3-10** Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness

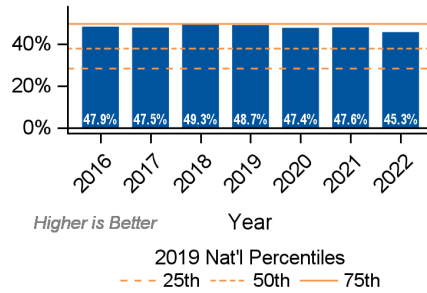


Figure 5-15

**3-11** Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence

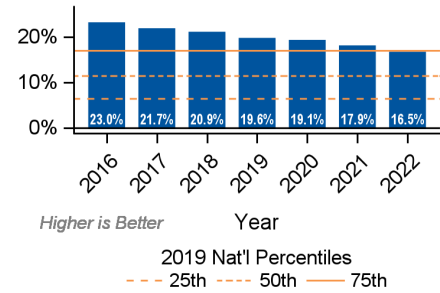


Table 5-13—Research Question 3.3

Do beneficiaries enrolled in an ACC plan have the same or better management of BH conditions compared to prior to integrated care?

	Weighted Rate <sup>1</sup>							
	Baseline Period			Evaluation Period				
	2016	2017	2018	2019	2020	2021	2022	
<b>3-8</b> Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	45.1%	44.1%	41.8%	42.3%	44.1%	49.2%	50.2%	
<b>3-8</b> Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	26.2%	24.2%	22.9%	23.3%	24.7%	26.8%	26.9%	
<b>3-9</b> Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	48.8%	48.4%	49.6%	46.9%	50.0%	51.6%	52.3%	
Adult	43.5%	42.4%	43.6%	41.0%	45.0%	45.8%	47.8%	
Child	67.1%	70.8%	70.8%	67.9%	70.1%	73.0%	68.2%	
<b>3-10</b> Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	47.9%	47.5%	49.3%	48.7%	47.4%	47.6%	45.3%	
Adult	42.8%	40.5%	40.3%	39.9%	39.0%	39.4%	37.8%	
Child	67.3%	69.5%	73.7%	71.5%	70.4%	70.0%	66.9%	
<b>3-11</b> Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	23.0%	21.7%	20.9%	19.6%	19.1%	17.9%	16.5%	
Adult	23.5%	22.2%	21.4%	20.0%	19.6%	18.2%	17.0%	
Child	10.4%	9.3%	9.8%	8.5%	7.1%	8.1%	4.5%	
<b>3-12</b> Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--	--	

Do beneficiaries enrolled in an ACC plan have the same or better management of BH conditions compared to prior to integrated care?

	Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
3-8 Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	43.7%	47.7%	4.1pp (<0.001)	3.5pp to 4.6pp	-2.5pp	Better
3-8 Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	24.4%	25.9%	1.4pp (<0.001)	0.9pp to 1.9pp	-2.1pp	Better
3-9 Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	48.9%	50.3%	1.4pp (<0.001)	0.7pp to 2.1pp	-2.5pp	Better
Adult	43.2%	44.9%	1.8pp (<0.001)	1.0pp to 2.5pp	-2.5pp	Better
Child	69.7%	69.8%	0.1pp (0.897)	-1.3pp to 1.5pp	-2.3pp	Not Meaningfully Worse
3-10 Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	48.2%	47.4%	-0.8pp (0.234)	-2.1pp to 0.5pp	-2.5pp	Not Meaningfully Worse
Adult	41.3%	39.2%	-2.1pp (0.006)	-3.6pp to -0.6pp	-2.4pp	Insufficient Data
Child	70.3%	69.8%	-0.5pp (0.686)	-2.9pp to 1.8pp	-2.3pp	Insufficient Data
3-11 Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	21.9%	18.0%	-3.9pp (<0.001)	-4.5pp to -3.2pp	-2.0pp	Worse
Adult	22.4%	18.4%	-3.9pp (<0.001)	-4.6pp to -3.3pp	-2.0pp	Worse
Child	9.8%	7.1%	-2.8pp (0.033)	-4.7pp to -0.3pp	-1.4pp	Insufficient Data
3-12 Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--

Note: Results for Measure 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

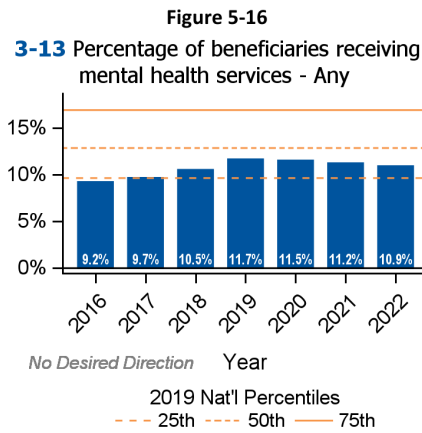
<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

- Measure 3-8 (84-Days) Conclusion:** Supports the hypothesis
- Measure 3-8 (180-Days) Conclusion:** Supports the hypothesis
- Measure 3-9 Conclusion:** Supports the hypothesis
- Measure 3-10 Conclusion:** Supports the hypothesis
- Measure 3-11 Conclusion:** Does not support the hypothesis

Figure 5-16 displays the benchmarks for Measure 3-13. Table 5-14 below presents findings for Measure 3-13, *Percentage of beneficiaries receiving mental health services*. Table 5-14 stratifies results by setting and by adult/child. There is no desired direction for this measure, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.

**Key Findings:**

- The average *Percentage of beneficiaries receiving any mental health services* increased by 1.4 percentage points between the baseline and demonstration period ( $p<0.001$ ).



**Table 5-14—Research Question 3.3, Measure 3-13**

		Weighted Rate <sup>1</sup>							
		Baseline Period			Evaluation Period				
		2016	2017	2018	2019	2020	2021	2022	
<b>Full ACC Population</b>									
<b>3-13</b>	Percentage of beneficiaries receiving mental health services (no desired direction)								
	<b>Any</b>	9.2%	9.7%	10.5%	11.7%	11.5%	11.2%	10.9%	
	ED	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	
	Intensive outpatient or partial hospitalization	0.5%	0.5%	0.5%	0.6%	0.5%	0.5%	0.6%	
	Inpatient	0.7%	0.8%	0.9%	1.0%	1.0%	1.0%	0.8%	
	Outpatient	9.0%	9.4%	10.2%	11.3%	11.0%	10.4%	9.9%	
	Telehealth	0.4%	0.5%	0.7%	0.8%	1.7%	2.5%	2.7%	
<b>Adult</b>									
<b>3-13</b>	Percentage of beneficiaries receiving mental health services (no desired direction)								
	<b>Any</b>	10.8%	11.1%	11.9%	13.2%	13.2%	13.0%	12.3%	
	ED	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	
	Intensive outpatient or partial hospitalization	0.7%	0.8%	0.8%	0.9%	0.8%	0.7%	0.7%	
	Inpatient	1.0%	1.2%	1.3%	1.4%	1.4%	1.3%	1.1%	
	Outpatient	10.5%	10.8%	11.4%	12.6%	12.4%	11.8%	10.9%	
	Telehealth	0.6%	0.6%	0.8%	0.9%	2.1%	3.0%	3.3%	
<b>Child</b>									
<b>3-13</b>	Percentage of beneficiaries receiving mental health services (no desired direction)								
	<b>Any</b>	7.3%	7.8%	8.8%	9.7%	9.3%	8.6%	8.8%	
	ED	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%	
	Intensive outpatient or partial hospitalization	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.3%	
	Inpatient	0.3%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	
	Outpatient	7.3%	7.8%	8.8%	9.7%	9.2%	8.3%	8.4%	
	Telehealth	0.3%	0.3%	0.5%	0.7%	1.2%	1.7%	1.7%	

**Do beneficiaries enrolled in an ACC plan have the same or better management of BH conditions compared to prior to integrated care?**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI
<b>Full ACC Population</b>					
<b>3-13</b>	Percentage of beneficiaries receiving mental health services (no desired direction)				
	<b>Any</b>	<b>9.8%</b>	<b>11.2%</b>	<b>1.4pp</b> <b>(&lt;0.001)</b>	<b>1.4pp to 1.5pp</b>
	ED	0.1%	0.1%	0.0pp <b>(&lt;0.001)</b>	0.0pp to 0.0pp
	Intensive outpatient or partial hospitalization	0.5%	0.5%	0.0pp <b>(&lt;0.001)</b>	0.0pp to 0.0pp
	Inpatient	0.8%	0.9%	0.1pp <b>(&lt;0.001)</b>	0.1pp to 0.1pp
	Outpatient	9.6%	10.5%	0.9pp <b>(&lt;0.001)</b>	0.9pp to 1.0pp
	Telehealth	0.5%	2.1%	1.5pp <b>(&lt;0.001)</b>	1.5pp to 1.6pp
<b>Adult</b>					
<b>3-13</b>	Percentage of beneficiaries receiving mental health services (no desired direction)				
	<b>Any</b>	<b>11.3%</b>	<b>12.8%</b>	<b>1.5pp</b> <b>(&lt;0.001)</b>	<b>1.4pp to 1.5pp</b>
	ED	0.1%	0.1%	-0.1pp <b>(&lt;0.001)</b>	-0.1pp to -0.1pp
	Intensive outpatient or partial hospitalization	0.8%	0.8%	0.0pp <b>(0.931)</b>	0.0pp to 0.0pp
	Inpatient	1.2%	1.2%	0.1pp <b>(&lt;0.001)</b>	0.1pp to 0.1pp
	Outpatient	10.9%	11.7%	0.8pp <b>(&lt;0.001)</b>	0.7pp to 0.8pp
	Telehealth	0.7%	2.5%	1.9pp <b>(&lt;0.001)</b>	1.8pp to 1.9pp
<b>Child</b>					
<b>3-13</b>	Percentage of beneficiaries receiving mental health services (no desired direction)				
	<b>Any</b>	<b>8.0%</b>	<b>9.0%</b>	<b>1.0pp</b> <b>(&lt;0.001)</b>	<b>1.0pp to 1.1pp</b>
	ED	0.0%	0.1%	0.1pp <b>(&lt;0.001)</b>	0.0pp to 0.1pp
	Intensive outpatient or partial hospitalization	0.2%	0.2%	0.0pp <b>(&lt;0.001)</b>	0.0pp to 0.0pp
	Inpatient	0.4%	0.5%	0.1pp <b>(&lt;0.001)</b>	0.1pp to 0.1pp
	Outpatient	7.9%	8.8%	0.8pp <b>(&lt;0.001)</b>	0.8pp to 0.9pp
	Telehealth	0.4%	1.4%	1.0pp <b>(&lt;0.001)</b>	1.0pp to 1.0pp

Note: Indicators in bold denote inclusion for evaluation in summary table. pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

**Measure 3-13 Conclusion: N/A**

Table 5-15 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 5-15—Research Question 3.3, Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
3-8 Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	Orange	Orange	Orange	Orange	Grey	Blue
Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	Orange	Orange	Orange	Orange	Grey	Blue
3-9 Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	Orange	Orange	Orange	Orange	Blue	Blue
3-10 Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	Blue	Orange	Orange	Orange	Orange	Grey
3-11 Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	Orange	Orange	Orange	Orange	Orange	Orange
3-13 Percentage of beneficiaries receiving mental health services (Any) <sup>†</sup>	↓ ↓	↓↓ ↓↓	↓↓ ↓↓	↓ ↓↓	- -	- ↑↑
Percentage of beneficiaries receiving mental health services (ED) <sup>†</sup>	↓↓ ↓	- ↑↑	↓ ↓↓	- -	↓↓ ↓↓	- -
Percentage of beneficiaries receiving mental health services (Inpatient) <sup>†</sup>	↓ -	↓↓ -	↓↓ ↓↓	↓↓ ↓↓	↓↓ ↓	- ↓
Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization) <sup>†</sup>	↑↑ ↑↑	↓ -	↓↓ ↓↓	- ↓	↓↓ ↓↓	↓↓ ↓↓
Percentage of beneficiaries receiving mental health services (Outpatient) <sup>†</sup>	↓ ↓↓	↓↓ ↓↓	↓↓ ↓↓	↓ ↓↓	- -	- ↑↑
Percentage of beneficiaries receiving mental health services (Telehealth) <sup>†</sup>	↓↓ ↓	↓↓ ↓↓	↓↓ ↓↓	↓↓ ↓↓	↑↑ ↓↓	- ↑↑

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



† Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

**Research Question 3.4: Do beneficiaries enrolled in an ACC plan have the same or better management of opioid prescriptions compared to prior to integrated care?**

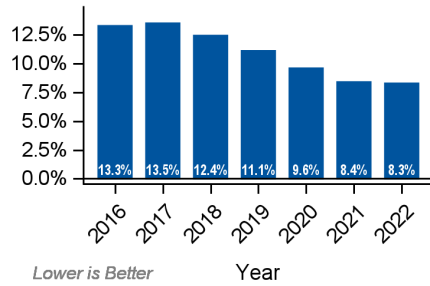
Figure 5-17 and Figure 5-18 display the benchmarks for Measure 3-14 and Measure 3-15. Table 5-16 shows that management of opioid prescriptions generally improved in the demonstration period among ACC beneficiaries.



**Key Findings:**

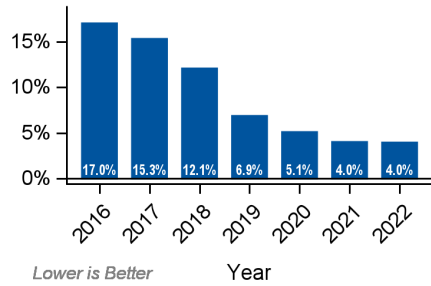
- The average *Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage* decreased by 3.7 percentage points between the baseline and demonstration period ( $p<0.001$ ).
- The average *Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines* decreased by 10.2 percentage points between the baseline and demonstration period ( $p<0.001$ ).

**Figure 5-17**  
**3-14** Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage



Lower is Better  
 No comparable benchmarks available.

**Figure 5-18**  
**3-15** Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines



Lower is Better  
 No comparable benchmarks available.

**Table 5-16—Research Question 3.4**

Do beneficiaries enrolled in an ACC plan have the same or better management of opioid prescriptions compared to prior to integrated care?								
		Weighted Rate <sup>1</sup>						
		Baseline Period			Evaluation Period			
		2016	2017	2018	2019	2020	2021	2022
<b>3-14</b>	Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	13.3%	13.5%	12.4%	11.1%	9.6%	8.4%	8.3%
<b>3-15</b>	Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	17.0%	15.3%	12.1%	6.9%	5.1%	4.0%	4.0%

Do beneficiaries enrolled in an ACC plan have the same or better management of opioid prescriptions compared to prior to integrated care?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>3-14</b>	Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	13.2%	9.4%	-3.7pp (<0.001)	-3.9pp to -3.5pp	1.7pp	Better
<b>3-15</b>	Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	15.2%	5.1%	-10.2pp (<0.001)	-10.3pp to -10.0pp	1.8pp	Better

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 3-14 Conclusion:** Supports the hypothesis

**Measure 3-15 Conclusion:** Supports the hypothesis

Table 5-17 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 5-17—Research Question 3.4, Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
3-14 Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage <sup>++</sup>	Orange	Blue	Blue	Blue	Blue	Blue
3-15 Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines <sup>++</sup>	Blue	Blue	Blue	Blue	Orange	Orange

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



<sup>++</sup> Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

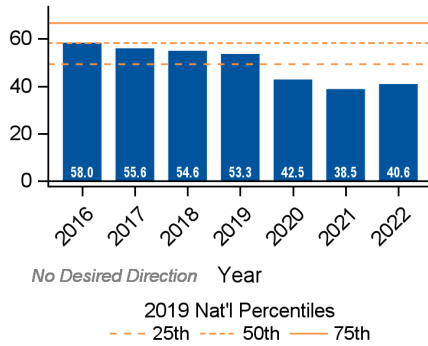
**Research Question 3.5: Do beneficiaries enrolled in an ACC plan have equal or lower ED or hospital utilization compared to prior to ACC?**

Figure 5-19 through Figure 5-21 display the benchmarks for Measures 3-16, 3-17, and 3-18. Table 5-18 shows that the rate of ED visits and inpatient (IP) visits among ACC beneficiaries decreased throughout the demonstration period, while the rate of unplanned readmissions increased slightly in the baseline period and remained stable throughout the demonstration period. The decrease in ED visits and IP visits was possibly attributable to the COVID-19 PHE and can be seen in other Demonstration groups including ALTCS-DD. There is no desired direction for Measure 3-16 and 3-17, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.

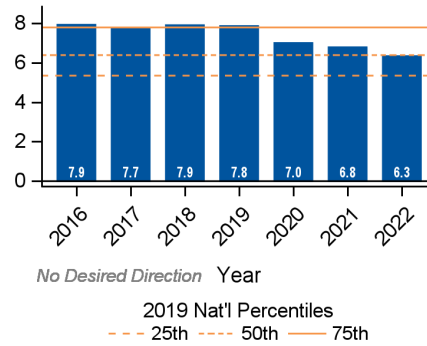
**Key Findings:**

- The average *Number of ED visits per 1,000 member months* declined by 11.97 visits per 1,000 member months between the baseline and demonstration period ( $p=0.002$ ).
- The average *Number of IP stays per 1,000 member months* declined by 0.86 visits per 1,000 member months between the baseline and demonstration period ( $p=0.017$ ).
- The *Percentage of adult inpatient discharges with an unplanned readmission within 30 days* increased by an average of 1.1 percentage points between the baseline and demonstration period ( $p<0.001$ ). Although traditional statistical testing found a statistically significant increase, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.

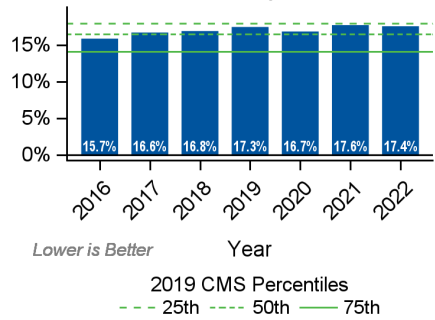
**Figure 5-19**  
**3-16** Number of ED visits per 1,000 member months



**Figure 5-20**  
**3-17** Number of inpatient stays per 1,000 member months



**Figure 5-21**  
**3-18** Percentage of adult inpatient discharges with an unplanned readmission within 30 days



**Table 5-18—Research Question 3.5**

Do beneficiaries enrolled in an ACC plan have equal or lower ED or hospital utilization compared to prior to ACC?

		Weighted Rate <sup>1</sup>							
		Baseline Period			Evaluation Period				
		2016	2017	2018	2019	2020	2021	2022	
<b>3-16</b>	Number of ED visits per 1,000 member months (no desired direction)	58.02	55.65	54.61	53.29	42.50	38.47	40.59	
	Adult (no desired direction)	71.35	69.00	66.87	64.58	52.86	48.60	47.20	
	Child (no desired direction)	42.00	39.49	39.64	39.27	29.04	24.03	30.42	
<b>3-17</b>	Number of inpatient stays per 1,000 member months (no desired direction)	7.91	7.72	7.89	7.85	6.99	6.78	6.33	
	Adult (no desired direction)	12.93	12.60	12.82	12.63	11.17	10.59	9.44	
	Child (no desired direction)	1.89	1.81	1.87	1.91	1.57	1.34	1.55	
<b>3-18</b>	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	15.7%	16.6%	16.8%	17.3%	16.7%	17.6%	17.4%	

Do beneficiaries enrolled in an ACC plan have equal or lower ED or hospital utilization compared to prior to ACC?

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
3-16	Number of ED visits per 1,000 member months (no desired direction)	56.09	44.13	-11.97 (0.002)	-18.2 to -4.7	--	--
	Adult	69.08	53.47	-15.61 (<0.001)	-23.2 to -6.8	--	--
	Child	40.37	31.24	-9.13 (0.018)	-15.1 to -1.8	--	--
3-17	Number of inpatient stays per 1,000 member months (no desired direction)	7.84	6.98	-0.86 (0.017)	-1.5 to -0.2	--	--
	Adult	12.78	10.88	-1.90 (0.013)	-3.2 to -0.4	--	--
	Child	1.86	1.60	-0.26 (0.057)	-0.5 to 0.0	--	--
3-18	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	16.4%	17.4%	1.1pp (<0.001)	0.8pp to 1.3pp	1.9pp	Not Meaningfully Worse

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. Because Measures 3-16 and 3-17 examine counts of services, a negative binomial model is used to appropriately conduct statistical testing. Estimates and confidence intervals have been transformed to rates per 1,000 member months for ease of interpretation.

<sup>1</sup>Rates are weighted by duration of enrollment in ACC.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Measure 3-16 Conclusion:** N/A  
**Measure 3-17 Conclusion:** N/A  
**Measure 3-18 Conclusion:** Supports the hypothesis

Table 5-19 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 5-19—Research Question 3.5, Demographics**

	Black	A/IAN	All Others	Unknown	Rural	Female
3-16 Number of ED visits per 1,000 member months <sup>†</sup>	↑ ↑	- -	↓↓ ↓↓	- -	- ↑	↑↑ ↑
3-17 Number of inpatient stays per 1,000 member months <sup>†</sup>	- -	- -	- -	- -	- -	↑↑ ↑↑
3-18 Percentage of adult inpatient discharges with an unplanned readmission within 30 days <sup>††</sup>						

Note: Reference groups are White/Caucasian, Urban, Male. A/IAN=American Indian/Alaska Native



†† Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

**Hypothesis 4—Beneficiary self-assessed health outcomes will maintain or improve as a result of the integration of PH and BH**

**Research Question 4.1: Do beneficiaries enrolled in an ACC plan have the same or higher overall health rating compared to prior to integrated care?**

**Research Question 4.2: Do beneficiaries enrolled in an ACC plan have the same or higher overall mental or emotional health rating compared to prior to integrated care?**

Self-reported rates of overall and mental or emotional health improved for ACC children but worsened for adults as seen in Table 5-20.

**Key Findings:**

- The *Percentage of beneficiaries who reported a high rating of overall health* increased by 9.0 percentage points among children ( $p < 0.001$ ). Conversely, this rate declined by 1.8 percentage points among adults ( $p = 0.171$ ).
- The *Percentage of beneficiaries who reported a high rating of overall mental or emotional health* increased by 4.0 percentage points among children ( $p = 0.004$ ). The rate among adults decreased by 2.5 percentage points ( $p = 0.089$ ).
- Non-inferiority testing shows that the *Percentage of beneficiaries who reported a high rating of overall health* was the same or better in the 2021 survey compared to the 2016–2017 survey.

**Table 5-20—Research Questions 4.1 and 4.2**

Do beneficiaries enrolled in an ACC plan have the same or higher overall health rating and mental or emotional health compared to prior to integrated care?							
		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
4-1	Percentage of beneficiaries who reported a high rating of overall health	52.4%	52.8%	0.4pp (0.706)	-1.7pp to 2.5pp	-2.5pp	Not Meaningfully Worse
	Adult	31.1%	29.2%	-1.8pp (0.171)	-4.4pp to 0.8pp	-2.3pp	Insufficient Data
	Child	72.4%	81.4%	9.0pp (<0.001)	6.7pp to 11.1pp	-2.3pp	Better
4-2	Percentage of beneficiaries who reported a high rating of overall mental or emotional health	58.0%	56.8%	-1.2pp (0.250)	-3.3pp to 0.8pp	-2.5pp	Insufficient Data
	Adult	44.8%	42.3%	-2.5pp (0.089)	-5.3pp to 0.4pp	-2.5pp	Insufficient Data
	Child	70.3%	74.3%	4.0pp (0.004)	1.4pp to 6.5pp	-2.3pp	Better

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

HSAG utilized data from the Behavioral Risk Factor Surveillance System (BRFSS) surveys in 2017 and 2021, which asked, “*Would you say that in general your health is excellent, very good, good, fair, or poor?*”. Notably, only four states had a Medicaid indicator available in the 2017 BRFSS survey compared to 49 states in the 2021 BRFSS survey<sup>5-7</sup> Table 5-21 shows that from 2016-2017 and in 2021, Medicaid beneficiaries nationally reported higher rates of excellent or very good health compared to ACC beneficiaries.

**Table 5-21—Research Question 4.1 BRFSS Results**

Do beneficiaries enrolled in an ACC plan have the same or higher overall health rating compared to prior to integrated care?				
		2016-2017 Survey	2021 Survey	
4-1	Percentage of beneficiaries who reported a high rating of overall health - Adult	Arizona	31.1%	29.2%
		National	38.3%	37.0%

Note: National comparisons are not presented for children as BRFSS only surveys adults 18 years or older. National rates were calculated from BRFSS 2017 from respondents who indicated their primary health insurance coverage is through “Medicaid or other state program”. National rates were calculated from BRFSS 2021 from respondents who indicated their primary health insurance coverage is through “Medicaid”.

Sources: BRFSS 2017, BRFSS 2021, AHCCCS beneficiary surveys (2016-2017), AHCCCS beneficiary surveys (2021).

**Measure 4-1 Conclusion:** Supports the hypothesis

**Measure 4-2 Conclusion:** Neither supports nor fails to support the hypothesis

<sup>5-7</sup> The four states with a Medicaid indicator in BRFSS 2017 include Delaware, Florida, New Jersey, and Wisconsin. In BRFSS 2021, all states except Florida include a Medicaid indicator.



**Hypothesis 5—Beneficiary satisfaction with their health care will maintain or improve as a result of the integration of PH and BH.**

**Research Question 5.1: Are beneficiaries equally or more satisfied with their health care as a result of integrated care?**

Table 5-22 displays the *Percentage of beneficiaries who reported a high rating of health plan* and *Percentage of beneficiaries who reported a high rating of overall health care* for both the pre-ACC and post-ACC survey.

**Key Findings:**

- The *Percentage of beneficiaries who reported a high rating of health plan* increased slightly by 0.4 and 0.7 percentage points among adults and children, respectively ( $p=0.749$  for adults and  $p=0.492$  for children).
- The *Percentage of beneficiaries who reported a high rating of overall health care* decreased by 3.0 percentage points among adults while it increased by 2.3 percentage points among children ( $p=0.052$  for adults and  $p=0.078$  for children).
- The *Percentage of beneficiaries who reported a high rating of health plan* was the same or better in the 2021 survey compared to the 2016–2017 survey based on non-inferiority testing.

**Table 5-22—Research Question 5.1**

Are beneficiaries equally or more satisfied with their health care as a result of integrated care?

		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
5-1	Percentage of beneficiaries who reported a high rating of health plan	81.8%	81.7%	-0.1pp (0.950)	-1.7pp to 1.5pp	-2.0pp	Not Meaningfully Worse
	Adult	77.1%	77.5%	0.4pp (0.749)	-2.1pp to 2.7pp	-2.1pp	Not Meaningfully Worse
	Child	86.1%	86.8%	0.7pp (0.492)	-1.4pp to 2.6pp	-1.8pp	Not Meaningfully Worse
5-2	Percentage of beneficiaries who reported a high rating of overall health care	82.2%	80.7%	-1.5pp (0.155)	-3.7pp to 0.5pp	-2.0pp	Insufficient Data
	Adult	77.3%	74.3%	-3.0pp (0.052)	-6.3pp to 0.0pp	-2.1pp	Insufficient Data
	Child	87.3%	89.6%	2.3pp (0.078)	-0.2pp to 4.4pp	-1.7pp	Not Meaningfully Worse

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 5-1 Conclusion:** Supports the hypothesis

**Measure 5-2 Conclusion:** Neither supports nor fails to support the hypothesis

**Hypothesis 6—The ACC program will provide cost-effective care.**

**Research Question 6.1: What are the costs associated with the integration of care under ACC?**

Figure 5-22 displays the per member per month (PMPM) and per utilizing member per month (PUMPM) claim/encounter costs and total expenditures from the baseline in 2018 through 2022 for actual incurred costs and the expected (counterfactual) costs. The three displayed comparisons of the actual and counterfactual costs exhibit an overall cost increase from 2018 through 2022. However, the impact year to year varies, driven greatly by the impact of the COVID-19 PHE in 2020. The reduction of the actual costs in 2020 and subsequent increase in 2021 was the result of the limited available benefits during the PHE offset by the leap in benefit utilization post-lockdown. The expected cost line does not include the impact of the COVID-19 PHE. Given the reduction of available services as a result of the PHE in the majority of fiscal year (FY) 2020, the expected impact would be a reduction of PMPM costs. Given the PUMPM metric focuses on utilizing beneficiaries (i.e., beneficiaries with at least one claim/encounter during the year), the impact of the PHE was expected to be negligible from a cost per utilizing beneficiary perspective when looking at all categories of service combined.

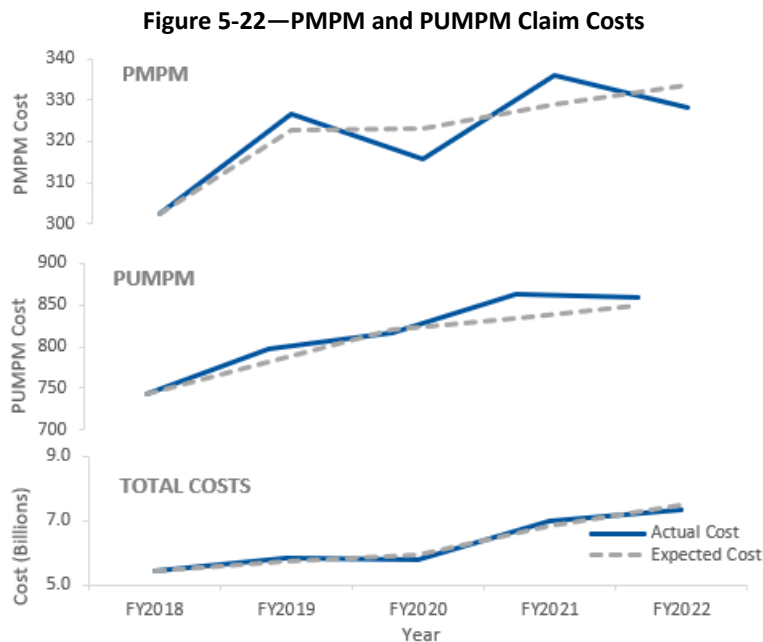


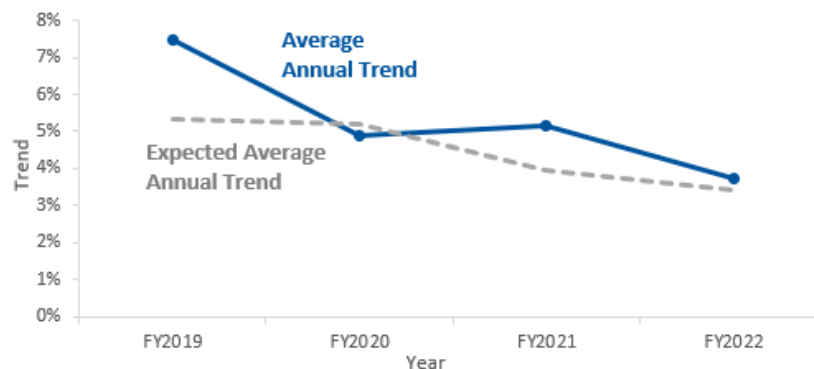
Figure 5-23 shows several trend calculations, based on changes from 2018 (not shown in the figure). The average annualized trend decreased throughout the life of the ACC program, from the baseline of 8.0 percent to 2.1 percent. The impact of the COVID-19 PHE can be seen in the steep drop in the PMPM trend from FY 2019 to FY 2020, with a rebound of the trend demonstrated by the increase from FY 2020 to FY 2021. Overall, ACC saw a reduction in trend throughout the Demonstration.

**Figure 5-23—Cost Per Beneficiary Trends**



Figure 5-24 shows two trend calculations, based on changes from 2018 (not shown in figure). The average annualized trend decreased throughout the life of the ACC program, from the baseline trend of 7.5 percent down to 3.7 percent for FY 2022. The impact of the COVID-19 PHE can be seen in the steep drop in the PUMPM trend from FY 2019 to FY 2020 with a rebound of the trend demonstrated by the increase from FY 2020 to FY 2021. Overall, ACC saw a reduction in PUMPM trend throughout the Demonstration. With a focus on utilizing beneficiaries, the magnitude of the trend changes from year to year was smaller than those of the total population.

**Figure 5-24—Cost Per Utilizing Beneficiary Trends**



Changes to the demographics of the population can impact the per beneficiary trends. The largest impact to the ACC population demographics from both a utilizing beneficiary and total population perspective was driven by an increase in the risk profile. The average annualized Chronic Illness & Disability Payment System (CDPS) (version 6.5) condition-based risk scores increased throughout the life of the ACC program at a rate of 1.9 percent for the utilizing population and 1.5 percent for the population as a whole. The beneficiary distribution by age, race, and geographic region did not change substantially from 2018 to 2022.

Based on data from the U.S. Bureau of Labor Statistics, prices for medical care were 14.46 percent higher in 2022 compared to 2018 (a \$14.46 difference in value per \$100 of spending), indicating a medical care average inflation rate of 1.9 percent per year. The medical care inflation rate was lower than the overall annual inflation rate of 4.1 percent during this same period. The medical CPI was used to account for changes to cost due to inflationary factors. CPI does not account for Arizona Medicaid-specific policy changes that had a fiscal impact. HSAG was not aware of any policy changes between 2019 and 2022 that had a fiscal impact that would have changed the analysis.

The COVID-19 PHE had diverse impacts on healthcare service utilization. HSAG reviewed category-of-service specific pre- and post- PHE trend changes in utilization per 1,000 beneficiaries to assess the impact on beneficiary utilization patterns. The impact of PHE on the availability of medical services driven by restrictions and lockdowns led to an industry expectation of reduced utilization throughout 2020 leading to negative utilization trends when compared to 2019 utilization per 1,000 beneficiaries. As state and federal restrictions and lockdowns were reduced or lifted, the industry expectation was that there was a rebound in services post-PHE and utilization was positive in 2021 and 2022.

ACC’s utilization trend analysis exhibited mixed impacts by category of service. The outpatient and pharmacy categories of service utilization patterns aligned with industry expectations demonstrating decreased trends observed for 2020, a rebound in 2021, and stable trends in 2022 that resembled pre-PHE numbers. Inpatient utilization behaved as expected in 2020 when the utilization per 1,000 beneficiaries trend dropped 7.5 percent in 2020; however, the IP category of service trend did not exhibit the expected pattern with subsequent drops in trend seen in 2021 and 2022 of 1.8 percent and 4.3 percent, respectively. Professional utilization per 1,000 beneficiaries trend saw a drop of 7.1 percent in 2020 with a rebound of 1.5 percent in 2021, aligning with the industry expectations; however, the trend continued to decrease in 2022 at a rate of 2.0 percent compared to 2021 levels of utilization per 1,000. The ED utilization per 1,000 trend beneficiaries exhibited the highest drop in trend of the categories of service analyzed, with a trend reduction of 19.3 percent in 2020. Trends for ED utilization dropped another 10.3 percent in 2021 compared to the 2020 rate. However, in 2022, there was a spike of 4.9 percent in ED utilization over the 2021 rate. The trend increased in 2022 and was higher than pre-PHE utilization trends. The continual drop in the utilization of inpatient and professional services, coupled with the spike in ED trends in 2022, could suggest a shift to the potential use of the ED in lieu of professional services for the ACC population.

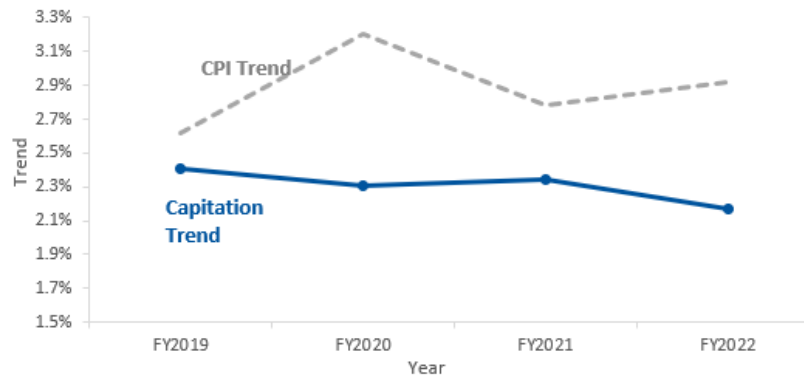
Figure 5-25 shows several trend calculations related to the utilization impact on the capitation arrangements between AHCCCS and its contracted health plans. Trend impacts were based on changes from 2018 (not shown in the figure). The average annualized utilization trend decreased throughout the life of the ACC program, from the baseline of 0.7 percent to -10.1 percent. The impact of the COVID-19 PHE can be seen in the steep drop in the utilization trend from FY 2019 to FY 2020. The changes in the utilization for subsequent years slowed. The expected utilization trend was calculated based on the utilization trend used and certified by AHCCCS’ actuaries in the development of the implemented capitation rates with changes in beneficiary demographics and population health condition-based risk score (See the Financial Analysis Trend and Cost Development Methodology section for additional details on adjustment factor development.)

**Figure 5-25—Utilization Trends**



Figure 5-26 shows several trend calculations related to the unit cost impact on the capitation arrangements between AHCCCS and its contracted health plans. Trend impacts were based on changes from 2018 (not shown in the figure). The average annualized capitation unit cost trend throughout the life of the ACC program was kept at a consistent level from the baseline of 2.4 percent to 2.2 percent by AHCCCS’ pricing actuaries. The expected unit cost trend was based on the medical CPI to account for changes to cost due to inflationary factors. CPI does not account for Arizona Medicaid-specific policy changes that had a fiscal impact.

**Figure 5-26—Unit Cost Trends**



**Research Question 6.2: What are the benefits/savings associated with the integration of care under ACC?**

Table 5-23 shows the impacts of each of the known changes in the cost and demographic variables for paid claims from 2018 to 2022. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2018 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2018 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating all known external impacts was 2.5 percent; comparing this to the annualized paid claims trend of 2.1 percent achieved by the Demonstration shows that ACC achieved an estimated savings in claims cost of 0.4 percent.

**Table 5-23—Counterfactual Paid Claims Trend Development**

Cost Impact Components	FY2018 Factors [A]	FY2022 Factors [B]	Cumulative Factor Change <sup>1</sup> [C]=[B]/[A]	Years [D]	Average Annualized Factor Trend <sup>2</sup> [E]=[C]^(1/[D])-1
Aging	0.9929	1.0185	1.0258	4	0.6%
Race	1.0034	1.0012	0.9978	4	-0.1%
Area	0.9995	1.0000	1.0006	4	0.0%
Risk	1.0945	1.1633	1.0629	4	1.5%
CPI	1.0000	1.1446	1.1446	4	3.4%
Service Category Distribution	1.0000	0.8852	0.8852	4	-3.0%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>1.0898</b>	<b>1.2018</b>	<b>1.1028</b>	<b>4</b>	<b>2.5%</b>

Average Annualized Trend		FY2018 to FY2022
[E]	Counterfactual Annualized Paid Claims Trend	2.5%
[F]	Annualized Paid Claims Trend <sup>4</sup>	2.1%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>	<b>0.4%</b>

Note: Factors represent the impact on claims cost for various groups within the ACC population. For example, the aging factor represents the impact on claims cost by dividing the ACC population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire ACC population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicates cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 19,456,703.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

Table 5-24 shows the impacts of each of the known changes in the cost and demographic variables on capitated cost arrangements from 2018 to 2022. The annual impact of each known driver was applied to the capitated base benefit PMPM trend from the baseline of 2018 to calculate the counterfactual capitated base benefit PMPM trend. The calculated counterfactual capitated base benefit PMPM trend incorporating all known external impacts was 6.0 percent; comparing this to the annualized paid claims trend of 4.5 percent achieved by the Demonstration shows that ACC achieved an estimated savings in capitation base benefit trend of 1.5 percent.

**Table 5-24—Capitation Rates Trend Development**

Cost Impact Factors	FY2018 Factors [A]	FY2022 Factors [B]	Cumulative Factor Change <sup>1</sup> [C]=[B]/[A]	Years [D]	Average Annualized Factor Trend <sup>2</sup> [E]=[C]^(1/[D])-1
Aging	0.9929	1.0185	1.0258	4	0.6%
Race	1.0034	1.0012	0.9978	4	-0.1%
Area	0.9995	1.0000	1.0006	4	0.0%
Risk	1.0945	1.1633	1.0629	4	1.5%
PMPM Rating <sup>3</sup>	1.0000	1.1603	1.1603	4	3.8%
<b>Capitation Rates<sup>4</sup></b>	<b>1.0898</b>	<b>1.3764</b>	<b>1.2630</b>	<b>4</b>	<b>6.0%</b>

Average Annualized Trend		FY2018 to FY2022
[E]	Annualized Capitation Rates Trend	6.0%
[F]	Annualized Capitation Base Benefit Trend <sup>5</sup>	4.5%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Annualized Capitation Rates Trend</b>	<b>1.5%</b>

Note: Factors represent the impact on claims cost for various groups within the ACC population. For example, the aging factor represents the impact on claims cost by dividing the ACC population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire ACC population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicates cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 19,456,703.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual capitation rates trend.

<sup>3</sup>PMPM Rating Factor comes from the Actuarial Rate Development files found on <https://www.azahcccs.gov/PlansProviders/RatesAndBilling/ManagedCare/capitationrates.html> for the relevant program being evaluated.

<sup>4</sup>The Capitation Rates Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>5</sup>Capitation Base Benefit trend comes from the Actuarial Rate Development files found on <https://www.azahcccs.gov/PlansProviders/RatesAndBilling/ManagedCare/capitationrates.html> for the relevant program being evaluated.



## 6. ALTCS Results

The following section details measure results by research question and related hypotheses for the Arizona Long Term Care System (ALTCS) Demonstration program. For details on the measure definitions and specifications, reference the approved Evaluation Design.<sup>6-1</sup> Full measure results with denominator data are presented in Appendix A.

Rates were calculated for the following groups and time periods:

- Integration of behavioral health (BH) care for ALTCS-Developmentally Disabled (DD) comparing the integration period of October 1, 2019, through September 30, 2022, to the pre-integration period of October 1, 2014, through September 30, 2019.
- Renewal period for ALTCS-DD comparing the baseline period of October 1, 2014, through September 30, 2016, and the demonstration period of October 1, 2017, through September 30, 2022.
- Renewal period for ALTCS-Elderly and/or Physically Disabled (EPD) comparing the baseline period of October 1, 2014, through September 30, 2016, and the demonstration period of October 1, 2017, through September 30, 2022.

This section focuses on the integration of care within the ALTCS-DD demonstration, emphasizing findings related to new and innovative components of the extension period. Results related to the Demonstration renewal for ALTCS-DD and ALTCS-EPD represent long-standing programs. Results on both ALTCS-DD prior to integration and ALTCS-EPD can be found in Appendix A. A summary results for both the integration and renewal period are presented below, organized by hypothesis and by research question. Most hypotheses include multiple research questions, and most research questions use multiple measures. For full results comparing the baseline period of October 1, 2014, through September 30, 2016, and the demonstration period of October 1, 2017, through September 30, 2022, for ALTCS-DD and ALTCS-EPD see Appendix A. Results Summary

In total, 45 measures were calculated for the ALTCS-DD and EPD populations between 2015 and 2022.<sup>6-2</sup> Due to effects of the coronavirus disease 2019 (COVID-19) public health emergency (PHE) impacting the U.S. healthcare system beginning in approximately March 2020, results for this time period must be interpreted with caution, as many changes in rates may not be indicative of program performance. Table 6-1 and Table 6-2 presents the number of measures by research question that supported the research question, did not support the research question, or were inconclusive for the renewal period and post-ALTCS-DD integration, respectively.<sup>6-3</sup> The tables show the number of measures for which there is no desired direction, such as emergency department (ED) or inpatient utilization measures. Information about the performance of these measures can be found in the detailed tables below.

Due to limitations of available and appropriate comparison groups, methods used in this analysis do not allow for description of causal effect. Measures characterized as supporting or not supporting their respective hypothesis may have been influenced by factors other than the ALTCS program that have not been statistically controlled for in these results. Additional details can be found in the Methodology Limitations section.

Results for qualitative analysis from key informants are included under Hypothesis 4.

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<sup>6-1</sup> Arizona Health Care Cost Containment System. Arizona's Section 1115 Waiver Independent Evaluation–Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>6-2</sup> Additional indicators were calculated for certain measures and are reported in full in the ALTCS Results section and in Appendix A.

<sup>6-3</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.

*ALTCS-DD Integration*

On October 1, 2019, ALTCS-DD plans provided integrated care for their beneficiaries, covering both physical health (PH) and behavioral health (BH). This was intended to simplify and streamline the provision of comprehensive care for these beneficiaries. Measures related to preventive care generally exhibited a slight decline; however, non-inferiority statistical testing<sup>6-4</sup> showed that these declines were not large enough to constitute a meaningful worsening in the rate. The rate of cervical cancer screening declined by a significant degree, while the rate of beneficiaries with persistent asthma maintaining appropriate medication ratio and the rate of adolescent well-care visits increased by a significant degree. The largest improvements were seen in the percentage of beneficiaries who remained on an antidepressant medication treatment for 84 days.

Overall, integration of care for the ALTCS-DD population resulted in the same or better rates of preventive care (excluding breast and cervical cancer screening) and management of BH conditions. Data were insufficient to establish reliable conclusions regarding the management of prescriptions.

**Table 6-1—ALTCS Results Summary, Integration**

Research Questions	ALTCS-DD			
	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
1.1: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?	1	0	0	0
1.2: Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?	2	0	0	0
1.3: Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?	N/A	N/A	N/A	N/A
2.1: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?	1	1	1	0
2.2: Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?	2	0	0	0
2.3: Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?	2	1	0	1

<sup>6-4</sup> Non-inferiority testing appears as “NI” in tables and figures throughout this section.

Research Questions	ALTCS-DD			
	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>2.4:</b> Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?	1	2	0	0
<b>2.5:</b> Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-of-state comparisons?	0	1	0	2
<b>3.1:</b> Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?	1	0	0	0
<b>3.2:</b> Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?	N/A	N/A	N/A	N/A
<b>3.3:</b> Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?	N/A	N/A	N/A	N/A

<sup>1</sup>Determination of support is not applicable or is dependent on context

### Renewal Period

Overall, results suggested improvements for the ALTCS-DD and ALTCS-EPD populations between the pre-renewal and renewal period. Among the DD population, 12 measures support their respective hypothesis, five did not support, 10 were inconclusive, and three measures did not have a desired direction. Rates generally improved for preventive measures, such as adolescent well-care and well-child visits; however, there were challenges among beneficiary engagement and community support based on NCI survey data.<sup>6-5</sup>

Among the ALTCS-EPD population, six measures support their respective hypothesis, six were inconclusive, and three measures did not have a desired direction. No measure failed to support its hypothesis. Improvements were seen in preventive care, including preventive visits and screening for breast and cervical cancer. Measures related to management of prescription opioids also improved for the ALTCS-EPD population.

<sup>6-5</sup> It is worth noting, however, the latest NCI survey data are only available for the 2018/2019 time period, which is at least three years prior to the end of the demonstration.

**Table 6-2—ALTCS Results Summary, Renewal**

Research Questions	ALTCS-DD				ALTCS-EPD			
	Number of Measures				Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>1.1:</b> Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?	1	0	0	0	1	0	0	0
<b>1.2:</b> Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?	2	0	0	0	N/A	N/A	N/A	N/A
<b>1.3:</b> Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?	1	4	0	0	N/A	N/A	N/A	N/A
<b>2.1:</b> Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?	1	1	1	0	2	1	0	0
<b>2.2:</b> Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?	2	0	0	0	N/A	N/A	N/A	N/A
<b>2.3:</b> Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?	2	1	0	1	1	2	0	1
<b>2.4:</b> Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?	1	2	0	0	2	1	0	0
<b>2.5:</b> Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-of-state comparisons?	0	1	0	2	0	1	0	2
<b>3.1:</b> Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?	1	1	0	0	0	1	0	0

Research Questions	ALTCS-DD				ALTCS-EPD			
	Number of Measures				Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>3.2:</b> Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?	1	0	1	0	N/A	N/A	N/A	N/A
<b>3.3:</b> Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?	0	0	3	0	N/A	N/A	N/A	N/A

<sup>1</sup>Determination of support is not applicable or is dependent on context

**Hypothesis 1—Access to care will maintain or improve over the waiver demonstration period.**

**Research Question 1.1: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?**

Table 6-3 shows that the *Percentage of beneficiaries who accessed preventative/ambulatory health services* trended upward during the pre-integration and integration periods. The rates slightly decreased in federal fiscal year (FFY) 2020, which was possibly due to the COVID-19 PHE, as a similar trend was seen in other Demonstration groups including AHCCCS Complete Care (ACC) and Comprehensive Health Plan (CHP). Renewal results for ALTCS-DD and ALTCS-EPD can be found in Appendix A.

**Key Findings:**

- The *Percentage of beneficiaries who accessed preventative/ambulatory health services* decreased by 0.1 percentage points between the pre-integration and integration period average (p=0.630). Non-inferiority testing shows that rates in the integration period were the same or better than rates in the pre-integration period.

**Table 6-3—Research Question 1.1, Integration**

Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?									
Weighted Rate <sup>1</sup>									
		Baseline Period				Integration Period			
		2015	2016	2017	2018	2019	2020	2021	2022
<b>ALTCS-DD Population</b>									
1-1	Percentage of beneficiaries who accessed preventative/ambulatory health services	87.1%	87.8%	88.0%	88.7%	89.4%	87.8%	88.0%	88.3%
Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?									
		Pre-Integration Average	Integration Average	Pre/Post Change in Rate <sup>2</sup>		95% CI	NI Threshold	Non-Inferiority <sup>3</sup>	
<b>ALTCS-DD Population</b>									
1-1	Percentage of beneficiaries who accessed preventative/ambulatory health services	88.3%	88.2%	-0.1pp (0.630)		-0.5pp to 0.3pp	-1.7pp	Not Meaningfully Worse	

Note: pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

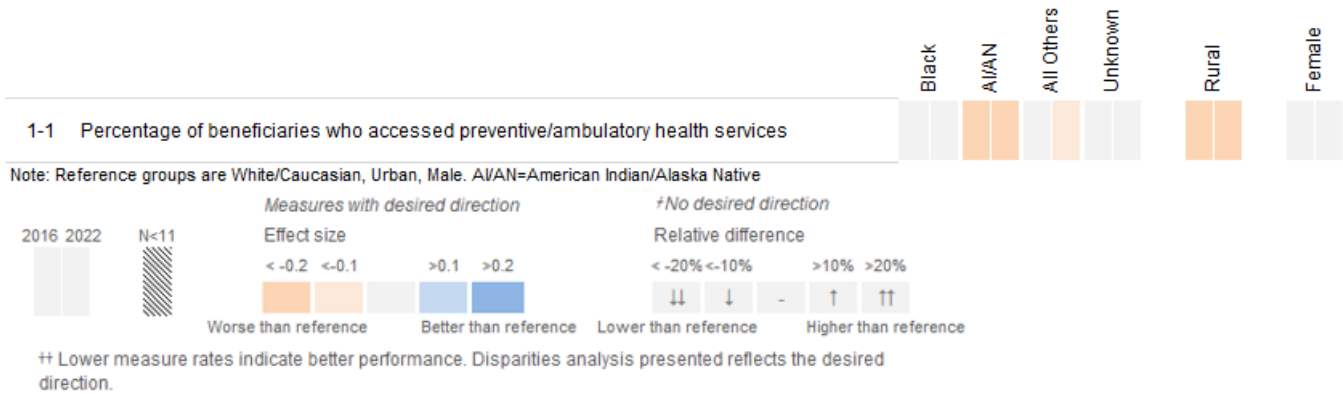
<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-1 Conclusion: Supports the hypothesis**

Table 6-4 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 6-4—Research Question 1.1, DD Demographics**



**Research Question 1.2: Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparison?**

Table 6-5 shows that the *Percentage of children and adolescents who accessed primary care practitioners* and *Percentage of beneficiaries under 21 with an annual dental visit* decreased between the pre-integration and integration years. The large decrease in the FFY 2020 annual dental visit rate was possibly attributable to the COVID-19 PHE and can be seen in other Demonstration groups including ACC and CHP. Renewal results for ALTCS-DD can be found in Appendix A.

**Key Findings:**

- The *Percentage of children and adolescents who accessed primary care practitioners* and *Percentage of beneficiaries under 21 with an annual dental visit* decreased by 0.8 and 1.9 percentage points between the pre-integration and integration period average, respectively. Both findings were statistically significant ( $p < 0.001$ ). Although traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.



**Table 6-5—Research Question 1.2, Integration**

Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?										
Weighted Rate <sup>1</sup>										
Baseline Period										
Integration Period										
2015 2016 2017 2018 2019 2020 2021 2022										
<b>ALTCS-DD Population</b>										
1-2	Percentage of children and adolescents who accessed primary care practitioners	91.1%	91.2%	91.0%	91.0%	91.6%	91.1%	90.2%	90.5%	
1-3	Percentage of beneficiaries under 21 with an annual dental visit	55.5%	53.4%	56.4%	57.1%	53.2%	40.2%	52.3%	54.2%	

Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?									
Pre-Integration Average Integration Average Pre/Post Change in Rate <sup>2</sup> 95% CI NI Threshold Non-Inferiority <sup>3</sup>									
<b>ALTCS-DD Population</b>									
1-2	Percentage of children and adolescents who accessed primary care practitioners	91.2%	90.3%	-0.8pp (<0.001)	-1.2pp to -0.5pp	-1.5pp	Not Meaningfully Worse		
1-3	Percentage of beneficiaries under 21 with an annual dental visit	55.1%	53.2%	-1.9pp (<0.001)	-2.5pp to -1.3pp	-2.5pp	Not Meaningfully Worse		

Note: pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-2 Conclusion:** Supports the hypothesis

**Measure 1-3 Conclusion:** Supports the hypothesis

Table 6-6 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 6-6—Research Question 1.2, DD Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
1-2 Percentage of children and adolescents who accessed primary care practitioners						
1-3 Percentage of beneficiaries under 21 with an annual dental visit						

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Research Question 1.3: Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?**

Baseline data collected in 2015–2016 and demonstration period data collected in 2017–2018 and 2018–2019 from NCI surveys of ALTCS-DD adults provide another view on access to care for this population. These measures were calculated using the NCI survey data which was only available up to 2018/2019, as such does not cover the integration of care for adults with DD. Please see Appendix A for the renewal survey results of the percentage of

Arizona adults with DD who *Have a primary care doctor or practitioner, Had a complete physical exam in the past year, Had a dental exam in the past year, and Had a flu vaccine in the past year.* Please see Appendix B for further details on Research Question 1.3

**Hypothesis 2—Quality of care will maintain or improve over the waiver demonstration period.**




**Research Question 2.1: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventative care compared to baseline rates and out-of-state comparisons?**

Table 6-7 shows the *Percentage of adult beneficiaries with a breast cancer screening and Percentage of adult beneficiaries with a cervical cancer screening* decreased between the pre-integration and integration years for ALTCS-DD beneficiaries. In addition, the table shows that the *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased substantially between FFY 2019 and FFY 2021 before decreasing in FFY 2022 for ALTCS-DD. Renewal results for ALTCS-DD and ALTCS-EPD can be found in Appendix A.

**Key Findings:**

- The *Percentage of adult beneficiaries with a breast cancer screening and Percentage of adult beneficiaries with a cervical cancer screening* decreased by 3.1 and 4.0 percentage points between the pre-integration and integration period average, respectively ( $p=0.016$ ,  $p<0.001$ ).
- The *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased by 7.8 percentage points between the pre-integration and integration period average ( $p<0.001$ ).

**Table 6-7—Research Question 2.1, Integration**

		Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?								
		Weighted Rate <sup>1</sup>								
		Baseline Period					Integration Period			
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-1	Percentage of adult beneficiaries with a breast cancer screening	43.9%	45.7%	46.2%	45.1%	44.0%	42.0%	41.5%	42.2%	
2-2	Percentage of adult beneficiaries with a cervical cancer screening	17.8%	17.4%	16.5%	16.3%	15.8%	14.0%	12.9%	12.6%	
2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	77.1%	79.0%	79.8%	76.2%	82.1%	86.7%	92.5%	80.0%	
<b>Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?</b>										
		Pre-Integration Average	Integration Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>			
<b>ALTCS-DD Population</b>										
2-1	Percentage of adult beneficiaries with a breast cancer screening	45.0%	41.9%	-3.1pp (0.016)	-5.6pp to -0.6pp	-2.5pp	Insufficient Data			
2-2	Percentage of adult beneficiaries with a cervical cancer screening	16.7%	12.8%	-4.0pp (<0.001)	-4.7pp to -3.2pp	-1.8pp	Worse			
2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	78.9%	86.7%	7.8pp (<0.001)	5.5pp to 9.8pp	-2.1pp	Better			

Note: pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-1 Conclusion: Neither supports nor fails to support the hypothesis**

**Measure 2-2 Conclusion:** Does not support the hypothesis

**Measure 2-3 Conclusion:** Supports the hypothesis

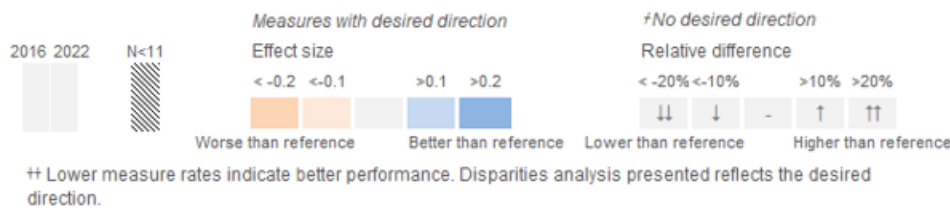
Table 6-8 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 6-8—Research Question 2.1, DD Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
2-1 Percentage of adult beneficiaries with a breast cancer screening <sup>1</sup>	Blue	Orange	Hatched	Blue	Orange	Hatched
2-2 Percentage of adult beneficiaries with a cervical cancer screening <sup>1</sup>	Grey	Orange	Hatched	Grey	Orange	Hatched
2-3 Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	Grey	Grey	Hatched	Grey	Blue	Grey

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native

<sup>1</sup>Disparities analysis was not performed for this measure because it only pertains to females.



**Research Question 2.2: Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?**

Table 6-9 shows that the *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* and the *Percentage of beneficiaries with an adolescent well-care visit* decreased in FFY 2020, before increasing throughout the remainder of the integration period for ALTCS-DD beneficiaries. The decline in FFY 2020 was likely attributable to the COVID-19 PHE, as other Demonstration groups such as ACC and CHP saw similar declines. Measure 2-6, *Percentage of beneficiaries with an influenza vaccine*, is not presented in this report due to the unavailability of immunization registry data. Renewal results for ALTCS-DD can be found in Appendix A.

**Key Findings:**

- The *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* increased by 1.1 percentage points between the pre-integration and integration period average ( $p=0.107$ ). Non-inferiority testing shows that rates in the integration period were the same or better than the pre-integration period.
- Between the pre-integration and integration period, the *Percentage of beneficiaries with an adolescent well-care visit* increased by 3.2 percentage points ( $p<0.001$ ).

**Table 6-9—Research Question 2.2, Integration**

		Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?								
		Weighted Rate <sup>1</sup>								
		Baseline Period					Integration Period			
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-4	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	52.2%	51.2%	53.5%	56.9%	58.9%	52.5%	55.3%	56.4%	
2-5	Percentage of beneficiaries with an adolescent well-care visit	39.8%	43.1%	43.3%	45.9%	48.1%	42.4%	46.5%	48.3%	

		Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?						
		Pre-Integration Average	Integration Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>	
<b>ALTCS-DD Population</b>								
2-4	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	54.7%	55.8%	1.1pp (0.107)	-0.2pp to 2.5pp	-2.5pp	Not Meaningfully Worse	
2-5	Percentage of beneficiaries with an adolescent well-care visit	44.2%	47.4%	3.2pp (<0.001)	2.4pp to 4.0pp	-2.5pp	Better	

Note: pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

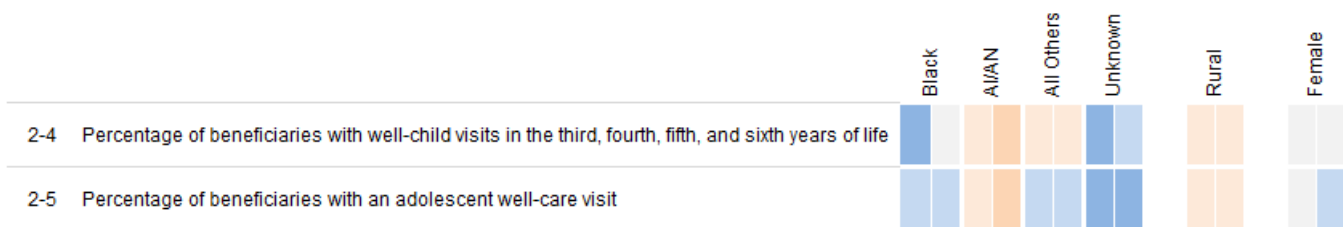
<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-4 Conclusion:** Supports the hypothesis

**Measure 2-5 Conclusion:** Supports the hypothesis

Table 6-10 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 6-10—Research Question 2.2, DD Demographics**



Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



† Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

**Research Question 2.3: Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?**

Table 6-11 shows that the *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* increased between the pre-integration and integration periods across the 84- and 180- day treatment periods for ALTCS-DD beneficiaries. There was a decrease in the *Percentage of beneficiaries receiving any*










mental health service between the pre-integration and integration periods for ALTCS-DD beneficiaries. Although rates for screening for clinical depression (Measure 2-9) were calculated, as described in the Methodology Limitations section, this measure relies on level II Healthcare Common Procedure Coding System (HCPCS) codes to identify numerator compliance, which yields artificially low rates calculated through administrative data; therefore, no results for this measure are displayed. There is no desired direction for Measure 2-10, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis. Renewal results for ALTCS-DD and ALTCS-EPD can be found in Appendix A.

**Key Findings:**

- The *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* saw a 2.2 percentage point increase in rates between the pre-integration average and the integration period average ( $p=0.188$ ). Non-inferiority testing shows that rates in the integration period were the same or better than rates in the pre-integration period.
- Between the pre-integration and integration periods, the average *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* for 84- and 180-days increased by 11.5 percentage points and 4.1 percentage points, respectively ( $p=0.005$ ,  $p=0.303$ ).
- The *Percentage of beneficiaries receiving any mental health services* decreased by 2.3 percentage points between the pre-integration average and the integration period average ( $p<0.001$ ).

**Table 6-11—Research Question 2.3, Integration**

Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?

		Weighted Rate <sup>1</sup>								
		Baseline Period					Integration Period			
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	68.3%	69.2%	75.2%	73.6%	73.2%	73.4%	74.1%	74.6%	
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	52.3%	45.9%	51.8%	47.3%	59.3%	47.8%	60.5%	66.1%	
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	38.8%	33.1%	33.0%	35.7%	45.1%	28.7%	43.5%	40.1%	
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--	
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)									
	Any	31.2%	31.5%	32.0%	32.1%	33.4%	32.4%	29.5%	30.1%	
	ED	0.2%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	
	Intensive outpatient or partial hospitalization	0.9%	0.9%	1.1%	1.1%	1.2%	0.9%	0.7%	1.4%	
	Inpatient	1.2%	1.2%	1.2%	1.3%	1.3%	1.2%	1.3%	1.3%	
	Outpatient	31.1%	31.4%	31.9%	32.0%	33.3%	32.0%	28.4%	29.0%	
	Telehealth	0.4%	0.7%	0.8%	1.3%	1.3%	3.5%	5.0%	5.0%	



**Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?**

		Pre-Integration Average	Integration Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCs-DD Population</b>							
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	72.1%	74.3%	<b>2.2pp (0.188)</b>	-1.1pp to 5.3pp	-2.3pp	<b>Not Meaningfully Worse</b>
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	51.8%	63.3%	<b>11.5pp (0.005)</b>	3.6pp to 18.7pp	-2.5pp	<b>Better</b>
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	37.6%	41.8%	<b>4.1pp (0.303)</b>	-3.6pp to 12.2pp	-2.4pp	<b>Insufficient Data</b>
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)						
	<b>Any</b>	32.1%	29.8%	<b>-2.3pp (&lt;0.001)</b>	-2.7pp to -1.9pp	--	--
	ED	0.2%	0.3%	<b>0.1pp (0.005)</b>	0.0pp to 0.1pp	--	--
	Intensive outpatient or partial hospitalization	1.1%	1.1%	<b>0.0pp (0.831)</b>	-0.1pp to 0.1pp	--	--
	Inpatient	1.3%	1.3%	<b>0.0pp (0.928)</b>	-0.1pp to 0.1pp	--	--
	Outpatient	32.0%	28.7%	<b>-3.3pp (&lt;0.001)</b>	-3.7pp to -2.9pp	--	--
	Telehealth	0.9%	5.0%	<b>4.0pp (&lt;0.001)</b>	3.8pp to 4.3pp	--	--

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Indicators in bold denote inclusion for evaluation in summary table for Measure 2-10. pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCs.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-7 Conclusion:** Supports the hypothesis

**Measure 2-8 (84-Days) Conclusion:** Supports the hypothesis

**Measure 2-8 (180-Days) Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 2-10 Conclusion:** N/A

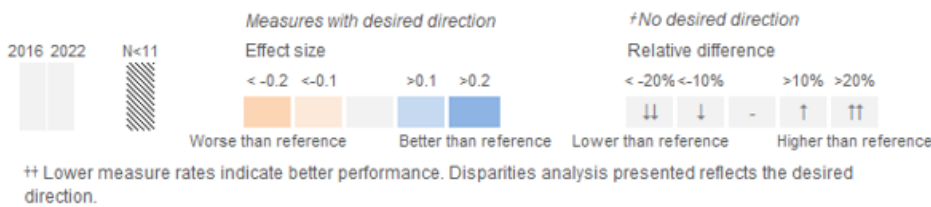
Table 6-12 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.



**Table 6-12—Research Question 2.3, DD Demographics**

		Black	AI/AN	All Others	Unknown	Rural	Female
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness						
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)						
	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)						
2-10	Percentage of beneficiaries receiving mental health services (Any) <sup>†</sup>	-	⇓⇓	↓⇓	-	-	↓
	Percentage of beneficiaries receiving mental health services (ED) <sup>†</sup>				↑⇓		⇓⇓
	Percentage of beneficiaries receiving mental health services (Inpatient) <sup>†</sup>	⇓⇓	-⇓		⇓⇓	⇓-	⇓⇓
	Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization) <sup>†</sup>	⇓⇓	⇓-		⇓⇓	⇓⇓	⇓-
	Percentage of beneficiaries receiving mental health services (Outpatient) <sup>†</sup>	-	⇓⇓	⇓⇓	-	-	↓
	Percentage of beneficiaries receiving mental health services (Telehealth) <sup>†</sup>		↑	⇓		⇓↓	⇓-

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



**Research Question 2.4: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?**




Table 6-13 illustrates that the *Percentage of adult beneficiaries with monitoring for persistent medications* (including monitoring for beneficiaries on angiotensin converting enzyme [ACE] inhibitors or angiotensin receptor blockers [ARB] and beneficiaries on diuretics) decreased overall between the pre-integration and integration periods, although rates fluctuated between years for ALTCS-DD beneficiaries. Following a similar trend, the *Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines* decreased between the pre-integration and integration periods for ALTCS-DD. Renewal results for ALTCS-DD and ALTCS-EPD can be found in Appendix A.

**Key Findings:**

- The *Percentage of adult beneficiaries with monitoring for persistent medications* declined by 0.2 percentage points between the pre-integration and integration period average ( $p=0.923$ ).
- The *Percentage of beneficiaries with opioid use at high dosage* among ALTCS-DD beneficiaries declined by 4.9 percentage points between the pre-integration and the integration period average ( $p=0.086$ ). Non-inferiority testing shows that rates in the pre-integration period were the same or better than rates in the integration period.
- The *Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines* decreased by 4.0 percentage points between the pre-integration and integration period average ( $p=0.257$ ).

**Table 6-13—Research Question 2.4, Integration**

Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?

		Weighted Rate <sup>1</sup>								
		Baseline Period					Integration Period			
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	72.6%	79.3%	83.8%	79.8%	83.2%	79.2%	81.9%	77.7%	
2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	8.5%	10.0%	8.5%	9.6%	4.3%	5.7%	5.0%	1.9%	
2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	16.7%	18.6%	18.4%	20.4%	16.6%	13.6%	15.2%	13.1%	
<b>Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?</b>										
		Pre-Integration Average	Integration Average	Pre/Post Change in Rate <sup>2</sup>		95% CI	NI Threshold	Non-Inferiority <sup>3</sup>		
<b>ALTCS-DD Population</b>										
2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	79.9%	79.7%	-0.2pp (0.923)		-3.4pp to 2.7pp	-2.0pp	Insufficient Data		
2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	8.5%	3.5%	-4.9pp (0.086)		-7.2pp to 1.1pp	1.4pp	Not Meaningfully Worse		
2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	18.1%	14.2%	-4.0pp (0.257)		-9.1pp to 3.4pp	2.0pp	Insufficient Data		

Note: pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-11 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 2-12 Conclusion:** Supports the hypothesis

**Measure 2-13 Conclusion:** Neither supports nor fails to support the hypothesis

Table 6-14 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 6-14—Research Question 2.4, DD Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
2-11 Percentage of adult beneficiaries with monitoring for persistent medications (Total)	Blue	Blue	Diagonal lines	Blue	Orange	Blue
2-12 Percentage of beneficiaries with opioid use at high dosage <sup>++</sup>	Diagonal lines	Diagonal lines	Diagonal lines	Diagonal lines	Diagonal lines	Diagonal lines
2-13 Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines <sup>++</sup>	Diagonal lines	Diagonal lines	Diagonal lines	Diagonal lines	Diagonal lines	Orange

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



<sup>++</sup> Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

**Research Question 2.5: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-of-state comparisons?**

Table 6-15 shows that among ALTCS-DD beneficiaries, the *Number of ED visits per 1,000 member months* and the *Number of inpatient (IP) stays per 1,000 member months* decreased throughout the integration period. Both ED visits and IP stays were likely impacted by the COVID-19 PHE as can be seen for ALTCS-DD in FFY 2020 and among all other Demonstration groups. The *Percentage of adult inpatient discharges with an unplanned readmission within 30 days* increased during the demonstration period for ALTCS-DD. There is no desired direction for Measure 2-14 and 2-15, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis. Renewal results for ALTCS-DD and ALTCS-EPD can be found in Appendix A.

**Key Findings:**

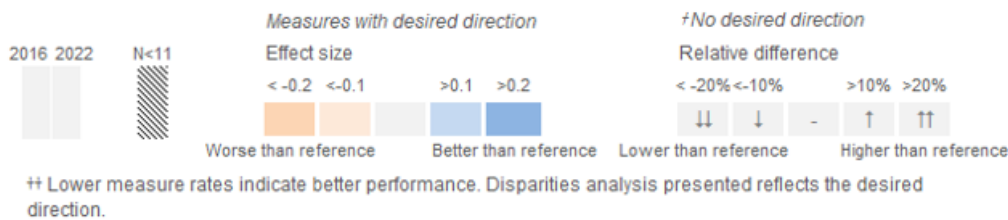
- The average *Number of ED visits per 1,000 member months* and *Number of IP stays per 1,000 member months* among ALTCS-DD beneficiaries decreased by 12.11 visits and 1.95 stays per 1,000 member months, respectively, between the pre-integration average and integration period average, respectively ( $p < 0.001$ ,  $p < 0.001$ ).
- The *Percentage of adult IP discharges with an unplanned readmission within 30 days* among ALTCS-DD beneficiaries increased by an average of 2.9 percentage points between the pre-integration average and the integration period average ( $p < 0.001$ ).



**Table 6-16—Research Question 2.5, DD Demographics**

	Black	A/IAN	All Others	Unknown	Rural	Female
2-14 Number of ED visits per 1,000 member months <sup>+</sup>	-	-	†† ‡‡	-	- †	† ††
2-15 Number of inpatient stays per 1,000 member months <sup>+</sup>	-	†† ††	†† ↓	-	-	†† ††
2-16 Percentage of adult inpatient discharges with an unplanned readmission within 30 days <sup>††</sup>	▨	▨	▨	▨		

Note: Reference groups are White/Caucasian, Urban, Male. A/IAN=American Indian/Alaska Native



**Hypothesis 3—Quality of life for beneficiaries will maintain or improve over the waiver demonstration period.**

**Research Question 3.1: Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?**



Independent living and community integration are thought to be positively associated with improved quality of life among the disabled population. *Percentage of beneficiaries living in their own home* is a measure of independent living. Two different data sources were used to address this research question: administrative residential placement data from AHCCCS and survey data collected through NCI. NCI survey data are only available through 2019 and may not give a complete picture of the demonstration period. These measures were calculated using the NCI survey data which was only available up to 2018/2019, as such does not cover the integration of care for adults with DD. Results from the NCI survey data can be found in Appendix A.

As shown in Table 6-17, AHCCCS placement data indicate that the proportion of the ALTCS-DD population residing in a home setting (including both their own house or apartment and living with their parents or other relatives) increased slightly between the pre-integration and integration periods. NCI survey data regarding type of residence for the adult ALTCS-DD population indicate a much lower percentage live in a home setting and that there was no significant change in the proportion doing so when compared to the change in the national rates between the baseline and demonstration periods. Unlike the AHCCCS placement data, the survey data do not include children, and that may help explain the difference in the observed percentages living in a home setting. Details on deviations from the Evaluation Design can be found in the Methodology Limitations section. Please see Appendix B for further details on Research Question 3.1.

**Key Findings:**

- According to AHCCCS placement data, the rate of ALTCS-DD beneficiaries residing in a home setting increased by 1.3 percentage points between the pre-integration and integration periods ( $p < 0.001$ ).

**Table 6-17—Research Question 3.1, Measure 3-1, Integration**

		Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?								
		Rate								
		Baseline Period					Integration Period			
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCs-DD Population</b>										
3-1	Percentage of beneficiaries residing in their own home	84.5%	84.7%	85.0%	85.2%	85.6%	85.9%	86.1%	86.6%	
<b>ALTCs-EPD Population</b>										
3-1	Percentage of beneficiaries residing in their own home	54.1%	52.1%	51.8%	51.9%	51.9%	52.5%	53.7%	53.1%	

		Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?					
		Pre-Integration Average	Integration Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCs-DD Population</b>							
3-1	Percentage of Beneficiaries Residing in Their Own Home	85.0%	86.3%	1.3pp (<0.001)	1.2pp to 1.3pp	-1.8pp	Better

Note: pp=percentage point. The integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2019. The integration period includes FFY 2020 through FFY 2022.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 3-1 Conclusion:** Supports the hypothesis

**Research Question 3.2: Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?**

Relatively few surveyed adults with DD in Arizona *Wants to live somewhere else* and almost all believe that *Services and supports help the person live a good life*. This was true in the baseline and both demonstration period surveys. Rates for ALTCS-DD adults were consistently better than national rates for both measures. These measures were calculated using the NCI survey data which was only available up to 2018/2019, as such does not cover the integration of care for adults with DD. Please see Appendix A for renewal survey results and Appendix B for further details on Research Question 3.2.

**Research Question 3.3: Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?**

The measures in Research Question 3.3 address community engagement and individual autonomy among DD adults in Arizona. The results are suggestive of at least moderate engagement and autonomy, although there are indications of lessened autonomy in the demonstration period compared to the baseline period. These measures were calculated using the NCI survey data which was only available up to 2018/2019, as such does not cover the integration of care for adults with DD. Please see Appendix A for renewal survey results and Appendix B for further details on Research Question 3.3.

**Hypothesis 4—ALTCS encourages and/or facilitates care coordination among PCPs and BH practitioners.**

Hypothesis 4 discusses impacts on the provision of BH services for beneficiaries with DD during the PH and BH integration process. DD beneficiaries began receiving integrated PH and BH care on October 1, 2019, through health plans contracted with DES/DDD.

Measures in Hypothesis 4 were evaluated through key informant interviews with AHCCCS State administrators, Arizona Department of Economic Security (DES)/Division of Developmental Disabilities (DDD) staff, representatives of health plans contracted to provide services under the ALTCS program, and provider



organizations. These methods allow for an in-depth analysis detailing activity focused on care integration and potential successes or barriers surrounding these activities.

Qualitative analysis was performed using transcripts from key informant interviews with AHCCCS State Administrators, DES/DDD, health plan representatives, and provider organizations. Research Questions 4.1 through 4.5 contain key findings on specific topics about care coordination strategies implemented by DES/DDD and contracted health plans, and any related barriers, as well as any barriers State administrators encountered while integrating care for beneficiaries with DD. A full results summary can be found in Appendix C.

***Research Question 4.1: Did the Department of Economic Security/Division of Developmental Disabilities (DES/DDD) or its contracted plans encounter barriers during the integration of care for beneficiaries with DD?***

DDD personnel discussed challenges they experienced during the integration of care for beneficiaries with DD. Discussions in key informant interviews about encountered barriers included:

- DDD personnel anticipated most barriers prior to integration and addressed the barriers in the planning phase.
- DES/DED and AHCCCS struggled to reach agreements regarding the integration design.
- Providers elected not to contract with ALTCS health plans due to low service rates.

***Research Question 4.2: What care coordination strategies did DES/DDD and its contracted plans implement as a result of integration of care?***

DES/DDD and its contracted plans implemented several care coordination strategies to successfully integrate care. Strategies discussed during key informant interviews included:

- DES/DDD hired support coordinators to help beneficiaries navigate the integrated system and facilitate care management in its efforts to focus on person-centered, holistic care.
- DES/DDD communicated integration plans with support coordinators and project teams to ensure beneficiaries received continuity of care during integration.
- DES/DDD developed training modules for support coordinators and health plan staff to ensure mutual understanding.

***Research Question 4.3: Did DES/DDD or its contracted plans encounter barriers to implementing care coordination strategies?***

DES/DDD implemented strategies to proactively address barriers arising from implementing care coordination strategies. Discussions during key informant interviews included:

- DES/DDD jointly trained internal and health plan staff on contract responsibilities.

***Research Question 4.4: Did AHCCCS encounter barriers related to integration of care for beneficiaries with DD?***

AHCCCS encountered several barriers when integrating care for beneficiaries with DD. During key informant interviews, AHCCCS outlined the following barriers:

- AHCCCS faced difficulties understanding government agencies' changing relationships and responsibilities. For example, duties that DES/DDD previously outsourced to AHCCCS were transitioned to DES/DDD following integration.
- AHCCCS struggled to manage the ALTCS population's evolving needs.

- AHCCCS State administrators found it difficult to contract with providers who understood how to support beneficiaries with intellectual disabilities.
- Relatedly, rates of preventive care declined in the integration period compared to the baseline period amongst ALTCS-DD beneficiaries, with decreases in the *Percentage of adult beneficiaries with a breast cancer screening* (Measure 2-1) and *Percentage of adult beneficiaries with a cervical cancer screening* (Measure 2-2).

**Research Question 4.5: Did providers encounter barriers related to integration of care for beneficiaries with DD?**

Providers shared several barriers encountered by beneficiaries with DD during the integration of PH and BH. Specific concerns discussed during key informant interviews included:

- Providers expressed concerns regarding beneficiaries' history of trauma in the ALTCS system, which resulted in fear of managed care.
- There was unease about how the provider network would change after integration and concerns about potential impacts to working relationships with DES/DDD.
- Despite initial concerns, providers reported improved access to BH and care coordination despite disjointed information and communication.
- Improved perceptions of access to BH were supported by increases in the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* (Measure 2-7) and *Percentage of adult beneficiaries who remained on an antidepressant medication treatment for 84- and 180-days* (Measure 2-8 and Measure 2-9).
- Providers reported barriers to credentialing with DDD health plans.

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**Hypothesis 5—ALTCS provides cost-effective care.**

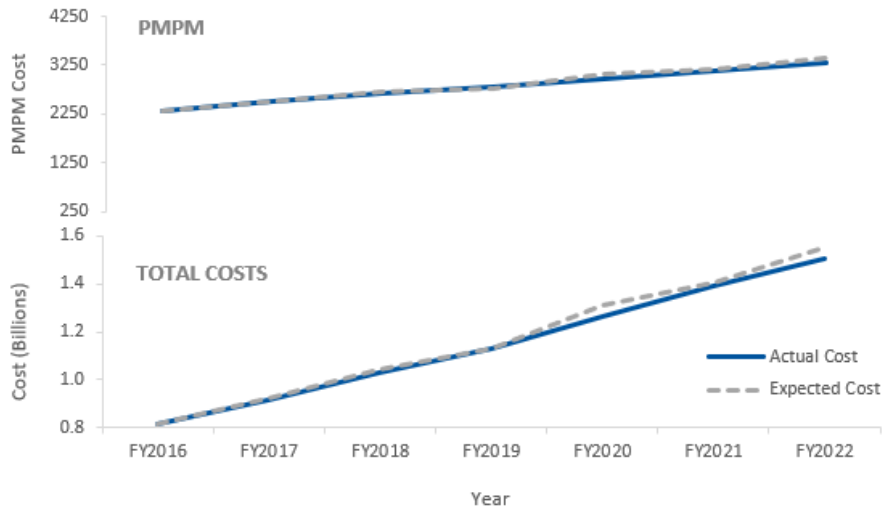
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**Research Question 5.1: What are the costs associated with the integration of care under ALTCS?**

**ALTCS-DD**

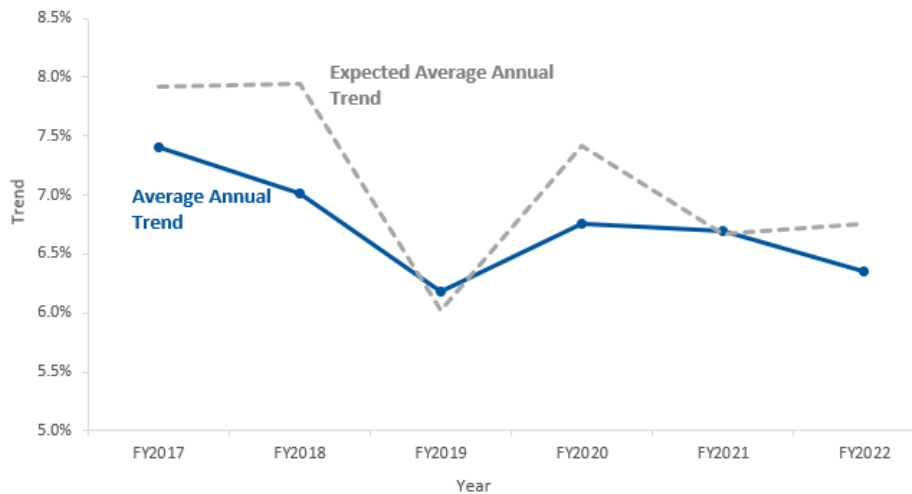
Figure 6-1 displays the per member per month (PMPM) claim/encounter costs and total expenditures from the baseline in 2016 through 2022 for actual incurred cost and the expected (counterfactual) costs for the entire period covered under the Demonstration for ALTCS services provided to Medicaid beneficiaries with developmental disabilities. The comparisons of the actual and counterfactual costs exhibited an overall cost increase from 2016 through 2022. The expected cost line does not include the impact of the COVID-19 PHE.

**Figure 6-1—PMPM Claim/Encounter Costs and Expenditures**



Trend calculations were reviewed both over the lifetime of the Demonstration from FY 2016 and for the period since integration of BH in FY 2019. Figure 6-2 shows several trend calculations, based on changes from 2016 (not shown in the figure) for the entire period covered by the ALTCS-DD program. The average annualized trend decreased throughout the life of the ALTCS-DD program, from the baseline of 7.4 percent to 6.4 percent. The impact of the COVID-19 PHE had little impact on the population covered by the ALTCS-DD program due to the beneficiaries’ needs. The average annual trends were lower than the expected trends based on known changes such as demographics, health condition-based risk, and inflation throughout the life of the Demonstration.

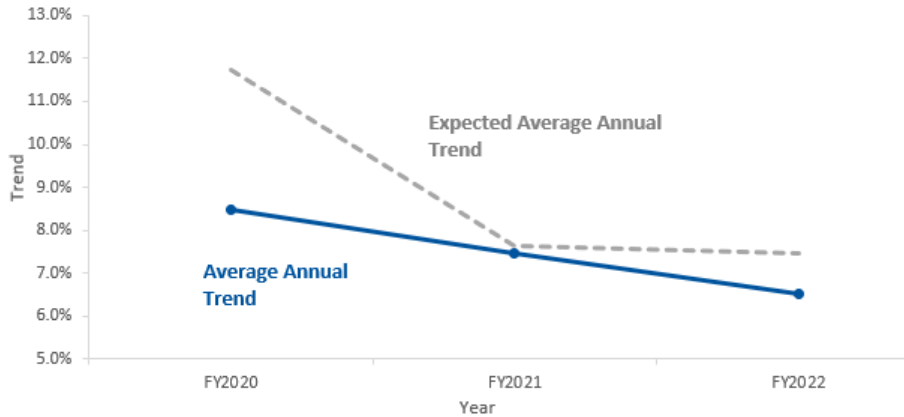
**Figure 6-2—Cost Per Beneficiaries Trends**



The following set of trends displayed in Figure 6-3 were based on changes from 2019 (not shown in the figure) for the period of the Demonstration covered post BH integration for the ALTCS-DD population. The average annualized trend decreased throughout the life of the ALTCS-DD program, from the baseline of 8.5 percent to 6.5 percent. The COVID-19 PHE had little impact on the population covered by the ALTCS-DD program due to beneficiaries’ needs. The average annual trends were lower than the expected trends based on known changes

such as demographics, health condition-based risk, and inflation throughout the post-integration period of the Demonstration.

**Figure 6-3—Cost Per Utilizing Beneficiaries Trends**



The COVID-19 PHE had diverse impacts on healthcare service utilization. HSAG reviewed category-of-service specific pre- and post-PHE trend changes in utilization per 1,000 beneficiaries to assess the impact on beneficiary utilization patterns. The impact of the COVID-19 PHE on the availability of medical services driven by restrictions and lockdowns led to an industry expectation of reduced utilization throughout 2020 leading to negative utilization trends when compared to 2019 utilization per 1,000 beneficiaries. As state and federal restrictions and lockdowns were reduced or lifted, the industry expectation was that there would be a rebound in services post-COVID-19 PHE and utilization would be positive in 2021 and 2022.

ALTCS-DD utilization trend analysis exhibited mixed impacts by category of service. The outpatient utilization pattern aligned with industry expectations, demonstrating decreased trends observed for 2020, a rebound in 2021, and stable trends in 2022 that resemble pre-COVID-19 PHE numbers. Inpatient utilization behaved as expected in 2020, with utilization per 1,000 beneficiaries trend dropping almost 10.0 percent in 2020; however, the inpatient category of service trend did not exhibit the expected pattern, with subsequent drop in trend in 2021 of 4.0 percent and an additional drop in 2022 of 3.5 percent. The professional utilization per 1,000 beneficiaries trend demonstrated the same behavior as inpatient utilization trends, just with a smaller magnitude from 2020 through 2022. Professional utilization per 1,000 beneficiaries saw a drop of 2.1 percent in 2020 with an addition trend reduction in 2021 of 0.5 percent and ultimately dropping 0.4 percent in 2022. The ED utilization per 1,000 beneficiaries trend exhibited the highest drop in trend of the categories of service analyzed, with a trend reduction of 23.2 percent in 2020. Trends for ED utilization continued to drop by another 10.5 percent in 2021 compared to the 2020 rate. However, in 2022, there was a spike of 18.5 percent in ED utilization over the 2021 rate. The trend increased in 2022 and was higher than pre-COVID-19 PHE utilization trends. The continual drop in the utilization of inpatient and professional services, coupled with the spike in ED trends in 2022, could suggest a shift to the potential use of the ED in lieu of professional services for the ALTCS-DD population. Table 6-18 below provides the utilization trends by category of service for each state fiscal year.

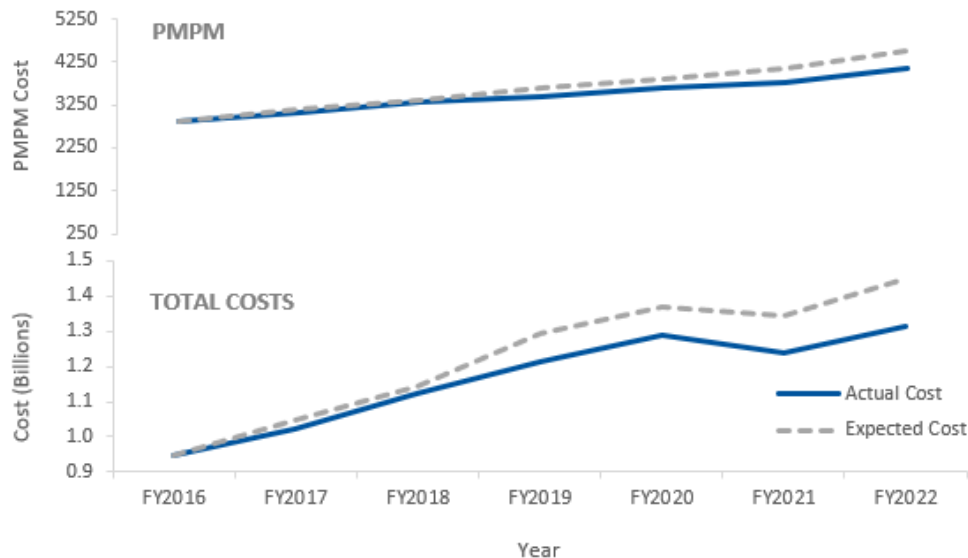
**Table 6-18—Utilization per 1,000 Beneficiaries Trends**

Category of Service	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Inpatient	-6.3%	-2.0%	-0.7%	-0.2%	-9.6%	-4.0%	-3.5%
Outpatient	5.0%	2.2%	1.1%	3.6%	-22.4%	5.0%	10.8%
Professional	0.3%	0.2%	0.2%	0.0%	-2.1%	-0.5%	-0.4%
Pharmacy	1.6%	-1.0%	-0.4%	-3.2%	-2.5%	-2.7%	0.9%
Emergency	1.9%	-3.7%	1.0%	-1.5%	-23.2%	-10.5%	18.5%

**ALTCS-EPD**

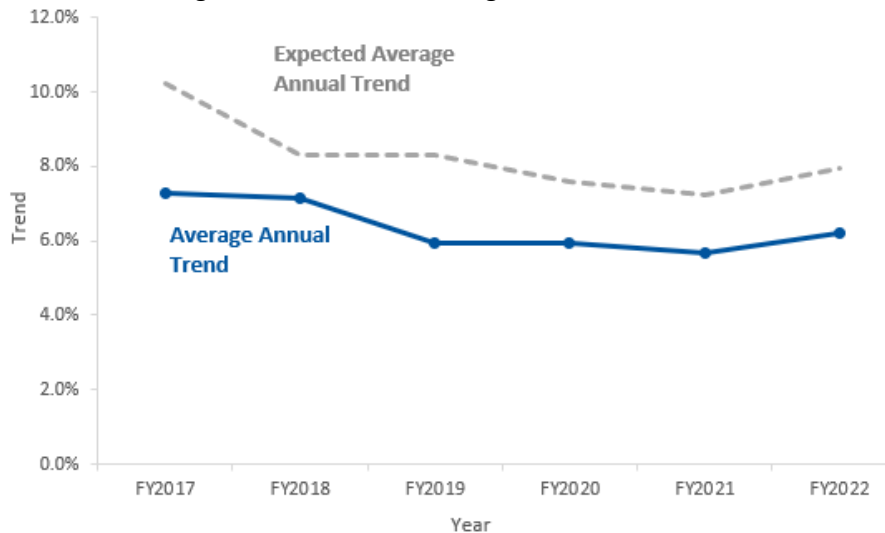
Figure 6-4 displays the PMPM claim/encounter costs and total expenditures from the baseline in 2016 through 2022 for actual incurred cost and the expected (counterfactual) costs for the entire period covered under the Demonstration for ALTCS services provided to eligible beneficiaries who are EPD. The comparisons of the actual and counterfactual costs exhibited an overall cost increase from 2016 through 2022. The expected cost line does not include the impact of the COVID-19 PHE.

**Figure 6-4—PMPM Claim/Encounter Costs and Expenditures**



Trend calculations were reviewed both over the lifetime of the Demonstration from FY 2016. Figure 6-5 shows several trend calculations, based on changes from 2016 (not shown in the figure) for the entire period covered by the ALTCS-EPD program. The average annualized trend decreased throughout the life of the ALTCS-EPD program, from the baseline of 7.3 percent to 6.2 percent. The impact of the COVID-19 PHE had little impact on the population covered by the ALTCS-EPD program due to the beneficiaries’ needs. The average annual trends were lower than the expected trends based on known changes such as demographics, health condition-based risk, and inflation throughout the life of the Demonstration.

**Figure 6-5—Cost Per Utilizing Beneficiaries Trends**



The COVID-19 PHE had diverse impacts on healthcare service utilization. HSAG reviewed category-of-service specific pre- and post-COVID-19 PHE trend changes in utilization per 1,000 beneficiaries to assess the impact on beneficiary utilization patterns. The impact of the PHE on the availability of medical services driven by restrictions and lockdowns led to an industry expectation of reduced utilization throughout 2020 leading to negative utilization trends when compared to 2019 utilization per 1,000 beneficiaries. As state and federal restrictions and lockdowns were reduced or lifted, the industry expectation was that there would be a rebound in services post-COVID-19 PHE and utilization would be positive in 2021 and 2022.

ALTCS-EPD utilization trend analysis exhibited similar impacts by category of service in inpatient, outpatient, and professional services. All three of these categories of service experienced negative trends from FY2020 through FY2022. The ED utilization per 1,000 beneficiaries trend exhibited the highest drop in trend of the categories of service analyzed, with a trend reduction of 27.0 percent in 2020. Trends for ED utilization continued to drop by another 14.7 percent in 2021 compared to the 2020 rate. However, in 2022, the trend swung the other direction with a trend increase of 1.2 percent in ED utilization over the 2021 rate. The continual drop in the utilization of inpatient and professional services, coupled with the increase in ED trends in 2022, could suggest a shift to the potential use of the ED in lieu of professional services for the ALTCS-EPD population.

**Research Question 5.2: What are the benefits/savings associated with the integration of care under ALTCS?**

**ALTCS-DD**

Table 6-19 shows the impacts of each of the known changes in the cost and demographic variables for paid claims from 2015 to 2022. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2015 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2015 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating all known external impacts was 6.5 percent. When compared to the annualized paid claims trend of 6.0 percent achieved by the Demonstration, the ALTCS-DD program achieved an estimated savings in claims cost of 0.5 percent.



**Table 6-19—Counterfactual Paid Claims Trend Development**

Cost Impact Components	FY2015 Factors [A]	FY2022 Factors [B]	Cumulative Factor Change <sup>1</sup> [C]=[B]/[A]	Years [D]	Average Annualized Factor Trend <sup>2</sup> [E]=[C]^(1/[D])-1
Aging	1.1437	1.1631	1.0170	7	0.2%
Race	1.0289	1.0291	1.0002	7	0.0%
Area	1.0150	1.0168	1.0017	7	0.0%
Risk	1.8629	1.4997	0.8050	7	-3.1%
CPI	1.0000	1.2794	1.2794	7	3.6%
Service Category Distribution	1.0000	1.4845	1.4845	7	5.8%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>2.2252</b>	<b>3.4667</b>	<b>1.5579</b>	<b>7</b>	<b>6.5%</b>
<b>Average Annualized Trend</b>					<b>FY2015 to FY2022</b>
[E]	Counterfactual Annualized Paid Claims Trend				6.5%
[F]	Annualized Paid Claims Trend <sup>4</sup>				6.0%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>				<b>0.5%</b>

Note: Factors represent the impact on claims cost for various groups within the ALTCS-DD population. For example, the aging factor represents the impact on claims cost by dividing the ALTCS-DD population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire ALTCS-DD population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicates cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 396,595.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

Table 6-20 reflects the impacts for the post-integration period from 2019 to 2022 of each of the known changes in the cost and demographic variables. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2019 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2019 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating all known external impacts was 10.6 percent. When compared to the annualized paid claims trend of 5.6 percent achieved by the Demonstration, the ALTCS-DD program achieved an estimated savings in claims cost of 4.8 percent.

**Table 6-20—Counterfactual Paid Claims Trend Development**

Cost Impact Components	FY2019 Factors [A]	FY2022 Factors [B]	Cumulative Factor Change <sup>1</sup> [C]=[B]/[A]	Years [D]	Average Annualized Factor Trend <sup>2</sup> [E]=[C]^(1/[D])-1
Aging	1.1496	1.1674	1.0155	3	0.5%
Race	1.0301	1.0297	0.9995	3	0.0%
Area	1.0156	1.0167	1.0011	3	0.0%
Risk	1.6175	1.5905	0.9833	3	-0.6%
CPI	1.0000	1.0980	1.0980	3	3.2%
Service Category Distribution	1.0000	1.2329	1.2329	3	7.2%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>1.9453</b>	<b>2.6315</b>	<b>1.3528</b>	<b>3</b>	<b>10.6%</b>
<b>Average Annualized Trend</b>					<b>FY2019 to FY2022</b>
[E]	Counterfactual Annualized Paid Claims Trend				10.6%
[F]	Annualized Paid Claims Trend <sup>4</sup>				5.6%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>				<b>4.8%</b>

Note: Factors represent the impact on claims cost for various groups within the ALTCS-DD population. For example, the aging factor represents the impact on claims cost by dividing the ALTCS-DD population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire ALTCS-DD population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicates cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 433,169.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

**ALTCS-EPD**

Table 6-21 shows the impacts of each of the known changes in the cost and demographic variables for paid claims from 2015 to 2022. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2015 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2015 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating all known external impacts was 7.9 percent. When compared to the annualized paid claims trend of 6.3 percent achieved by the Demonstration, the ALTCS-EPD program achieved an estimated savings in claims cost of 1.9 percent.

**Table 6-21—Normalized Trend Walkdown, FY 2015–2022**

Cost Impact Components	FY2015 Factors [A]	FY2022 Factors [B]	Cumulative Factor Change <sup>1</sup> [C]=[B]/[A]	Years [D]	Average Annualized Factor Trend <sup>2</sup> [E]=[C]^(1/[D])-1
Aging	1.2204	1.1706	0.9592	7	-0.6%
Race	1.0261	1.0156	0.9898	7	-0.1%
Area	1.0041	1.0051	1.0010	7	0.0%
Risk	3.0086	3.0046	0.9987	7	0.0%
CPI	1.0000	1.2794	1.2794	7	3.6%
Service Category Distribution	1.0000	1.4060	1.4060	7	5.0%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>3.7829</b>	<b>6.4579</b>	<b>1.7071</b>	<b>7</b>	<b>7.9%</b>

Average Annualized Trend		FY2015 to FY2022
[E]	Counterfactual Annualized Paid Claims Trend	7.9%
[F]	Annualized Paid Claims Trend <sup>4</sup>	6.3%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>	<b>1.6%</b>

Note: Factors represent the impact on claims cost for various groups within the ALTCS-EPD population. For example, the aging factor represents the impact on claims cost by dividing the ALTCS-EPD population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire ALTCS-EPD population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change.

Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicates cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 336,261.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

## 7. CHP Results

The following section details measure results by research question and related hypotheses for the Comprehensive Health Plan (CHP) Demonstration program. Results are presented for CHP comparing measure rates in the period prior to and after the integration of physical health (PH) and behavioral health (BH) care coverage that began on April 1, 2021, to focus findings on new, more innovative components in the Demonstration period. Results related to the Demonstration renewal for CHP represent a long-standing program and can be found in Appendix A. Summary results for both the integration and renewal periods are presented below for reference. For details on the measure definitions and specifications, reference the approved Evaluation Design.<sup>7-1</sup> Results from the Demonstration renewal and full measure results with denominator data are presented in Appendix A.

Results presented in this section are organized by hypothesis and by research question within each hypothesis. Most hypotheses include multiple research questions, and most research questions use multiple measures. Measures presented in this section use administrative claims/encounter data. Qualitative data were also gathered through key informant interviews with Arizona Health Care Cost Containment System (AHCCCS), CHP representatives, and provider focus groups to assess the integration of PH and BH care coverage that began on April 1, 2021.

### Results Summary

In total, 11 measures were calculated for federal fiscal years (FFYs) 2015 through 2022.<sup>7-2</sup> Due to effects of the coronavirus disease 2019 (COVID-19) public health emergency (PHE) impacting the U.S. healthcare system beginning in approximately March 2020, results for this time period must be interpreted with caution, as many changes in rates may not be indicative of program performance. Table 7-1 and Table 7-2 present the number of measures by research question that support the research question, do not support the research question, or were inconclusive.<sup>7-3</sup> The table also shows the number of measures for which there is no desired direction, such as emergency department (ED) or inpatient utilization measures.

Following integration of PH and BH care, children and adolescents had the same or better rates of visits for preventive or wellness services, chronic condition management, and management of BH conditions. Of the eight measures with a desired direction, five supported their respective research question, and three were inconclusive during the integration period. Results following Demonstration renewal followed a similar pattern, with seven out of eight measures supporting their respective hypothesis and one, the *Percentage of children and adolescents with access to primary care physicians (PCPs)* (Measure 1-1), being inconclusive.

Due to limitations of available and appropriate comparison groups, methods used in this analysis do not allow for description of causal effect. Measures characterized as improving or worsening may have been influenced by factors other than the CHP program that have not been statistically controlled for in these results. Additional details can be found in the Methodology Limitations section.

Results for qualitative analysis from key informants are included under Hypothesis 3.

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<sup>7-1</sup> Arizona Health Care Cost Containment System. Arizona's Section 1115 Waiver Independent Evaluation—Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>7-2</sup> Additional indicators were calculated for certain measures and are reported in full in CHP Results section and in Appendix A.

<sup>7-3</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.

**Table 7-1—CHP Results Summary, Integration**

Research Questions	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>1.1:</b> Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period compared to the baseline?	1	1	0	0
<b>2.1:</b> Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?	2	0	0	0
<b>2.2:</b> Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period compared to the baseline?	0	1	0	0
<b>2.3:</b> Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period compared to the baseline?	2	1	0	1
<b>2.4:</b> Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?	0	0	0	2

<sup>1</sup>Determination of support is not applicable or is dependent on context

**Table 7-2—CHP Results Summary, Renewal**

Research Questions	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>1.1:</b> Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period compared to the baseline?	1	1	0	0
<b>2.1:</b> Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?	2	0	0	0
<b>2.2:</b> Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period compared to the baseline?	1	0	0	0
<b>2.3:</b> Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period compared to the baseline?	3	0	0	1
<b>2.4:</b> Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?	0	0	0	2

<sup>1</sup>Determination of support is not applicable or is dependent on context

**Hypothesis 1—Access to care will be maintained or increase during the demonstration.**

Hypothesis 1 is designed to determine whether the CHP activities during the demonstration maintained or improved beneficiary access to PCPs and specialists. Access to care was assessed by focusing on beneficiaries’ access to PCPs and dental utilization.



**Research Question 1.1: Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period compared to the baseline?**

Table 7-3 shows that the *Percentage of children and adolescents with access to PCPs* decreased between the pre-integration and integration periods while the *Percentage of beneficiaries with an annual dental visit* increased throughout the ramp-up and integration periods. The decrease in the federal fiscal year (FFY) 2020 annual dental visit rate is possibly attributable to the COVID-19 PHE and can be seen in other Demonstration groups including AHCCCS Complete Care (ACC) and ALTCS-DD. Renewal results for CHP can be found in Appendix A.

**Key Findings:**

- The *Percentage of children and adolescents with access to PCPs* decreased by 1.6 percentage points between the pre-integration average and integration period rate ( $p < 0.001$ ).
- The *Percentage of beneficiaries with an annual dental visit* increased by 4.9 percentage points between the pre-integration average and integration period rate ( $p < 0.001$ ).

**Table 7-3—Research Question 1.1, Integration**

Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period as compared to the baseline?										
Weighted Rate <sup>1</sup>										
Baseline Period										
Ramp-Up Period										
Integration Period										
		2015	2016	2017	2018	2019	2020	2021	2022	
1-1	Percentage of children and adolescents with access to PCPs	95.4%	95.3%	94.2%	95.0%	95.3%	93.7%	93.7%	93.4%	
1-2	Percentage of beneficiaries with an annual dental visit	67.6%	66.3%	70.2%	72.6%	73.6%	66.3%	74.7%	74.7%	

Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period as compared to the baseline?							
		Pre-Integration Average	Integration Rate	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
1-1	Percentage of children and adolescents with access to PCPs	95.0%	93.4%	-1.6pp (<0.001)	-2.1pp to -1.1pp	-1.1pp	Insufficient Data
1-2	Percentage of beneficiaries with an annual dental visit	69.8%	74.7%	4.9pp (<0.001)	4.0pp to 5.8pp	-2.3pp	Better

Note: pp=percentage point. The pre-integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2020. The integration period includes FFY 2022. FFY 2021 is considered a ramp-up period and is therefore excluded from the analysis.

<sup>1</sup> Rates are weighted by duration of enrollment in CHP.

<sup>2</sup> Change in Rate compares the rate in the integration period to the pre-integration period using a pre/post model.

<sup>3</sup> Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-1 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-2 Conclusion:** Supports the hypothesis

Table 7-4 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.



**Table 7-4—Research Question 1.1, Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
1-1 Percentage of children and adolescents with access to PCPs	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
1-2 Percentage of beneficiaries with an annual dental visit	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



**Hypothesis 2—Quality of care for beneficiaries enrolled in CHP will be maintained or improve during the demonstration.**

**Research Question 2.1: Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?**

As shown in Table 7-5, both the *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* and the *Percentage of beneficiaries with an adolescent well-care visit* generally increased until FFY 2020 when rates fell before gradually returning to levels seen prior to FFY 2020. This trend was likely due to the immediate and ongoing effects of the COVID-19 PHE and can be seen across other programs including ACC and ALTCS-DD. Rates for childhood and adolescent immunizations are not presented in this report due to the unavailability of immunization registry data. Renewal results for CHP can be found in Appendix A.

**Key Findings:**

- The integration period rate for *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* increased by 1.6 percentage points from the pre-integration average ( $p=0.076$ ). Rates in the integration period were the same or better than rates in the pre-integration period based on non-inferiority testing.<sup>7-4</sup>
- The rate decreased by 0.5 percentage points between the pre-integration average and the integration period rate for *Percentage of beneficiaries with an adolescent well-care visit* ( $p=0.572$ ). Non-inferiority testing shows that rates in the integration period were the same or better than rates in the pre-integration period.

<sup>7-4</sup> Non-inferiority testing appears as “NI” in tables and figures throughout this section.

**Table 7-5—Research Question 2.1, Integration**

Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?										
Weighted Rate <sup>1</sup>										
Baseline Period										
Ramp-Up Period										
Integration Period										
		2015	2016	2017	2018	2019	2020	2021	2022	
2-1	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	68.9%	69.4%	69.8%	69.6%	74.2%	67.2%	72.1%	71.8%	
2-2	Percentage of beneficiaries with an adolescent well-care visit	60.6%	61.3%	63.2%	67.0%	68.4%	60.3%	62.0%	63.5%	
2-3	Percent of children two years of age with appropriate immunization status	--	--	--	--	--	--	--	--	
2-4	Percent of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--	--	--	

**Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?**

		Pre-Integration Average	Integration Rate	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
2-1	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	70.2%	71.8%	1.6pp (0.076)	-0.2pp to 3.3pp	-2.3pp	Not Meaningfully Worse
2-2	Percentage of beneficiaries with an adolescent well-care visit	64.0%	63.5%	-0.5pp (0.572)	-2.1pp to 1.2pp	-2.4pp	Not Meaningfully Worse
2-3	Percentage of children two years of age with appropriate immunization status	--	--	--	--	--	--
2-4	Percentage of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--

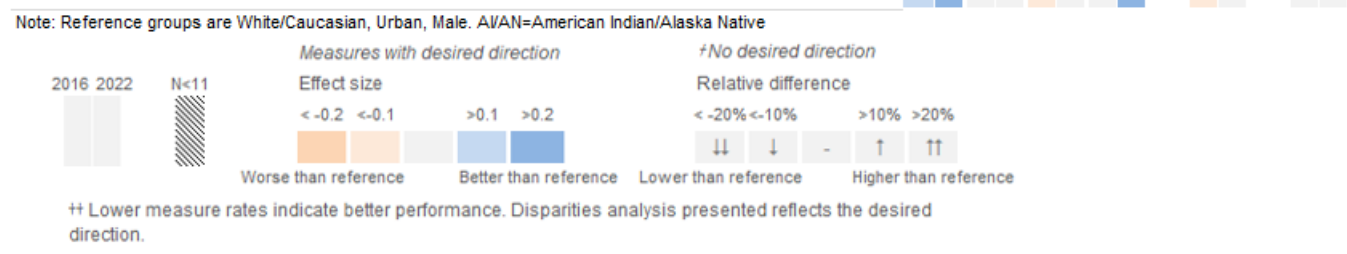
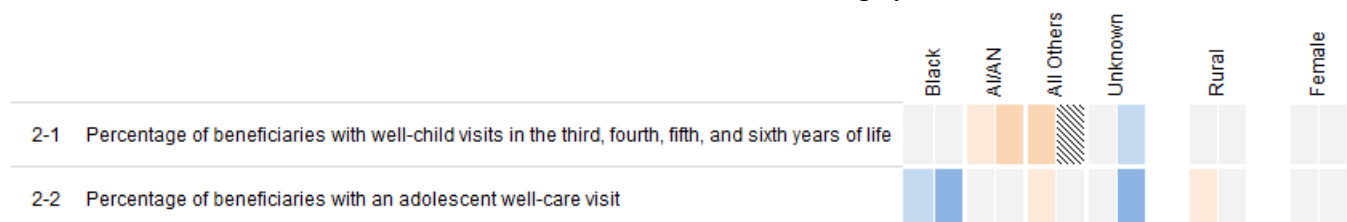
Note: pp=percentage point. The pre-integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2020. The integration period includes FFY 2022. FFY 2021 is considered a ramp-up period and is therefore excluded from the analysis.

<sup>1</sup> Rates are weighted by duration of enrollment in CHP.  
<sup>2</sup> Change in Rate compares the rate in the integration period to the pre-integration period using a pre/post model.  
<sup>3</sup> Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-1 Conclusion:** Supports the hypothesis  
**Measure 2-2 Conclusion:** Supports the hypothesis

Table 7-6 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 7-6—Research Question 2.1, Demographics**



**Research Question 2.2: Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period compared to the baseline?**

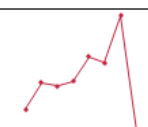
Table 7-7 shows that the *Percentage of beneficiaries ages 5 to 18 who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year* increased throughout the pre-integration period with a sharp decline in the integration period. This decline in FFY 2022 can be seen across all programs including ACC, ALTCS-DD, ALTCS-EPD, and Regional Behavioral health Authority (RBHA) although CHP demonstrated the greatest decline. Renewal results for CHP can be found in Appendix A.

**Key Findings:**

- The percentage in the integration period was 10.7 percentage points lower than the average rate in the pre-integration period ( $p=0.049$ ).

**Table 7-7—Research Question 2.2, Integration**

Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period as compared to the baseline?								
Weighted Rate <sup>1</sup>								
Baseline Period								
Ramp-Up Period								
Integration Period								
	2015	2016	2017	2018	2019	2020	2021	2022
2-5	68.3%	74.4%	73.7%	74.9%	80.5%	79.1%	90.1%	63.1%



Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period as compared to the baseline?							
		Pre-Integration Average	Integration Rate	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
2-5	Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year	73.8%	63.1%	-10.7pp (0.049)	-22.8pp to -0.1pp	-2.2pp	Insufficient Data

Note: pp=percentage point. The pre-integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2020. The integration period includes FFY 2022. FFY 2021 is considered a ramp-up period and is therefore excluded from the analysis.

<sup>1</sup> Rates are weighted by duration of enrollment in CHP.

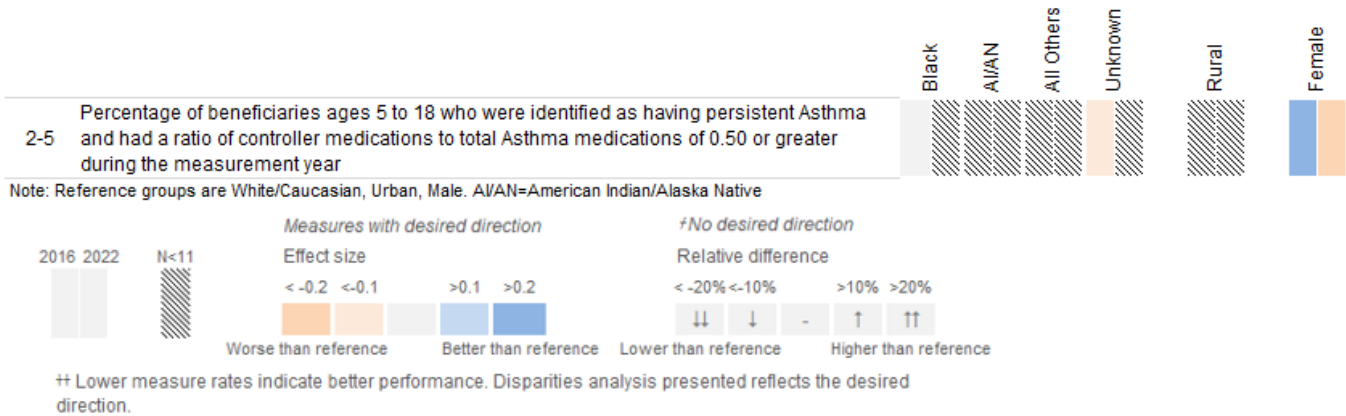
<sup>2</sup> Change in Rate compares the rate in the integration period to the pre-integration period using a pre/post model.

<sup>3</sup> Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-5 Conclusion: Neither supports nor fails to support the hypothesis**

Table 7-8 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 7-8—Research Question 2.2, Demographics**



**Research Question 2.3: Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period compared to the baseline?**

As illustrated in Table 7-9, the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased throughout both the pre-integration and integration periods. Approximately half of children and adolescents on antipsychotic prescriptions had metabolic testing in all years apart from FFY 2020 when a notable decrease in the rate was observed. The pre-integration trend of children and adolescents using multiple concurrent antipsychotics decreased, and this trend continued into the integration period. The *Percentage of beneficiaries receiving mental health services* generally increased throughout the pre-integration period and remained steady through the integration period. As described in the Methodology Limitations section, the screening for depression and follow-up plan measure relied on level II Healthcare Common Procedure Coding System (HCPCS) codes to identify numerator compliance, which contributed to the low observed rate calculated through administrative data. As such, results for this measure are not shown. There is no desired direction for Measure 2-10, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis. Renewal results for CHP can be found in Appendix A.

**Key Findings:**

- The *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased by 9.1 percentage points between the pre-integration average and integration period rate ( $p<0.001$ ).
- The integration period *Percentage of children and adolescents on antipsychotics with metabolic monitoring* increased by 0.6 percentage points from the pre-integration average ( $p=0.741$ ).
- The rate declined by 0.7 percentage points between the pre-integration average and the integration period *Percentage of children and adolescents with use of multiple concurrent antipsychotics* ( $p=0.132$ ). Non-inferiority testing shows that rates in the integration period were the same or better than rates in the pre-integration period.
- The *Percentage of beneficiaries receiving mental health services* increased by 10.3 percentage points between the pre-integration average and integration period rate ( $p<0.001$ ).

**Table 7-9—Research Question 2.3, Integration**

		Weighted Rate <sup>1</sup>								
		Baseline Period					Ramp-Up Period	Integration Period		
		2015	2016	2017	2018	2019	2020	2021		
2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	55.2%	62.0%	63.2%	67.1%	66.2%	65.3%	68.4%	72.5%	
2-7	Percentage of children and adolescents on antipsychotics with metabolic monitoring	50.5%	50.2%	55.0%	57.8%	46.5%	38.7%	46.1%	52.7%	
2-8	Percentage of beneficiaries with screening for depression and follow-up plan	--	--	--	--	--	--	--	--	
2-9	Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)	2.3%	1.8%	0.6%	0.6%	0.9%	1.1%	0.8%	0.5%	
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)									
	<b>Any</b>	<b>36.5%</b>	<b>36.9%</b>	<b>40.0%</b>	<b>48.6%</b>	<b>57.1%</b>	<b>57.5%</b>	<b>52.8%</b>	<b>53.3%</b>	
	ED	0.1%	0.0%	0.1%	0.1%	0.4%	0.6%	1.0%	0.6%	
	Intensive outpatient or partial hospitalization	1.6%	1.6%	1.7%	1.5%	1.9%	1.6%	1.3%	4.0%	
	Inpatient	2.6%	2.9%	3.2%	4.2%	4.8%	4.9%	4.6%	4.2%	
	Outpatient	36.3%	36.6%	39.8%	48.3%	56.8%	57.0%	51.8%	52.6%	
	Telehealth	0.6%	1.1%	1.4%	2.4%	4.0%	7.7%	10.0%	10.2%	

**Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period as compared to the baseline?**

		Pre-Integration	Pre/Post Change		95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
		Average	Integration Rate	in Rate <sup>2</sup>			
2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	63.4%	72.5%	9.1pp ( <b>&lt;0.001</b> )	4.9pp to 13.0pp	-2.4pp	<b>Better</b>
2-7	Percentage of children and adolescents on antipsychotics with metabolic monitoring	52.1%	52.7%	0.6pp (0.741)	-3.1pp to 4.4pp	-2.5pp	Insufficient Data
2-8	Percentage of beneficiaries with screening for depression and follow-up plan	--	--	--	--	--	--
2-9	Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)	1.2%	0.5%	-0.7pp (0.132)	-1.1pp to 0.4pp	0.6pp	<b>Not Meaningfully Worse</b>
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)						
	<b>Any</b>	<b>43.0%</b>	<b>53.3%</b>	<b>10.3pp</b> ( <b>&lt;0.001</b> )	<b>9.4pp to 11.3pp</b>	--	--
	ED	0.1%	0.6%	0.4pp ( <b>&lt;0.001</b> )	0.3pp to 0.7pp	--	--
	Intensive outpatient or partial hospitalization	1.6%	4.0%	2.3pp ( <b>&lt;0.001</b> )	1.9pp to 2.7pp	--	--
	Inpatient	3.5%	4.2%	0.8pp ( <b>&lt;0.001</b> )	0.4pp to 1.2pp	--	--
	Outpatient	42.8%	52.6%	9.8pp ( <b>&lt;0.001</b> )	8.9pp to 10.8pp	--	--
	Telehealth	1.8%	10.2%	8.4pp ( <b>&lt;0.001</b> )	7.7pp to 9.2pp	--	--

Note: Results for Measure 2-8 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Indicators in bold denote inclusion for evaluation in summary table for Measure 2-10. pp=percentage point. The pre-integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2020. The integration period includes FFY 2022. FFY 2021 is considered a ramp-up period and is therefore excluded from the analysis.

<sup>1</sup> Rates are weighted by duration of enrollment in CHP.

<sup>2</sup> Change in Rate compares the rate in the integration period to the pre-integration period using a pre/post model.

<sup>3</sup> Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-6 Conclusion: Supports the hypothesis**



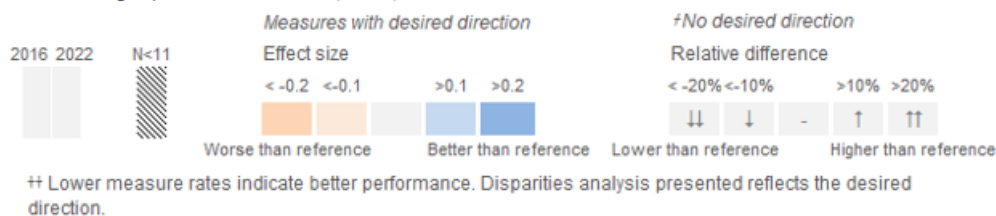
**Measure 2-7 Conclusion:** Neither supports nor fails to support the hypothesis  
**Measure 2-9 Conclusion:** Supports the hypothesis  
**Measure 2-10 Conclusion:** N/A

Table 7-10 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 7-10—Research Question 2.3, Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
2-6 Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	█	█	█	█	█	█
2-7 Percentage of children and adolescents on antipsychotics with metabolic monitoring	█	█	█	█	█	█
2-9 Percentage of children and adolescents with use of multiple concurrent antipsychotics <sup>++</sup>	█	█	█	█	█	█
2-10 Percentage of beneficiaries receiving mental health services (Any) <sup>+</sup>	-	-	↓	↓	-	-
Percentage of beneficiaries receiving mental health services (ED) <sup>+</sup>	█	█	█	█	█	█
Percentage of beneficiaries receiving mental health services (Inpatient) <sup>+</sup>	-	↑	█	█	↑	-
Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization) <sup>+</sup>	↑	↑	↓	↑	↑	-
Percentage of beneficiaries receiving mental health services (Outpatient) <sup>+</sup>	-	-	↓	↓	-	↑
Percentage of beneficiaries receiving mental health services (Telehealth) <sup>+</sup>	↑	↑	█	█	↑	-

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Research Question 2.4: Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?**

Table 7-11 shows that the *Number of ED visits per 1,000 member months* increased steadily during the demonstration period until FFY 2020 when a notable decline was observed. This decline in FFY 2020 and the impacts in the subsequent evaluation years could be due to immediate and ongoing impacts of the COVID-19 PHE and was observed across all Demonstration groups. The *Number of inpatient stays per 1,000 member months* remained largely stable throughout the pre-integration and integration periods. There is no desired direction for these measures, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis. Renewal results for CHP can be found in Appendix A.



**Key Findings:**

- The integration period rate for ED visits decreased by 3.24 visits per 1,000 member months from the pre-integration average ( $p=0.057$ ).
- The *Number of inpatient stays per 1,000 member months* increased by 0.46 stays per 1,000 member months between the pre-integration average and the integration period rate ( $p=0.023$ ).

**Table 7-11—Research Question 2.4, Integration**

Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?										
Weighted Rate <sup>1</sup>										
Baseline Period										
Ramp-Up Period										
Integration Period										
		2015	2016	2017	2018	2019	2020	2021	2022	
2-11	Number of ED visits per 1,000 member months (no desired direction)	44.33	41.83	40.87	42.14	46.14	35.01	33.47	39.81	
2-12	Number of inpatient stays per 1,000 member months (no desired direction)	3.28	3.09	2.84	3.15	3.46	3.23	3.15	3.61	

**Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?**

		Pre-Integration Average	Integration Rate	Pre/Post Change in Rate <sup>2</sup>	95% CI
2-11	Number of ED visits per 1,000 member months (no desired direction)	43.05	39.81	-3.24 (0.057)	-6.3 to 0.1
2-12	Number of inpatient stays per 1,000 member months (no desired direction)	3.15	3.61	0.46 (0.023)	0.1 to 0.9

Note: pp=percentage point. The pre-integration average and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. The pre-integration period includes FFY 2015 through FFY 2020. The integration period includes FFY 2022. FFY 2021 is considered a ramp-up period and is therefore excluded from the analysis. Because Measures 2-11 and 2-12 examine counts of services, a negative binomial model is used to appropriately conduct statistical testing. Estimates and confidence intervals have been transformed to rates per 1,000 member months for ease of interpretation.

<sup>1</sup> Rates are weighted by duration of enrollment in CHP.

<sup>2</sup> Change in Rate compares the rate in the integration period to the pre-integration period using a pre/post model.

**Measure 2-11 Conclusion: N/A**

**Measure 2-12 Conclusion: N/A**

Table 7-12 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 7-12—Research Question 2.4, Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
2-11	- ↑	- -	- -	↑ -	- -	- -
2-12	- -	- ††	†	†† -	‡‡ -	- †

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



†† Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

### **Hypothesis 3—CHP encourages and/or facilitates care coordination among PCPs and BH practitioners.**

Hypothesis 3 was designed to identify in detail the activities the Department of Child Safety (DCS) conducted to further AHCCCS' goal of integrating care by implementing strategies supporting care coordination and management.

Measures in Hypothesis 3 were evaluated through key informant interviews with AHCCCS State Administrators, Mercy Care DCS CHP, and providers. These methods allow for an in-depth analysis detailing activity focused on care integration and potential successes or barriers surrounding these activities.

Qualitative analysis was performed using transcripts from key informant interviews with State Administrators, Mercy Care DCS CHP, and providers. Research Questions 3.1 through 3.3 contain key findings on specific topics about CHP's activities, barriers encountered during the transition to integrated care, and barriers specific to implementing care coordination strategies. A full results summary can be found in Appendix C.

#### ***Research Question 3.1: What barriers did CHP anticipate/encounter during the integration?***

CHP expected and experienced several challenges during the integration of care. Difficulties discussed during key informant interviews included:

- Informants reported difficulty communicating between providers, Mercy Care, DCS, and State administrators, such as slow responses, issues reaching the correct authority, and conflicting perceptions of program oversight responsibilities.

#### ***Research Question 3.2: What care coordination strategies did CHP plan/implement during integration?***

CHP prepared and enacted many care coordination strategies to prepare for and promote integration. Common strategies discussed during key informant interviews included:

- DCS and Mercy Care employed care coordinators to attend meetings related to beneficiaries' care. To ensure clear and timely communication, DCS and Mercy Care welcomed beneficiary feedback, set response time requirements, and facilitated cross-department communication for beneficiary transfers.
- Care coordination efforts involved rapid response meetings within the first 24 hours of a beneficiary's placement to accurately assess their PH and BH needs.
- Management of BH conditions improved during the integration periods, potentially due to these implemented care coordination strategies. Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness (Measure 2-6) increased and Percentage of children and adolescents with use of multiple concurrent antipsychotics (Measure 2-7) decreased.

#### ***Research Question 3.3: What barriers to implementing care coordination strategies did the CHP anticipate/encounter?***

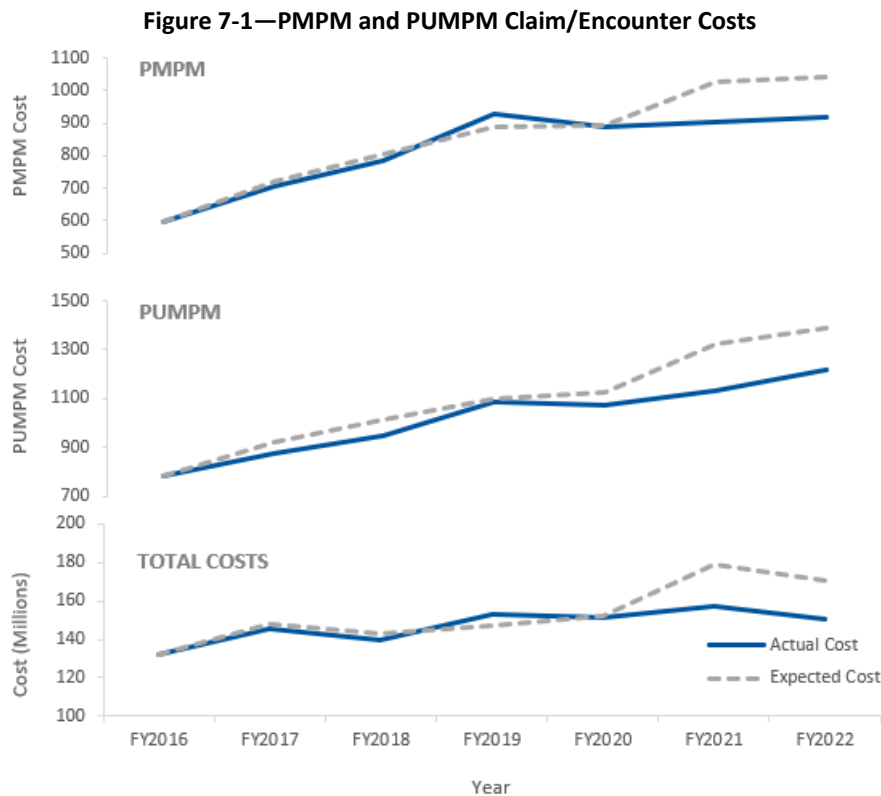
Providers reported multiple challenges arising from the implementation of care coordination strategies in key informant interviews. Specific issues discussed included:

- Providers identified several barriers unique to CHP post-integration. DCS beneficiaries were less likely to have long standing relationships with a single PCP or specialty provider, resulting in providers dedicating extra time to obtain complete medical histories.
- Providers had challenges with the prior authorization process, network adequacy, rural staffing, and reluctance to work with DCS beneficiaries with complicated healthcare needs.

**Hypothesis 4—CHP will provide cost-effective care.**

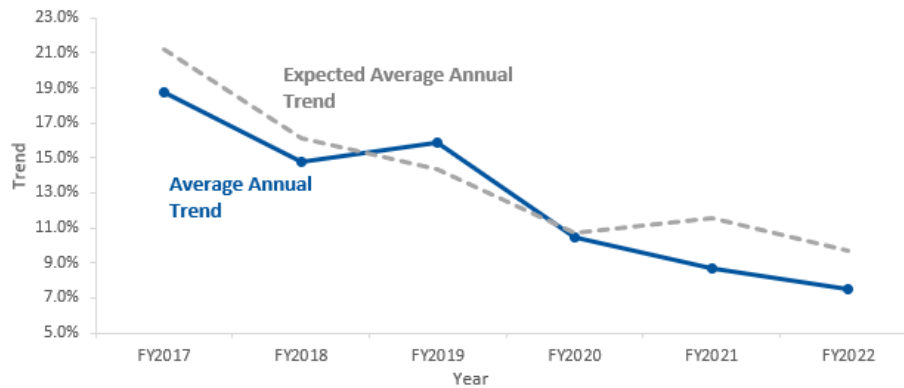
**Research Question 4.1: What are the costs associated with the integration of care in the CHP?**

Figure 7-1 displays the per member per month (PMPM) and per utilizing member per month (PUMPM) claim/encounter costs and total expenditures from the baseline in 2016 through 2022 for actual incurred costs and the expected (counterfactual) costs for the entire period covered under the Demonstration for the CHP program. The three displayed comparisons of the actual and counterfactual costs exhibit an overall cost increase from 2016 through 2022. However, the impact year to year varied, driven primarily by the impact of the COVID-19 PHE in 2020. The reduction of the actual costs in 2020 and subsequent increase in 2021 was the result of the limited available benefits during the PHE offset by the leap in benefit utilization post-lockdown. The expected cost line did not include the impact of the COVID-19 PHE. Given the reduction of available services as a result of the PHE in the majority of fiscal year (FY) 2020, the expected impact would be a reduction of PMPM costs. Given the PUMPM metric focused on utilizing beneficiaries (i.e., beneficiaries with at least one claim/encounter during the year), the impact of the PHE was expected to be negligible from a cost per utilization perspective.



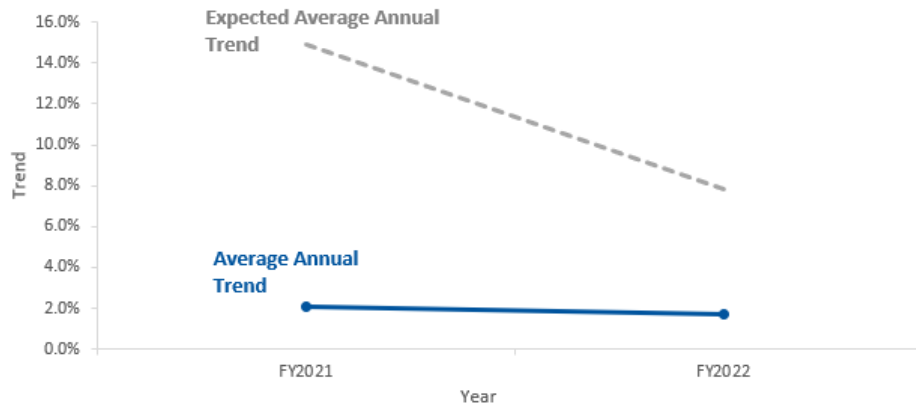
Trend calculations were reviewed both over the lifetime of the Demonstration from FY 2016 and for the period since integration of PH and BH in FY 2021. Figure 7-2 shows several trend calculations, based on changes from 2016 (not shown in the figure) for the entire period covered by the CHP program. The average annualized trend decreased throughout the life of the CHP program, from the baseline of 18.5 percent to 7.5 percent. The impact of the COVID-19 PHE was seen in the steep drop in the PMPM trend from FY 2019 to FY 2020 with a rebound of the trend demonstrated by the increase from FY 2020 to FY 2021. The average annual trends overall were lower than the expected trends based on known changes such as demographics, health condition-based risk, and inflation throughout the life of the Demonstration.

**Figure 7-2—Cost Per Beneficiaries Trends**



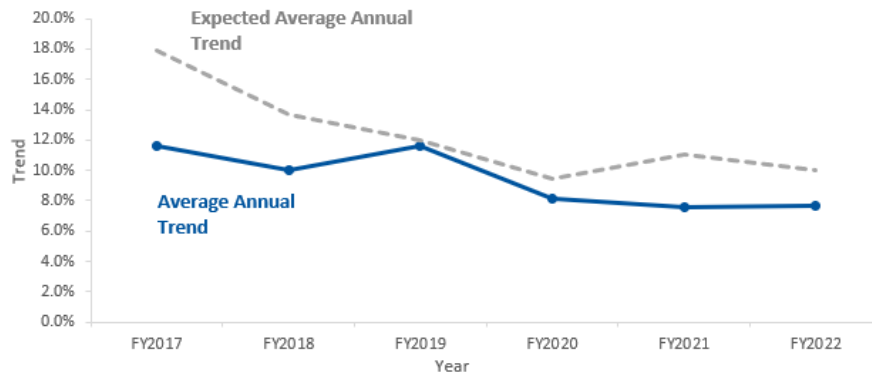
The following set of trends displayed in Figure 7-3 was based on changes from 2020 (not shown in the figure) for the period of the Demonstration covered post-BH integration for the CHP population. The average annualized trend since the integration of PH and BH in the CHP program remained fairly flat, around 2 percent. The average annual trends were lower than the expected trends based on known changes such as demographics, health condition-based risk, and inflation throughout the life of the Waiver.

**Figure 7-3—Cost Per Beneficiaries Trends**



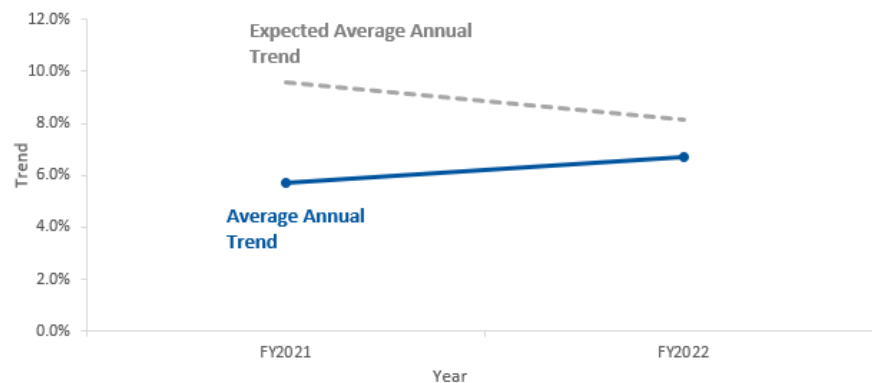
With a focus on utilizing beneficiaries, trend calculations were reviewed both over the lifetime of the Demonstration from FY 2016 and for the period since integration of BH in FY 2021. Figure 7-4 shows several trend calculations, based on changes from 2016 (not shown in the figure) for the entire period covered by the CHP program. The average annualized trend decreased throughout the life of the CHP program, from the baseline of 11.6 percent to 7.6 percent. The impact of the COVID-19 PHE was seen in the drop in the PMPM trend from FY 2019 to FY 2020. Unlike the PMPM trends that exhibited a rebound in FY 2021, trends for PUMPM beneficiaries stayed fairly flat since the PHE. The average annual trends overall were lower than the expected trends based on known changes such as demographics, health condition-based risk, and inflation throughout the life of the Demonstration.

**Figure 7-4—Cost Per Utilizing Beneficiaries Trends**



Continuing a review of the impact of the integration of PH and BH services, the following set of trends displayed in Figure 7-5 was based on changes from 2020 (not shown in the figure) for utilizing beneficiaries of the CHP population. The average annualized trend since the integration of PH and BH in the CHP program increased from 5.7 percent to 6.7 percent. The average annual trends were lower than the expected trends based on known changes such as demographics, health condition-based risk, and inflation throughout the life of the Demonstration.

**Figure 7-5—Cost Per Utilizing Beneficiaries Trends**



**Research Question 4.2: What are the benefits/savings associated with the integration of care in the CHP?**

Table 7-13 shows the impacts of each of the known changes in the cost and demographic variables for paid claims from 2015 to 2022. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2015 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2015 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating all known external impacts was 9.7 percent. When compared to the annualized paid claims trend of 7.5 percent achieved by the Demonstration, the program achieved an estimated savings in claims cost of 2.1 percent.

**Table 7-13—Counterfactual Paid Claims Trend Development**

Cost Impact Components	FY2016 Factors	FY2022 Factors	Cumulative Factor Change <sup>1</sup>	Years	Average Annualized Factor Trend <sup>2</sup>
	[A]	[B]	[C]=[B]/[A]	[D]	[E]=[C]^(1/[D])-1
Aging	0.9820	0.9906	1.0088	6	0.1%
Race	1.0027	1.0811	1.0782	6	1.3%
Area	1.0108	1.0045	0.9938	6	-0.1%
Risk	1.8401	2.0687	1.1242	6	2.0%
CPI	1.0000	1.2178	1.2178	6	3.3%
Service Category Distribution	1.0000	1.1789	1.1789	6	2.8%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>1.8312</b>	<b>3.1946</b>	<b>1.7445</b>	<b>6</b>	<b>9.7%</b>
<b>Average Annualized Trend</b>					<b>FY2016 to FY2022</b>
[E]	Counterfactual Annualized Paid Claims Trend				9.7%
[F]	Annualized Paid Claims Trend <sup>4</sup>				7.5%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>				<b>2.1%</b>

Note: Factors represent the impact on claims cost for various groups within the CHP population. For example, the aging factor represents the impact on claims cost by dividing the CHP population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire CHP population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicate cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 182,915.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

Table 7-14 reflects the impacts for the post-integration period from 2021 to 2022 for the impacts of each of the known changes in the cost and demographic variables. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2020 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2020 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating all known external impacts was 7.8 percent; comparing this to the annualized paid claims trend of 1.7 percent achieved by the Demonstration shows that the program achieved an estimated savings in claims cost of 6.0 percent.



**Table 7-14—Counterfactual Paid Claims Trend Development**

Cost Impact Components	FY2020 Factors	FY2022 Factors	Cumulative Factor Change <sup>1</sup>	Years	Average Annualized Factor Trend <sup>2</sup>
	[A]	[B]	[C]=[B]/[A]	[D]	[E]=[C]^(1/[D])-1
Aging	0.9936	0.9906	0.9970	2	-0.2%
Race	1.0609	1.0811	1.0190	2	0.9%
Area	1.0077	1.0045	0.9968	2	-0.2%
Risk	2.0918	2.0687	0.9889	2	-0.6%
CPI	1.0000	1.0534	1.0534	2	2.6%
Service Category Distribution	1.0000	1.1015	1.1015	2	5.0%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>2.2219</b>	<b>2.5820</b>	<b>1.1621</b>	<b>2</b>	<b>7.8%</b>
<b>Average Annualized Trend</b>					<b>FY2020 to FY2022</b>
[E]	Counterfactual Annualized Paid Claims Trend				7.8%
[F]	Annualized Paid Claims Trend <sup>4</sup>				1.7%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>				<b>6.0%</b>

Note: Factors represent the impact on claims cost for various groups within the CHP population. For example, the aging factor represents the impact on claims cost by dividing the CHP population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire CHP population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicate cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 169,734

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

## 8. RBHA Results

The following section details measure results by research question and related hypotheses for the Regional Behavioral Health Authority (RBHA) Demonstration program. This report offers results for the baseline period and demonstration period. For details on the measure definitions and specifications, reference the approved Evaluation Design.<sup>8-1</sup> Full measure results with denominator data are presented in Appendix A.

### Results Summary

In total, 27 measures were calculated for the years between federal fiscal years (FFYs) 2012 and 2022.<sup>8-2</sup> Due to effects of the coronavirus disease 2019 (COVID-19) public health emergency (PHE) impacting the U.S. healthcare system beginning in approximately March 2020, results for this time period must be interpreted with caution, as many changes in rates may not be indicative of program performance. Table 8-1 presents the number of measures by research question that support the research question, do not support the research question, or were inconclusive.<sup>8-3</sup> The table also shows the number of measures for which there is no desired direction, such as emergency department (ED) or inpatient utilization measures. Results for qualitative analyses are included in Hypothesis 5. Results for survey-based measures were analyzed through a pre-test/post-test and non-inferiority testing.<sup>8-4</sup> Pre-test data were derived from a survey of AHCCCS beneficiaries with serious mental illness (SMI) in winter 2016/spring 2017. Post-test data were derived from recently administered surveys of AHCCCS SMI beneficiaries in spring/summer 2021.

Following integration of care for beneficiaries with an SMI, rates were maintained or improved across measures related to management of behavioral health (BH) conditions and management of opioid prescriptions. Additionally, of the three measures related to chronic condition management, the *Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test* and the *Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications* had rates that were the same or better in the demonstration period while the *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* was inconclusive.

Due to limitations of available and appropriate comparison groups, methods used in this analysis do not allow for description of causal effect. Measures characterized as improving or worsening may have been influenced by factors other than the RBHA program that have not been statistically controlled for in these results. Additional details can be found in the Methodology Limitations section.

**Table 8-1—RBHA Results Summary**

Research Questions	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>1.1:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to primary care services compared to prior to the demonstration renewal?	1	3	0	0

<sup>8-1</sup> Arizona Health Care Cost Containment System. Arizona’s Section 1115 Waiver Independent Evaluation—Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>8-2</sup> Additional indicators were calculated for certain measures and are reported in full in RBHA Results section and in Appendix A.

<sup>8-3</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.

<sup>8-4</sup> Non-inferiority testing appears as “NI” in tables and figures throughout this section.

Research Questions	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>1.2:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to substance abuse treatment compared to prior to the demonstration renewal?	1	1	0	0
<b>2.1:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rates of preventive or wellness services compared to prior to demonstration renewal?	0	1	0	0
<b>2.2:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of chronic conditions compared to prior to the demonstration?	2	1	0	0
<b>2.3:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of BH conditions compared to prior to the demonstration renewal?	5	0	0	1
<b>2.4:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of opioid prescriptions compared to prior to the demonstration renewal?	2	0	0	0
<b>2.5:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower tobacco usage compared to prior to the demonstration renewal?	0	1	0	0
<b>2.6:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower hospital utilization compared to prior to the demonstration?	0	1	0	2
<b>3.1:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rating of health compared to prior to the demonstration renewal?	0	2	0	0
<b>4.1:</b> Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher satisfaction in their health care compared to prior to the demonstration renewal?	1	1	0	0
<b>4.2:</b> Do adult beneficiaries with an SMI enrolled in a RBHA perceive their doctors to have the same or better care coordination compared to prior to the demonstration renewal?	0	1	0	0

<sup>1</sup>Determination of improvement is not applicable or is dependent on context

**Hypothesis 1—Access to care for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or increase during the demonstration.**

**Research Question 1.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to primary care services compared to prior to the demonstration renewal?**

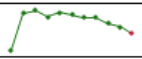
Table 8-2 shows that the *Percentage of adults who accessed preventive/ambulatory health services* rose sharply between baseline years before gradually falling throughout the demonstration period.

**Key Findings:**

- The average *Percentage of adults who accessed preventive/ambulatory health services* increased by 2.7 percentage points between the baseline and demonstration periods ( $p < 0.001$ ).
- Compared to the National Committee for Quality Assurance (NCQA) Quality Compass 2019 benchmarks, the evaluation average of 91.3 percent exceeded the 95th percentile.

**Table 8-2—Research Question 1.1**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to primary care services compared to prior to the demonstration renewal?												
		Weighted Rate <sup>1</sup>										
		Baseline Period		Evaluation Period								
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>1-1</b>	Percentage of adults who accessed preventive/ambulatory health services	84.1%	92.8%	93.5%	92.0%	93.0%	92.4%	91.8%	91.7%	90.4%	89.5%	87.9%



Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to primary care services compared to prior to the demonstration renewal?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>1-1</b>	Percentage of adults who accessed preventive/ambulatory health services	88.5%	91.3%	2.7pp (<0.001)	2.5pp to 3.0pp	-1.6pp	Better

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in RBHA.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-1 Conclusion: Supports the hypothesis**

Table 8-3 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 8-3—Research Question 1.1, Demographics**

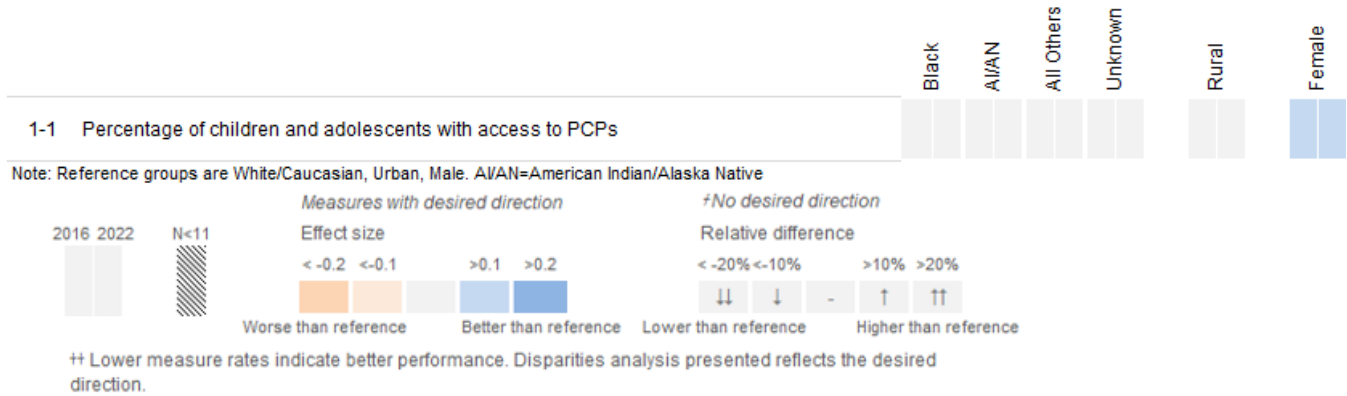


Table 8-4 shows that self-reported rates about getting needed care decreased between the survey periods.

**Table 8-4—Research Question 1.1, Surveys**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or increased access to primary care services compared to prior to the demonstration renewal?							
		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
1-2	Percentage of beneficiaries who reported they received care as soon as they needed	82.0%	76.8%	-5.2pp (0.130)	-13.6pp to 1.3pp	-2.0pp	Insufficient Data
1-3	Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor's office or clinic as soon as they needed	80.3%	78.6%	-1.6pp (0.556)	-7.7pp to 3.3pp	-2.0pp	Insufficient Data
1-4	Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed	81.9%	77.1%	-4.7pp (0.121)	-12.0pp to 1.0pp	-2.0pp	Insufficient Data

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-2 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-3 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-4 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 1.2: Do adult beneficiaries with an SMI enrolled in RBHA have the same or increased access to substance abuse treatment compared to prior to the demonstration renewal?**



Table 8-5 shows that the rate of treatment initiation remained largely consistent in the baseline and demonstration periods while the rate of treatment engagement increased throughout the demonstration period.

**Key Findings:**

- The average *Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment* decreased by 2.1 percentage points between the baseline and demonstration period ( $p<0.001$ ).
- The average *Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment* increased by 6.7 percentage points between the baseline and demonstration period ( $p<0.001$ ).

- Compared to the NCQA Quality Compass 2019 benchmarks, the evaluation average rate of 9.0 percent for treatment engagement fell below the 25th percentile.

**Table 8-5—Research Question 1.2**

Do adult beneficiaries with an SMI enrolled in RBHA have the same or increased access to substance abuse treatment compared to prior to the demonstration renewal?													
		Weighted Rate <sup>1</sup>											
		Baseline Period		Evaluation Period									
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
1-5	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	46.6%	47.0%	50.1%	42.6%	42.9%	44.5%	44.9%	42.2%	41.9%	44.6%	46.2%	
1-6	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	3.1%	1.6%	1.9%	6.9%	8.7%	9.8%	11.0%	11.2%	10.1%	10.6%	11.6%	

Do adult beneficiaries with an SMI enrolled in RBHA have the same or increased access to substance abuse treatment compared to prior to the demonstration renewal?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
1-5	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	46.8%	44.7%	-2.1pp (<0.001)	-3.3pp to -1.0pp	-2.5pp	Insufficient Data
1-6	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	2.3%	9.0%	6.7pp (<0.001)	5.6pp to 8.0pp	-0.7pp	Better

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in RBHA.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-5 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-6 Conclusion:** Supports the hypothesis

Table 8-6 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.



**Table 8-6—Research Question 1.2, Demographics**

		Black	AI/AN	All Others	Unknown	Rural	Female
1-5	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Alcohol)	Orange		Orange		Orange	Orange
	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Opioid)	Orange	Hatched	Orange		Orange	Orange
	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Other Drug)					Orange	Orange
	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)					Orange	Orange
1-6	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Alcohol)	Hatched	Hatched	Blue			
	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Opioid)	Hatched	Hatched	Blue		Hatched	Orange
	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Other Drug)		Hatched	Blue			
	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	Orange	Hatched	Blue			

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



**Hypothesis 2—Quality of care for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or improve during the demonstration.**

**Research Question 2.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rates of preventive or wellness services compared to prior to demonstration renewal?**

Table 8-7 shows the *Percentage of beneficiaries who reported having a flu shot or nasal flu spray since July 1* in the 2016-2017 survey and the 2021 survey.

**Key Findings:**

- The *Percentage of beneficiaries who reported having a flu shot or nasal flu spray since July 1* decreased by 2.8 percentage points between the 2016/2017 survey and 2021 survey ( $p=0.311$ ).

**Table 8-7—Research Question 2.1**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rates of preventive or wellness services compared to prior to demonstration renewal?							
		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
2-1	Percentage of beneficiaries who reported having a flu shot or nasal flu spray since July 1	50.5%	47.6%	-2.8pp (0.311)	-8.3pp to 2.7pp	-2.5pp	Insufficient Data

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-1 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 2.2: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of chronic conditions compared to prior to the demonstration renewal?**

Table 8-8 shows that rates related to chronic condition management fluctuated slightly throughout the demonstration period but on average declined between the baseline and demonstration period. The *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased substantially between FFY 2019 and FFY 2021 before decreasing in FFY 2022. This trend was seen across all Demonstration programs including AHCCCS Complete Care (ACC), Arizona Long Term Care System (ALTCS)-Developmentally Disabled (DD), ALTCS-Elderly and Physically Disabled (EPD), and Comprehensive Health Plan (CHP).

**Key Findings:**

- The average *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* declined by 4.4 percentage points from the baseline to the demonstration period ( $p=0.075$ ).
- The evaluation *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* ranked below the 25th percentile of the NCQA Quality Compass 2019 benchmarks.
- The average *Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test* decreased 0.8 percentage points between the baseline and demonstration periods ( $p=0.027$ ). Although traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.
- The average *Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medication* decreased 0.9 percentage points between the baseline and demonstration period ( $p=0.087$ ). Non-inferiority testing shows that rates in the demonstration period were the same or better than the baseline period.

**Table 8-8—Research Question 2.2**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of chronic conditions compared to prior to the demonstration renewal?														
			Weighted Rate <sup>1</sup>											
			Baseline Period		Evaluation Period									
			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2-2	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent		60.9%	59.5%	44.7%	50.1%	54.8%	50.1%	51.7%	54.9%	63.1%	74.9%	58.7%	
2-3	Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test		80.1%	79.4%	79.1%	81.2%	77.8%	77.4%	75.8%	78.5%	76.2%	79.8%	81.1%	
2-4	Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications		57.5%	58.5%	53.3%	52.7%	57.8%	60.4%	55.4%	56.5%	60.8%	60.1%	59.6%	

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of chronic conditions compared to prior to the demonstration renewal?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
2-2	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	59.7%	55.3%	-4.4pp (0.075)	-9.3pp to 0.4pp	-2.5pp	Insufficient Data
2-3	Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test	79.7%	78.9%	-0.8pp (0.027)	-1.6pp to -0.1pp	-2.0pp	Not Meaningfully Worse
2-4	Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications	58.1%	57.2%	-0.9pp (0.087)	-2.0pp to 0.1pp	-2.5pp	Not Meaningfully Worse

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in RBHA.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-2 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 2-3 Conclusion:** Supports the hypothesis

**Measure 2-4 Conclusion:** Supports the hypothesis

Table 8-9 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 8-9—Research Question 2.2, Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
2-2 Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	Blue	Blue with diagonal lines	Blue	Grey	Orange	Blue
2-3 Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test	Grey	Blue	Grey	Grey	Grey	Grey
2-4 Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications	Orange	Orange	Blue	Grey	Orange	Grey

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Research Question 2.3: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of BH conditions compared to prior to the demonstration renewal?**

As illustrated in Table 8-10, the *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* increased during the baseline and remained stable during the demonstration period for both the 84- and 180-day periods. The *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* reached its peak in FFY 2016 before generally remaining stable throughout the remainder of the demonstration period. The *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness* reached its peak in FFY 2017 before generally declining throughout the remainder of the demonstration period. The *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence* remained largely consistent between the baseline and demonstration period. Although rates for screening for clinical depression (Measure 2-9) were calculated, as described in the Methodology Limitations section, this measure relies on level II Healthcare Common Procedure Coding System (HCPCS) codes to identify numerator compliance, which yields artificially low rates calculated through administrative data. Therefore, no results for this measure are displayed.

Overall, the *Percentage of beneficiaries receiving mental health services (Any)* increased between the baseline and demonstration period. This trend was mirrored in the rates of outpatient services. Specifically, telehealth service utilization increased each year, with the largest increase coming in FFY 2020 which was likely attributable to the COVID-19 PHE. There is no desired direction for this measure, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.






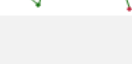




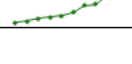

**Key Findings:**

- The average *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* increased by 1.2 percentage points for the 84-day period and 0.8 percentage points for the 180-day period between the baseline and demonstration period ( $p=0.265$ ,  $p=0.363$ ). Rates for both the 84- and 180-day period were the same or better in the demonstration period compared to rates in the baseline period based on non-inferiority testing.
- The average *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased by 26.6 percentage points between the baseline and demonstration period ( $p<0.001$ ).

- Compared to the NCQA Quality Compass 2019 benchmarks, the evaluation average of 66.7 percent for the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* is above the 95th percentile.
- The *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness* increased by 3.0 percentage points from the average in the baseline to the demonstration period ( $p=0.002$ ). Similarly, the average *Percentage of beneficiaries with a follow-up visit within 7 days after ED visit for alcohol and other drug abuse or dependence* increased by 1.2 percentage points from the baseline to the demonstration period ( $p=0.241$ ). Non-inferiority testing shows that the *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence* in the demonstration period was the same or better than the baseline period percentage.
- The average *Percentage of beneficiaries receiving mental health services (Any)* increased by 4.4 percentage points in the demonstration period relative to the baseline ( $p<0.001$ ).

**Table 8-10—Research Question 2.3**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of BH conditions compared to prior to the demonstration renewal?

	Weighted Rate <sup>1</sup>												
	Baseline Period		Evaluation Period										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	39.3%	46.3%	44.2%	42.5%	45.7%	46.2%	43.5%	42.5%	41.7%	46.8%	45.0%	
2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	23.3%	27.5%	26.9%	26.4%	28.9%	27.7%	24.8%	24.2%	24.0%	27.6%	25.8%	
2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	N/A	40.1%	47.2%	65.1%	70.7%	70.6%	70.0%	68.5%	66.9%	68.1%	67.6%	
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	56.1%	59.3%	61.0%	62.0%	62.7%	63.8%	61.5%	58.6%	56.8%	57.1%	52.7%	
2-8	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	18.8%	18.4%	17.5%	21.6%	21.1%	19.7%	21.0%	19.3%	19.9%	19.8%	17.2%	
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--	--	--	--	
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)												
	<b>Any</b>	<b>73.6%</b>	<b>83.4%</b>	<b>85.5%</b>	<b>82.5%</b>	<b>85.9%</b>	<b>86.4%</b>	<b>85.9%</b>	<b>84.8%</b>	<b>82.3%</b>	<b>79.4%</b>	<b>76.4%</b>	
	ED	0.0%	0.1%	0.4%	0.9%	1.5%	1.5%	1.2%	1.0%	0.8%	0.5%	0.4%	
	Intensive outpatient or partial hospitalization	12.3%	13.2%	12.8%	12.1%	14.3%	14.8%	14.9%	15.1%	12.9%	12.7%	12.5%	
	Inpatient	12.2%	13.1%	13.2%	14.2%	14.9%	16.0%	16.3%	16.4%	15.8%	16.5%	15.7%	
	Outpatient	72.8%	82.9%	85.0%	81.9%	85.4%	85.9%	85.3%	84.2%	81.5%	78.1%	75.1%	
	Telehealth	0.1%	0.8%	1.6%	2.1%	2.8%	4.2%	6.7%	7.3%	10.8%	13.6%	13.4%	

**Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of BH conditions compared to prior to the demonstration renewal?**

	Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
2-5 Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	43.4%	44.5%	1.2pp (0.265)	-0.9pp to 3.2pp	-2.5pp	Not Meaningfully Worse
2-5 Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	25.7%	26.5%	0.8pp (0.363)	-0.9pp to 2.7pp	-2.2pp	Not Meaningfully Worse
2-6 Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	40.1%	66.7%	26.6pp (<0.001)	25.3pp to 28.0pp	-2.4pp	Better
2-7 Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	57.6%	60.6%	3.0pp (0.002)	1.1pp to 4.9pp	-2.5pp	Better
2-8 Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	18.6%	19.8%	1.2pp (0.241)	-0.8pp to 3.4pp	-1.9pp	Not Meaningfully Worse
2-9 Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--
2-10 Percentage of beneficiaries receiving mental health services (no desired direction)						
Any	78.7%	83.1%	4.4pp (<0.001)	4.1pp to 4.7pp	--	--
ED	0.0%	0.9%	0.9pp (<0.001)	0.6pp to 1.3pp	--	--
Intensive outpatient or partial hospitalization	12.8%	13.6%	0.8pp (<0.001)	0.5pp to 1.1pp	--	--
Inpatient	12.7%	15.5%	2.8pp (<0.001)	2.5pp to 3.1pp	--	--
Outpatient	78.0%	82.3%	4.3pp (<0.001)	4.0pp to 4.6pp	--	--
Telehealth	0.5%	6.8%	6.4pp (<0.001)	5.7pp to 7.2pp	--	--

Note: The 2012 rate for Measure 2-6 is not presented due to large rate variation attributable to changes in specifications. Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Indicators in bold denote inclusion for evaluation in summary table for Measure 2-10. pp=percentage point. The evaluation average and Pre/Post testing controls for the effect of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in RBHA.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Measure 2-5 (84-Days) Conclusion:** Supports the hypothesis  
**Measure 2-5 (180-Days) Conclusion:** Supports the hypothesis  
**Measure 2-6 Conclusion:** Supports the hypothesis  
**Measure 2-7 Conclusion:** Supports the hypothesis  
**Measure 2-8 Conclusion:** Supports the hypothesis  
**Measure 2-10 Conclusion:** N/A

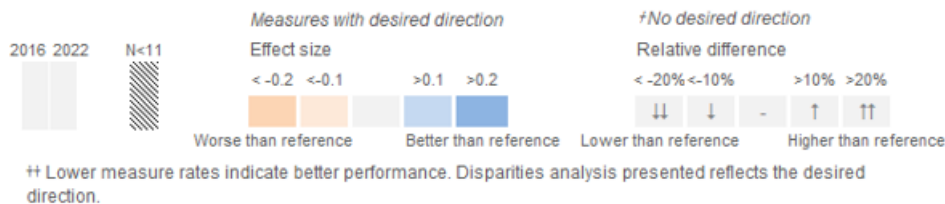
Table 8-11 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.



**Table 8-11—Research Question 2.3, Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
2-5 Percentage of beneficiaries who remained on antidepressant medication treatment (84 days)	Orange	Orange	Orange	Orange	Blue	Blue
Percentage of beneficiaries who remained on antidepressant medication treatment (180 days)	Orange	Hatched	Orange	Orange	Blue	Blue
2-6 Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	Orange	Orange	Blue	Orange	Orange	Orange
2-7 Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	Orange	Blue	Blue	Blue	Orange	Orange
2-8 Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	Orange	Hatched	Hatched	Orange	Orange	Orange
2-10 Percentage of beneficiaries receiving mental health services (Any) <sup>†</sup>	-	-	-	-	↓	-
Percentage of beneficiaries receiving mental health services (ED) <sup>†</sup>	↑	↑	↑	↑	↓	↓
Percentage of beneficiaries receiving mental health services (Inpatient) <sup>†</sup>	-	↑	↑	-	↓	↓
Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization) <sup>†</sup>	↑	↑	↑	↑	↓	↓
Percentage of beneficiaries receiving mental health services (Outpatient) <sup>†</sup>	-	-	-	-	↓	-
Percentage of beneficiaries receiving mental health services (Telehealth) <sup>†</sup>	↓	↑	↑	-	↑	↓

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



**Research Question 2.4: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of opioid prescriptions compared to prior to the demonstration renewal?**

As seen in Table 8-12, the *Percentage of beneficiaries who have prescriptions for opioids at a high dosage* decreased steadily throughout the demonstration period. The *Percentage of beneficiaries with concurrent use of opioids and benzodiazepines* decreased substantially throughout the baseline and demonstration periods. Both trends were also observed in the ACC and ALTCS programs.

**Key Findings:**

- The average *Percentage of beneficiaries who have prescriptions for opioids at a high dosage* and *Percentage of beneficiaries with concurrent use of opioids and benzodiazepines* decreased 5.6 and 15.8 percentage points, respectively, between the baseline and demonstration period ( $p<0.001$ ,  $p<0.001$ ).
- The average *Percentage of beneficiaries who have prescriptions for opioids at a high dosage* during the demonstration period was 14.9 percent, ranking below the 10th percentile according to the NCQA Quality Compass 2019 benchmarks.

**Table 8-12—Research Question 2.4**

		Weighted Rate <sup>1</sup>										
		Baseline Period		Evaluation Period								
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2-11	Percentage of beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	20.2%	20.9%	19.0%	18.8%	17.2%	16.2%	12.8%	11.5%	11.3%	10.7%	10.7%
2-12	Percentage of beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	43.7%	41.9%	39.2%	34.7%	31.8%	27.6%	20.7%	11.0%	9.0%	8.2%	7.5%

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or better management of opioid prescriptions compared to prior to the demonstration renewal?

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
2-11	Percentage of beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	20.5%	14.9%	-5.6pp (<0.001)	-6.8pp to -4.4pp	2.1pp	Better
2-12	Percentage of beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	42.8%	27.0%	-15.8pp (<0.001)	-16.7pp to -14.9pp	2.5pp	Better

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in RBHA.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

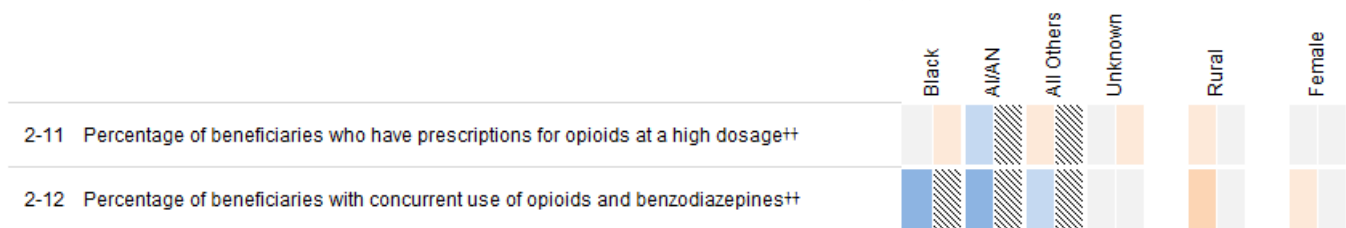
<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-11 Conclusion:** Supports the hypothesis

**Measure 2-12 Conclusion:** Supports the hypothesis

Table 8-13 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 8-13—Research Question 2.4, Demographics**



Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



<sup>++</sup> Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

**Research Question 2.5: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower tobacco usage compared to prior to the demonstration renewal?**

Table 8-14 shows the Percentage of beneficiaries who indicated smoking cigarettes or using tobacco in the 2016/2017 survey and the 2021 survey.

**Key Findings:**

- The *Percentage of beneficiaries who indicated smoking cigarettes or using tobacco* increased by 3.1 percentage points between the 2016/2017 survey and the 2021 survey ( $p=0.270$ ).

**Table 8-14—Research Question 2.5**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same lower tobacco usage compared to prior to the demonstration renewal?						
		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold Non-Inferiority <sup>1</sup>
2-13	Percentage of beneficiaries who indicated smoking cigarettes or using tobacco	42.8%	45.8%	3.1pp (0.270)	-2.3pp to 8.6pp	2.5pp Insufficient Data

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-13 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 2.6: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower hospital utilization compared to prior to the demonstration renewal?**

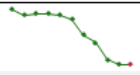


Table 8-15 shows that among RBHA beneficiaries, the *Number of ED visits per 1,000 member months* and *Number of inpatient (IP) stays per 1,000 member months* decreased throughout the baseline and demonstration periods. Unlike the ALTCS and ACC programs, the *Number of IP stays per 1,000 member months* remained unchanged during the COVID-19 PHE. Conversely, the *Percentage of inpatient discharges with an unplanned readmission within 30 days* generally increased over the baseline and demonstration period. There is no desired direction for Measure 2-14 and 2-15, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.

**Key Findings:**

- Between the baseline and demonstration period, the average *Number of ED visits per 1,000 member months* decreased by 18.91 visits ( $p=0.161$ ), and the average *Number of IP stays per 1,000 member months* decreased by 5.07 stays ( $p<0.001$ ).
- The evaluation average *Number of ED visits per 1,000 member months* (124.4 visits per 1,000 member months) and the evaluation average *Number of IP stays per 1,000 member months* (17.0 stays per 1,000 member months) both ranked above the 95th percentile when compared to the NCQA Quality Compass 2019 benchmarks.
- The average *Percentage of inpatient discharges with an unplanned readmission within 30 days* was 2.6 percentage points higher in the demonstration period than the baseline period ( $p<0.001$ ).
- Compared to 2019 benchmarks calculated from the Centers for Medicare & Medicaid Services (CMS) Adult Core Set,<sup>8-5</sup> the evaluation average *Percentage of IP discharges with an unplanned readmission within 30 days* of 24.9 percent ranked well below the 25th percentile.

<sup>8-5</sup> Benchmarks for measures that utilize a hybrid methodology are reported where available using CMS Core Set data from states that reported administrative only methodology.

**Table 8-15—Research Question 2.6**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower hospital utilization compared to prior to the demonstration renewal?													
		Weighted Rate <sup>1</sup>											
		Baseline Period		Evaluation Period									
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
2-14	Number of ED visits per 1,000 member months (no desired direction)	145.9	140.8	141.9	142.1	140.3	136.8	123.5	116.6	101.5	97.3	96.8	
2-15	Number of inpatient stays per 1,000 member months (no desired direction)	22.7	21.4	20.5	18.6	16.8	16.6	15.4	15.3	15.3	16.2	16.4	
2-16	Percentage of inpatient discharges with an unplanned readmission within 30 days (lower is better)	22.1%	22.5%	21.6%	22.8%	22.3%	24.5%	23.5%	26.9%	26.1%	27.7%	27.6%	

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or lower hospital utilization compared to prior to the demonstration renewal?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
2-14	Number of ED visits per 1,000 member months (no desired direction)	143.34	124.43	-18.91 (0.161)	-41.2 to 8.3	--	--
2-15	Number of inpatient stays per 1,000 member months (no desired direction)	22.05	16.98	-5.07 (<0.001)	-7.1 to -2.8	--	--
2-16	Percentage of inpatient discharges with an unplanned readmission within 30 days (lower is better)	22.3%	24.9%	2.6pp (<0.001)	2.0pp to 3.3pp	2.1pp	Insufficient Data

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. Because Measures 2-14 and 2-15 examine counts of services, a negative binomial model is used to appropriately conduct statistical testing. Estimates and confidence intervals have been transformed to rates per 1,000 member months for ease of interpretation.

<sup>1</sup>Rates are weighted by duration of enrollment in RBHA.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Measure 2-14 Conclusion:** N/A  
**Measure 2-15 Conclusion:** N/A  
**Measure 2-16 Conclusion:** Neither supports nor fails to support the hypothesis

Table 8-16 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section. Specific annual rates for each demographic category can be found in Appendix A.

**Table 8-16—Research Question 2.6, Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
2-14 Number of ED visits per 1,000 member months†	- ↑	↑ ↑	↓ -	- -	- -	↑↑ ↑
2-15 Number of inpatient stays per 1,000 member months†	- -	- -	↓ -	- -	↓ ↓↓	↑↑ -
2-16 Percentage of inpatient discharges with an unplanned readmission within 30 days††						

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Hypothesis 3—Health outcomes for adult beneficiaries with an SMI enrolled in a RBHA will be maintained or improve during the demonstration.**

**Research Question 3.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rating of health compared to prior to the demonstration renewal?**

Table 8-17 shows the *Percentage of beneficiaries who reported a high rating of overall health* (excellent or very good) and *Percentage of beneficiaries who reported a high rating of overall mental or emotional health* in the 2016–2017 survey and the 2021 survey.

**Key Findings:**

- The *Percentage of beneficiaries who reported a high rating of overall health* increased by 1.2 percentage points ( $p=0.590$ ) while the *Percentage of beneficiaries who reported a high rating of overall mental or emotional health* remained unchanged ( $p=0.982$ ).

**Table 8-17—Research Question 3.1**

Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher rating of health compared to prior to the demonstration renewal?							
	2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>	
3-1	Percentage of beneficiaries who reported a high rating of overall health	17.4%	18.5%	1.2pp (0.590)	-2.7pp to 6.0pp	-1.9pp	Insufficient Data
3-2	Percentage of beneficiaries who reported a high rating of overall mental or emotional health	15.4%	15.4%	0.0pp (0.982)	-3.5pp to 4.4pp	-1.8pp	Insufficient Data

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 3-1 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 3-2 Conclusion:** Neither supports nor fails to support the hypothesis



**Hypothesis 4—Adult beneficiary satisfaction in RBHA health plans will be maintained or improve over the waiver demonstration period.**

**Research Question 4.1: Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher satisfaction in their health care compared to prior to the demonstration renewal?**

Table 8-18 displays the *Percentage of beneficiaries who reported a high rating of overall health care* and *Percentage of beneficiaries who reported a high rating of health plan* for both the 2016/2017 survey and the 2021 survey.

**Key Findings:**

- The *Percentage of beneficiaries who reported a high rating of overall health care* (8, 9, or 10) remained unchanged between the 2016/2017 survey and 2021 survey at 64.5 percent ( $p=0.984$ ).
- The *Percentage of beneficiaries who reported a high rating of health plan* (8, 9, or 10) increased by 5.8 percentage points in the 2016/2017 survey compared to the 2021 survey ( $p=0.024$ ).

**Table 8-18—Research Question 4.1**

**Do adult beneficiaries with an SMI enrolled in a RBHA have the same or higher satisfaction in their health care compared to prior to the demonstration renewal?**

		2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
4-1	Percentage of beneficiaries who reported a high rating of overall health care	64.5%	64.5%	-0.1pp (0.984)	-6.2pp to 5.6pp	-2.4pp	Insufficient Data
4-2	Percentage of beneficiaries who reported a high rating of health plan	66.7%	72.4%	5.8pp (0.024)	0.8pp to 10.2pp	-2.4pp	Better

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 4-1 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 4-2 Conclusion:** Supports the hypothesis

**Research Question 4.2: Do adult beneficiaries with an SMI enrolled in a RBHA perceive their doctors to have the same or better care coordination compared to prior to the demonstration renewal?**

Table 8-19 displays the *Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers* in both the 2016–2017 survey and the 2021 survey.

**Key Findings**

- The *Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers* increased by 3.2 percentage points between the 2016/2017 survey and 2021 survey ( $p=0.354$ ).



**Table 8-19—Research Question 4.2**

Do adult beneficiaries with an SMI enrolled in a RBHA perceive their doctors to have the same or better care coordination compared to prior to the demonstration renewal?						
	2016-2017 Survey	2021 Survey	Pre/Post Change in Rate	95% CI	NI Threshold	Non-Inferiority <sup>1</sup>
4-3 Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers	73.6%	76.7%	3.2pp (0.354)	-3.9pp to 8.9pp	-2.2pp	Insufficient Data

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point  
<sup>1</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 4-3 Conclusion:** Neither supports nor fails to support the hypothesis.

**Hypothesis 5—RBHAs encourage and/or facilitate care coordination among primary care practitioners (PCPs) and BH practitioners.**

Hypothesis 5 was designed to identify the activities health plans conducted to further AHCCCS’ goal of care integration by implementing strategies supporting care coordination and management.

Measures in Hypothesis 5 were evaluated through provider focus groups and key informant interviews with health plan subject matter experts, AHCCCS State administrators, and other pertinent stakeholders. These methods allow for an in-depth analysis detailing activity focused on care integration and potential successes or barriers surrounding these activities.

Qualitative analysis was performed using transcripts from key informant interviews with State administrators, RHBA health plan staff, and providers. Research Questions 5.1 through 5.4 contain key findings on specific topics about the care coordination strategies used by the RBHAs for their beneficiaries with an SMI, whether those strategies changed since the RBHAs became focused solely on beneficiaries with an SMI, and the care coordination strategies that AHCCCS used to benefit beneficiaries with an SMI. A full results summary can be found in Appendix C.

**Research Question 5.1: What care coordination strategies are the RBHAs conducting for their SMI population?**

RBHA staff indicated in key informant interviews that their organizations adopted beneficiary-focused strategies geared toward maintaining beneficiary choice and providing seamlessly integrated care. Key findings from interviews included:

- RBHAs partnered with community organizations to coordinate care for beneficiaries. Internally, RBHAs developed methods to promote care coordination, including integrating health home models, planning discharges to prevent readmissions, allowing all levels of care to provide referrals for BH services, employing specialized teams to target specific populations and issues, offering peer support to beneficiaries, and providing education to bridge knowledge gaps between PH and BH providers.
- Care coordination strategies focused on BH services were effective, with observed improvements in all measures regarding the management of BH conditions (Measure 2-5 through Measure 2-8).

**Research Question 5.2: Have care coordination strategies for the SMI population changed as a result of ACC?**

RBHAs shared that care coordination strategies were better focused on the complexities and nuances of the population living with an SMI as a result of ACC. Specific changes included:

- RBHAs increased their capacity to focus resources on complex care for beneficiaries living with a SMI once the general BH/substance use population transitioned from the RBHAs to the ACC health plans, the DD population transitioned to the ALTCS program, and CHP integrated PH and BH care.

***Research Question 5.3: What care coordination strategies is AHCCCS conducting for its SMI population?***

AHCCCS leveraged internal and external teams to engage beneficiaries with an SMI in their healthcare and enhance care coordination. Key findings shared during key informant interviews included:

- AHCCCS State administrators highlighted the importance of family and peer engagement in the care coordination of beneficiaries with a SMI through leveraging its Office of Individual and Family Affairs (OIFA) and requiring RBHAs to have their own OIFA.
- AHCCCS State administrators employed ACT teams to serve as a single-point case management lead for beneficiaries with a SMI to reduce the complexity of the healthcare system. Furthermore, AHCCCS reduced system bifurcation by maintaining a single RBHA contract in each geographic service area (GSA).

***Research Question 5.4: What care coordination strategies and/or activities are providers conducting for their SMI patients served by the RBHAs?***

Providers employed an array of care coordination strategies and activities for beneficiaries with an SMI. Commonly discussed strategies included:

- RBHAs and providers contracted with transportation service providers to assist patients, connected beneficiaries to a crisis line, hired discharge planners, and offered training options on employment and independent living.

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**Hypothesis 6—RBHAs will provide cost-effective care for beneficiaries with an SMI.**

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***Research Question 6.1: What are the costs associated with providing care for beneficiaries with an SMI through the RBHAs?***

Figure 8-1 displays the per member per month (PMPM) claim/encounter costs and total expenditures from the baseline in 2015 through 2022 for actual incurred cost and the expected (counterfactual) costs. The displayed comparisons of the actual and counterfactual costs exhibit an overall cost increase from 2015 through 2022. However, actual costs grew at a much lower rate than the expected cost growth. The slight reduction of the actual costs in 2020 and subsequent increase in 2021 was the result of the limited available benefits during the PHE offset by the leap in benefit utilization post-lockdown. The expected cost line does not include the impact of the PHE. Given the reduction of available services as a result of the PHE in the majority of fiscal year (FY) 2020, the expected impact would be a reduction of PMPM costs. Given that the RBHA program focuses on a population in treatment for an SMI, the impact of the PHE was expected to be negligible from a cost per utilization perspective.

**Figure 8-1—PMPM Claim/Encounter Costs and Total Expenditures**

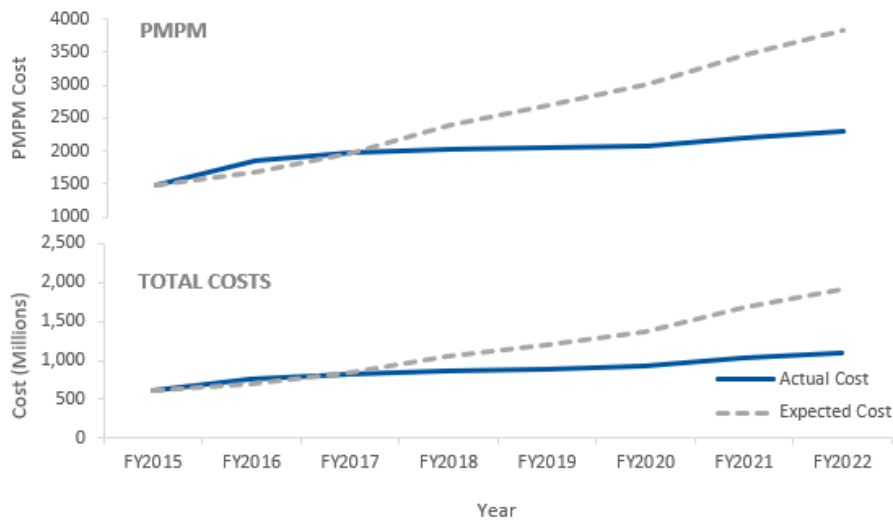


Figure 8-2 shows several trend calculations for the entire population covered under the RBHA program, based on changes from 2015 (not shown in the figure). The average annualized trend decreased throughout the life of the RBHA program, from the baseline of 21.6 percent to 5.9 percent. The impact of the COVID-19 PHE can be seen in the drop in the PMPM trend from FY 2019 to FY 2020. The rebound of the year-over-year trend was smaller from FY 2020 through FY 2022 than the change year to year from FY 2015 to FY 2019; consequently, the rebound did not have a substantial impact on the average trend from FY 2020 through FY 2022. Overall, RBHA has seen a reduction in trend throughout the Demonstration.

**Figure 8-2—Cost Per Beneficiary Trends**



Changes to the demographics of the population can impact the per beneficiary trends. The largest impact to the RBHA population demographics from both a utilizing beneficiary and total population perspective was driven by an increase in the risk profile. The average annualized CDPS (version 6.5) condition-based risk scores increased throughout the life of the ACC program at a rate of 2.7 percent for the population. The beneficiary distribution by age, race, and geographic region did not change substantially from 2015 to 2022.

Based on data from the Federal Reserve Economic Data Medical Services Expenditures by Disease: Mental Illness Price Index, prices for mental illness care were 68.19 percent higher in 2022 compared to 2015 (a \$68.19 difference in value per \$100 of spending), indicating a mental illness care average inflation rate of 7.4 percent per year. The mental illness care inflation rate was significantly higher than the overall medical care annual inflation rate of 1.9 percent during this same period. The medical CPI was used to account for changes to cost due to inflationary factors. CPI does not account for Arizona Medicaid-specific policy changes that had a fiscal impact. HSAG is unaware of any policy changes between 2016 and 2022 that had a fiscal impact that would have changed the analysis.

The COVID-19 PHE had diverse impacts on healthcare service utilization. HSAG reviewed category-of-service specific pre- and post-COVID-19 PHE trend changes in utilization per 1,000 beneficiaries to assess the impact on beneficiary utilization patterns. The impact of the COVID-19 PHE on the availability of medical services driven by restrictions and lockdowns led to an industry expectation of reduced utilization throughout 2020 leading to negative utilization trends when compared to 2019 utilization per 1,000 covered beneficiaries. As state and federal restrictions and lockdowns were reduced or lifted, the industry expected there would be a positive rebound in service utilization post COVID-19 PHE in 2021 and 2022.

Beneficiaries in the RBHA cohort tended to utilize professional services at a higher rate than other categories of service. Shifts in utilization per 1,000 beneficiaries trends for professional services drove an overall annual trend reduction. RBHA exhibited an overall trend reduction in utilization per 1,000 trends since the PHE, with year-over-year decreases in trends seen in 2020, 2021, and 2022 of -1.1 percent, -1.6 percent, and -2.5 percent, respectively. Outpatient and ED services exhibited the largest utilization trend decreases when compared to the magnitude of trend changes in the other categories of service reviewed. Outpatient services saw a 12.2 percent utilization per 1,000 beneficiaries trend decrease in 2020 followed by an 11.4 percent trend rebound in 2021 however the trend decreased by 2.9 percent in 2022. ED services observed decreased trends for all of 2020, 2021, and 2022. The RBHA utilization trends did not follow the overall industry expectations of utilization with all categories of service exhibiting decreased utilization per 1,000 trends in 2022.

Figure 8-3 shows several trend calculations related to the utilization impact on the capitation arrangements between AHCCCS and its contracted health plans. Trend impacts were based on changes from 2015 (not shown in the figure). The average annualized utilization trend initially increased from a -2.8 percent in FY 2017 to 1.1 percent in FY 2019 but has seen a decrease since the PHE down to a negative 1.1 percent by FY 2022. The impact of the COVID-19 PHE can be seen in the steep drop in the utilization trend from FY 2019 to FY 2020. The changes in the utilization for subsequent years has continued to decrease but at a slower rate. The expected utilization trend was calculated based on the utilization trend utilized and certified by AHCCCS' actuaries in the development of the implemented capitation rates with changes in beneficiary demographics and population health condition-based risk score (See the Financial Analysis Trend and Cost Development Methodology section for additional details on adjustment factor development.) Throughout the life of the RBHA program, the expected average utilization trend adjusted for demographic changes has been significantly higher than the actual realized utilization trends.

**Figure 8-3—Utilization Trends**

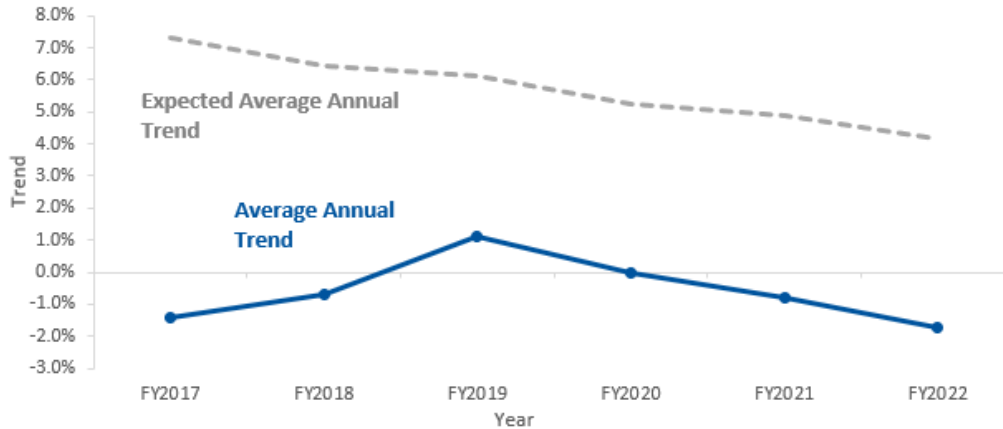


Figure 8-4 shows several trend calculations related to the unit cost impact on the capitation arrangements between AHCCCS and its contracted health plans. Trend impacts are based on changes from 2015 (not shown in the figure). The average annualized capitation unit cost trend throughout the life of the RBHA program, has seen moderate growth up to an average 2.0 percent by AHCCCS’ pricing actuaries. The expected unit cost trend, based on the mental illness price index from the Federal Reserve Economic Data, was utilized to account for changes to cost due to inflationary factors. The price index does not account for Arizona Medicaid-specific policy changes that had a fiscal impact. The price index saw a significant growth in FY 2018 but has leveled out to be more consistent annually since the initial spike. Throughout the life of the RBHA program, the expected average unit cost trend has been significantly higher than the priced unit cost trend.

**Figure 8-4—Unit Cost Trends**



**Research Question 6.2: What are the benefits/savings associated with providing care for beneficiaries with an SMI through the RBHAs?**

Table 8-20 shows the impacts of each of the known changes in the cost and demographic variables for paid claims from 2015 to 2022. The annual impact of each known driver was applied to the PMPM claims cost from the baseline of 2015 to calculate the counterfactual claims PMPM. Both the average annual trend and the expected average annual trend decreased from the baseline period in 2015 to 2022, and the average annual trend was below the expected average annual trend for the same period. The calculated counterfactual claims trend incorporating

all known external impacts was 14.7 percent; comparing this to the annualized paid claims trend of 5.9 percent achieved by the Demonstration shows that the RBHA program achieved an estimated savings in claims cost of 5.9 percent.

**Table 8-20—Counterfactual Paid Claims Trend Development**

Cost Impact Components	FY2015 Factors [A]	FY2022 Factors [B]	Cumulative Factor Change <sup>1</sup> [C]=[B]/[A]	Years [D]	Average Annualized Factor Trend <sup>2</sup> [E]=[C]^(1/[D])-1
Aging	1.2317	1.2812	1.0402	7	0.6%
Race	1.0186	1.0146	0.9961	7	-0.1%
Area	0.9973	1.0015	1.0043	7	0.1%
Risk	2.1120	2.5372	1.2013	7	2.7%
CPI	1.0000	1.6478	1.6478	7	7.4%
Service Category Distribution	1.0000	1.2653	1.2653	7	3.4%
<b>Counterfactual Paid Claims<sup>3</sup></b>	<b>2.6425</b>	<b>6.8875</b>	<b>2.6065</b>	<b>7</b>	<b>14.7%</b>
<b>Average Annualized Trend</b>					<b>FY2015 to FY2022</b>
[E]	Counterfactual Annualized Paid Claims Trend				14.7%
[F]	Annualized Paid Claims Trend <sup>4</sup>				5.9%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Counterfactual Annualized Paid Claims Trend</b>				<b>8.3%</b>

Note: Factors represent the impact on claims cost for various groups within the RBHA population. For example, the aging factor represents the impact on claims cost by dividing the RBHA population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire RBHA population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicate cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 526,394.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual counterfactual paid claims trend.

<sup>3</sup>The Counterfactual Paid Claims Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>4</sup>Annualized Paid Claims Trend represents the average annual change in the actual cost of care of the population throughout the evaluation period.

Table 8-21 shows the impacts of each of the known changes in the cost and demographic variables on capitated cost arrangements from 2015 to 2022. The annual impact of each known driver was applied to the capitated base benefit PMPM trend from the baseline of 2015 to calculate the counterfactual capitated base benefit PMPM trend. The calculated counterfactual capitated base benefit PMPM trend incorporating all known external impacts was 7.0 percent; comparing this to the annualized paid capitation trend of 2.8 percent achieved by the Demonstration shows that the RBHA program achieved an estimated savings in capitation base benefit trend of 4.1 percent.



**Table 8-21—Capitation Rates Trend Development**

Cost Impact Factors	FY2015 Factors	FY2022 Factors	Cumulative Factor Change <sup>1</sup>	Years	Average Annualized Factor Trend <sup>2</sup>
	[A]	[B]	[C]=[B]/[A]	[D]	[E]=[C]^(1/[D])-1
Aging	1.2317	1.2812	1.0402	7	0.6%
Race	1.0186	1.0146	0.9961	7	-0.1%
Area	0.9973	1.0015	1.0043	7	0.1%
Risk	2.1120	2.5372	1.2013	7	2.7%
PMPM Rating <sup>3</sup>	1.0000	1.2859	1.2859	7	3.7%
<b>Capitation Rates<sup>4</sup></b>	<b>2.6425</b>	<b>4.2477</b>	<b>1.6075</b>	<b>7</b>	<b>7.0%</b>
<b>Average Annualized Trend</b>					<b>FY2015 to FY2022</b>
[E]	Annualized Capitation Rates Trend				7.0%
[F]	Annualized Capitation Base Benefit Trend <sup>5</sup>				2.8%
<b>[G]=(1+[E])/(1+[F])-1</b>	<b>Savings Below Annualized Capitation Rates Trend</b>				<b>4.1%</b>

Note: Factors represent the impact on claims cost for various groups within the RBHA population. For example, the aging factor represents the impact on claims cost by dividing the RBHA population into infants, children and adults and comparing the cost for each grouping to the total claims cost. The resulting ratios are summarized into a single factor representing the entire RBHA population. More details of the calculations for each factor can be found in the Methodology section. The change in claims cost factors over the evaluation period are represented by the cumulative factor change. Cumulative factor changes greater than one indicates cost increases attributed to the cost impact component and cumulative factor changes less than one indicates cost decreases attributed to the cost impact component throughout the evaluation period. Average annual member months for the evaluation period used was 526,394.

<sup>1</sup>As described in the methodology, cost factors were developed for each demographic stratification and risk. The change in those cost factors over the evaluation period is represented by the cumulative factor change. Trends are developed as the average of the cumulative factor change across the evaluation period.

<sup>2</sup>The average annualized trends presented in the table above represent the average change throughout the evaluation period and cannot be summed to generate the average annual capitation rates trend.

<sup>3</sup>PMPM Rating Factor comes from the Actuarial Rate Development files found on <https://www.azahcccs.gov/PlansProviders/RatesAndBilling/ManagedCare/capitationrates.html> for the relevant program being evaluated.

<sup>4</sup>The Capitation Rates Factor for FY 2018 and FY2022 is the product of each factor listed in the respective year.

<sup>5</sup>Capitation Base Benefit trend comes from the Actuarial Rate Development files found on <https://www.azahcccs.gov/PlansProviders/RatesAndBilling/ManagedCare/capitationrates.html> for the relevant program being evaluated.

## 9. PQC Results

The following section details measure results by research question and related hypotheses for the Prior Quarter Coverage (PQC) waiver. This Summative Evaluation Report provides results from the baseline period and demonstration period. For details on the measure definitions and specifications, reference the approved Evaluation Design.<sup>9-1</sup> Full measure results with denominator data are presented in Appendix A.

The results presented in this section are reported separately for each baseline year and evaluation year for measures that use administrative eligibility, enrollment, and encounter data. Qualitative data from key informant interviews are presented as well. Beneficiary surveys were administered to further assess the PQC waiver on beneficiary satisfaction, experience of care, and medical debt following the implementation of the PQC waiver. Results presented in this section are organized by hypothesis and by research question within each hypothesis. Most hypotheses include multiple research questions, and most research questions use multiple measures.

Because the PQC waiver was designed in part to encourage beneficiaries to enroll when healthy, rates of enrollment and continuity of enrollment are among the primary outcomes that were examined. However, policy responses to the coronavirus disease 2019 (COVID-19) public health emergency (PHE) included a continuous eligibility provision that allowed most beneficiaries who would normally be disenrolled to remain on Medicaid during the PHE.<sup>9-2</sup> As a result, the PHE likely introduced significant confounding with measured outcomes. The PQC waiver became effective on July 1, 2019, which was approximately eight months prior to the PHE in March 2020. For measures in which monthly data points could be reliably calculated, statistical controls were applied to effectively isolate this eight-month period after PQC implementation and prior to the PHE in order to identify an uncontaminated effect of the policy change. However, not all measures could be calculated monthly, and as such, could not provide results attributable solely to the Demonstration.

### Results Summary

In total, 23 measures were calculated between state fiscal year (SFY) 2018 and 2022, 12 of which utilized data before and after PQC implementation and had a desired direction, allowing for an assessment of changes in rates and level of support for their respective hypothesis.<sup>9-3</sup>

Table 9-1 presents the number of measures that support the research question, do not support the research question, or were inconclusive.<sup>9-4</sup> Non-inferiority testing<sup>9-5</sup> shows that the rate of Medicaid enrollment after PQC among likely eligible beneficiaries did not change by a meaningful degree, which is supportive of the hypothesis that enrollment rates were the same or improved. Similarly, results for Measure 5-3 show the rates of visit to a specialist decreased but not by a meaningful degree. Measure 1-5 shows that the average rate of beneficiaries completing the renewal process decreased immediately following PQC, but the change was not found to be statistically significant and the COVID-19 PHE likely confounded analysis after March 2020.

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<sup>9-1</sup> Arizona Health Care Cost Containment System. Arizona's Section 1115 Waiver Independent Evaluation–Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>9-2</sup> In accordance with the continuous enrollment requirement enacted under the Families First Coronavirus Response Act, which allowed most beneficiaries who would otherwise have been disenrolled to remain on Medicaid during the PHE. AHCCCS returned to the regular renewal process on April 1, 2023.

<sup>9-3</sup> Additional indicators were calculated for certain measures and are reported in full in the PQC Results section and in Appendix A.

<sup>9-4</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.

<sup>9-5</sup> Non-inferiority testing appears as “NI” in tables and figures throughout this section.

Beneficiary surveys were administered to assess measures that cannot be captured through administrative data sources; however, the PQC waiver was implemented prior to survey administration, which prohibits pre/post-comparisons among the population eligible for the PQC waiver. Comparisons to other AHCCCS-specific rates or national data are made where possible to provide context for rates observed in Arizona among the PQC population. However, due to differences in population composition and/or timing of the comparison data sources, statistical analyses were not performed. The PQC population was defined as adult survey respondents meeting the PQC eligibility criteria across seven AHCCCS Complete Care (ACC) and three Regional Behavioral Health Authority (RBHA) plans. Responses were reweighted in summary statistics by overall plan enrollment to account for disproportionate oversampling of the RBHA plans relative to the overall Medicaid population.

**Table 9-1—PQC Results Summary**

Research Questions	Number of Measures			
	Supports	Inconclusive	Does Not Support	N/A <sup>1</sup>
<b>1.1:</b> Do eligible people without PQC enroll in Medicaid at the same rates as other eligible people with PQC?	2	0	0	2
<b>1.2:</b> What is the likelihood of enrollment continuity for those without PQC compared to other Medicaid beneficiaries with PQC?	0	2	0	0
<b>1.3:</b> Do beneficiaries without PQC who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries with PQC?	0	4	0	0
<b>5.2:</b> Do beneficiaries without PQC have the same or higher rates of service and facility utilization compared to baseline rates and out-of-state comparisons with PQC?	1	0	0	0
<b>7.3:</b> Do costs to non-AHCCCS entities stay the same or decrease after the implementation of the waiver compared to before?	0	1	0	0

<sup>1</sup>Determination of support is not applicable or is dependent on context

**Hypothesis 1—Eliminating PQC will increase the likelihood and continuity of enrollment.**

**Research Question 1.1: Do eligible people without PQC enroll in Medicaid at the same rates as other eligible people with PQC?**

Table 9-2 shows a decrease in the percentage of total eligible Medicaid recipients enrolled in the first two years of the demonstration period before increasing to a five-year high in the final year. Table 9-2 also shows that the percentage of new Medicaid beneficiaries increased during the baseline period and first year of the demonstration period before decreasing the rest of the demonstration period. The estimated eligible Medicaid recipients by eligibility group originate from the American Community Survey (ACS) data from Integrated Public Use Microdata Series (IPUMS).

**Key Findings:**






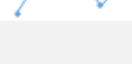






- The *Percentage of estimated eligible Medicaid recipients enrolled* decreased by 0.8 percentage points between the baseline period and demonstration period, while the *Percentage of estimated eligible Medicaid recipients newly enrolled* decreased by 0.6 percentage points. Although traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold. The Parent eligibility group had the

highest rate of enrollment and the highest rate of new beneficiaries across all three years, experienced the largest decrease in enrollment (3.8 percentage points), and the only increase in new beneficiaries (0.8 percentage points) between baseline and evaluation years. Non-inferiority testing shows that the rates were inferior in the demonstration period for enrollment, and superior in the demonstration period for new beneficiaries using the non-inferiority threshold.

- The Disabled (Freedom to Work [FTW]) and Supplemental Security Income (SSI) Aged groups had the lowest enrollment rates across all the entire demonstration period while Disabled (FTW) and Senior Disabled (DIS) had the lowest rates of new beneficiaries.
- Adult, SSI Aged, and Senior (DIS) eligibility groups experienced increases in enrollment rates (0.4, 1.0, and 2.9 percentage points, respectively) and decreases in newly enrolled rates (-0.3, -2.2, and -0.2 percentage points, respectively) between the baseline period and demonstration period.

**Table 9-2—Research Question 1.1**

**Do eligible people without PQC enroll in Medicaid at the same rates as other eligible people with PQC?**

	Baseline Period		Evaluation Period			
	SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022	
<b>1-1</b> Percentage of estimated eligible Medicaid recipients enrolled, by eligibility group <sup>1</sup>						
Eligible - Total	38.9%	39.1%	38.3%	36.5%	39.8%	
Eligible - Adult	36.3%	36.3%	36.9%	34.3%	39.3%	
Eligible - Disabled (FTW)	25.5%	30.2%	25.2%	26.8%	25.7%	
Eligible - Parent	57.6%	55.1%	51.0%	52.1%	54.7%	
Eligible - Senior (DIS)	43.2%	43.9%	47.7%	48.8%	43.0%	
Eligible - SSI Aged	25.1%	28.9%	29.3%	25.8%	28.7%	
<b>1-2</b> Percentage of estimated eligible Medicaid recipients newly enrolled, by eligibility group <sup>2</sup>						
Eligible - Total	11.1%	11.3%	12.1%	10.6%	9.1%	
Eligible - Adult	11.3%	11.7%	12.6%	11.2%	9.7%	
Eligible - Disabled (FTW)	0.4%	0.4%	0.4%	0.3%	0.2%	
Eligible - Parent	17.0%	17.0%	20.7%	17.9%	14.7%	
Eligible - Senior (DIS)	0.9%	0.8%	0.7%	0.6%	0.7%	
Eligible - SSI Aged	12.1%	12.6%	10.7%	10.1%	9.9%	

Do eligible people without PQC enroll in Medicaid at the same rates as other eligible people with PQC?

	Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>3</sup>	95% CI	NI Threshold	Non-Inferiority <sup>4</sup>
<b>1-1</b> Percentage of estimated eligible Medicaid recipients enrolled, by eligibility group <sup>1</sup>						
Eligible - Total	39.0%	38.2%	-0.8pp (<0.001)	-0.9pp to -0.7pp	-2.4pp	Not Meaningfully Worse
Eligible - Adult	36.3%	36.8%	0.4pp (<0.001)	0.4pp to 0.5pp	-2.4pp	Better
Eligible - Disabled (FTW)	27.9%	25.9%	-2.0pp (<0.001)	-2.3pp to -1.8pp	-2.2pp	Insufficient Data
Eligible - Parent	56.3%	52.6%	-3.8pp (<0.001)	-4.0pp to -3.6pp	-2.5pp	Worse
Eligible - Senior (DIS)	43.5%	46.5%	2.9pp (<0.001)	2.6pp to 3.3pp	-2.5pp	Better
Eligible - SSI Aged	27.0%	27.9%	1.0pp (<0.001)	0.7pp to 1.2pp	-2.2pp	Better
<b>1-2</b> Percentage of estimated eligible Medicaid recipients newly enrolled, by eligibility group <sup>2</sup>						
Eligible - Total	11.2%	10.6%	-0.6pp (<0.001)	-0.6pp to -0.5pp	-1.5pp	Not Meaningfully Worse
Eligible - Adult	11.5%	11.2%	-0.3pp (<0.001)	-0.4pp to -0.3pp	-1.6pp	Not Meaningfully Worse
Eligible - Disabled (FTW)	0.4%	0.3%	-0.1pp (<0.001)	-0.2pp to -0.1pp	-0.3pp	Not Meaningfully Worse
Eligible - Parent	17.0%	17.8%	0.8pp (<0.001)	0.7pp to 1.0pp	-1.8pp	Better
Eligible - Senior (DIS)	0.9%	0.7%	-0.2pp (<0.001)	-0.2pp to -0.1pp	-0.4pp	Not Meaningfully Worse
Eligible - SSI Aged	12.4%	10.2%	-2.2pp (<0.001)	-2.3pp to -2.0pp	-1.6pp	Worse

Note: Indicators in bold denote inclusion for evaluation in summary table.

<sup>1</sup>Rates are based on calendar years due to IPUMS annual reporting periods.

<sup>2</sup>Newly enrolled beneficiaries are those who did not have Medicaid enrollment in the six months prior to joining.

<sup>3</sup>Change in Rate compares the rate in the evaluation period to the average rate in the baseline period using a pre/post model.

<sup>4</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

Because the percentage of estimated eligible Medicaid recipients—both new to Medicaid and those returning within six months—did not decrease by a meaningful degree (i.e., non-inferiority testing found the decline to be non-inferior) following the implementation of the waiver, these results support the hypothesis.

**Measure 1-1 Conclusion:** Supports the hypothesis

**Measure 1-2 Conclusion:** Supports the hypothesis

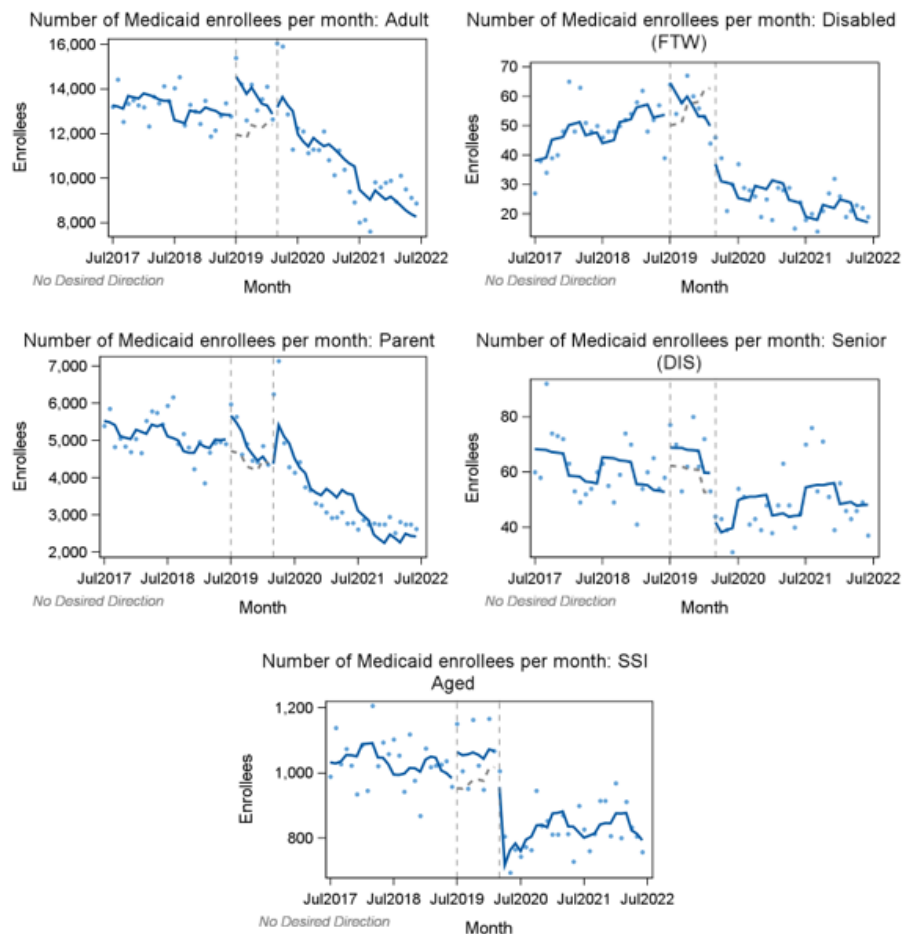
Health Services Advisory Group, Inc. (HSAG), conducted an interrupted time series (ITS) analysis, controlling for the COVID-19 PHE affected time periods, seasonality, and Arizona unemployment rates. Data for the Arizona unemployment rates are from the Arizona Commerce Authority using the Local Area Unemployment Survey (LAUS). Measure 1-3: *Number of Medicaid enrollees per month by eligibility group and/or per-capita of state*, and Measure 1-4: *Number of new Medicaid beneficiaries per month by eligibility group, as identified by those without a recent spell of Medicaid coverage* are presented below in Figure 9-1 and Figure 9-2. The blue line represents the model-based average rates for each month. The dashed grey line represents the counterfactual

projection of the baseline period trend in the post-policy change period before the COVID-19 PHE affected months. There is no desired direction for these measures, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.

**Key Findings:**

- Upon implementation of the PQC waiver, there was a statistically significant increase in the average number of Adult and Disabled (FTW) Medicaid beneficiaries of approximately 2,597 and 14, respectively. New Adult Medicaid beneficiaries increased significantly by approximately 1,074.
- The rate of Medicaid beneficiaries and new Medicaid beneficiaries in the Adult, Disabled (FTW), Parent, and SSI Aged eligibility groups decreased when compared to the projected rates had the baseline trend continued.
- The rate of Medicaid beneficiaries and new Medicaid beneficiaries in the Senior (DIS) group remained nearly unchanged when compared to the projected rates had the baseline trend continued.
- There was a statistically significant level change at the beginning of the COVID-19 PHE for the new Medicaid beneficiaries in the Adult eligibility group, increasing by approximately 1,162 new beneficiaries.

**Figure 9-1—Number of Medicaid Beneficiaries Per Month by Eligibility Group and/or Per-Capita of State**



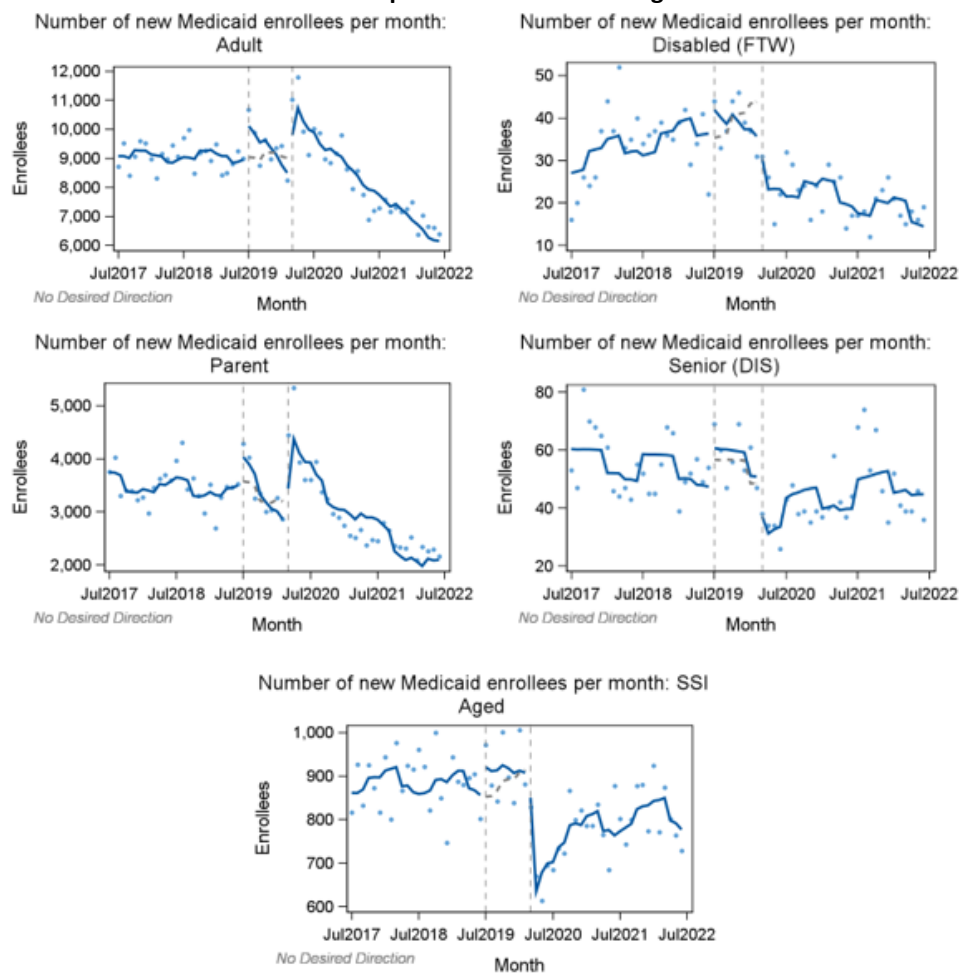


Variable	Adult	Disabled (FTW)	Parent	Senior (DIS)	SSI Aged
Intercept	13,440.3 *** ( <i>&lt;0.001</i> )	43.9 *** ( <i>&lt;0.001</i> )	4,727.4 *** ( <i>&lt;0.001</i> )	69.4 *** ( <i>&lt;0.001</i> )	1,178.8 *** ( <i>&lt;0.001</i> )
Baseline monthly trend	-54.4 * ( <i>0.094</i> )	0.5 ** ( <i>0.020</i> )	-33.6 * ( <i>0.072</i> )	-0.3 ( <i>0.427</i> )	-3.3 ( <i>0.147</i> )
Level change at implementation	2,596.8 ** ( <i>0.005</i> )	14.4 ** ( <i>0.015</i> )	951.0 * ( <i>0.065</i> )	6.6 ( <i>0.452</i> )	111.7 * ( <i>0.080</i> )
Change in monthly trend	-302.3 * ( <i>0.083</i> )	-3.9 ** ( <i>0.001</i> )	-141.0 ( <i>0.157</i> )	0.1 ( <i>0.968</i> )	-8.8 ( <i>0.472</i> )
Level change at beginning COVID-19 PHE	274.1 ( <i>0.798</i> )	-13.4 * ( <i>0.058</i> )	-45.8 ( <i>0.940</i> )	-17.3 ( <i>0.106</i> )	-86.0 ( <i>0.260</i> )
Change in monthly trend during COVID-PHE	-121.4 ** ( <i>0.029</i> )	-1.0 ** ( <i>0.004</i> )	-45.3 ( <i>0.150</i> )	0.5 ( <i>0.324</i> )	-2.1 ( <i>0.586</i> )

\*p<0.1, \*\*p<0.05, \*\*\*p<0.001

Note: Full model results are presented in Appendix A. p value is presented in parentheses.

**Figure 9-2—Number of New Medicaid Beneficiaries Per Month by Eligibility Group, as Identified by Those Without a Recent Spell of Medicaid Coverage**



Variable	Adult	Disabled (FTW)	Parent	Senior (DIS)	SSI Aged
Intercept	8,550.5 *** ( <i>&lt;0.001</i> )	32.5 *** ( <i>&lt;0.001</i> )	2,924.3 *** ( <i>&lt;0.001</i> )	63.2 *** ( <i>&lt;0.001</i> )	996.2 *** ( <i>&lt;0.001</i> )
Baseline monthly trend	-1.5 ( <i>0.928</i> )	0.3 * ( <i>0.080</i> )	-7.1 ( <i>0.514</i> )	-0.2 ( <i>0.619</i> )	-0.4 ( <i>0.846</i> )
Level change at implementation	1,074.1 ** ( <i>0.025</i> )	6.6 ( <i>0.222</i> )	458.3 ( <i>0.132</i> )	4.0 ( <i>0.643</i> )	67.9 ( <i>0.208</i> )
Change in monthly trend	-226.8 ** ( <i>0.016</i> )	-2.1 ** ( <i>0.048</i> )	-114.0 * ( <i>0.056</i> )	-0.2 ( <i>0.888</i> )	-10.6 ( <i>0.310</i> )
Level change at beginning COVID-19 PHE	1,162.3 ** ( <i>0.044</i> )	-5.5 ( <i>0.399</i> )	495.0 ( <i>0.177</i> )	-13.3 ( <i>0.205</i> )	-38.0 ( <i>0.557</i> )
Change in monthly trend during COVID-PHE	-120.6 *** ( <i>&lt;0.001</i> )	-0.8 ** ( <i>0.022</i> )	-44.7 ** ( <i>0.018</i> )	0.5 ( <i>0.350</i> )	-1.5 ( <i>0.649</i> )

\*p<0.1, \*\*p<0.05, \*\*\*p<0.001

Note: Full model results are presented in Appendix A. p value is presented in parentheses.

**Measure 1-3 Conclusion:** N/A

**Measure 1-4 Conclusion:** N/A

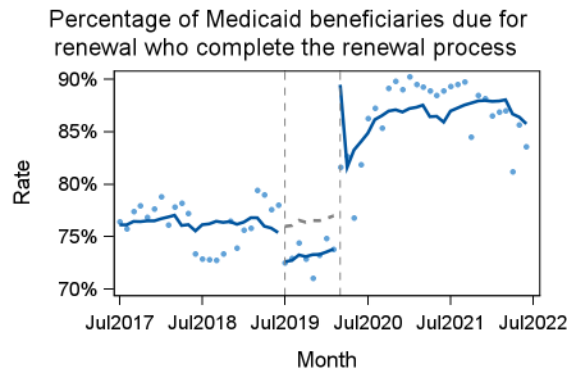
**Research Question 1.2: What is the likelihood of enrollment continuity for those without PQC compared to other Medicaid beneficiaries with PQC?**

An ITS analysis was conducted to evaluate Measure 1-5: *Percentage of Medicaid beneficiaries due for renewal who complete the renewal process*. Results are presented below in Figure 9-3. The blue line represents the model-based average rates for each month. The dashed grey line represents the counterfactual projection of the baseline period trend in the post-policy period before the COVID-19 PHE affected months.

**Key Findings:**

- Upon implementation of the PQC waiver, there was a decrease in the average rate of beneficiaries completing the renewal process of 3.4 percentage points, though this result was not statistically significant.
- The monthly trend in the percentage of Medicaid beneficiaries due for renewal who complete the renewal process remained nearly unchanged when compared to the projected rates had the baseline trend continued.
- At the start of the COVID-PHE, there was an increase of 16.4 percentage points of beneficiaries due for renewal who completed the renewal process, a statistically significant result ( $p<0.001$ ). This increase may have been due to the continuous enrollment requirement during the COVID-19 PHE and cannot be reliably attributed to the waiver.

**Figure 9-3—Percentage of Medicaid Beneficiaries Due for Renewal Who Complete the Renewal Process**



Variable	Estimate
Intercept	80.41pp *** ( <i>&lt;0.001</i> )
Baseline monthly trend	-0.01pp ( <i>0.942</i> )
Level change at implementation	-3.36pp ( <i>0.143</i> )
Change in monthly trend	0.03pp ( <i>0.949</i> )
Level change at beginning COVID-19 PHE	16.41pp *** ( <i>&lt;0.001</i> )
Change in monthly trend during COVID-PHE	-0.13pp ( <i>0.362</i> )

\*p<0.1, \*\*p<0.05, \*\*\*p<0.001

pp = percentage point.

Note: Full model results are presented in Appendix A. p value is presented in parentheses.

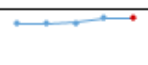
A pre/post-test was conducted to assess Measure 1-6. Table 9-3 shows the average number of months with Medicaid coverage gradually increased throughout the baseline and demonstration periods. Due to the continuous enrollment requirement during the COVID-19 PHE, which ran through most months of the demonstration period, the growth in Medicaid months is likely not solely attributable to the Demonstration.

**Key Findings:**

- The average during the baseline period was 9.82 months and increased to 10.67 months during the demonstration period. This increase of 0.85 months was statistically significant ( $p<0.001$ ).
- Because of the significant confounding effects the COVID-19 PHE had on Medicaid enrollment, the results of this measure neither support nor fail to support the hypothesis that eliminating PQC will increase the likelihood and continuity of enrollment.

**Table 9-3—Research Question 1.2**

What is the likelihood of enrollment continuity for those without PQC compared to other Medicaid beneficiaries with PQC?						
	Baseline Period		Evaluation Period			
	SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022	
1-6	Average number of months with Medicaid coverage	9.76	9.89	9.94	10.91	11.07



What is the likelihood of enrollment continuity for those without PQC compared to other Medicaid beneficiaries with PQC?				
	Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>1</sup>	
1-6	Average number of months with Medicaid coverage	9.82	10.67	0.85 (<0.001)

<sup>1</sup>Change in Rate compares the rate in the evaluation period to the average rate in the baseline period using a pre/post model.

**Measure 1-5 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-6 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 1.3: Do beneficiaries without PQC who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries with PQC?**

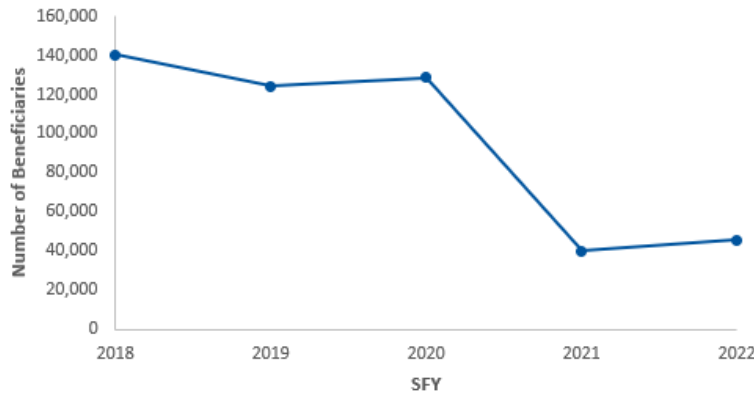
Measures 1-7 through 1-10 assess the percentage of Medicaid beneficiaries who re-enroll after a gap of up to six months and the average number of months, gaps, and days per gap in Medicaid coverage. It is worth noting the continuous enrollment requirement at the beginning of the COVID-19 PHE allowed most beneficiaries who would normally be disenrolled to remain on Medicaid during the PHE.<sup>9-6</sup> Although these measures limit the eligible population to those who already have a gap in enrollment of up to six months (which could alleviate the most substantive impacts of the continuous enrollment requirement), the COVID-19 PHE had additional impacts on beneficiary behavior and enrollment that cannot be controlled for. Figure 9-4 shows the number of beneficiaries who disenrolled from Medicaid during the first six months of each evaluation year. It is possible that beneficiaries who experienced a gap in enrollment during the continuous enrollment period were systematically different than beneficiaries who experienced a gap prior to the PHE. This would result in an unknown degree and direction of bias in these measures.

Table 9-4 shows the annual rates for Medicaid beneficiaries who re-enrolled after a gap of up to six months and the average number of gaps in Medicaid coverage for these beneficiaries both remained steady until SFY 2021, which was the first full year after the COVID-19 PHE. Table 9-4 also shows the average number of months without Medicaid coverage and the average number of days per gap in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months both remained steady until SFY 2021 where they reached a five-year low, before increasing again in SFY 2022.

<sup>9-6</sup> In accordance with the continuous enrollment requirement enacted under the Families First Coronavirus Response Act, which allowed most beneficiaries who would otherwise have been disenrolled to remain on Medicaid during the PHE. AHCCCS returned to the regular renewal process on April 1, 2023.

**Figure 9-4—Research Question 1.3**

Number of Beneficiaries Who Disenrolled From Medicaid During the First Six Months of Each Evaluation Year



**Key Findings:**

- The *Percentage of Medicaid beneficiaries who re-enroll after a gap of up to six months* increased from 24.5 percent during the baseline period to 27.8 percent in the demonstration period, a statistically significant increase of 3.3 percentage points ( $p < 0.001$ ).
- The *Average number of months without Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months* during the demonstration period decreased to 1.89 months, compared to 2.27 months for the baseline period, a statistically significant decrease of 0.39 months ( $p < 0.001$ ).
- The *Average number of gaps in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months* increased by 0.10 gaps between the baseline and demonstration periods ( $p < 0.001$ ).
- The *Average number of days per gap in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months* decreased by 13.30 days between the baseline and demonstration period ( $p < 0.001$ ).
- The effect of the COVID-PHE on enrollment may heavily impact these measures, as such conclusions regarding the PQC waiver’s impact cannot be reliably drawn for these measures.

**Table 9-4—Research Question 1.3**

Do beneficiaries without PQC who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries with PQC?

	Baseline Period		Evaluation Period			
	SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022	
<b>1-7</b> Percentage of Medicaid beneficiaries who re-enroll after a gap of up to six months	24.8%	24.1%	25.8%	34.9%	27.2%	
<b>1-8</b> Average number of months without Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	2.28	2.27	2.15	1.43	1.70	
<b>1-9</b> Average number of gaps in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	1.20	1.20	1.22	1.45	1.35	
<b>1-10</b> Average number of days per gap in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	57.06	56.54	52.85	29.63	37.71	

**Do beneficiaries without PQC who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries with PQC?**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>1</sup>
1-7	Percentage of Medicaid beneficiaries who re-enroll after a gap of up to six months	24.5%	27.8%	3.3pp (<0.001)
1-8	Average number of months without Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	2.27	1.89	-0.39 (<0.001)
1-9	Average number of gaps in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	1.20	1.30	0.10 (<0.001)
1-10	Average number of days per gap in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	56.82	43.51	-13.30 (<0.001)

Note: pp=percentage point

<sup>1</sup>Change in Rate compares the rate or number in the evaluation period to the average rate or number in the baseline period using a pre/post model.

- Measure 1-7 Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 1-8 Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 1-9 Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 1-10 Conclusion:** Neither supports nor fails to support the hypothesis

**Hypothesis 2—Eliminating PQC will increase enrollment of eligible people when they are healthy relative to those eligible people who have the option of PQC.**

**Research Question 2.1: Do newly enrolled beneficiaries without PQC have higher self-assessed health status than continuously enrolled beneficiaries?**

Table 9-5 illustrates the rates of beneficiaries’ overall health status, prior six-month emergency department (ED) and inpatient utilization and getting repeated help for the same condition. However, findings in this section cannot be used to draw causal conclusions due to absence of pre-PQC baseline rates, and differences in survey time frames and populations covered between PQC and national benchmarks.

**Key Findings:**

- The *Beneficiary response to rating of overall health among newly enrolled* and *Beneficiary response to rating of overall mental or emotional health among newly enrolled* reporting excellent or very good overall health was 31.2 percent and 47.5 percent, respectively, for mental or emotional health.
- Approximately one in four beneficiaries new to Medicaid reported using the ED in the six months prior to responding to the survey and about one in 10 reported an inpatient admission.
- Nearly one-third (31.8 percent) reported getting care three or more times for the same problem or condition.



**Table 9-5—Research Question 2.1**

Do newly enrolled beneficiaries without PQC have high self-assessed health status?		
	Responses	Rate
2-1	Beneficiary Response to Rating of Overall Health Among Newly Enrolled	367 31.2%
2-2	Beneficiary Response to Rating of Overall Mental or Emotional Health Among Newly Enrolled	367 47.5%
2-3	Percentage of Beneficiaries Who Reported Prior Six-Months Emergency Room (ER) Visit Among Newly Enrolled	369 26.1%
2-4	Percentage of Beneficiaries Who Reported Prior Six-Months Hospital Admission Among Newly Enrolled	367 11.5%
2-5	Percentage of Beneficiaries Who Reported Getting Healthcare Three or More Times for The Same Condition or Problem Among Newly Enrolled	369 31.8%

**Measure 2-1 Conclusion:** N/A  
**Measure 2-2 Conclusion:** N/A  
**Measure 2-3 Conclusion:** N/A  
**Measure 2-4 Conclusion:** N/A  
**Measure 2-5 Conclusion:** N/A

**Hypothesis 3—Health outcomes will be better for those without PQC compared to Medicaid beneficiaries with PQC.**

**Research Question 3.1: Do beneficiaries without PQC have better health outcomes compared to baseline rates and out-of-state comparisons with PQC?**

Table 9-6 shows the percentage of *Beneficiary reported rating of overall health for all beneficiaries* and *Beneficiary reported rating of overall mental or emotional health for all beneficiaries* of all PQC beneficiaries reporting excellent or very good overall health and mental or emotional health. Due to the absence of pre-PQC baseline rates and differences in survey time frames and populations covered between PQC and national benchmarks, findings in this section cannot be used to draw causal conclusions.

**Key Findings:**

- Among all PQC-eligible beneficiaries surveyed, 27.9 percent reported excellent or very good overall health, which is lower than the newly enrolled PQC group.
- Similarly, 39.8 percent reported a high rating of mental or emotional health, which is lower than the newly enrolled PQC group.

**Table 9-6—Research Question 3.1**

Do beneficiaries without PQC have a high rating of health status?			
		Weighted Number of Responses	Rate
			Newly Enrolled
3-1	Beneficiary reported rating of overall health for all beneficiaries	3,381	27.9%
3-2	Beneficiary reported rating of overall mental or emotional health for all beneficiaries	3,395	39.8%

Note: The PQC population surveyed includes all non-pregnant/postpartum adult Medicaid beneficiaries across ACC and RBHA.

**Measure 3-1 Conclusion:** N/A

**Measure 3-2 Conclusion:** N/A

**Hypothesis 4—Eliminating PQC will not have adverse financial impacts on consumers.**

**Research Question 4.1: Does the PQC waiver lead to changes in the incidence of beneficiary medical debt?**

Table 9-7 displays the *Percentage of beneficiaries who reported medical debt*. Causal conclusions cannot be drawn from this section due to absence of pre-PQC baseline rates and differences in survey time frames and populations covered between PQC and national benchmarks.

**Key Findings:**

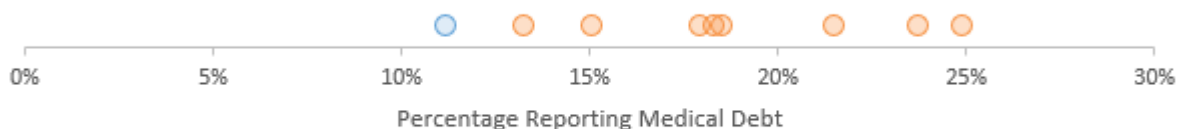
- The *Percentage of beneficiaries who reported medical debt* that they were paying off over time in 2021 was 11.1 percent.

**Table 9-7—Research Question 4.1**

What is the prevalence of medical debt among PQC beneficiaries?		
	Weighted Number of Responses	Rate
4-1 Percentage of Beneficiaries Who Reported Medical Debt	3,012	11.1%

To assess whether 11.1 percent represents a high or low prevalence, HSAG utilized data from the Behavioral Risk Factor Surveillance System (BRFSS) which asked a similar question in a 2018 survey to triangulate findings among other states’ Medicaid population. Figure 9-5 shows that the prevalence of medical debt among PQC beneficiaries in 2021 was lower than eight other states assessed in 2018 from BRFSS.<sup>9-7</sup>

**Figure 9-5—Prevalence of Medical Debt Among PQC Beneficiaries**  
Fewer **Arizona PQC beneficiaries** reported having medical debt in 2021 compared to Medicaid members in **other states** in 2018.



Note: Due to changes in Medicaid populations, beneficiary financial well-being, and state policies between 2018 and 2021, it is unknown if hypothetical BRFSS data for 2021 would be reflective of the 2018 results as shown, or if 2021 represents an improvement over 2018 rates for AHCCCS beneficiaries.

Sources: BRFSS 2018, AHCCCS beneficiary surveys (2021).

**Measure 4-1 Conclusion:** N/A

<sup>9-7</sup> Other states include (in order of lowest to highest rate) New Mexico, Oregon, Tennessee, Louisiana, Mississippi, Nebraska, New Hampshire, and Georgia.

**Hypothesis 5—Eliminating PQC will not adversely affect access to care.**

**Research Question 5.1: Do beneficiaries without PQC have the same or higher rates of office visits compared to baseline rates and out-of-state comparisons with PQC?**

Table 9-8 displays the percentage of beneficiaries who report having timely access to care. To fully address Research Question 5.1, data on similar Medicaid beneficiaries from other states that do not have a retroactive eligibility waiver and/or data collected among pre-PQC eligible beneficiaries would be necessary to draw causal comparisons. Although these data were unavailable for this report, comparisons to national benchmarks are included to provide additional context in which these rates may be interpreted. However, findings in this section cannot be used to draw causal conclusions due to absence of pre-PQC baseline rates, and differences in survey time frames and populations covered between PQC and national benchmarks.

**Key Findings:**

- Among all PQC beneficiaries surveyed, 83.5 percent reported getting needed care always or usually, and 80.3 percent reported always or usually getting an appointment for routine care as soon as needed. These rates fall between the 33rd and 50th national percentiles in 2020.

**Table 9-8—Research Question 5.1**

Do beneficiaries without PQC have high rates of office visits?			
		Weighted Number of Responses	2020 National Percentile
		Rate	
5-1	Beneficiary Response to Getting Needed Care Right Away	1,093	83.5%
5-2	Beneficiary Response to Getting an Appointment for a Check-Up or Routine Care at a Doctor’s Office or Clinic	1,951	80.3%

Note: A higher percentile indicates better performance on a scale from 0 to 100.

**Measure 5-1 Conclusion:** N/A

**Measure 5-2 Conclusion:** N/A

**Research Question 5.2: Do beneficiaries without PQC have the same or higher rates of service and facility utilization compared to baseline rates and out-of-state comparisons with PQC?**


Table 9-9 shows that the annual rates for Medicaid beneficiaries who had a visit to a specialist fluctuated during the demonstration period but decreased overall.

**Key Findings:**

- The average *Percentage of beneficiaries with a visit to a specialist* was 40.5 percent in the demonstration period, a 1.4 percentage point decrease from the average of 41.8 percent in the baseline period, a statistically significant difference ( $p < 0.001$ ). Although traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.

**Table 9-9—Research Question 5.2**

Do beneficiaries without PQC have the same or higher rates of service and facility utilization compared to baseline rates and out-of-state comparisons with PQC?						
		Baseline Period		Evaluation Period		
		SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022
5-3	Percentage of beneficiaries with a visit to a specialist	41.5%	42.2%	40.7%	41.4%	39.5%



Do beneficiaries without PQC have the same or higher rates of service and facility utilization compared to baseline rates and out-of-state comparisons with PQC?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>1</sup>	95% CI	NI Threshold	Non-Inferiority <sup>2</sup>

Note: pp=percentage point

<sup>1</sup>Change in Rate compares the rate in the evaluation period to the average rate in the baseline period using a pre/post model.

<sup>2</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 5-3 Conclusion:** Supports the hypothesis

**Hypothesis 6—Eliminating PQC will not result in reduced beneficiary satisfaction.**

**Research Question 6.1: Do beneficiaries without PQC have the same or higher satisfaction with their health care compared to baseline rates and out-of-state comparisons with PQC?**

Table 9-10 displays the *Beneficiary rating of overall health care*. To fully address Research Question 6.1, data on Medicaid beneficiaries from other states that do not have a retroactive eligibility waiver and/or data collected among pre-PQC eligible beneficiaries would be necessary to draw causal comparisons. Although these data were unavailable for this report, comparisons to national benchmarks are included to provide additional context in which these rates may be interpreted. However, findings in this section cannot be used to draw causal conclusions due to absence of pre-PQC baseline rates, and differences in survey time frames and populations covered between PQC and national benchmarks.

**Key Findings:**

- Nearly three quarters (73.8 percent) of PQC-eligible beneficiaries reported a high rating of health care (8, 9, or 10 out of 10). This rate falls between the 25th and 33rd percentiles among Medicaid beneficiaries nationally in 2020.

**Table 9-10—Research Question 6.1**

Do beneficiaries without PQC have high satisfaction with their health care?			
		Weighted Number of Responses	2020 National Percentile
		Rate	
6-1	Beneficiary Rating of Overall Health Care	2,008	25th - 33rd

Note: A higher percentile indicates better performance on a scale from 0 to 100.

**Measure 6-1 Conclusion:** N/A

**Hypothesis 7—Eliminating PQC will generate cost savings over the term of the waiver.**

*Research Question 7.1: What are the costs associated with eliminating PQC?*

*Research Question 7.2: What are the benefits/savings associated with eliminating PQC?*

HSAG collaborated with AHCCCS to conduct data validation checks on the historical PQC Waiver costs. HSAG attempted to validate the historical costs outlined in the Arizona Section 1115 Waiver Amendment Request: Proposal to Waive PQC filed on April 6, 2018, and approved by CMS on January 18, 2019. Table 9-11 highlights the amounts reported by state fiscal year from the waiver amendment.

**Table 9-11—Historical PQC Costs by Year**

State Fiscal Year	Historical Costs
2014	\$19,809
2015	\$15,743,139
2016	\$21,708,207
2017	\$21,347,704
2018*	\$11,136,736
<b>Total</b>	<b>\$69,955,595</b>

\*SFY 2018 includes PQC expenditures from July 1, 2017, to November 30, 2017.

AHCCCS provided HSAG with projected impacts from the budget neutrality appendix in the Demonstration amendment outlining the anticipated savings by fiscal year for the elimination of the PQC eligibility requirement. The projections are outlined in Table 9-12.

**Table 9-12—Projected PQC Costs by Year**

State Fiscal Year	Projected Savings
2018**	\$9,857,750
2019	\$39,431,100
2020	\$41,828,500
2021	\$44,388,610
<b>Total</b>	<b>\$135,505,960</b>

\*\*SFY 2018 includes PQC expenditures from December 1, 2017, to June 30, 2018.

Based on the administrative data provided, HSAG was unable to validate the historical data used to develop the projected savings. HSAG was unable to locate an assessment of the savings in any filed budget neutrality reports for state fiscal years 2018 to 2022. Therefore, HSAG was not able to determine the actual costs or savings resulting from eliminating PQC.

*Research Question 7.3: Do costs to non-AHCCCS entities stay the same or decrease after implementation of the waiver compared to before?*

Measure 7-1 aims to determine if costs for uninsured or likely eligible Medicaid recipients maintained or decreased during the demonstration by using data collected through the Healthcare Cost Report Information System (HCRIS) to assess hospital spending.

Charity care refers to the total costs incurred by hospitals for services rendered to uninsured patients who apply for charity care and are determined to be unable to pay. The average charity care costs incurred by Arizona hospitals steadily increased from \$2.9 million to \$5.2 million between FFY 2017 and FFY 2021. The largest increase occurred between FFY 2020 and FFY 2021, which represents the time period that the PQC waiver was introduced, although this trend may have been exacerbated by the COVID-19 PHE. Nationally, the average cost reached its peak of \$5.7 million in FFY 2019 and remained below that figure for the remainder of the demonstration period. Although the average costs of charity care among Arizona hospitals was less than that of national hospitals, the cost increased through both the baseline and demonstration periods. As a result, there is insufficient evidence to conclude that the PQC waiver impacted uncompensated care costs. Details on deviations from the Evaluation Design for this Research Question can be found in the *Methodological Limitations* section.

Although indigent care costs were evaluated, results are not reported as data were only provided for one Arizona facility.

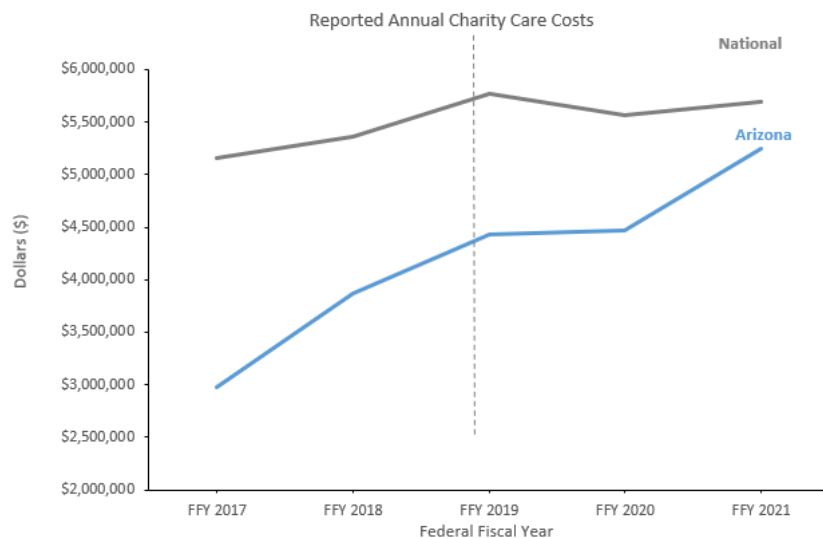
Table 9-13 and Figure 9-6 below shows the baseline and demonstration period cost averages for charity care among reporting Arizona and national hospitals.

**Table 9-13—Research Question 7.3**

Reported average costs for uninsured and/or likely eligible Medicaid recipients among potentially impacted providers and/or provider networks						
		Baseline Period			Evaluation Period	
		FFY 2017	FFY 2018	FFY 2019	FFY 2020	FFY 2021
7-1	Arizona	\$2,974,973	\$3,872,829	\$4,429,870	\$4,472,702	\$5,246,143
	N	57	54	54	53	53
	National	\$5,152,046	\$5,365,055	\$5,769,671	\$5,563,705	\$5,696,796
	N	4,127	4,071	4,042	3,952	3,933

Totals shown are adjusted for inflation in 2021 dollars.  
N = Number of hospitals

**Figure 9-6—Research Question 7.3**



**Measure 7-1 Conclusion:** Neither supports nor fails to support the hypothesis.



**Hypothesis 8—Education and outreach activities by AHCCCS will increase provider understanding about the elimination of PQC.**

Hypothesis 8 was designed to identify activities related to waiving PQC and barriers that followed.

Measures in Hypothesis 8 were evaluated through provider focus groups and key informant interviews with AHCCCS State administrators. These methods allow for an in-depth analysis detailing activity focused on waiving PQC and barriers surrounding this activity.

Qualitative analysis was performed using transcripts from key informant interviews with State administrators. Research Questions 8.1 and 8.2 contain key findings of specific topics about the education activities AHCCCS used prior to implementing the Demonstration, provider knowledge of the Demonstration, and any barriers to providing education encountered by AHCCCS prior to implementation. A full results summary can be found in Appendix C.

***Research Question 8.1: What activities did AHCCCS perform to educate beneficiaries and providers about changes to retroactive eligibility?***

State administrators performed several educational activities to prepare both providers and the public for the elimination of PQC. Primary strategies shared during key informant interviews included:

- State administrators disseminated information on retroactive eligibility changes to providers through a web-based provider portal, newsletters, community outreach events, and publicly posted documents.

***Research Question 8.2: Did AHCCCS encounter barriers related to informing providers about eliminating PQC?***

State administrators reported no barriers or challenges to providing education and outreach to the public or providers about the elimination of PQC during key informant interviews.

The following section details measure results by research question and related hypotheses for the Targeted Investments (TI) Demonstration program. The TI program is split into three groups: adults, pediatric, and beneficiaries transitioning from the criminal justice system. A difference-in-differences (DiD) approach was utilized to assess the effect of the demonstration during demonstration year four (federal fiscal year [FFY] 2020). For details on the measure definitions and specifications, reference the approved Evaluation Design.<sup>10-1</sup> Full measure results with denominator data are presented in Appendix A.

The evaluation of the TI program follows a mixed-methods approach consisting of measures assessing both provider-level experience and success with the overall goals of TI, and beneficiary-level experience of care and quantitative measures of health effectiveness.

Beneficiaries impacted by the TI program were identified as being attributed to a TI-participating provider (attributed beneficiaries)<sup>10-2</sup> in each measurement year or the year prior to the baseline period and are separated into three groups: (1) adults, (2) children/youth, (3) and adults transitioning from the criminal justice system. Likewise, the hypotheses and results presented in this section are separated to address the unique needs of these populations and are organized by hypothesis and by research question within each hypothesis. Most hypotheses include multiple research questions, and most research questions use multiple measures. Measures presented in this section use administrative claims/encounter data and TI program participation data.

### Results Summary

Results for claims-based measures are separated into two components: (1) a descriptive component reporting the rates for each year delineating the baseline and demonstration period, and (2) results from DiD analysis. Multiple DiD analyses were conducted to compare each evaluation year to the baseline period. The DiD analysis for FFY 2019 was conducted to assess the preliminary impact of the TI program prior to potentially confounding effects from the coronavirus disease 2019 (COVID-19) public health emergency (PHE) in 2020.

In total, 18 measures were calculated between the baseline and demonstration period using administrative claims data, and six measures were calculated from beneficiary surveys comparing TI and non-TI aligned beneficiaries.<sup>10-3</sup> Due to effects of the COVID-19 PHE impacting the U.S. healthcare system beginning in approximately March 2020, results for this time period must be interpreted with caution, as many changes in rates may not be indicative of program performance. The performance measure rates for 2020 in the TI program are likely to be lower than would otherwise be expected had the PHE not occurred. The results of the DiD analyses, however, allow for a comparison between the TI-participating providers and their non-TI counterparts to estimate whether the TI program was able to demonstrate better changes in outcomes than non-TI providers. While the results are based on an assumption that the PHE had the same impact on both sets of providers, it is important to note that AHCCCS' response to the PHE through the TI program represents an indirect difference of the PHE

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<sup>10-1</sup> Arizona Health Care Cost Containment System. Arizona's Section 1115 Waiver Independent Evaluation–Design Plan. Available at: [https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCEvaluationDesign_without_letter.pdf). Accessed on: Aug 2, 2024.

<sup>10-2</sup> TI practitioners were any BH or primary care providers (PCPs) who indicated participation in the TI program during demonstration year 4 (FFY 2020) through demonstration year 6 (FFY 2022). Justice beneficiaries were identified as having been attributed to a participating TI practitioner, including providers specifically working with the justice transition project.

<sup>10-3</sup> Additional indicators were calculated for certain measures and are reported in full in the TI Results section and in Appendix A.

between the TI and non-TI providers. To address these complexities, analysis of the ramp-up period during 2019 was conducted to increase knowledge about the preliminary program impact.

Table 10-1 presents the number of measures by research question that support the research question, do not support the research question, or were inconclusive.<sup>10-4</sup> The table also shows the number of measures for which there is no desired direction, such as emergency department (ED) or inpatient utilization measures.

DiD analyses suggest that the TI program led to an improvement in adolescents with well-care visits; adult rates of follow-up after hospitalization for mental illness; initiation and engagement of treatment for alcohol, opioid, or other drug abuse; and medication assisted treatment (MAT).

Financial analyses indicate that for the Arizona Long Term Care System–Developmentally Disabled (ALTCS-DD) population, those attributed to TI participating providers had costs that were half of the costs attributed to non-TI participating providers by the end of the demonstration period.

**Table 10-1—TI Results Summary**

Research Questions	Number of Measures			
	Supports <sup>1</sup>	Inconclusive	Does Not Support	N/A <sup>2</sup>
<b>1.2:</b> Do children subject to the TI program have higher rates of screening and well-child visits compared to those who are not subject to the demonstration?	1	2	0	0
<b>1.3:</b> Do children subject to the TI program have higher rates of follow-up after hospitalization or an ED visit for mental illness than those who are not subject to the demonstration?	0	1	0	0
<b>1.4:</b> Do parents/guardians of children subject to the program perceive their doctors have better care coordination than those not subject to the demonstration?	0	1	0	0
<b>2.2:</b> Do adults subject to the TI program have higher rates of screening than those who are not subject to the demonstration?	0	1	0	0
<b>2.3:</b> Do adults subject to the TI program have lower rates of ED utilization than those who are not subject to the demonstration?	0	0	0	2
<b>2.4:</b> Do adults subject to the TI program have higher rates of follow-up after hospitalization or an ED visit for mental illness than those who are not subject to the demonstration?	1	1	0	0
<b>2.5:</b> Do adults subject to the TI program have higher rates of alcohol and drug abuse treatment and adherence than those who were not subject to the demonstration?	3	0	0	0
<b>2.6:</b> Do adults subject to the TI program perceive their doctors have better care coordination than those not subject to the demonstration?	0	1	0	0

<sup>10-4</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.

Research Questions	Number of Measures			
	Supports <sup>1</sup>	Inconclusive	Does Not Support	N/A <sup>2</sup>
<b>3.2:</b> Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of access to care than those who were not subject to the demonstration?	0	3	0	0
<b>3.3:</b> Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of alcohol and drug abuse treatment and adherence than those who were not subject to the demonstration?	0	3	0	0
<b>3.4:</b> Do adult beneficiaries recently released from a criminal justice facility and subject to the TI program have lower rates of ED utilization than those who were not subject to the demonstration?	0	0	0	2
<b>3.5:</b> Do adult beneficiaries recently released from a criminal justice facility and subject to the TI program have better management of opioid prescriptions than those who were not subject to the demonstration?	0	2	0	0

<sup>1</sup>Supports column is inclusive of measures that weakly support and strongly support the research question.

<sup>2</sup>Determination of support is not applicable or is dependent on context.

**Hypothesis 1—The TI program will improve PH and BH care integration for children.**

**Research Question 1.1: What is the percentage of providers that have an executed agreement with Health Current and receive admission-discharge-transfer (ADT) alerts?**

As described in the Background section, providers and hospitals are required to meet specific programmatic milestones and performance benchmarks to participate in the TI program and receive incentive payments. A key step in the integration process for participating TI providers is to establish an agreement with Health Current, Arizona’s health information exchange (HIE) and to receive ADT alerts. Providers who receive ADT alerts receive an automated clinical summary in response to inpatient admission, ED registration or ambulatory encounter registration, and a comprehensive continuity of care document that contains the patient’s most recent clinical and encounter information.<sup>10-5,10-6</sup> This allows providers to receive key information to improve patient care. Shown in Figure 10-2, most TI providers began receiving ADT alerts between May and October 2018.

<sup>10-5</sup> Contexture. HIE Solutions. Available at: <https://contexture.org/hie-main>. Accessed on: Dec 1, 2023.

<sup>10-6</sup> Health Current became Contexture in September 2020. Contexture. *CORHIO and Health Current Join Forces and Announce Intent to Form New Regional Organization*. <https://contexture.org/corhio-and-health-current-merger/>. Accessed on: Dec 1, 2023.

**Figure 10-1—Number of Providers Participating in TI Program**

Approximately 2 out of 3 providers receiving ADT alerts by March 2020 were participating in the TI program.

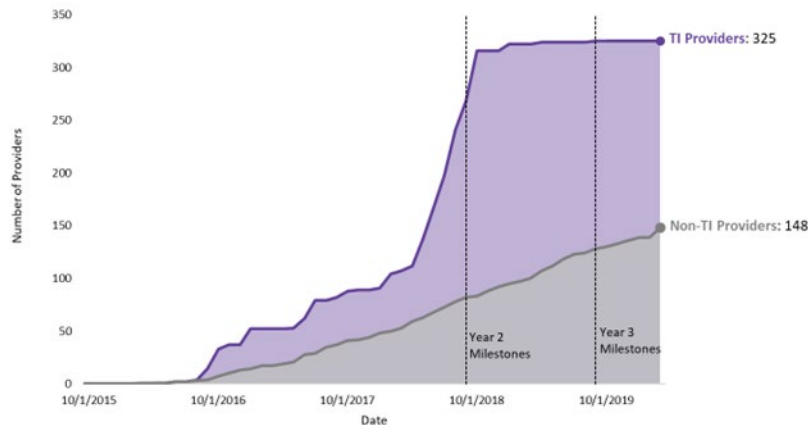
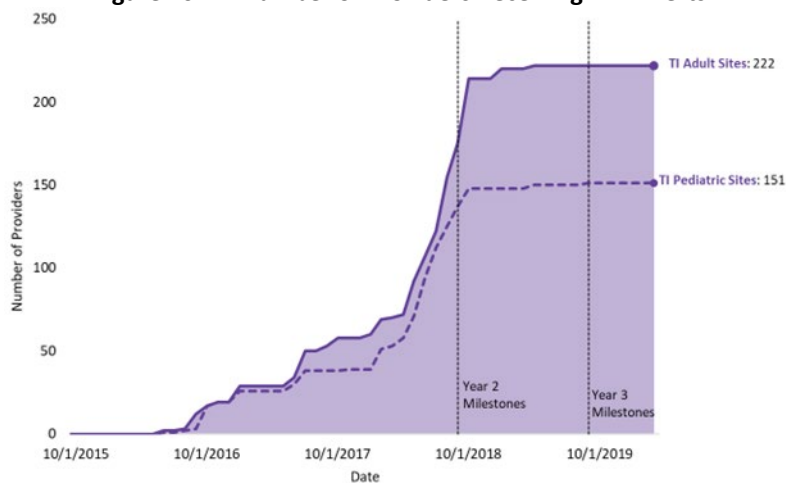


Figure 10-2 illustrates the trend of providers receiving ADT alerts by adult and pediatric TI-participating sites.

**Figure 10-2—Number of Providers Receiving ADT Alerts**





**Research Question 1.2: Do children subject to the TI program have higher rates of screening and well-child visits compared to those who are not subject to the demonstration?**

Multiple DiD analyses were conducted between the baseline year and the ramp-up year (FFY 2019), and between the baseline year and each evaluation year. Table 10-2 shows that the percentage of well-care visits among beneficiaries ages 3 to 6 years declined between the baseline and each evaluation year for the TI group, while the percentage for the non-TI group fluctuated between the baseline and each evaluation year. For both the TI and non-TI group, the percentage of beneficiaries with an adolescent well-care visit declined in FFY 2020 compared to the baseline period but returned to a higher rate than the baseline level in FFY 2021 and 2022. The decrease in the rate for both measures in FFY 2020 was possibly due to the COVID-19 PHE. As described in the Methodology Limitations section, rates of screening for clinical depression (Measure 1-4) were calculated, however, this measure relies on level II Healthcare Common Procedure Coding System (HCPCS) codes to identify numerator compliance, which yields artificially low rates calculated through administrative data. Therefore, no results for this measure are displayed.

**Key Findings:**

- The performance of the rate *Percentage of beneficiaries with a well-care visit in the third, fourth, fifth, and sixth years of life* for the TI group fell by a smaller margin than the non-TI group in FFY 2020 and FFY 2022 (1.3 and 1.0 percentage points, respectively), although the differences were not statistically significant. In FFY 2021, the rate decreased in the TI group and increased in the non-TI group compared to the baseline period, leading to a relative decrease of 2.1 percentage points.
- The decline in the *Percentage of beneficiaries with an adolescent well-care visit* from the baseline period to FFY 2020 was 0.9 percentage points less for the TI group compared to the non-TI group, and the increase from the baseline to FFY 2021 was 0.5 percentage points greater for the TI group compared to the non-TI group, although these differences were not statistically significant. In FFY 2022, the rate increased in the TI group and decreased for the non-TI group compared to the baseline, a relative difference of 1.7 percentage points between the groups.
- Both groups had high rates of *Beneficiary response to getting needed care right away*. TI-aligned beneficiaries had a rate that was 3.3 percentage points higher than non-TI aligned beneficiaries; however, this difference was not statistically significant.

**Table 10-2—Research Question 1.2**

Measure 1-3: Percentage of beneficiaries with a well-child visit in the third, fourth, fifth, and sixth years of life						
Group	Baseline	Ramp-Up Period		Evaluation		
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	70.9% N=39,490	73.3% N=23,546	65.1% N=25,459	69.5% N=26,275	70.1% N=22,137	
Non-TI	63.4% N=16,423	65.1% N=8,107	56.4% N=8,889	64.2% N=10,999	61.6% N=11,225	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	2.43pp	-5.74pp	-1.33pp	-0.81pp	
Non-TI Change	--	1.66pp	-7.04pp	0.79pp	-1.81pp	
TI Impact (p-value)	--	0.8pp (0.151)	1.3pp (0.350)	-2.1pp (0.002)	1.0pp (0.222)	
Measure 1-5: Percentage of beneficiaries with an adolescent well-care visit						
Group	Baseline	Ramp-Up Period		Evaluation		
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	57.2% N=54,242	61.2% N=34,565	53.1% N=35,863	59.0% N=39,464	58.5% N=34,043	
Non-TI	50.1% N=15,128	54.4% N=8,205	45.1% N=9,595	51.5% N=12,338	49.7% N=12,117	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	4pp	-4.13pp	1.83pp	1.27pp	
Non-TI Change	--	4.33pp	-4.98pp	1.38pp	-0.39pp	
TI Impact (p-value)	--	-0.3pp (0.799)	0.9pp (0.264)	0.5pp (0.468)	1.7pp (0.016)	

Note: N represents the weighted denominator count. The dashed line represents the pooled baseline value. pp=percentage point.

<sup>1</sup> Pooled baseline utilizes data from 2015 and 2016.

<sup>2</sup> Change refers to the difference between the pooled baseline and each subsequent measurement year.

<sup>3</sup> Results for 1-4 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.



**Table 10-3—Research Question 1.2, Measure 1-6**

Do children subject to the TI program have higher rates of screening and well-child visits compared to those who are not subject to the demonstration?						
		TI Beneficiaries		Non-TI Beneficiaries		Difference in Rate
		Number of Responses	Rate	Number of Responses	Rate	
1-6	Beneficiary Response to Getting Needed Care Right Away	49	95.9%	68	92.6%	3.3pp (0.462)

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

**Measure 1-3 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-5 Conclusion:** Weak evidence to support the hypothesis

**Measure 1-6 Conclusion:** Neither supports nor fails to support the hypothesis


**Research Question 1.3: Do children subject to the TI program have higher rates of follow-up after hospitalization or an ED visit for mental illness than those who are not subject to the demonstration?**

Table 10-4 shows the annual *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* and the comparison of the baseline and demonstration period averages for TI and non-TI beneficiaries. The *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased compared to 2020 for both the TI and non-TI groups during each evaluation year compared to the baseline period.

**Key Findings:**

- The increase in the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* for the TI-associated beneficiaries was 11.4, 0.7, and 15.5 percentage points lower than the comparison group in FFY 2019, 2021, and 2022, respectively; however, the differences were not statistically significant.
- Conversely, the change in rate from the baseline period to FFY 2020 was 1.9 percentage points greater for the TI group compared to the non-TI group, but this result was not statistically significant.

**Table 10-4—Research Question 1.3**

Measure 1-7: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness							
Group	Baseline	Ramp-Up Period		Evaluation			
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022		
TI	69.7% N=2,276	70.1% N=1,686	73.6% N=1,585	76.9% N=1,955	74.0% N=1,581		
Non-TI	45.7% N=23	57.4% N=13	47.6% N=12	53.5% N=8	65.4% N=12		
<b>DiD Results<sup>2</sup></b>							
TI Change	--	0.38pp	3.84pp	7.15pp	4.28pp		
Non-TI Change	--	11.74pp	1.94pp	7.84pp	19.73pp		
TI Impact (p-value)	--	-11.4pp (0.514)	1.9pp (0.878)	-0.7pp (0.948)	-15.5pp (0.418)		

Note: N represents the weighted denominator count. The dashed line represents the pooled baseline value. pp=percentage point.

<sup>1</sup> Pooled baseline utilizes data from 2015 and 2016.

<sup>2</sup> Change refers to the difference between the pooled baseline and each subsequent measurement year.

**Measure 1-7 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 1.4: Do parents/guardians of children subject to the program perceive their doctors have better care coordination than those not subject to the demonstration?**

To assess Measure 1-8, a beneficiary survey was used to identify beneficiary perception of care coordination among health providers. Table 10-5 shows the number of responses and rates for both TI and non-TI beneficiaries who responded to the Consumer Assessment of Healthcare Providers and Systems (CAHPS®)<sup>10-7</sup> survey and reported that their child’s doctor seemed informed about the care their child received from other health providers.

**Key Findings:**

- The rate of perceived care coordination among TI-aligned pediatric beneficiaries was 7.5 percent higher than non-TI beneficiaries. Although this difference was not statistically significant, it does represent the difference between the National Committee for Quality Assurance (NCQA) Quality Compass<sup>10-8</sup> 10th percentile and 75th percentile nationally from 2020.

**Table 10-5—Research Question 1.4**

Do parents/guardians of children subject to the program perceive their doctors have better care coordination than those not subject to the demonstration?						
		TI Beneficiaries		Non-TI Beneficiaries		Difference in Rate
		Number of Responses	Rate	Number of Responses	Rate	
1-8	Beneficiary Response to Their Child’s Doctor Seeming Informed About the Care Their Child Received from Other Health Providers	69	87.0%	68	79.4%	7.5pp (0.237)

Note: Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

**Measure 1-8 Conclusion:** Neither supports nor fails to support the hypothesis

**Hypothesis 2—The TI program will improve PH and BH care integration for adults.**

**Research Question 2.1: What is the percentage of providers that have an executed agreement with Health Current and receive ADT alerts?**

Results for Research Question 2.1 were initially intended to be provided as rapid cycle reporting measures separately from this Summative Evaluation Report. However, upon receipt and inspection of data, most TI providers had begun receiving ADT alerts by October 2018, as described in the Background section and in Research Question 1.1.

**Research Question 2.2: Do adults subject to the TI program have higher rates of screening than those who are not subject to the demonstration?**

Although rates for screening for clinical depression (Measure 2-3) were calculated, as described in the Methodology Limitations section, this measure relies on level II HCPCS codes to identify numerator compliance, which yields artificially low rates calculated through administrative data. Therefore, no results for this measure are presented.

<sup>10-7</sup> CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).

<sup>10-8</sup> Quality Compass® is a registered trademark of the National Committee for Quality Assurance (NCQA).

Measure 2-4 utilized a beneficiary survey question assessing whether respondents were always or usually able to get needed care right away. Results are displayed in Table 10-6.

**Key Findings:**

- The *Beneficiary response to getting needed care right away* was 2.8 percentage points higher among TI-aligned beneficiaries; however, this difference was not statistically significant.

**Table 10-6—Research Question 2.2**

Do adults subject to the TI program have higher rates of screening than those who are not subject to the demonstration?						
		TI Beneficiaries		Non-TI Beneficiaries		
		Weighted Number of Responses	Weighted Rate	Weighted Number of Responses	Weighted Rate	Difference in Rate
2-4	Beneficiary Response to Getting Needed Care Right Away	272	86.7%	162	83.9%	2.8pp (0.425)

Note: Number of responses and rates are re-weighted by plan to adjust for disproportionate sampling among RBHA health plans. Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

**Measure 2-4 Conclusion:** Neither supports nor fails to support the hypothesis


**Research Question 2.3: Do adults subject to the TI program have lower rates of ED utilization than those who are not subject to the demonstration?**

Two measures were used to assess rates of ED utilization for TI-affiliated adult beneficiaries. Table 10-7 shows that since the implementation of the TI program, the *Number of ED visits per 1,000 member months* steadily decreased relative to the baseline period for both the TI and non-TI groups. The *Number of ED visits for substance use disorder (SUD) or opioid use disorder (OUD) per 1,000 member months* followed a similar trend (Table 10-7). There is no desired direction for these measures, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.


**Key Findings:**

- The *Number of ED visits per 1,000 member months* among TI-affiliated adults fell by a margin of 18.7, 24.1, 28.9, and 29.3 visits per 1,000 members months greater than the rate in the comparison group in FFY 2019, 2020, 2021, and 2022, respectively.
- The *Number of ED visits for SUD or OUD per 1,000 member months* among TI-affiliated adults also fell by a larger margin of 0.1, 0.3, 0.6, and 0.8 visits per 1,000 members month compared to the non-TI affiliated adults in FFY 2019, 2020, 2021, and 2022, respectively; however, these declines were not statistically significant.
- Neither a higher nor lower rate of ED utilization necessarily indicates better performance, as an exceedingly low rate of ED utilization may indicate barriers to accessing care while an exceedingly high rate of ED utilization may indicate unnecessary ED visits.

**Table 10-7—Research Question 2.3**

Measure 2-5: Number of ED visits per 1,000 member months (no desired direction)						
Group	Baseline	Ramp-Up Period	Evaluation			
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	105.17 N=115	76.60 N=141	65.49 N=139	58.02 N=141	58.61 N=139	
Non-TI	46.35 N=77	36.45 N=59	30.79 N=52	28.11 N=50	29.12 N=46	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	-28.58	-39.66	-47.08	-46.50	
Non-TI Change	--	-9.90	-15.54	-18.20	-17.19	
TI Impact (p-value)	--	-18.7 (0.012)	-24.1 (0.041)	-28.9 (0.004)	-29.3 (<0.001)	

Measure 2-6: Number of ED visits for SUD or OUD per 1,000 member months (no desired direction)						
Group	Baseline	Ramp-Up Period	Evaluation			
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	2.03 N=115	1.76 N=141	1.60 N=139	1.28 N=141	1.01 N=139	
Non-TI	0.44 N=77	0.32 N=59	0.30 N=52	0.26 N=50	0.25 N=46	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	-0.27	-0.42	-0.75	-1.02	
Non-TI Change	--	-0.12	-0.14	-0.18	-0.19	
TI Impact (p-value)	--	-0.1 (0.243)	-0.3 (0.332)	-0.6 (0.655)	-0.8 (0.364)	

Note: N represents the weighted number of unique providers.

<sup>1</sup> Pooled baseline utilizes data from 2015 and 2016.

<sup>2</sup> Change refers to the difference between the pooled baseline and each subsequent measurement year.

**Measure 2-5 Conclusion:** N/A

**Measure 2-6 Conclusion:** N/A

**Research Question 2.4: Do adults subject to the TI program have higher rates of follow-up after hospitalization or an ED visit for mental illness than those who are not subject to the demonstration?**


Two measures were used to assess rates of follow-up visits after hospitalization or ED visit for mental illness. Table 10-8 shows that the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* fell below baseline levels in the ramp-up period and then increased during the demonstration period for both the TI and non-TI groups. Table 10-8 shows that the *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness* was lower in the demonstration period for the TI group. However, the year-to-year trend for the non-TI group is not as clear; the rate decreases in the ramp-up period and FFY 2020 relative to the baseline period, jumps to 36.6 percent in FFY 2021, before dropping to 18.0 percent in FFY 2022.

**Key Findings:**

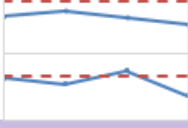
- The *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* decreased between the baseline and FFY 2020 evaluation year, but by 7.7 percentage points less than the non-TI group. In FFY 2021 and FFY 2022, the TI group rate increased while the non-TI group rate decreased compared to the baseline period, resulting in a relative increase of 5.0 percentage points in FFY 2021 and 2.1 percentage points in FFY 2022.

- The changes were in the desired direction for all three evaluation years, but none of the differences were statistically significant.
- In FFY 2020 and FFY 2022, the *Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness* decreased less for the TI group than the comparison group; the difference in margins were 3.7 percentage points and 8.0 percentage points, respectively. Conversely, the rate decreased in the TI group and increased in the non-TI group in FFY 2021 relative to the baseline period, leading to a relative decrease of 8.2 percentage points.
- The TI impact did not have a consistent direction across evaluation years, and no differences were statistically significant.

**Table 10-8—Research Question 2.4**

Measure 2-7: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness						
Group	Baseline	Ramp-Up Period	Evaluation			
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	60.1% N=8,068	59.2% N=6,125	58.6% N=5,907	60.4% N=6,250	61.5% N=5,717	
Non-TI	48.7% N=70	31.1% N=19	39.5% N=27	44.0% N=25	47.9% N=24	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	-0.9pp	-1.46pp	0.31pp	1.38pp	
Non-TI Change	--	-17.58pp	-9.2pp	-4.7pp	-0.74pp	
TI Impact (p-value)	--	16.7pp (0.203)	7.7pp (0.498)	5.0pp (0.667)	2.1pp (0.854)	

Measure 2-8: Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness						
Group	Baseline	Ramp-Up Period	Evaluation			
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	55.4% N=2,905	50.9% N=1,326	52.5% N=1,032	50.7% N=909	48.3% N=820	
Non-TI	33.1% N=80	31.2% N=15	26.5% N=13	36.6% N=14	18.0% N=8	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	-4.52pp	-2.9pp	-4.71pp	-7.13pp	
Non-TI Change	--	-1.92pp	-6.6pp	3.46pp	-15.11pp	
TI Impact (p-value)	--	-2.6pp (0.877)	3.7pp (0.770)	-8.2pp (0.572)	8.0pp (0.573)	

Note: N represents the weighted denominator count. The dashed line represents the pooled baseline value. pp=percentage point.

<sup>1</sup> Pooled baseline utilizes data from 2015 and 2016.

<sup>2</sup> Change refers to the difference between the pooled baseline and each subsequent measurement year.

**Measure 2-7 Conclusion:** Weak evidence to support the hypothesis

**Measure 2-8 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 2.5: Do adults subject to the TI program have higher rates of alcohol and drug abuse treatment and adherence than those who were not subject to the demonstration?**










Table 10-9 shows that three measures were used to assess rates of alcohol and other drug abuse or dependence treatment and MAT among TI-affiliated adults. The average *Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment* and *Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment* remained relatively steady for the TI group and decreased for the non-TI group between the baseline and evaluation years. The *Percentage of beneficiaries with OUD*

receiving any OUD-MAT increased during the evaluation years compared to the baseline period for both the TI and non-TI groups.

**Key Findings:**

- The change in *Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment* among the TI group was 8.7, 11.4, and 9.7 percentage points better than the change in the non-TI group in FFY 2020, 2021, and 2022, respectively.
- Although this trend was consistent for rates stratified by type of treatment (alcohol, opioid or other drug), the TI program impact was only statistically significant for initiation of other drug treatment.
- The change in *Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment* for the TI group was 14.4, 10.8, and 12.3 percentage points better relative to the change in the non-TI group in FFY 2020, 2021, and 2022, respectively.
- This trend was maintained when stratified by drug type, particularly among beneficiaries engaging in other drug treatment. The TI impact was only statistically significant for engagement in alcohol treatment when comparing FFY 2020 and FFY 2022 to baseline, and for engagement in opioid treatment in FFY 2022 compared to baseline.
- The *Percentage of beneficiaries with OUD receiving any OUD-MAT* among the TI group increased by 5.7, 5.2, and 10.1 percentage points more than the non-TI group in FFY 2020, 2021, and 2022, although only results for FFY 2022 were statistically significant.

**Table 10-9—Research Question 2.5**










Measure 2-9: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment							
		Baseline	Ramp-Up Period	Evaluation			
		Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	<b>Total</b>	<b>46.3%</b> <b>N=17,141</b>	<b>46.6%</b> <b>N=9,381</b>	<b>46.1%</b> <b>N=8,951</b>	<b>46.9%</b> <b>N=10,029</b>	<b>46.8%</b> <b>N=9,829</b>	
	Alcohol	47.0% N=5,954	43.8% N=3,211	45.5% N=3,107	45.8% N=3,667	45.3% N=3,451	
	Opioid	53.2% N=3,534	60.5% N=1,988	54.1% N=2,005	56.9% N=2,240	59.1% N=2,099	
	Other Drug	44.3% N=8,846	43.4% N=5,028	45.2% N=4,693	46.2% N=5,220	46.1% N=5,336	
	<b>Total</b>	<b>37.5%</b> <b>N=855</b>	<b>29.3%</b> <b>N=238</b>	<b>28.5%</b> <b>N=242</b>	<b>26.6%</b> <b>N=236</b>	<b>28.3%</b> <b>N=262</b>	
Non-TI	Alcohol	33.0% N=308	24.0% N=97	26.7% N=106	28.4% N=103	23.8% N=119	
	Opioid	51.5% N=108	55.7% N=39	42.9% N=32	47.1% N=33	40.2% N=28	
	Other Drug	37.8% N=494	28.7% N=122	28.0% N=123	20.1% N=116	31.0% N=131	
	<b>Total</b>	<b>37.5%</b> <b>N=855</b>	<b>29.3%</b> <b>N=238</b>	<b>28.5%</b> <b>N=242</b>	<b>26.6%</b> <b>N=236</b>	<b>28.3%</b> <b>N=262</b>	
<b>DiD Results<sup>2</sup></b>							
TI Change		--	0.32pp	-0.22pp	0.62pp	0.49pp	
Non-TI Change		--	-8.21pp	-8.96pp	-10.83pp	-9.21pp	
TI Impact (p-value)	<b>Total</b>	--	<b>8.5pp</b> <b>(0.017)</b>	<b>8.7pp</b> <b>(0.013)</b>	<b>11.4pp</b> <b>(0.001)</b>	<b>9.7pp</b> <b>(0.005)</b>	



**Alcohol, Opioid, and Other Drug**

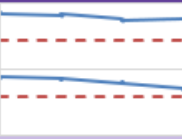
TI Change		--	-3.19pp	-1.5pp	-1.17pp	-1.72pp
Non-TI Change	Alcohol	--	-8.97pp	-6.3pp	-4.51pp	-9.18pp
TI Impact (p-value)		--	5.8pp (0.245)	4.8pp (0.344)	3.3pp (0.514)	7.5pp (0.124)
TI Change		--	7.29pp	0.94pp	3.75pp	5.95pp
Non-TI Change	Opioid	--	4.15pp	-8.65pp	-4.42pp	-11.33pp
TI Impact (p-value)		--	3.1pp (0.730)	9.6pp (0.346)	8.2pp (0.412)	17.3pp (0.107)
TI Change		--	-0.85pp	0.88pp	1.96pp	1.87pp
Non-TI Change	Other Drug	--	-9.15pp	-9.78pp	-17.72pp	-6.78pp
TI Impact (p-value)		--	8.3pp (0.090)	10.7pp (0.032)	19.7pp (<0.001)	8.6pp (0.077)

**Measure 2-10: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment**

		Baseline	Ramp-Up Period	Evaluation			
		Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	<b>Total</b>	<b>13.5%</b> N=17,141	<b>16.7%</b> N=9,381	<b>15.5%</b> N=8,951	<b>13.3%</b> N=10,029	<b>13.0%</b> N=9,829	
	Alcohol	12.4% N=5,954	13.5% N=3,211	14.0% N=3,107	11.3% N=3,667	11.1% N=3,451	
	Opioid	19.4% N=3,534	30.0% N=1,988	25.1% N=2,005	22.1% N=2,240	23.2% N=2,099	
	Other Drug	10.9% N=8,846	12.1% N=5,028	11.5% N=4,693	10.1% N=5,220	9.8% N=5,336	
	<b>Total</b>	<b>19.6%</b> N=855	<b>10.8%</b> N=238	<b>7.3%</b> N=242	<b>8.6%</b> N=236	<b>6.8%</b> N=262	
Non-TI	Alcohol	13.9% N=308	3.7% N=97	5.0% N=106	7.2% N=103	4.9% N=119	
	Opioid	26.9% N=108	32.5% N=39	16.9% N=32	24.6% N=33	11.9% N=28	
	Other Drug	20.6% N=494	9.0% N=122	6.5% N=123	4.9% N=116	7.7% N=131	
	<b>Total</b>						
<b>DiD Results<sup>2</sup></b>							
TI Change		--	3.23pp	2.07pp	-0.16pp	-0.5pp	
Non-TI Change	<b>Total</b>	--	-8.77pp	-12.32pp	-10.99pp	-12.77pp	
TI Impact (p-value)		--	12.0pp (<0.001)	14.4pp (<0.001)	10.8pp (<0.001)	12.3pp (<0.001)	

**Alcohol, Opioid, and Other Drug**

TI Change		--	1.06pp	1.61pp	-1.13pp	-1.33pp
Non-TI Change	Alcohol	--	-10.23pp	-8.88pp	-6.71pp	-9.01pp
TI Impact (p-value)		--	11.3pp (0.007)	10.5pp (0.009)	5.6pp (0.137)	7.7pp (0.027)
TI Change		--	10.63pp	5.78pp	2.79pp	3.85pp
Non-TI Change	Opioid	--	5.57pp	-10.07pp	-2.35pp	-14.97pp
TI Impact (p-value)		--	5.1pp (0.447)	15.9pp (0.075)	5.1pp (0.527)	18.8pp (0.050)
TI Change		--	1.26pp	0.67pp	-0.82pp	-1.05pp
Non-TI Change	Other Drug	--	-11.56pp	-14.12pp	-15.73pp	-12.92pp
TI Impact (p-value)		--	12.8pp (0.001)	14.8pp (<0.001)	14.9pp (<0.001)	11.9pp (0.004)

Measure 2-11: Percentage of beneficiaries with OUD receiving any OUD-MAT						
Group	Baseline	Ramp-Up Period	Evaluation			
	Pooled Baseline <sup>1</sup>	2019	2020	2021	2022	
TI	21.8% N=12,695	41.6% N=10,962	41.0% N=11,727	37.0% N=12,246	38.0% N=10,865	
Non-TI	28.7% N=466	43.4% N=186	42.3% N=161	38.8% N=153	34.8% N=134	
<b>DiD Results<sup>2</sup></b>						
TI Change	--	19.75pp	19.2pp	15.17pp	16.21pp	
Non-TI Change	--	14.68pp	13.54pp	10pp	6.1pp	
TI Impact (p-value)	--	5.1pp (0.109)	5.7pp (0.099)	5.2pp (0.137)	10.1pp (0.016)	

Note: N represents the weighted denominator count. The dashed line represents the pooled baseline value. pp=percentage point.

<sup>1</sup> Pooled baseline utilizes data from 2015 and 2016.

<sup>2</sup> Change refers to the difference between the pooled baseline and each subsequent measurement year.

**Measure 2-9 Conclusion:** Strong evidence to support the hypothesis

**Measure 2-10 Conclusion:** Strong evidence to support the hypothesis

**Measure 2-11 Conclusion:** Weak evidence to support the hypothesis

**Research Question 2.6: Do adults subject to the TI program perceive their doctors have better care coordination than those not subject to the demonstration?**

One measure from beneficiary surveys was used to assess Research Question 2.6 as shown in Table 10-10.

**Key Findings:**

- The Beneficiary response to their doctor seeming informed about the care they received from other health providers was 4.3 percentage points higher than non-TI affiliated beneficiaries; however, this difference was not statistically significant.

**Table 10-10—Research Question 2.6**

Do adults subject to the TI program perceive their doctors have better care coordination than those not subject to the demonstration?					
	TI Beneficiaries		Non-TI Beneficiaries		Difference in Rate
	Weighted Number of Responses	Weighted Rate	Weighted Number of Responses	Weighted Rate	
Beneficiary Response to Their Doctor Seeming Informed About the Care They Received from Other Health Providers	298	82.3%	191	78.0%	4.3pp (0.244)

Note: Number of responses and rates are re-weighted by plan to adjust for disproportionate sampling among RBHA health plans. Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

**Measure 2-12 Conclusion:** Neither supports nor fails to support the hypothesis

**Hypothesis 3—The TI program will improve care coordination for AHCCCS enrolled adults released from criminal justice facilities.**

**Research Question 3.1: What is the percentage of providers that have an executed agreement with Health Current and receive ADT alerts?**

All five TI justice providers participating in TI at the end of Year 2 (September 30, 2018) had an agreement in place with Health Current. However, the information could not be trended as the dates in which the TI justice providers began receiving ADT alerts was unavailable for this report.

**Research Question 3.2: Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of access to care than those who were not subject to the demonstration?**

Table 10-11 shows that the percentage of recently released TI-affiliated and non-TI affiliated beneficiaries who had a preventive/ambulatory visit decreased from baseline levels during the demonstration period. In addition, Table 10-12 shows that recently released TI-affiliated beneficiaries indicated a higher rate of being able to receive needed care right away and a lower rate of being able to get routine care right away compared to recently released non-TI affiliated beneficiaries.

**Key Findings:**

- The *Percentage of recently released beneficiaries who had a preventive ambulatory health service visit* fell between the baseline period and FFY 2020, but the decline was 2.8 percentage points less than that of recently released non-TI affiliated beneficiaries. This trend reversed in FFY 2021 and FFY 2022 when the rate among TI-affiliated beneficiaries decreased by 0.6 percentage points and 3.6 percentage points more than that of non-TI affiliated beneficiaries, respectively. However, none of these differences were statistically significant but it is important to note that the denominators for the TI population were nearly 20 times the size of the denominators for the non-TI population.
- The percentage of *Recently released beneficiary response to getting needed care right away* that were always or usually able to get needed care right away was 5.2 percentage points higher than the comparison group; however, this difference was not statistically significant.
- The percentage of *Recently released beneficiary response to getting routine care right away* was 1.3 percentage points lower than the comparison group; however, this difference was not statistically significant.

**Table 10-11—Research Question 3.2, Measure 3-3**

Measure 3-3: Percentage of recently released beneficiaries who had a preventative ambulatory health service visit					
Group	Baseline	Ramp-Up Period	Evaluation		
	2016	2019	2020	2021	2022
TI	75.1% N=1,344	73.8% N=2,028	69.3% N=2,641	67.3% N=3,300	62.6% N=2,965
Non-TI	59.6% N=138	54.7% N=71	51.0% N=73	52.5% N=133	50.8% N=122
<b>DiD Results<sup>1</sup></b>					
TI Change	--	-1.26pp	-5.82pp	-7.74pp	-12.47pp
Non-TI Change	--	-4.97pp	-8.57pp	-7.17pp	-8.86pp
TI Impact (p-value)	--	3.7pp (0.654)	2.8pp (0.849)	-0.6pp (0.732)	-3.6pp (0.384)

Note: N represents the weighted denominator count. The dashed line represents the baseline value. pp=percentage point.

<sup>1</sup> Change refers to the difference between the baseline year and each subsequent measurement year.

**Table 10-12—Research Question 3.2, Measure 3-4, and Measure 3-5**

Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of access to care than those who were not subject to the demonstration?

		TI Beneficiaries		Non-TI Beneficiaries		Difference in Rate
		Number of Responses	Rate	Number of Responses	Rate	
3-4	Recently Released Beneficiary Response to Getting Needed Care Right Away	67	88.1%	35	82.9%	5.2pp (0.469)
3-5	Recently Released Beneficiary Response to Getting Routine Care Right Away	77	75.3%	47	76.6%	-1.3pp (0.873)

Note: Number of responses and rates are re-weighted by plan to adjust for disproportionate sampling among RBHA health plans. Sample sizes are lower than required and may not be sufficiently powered to detect meaningful differences between groups. pp=percentage point

**Measure 3-3 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 3-4 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 3-5 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 3.3: Do adult beneficiaries who are recently released from a criminal justice facility and subject to the TI program have higher rates of alcohol and drug abuse treatment and adherence than those who were not subject to the demonstration?**

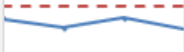







Table 10-13 shows the that the *Percentage of recently released beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment* and *Percentage of recently released beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment* fell below baseline levels during the demonstration period for the recently released TI-affiliated group. Conversely, the *Percentage of recently released beneficiaries with OUD receiving any OUD-MAT* increased between the baseline and demonstration period for both recently released TI-affiliated and recently released non-TI affiliated groups.

**Key Findings:**

- The *Percentage of recently released beneficiaries who had initiation of alcohol and other drug dependence treatment* increased by 2.6 percentage points and 20.3 percentage points between the baseline period and FFY 2021 and FFY 2022, respectively, when compared to recently released non-TI affiliated beneficiaries. In FFY 2022, the rate among the recently released TI group decreased while the comparison group increased, resulting in a relative decrease of 25.8 percentage points.

- Due to small number suppression within the comparison group, no conclusions can be drawn for Measure 3-7, *Percentage of recently released beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment.*
- The increase in the *Percentage of recently released beneficiaries with OUD receiving any OUD-MAT* was 2.2 and 1.0 percentage points greater than the increase among recently released non-TI affiliated beneficiaries in FFY 2020 and FFY 2022, respectively. In FFY 2021, recently released TI-affiliated beneficiaries experienced a 7.4 percentage point smaller increase in rate relative to the comparison group. The TI impact was not statistically significant for any of the measurement years.

**Table 10-13—Research Question 3.3**

		Measure 3-6: Percentage of recently released beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment <sup>1</sup>					
		Baseline 2016	Ramp-Up Period 2019	Evaluation			
		2020	2021	2022			
TI	<b>Total</b>	<b>56.8%</b> N=486	<b>52.3%</b> N=692	<b>49.1%</b> N=746	<b>52.5%</b> N=854	<b>48.9%</b> N=773	
	Alcohol	58.7% N=167	46.9% N=207	49.1% N=216	46.2% N=223	46.0% N=198	
	Opioid	63.7% N=124	67.1% N=152	66.1% N=171	65.1% N=241	57.6% N=238	
	Other Drug	56.7% N=247	49.4% N=415	45.4% N=476	50.5% N=556	48.1% N=468	
	<b>Total</b>	<b>40.2%</b> N=20	<b>24.2%</b> N=9	<b>29.8%</b> N=5	<b>15.6%</b> N=8	<b>58.1%</b> N=6	
Non-TI	Alcohol	40.0% N=6	** N=6	** N=6	** N=6	** N=6	
	Opioid	56.3% N=3	N/A N=2	** N=2	N/A N=2	N/A N=2	
	Other Drug	38.5% N=12	19.1% N=6	N/A N=2	10.0% N=5	56.3% N=2	
<b>DiD Results<sup>2</sup></b>							
TI Change		--	<b>-4.48pp</b>	<b>-7.73pp</b>	<b>-4.33pp</b>	<b>-7.89pp</b>	
Non-TI Change		--	<b>-16.04pp</b>	<b>-10.37pp</b>	<b>-24.6pp</b>	<b>17.89pp</b>	
TI Impact (p-value)		--	<b>11.6pp</b> <b>(0.530)</b>	<b>2.6pp</b> <b>(0.895)</b>	<b>20.3pp</b> <b>(0.296)</b>	<b>-25.8pp</b> <b>(0.281)</b>	

**Measure 3-6: Percentage of recently released beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment<sup>1</sup>**

		Baseline 2016	Ramp-Up Period 2019	Evaluation		
				2020	2021	2022
<b>Alcohol, Opioid, and Other Drug</b>						
TI Change		--	-11.82pp	-9.61pp	-12.49pp	-12.72pp
Non-TI Change	Alcohol	--	**	**	**	**
TI Impact (p-value)		--	**	**	**	**
TI Change		--	3.4pp	2.37pp	1.44pp	-6.15pp
Non-TI Change	Opioid	--	N/A	**	N/A	N/A
TI Impact (p-value)		--	N/A	**	N/A	N/A
TI Change		--	-7.28pp	-11.3pp	-6.14pp	-8.6pp
Non-TI Change	Other Drug	--	-19.42pp	N/A	-28.52pp	17.77pp
TI Impact (p-value)		--	12.1pp (0.570)	N/A	22.4pp (0.355)	-26.4pp (0.480)


**Measure 3-7: Percentage of recently released beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment**

		Baseline 2016	Ramp-Up Period 2019	Evaluation		
				2020	2021	2022
TI	<b>Total</b>	<b>21.4%</b> N=486	<b>21.0%</b> N=692	<b>17.6%</b> N=746	<b>17.8%</b> N=854	<b>17.6%</b> N=773
	Alcohol	21.0% N=167	16.9% N=207	16.2% N=216	15.2% N=223	16.2% N=198
	Opioid	28.2% N=124	31.6% N=152	26.9% N=171	24.1% N=241	23.1% N=238
	Other Drug	17.0% N=247	16.1% N=415	13.7% N=476	13.5% N=556	12.4% N=468
	<b>Total</b>	<b>28.4%</b> N=20	<b>13.4%</b> N=9	<b>**</b> **	<b>**</b> **	<b>**</b> **
Non-TI	Alcohol	28.7% N=6	**	**	**	**
	Opioid	27.8% N=3	**	**	**	**
	Other Drug	27.8% N=12	**	**	**	**
	<b>Total</b>		**	**	**	**
DiD Results <sup>2</sup>						
TI Change		--	-0.45pp	-3.84pp	-3.6pp	-3.81pp
Non-TI Change	<b>Total</b>	--	-15.03pp	**	**	**
TI Impact (p-value)		--	14.6pp (0.403)	**	**	**



Measure 3-7: Percentage of recently released beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment						
		Baseline	Ramp-Up Period	Evaluation		
		2016	2019	2020	2021	2022
<b>Alcohol, Opioid, and Other Drug</b>						
TI Change		--	-4.05pp	-4.75pp	-5.71pp	-4.8pp
Non-TI Change	Alcohol	--	**	**	**	**
TI Impact (p-value)		--	**	**	**	**
TI Change		--	3.35pp	-1.33pp	-4.16pp	-5.12pp
Non-TI Change	Opioid	--	**	**	**	**
TI Impact (p-value)		--	**	**	**	**
TI Change		--	-0.86pp	-3.35pp	-3.51pp	-4.61pp
Non-TI Change	Other Drug	--	**	**	**	**
TI Impact (p-value)		--	**	**	**	**

Measure 3-8: Percentage of recently released beneficiaries with OUD receiving any OUD-MAT						
Group	Baseline	Ramp-Up Period	Evaluation			
	2016	2019	2020	2021	2022	
TI	17.5%	34.9%	32.6%	31.0%	25.8%	
	N=537	N=1,202	N=1,452	N=1,477	N=1,279	
Non-TI	14.6%	32.5%	27.5%	35.5%	21.9%	
	N=18	N=8	N=5	N=7	N=5	
DiD Results <sup>1</sup>						
TI Change	--	17.35pp	15.14pp	13.5pp	8.3pp	
Non-TI Change	--	17.89pp	12.9pp	20.89pp	7.31pp	
TI Impact (p-value)	--	(0.912)	(0.982)	(0.685)	(0.999)	

<sup>1</sup> For accurate rate calculation, rates with an unweighted denominator count less than 30 are suppressed and are represented with an N/A. Additionally, cells containing unweighted numerators or denominators between 1 and 10 are suppressed to ensure anonymity and are represented with "\*\*". N represents the weighted denominator count. The dashed line represents the baseline value. pp=percentage point. Denominator for opioid treatment for the non-TI group included 25 members across 18 providers with a combined weight of 1.60 in 2019, 24 members across 17 providers with a combined weight of 2.11 in 2021, and 26 members across 20 providers with a combined weight in 1.87 in 2022. Denominator for other drug treatment for the non-TI group in 2020 included 27 members across 18 providers with a combined weight of 1.82.

<sup>2</sup> Change refers to the difference between the baseline year and each subsequent measurement year.

**Measure 3-6 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 3-7 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 3-8 Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 3.4: Do adult beneficiaries recently released from a criminal justice facility and subject to the TI program have lower rates of ED utilization than those who were not subject to the demonstration?**





Table 10-14 shows the *Number of ED visits per 1,000 member months for recently released beneficiaries* declined between the baseline and each evaluation year for both the recently released TI and non-TI groups. The *Number of ED visits for SUD or OUD per 1,000 member months for recently released beneficiaries* declined between the baseline and each evaluation year for the TI group, while the rate among the non-TI group fluctuated between the baseline and each evaluation year. Neither a higher nor lower rate of ED utilization indicates better performance,

as an exceedingly low rate of ED utilization may indicate barriers to accessing care while an exceedingly high rate of ED utilization may indicate unnecessary ED visits. There is no desired direction for these measures, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.

**Key Findings:**

- The *Number of ED visits per 1,000 member months for recently released beneficiaries* among the recently released TI group fell by a margin of 1.7, 16.4, and 19.8 visits per 1,000 members months more than the comparison group in FFY 2020, 2021, and 2022, respectively. None of the results were statistically significant.
- The *Number of ED visits for SUD or OUD per 1,000 member months for recently released beneficiaries* fell by a margin of 1.5, 2.2, 3.5, and 4.2 visits per 1,000 member months compared to recently released non-TI adults in FFY 2019, 2020, 2021 and 2022, respectively; however, these declines were not statistically significant.

**Table 10-14—Research Question 3.4**

Measure 3-9: Number of ED visits per 1,000 member months for recently released beneficiaries (no desired direction)						
Group	Baseline 2016	Ramp-Up Period 2019	Evaluation			
			2020	2021	2022	
TI	130.36 N=105	117.08 N=126	107.96 N=118	88.81 N=121	85.15 N=106	
Non-TI	64.67 N=35	50.05 N=19	43.98 N=14	39.49 N=15	39.19 N=13	
<b>DiD Results<sup>1</sup></b>						
TI Change	--	-13.29	-22.42	-42.30	-46.16	
Non-TI Change	--	-14.62	-20.70	-25.89	-26.38	
TI Impact (p-value)	--	1.3 (0.208)	-1.7 (0.128)	-16.4 (0.338)	-19.8 (0.493)	
Measure 3-10: Number of ED visits for SUD or OUD per 1,000 member months for recently released beneficiaries (no desired direction)						
Group	Baseline 2016	Ramp-Up Period 2019	Evaluation			
			2020	2021	2022	
TI	9.53 N=105	8.61 N=126	7.65 N=118	5.54 N=121	4.93 N=106	
Non-TI	0.92 N=35	1.51 N=19	1.19 N=14	0.39 N=15	0.52 N=13	
<b>DiD Results<sup>1</sup></b>						
TI Change	--	-0.91	-1.88	-3.99	-4.60	
Non-TI Change	--	0.59	0.27	-0.53	-0.40	
TI Impact (p-value)	--	-1.5 (0.515)	-2.2 (0.648)	-3.5 (0.815)	-4.2 (0.940)	

Note: N represents the weighted number of unique providers. The dashed line represents the baseline value.

<sup>1</sup> Change refers to the difference between the baseline year and each subsequent measurement year.

**Measure 3-9 Conclusion: N/A**  
**Measure 3-10 Conclusion: N/A**

**Research Question 3.5: Do adult beneficiaries recently released from a criminal justice facility and subject to the TI program have better management of opioid prescriptions than those who were not subject to the demonstration?**

Table 10-15 shows the *Percentage of recently released beneficiaries who have prescriptions for opioids at a high dosage* and the *Percentage of recently released beneficiaries who have prescriptions for concurrent use of opioids and benzodiazepines* in FFY 2016. Due to small number suppression, annual rates for these measures from FFY 2019–2022 are not presented.

**Key Findings:**

- Due to small number suppression within the TI and non-TI groups, no conclusions can be drawn for these measures.

**Table 10-15—Research Question 3.5**

Measure 3-11: Percentage of recently released beneficiaries who have prescriptions for opioids at a high dosage (lower is better) <sup>1</sup>					
Group	Baseline	Ramp-Up Period	Evaluation		
	2016	2019	2020	2021	2022
TI	13.2%	**	**	**	**
	N=167	**	**	**	**
Non-TI	28.4%	**	**	**	**
	N=7	**	**	**	**
<b>DiD Results<sup>2</sup></b>					
TI Change	--	**	**	**	**
Non-TI Change	--	**	**	**	**
TI Impact (p-value)	--	**	**	**	**
Measure 3-12: Percentage of recently released beneficiaries who have prescriptions for concurrent use of opioids and benzodiazepines (lower is better) <sup>1</sup>					
Group	Baseline	Ramp-Up Period	Evaluation		
	2016	2019	2020	2021	2022
TI	19.4%	**	**	**	**
	N=211	**	**	**	**
Non-TI	18.9%	**	**	**	**
	N=9	**	**	**	**
<b>DiD Results<sup>2</sup></b>					
TI Change	--	**	**	**	**
Non-TI Change	--	**	**	**	**
TI Impact (p-value)	--	**	**	**	**

<sup>1</sup> For accurate rate calculation, rates with an unweighted denominator count less than 30 are suppressed and are represented with an N/A. Additionally, cells containing unweighted numerators or denominators between 1 to 10 are suppressed to ensure anonymity and are represented with \*\*. N represents the weighted denominator count. The dashed line represents the baseline value.

<sup>2</sup> Change refers to the difference between the baseline year and each subsequent measurement year.

**Measure 3-11 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 3-12 Conclusion:** Neither supports nor fails to support the hypothesis

**Hypothesis 4—The TI program will provide cost-effective care.**

**Research Question 4.1: What are the costs associated with care coordination provided under TI?**

The TI program was originally designed to provide up to \$300 million across the demonstration approval period to support the physical health (PH) and behavioral health (BH) care integration and coordination for beneficiaries with BH needs who are enrolled in AHCCCS. The target population focuses on at-risk beneficiaries, specifically those with complex BH needs and those enduring extraordinary life circumstances who are AHCCCS-eligible. The TI program’s overall goals are to reduce fragmentation between acute care and BH care, increase efficiencies in service delivery for members with BH needs by improving integration at the provider level, and improve health outcomes for the affected populations.

On September 30, 2021, a one-year extension of the TI program was approved adding an additional \$50 million to continue the efforts supporting the program’s integration goals. This extension brought the total cost of the TI program up to \$350 million for the six-year demonstration period. Table 10-16 displays the total cost, attributed beneficiaries months and the cost per attributed beneficiary per month for the program.

**Table 10-16—TI Program Cost Summary**

	Total
Program Cost	\$350M
Attributed Beneficiaries Months	21,485,027
Program Cost Per Attributed Beneficiary Per Month	\$16.29

**Research Question 4.2: What are the benefits/savings associated with care coordination provided under TI?**

To determine the estimated financial savings of the TI program, HSAG utilized a non-random temporal control actuarial methodology frequently used in disease management assessments to determine financial outcomes, which is referred to as the actuarially adjusted historical control model.<sup>10-9</sup> The model defines the beneficiaries to be included in the reference and intervention populations, determines the baseline and intervention costs for each population adjusted for differences as well as changes over time. This adjustment process, defined as “normalization,” allowed for equivalent comparisons between the baseline and intervention period.

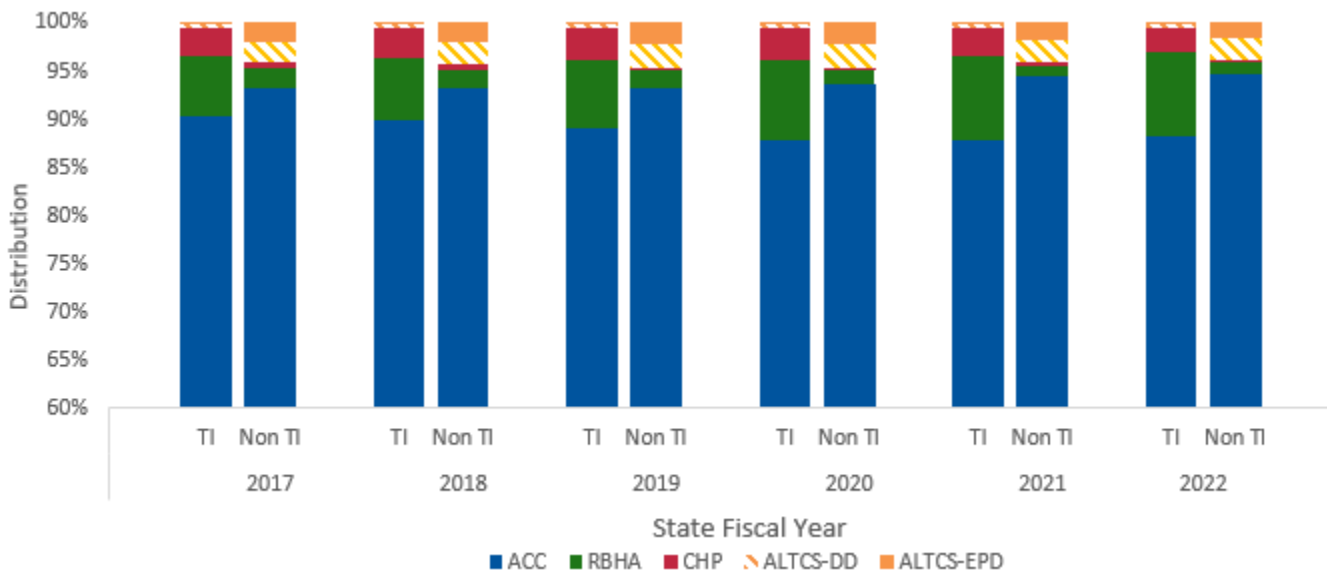
For the TI analysis, the intervention population included beneficiaries attributed to providers participating in the TI program, and the reference population was defined as beneficiaries who did not receive treatment from a TI provider throughout the measurement period. The baseline period was SFY 2016, and the intervention period ended SFY 2022. Each population cohort’s baseline and intervention period costs were normalized for changes in risk, age/gender, race, and area distribution.

This process allowed for the calculation of a counterfactual trend based on the non-intervention population. The counterfactual trend was applied to the normalized baseline cost for the intervention population to create the counterfactual costs. The counterfactual costs were compared to the actual normalized costs to determine the savings from the program. Given the diversity of claims and beneficiary distributions for each AHCCCS program impacted by the TI program as outlined in Figure 10-3 and Figure 10-4 below, HSAG calculated the counterfactual savings for each program independently, then combined the program-level savings to determine the

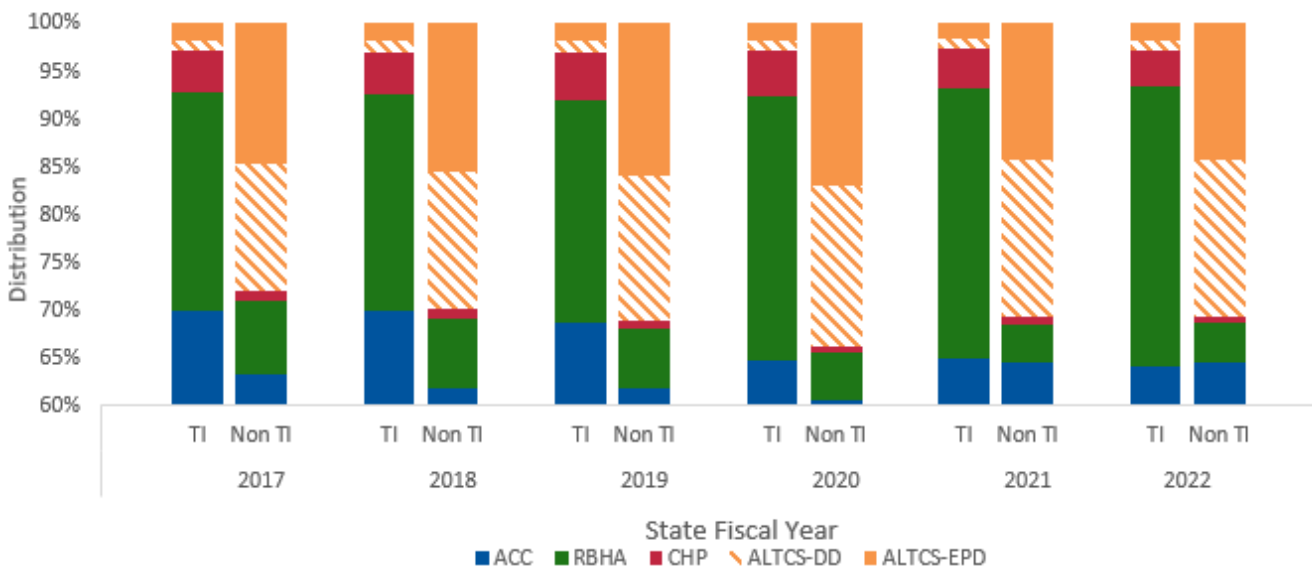
<sup>10-9</sup> Duncan, I. PART 2: Actuarial Issues in Care Management Interventions. Paper 6: An Actuarial Method for Evaluating Disease Management Outcomes. Available at: <https://www.soa.org/49384a/globalassets/assets/files/research/projects/paper6-actuarial-methodology-for-evaluating-dm.pdf>. Accessed on: Nov 9, 2023.

overall savings to be attributed to the TI program. Detailed values for each distribution and program can be found in Appendix A.

**Figure 10-3—Member Month Distribution, TI Participating vs Non-TI Participating Providers**



**Figure 10-4—Claims Distribution, TI Participating vs Non-TI Participating Providers**



The program resulted in a total counterfactual savings of over \$482M or approximately \$22 per attributed beneficiary per month. Compared to the total program cost of \$350M or roughly \$16 per attributed beneficiary per month, the TI program realized a net savings of more than \$131M or around \$6 per attributed beneficiary per month. Table 10-17 illustrates the counterfactual cost savings for the TI program.

**Table 10-17—TI Program Counterfactual Savings Calculation**

Metric	Formula	ACC	ALTCS-DD	ALTCS-EPD	CHP	RBHA	Total
Baseline Intervention Population Cost PMPM	A	\$348.22	\$1,539.41	\$4,430.79	\$646.38	\$1,726.79	\$475.47
Counterfactual Trend (2016 to 2022)	B	17.2%	58.5%	27.0%	30.9%	9.5%	16.3%
Counterfactual Cost PMPM	$C = A*(1+B)$	\$408.07	\$2,439.59	\$5,627.65	\$845.97	\$1,890.01	\$552.96
Ending Period Intervention Population Cost PMPM	D	\$428.06	\$1,443.75	\$5,494.50	\$868.59	\$1,994.02	\$575.16
Normalization Factor (2016 to 2022)	E	1.06	0.95	0.97	1.15	1.15	1.08
Normalized Ending Period Cost	$F = D/E$	\$403.34	\$1,527.18	\$5,678.42	\$752.20	\$1,735.32	\$530.54
Counterfactual (Savings)/Costs PMPM	$G = F-C$	(\$4.73)	(\$912.41)	\$50.77	(\$93.76)	(\$154.69)	(\$22.42)
Member Months 2017-2022	H	19,062,128	85,301	40,717	648,060	1,648,821	21,485,027
Total Counterfactual (Savings)/Costs	$I = G*H$	(\$90,159,182)	(\$77,829,761)	\$2,067,194	(\$60,765,325)	(\$255,058,173)	(\$481,745,249)
Total Targeted Improvement Investment	J						\$350,000,000
Total Net Counterfactual (Savings)/Costs	$K = J-I$						(\$131,745,249)

The summary illustrates a substantial variance in savings per attributed beneficiary per month by program. HSAG attributes the variance to the following key drivers:

- Risk scores calculated using the Chronic Illness & Disability Payment System (CDPS) for both ACC, RBHAs and ALTCS-EPD were higher in the TI attributed beneficiary population but lower in the Comprehensive Health Plan (CHP) population and ALTCS-Beneficiaries with Developmental Disabilities (DD).
- The PMPM cost trend for the population not attributed to TI providers in the CHP population was more than double the trend for beneficiaries attributed to TI providers.
- The CHP population utilizing non-TI participating providers decreased to less than half of the baseline population while those utilizing TI participating providers only increased roughly 25 percent.
- In the ALTCS-DD population, those attributed to TI participating providers had costs that were half of the costs attributed to non-TI participating providers by the end of the demonstration period.

For the ALTCS-EPD population, residential treatment settings did not participate in the TI program, possibly limiting costs savings for the TI program. Detailed calculation of the counterfactual savings for each program can be found in Appendix A.



**Hypothesis 5—Providers will increase the level of care integration over the course of the demonstration.**

Hypothesis 5 uses administrative program data to assess the percentage of providers who transition to a higher level of care integration, as defined by the Substance Abuse and Mental Health Services Administration (SAMHSA) and used in the Integrated Practice Assessment Tool (IPAT). SAMHSA defines six levels of coordinated/integrated care grouped into three broad categories, depicted in Figure 10-5.<sup>10-10</sup> Additional details regarding the IPAT may be found in *A Review and Proposed Standard Framework for Levels of Integrated Healthcare*.<sup>10-11</sup>

**Figure 10-5—SAMHSA Coordinated/Integrated Care Categories**

Coordinated Key Element: Communication		Co-Located Key Element: Physical Proximity		Integrated Key Element: Practice Change	
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
Minimal Collaboration	Basic Collaboration at a Distance	Basic Collaboration On site	Close Collaboration On site with Some Systems Integration	Close Collaboration Approaching an Integrated Practice	Full Collaboration in Transformed/Merged Integrated Practice

The following measures assess providers’ self-reported IPAT scores as of May 31, 2018 (year two) prior to implementing protocols associated with the TI program, against IPAT scores reported as of September 30, 2022 (year six), for providers who submitted a valid IPAT score in all years from year two through year six.<sup>10-12</sup> Table 10-18 presents a summary of the number of sites between year two and year six that participated in the TI program in any year from year two to year six, participating locations that submitted a valid IPAT score in any year from year two to year six, and participating locations that submitted a valid IPAT score in all years (years two–six). There were 607 provider locations (excluding hospitals) that participated in the TI program in any year, with 595 of those providing a valid IPAT score in any year. Overall, 427 sites reported a valid IPAT score in all years.

<sup>10-10</sup> Waxmonsky J, Auxier A, Wise Romero P, and Heath B. Integrated Practice Assessment Tool Version 2.0. Available at: <https://www.thenationalcouncil.org/resources/integration-practice-assessment-tool-ipat/>. Accessed on: Oct 3, 2023.

<sup>10-11</sup> Heath B, Wise Romero P, and Reynolds K. A Review and Proposed Standard Framework for Levels of Integrated Healthcare. Washington, D.C. SAMHSA-HRSA Center for Integrated Health Solutions. March 2013. Available at: <https://napavintners.com/community/docs/Mental-Health-SAMHSA-integration-model.pdf#:~:text=A%20Review%20and%20Proposed%20Standard%20Framework%20for%20Levels,Healthcare.%20Washington%2C%20D.C.SAMHSA-HRSA%20Center%20for%20Integrated%20Health%20Solutions>. Accessed on: Oct 3, 2023.

<sup>10-12</sup> See, e.g., adult PCP years 2 and 3 core components and milestones: Arizona Health Care Cost Containment System. Adult Primary Care Provider, AHCCCS Targeted Investments Program Core Components and Milestones, Version Jun 20, 2019. Available at: [https://www.azahcccs.gov/PlansProviders/Downloads/TI/CoreComponents/Adult\\_PCP\\_webpage.pdf](https://www.azahcccs.gov/PlansProviders/Downloads/TI/CoreComponents/Adult_PCP_webpage.pdf). Accessed on: October 25, 2020.

**Table 10-18—TI Participating Locations and IPAT Completion**

Type	Number of Sites Participating in Year 2	Valid Year 2 IPAT Response	Valid Year 2 IPAT and Valid Year 3 IPAT	No Valid Year 3 IPAT Response
Adult Behavioral Health	157	157	153	4
Adult PCP	191	189	139	50
Pediatric Behavioral Health	119	118	110	8
Pediatric PCP	90	89	84	5
Justice	12	9	9	0
<b>Total</b>	<b>569</b>	<b>562</b>	<b>495</b>	<b>67</b>

**Research Question 5.1: Do providers progress across the Substance Abuse and Mental Health Services Administration (SAMHSA) national standard of six levels of integrated health care?**

Table 10-19 shows the number of TI sites, their respective IPAT scores, and differences in IPAT scores between years two and six for providers who submitted a valid IPAT score in all years (year two through year six). Specifically, the table shows that providers across all areas of concentration (excluding justice) generally increased their attested integration status between demonstration years two and six. For all areas of concentration, there were fewer providers attesting to the lowest integration level of minimal collaboration by the end of year six compared to year two. For instance, at the end of year two, there were 54 adult PCP sites at the lowest integration level while by the end of year six, there were only seven such providers. Likewise, there were more providers attesting to the top two integration levels (five or six) by the end of year six than there were at the end of year two. As shown below, 67 additional adult PCP provider locations attested to either level five or six integration by the end of year six compared to year two.

**Table 10-19—Attested TI Sites, by Year and Area of Concentration**

Number of TI Sites that Attested to Each IPAT Level, by Year and Area of Concentration							
Adult Providers							
Integration Level	IPAT Score	Behavioral Health			PCP		
		Year 2	Year 3	Difference	Year 2	Year 3	Difference
Integrated	6	6	18	12 (200%)	7	15	8 (114%)
	5	33	49	16 (48%)	18	66	48 (267%)
Co-located	4	13	22	9 (69%)	15	25	10 (67%)
	3	22	7	-15 (-68%)	13	7	-6 (-46%)
Coordinated	2	26	33	7 (27%)	18	20	2 (11%)
	1	53	24	-29 (-55%)	68	6	-62 (-91%)
Pediatric Providers							
Integration Level	IPAT Score	Behavioral Health			PCP		
		Year 2	Year 3	Difference	Year 2	Year 3	Difference
Integrated	6	5	9	4 (80%)	5	11	6 (120%)
	5	19	37	18 (95%)	17	23	6 (35%)
Co-located	4	5	14	9 (180%)	3	15	12 (400%)
	3	8	8	0 (0%)	4	4	0 (0%)
Coordinated	2	35	26	-9 (-26%)	11	24	13 (118%)
	1	38	16	-22 (-58%)	44	7	-37 (-84%)

While Table 10-19 shows a general increase in IPAT scores across all providers, Table 10-20 illustrates the change in integration level between year two and year six, for providers who submitted a valid IPAT score in all years (year two through year six). Table 10-20 shows that overall, providers transitioned from having level one or level two integration (coordinated care) to having level three or level four integration (co-located care) at the lowest rates. Approximately 14 percent of providers who attested to having level one or level two integration in year two of the program attested to level three or level four integration at the end of year six. This rate was much lower than other transitions, where 42 percent of level one or level two providers in year two transitioned to level five or level six by the end of year six and 89 percent of level three or level four providers in year two transitioned to level five or level six by the end of year six. Pediatric BH sites had the highest rate (23 percent) among all provider types who attested to transitioning from coordinated care to co-located care between year two and year six. This may indicate that achieving success in transitioning out of the lowest levels of care coordination to the middle levels was likely costlier and most logistically challenging than other transitions.

Conversely, providers who transitioned from coordinated care to integrated care saw more success than providers transitioning from coordinated care to co-located care. As shown in Table 10-20 below, all provider types had the same or increased rates of transition from coordinated care to integrated care, compared to providers who transitioned from coordinated care to co-located care. Justice providers experienced the largest increase, with all providers who reported the lowest levels of integrated care in year two reporting the highest levels of integrated care by the end of year six.

Similarly, providers transitioning from the middle level of integrated care—levels three or four—had the highest rates of transitioning to integrated care, with 84 percent to 100 percent of providers moving from co-located care to integrated care. This may indicate that providers who were already co-located find it easier to increase levels of internal communication and collaboration, thereby meeting the objectives of integrated care, than providers who were at separate locations to merge into one facility.

**Table 10-20—Research Question 5.1**

**Do providers progress across the SAMHSA national standard of six levels of integrated health care?**

Measure and Type of Provider	Denominator	Numerator	Rate
<b>5-1a</b> Percentage of providers transitioning from Level 1 or Level 2 (coordinated care) to Level 3 or Level 4 (co-located care)			
Adult Behavioral Health	79	13	16%
Adult PCP	86	24	28%
Pediatric Behavioral Health	73	13	18%
Pediatric PCP	55	15	27%
Justice Providers	4	0	0%
<b>5-1b</b> Percentage of providers transitioning from Level 1 or Level 2 (coordinated care) to Level 5 or Level 6 (integrated care)			
Adult Behavioral Health	79	11	14%
Adult PCP	86	42	49%
Pediatric Behavioral Health	73	18	25%
Pediatric PCP	55	12	22%
Justice Providers	4	4	100%
<b>5-2</b> Percentage of providers transitioning from Level 3 or Level 4 (co-located care) to Level 5 or Level 6 (integrated care)			
Adult Behavioral Health	35	21	60%
Adult PCP	28	22	79%
Pediatric Behavioral Health	13	9	69%
Pediatric PCP	7	6	86%
Justice Providers	2	2	100%

**Research Question 5.2: Do providers increase level of integration within each broader category (i.e., coordinated, co-located, and integrated care) during the demonstration period?**

Table 10-21 demonstrates the change in integration level within each care category between year two and year six for providers who submitted a valid IPAT score in all years from year two through year six. Excluding justice providers, between 24 and 42 percent of TI participating locations that indicated having level one integration in year two reported transitioning to level two integration by the end of year six. While only 16 out of 54 adult PCPs reported transitioning to level two from level one, many of these providers transitioned to levels beyond level two, as results for Measure 5-1a and Measure 5-1b suggest.

Following a similar pattern, only one location transitioned to level four from level three, reflecting the relatively large number of transitions from levels three or four to levels five or six as reported in Measure 5-2. Excluding pediatric PCP providers, between 46 percent to 100 percent of providers who reported level five integration during year two increased level six integration by the end of year six.

**Table 10-21—Research Question 5.2**

**Do providers increase level of integration within each broader category (i.e., coordinated, co-located, and integrated care) during the demonstration period?**

Measure and Type of Provider	Denominator	Numerator	Rate
<b>5-3</b> Percentage of providers transitioning from Level 1 to Level 2 integration			
Adult Behavioral Health	53	16	30%
Adult PCP	68	3	4%
Pediatric Behavioral Health	38	16	42%
Pediatric PCP	44	18	41%
Justice Providers	4	0	0%
<b>5-4</b> Percentage of providers transitioning from Level 3 to Level 4 integration			
Adult Behavioral Health	22	4	18%
Adult PCP	13	0	0%
Pediatric Behavioral Health	8	1	13%
Pediatric PCP	4	0	0%
Justice Providers	0	0	N/A
<b>5-5</b> Percentage of providers transitioning from Level 5 to Level 6 integration			
Adult Behavioral Health	33	5	15%
Adult PCP	18	4	22%
Pediatric Behavioral Health	19	3	16%
Pediatric PCP	17	3	18%
Justice Providers	3	0	0%

**Hypothesis 6—Providers will conduct care coordination activities.**

Hypothesis 6 was designed to identify the barriers AHCCCS State Administrators and providers faced while implementing the TI program.

Measures in Hypothesis 6 were evaluated through key informant interviews with AHCCCS State administrators, and providers. These methods allow for an in-depth analysis detailing activity focused on care integration and potential successes or barriers surrounding these activities.

Qualitative analysis was performed using transcripts from key informant interviews with AHCCCS State administrators and providers. Research Questions 6.1 and 6.2 contain key findings describing specific topics raised by AHCCCS State administrators concerning the barriers it encountered related to the implementation of the TI Demonstration and its phases of implementation. A full results summary can be found in Appendix C.

State administrators spent the first year implementing the TI program and enrolling eligible providers who applied to participate. State administrators sought stakeholder input from those impacted by the TI program to inform the development process through a series of stakeholder meetings throughout the State. Providers, health plans, the HIE, and internal subject matter experts participated in the stakeholder meetings.

***Research Question 6.1: Did AHCCCS encounter barriers related to the pre-implementation and implementation phases of TI?***

The shift from the initial larger Delivery System Reform Incentive Payment (DSRIP) proposal to the scaled down TI program results in several barriers. AHCCCS State administrators shared several key findings during key informant interviews, such as:

- State administrators had limited time to promote provider participation and struggled with provider retention.
- State administrators had limited time to design the program and revised many aspects of TI concurrently with the implementation of the program.
- Barriers in program design may have influenced the inconclusive results observed in the TI program—including in rates of hospitalization (RQ 1.3 and RQ 2.4) and perceived care coordination (RQ 1.4 and RQ 2.6) amongst TI adult and child participants, and all measures related to the TI justice program (RQ 3.2, RQ 3.3, and RQ 3.5).

***Research Question 6.2: Did providers encounter barriers related to the pre-implementation and implementation phases of TI?***

Providers reported operational challenges and barriers related to the pre-implementation and implementation of TI. Primary, providers shared that:

- Barriers faced by providers included a lack of knowledge or direction from the State on how to improve integration efforts, challenges working with multiple health plans, and perceived increases in oversight of clinical decisions.

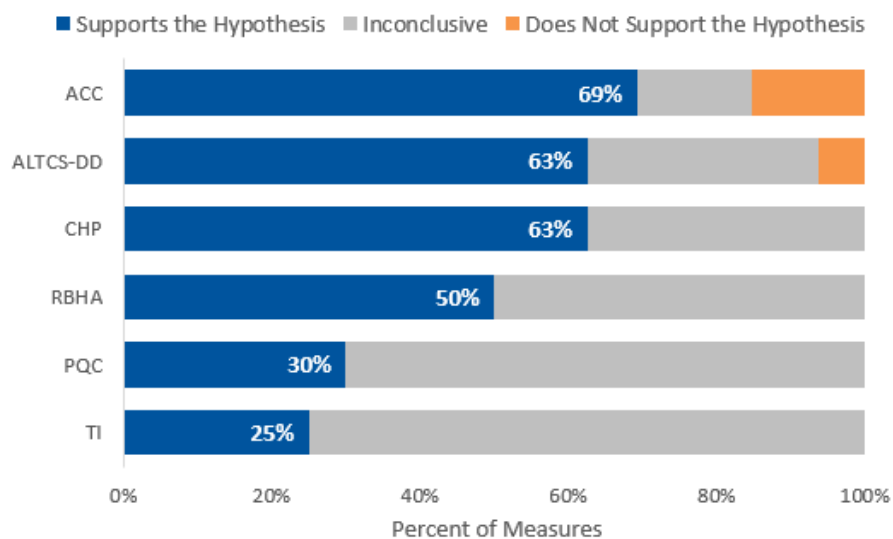


## 11. Conclusions

In total, the Summative Evaluation Report addressed all 35 hypotheses, 22 of which involved statistical testing of quantitative performance measure rates, beneficiary surveys, and national survey data. Six hypotheses were related to descriptive reporting and synthesis from qualitative data collection—one for each program. Six hypotheses related to assessing the cost-effectiveness of each program, and one hypothesis related to the Targeted Investments (TI) program provided a descriptive analysis of quantitative data. Among the hypotheses tested, 13 represented expectations that the Arizona Health Care Cost Containment System (AHCCCS) Section 1115 Waiver Demonstration (the Demonstration) will either maintain or improve care and outcomes for beneficiaries. Hypotheses framed in this manner utilized non-inferiority testing to draw measure conclusions. The results from the statistical analysis of performance measure rate changes between baseline and evaluation periods show general support for the research questions. Of the 104 measures evaluated for the integration of care wherein the desired direction of change was defined, 53 measures supported the hypothesis, while only five did not support the hypothesis. It is important to note that a decline among many service-based measures was driven by the coronavirus disease 2019 (COVID-19) public health emergency (PHE) in federal fiscal year (FFY) 2020, which may have contributed to an observed decline or worsening in the rates if impacts of the PHE extended beyond FFY 2020.<sup>11-1</sup>

The AHCCCS programs evaluated also demonstrated substantial variability in the results. Figure 11-1 illustrates the percentage of measures consistent with their hypothesis across each Demonstration program.

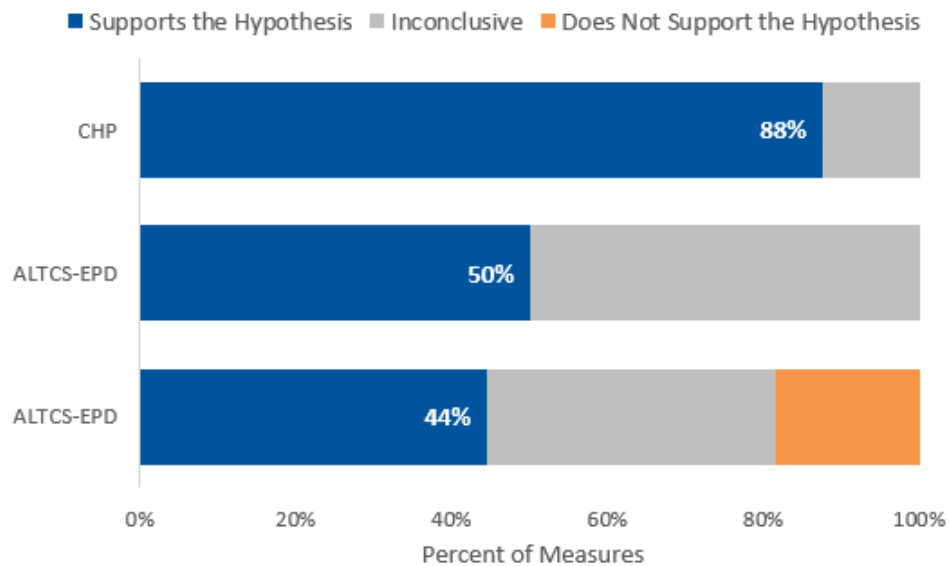
**Figure 11-1—Percentage of Measures Consistent With Research Hypothesis, Integration**



In addition to the evaluation of the integration periods, separate analyses were performed to evaluate the renewal periods for the Arizona Long Term Care System (ALTCS) program for Beneficiaries with Developmental Disabilities (DD), Arizona Long Term Care System (ALTCS) program for people who are Elderly and/or who have Physical Disabilities (EPD), and the Comprehensive Health Plan (CHP) waiver groups. Figure 11-2 below shows the percentage of measures consistent with their respective hypothesis for the renewal periods.

<sup>11-1</sup> Statistical analyses included an indicator variable for FFY 2020 to control for the peak impact of COVID-19 on quantitative outcomes.

**Figure 11-2—Percentage of Measures Consistent With Research Hypothesis, Renewal**



The CHP program exhibited the highest proportion of measures consistent with their respective hypothesis. The only measure that was inconclusive, *Percentage of children and adolescents with access to PCPs*, had high rates near 95 percent before declining; the decline was likely driven by immediate and ongoing effects of the COVID-19 PHE. Additionally, CHP appeared to have substantially higher rates of preventive visits than ACC children. Results measuring the integration of care for CHP beneficiaries showed fewer measures supporting CHP hypotheses when compared to the demonstration period. A notable finding in relation to the integration analysis was that rates were markedly higher in 2022 for the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* possibly indicating improvements following the integration of care.

Results for the AHCCCS Complete Care (ACC) program showed that over two-thirds of measures supported their respective hypothesis. These supporting measures related to substance abuse treatment, preventive or wellness services, management of opioid prescriptions, and management of chronic conditions. Of the four measures that failed to support their respective hypothesis, three (*Percentage of adults who accessed preventive/ambulatory health services*, *Percentage of children and adolescents who accessed PCPs*, and *Percentage of beneficiaries under 21 with an annual dental visit*) were related to access to care. Each of these measures declined sharply following the COVID-19 PHE in 2020 and did not recover throughout the remainder of the demonstration period. Similar trends were seen nationally through National Committee for Quality Assurance (NCQA) Quality Compass<sup>11-2</sup> benchmarks over the evaluation years for the *Percentage of adults who accessed preventive/ambulatory health services* and *Percentage of beneficiaries under 21 with an annual dental visit* performance measures indicating these declines were not isolated to the ACC program. The *Percentage of children and adolescents who accessed PCPs* measure was retired following Healthcare Effectiveness Data and Information Set (HEDIS)<sup>11-3</sup> measurement year 2020; therefore, national trends following the COVID-19 PHE could not be assessed.

The ALTCS program for people who are elderly and/or who have physical disabilities (EPD) had half of all measures with a desired direction support their respective hypothesis. There were no measures that failed to

<sup>11-2</sup> Quality Compass ® is a registered trademark of the National Committee for Quality Assurance (NCQA).

<sup>11-3</sup> HEDIS is a registered trademark of the NCQA.

support the hypothesis. Measures that improved were related to preventive care, including preventive visits and screening for breast and cervical cancer, and management of prescription opioids.

The Regional Behavioral Health Authority (RBHA) program also had half of all measures with a desired direction support its hypothesis, and no measures failed to support their respective hypothesis. All five measures related to management of BH conditions supported their respective hypothesis. Additionally, general support was seen for measures related to management of opioid prescriptions and chronic conditions.

Among the ALTCS-DD group, general support was seen for measures related to preventive care; however, measures relying on data from National Core Indicators (NCI) largely did not support their respective hypotheses, especially for measures related to quality of life. Measures related to access and utilization of care were mostly inconclusive. Results assessing the integration of care for ALTCS-DD beneficiaries were similar to the results evaluating the demonstration period for measures in which integration of care was evaluated.

Many Prior Quarter Coverage (PQC) waiver measures were inconclusive in their findings. Measures that related to continuity of enrollment constituted a majority of these inconclusive measures primarily due to the confounding impact of the COVID-19 PHE and the continuous eligibility requirement associated with the PHE. Rates for measures related to the likelihood of beneficiary enrollment and service utilization were shown to be meaningfully the same and therefore supported their respective hypothesis.

Fewer than one-third of measures with a desired direction supported their respective hypothesis for the Targeted Investments (TI) program. No measures failed to support their hypothesis. All three measures related to alcohol and drug abuse treatment and adherence supported their respective hypothesis for the adult-specific TI group. Additionally, analysis suggested support for measures related to adolescent well-care visits and adult rates of follow-up after hospitalization for mental illness. Inconclusive findings for the TI group are in part due to small sample sizes in the comparison group. Notably, for the ALTCS-DD population, those attributed to TI participating providers had costs that were half of the costs attributed to non-TI participating providers by the end of the demonstration period.

While the results of the statistical analysis could be interpreted as being consistent or inconsistent with the evaluation hypotheses, one limitation of the majority of analyses included an inability to explain why performance measure rates increased or decreased. The pre/post-analysis of changes in measure rates did not include the use of a comparison group that would allow the results to identify changes in measure rates that were associated with specific programs. The analysis was only able to include a comparison group for the analysis of the TI program data and measures that utilized NCI data for the ALTCS-DD program and therefore drew stronger conclusions regarding the impact of this program.

Qualitative analysis of transcripts from key informant interviews and limited focus group data provided critical pieces of context about the implementation of the Demonstration when interpreting the results. Two main points emerged from the qualitative analysis that were reported in the Interim Evaluation Report and retained importance for the Summative Evaluation Report. First, there was a general consensus that during the planning and development phases of the Demonstration, AHCCCS provided stakeholders with excellent information and communication, maintaining transparency about what each program would do and what issues would need to be addressed. AHCCCS also facilitated collaboration among all stakeholders, encouraging the health plans to collaborate in developing resolutions for data sharing. One exception to this was the implementation of the CHP program, wherein key informants described some confusion and lengthy communication processes; however, after collaboration of involved entities, AHCCCS developed a plan forward and the program was successfully implemented.



The second main theme was obtained from ACC focus group participants, who indicated that operational differences across health plans created challenges that impacted all providers and may be particularly detrimental to smaller provider organizations. Providers generally indicated agreement that increased competition was beneficial in the marketplace. However, the operational differences and flexibility provided by the health plan contracts created administrative burden among some providers that prevented them from achieving AHCCCS' goals of improving integration and care coordination.

## 12. Interpretations, Policy Implications, and Interactions With Other State Initiatives

### Interpretations

After analysis of quantitative and qualitative data, several themes emerged from the results of this Summative Evaluation Report. In contrast to the Interim Evaluation Report, approved in October 2022, the evaluation included additional years of Demonstration data and non-inferiority statistical testing to more accurately assess whether the outcomes during the demonstration period were maintained or improved. Moreover, additional data during and after the peak impact of the coronavirus disease 2019 (COVID-19) public health emergency (PHE) provided a more robust assessment of impacts related to the PHE.

Several themes emerge from analysis of quantitative performance measures. First, non-inferiority statistical testing revealed that the Comprehensive Health Plan (CHP) and AHCCCS Complete Care (ACC) programs demonstrated the greatest success in maintaining or improving rates during the demonstration period. Smaller sample sizes among the Arizona Long Term Care System (ALTCSS) and Regional Behavioral Health Authority (RBHA) populations may have contributed to a larger number of inconclusive results; however, results of quantitative performance measures for the RBHA population were largely supportive, with 11 out of 14 claims/encounter-based measures with desired directions supporting the respective hypothesis. Beneficiary survey data, wherein sample sizes are smaller, contributed the most to inconclusive results for this population.

Second, certain measures primarily dependent on beneficiary action that demonstrated worsening in the Interim Evaluation Report appear to have stabilized or reversed. For example, the rate of beneficiaries who remained on antidepressant medication treatment improved for most groups in FFYs 2021 and 2022 compared to prior years, reversing lower rates in the first few years of the renewal period. Similar improvements were seen in rates of asthma controller medication ratios and monitoring for persistent medication for most groups.

Third, it is clear the COVID-19 PHE had a profound impact on measured outcomes, primarily those related to preventive visits and access to care during the first several months and quarters of the PHE as both patients and the health care system were adjusting to its impacts. Some of these impacts remained in the following years. However, findings from the Summative Evaluation Report analysis suggest the CHP beneficiaries and ALTCSS-Beneficiaries with Developmental Disabilities (DD) may have been insulated from longer-term impacts to maintaining routine care, particularly for dental visits and well-child visits. Although rates of these visits decreased in FFY 2020, they quickly reverted back to pre-PHE levels, suggesting the special requirements and needs for these beneficiaries were adequately met after the peak impact of the PHE. In contrast, most children in Medicaid (i.e., the ACC program) exhibited a slight increase in rates after SFY 2020 but remained below that of pre-PHE rates, which indicates room for improvement among most children on Medicaid.

Additionally, results from demographic stratifications suggested that beneficiaries in rural areas were not utilizing telehealth services to the same degree as their urban counterparts following the COVID-19 PHE; however, prior to the COVID-19 PHE, beneficiaries residing in rural counties used telehealth at a higher compared to their urban counterparts. Rural beneficiaries did not increase their usage of telehealth to the same degree as urban beneficiaries during the COVID-19 PHE. This could be indicative of access and technological capability issues if beneficiaries in rural areas who had the capability of utilizing a telehealth setting were already doing so prior to the PHE.

Similarly, access to preventive care remained a challenge for beneficiaries residing in rural counties. However, there were several bright spots related to urban/rural disparities. Prior to the Demonstration, rural beneficiaries had substantially higher rates of concurrent use of opioids and benzodiazepines; however, by the end of the

Demonstration, these beneficiaries had closed the gap such that rates were similar to their urban counterparts. Similarly, disparities in rates of cervical and breast cancer screening began to close among the ALTCS beneficiaries who are elderly and/or who have physical disabilities (EPD) and DD populations.

Measures related to preventative care and child or adolescent well-care visits which showed disparities within rural areas also often contained disparities within the American Indian/Alaskan Native (AI/AN) racial group. These findings may be correlated as approximately a quarter of the AI/AN beneficiaries reside in a rural county, the highest proportion amongst all racial groups. Disparities for AI/AN beneficiaries were not equal across Demonstration programs with RBHA and ALTCS-EPD groups displaying rates more aligned with other racial categories. Utilizing procedures from the RBHA and ALTCS-EPD programs in serving the AI/AN population across other Demonstration groups may assist in alleviating existing disparities. Racial data should be interpreted with caution as measure calculation within this Summative Evaluation Report utilizes encounter data which may not capture all services rendered to AI/AN beneficiaries, who were also served under a fee-for-service system. Additionally, approximately 30 percent of racial data provided is unknown which may introduce further uncertainties or bias in rates when stratified by race.

Finally, and as found in the Interim Evaluation Report, measures related to management of opioid prescriptions continued to improve throughout the demonstration period. There were substantial reductions in the use of opioids at high dosage and concurrent use of opioids and benzodiazepines across all relevant waiver groups throughout the demonstration period with one exception. The rate of concurrent use of opioids and benzodiazepines was not significantly lower among the ALTCS-DD population and remained approximately at the same level as the ALTCS-EPD population by the end of the demonstration period, suggesting room for improvement.

## Policy Implications

### *Integration of Care*

One of AHCCCS's primary objectives and activities during the 2017–2022 demonstration period was the integration of physical health (PH) and behavioral health (BH) care under one plan. Prior to the demonstration period, AHCCCS provided integrated care for its serious mental illness (SMI) population under the RBHA program as a pilot in 2014 and then expanded statewide in 2015. In October 2018, AHCCCS integrated care for most adults and children on Medicaid through the ACC program. A year later, beneficiaries with intellectual and developmental disabilities (I/DD) enrolled in the ALTCS-DD program transitioned to a single plan for PH and BH. AHCCCS planned to integrate children in custody of the Department of Child Safety (DCS) for the following year (October 1, 2020); however, the COVID-19 PHE delayed this effort until April 1, 2021.

Interviews with key informants at AHCCCS and health plans described a general pattern of success. As described in the Interim Evaluation Report, integration of the ACC program was the most ambitious, transitioning 1.5 million beneficiaries to different plans. Key informants noted administrative challenges with transitioning these many beneficiaries in the first few months, but issues were addressed quickly with collaboration between the plans and AHCCCS. Other challenges arose related to the introduction of BH coverage for health plans with less experience in BH or who had developed different systems for PH and BH. Despite these challenges, analysis of quantitative performance measures showed that approximately two-thirds (69 percent) of measures supported their respective hypothesis.

Within the ALTCS-DD population, AHCCCS and ALTCS drew on their history of providing integrated care for the EPD population since ALTCS' founding in 1989. Key informants described how the efforts of both AHCCCS and Department of Economic Security/Division of Developmental Disabilities (DES/DDD) staff led to a



successful transition to integrated PH and BH coverage. Analysis of quantitative performance measures supports this finding, with 56 percent of measures showing support for their respective hypothesis.

Among children in custody of DCS who receive coverage through CHP, key stakeholders described several challenges with the transition and initial implementation of providing integrated care. Transitional challenges included three-way discussions among State administrators, Mercy Care, and DCS leading to duplicative efforts, confusion around requirements, and lengthy communication processes. Once the transition to integrated care was completed, other challenges in providing integrated care remained. These included lack of preparedness and communication for transportation to routine office visits, and staff turnover among contracted providers. Successes of integrated care included rapid response meetings held within the first 24 hours of a beneficiary's placement to accurately assess their PH and BH needs followed by comprehensive evaluations within 30 days of placement and monthly BH visits for the first six months. Analysis of quantitative performance measures largely demonstrated support for their respective hypotheses, including rates of *Follow-up visits within 7-days after hospitalization for mental illness*; however, because only one full fiscal year of data were available for analysis after integration, future analyses may provide a more complete assessment of program performance.

Taken together, AHCCCS' integration efforts demonstrated success in spite of additional challenges brought about by the COVID-19 PHE.

## ALTCs-DD

While 10 out of 16 quantitative performance measures with desired direction showed support for their respective hypothesis over the demonstration period and one measure did not show support (the remaining five measures were inconclusive and neither supported nor failed to support their hypothesis), results from the National Core Indicators (NCI) survey showed substantive declines in rates between the 2015/2016 baseline period and the 2018/2019 evaluation period, particularly for measures related to feeling engaged in the community and satisfaction of living arrangements. Although the COVID-19 PHE led to challenges in collecting more recent survey data, decreases in these measures across both evaluation periods signified a potentially alarming trend. Indeed, AHCCCS had identified approximately 27,000 quality incident reports between June 1, 2017, and August 8, 2018, and issued a corrective action plan (CAP) to DES/DDD.<sup>12-1</sup> These incidents may have contributed to the worsening rates of community engagement as manifested in the NCI survey collection during and shortly following the audit period. On May 19, 2023, AHCCCS determined that DES/DDD “ha[d] demonstrated progress regarding the areas of deficiency as outlined in the original NTC [Notice to Cure] issued on October 15, 2018...”<sup>12-2</sup> and released DES/DDD from the Notice to Cure. AHCCCS is encouraged to continue participation in the NCI-IDD survey efforts to examine whether the CAP led to material improvements in the quality of life for its beneficiaries enrolled with DES/DDD.

## Rural Health Care Challenges

Analysis of rates stratified by demographic factors including beneficiaries residing in rural versus urban counties revealed several patterns. First, most beneficiaries residing in rural counties were less prone to utilize telehealth to receive BH services during the PHE compared to their urban counterparts. Although they utilized this setting at a higher rate prior to the PHE, because rates did not increase by as much as rates for beneficiaries in urban areas,

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<sup>12-1</sup> Arizona Health Care Cost Containment System. *Release from Notice to Cure—Quality Management and Performance Improvement*. Available at: [https://www.azahcccs.gov/Resources/Downloads/AdminActions/DDD/Notices/2023\\_5\\_19\\_DESDDD\\_QM\\_NTC.pdf](https://www.azahcccs.gov/Resources/Downloads/AdminActions/DDD/Notices/2023_5_19_DESDDD_QM_NTC.pdf). Accessed on: Nov 21, 2023.

<sup>12-2</sup> Ibid.

this could indicate those capable of utilizing telehealth were already doing so, revealing potential technological barriers among beneficiaries. Although analysis of telehealth settings was limited to BH services, AHCCCS could collaborate with its rural providers to identify any potential technological limitations their patients may experience when utilizing telehealth. Actions to address this potential gap would, however, likely extend beyond the realistic capabilities that AHCCCS can provide, such as reliable high-speed Internet service.

Second, there were large disparities between rural and urban counties in rates of follow-up visits after ED visits for mental illness and alcohol and other drug abuse or dependence, particularly among the ACC population. However, the rate of *Follow-up visits within 7-days after a hospitalization for mental illness* was slightly higher among rural counties than urban counties, suggesting AHCCCS and providers could leverage similar strategies for following up after ED visits as they do for inpatient stays, where possible. This may be evidence of success for Arizona's health information exchange (HIE), which supplies contracted providers with automated admission-discharge-transfer (ADT) alerts that notify them when beneficiaries are admitted, discharged, or transferred to and from hospitals or other care settings. To the extent Arizona's current HIE, Contexture, sends alerts of ED visits to providers, the discrepancy between rates of follow-up visits after hospitalizations versus ED visits may suggest different pathways or behavior by patient or provider.

Finally, among BH outcomes, rural counties demonstrated a widening disparity in the rates of initiation of treatment for alcohol, opioid, and other drug abuse or dependence. These rates improved throughout the demonstration period among beneficiaries in urban counties, but rural beneficiaries did not see measurable improvement. Strengthening of referral and follow-up after identification of substance use disorder (SUD) diagnoses to encourage beneficiaries in rural communities to initiate treatment may improve outcomes for these rates. The use of telehealth or virtual check-ins could be leveraged to address any logistical and physical challenges accessing care where possible. Similarly, there were notable disparities among utilizing BH services in the ED and intensive outpatient/partial hospitalization settings compared to other settings, suggesting a potential gap in accessing care for these settings.

## Interactions With Other State Initiatives

The State of Arizona operates SUD and opioid use disorder (OUD) treatment and prevention initiatives outside of the Demonstration. Arizona has implemented multiple efforts to reduce opioid misuse and dependence, including releasing opioid prescribing guidelines for the treatment of acute and chronic non-terminal pain in 2014, and updating the guidelines in 2017 and 2018.<sup>12-3</sup> The guidelines synthesize recent evidence, national guidelines, identified best practices, and data to provide clinicians with clinical decision-making support to reduce the overreliance on opioid therapy and increasing awareness of OUD. The most recent guidelines place emphasis on non-stigmatizing language, integration into clinical workflow, and treatment methods for patients receiving long-term opioid therapy.

Substance Abuse and Mental Health Services Association (SAMHSA) allocated over \$24 million via a State Targeted Response to the Opioid Crisis Grant for AHCCCS to use over the course of two years to implement prevention and treatment activities with the goal of reducing the number of individuals and deaths associated with an OUD. The Arizona Opioid State Targeted Response Grant funded the Arizona Opioid State Targeted Response project which began on May 1, 2017. The primary goal of the State Targeted Response was to increase access to

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<sup>12-3</sup> Arizona Department of Health Services. *Arizona Opioid Prescribing Guidelines*. Available at: <https://www.azdhs.gov/documents/audiences/clinicians/clinical-guidelines-recommendations/prescribing-guidelines/az-opioid-prescribing-guidelines.pdf>. Accessed on: Feb 8, 2023.

medication-assisted therapy (MAT), OUD recovery support services, and opioid prevention activities, and to coordinate and integrate care.<sup>12-4</sup>

Additionally, AHCCCS manages the State Opioid Response (SOR) II grant awarded by SAMHSA.<sup>12-5</sup> Arizona was awarded this \$60 million grant to use over the course of two years on August 27, 2020. The grant aimed to increase access to OUD treatment and to coordinated and integrated care by developing and implementing best practices on the full continuum of care. AHCCCS administered the grant by working through other State agencies and community partners, namely DCS and the RBHAs.

SAMHSA awards Arizona the Substance Abuse Prevention, Treatment Block Grant (SUBG) annually.<sup>12-6</sup> The SUBG funds primary prevention services and treatment services for individuals without health insurance or other resources who seek specialty treatment and prevention services for SUD. The SUBG assists pregnant women who use substances or drugs by injection, other persons who use drugs by injection, substance using women with dependent children and their families, and all other individuals with a SUD.

In addition to the Demonstration, the Governor of Arizona declared an Executive Order (EO) to address substance-abuse related issues in Arizona. The Arizona Substance Abuse Partnership (ASAP) is authorized under EO 2013-05. ASAP aims to track and evaluate current substance use data trends, educate the public on emerging substance use issues, and support anti-substance abuse coalitions across the State to prevent substance abuse.<sup>12-7</sup> The status of the ASAP will be reviewed December 31, 2024, to determine appropriate action for its continuance, modification, or termination.<sup>12-8</sup>

## COVID-19 Initiatives

Effective March 15, 2020, two days after the President of the United States declared the COVID-19 PHE a national emergency, states were able to request the use of Section 1135 waivers. Section 1135 waivers were granted to states through the authority of Section 1135 of the Social Security Act, which permits the United States Secretary of Health and Human Services to temporarily waive or modify certain Medicare, Medicaid, and Children's Health Insurance Program (CHIP) requirements to ensure sufficient care and services are provided during a PHE.<sup>12-9</sup> On March 17, 2020, Arizona submitted a Section 1135 waiver request, which was approved by the Centers for Medicare & Medicaid Services (CMS) on March 23, 2020.<sup>12-10</sup> Arizona's application included the request to:

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- <sup>12-4</sup> Arizona Health Care Cost Containment System. *Arizona Opioid State Targeted Response Grant*. Available at: [https://www.azahcccs.gov/AHCCCS/Downloads/StateTargetedResponse/Arizona\\_Opioid\\_STR\\_Fact\\_Sheet.pdf](https://www.azahcccs.gov/AHCCCS/Downloads/StateTargetedResponse/Arizona_Opioid_STR_Fact_Sheet.pdf). Accessed on: Nov 30, 2023.
- <sup>12-5</sup> Arizona Health Care Cost Containment System. *State Opioid Response II*. Available at: <https://www.azahcccs.gov/Resources/Grants/SORII/>. Accessed on: Nov 30, 2023.
- <sup>12-6</sup> Arizona Health Care Cost Containment System. *Substance Use Prevention, Treatment and Recovery Block Grant (SUBG)—formerly known as SABG*. Available at: <https://www.azahcccs.gov/Resources/Grants/SABG/>. Accessed on: Nov 30, 2023.
- <sup>12-7</sup> Arizona Substance Abuse Partnership. *Arizona Substance Abuse Partnership Annual Report 2022*. Available at: <https://goyff.az.gov/councils-commissions/arizona-substance-abuse-partnership>. Accessed on: Nov 30, 2023.
- <sup>12-8</sup> Governor's Office of Youth, Faith and Family. *Executive Order 2013-05: Arizona Substance Abuse Partnership*. Available at: <https://goyff.az.gov/councils-commissions/arizona-substance-abuse-partnership>. Accessed on: Dec 11, 2023.
- <sup>12-9</sup> Centers for Medicare & Medicaid Services. *1135 Waivers*. Available at: <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/1135-Waivers>. Accessed on: Nov 30, 2023.
- <sup>12-10</sup> Centers for Medicare & Medicaid Services. *Section 1135 Waiver Flexibilities – Arizona Coronavirus Disease 2019*. Available at: <https://www.medicare.gov/state-resource-center/disaster-response-toolkit/federal-disaster-resources/entry/54034>. Accessed on: Nov 30, 2023.

- Suspend Medicaid fee-for-service prior authorization requirements.
- Extend pre-existing authorizations through the end of the PHE.
- Suspend Pre-Admission Screening and Resident Review (PASRR) Level I and Level II assessments for 30 days.

As part of the State's response to the ongoing COVID-19 PHE, the American Rescue Plan Act (ARPA) awarded funds on March 11, 2021, to three major allocations:<sup>12-11</sup>

- Home- and Community-Based Services Enhanced Federal Match
  - The provision allows states to supplement funds for rehabilitative services, private duty nursing, alternative benefit plans, home healthcare, personal care services, self-directed personal care services, case management, and school-based services.
- SAMHSA Block Grants to Address Addiction, Mental Health Crisis
  - ARPA allocated an additional \$71 million to SAMHSA Block Grants.
- Mobile-Crisis Services Grant Funding
  - ARPA allocated \$15 million to support Mobile-Crisis services in 24/7 clinically staffed crisis call centers, 24/7 mobile crisis team response, and crisis stabilization units providing short-term stabilization in a non-hospital setting.

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<sup>12-11</sup> Arizona Health Care Cost Containment System. *American Rescue Plan Allocations*. Available at: <https://www.azahcccs.gov/AHCCCS/Initiatives/ARPA/index.html>. Accessed on: Nov 30, 2023.

## 13. Lessons Learned and Recommendations

Previous sections in this Summative Evaluation Report provide background on the Arizona Health Care Cost Containment System (AHCCCS) Section 1115 Waiver programs; a description of the evaluation research questions, hypotheses, measures, data sources; methodology; results; conclusions; and interpretation. This section of the Summative Evaluation Report presents lessons learned from the implementation and recommendations for future improvements for both Arizona and other states considering implementing similar programs.

Throughout the demonstration period, AHCCCS made several substantive program and policy changes. The first was integration of care through providing beneficiaries with a single plan to cover their physical health (PH) and behavioral health (BH) needs. The second was the Targeted Investments (TI) program, a \$350 million initiative aimed at providing integrated PH and BH and coordination for adult and child beneficiaries with both PH and BH needs and individuals transitioning from incarceration into the community. The final policy change was the waiver of retroactive eligibility. A consistent theme among lessons learned throughout each of these programs is the importance of communication.

### Integration of Care at the Health Plan Level (ACC, ALTCS-DD, CHP, and RBHA)

AHCCCS experienced challenges in maintaining an effective level of communication when implementing the integration of care provided under the Comprehensive Health Plan (CHP) for beneficiaries in custody of the Department of Child Safety (DCS). Communication among providers, Mercy Care, DCS, and AHCCCS resulted in delays in receiving timely responses to questions. State administrators asked questions first to DCS before going to Mercy Care, which reduced direct communication with Mercy Care, leading to duplicative work and placing additional burden on providers due to receiving separate requests from both AHCCCS and Mercy Care for similar work. This hierarchical structure through which AHCCCS treated Mercy Care as a subcontractor to DCS led to a misunderstanding of responsibilities on the part of DCS. Ultimately, the communication issues were resolved, and the three entities proceeded collaboratively. The initial confusion regarding roles and responsibilities could have been avoided had expectations and relationships between entities been clearly defined at the beginning.

#### Recommendations:

- Clearly define the roles and expectations of involved entities.
- Minimize the hierarchical structure and number of channels communications must pass through before decisions are made.

### Integration of Care at the Provider Level (TI Program)

Throughout the planning and implementation phases of the TI program, key informants explained that AHCCCS maintained effective communication and collaboration among participating entities to leverage their unique knowledge bases. AHCCCS successfully orchestrated communication with the Regional Behavioral Health Authorities (RBHAs), DCS, the State's health information exchange (HIE), Arizona State University's College of Health Solutions and Ira A. Fulton School of Engineering, and participating providers. In contrast to challenges encountered with the CHP care integration effort, one possible facilitator of successful communication was that AHCCCS minimized the hierarchical structure of communication. Although there were more stakeholders involved in implementing the TI program than integrating care under CHP, AHCCCS communicated directly with

many of the stakeholders. Where there was multi-way communication (such as among ASU College of Health Solutions and Ira A. Fulton School of Engineering and participating providers), roles and expectations were clearly defined from the start, and other entities were brought into discussions directly as necessary.<sup>13-1</sup>

Challenges, however, arose upon implementation and maintenance of the TI program. There was a rapid shift from a larger program with more funding to the TI program shortly before implementation. As a result, AHCCCS was faced with implementing the TI program as they were completing its design. This required substantial time to collaborate with health plans to ensure efforts did not conflict or were not duplicated. Another challenge arising in maintaining the program was attrition among participating providers. Some key informants described that internal champions for the program left the organization and the new staff assigned the responsibility of engaging with TI may not have been as invested in the program and subsequently ceased participation. Other challenges that providers faced related to the large number of ACC plans and differing rules and requirements (such as attribution methods, reporting systems, prior authorization requirements, and quality improvement focus).

Although implementation and operation of the TI program was largely successful despite significant challenges presented by the redesign and reduction in scope, the following recommendations are provided as a reflection on some of the challenges that AHCCCS experienced when implementing the program.

#### **Recommendations:**

- Create alternate avenues for engaging providers that increase the likelihood of continued participation, particularly among smaller provider organizations.
- Consider special information sessions to proactively prepare for potential key staff turnover among participating entities to ensure new staff are aware of the program and its requirements, and to share enthusiasm for program success.
- Outline how providers may be able to make improvements to reach intended milestone targets at the beginning of the program.
- Coordinate health plans' key elements to ensure comparability across health plans.
- Align health plan initiatives with TI program objectives.

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<sup>13-1</sup> For example, an August 4, 2020, Quality Improvement Collaborative between ASU College of Health Solutions and Ira A. Fulton School of Engineering and participating pediatric providers directly involved the State's HIE.



Arizona Health Care Cost Containment System



# Arizona Section 1115 Waiver Evaluation

*Summative Evaluation Report, Appendices*

September 2024



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## Appendix A. Supplemental Quantitative Results

### Full Measure Calculation Results

Table A-1 through Table A-43 provide full measure calculation results for Arizona’s Section 1115 Waiver Demonstration.

#### ACC

**Table A-1—ACC Full Measure Calculations, 2016–2018**

RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-1	2-1	Percentage of adults who accessed preventive/ambulatory health services	590,707	77.3%	613,992	76.2%	589,389	76.9%
2-1	2-2	Percentage of children and adolescents who accessed PCPs	518,596	88.4%	543,487	86.8%	517,811	86.9%
2-1	2-3	Percentage of beneficiaries under 21 with an annual dental visit	577,074	59.8%	591,204	60.6%	555,904	61.0%
2-2	2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	37,937	41.7%	38,239	42.4%	38,232	44.2%
2-2	2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	37,937	12.6%	38,239	12.8%	38,232	14.3%
3-1	3-1	Percentage of beneficiaries with a well-child visit in the first 15 months of life						
3-1	3-1	0 Visits (lower is better)	34,715	4.6%	30,893	5.1%	29,465	2.9%
3-1	3-1	1 Visit	34,715	3.8%	30,893	3.9%	29,465	3.0%
3-1	3-1	2 Visits	34,715	4.6%	30,893	4.3%	29,465	3.9%
3-1	3-1	3 Visits	34,715	6.6%	30,893	5.9%	29,465	5.5%
3-1	3-1	4 Visits	34,715	9.7%	30,893	8.9%	29,465	8.7%
3-1	3-1	5 Visits	34,715	14.7%	30,893	13.8%	29,465	13.7%
3-1	3-1	6+ Visits (higher is better)	34,715	56.0%	30,893	58.1%	29,465	62.4%

RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
3-1	3-2	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	131,739	60.9%	133,510	60.8%	127,285	61.3%
3-1	3-3	Percentage of beneficiaries with an adolescent well-care visit	252,194	38.8%	265,082	39.0%	251,193	40.3%
3-1	3-4	Percentage of children two years of age with appropriate immunization status	--	--	--	--	--	--
3-1	3-5	Percentage of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	15,735	58.9%	16,647	59.4%	15,819	58.5%
3-3	3-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	18,382	45.1%	18,761	44.1%	18,094	41.8%
3-3	3-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	18,382	26.2%	18,761	24.2%	18,094	22.9%
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	9,668	48.8%	11,459	48.4%	12,758	49.6%
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	4,619	47.9%	4,354	47.5%	4,133	49.3%
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	9,318	23.0%	8,971	21.7%	8,323	20.9%
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)						
3-3	3-13	Any	16,571,633	9.2%	17,029,303	9.7%	16,378,404	10.5%
3-3	3-13	ED	16,571,633	0.1%	17,029,303	0.1%	16,378,404	0.1%
3-3	3-13	Intensive outpatient or partial hospitalization	16,571,633	0.5%	17,029,303	0.5%	16,378,404	0.5%
3-3	3-13	Inpatient	16,571,633	0.7%	17,029,303	0.8%	16,378,404	0.9%
3-3	3-13	Outpatient	16,571,633	9.0%	17,029,303	9.4%	16,378,404	10.2%
3-3	3-13	Telehealth	16,571,633	0.4%	17,029,303	0.5%	16,378,404	0.7%

RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
3-4	3-14	Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	62,751	13.3%	52,473	13.5%	36,604	12.4%
3-4	3-15	Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	75,698	17.0%	62,718	15.3%	43,551	12.1%
3-5	3-16	Number of ED visits per 1,000 member months (no desired direction)	17,946,873	58.0	18,409,801	55.6	17,890,950	54.6
3-5	3-17	Number of inpatient stays per 1,000 member months (no desired direction)	17,946,873	7.9	18,409,801	7.7	17,890,950	7.9
3-5	3-18	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	51,082	15.7%	54,404	16.6%	54,323	16.8%

Note: Results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in ACC.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-2—ACC Full Measure Calculations, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-1	2-1	Percentage of adults who accessed preventive/ambulatory health services	607,192	75.7%	692,648	72.9%	868,973	71.8%	985,888	68.3%
2-1	2-2	Percentage of children and adolescents who accessed PCPs	515,597	86.7%	556,608	84.0%	56,604	79.5%	63,043	77.8%
2-1	2-3	Percentage of beneficiaries under 21 with an annual dental visit	562,485	59.8%	605,672	48.5%	697,608	52.7%	715,146	52.7%
2-2	2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	39,758	44.8%	40,206	44.5%	47,351	46.7%	49,932	48.8%
2-2	2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	39,758	16.1%	40,206	15.7%	47,351	17.0%	49,932	18.1%
3-1	3-1	Percentage of beneficiaries with a well-child visit in the first 15 months of life								
3-1	3-1	0 Visits (lower is better)	28,485	2.6%	32,274	3.2%	38,415	4.5%	35,931	4.5%
3-1	3-1	1 Visit	28,485	2.9%	32,274	3.2%	38,415	4.8%	35,931	4.0%
3-1	3-1	2 Visits	28,485	3.5%	32,274	4.4%	38,415	4.9%	35,931	4.8%
3-1	3-1	3 Visits	28,485	5.4%	32,274	5.5%	38,415	6.9%	35,931	6.1%
3-1	3-1	4 Visits	28,485	8.5%	32,274	9.1%	38,415	9.6%	35,931	8.9%
3-1	3-1	5 Visits	28,485	13.5%	32,274	15.1%	38,415	13.9%	35,931	13.6%
3-1	3-1	6+ Visits (higher is better)	28,485	63.6%	32,274	59.5%	38,415	55.3%	35,931	58.0%

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
3-1	3-2	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	127,780	63.0%	135,135	53.2%	151,057	58.0%	152,962	57.2%
3-1	3-3	Percentage of beneficiaries with an adolescent well-care visit	261,396	41.6%	292,785	33.0%	348,461	36.5%	366,832	35.3%
3-1	3-4	Percentage of children two years of age with appropriate immunization status	--	--	--	--	--	--	--	--
3-1	3-5	Percentage of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--	--	--
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	13,940	65.7%	14,245	72.0%	14,544	79.7%	14,676	63.7%
3-3	3-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	19,901	42.3%	22,101	44.1%	25,231	49.2%	27,860	50.2%
3-3	3-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	19,901	23.3%	22,101	24.7%	25,231	26.8%	27,860	26.9%
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	14,319	46.9%	14,286	50.0%	16,370	51.6%	15,017	52.3%
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	3,872	48.7%	3,294	47.4%	3,246	47.6%	2,582	45.3%
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	8,021	19.6%	8,074	19.1%	8,278	17.9%	7,742	16.5%
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)								
3-3	3-13	Any	16,392,861	11.7%	17,202,665	11.5%	19,929,831	11.2%	21,581,723	10.9%
3-3	3-13	ED	16,392,861	0.1%	17,202,665	0.1%	19,929,831	0.1%	21,581,723	0.1%
3-3	3-13	Intensive outpatient or partial hospitalization	16,392,861	0.6%	17,202,665	0.5%	19,929,831	0.5%	21,581,723	0.6%
3-3	3-13	Inpatient	16,392,861	1.0%	17,202,665	1.0%	19,929,831	1.0%	21,581,723	0.8%
3-3	3-13	Outpatient	16,392,861	11.3%	17,202,665	11.0%	19,929,831	10.4%	21,581,723	9.9%
3-3	3-13	Telehealth	16,392,861	0.8%	17,202,665	1.7%	19,929,831	2.5%	21,581,723	2.7%
3-4	3-14	Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	30,974	11.1%	27,520	9.6%	24,760	8.4%	21,694	8.3%
3-4	3-15	Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	33,828	6.9%	30,188	5.1%	29,614	4.0%	26,406	4.0%
3-5	3-16	Number of ED visits per 1,000 member months (no desired direction)	17,718,987	53.3	18,282,471	42.5	20,568,051	38.5	22,292,110	40.6
3-5	3-17	Number of inpatient stays per 1,000 member months (no desired direction)	17,718,987	7.8	18,282,471	7.0	20,568,051	6.8	22,292,110	6.3
3-5	3-18	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	56,150	17.3%	52,652	16.7%	68,394	17.6%	74,262	17.4%

Note: Results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in ACC.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner



**Table A-3—ACC Full Measure Calculations, Adults, 2016–2018**

RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-1	2-3	Percentage of beneficiaries under 21 with an annual dental visit	62,380	37.4%	66,243	37.7%	61,386	38.7%
2-2	2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	36,368	41.9%	36,751	42.7%	36,694	44.4%
2-2	2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	36,368	12.7%	36,751	12.9%	36,694	14.5%
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	7,332	50.2%	8,255	51.1%	8,298	50.5%
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	7,501	43.5%	9,059	42.4%	9,960	43.6%
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	3,663	42.8%	3,295	40.5%	3,015	40.3%
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	8,953	23.5%	8,637	22.2%	7,999	21.4%
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)						
3-3	3-13	Any	9,080,448	10.8%	9,384,554	11.1%	9,069,775	11.9%
3-3	3-13	ED	9,080,448	0.1%	9,384,554	0.1%	9,069,775	0.1%
3-3	3-13	Intensive outpatient or partial hospitalization	9,080,448	0.7%	9,384,554	0.8%	9,069,775	0.8%
3-3	3-13	Inpatient	9,080,448	1.0%	9,384,554	1.2%	9,069,775	1.3%
3-3	3-13	Outpatient	9,080,448	10.5%	9,384,554	10.8%	9,069,775	11.4%
3-3	3-13	Telehealth	9,080,448	0.6%	9,384,554	0.6%	9,069,775	0.8%
3-5	3-16	Number of ED visits per 1,000 member months (no desired direction)	9,794,575	71.4	10,080,630	69.0	9,833,728	66.9
3-5	3-17	Number of inpatient stays per 1,000 member months (no desired direction)	9,794,575	12.9	10,080,630	12.6	9,833,728	12.8

Note: Results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in ACC.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-4—ACC Full Measure Calculations, Adults, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-1	2-3	Percentage of beneficiaries under 21 with an annual dental visit	64,116	38.2%	75,559	30.8%	95,245	33.2%	103,363	31.8%
2-2	2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	37,960	45.1%	38,492	44.6%	45,784	46.8%	48,240	48.9%
2-2	2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	37,960	16.3%	38,492	16.0%	45,784	17.2%	48,240	18.3%
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	7,397	58.3%	7,942	65.0%	8,848	75.0%	9,713	60.7%
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	11,211	41.0%	11,451	45.0%	12,871	45.8%	11,682	47.8%
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	2,801	39.9%	2,414	39.0%	2,378	39.4%	1,912	37.8%
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	7,701	20.0%	7,755	19.6%	8,014	18.2%	7,456	17.0%
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)								
3-3	3-13	Any	9,163,402	13.2%	9,821,719	13.2%	11,864,551	13.0%	13,298,215	12.3%
3-3	3-13	ED	9,163,402	0.1%	9,821,719	0.1%	11,864,551	0.1%	13,298,215	0.0%
3-3	3-13	Intensive outpatient or partial hospitalization	9,163,402	0.9%	9,821,719	0.8%	11,864,551	0.7%	13,298,215	0.7%
3-3	3-13	Inpatient	9,163,402	1.4%	9,821,719	1.4%	11,864,551	1.3%	13,298,215	1.1%
3-3	3-13	Outpatient	9,163,402	12.6%	9,821,719	12.4%	11,864,551	11.8%	13,298,215	10.9%
3-3	3-13	Telehealth	9,163,402	0.9%	9,821,719	2.1%	11,864,551	3.0%	13,298,215	3.3%
3-5	3-16	Number of ED visits per 1,000 member months (no desired direction)	9,819,983	64.6	10,327,238	52.9	12,089,883	48.6	13,504,867	47.2
3-5	3-17	Number of inpatient stays per 1,000 member months (no desired direction)	9,819,983	12.6	10,327,238	11.2	12,089,883	10.6	13,504,867	9.4

Note: Results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in ACC.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-5—ACC Full Measure Calculations, Children, 2016–2018**

RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-1	2-3	Percentage of beneficiaries under 21 with an annual dental visit	514,686	62.6%	524,953	63.5%	494,510	63.7%
2-2	2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	1,568	36.9%	1,488	36.1%	1,538	38.5%
2-2	2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	1,568	10.7%	1,488	10.5%	1,538	10.1%
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	8,404	66.5%	8,391	67.7%	7,521	67.4%
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	2,166	67.1%	2,400	70.8%	2,799	70.8%
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	956	67.3%	1,059	69.5%	1,118	73.7%
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	366	10.4%	334	9.3%	324	9.8%
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)						
3-3	3-13	Any	7,490,829	7.3%	7,644,480	7.8%	7,308,337	8.8%
3-3	3-13	ED	7,490,829	0.0%	7,644,480	0.0%	7,308,337	0.0%
3-3	3-13	Intensive outpatient or partial hospitalization	7,490,829	0.2%	7,644,480	0.2%	7,308,337	0.2%
3-3	3-13	Inpatient	7,490,829	0.3%	7,644,480	0.4%	7,308,337	0.5%
3-3	3-13	Outpatient	7,490,829	7.3%	7,644,480	7.8%	7,308,337	8.8%
3-3	3-13	Telehealth	7,490,829	0.3%	7,644,480	0.3%	7,308,337	0.5%
3-5	3-16	Number of ED visits per 1,000 member months (no desired direction)	8,151,626	42.0	8,328,554	39.5	8,056,675	39.6
3-5	3-17	Number of inpatient stays per 1,000 member months (no desired direction)	8,151,626	1.9	8,328,554	1.8	8,056,675	1.9

Note: Results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in ACC.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-6—ACC Full Measure Calculations, Children, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-1	2-3	Percentage of beneficiaries under 21 with an annual dental visit	498,369	62.6%	530,113	51.0%	602,363	55.8%	611,783	56.2%
2-2	2-7	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	1,798	40.1%	1,714	41.3%	1,567	43.5%	1,691	46.4%
2-2	2-8	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	1,798	11.0%	1,714	9.6%	1,567	11.0%	1,691	11.0%
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	6,543	74.1%	6,303	80.9%	5,696	87.0%	4,963	69.7%
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	3,108	67.9%	2,835	70.1%	3,499	73.0%	3,335	68.2%
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness	1,070	71.5%	880	70.4%	868	70.0%	670	66.9%
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	320	8.5%	319	7.1%	264	8.1%	286	4.5%
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)								
3-3	3-13	Any	7,229,179	9.7%	7,380,866	9.3%	8,065,221	8.6%	8,283,412	8.8%
3-3	3-13	ED	7,229,179	0.1%	7,380,866	0.0%	8,065,221	0.1%	8,283,412	0.1%
3-3	3-13	Intensive outpatient or partial hospitalization	7,229,179	0.2%	7,380,866	0.1%	8,065,221	0.1%	8,283,412	0.3%
3-3	3-13	Inpatient	7,229,179	0.5%	7,380,866	0.5%	8,065,221	0.5%	8,283,412	0.5%
3-3	3-13	Outpatient	7,229,179	9.7%	7,380,866	9.2%	8,065,221	8.3%	8,283,412	8.4%
3-3	3-13	Telehealth	7,229,179	0.7%	7,380,866	1.2%	8,065,221	1.7%	8,283,412	1.7%
3-5	3-16	Number of ED visits per 1,000 member months (no desired direction)	7,898,522	39.3	7,954,947	29.0	8,477,903	24.0	8,786,971	30.4
3-5	3-17	Number of inpatient stays per 1,000 member months (no desired direction)	7,898,522	1.9	7,954,947	1.6	8,477,903	1.3	8,786,971	1.5

Note: Results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in ACC.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-7—ACC Full Measure Calculations, Surveys, Total**

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-6	1-6	<b>Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers</b>				
		Intercept	1.270	0.061	433.228	<0.001
		Post Implementation Indicator	0.152	0.099	2.372	0.124
2-1	2-4	<b>Percentage of beneficiaries who reported they received care as soon as they needed</b>				
		Intercept	1.924	0.072	710.830	<0.001
		Post Implementation Indicator	-0.086	0.119	0.532	0.466
2-1	2-5	<b>Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor's office or clinic as soon as they needed</b>				
		Intercept	1.545	0.044	1,206.779	<0.001
		Post Implementation Indicator	0.057	0.073	0.601	0.438
2-1	2-6	<b>Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed</b>				
		Intercept	1.401	0.060	543.670	<0.001
		Post Implementation Indicator	0.063	0.093	0.454	0.500
3-1	3-6	<b>Percentage of adult beneficiaries who reported having a flu shot or nasal flu spray since July 1</b>				
		Intercept	-0.442	0.040	120.561	<0.001
		Post Implementation Indicator	0.240	0.060	15.977	<0.001
4-1	4-1	<b>Percentage of beneficiaries who reported a high rating of overall health</b>				
		Intercept	0.096	0.027	12.421	<0.001
		Post Implementation Indicator	0.016	0.042	0.143	0.706
4-2	4-2	<b>Percentage of beneficiaries who reported a high rating of overall mental or emotional health</b>				
		Intercept	0.321	0.027	136.515	<0.001
		Post Implementation Indicator	-0.049	0.043	1.321	0.250
5-1	5-1	<b>Percentage of beneficiaries who reported a high rating of health plan</b>				
		Intercept	1.502	0.035	1,800.911	<0.001
		Post Implementation Indicator	-0.003	0.055	0.004	0.950
5-1	5-2	<b>Percentage of beneficiaries who reported a high rating of overall health care</b>				
		Intercept	1.531	0.043	1,285.739	<0.001
		Post Implementation Indicator	-0.098	0.069	2.026	0.155

**Table A-8—ACC Full Measure Calculations, Surveys, Adults**

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-6	1-6	<b>Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers</b>				
		Intercept	1.218	0.077	249.621	<0.001
		Post Implementation Indicator	0.155	0.119	1.701	0.192
2-1	2-4	<b>Percentage of beneficiaries who reported they received care as soon as they needed</b>				
		Intercept	1.773	0.090	384.235	<0.001
		Post Implementation Indicator	-0.247	0.136	3.286	0.070
2-1	2-5	<b>Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor's office or clinic as soon as they needed</b>				
		Intercept	1.315	0.059	490.820	<0.001
		Post Implementation Indicator	0.105	0.093	1.269	0.260
2-1	2-6	<b>Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed</b>				
		Intercept	1.434	0.073	387.162	<0.001
		Post Implementation Indicator	0.045	0.110	0.167	0.683
3-1	3-6	<b>Percentage of adult beneficiaries who reported having a flu shot or nasal flu spray since July 1</b>				
		Intercept	-0.442	0.040	120.561	<0.001
		Post Implementation Indicator	0.240	0.060	15.977	<0.001
4-1	4-1	<b>Percentage of beneficiaries who reported a high rating of overall health</b>				
		Intercept	-0.797	0.042	358.156	<0.001
		Post Implementation Indicator	-0.087	0.064	1.873	0.171
4-2	4-2	<b>Percentage of beneficiaries who reported a high rating of overall mental or emotional health</b>				
		Intercept	-0.208	0.039	28.172	<0.001
		Post Implementation Indicator	-0.100	0.059	2.889	0.089
5-1	5-1	<b>Percentage of beneficiaries who reported a high rating of health plan</b>				
		Intercept	1.216	0.047	672.355	<0.001
		Post Implementation Indicator	0.023	0.071	0.102	0.749
5-1	5-2	<b>Percentage of beneficiaries who reported a high rating of overall health care</b>				
		Intercept	1.223	0.055	496.987	<0.001
		Post Implementation Indicator	-0.164	0.084	3.773	0.052



**Table A-9—ACC Full Measure Calculations, Surveys, Children**

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-6	1-6	<b>Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers</b>				
		Intercept	1.354	0.100	183.603	<0.001
		Post Implementation Indicator	0.194	0.180	1.164	0.281
2-1	2-4	<b>Percentage of beneficiaries who reported they received care as soon as they needed</b>				
		Intercept	2.156	0.120	320.774	<0.001
		Post Implementation Indicator	0.914	0.308	8.791	0.003
2-1	2-5	<b>Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor's office or clinic as soon as they needed</b>				
		Intercept	1.802	0.068	705.422	<0.001
		Post Implementation Indicator	0.087	0.119	0.528	0.467
2-1	2-6	<b>Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed</b>				
		Intercept	1.329	0.106	156.377	<0.001
		Post Implementation Indicator	0.089	0.177	0.254	0.614
4-1	4-1	<b>Percentage of beneficiaries who reported a high rating of overall health</b>				
		Intercept	0.965	0.042	521.558	<0.001
		Post Implementation Indicator	0.511	0.075	46.478	<0.001
4-2	4-2	<b>Percentage of beneficiaries who reported a high rating of overall mental or emotional health</b>				
		Intercept	0.863	0.041	434.870	<0.001
		Post Implementation Indicator	0.201	0.069	8.486	0.004
5-1	5-1	<b>Percentage of beneficiaries who reported a high rating of health plan</b>				
		Intercept	1.823	0.055	1,106.869	<0.001
		Post Implementation Indicator	0.062	0.090	0.473	0.492
5-1	5-2	<b>Percentage of beneficiaries who reported a high rating of overall health care</b>				
		Intercept	1.924	0.070	765.510	<0.001
		Post Implementation Indicator	0.224	0.127	3.104	0.078

**Table A-10—ACC Supplemental Model Results, Total**

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
2-1	2-1	<b>Percentage of adults who accessed preventive/ambulatory health services</b>				
		Intercept	1.197	0.002	458,047.694	<0.001
		Post Implementation Indicator	-0.283	0.002	15,700.061	<0.001
		FFY 2020 COVID Indicator	0.076	0.003	629.412	<0.001
2-1	2-2	<b>Percentage of children and adolescents who accessed PCPs</b>				
		Intercept	1.932	0.002	651,685.805	<0.001
		Post Implementation Indicator	-0.334	0.003	11,629.434	<0.001
		FFY 2020 COVID Indicator	0.060	0.004	210.410	<0.001
2-1	2-3	<b>Percentage of beneficiaries under 21 with an annual dental visit</b>				
		Intercept	0.426	0.002	74,621.609	<0.001
		Post Implementation Indicator	-0.237	0.002	12,541.057	<0.001
		FFY 2020 COVID Indicator	-0.250	0.003	7,203.539	<0.001
2-2	2-7	<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)</b>				
		Intercept	-0.292	0.006	2,379.997	<0.001
		Post Implementation Indicator	0.169	0.008	437.979	<0.001
		FFY 2020 COVID Indicator	-0.099	0.011	75.181	<0.001
2-2	2-8	<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)</b>				
		Intercept	-1.880	0.009	46,448.327	<0.001
		Post Implementation Indicator	0.303	0.011	719.775	<0.001
		FFY 2020 COVID Indicator	-0.100	0.015	42.011	<0.001
3-1	3-1	<b>Percentage of beneficiaries with a well-child visit in the first 15 months of life</b>				
		<b>0 Visits (lower is better)</b>				
		Intercept	-3.126	0.016	37,419.660	<0.001
		Post Implementation Indicator	-0.055	0.023	5.844	0.016
		FFY 2020 COVID Indicator	-0.218	0.035	38.067	<0.001
		<b>1 Visit</b>				
		Intercept	-3.290	0.017	35,635.137	<0.001
		Post Implementation Indicator	0.108	0.024	20.755	<0.001
		FFY 2020 COVID Indicator	-0.215	0.035	37.227	<0.001

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>2 Visits</b>				
		Intercept	-3.100	0.016	37,689.062	<0.001
		Post Implementation Indicator	0.046	0.022	4.348	0.037
		FFY 2020 COVID Indicator	-0.030	0.031	0.929	0.335
		<b>3 Visits</b>				
		Intercept	-2.746	0.014	40,632.168	<0.001
		Post Implementation Indicator	0.032	0.019	2.964	0.085
		FFY 2020 COVID Indicator	-0.135	0.028	23.972	<0.001
		<b>4 Visits</b>				
		Intercept	-2.297	0.011	41,646.725	<0.001
		Post Implementation Indicator	-0.011	0.016	0.528	0.467
		FFY 2020 COVID Indicator	0.003	0.022	0.022	0.883
		<b>5 Visits</b>				
		Intercept	-1.808	0.009	37,611.413	<0.001
		Post Implementation Indicator	-0.033	0.013	6.400	0.011
		FFY 2020 COVID Indicator	0.117	0.018	42.438	<0.001
		<b>6+ Visits (higher is better)</b>				
		Intercept	0.349	0.007	2,805.649	<0.001
		Post Implementation Indicator	-0.003	0.009	0.092	0.761
		FFY 2020 COVID Indicator	0.037	0.013	8.212	0.004
3-1	3-2	<b>Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life</b>				
		Intercept	0.446	0.003	18,572.834	<0.001
		Post Implementation Indicator	-0.073	0.005	264.944	<0.001
		FFY 2020 COVID Indicator	-0.243	0.006	1,496.277	<0.001
3-1	3-3	<b>Percentage of beneficiaries with an adolescent well-care visit</b>				
		Intercept	-0.431	0.002	34,155.573	<0.001
		Post Implementation Indicator	-0.083	0.003	704.384	<0.001
		FFY 2020 COVID Indicator	-0.192	0.004	1,851.820	<0.001
3-1	3-4	<b>Percentage of children two years of age with appropriate immunization status</b>	--	--	--	--
3-1	3-5	<b>Percentage of adolescents 13 years of age with appropriate immunizations</b>	--	--	--	--

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-2	3-7	<b>Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent</b>				
		Intercept	0.362	0.009	1,529.442	<0.001
		Post Implementation Indicator	0.474	0.014	1,147.568	<0.001
		FFY 2020 COVID Indicator	0.110	0.021	26.413	<0.001
3-3	3-8	<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)</b>				
		Intercept	-0.255	0.009	885.903	<0.001
		Post Implementation Indicator	0.164	0.011	209.781	<0.001
		FFY 2020 COVID Indicator	-0.148	0.015	91.697	<0.001
3-3	3-8	<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)</b>				
		Intercept	-1.129	0.010	12,992.241	<0.001
		Post Implementation Indicator	0.076	0.013	34.084	<0.001
		FFY 2020 COVID Indicator	-0.061	0.018	11.675	<0.001
3-3	3-9	<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>				
		Intercept	-0.042	0.011	14.986	<0.001
		Post Implementation Indicator	0.056	0.014	15.186	<0.001
		FFY 2020 COVID Indicator	-0.014	0.019	0.570	0.450
3-3	3-10	<b>Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness</b>				
		Intercept	-0.071	0.017	16.467	<0.001
		Post Implementation Indicator	-0.032	0.027	1.417	0.234
		FFY 2020 COVID Indicator	-0.003	0.040	0.005	0.946
3-3	3-11	<b>Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence</b>				
		Intercept	-1.272	0.015	7,364.534	<0.001
		Post Implementation Indicator	-0.243	0.022	117.939	<0.001
		FFY 2020 COVID Indicator	0.073	0.033	4.960	0.026
3-3	3-12	<b>Percentage of beneficiaries with a screening for clinical depression and follow-up plan</b>	--	--	--	--

RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-3	3-13	<b>Percentage of beneficiaries receiving mental health services (no desired direction)</b>				
3-3	3-13	<b>Any</b>				
		Intercept	-2.220	0.002	1,813,872.692	<0.001
		Post Implementation Indicator	0.153	0.002	4,858.745	<0.001
		FFY 2020 COVID Indicator	0.029	0.003	91.479	<0.001
3-3	3-13	<b>ED</b>				
		Intercept	-7.154	0.018	166,416.277	<0.001
		Post Implementation Indicator	-0.093	0.024	14.463	<0.001
		FFY 2020 COVID Indicator	0.000	0.036	0.000	0.995
3-3	3-13	<b>Intensive outpatient or partial hospitalization</b>				
		Intercept	-5.274	0.007	587,625.904	<0.001
		Post Implementation Indicator	0.064	0.009	48.454	<0.001
		FFY 2020 COVID Indicator	-0.052	0.013	15.529	<0.001
3-3	3-13	<b>Inpatient</b>				
		Intercept	-4.794	0.005	779,660.354	<0.001
		Post Implementation Indicator	0.136	0.007	355.211	<0.001
		FFY 2020 COVID Indicator	0.036	0.010	13.989	<0.001
3-3	3-13	<b>Outpatient</b>				
		Intercept	-2.247	0.002	1,818,335.371	<0.001
		Post Implementation Indicator	0.101	0.002	2,059.236	<0.001
		FFY 2020 COVID Indicator	0.057	0.003	351.891	<0.001
3-3	3-13	<b>Telehealth</b>				
		Intercept	-5.230	0.007	603,351.711	<0.001
		Post Implementation Indicator	1.372	0.007	33,856.964	<0.001
		FFY 2020 COVID Indicator	-0.176	0.007	605.966	<0.001
3-4	3-14	<b>Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage (lower is better)</b>				
		Intercept	-1.888	0.008	61,792.310	<0.001
		Post Implementation Indicator	-0.372	0.014	664.951	<0.001
		FFY 2020 COVID Indicator	0.017	0.024	0.500	0.480
3-4	3-15	<b>Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)</b>				
		Intercept	-1.717	0.007	69,248.481	<0.001
		Post Implementation Indicator	-1.212	0.017	5,367.477	<0.001
		FFY 2020 COVID Indicator	0.006	0.030	0.044	0.835

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-5	3-16	<b>Number of ED visits per 1,000 member months (no desired direction)</b>				
		Intercept	-2.881	0.055	2,712.09	<0.001
		Post Implementation Indicator	-0.240	0.078	9.41	0.002
		FFY 2020 COVID Indicator	-0.038	0.111	0.12	0.734
3-5	3-17	<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>				
		Intercept	-4.848	0.034	19,824.51	<0.001
		Post Implementation Indicator	-0.116	0.049	5.65	0.017
		FFY 2020 COVID Indicator	0.001	0.069	0.00	0.987
3-5	3-18	<b>Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)</b>				
		Intercept	-1.631	0.007	58,203.127	<0.001
		Post Implementation Indicator	0.077	0.009	73.146	<0.001
		FFY 2020 COVID Indicator	-0.052	0.013	16.008	<0.001

Note: Statistical testing results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-11—ACC Supplemental Model Results, Adults**

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
2-1	2-3	<b>Percentage of beneficiaries under 21 with an annual dental visit</b>				
		Intercept	-0.492	0.005	10,841.75	<0.001
		Post Implementation Indicator	-0.177	0.006	797.39	<0.001
		FFY 2020 COVID Indicator	-0.141	0.009	249.79	<0.001
2-2	2-7	<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)</b>				
		Intercept	-0.282	0.006	2,140.37	<0.001
		Post Implementation Indicator	0.165	0.008	402.04	<0.001
		FFY 2020 COVID Indicator	-0.099	0.012	71.84	<0.001
2-2	2-8	<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)</b>				
		Intercept	-1.870	0.009	44,432.43	<0.001
		Post Implementation Indicator	0.309	0.011	727.04	<0.001
		FFY 2020 COVID Indicator	-0.096	0.016	37.55	<0.001



RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-1	3-4	Percentage of children two years of age with appropriate immunization status	--	--	--	--
3-1	3-5	Percentage of adolescents 13 years of age with appropriate immunizations	--	--	--	--
3-2	3-7	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent				
		Intercept	0.024	0.013	3.45	0.063
		Post Implementation Indicator	0.590	0.018	1,033.77	<0.001
		FFY 2020 COVID Indicator	0.004	0.027	0.03	0.870
3-3	3-9	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness				
		Intercept	-0.274	0.012	489.65	<0.001
		Post Implementation Indicator	0.071	0.016	18.96	<0.001
		FFY 2020 COVID Indicator	0.003	0.022	0.01	0.905
3-3	3-10	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness				
		Intercept	-0.352	0.020	299.99	<0.001
		Post Implementation Indicator	-0.087	0.032	7.57	0.006
		FFY 2020 COVID Indicator	-0.009	0.048	0.04	0.848
3-3	3-11	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence				
		Intercept	-1.244	0.015	6,879.84	<0.001
		Post Implementation Indicator	-0.244	0.023	115.82	<0.001
		FFY 2020 COVID Indicator	0.077	0.033	5.43	0.020
3-3	3-12	Percentage of beneficiaries with a screening for clinical depression and follow-up plan	--	--	--	--
3-3	3-13	Percentage of beneficiaries receiving mental health services (no desired direction)				
		Any				
		Intercept	-2.062	0.002	976,719.00	<0.001
		Post Implementation Indicator	0.140	0.003	2,624.01	<0.001
		FFY 2020 COVID Indicator	0.038	0.004	105.03	<0.001

RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>ED</b>				
		Intercept	-6.657	0.018	130,368.43	<0.001
		Post Implementation Indicator	-0.581	0.029	408.21	<0.001
		FFY 2020 COVID Indicator	0.203	0.043	22.02	<0.001
		<b>Intensive outpatient or partial hospitalization</b>				
		Intercept	-4.859	0.008	413,816.24	<0.001
		Post Implementation Indicator	0.001	0.010	0.01	0.931
		FFY 2020 COVID Indicator	0.038	0.014	7.13	0.008
		<b>Inpatient</b>				
		Intercept	-4.437	0.006	522,129.76	<0.001
		Post Implementation Indicator	0.061	0.008	55.93	<0.001
		FFY 2020 COVID Indicator	0.091	0.011	69.95	<0.001
		<b>Outpatient</b>				
		Intercept	-2.102	0.002	983,912.98	<0.001
		Post Implementation Indicator	0.077	0.003	749.06	<0.001
		FFY 2020 COVID Indicator	0.072	0.004	355.04	<0.001
		<b>Telehealth</b>				
		Intercept	-5.022	0.008	376,514.53	<0.001
		Post Implementation Indicator	1.375	0.009	23,329.82	<0.001
		FFY 2020 COVID Indicator	-0.179	0.009	440.94	<0.001
3-5	3-16	<b>Number of ED visits per 1,000 member months (no desired direction)</b>				
		Intercept	-2.673	0.055	2,364.83	<0.001
		Post Implementation Indicator	-0.256	0.078	10.86	<0.001
		FFY 2020 COVID Indicator	-0.011	0.110	0.01	0.918
3-5	3-17	<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>				
		Intercept	-4.360	0.046	9,135.81	<0.001
		Post Implementation Indicator	-0.161	0.065	6.23	0.013
		FFY 2020 COVID Indicator	0.026	0.091	0.08	0.776

Note: Statistical testing results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

**Table A-12—ACC Supplemental Model Results, Children**

RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
2-1	2-3	<b>Percentage of beneficiaries under 21 with an annual dental visit</b>				
		Intercept	0.544	0.002	105,479.758	<0.001
		Post Implementation Indicator	-0.225	0.002	9,747.82	<0.001
		FFY 2020 COVID Indicator	-0.279	0.003	7,817.40	<0.001
2-2	2-7	<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)</b>				
		Intercept	-0.524	0.031	295.12	<0.001
		Post Implementation Indicator	0.254	0.042	37.21	<0.001
		FFY 2020 COVID Indicator	-0.083	0.057	2.14	0.144
2-2	2-8	<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)</b>				
		Intercept	-2.150	0.048	1,984.52	<0.001
		Post Implementation Indicator	0.059	0.066	0.81	0.368
		FFY 2020 COVID Indicator	-0.153	0.094	2.68	0.102
3-1	3-4	<b>Percentage of children two years of age with appropriate immunization status</b>	--	--	--	--
3-1	3-5	<b>Percentage of adolescents 13 years of age with appropriate immunizations</b>	--	--	--	--
3-2	3-7	<b>Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent</b>				
		Intercept	0.716	0.014	2,745.59	<0.001
		Post Implementation Indicator	0.499	0.023	483.50	<0.001
		FFY 2020 COVID Indicator	0.229	0.037	38.71	<0.001
3-3	3-9	<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>				
		Intercept	0.834	0.025	1,080.81	<0.001
		Post Implementation Indicator	0.004	0.033	0.02	0.897
		FFY 2020 COVID Indicator	0.015	0.046	0.10	0.751
3-3	3-10	<b>Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for mental illness</b>				
		Intercept	0.863	0.039	487.08	<0.001
		Post Implementation Indicator	-0.023	0.058	0.16	0.686
		FFY 2020 COVID Indicator	0.027	0.085	0.10	0.755

RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-3	3-11	<b>Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence</b>				
		Intercept	-2.215	0.105	445.57	<0.001
		Post Implementation Indicator	-0.360	0.169	4.56	0.033
		FFY 2020 COVID Indicator	-0.002	0.256	0.00	0.992
3-3	3-12	<b>Percentage of beneficiaries with a screening for clinical depression and follow-up plan</b>	--	--	--	--
3-3	3-13	<b>Percentage of beneficiaries receiving mental health services (no desired direction)</b>				
		<b>Any</b>				
		Intercept	-2.445	0.003	821,071.68	<0.001
		Post Implementation Indicator	0.132	0.004	1,294.18	<0.001
		FFY 2020 COVID Indicator	0.035	0.005	47.89	<0.001
		<b>ED</b>				
		Intercept	-8.710	0.057	23,398.45	<0.001
		Post Implementation Indicator	1.449	0.063	529.61	<0.001
		FFY 2020 COVID Indicator	-0.364	0.064	32.62	<0.001
		<b>Intensive outpatient or partial hospitalization</b>				
		Intercept	-6.258	0.017	139,769.65	<0.001
		Post Implementation Indicator	0.111	0.023	23.70	<0.001
		FFY 2020 COVID Indicator	-0.427	0.037	129.51	<0.001
		<b>Inpatient</b>				
		Intercept	-5.533	0.012	224,684.95	<0.001
		Post Implementation Indicator	0.237	0.015	235.09	<0.001
		FFY 2020 COVID Indicator	-0.080	0.021	13.84	<0.001
		<b>Outpatient</b>				
		Intercept	-2.452	0.003	820,937.71	<0.001
		Post Implementation Indicator	0.107	0.004	839.04	<0.001
		FFY 2020 COVID Indicator	0.051	0.005	99.10	<0.001
		<b>Telehealth</b>				
		Intercept	-5.564	0.012	220,318.49	<0.001
		Post Implementation Indicator	1.290	0.013	9,345.18	<0.001
		FFY 2020 COVID Indicator	-0.127	0.013	92.60	<0.001

RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-5	3-16	<b>Number of ED visits per 1,000 member months (no desired direction)</b>				
		Intercept	-3.210	0.076	1,766.41	<0.001
		Post Implementation Indicator	-0.256	0.108	5.64	0.018
		FFY 2020 COVID Indicator	-0.073	0.153	0.23	0.633
3-5	3-17	<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>				
		Intercept	-6.289	0.056	12,707.37	<0.001
		Post Implementation Indicator	-0.150	0.079	3.62	0.057
		FFY 2020 COVID Indicator	-0.020	0.112	0.03	0.860

Note: Statistical testing results for Measures 3-4, 3-5, and 3-12 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioner

## ALTCS

Table A-13—ALTCS-DD Full Measure Calculations, 2015–2018

RQ	Meas Num	Measure Description	2015		2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	12,011	87.1%	12,528	87.8%	13,195	88.0%	13,843	88.7%
1-2	1-2	Percentage of children and adolescents who accessed primary care practitioners	14,890	91.1%	15,448	91.2%	16,144	91.0%	16,902	91.0%
1-2	1-3	Percentage of beneficiaries under 21 with an annual dental visit	15,840	55.5%	16,433	53.4%	17,115	56.4%	17,932	57.1%
2-1	2-1	Percentage of adult beneficiaries with a breast cancer screening	937	43.9%	922	45.7%	953	46.2%	995	45.1%
2-1	2-2	Percentage of adult beneficiaries with a cervical cancer screening	3,863	17.8%	3,995	17.4%	4,124	16.5%	4,300	16.3%
2-1	2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	575	77.1%	594	79.0%	630	79.8%	629	76.2%
2-2	2-4	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	3,082	52.2%	3,059	51.2%	3,140	53.5%	3,297	56.9%
2-2	2-5	Percentage of beneficiaries with an adolescent well-care visit	8,023	39.8%	8,540	43.1%	9,014	43.3%	9,556	45.9%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	366	68.3%	368	69.2%	399	75.2%	471	73.6%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	67	52.3%	69	45.9%	83	51.8%	90	47.3%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	67	38.8%	69	33.1%	83	33.0%	90	35.7%

RQ	Meas Num	Measure Description	2015		2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	332,095	31.2%	346,227	31.5%	362,205	32.0%	379,862	32.1%
2-3	2-10	ED	332,095	0.2%	346,227	0.3%	362,205	0.2%	379,862	0.2%
2-3	2-10	Intensive outpatient or partial hospitalization	332,095	0.9%	346,227	0.9%	362,205	1.1%	379,862	1.1%
2-3	2-10	Inpatient	332,095	1.2%	346,227	1.2%	362,205	1.2%	379,862	1.3%
2-3	2-10	Outpatient	332,095	31.1%	346,227	31.4%	362,205	31.9%	379,862	32.0%
2-3	2-10	Telehealth	332,095	0.4%	346,227	0.7%	362,205	0.8%	379,862	1.3%
2-4	2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	398	72.6%	413	79.3%	408	83.8%	429	79.8%
2-4	2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	**	8.5%	119	10.0%	**	8.5%	**	9.6%
2-4	2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	179	16.7%	173	18.6%	151	18.4%	116	20.4%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	335,340	44.5	349,528	46.0	365,766	43.9	383,627	43.7
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	335,340	10.8	349,528	9.8	365,766	9.6	383,627	9.8
2-5	2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	1,591	14.7%	1,458	13.3%	1,559	14.8%	1,681	15.3%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Measures with numerators or denominators between 1 and 10 are suppressed to ensure anonymity and are indicated with "\*\*".

<sup>1</sup>Reported denominator and rates are weighted by beneficiaries' duration of enrollment in ALTCS-DD.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-14—ALTCS-DD Full Measure Calculations, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
ALTCS-DD										
1-1	1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	14,583	89.4%	15,339	87.8%	16,099	88.0%	16,914	88.3%
1-2	1-2	Percentage of children and adolescents who accessed primary care practitioners	17,676	91.6%	18,683	91.1%	19,348	90.2%	19,851	90.5%
1-2	1-3	Percentage of beneficiaries under 21 with an annual dental visit	18,881	53.2%	19,986	40.2%	20,650	52.3%	21,253	54.2%
2-1	2-1	Percentage of adult beneficiaries with a breast cancer screening	1,017	44.0%	1,038	42.0%	1,053	41.5%	1,079	42.2%
2-1	2-2	Percentage of adult beneficiaries with a cervical cancer screening	4,440	15.8%	4,561	14.0%	4,769	12.9%	4,858	12.6%
2-1	2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	630	82.1%	660	86.7%	633	92.5%	549	80.0%



Meas RQ	Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
ALTCS-DD										
2-2	2-4	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	3,559	58.9%	3,831	52.5%	3,781	55.3%	3,765	56.4%
2-2	2-5	Percentage of beneficiaries with an adolescent well-care visit	10,086	48.1%	10,733	42.4%	11,209	46.5%	11,698	48.3%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	478	73.2%	472	73.4%	532	74.1%	530	74.6%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	107	59.3%	105	47.8%	114	60.5%	118	66.1%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	107	45.1%	105	28.7%	114	43.5%	118	40.1%
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	400,025	33.4%	420,781	32.4%	436,212	29.5%	452,625	30.1%
2-3	2-10	ED	400,025	0.3%	420,781	0.3%	436,212	0.3%	452,625	0.3%
2-3	2-10	Intensive outpatient or partial hospitalization	400,025	1.2%	420,781	0.9%	436,212	0.7%	452,625	1.4%
2-3	2-10	Inpatient	400,025	1.3%	420,781	1.2%	436,212	1.3%	452,625	1.3%
2-3	2-10	Outpatient	400,025	33.3%	420,781	32.0%	436,212	28.4%	452,625	29.0%
2-3	2-10	Telehealth	400,025	1.3%	420,781	3.5%	436,212	5.0%	452,625	5.0%
2-4	2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	470	83.2%	476	79.2%	471	81.9%	488	77.7%
2-4	2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	**	4.3%	**	5.7%	**	5.0%	**	1.9%
2-4	2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	84	16.6%	**	13.6%	73	15.2%	**	13.1%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	404,494	43.1	424,435	32.9	439,861	29.3	456,778	35.0
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	404,494	9.7	424,435	8.0	439,861	7.6	456,778	8.4
2-5	2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	1,817	14.1%	1,621	13.6%	1,777	17.5%	1,993	17.2%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Measures with numerators or denominators between 1 and 10 are suppressed to ensure anonymity and are indicated with "\*\*".

<sup>1</sup>Reported denominator and rates are weighted by beneficiaries' duration of enrollment in ALTCS-DD.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-15—ALTCS-EPD Full Measure Calculations, 2015–2018**

RQ	Meas Num	Measure Description	2015		2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	23,177	88.6%	22,686	91.0%	22,591	91.4%	22,955	92.0%
2-1	2-1	Percentage of adult beneficiaries with a breast cancer screening	4,220	28.0%	3,480	31.1%	3,383	34.3%	3,331	33.5%
2-1	2-2	Percentage of adult beneficiaries with a cervical cancer screening	3,052	21.4%	2,916	23.3%	2,817	23.7%	2,821	24.4%
2-1	2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	79	65.9%	62	67.7%	63	73.5%	61	62.7%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	142	21.4%	169	29.9%	191	31.3%	185	36.5%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	230	61.3%	206	63.2%	199	54.8%	225	59.0%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	230	44.2%	206	45.7%	199	47.0%	225	40.8%
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	306,285	19.8%	304,429	19.7%	304,690	20.3%	309,842	22.1%
2-3	2-10	ED	306,285	0.1%	304,429	0.1%	304,690	0.2%	309,842	0.2%
2-3	2-10	Intensive outpatient or partial hospitalization	306,285	0.2%	304,429	0.3%	304,690	0.3%	309,842	0.2%
2-3	2-10	Inpatient	306,285	7.4%	304,429	6.9%	304,690	6.5%	309,842	6.1%
2-3	2-10	Outpatient	306,285	13.7%	304,429	14.2%	304,690	15.1%	309,842	17.0%
2-3	2-10	Telehealth	306,285	0.1%	304,429	0.1%	304,690	0.4%	309,842	0.8%
2-4	2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	1,742	95.9%	1,913	92.5%	1,574	91.2%	1,507	92.2%
2-4	2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	410	23.5%	1,427	25.8%	1,337	24.9%	1,199	20.7%
2-4	2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	1,848	36.3%	1,571	36.3%	1,510	32.0%	1,373	26.7%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	324,396	63.6	322,707	68.0	323,886	71.2	330,088	69.9
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	324,396	37.1	322,707	39.2	323,886	42.6	330,088	43.6
2-5	2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	3,839	19.2%	3,863	18.9%	4,055	19.3%	4,117	19.6%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rates are weighted by beneficiaries' duration of enrollment in ALTCS-EPD.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-16—ALTCS-EPD Full Measure Calculations, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	23,756	93.2%	23,166	91.4%	21,898	92.2%	21506	92.7%
2-1	2-1	Percentage of adult beneficiaries with a breast cancer screening	3,326	36.6%	3,423	34.4%	3,384	31.2%	3290	30.9%
2-1	2-2	Percentage of adult beneficiaries with a cervical cancer screening	2,852	24.8%	2,811	23.7%	2,836	21.4%	2630	22.6%
2-1	2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	55	60.6%	62	63.8%	64	74.8%	47	70.4%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	206	39.0%	128	38.0%	157	45.1%	145	43.1%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	287	55.7%	260	55.6%	238	61.2%	306	59.6%
2-3	2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	287	39.2%	260	41.0%	238	46.2%	306	40.5%
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	319,078	24.3%	318,017	23.4%	294,742	22.8%	289,532	23.4%
2-3	2-10	ED	319,078	0.2%	318,017	0.2%	294,742	0.1%	289,532	0.1%
2-3	2-10	Intensive outpatient or partial hospitalization	319,078	0.5%	318,017	0.4%	294,742	0.5%	289,532	0.6%
2-3	2-10	Inpatient	319,078	5.9%	318,017	5.8%	294,742	5.8%	289,532	5.5%
2-3	2-10	Outpatient	319,078	19.6%	318,017	18.0%	294,742	16.5%	289,532	17.8%
2-3	2-10	Telehealth	319,078	0.9%	318,017	3.5%	294,742	4.8%	289,532	4.8%
2-4	2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	1,656	94.8%	1,624	93.5%	1,395	93.2%	1,321	93.4%
2-4	2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	1,204	18.2%	1,098	15.9%	924	13.3%	861	12.5%
2-4	2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	1,210	18.7%	1,108	15.5%	1,016	14.0%	984	12.2%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	338,965	74.8	339,097	56.6	312,875	56.9	307,165	61.1
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	338,965	47.5	339,097	37.9	312,875	39.1	307,165	40.9
2-5	2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	4,562	20.0%	3,863	20.7%	3,755	22.1%	3,910	21.7%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rates are weighted by beneficiaries' duration of enrollment in ALTCS-EF

RQ: research question; Denom: denominator; ED: emergency department

**Table A-17—ALTCS-DD Supplemental Model Results, Renewal**

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries who accessed preventive/ambulatory health services</b>						
1-1	1-1	Intercept	1.945	0.019	10,160.173	<0.001
		Post Implementation Indicator	0.092	0.022	16.835	<0.001
		FFY 2020 COVID Indicator	-0.064	0.027	5.607	0.018
<b>Percentage of children and adolescents who accessed primary care practitioners</b>						
1-2	1-2	Intercept	2.333	0.020	13,310.462	<0.001
		Post Implementation Indicator	-0.039	0.023	2.771	0.096
		FFY 2020 COVID Indicator	0.030	0.028	1.139	0.286
<b>Percentage of beneficiaries under 21 with an annual dental visit</b>						
1-2	1-3	Intercept	0.178	0.011	253.909	<0.001
		Post Implementation Indicator	0.003	0.013	0.046	0.830
		FFY 2020 COVID Indicator	-0.577	0.016	1,332.630	<0.001
<b>Percentage of adult beneficiaries with a breast cancer screening</b>						
2-1	2-1	Intercept	-0.210	0.047	20.279	<0.001
		Post Implementation Indicator	-0.042	0.055	0.598	0.439
		FFY 2020 COVID Indicator	-0.069	0.069	1.000	0.317
<b>Percentage of adult beneficiaries with a cervical cancer screening</b>						
2-1	2-2	Intercept	-1.543	0.030	2,714.447	<0.001
		Post Implementation Indicator	-0.213	0.035	36.963	<0.001
		FFY 2020 COVID Indicator	-0.057	0.047	1.497	0.221
<b>Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent</b>						
2-1	2-3	Intercept	1.269	0.071	322.559	<0.001
		Post Implementation Indicator	0.261	0.085	9.461	0.002
		FFY 2020 COVID Indicator	0.340	0.124	7.565	0.006

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life</b>						
2-2	2-4	Intercept	0.067	0.026	6.986	0.008
		Post Implementation Indicator	0.184	0.030	38.200	<0.001
		FFY 2020 COVID Indicator	-0.152	0.036	18.174	<0.001
<b>Percentage of beneficiaries with an adolescent well-care visit</b>						
2-2	2-5	Intercept	-0.344	0.016	475.086	<0.001
		Post Implementation Indicator	0.205	0.018	129.128	<0.001
		FFY 2020 COVID Indicator	-0.169	0.021	62.203	<0.001
<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>						
2-3	2-7	Intercept	0.787	0.080	97.742	<0.001
		Post Implementation Indicator	0.264	0.092	8.221	0.004
		FFY 2020 COVID Indicator	-0.039	0.114	0.115	0.735
<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)</b>						
2-3	2-8	Intercept	-0.039	0.171	0.052	0.819
		Post Implementation Indicator	0.354	0.193	3.348	0.067
		FFY 2020 COVID Indicator	-0.403	0.215	3.501	0.061
<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)</b>						
2-3	2-8	Intercept	-0.580	0.179	10.549	0.001
		Post Implementation Indicator	0.173	0.200	0.745	0.388
		FFY 2020 COVID Indicator	-0.503	0.234	4.621	0.032
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)				

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>Any</b>				
		Intercept	-0.784	0.009	7,480.041	<0.001
		Post Implementation Indicator	0.000	0.010	0.001	0.981
		FFY 2020 COVID Indicator	0.048	0.013	14.746	<0.001
		<b>ED</b>				
		Intercept	-6.104	0.089	4,684.801	<0.001
		Post Implementation Indicator	0.151	0.101	2.239	0.135
		FFY 2020 COVID Indicator	-0.005	0.116	0.002	0.965
		<b>Intensive outpatient or partial hospitalization</b>				
		Intercept	-4.685	0.044	11,244.694	<0.001
		Post Implementation Indicator	0.187	0.050	14.038	<0.001
		FFY 2020 COVID Indicator	-0.234	0.062	14.233	<0.001
2-3	2-10	<b>Inpatient</b>				
		Intercept	-4.388	0.038	13,196.235	<0.001
		Post Implementation Indicator	0.046	0.044	1.095	0.295
		FFY 2020 COVID Indicator	-0.067	0.054	1.551	0.213
		<b>Outpatient</b>				
		Intercept	-0.788	0.009	7,547.238	<0.001
		Post Implementation Indicator	-0.022	0.010	4.313	0.038
		FFY 2020 COVID Indicator	0.059	0.013	21.734	<0.001
		<b>Telehealth</b>				
		Intercept	-5.125	0.055	8,722.842	<0.001
		Post Implementation Indicator	1.589	0.057	782.105	<0.001
		FFY 2020 COVID Indicator	0.212	0.033	42.145	<0.001
		<b>Percentage of adult beneficiaries with monitoring for persistent medications (Total)</b>				
2-4	2-11	Intercept	1.154	0.082	196.841	<0.001
		Post Implementation Indicator	0.309	0.098	9.884	0.002
		FFY 2020 COVID Indicator	-0.126	0.125	1.018	0.313



RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries with opioid use at high dosage (lower is better)</b>						
2-4	2-12	Intercept	-2.222	0.282	62.165	<0.001
		Post Implementation Indicator	-0.444	0.350	1.604	0.205
		FFY 2020 COVID Indicator	-0.147	0.630	0.055	0.815
<b>Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)</b>						
2-4	2-13	Intercept	-1.540	0.140	121.598	<0.001
		Post Implementation Indicator	-0.020	0.184	0.012	0.912
		FFY 2020 COVID Indicator	-0.285	0.378	0.568	0.451
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-5	2-14	Intercept	-3.096	0.088	1,224.918	<0.001
		Post Implementation Indicator	-0.148	0.105	1.997	0.158
		FFY 2020 COVID Indicator	-0.170	0.137	1.540	0.215
<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>						
2-5	2-15	Intercept	-4.577	0.059	6,113.482	<0.001
		Post Implementation Indicator	-0.132	0.069	3.632	0.057
		FFY 2020 COVID Indicator	-0.125	0.091	1.884	0.170
<b>Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)</b>						
2-5	2-16	Intercept	-1.812	0.052	1,208.257	<0.001
		Post Implementation Indicator	0.142	0.060	5.639	0.018
		FFY 2020 COVID Indicator	-0.176	0.078	5.070	0.024

Note: Statistical testing results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-18—ALTCs-DD Supplemental Model Results, Integration**

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries who accessed preventive/ambulatory health services</b>						
1-1	1-1	Intercept	2.017	0.012	27,895.316	<0.001
		Post Implementation Indicator	-0.010	0.021	0.232	0.630
		FFY 2020 COVID Indicator	-0.035	0.030	1.345	0.246
<b>Percentage of children and adolescents who accessed primary care practitioners</b>						
1-2	1-2	Intercept	2.338	0.012	35,570.130	<0.001
		Post Implementation Indicator	-0.101	0.021	22.976	<0.001
		FFY 2020 COVID Indicator	0.088	0.031	8.083	0.004
<b>Percentage of beneficiaries under 21 with an annual dental visit</b>						
1-2	1-3	Intercept	0.205	0.007	896.222	<0.001
		Post Implementation Indicator	-0.076	0.012	40.159	<0.001
		FFY 2020 COVID Indicator	-0.526	0.017	909.615	<0.001
<b>Percentage of adult beneficiaries with a breast cancer screening</b>						
2-1	2-1	Intercept	-0.202	0.029	48.935	<0.001
		Post Implementation Indicator	-0.126	0.053	5.752	0.016
		FFY 2020 COVID Indicator	0.007	0.077	0.009	0.926
<b>Percentage of adult beneficiaries with a cervical cancer screening</b>						
2-1	2-2	Intercept	-1.605	0.019	7,434.744	<0.001
		Post Implementation Indicator	-0.317	0.036	78.611	<0.001
		FFY 2020 COVID Indicator	0.109	0.052	4.287	0.038
<b>Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent</b>						
2-1	2-3	Intercept	1.318	0.044	885.035	<0.001
		Post Implementation Indicator	0.556	0.096	33.258	<0.001
		FFY 2020 COVID Indicator	-0.003	0.143	0.001	0.981

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life</b>						
2-2	2-4	Intercept	0.189	0.016	142.629	<0.001
		Post Implementation Indicator	0.045	0.028	2.601	0.107
		FFY 2020 COVID Indicator	-0.136	0.040	11.615	<0.001
<b>Percentage of beneficiaries with an adolescent well-care visit</b>						
2-2	2-5	Intercept	-0.231	0.009	595.992	<0.001
		Post Implementation Indicator	0.128	0.016	62.128	<0.001
		FFY 2020 COVID Indicator	-0.205	0.024	75.148	<0.001
<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>						
2-3	2-7	Intercept	0.950	0.049	377.614	<0.001
		Post Implementation Indicator	0.113	0.086	1.731	0.188
		FFY 2020 COVID Indicator	-0.049	0.126	0.154	0.695
<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)</b>						
2-3	2-8	Intercept	0.074	0.098	0.567	0.451
		Post Implementation Indicator	0.473	0.168	7.948	0.005
		FFY 2020 COVID Indicator	-0.635	0.238	7.093	0.008
<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)</b>						
2-3	2-8	Intercept	-0.505	0.101	24.991	<0.001
		Post Implementation Indicator	0.172	0.167	1.060	0.303
		FFY 2020 COVID Indicator	-0.577	0.254	5.177	0.023
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)				

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>Any</b>				
		Intercept	-0.750	0.006	18,588.981	<0.001
		Post Implementation Indicator	-0.107	0.010	119.740	<0.001
		FFY 2020 COVID Indicator	0.120	0.014	73.814	<0.001
		<b>ED</b>				
		Intercept	-6.075	0.054	12,818.280	<0.001
		Post Implementation Indicator	0.244	0.087	7.907	0.005
		FFY 2020 COVID Indicator	-0.126	0.125	1.014	0.314
		<b>Intensive outpatient or partial hospitalization</b>				
		Intercept	-4.545	0.025	32,585.056	<0.001
		Post Implementation Indicator	0.009	0.044	0.045	0.831
		FFY 2020 COVID Indicator	-0.196	0.068	8.405	0.004
2-3	2-10	<b>Inpatient</b>				
		Intercept	-4.354	0.023	36,032.443	<0.001
		Post Implementation Indicator	0.004	0.040	0.008	0.928
		FFY 2020 COVID Indicator	-0.058	0.059	0.962	0.327
		<b>Outpatient</b>				
		Intercept	-0.755	0.006	18,793.495	<0.001
		Post Implementation Indicator	-0.156	0.010	251.173	<0.001
		FFY 2020 COVID Indicator	0.158	0.014	127.418	<0.001
		<b>Telehealth</b>				
		Intercept	-4.653	0.027	30,728.028	<0.001
		Post Implementation Indicator	1.704	0.031	2,932.509	<0.001
		FFY 2020 COVID Indicator	-0.376	0.034	124.408	<0.001
		<b>Percentage of adult beneficiaries with monitoring for persistent medications (Total)</b>				
2-4	2-11	Intercept	1.379	0.054	646.948	<0.001
		Post Implementation Indicator	-0.009	0.097	0.009	0.923
		FFY 2020 COVID Indicator	-0.033	0.139	0.057	0.811

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries with opioid use at high dosage (lower is better)</b>						
2-4	2-12	Intercept	-2.381	0.178	179.571	<0.001
		Post Implementation Indicator	-0.927	0.539	2.954	0.086
		FFY 2020 COVID Indicator	0.494	0.783	0.398	0.528
<b>Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)</b>						
2-4	2-13	Intercept	-1.507	0.098	237.236	<0.001
		Post Implementation Indicator	-0.295	0.260	1.286	0.257
		FFY 2020 COVID Indicator	-0.043	0.432	0.010	0.920
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-5	2-14	Intercept	-3.118	0.021	21,505.981	<0.001
		Post Implementation Indicator	-0.320	0.040	64.473	<0.001
		FFY 2020 COVID Indicator	0.024	0.058	0.165	0.684
<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>						
2-5	2-15	Intercept	-4.612	0.018	62,821.845	<0.001
		Post Implementation Indicator	-0.219	0.034	40.231	<0.001
		FFY 2020 COVID Indicator	-0.003	0.051	0.004	0.949
<b>Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)</b>						
2-5	2-16	Intercept	-1.777	0.032	3,167.047	<0.001
		Post Implementation Indicator	0.214	0.053	16.030	<0.001
		FFY 2020 COVID Indicator	-0.283	0.084	11.296	<0.001

Note: Statistical testing results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-19—ALTCS-EPD Supplemental Model Results**

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-1	1-1	<b>Percentage of beneficiaries who accessed preventive/ambulatory health services</b>				
		Intercept	2.176	0.015	19,877.188	<0.001
		Post Implementation Indicator	0.310	0.019	264.331	<0.001
		FFY 2020 COVID Indicator	-0.116	0.026	19.934	<0.001
2-1	2-1	<b>Percentage of adult beneficiaries with a breast cancer screening</b>				
		Intercept	-0.876	0.025	1,226.751	<0.001
		Post Implementation Indicator	0.180	0.030	36.298	<0.001
		FFY 2020 COVID Indicator	0.049	0.040	1.543	0.214
2-1	2-2	<b>Percentage of adult beneficiaries with a cervical cancer screening</b>				
		Intercept	-1.248	0.031	1,611.616	<0.001
		Post Implementation Indicator	0.061	0.037	2.691	0.101
		FFY 2020 COVID Indicator	0.020	0.049	0.176	0.675
2-1	2-3	<b>Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent</b>				
		Intercept	0.695	0.178	15.142	<0.001
		Post Implementation Indicator	0.085	0.219	0.151	0.698
		FFY 2020 COVID Indicator	-0.212	0.293	0.521	0.470
2-3	2-7	<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>				
		Intercept	-1.045	0.129	65.368	<0.001
		Post Implementation Indicator	0.579	0.147	15.619	<0.001
		FFY 2020 COVID Indicator	-0.023	0.195	0.014	0.906
2-3	2-8	<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)</b>				
		Intercept	0.498	0.099	25.419	<0.001
		Post Implementation Indicator	-0.169	0.114	2.200	0.138
		FFY 2020 COVID Indicator	-0.104	0.137	0.568	0.451
2-3	2-8	<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)</b>				
		Intercept	-0.205	0.096	4.551	0.033
		Post Implementation Indicator	-0.102	0.112	0.838	0.360
		FFY 2020 COVID Indicator	-0.056	0.139	0.161	0.688



Meas			Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
RQ	Num	Measure Description				
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--
		<b>Percentage of beneficiaries receiving mental health services (no desired direction)</b>				
		<b>Any</b>				
		Intercept	-1.403	0.011	15,867.154	<0.001
		Post Implementation Indicator	0.169	0.013	169.636	<0.001
		FFY 2020 COVID Indicator	0.049	0.016	9.291	0.002
		<b>ED</b>				
		Intercept	-6.650	0.123	2,904.791	<0.001
		Post Implementation Indicator	0.219	0.142	2.375	0.123
		FFY 2020 COVID Indicator	0.342	0.147	5.394	0.020
		<b>Intensive outpatient or partial hospitalization</b>				
		Intercept	-6.015	0.090	4,474.756	<0.001
2-3	2-10	Post Implementation Indicator	0.530	0.100	28.093	<0.001
		FFY 2020 COVID Indicator	-0.056	0.108	0.273	0.602
		<b>Inpatient</b>				
		Intercept	-2.567	0.017	22,204.640	<0.001
		Post Implementation Indicator	-0.186	0.021	79.443	<0.001
		FFY 2020 COVID Indicator	-0.043	0.029	2.196	0.138
		<b>Outpatient</b>				
		Intercept	-1.817	0.013	20,203.484	<0.001
		Post Implementation Indicator	0.246	0.015	275.613	<0.001
		FFY 2020 COVID Indicator	0.052	0.018	8.539	0.003
		<b>Telehealth</b>				
		Intercept	-7.165	0.160	2,017.572	<0.001
		Post Implementation Indicator	3.400	0.161	448.038	<0.001
		FFY 2020 COVID Indicator	0.436	0.039	127.971	<0.001
		<b>Percentage of adult beneficiaries with monitoring for persistent medications (Total)</b>				
2-4	2-11	Intercept	2.773	0.070	1,555.546	<0.001
		Post Implementation Indicator	-0.187	0.084	5.001	0.025
		FFY 2020 COVID Indicator	0.080	0.110	0.522	0.470

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries with opioid use at high dosage (lower is better)</b>						
2-4	2-12	Intercept	-1.081	0.054	406.273	<0.001
		Post Implementation Indicator	-0.392	0.064	37.714	<0.001
		FFY 2020 COVID Indicator	-0.193	0.089	4.654	0.031
<b>Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)</b>						
2-4	2-13	Intercept	-0.563	0.036	250.492	<0.001
		Post Implementation Indicator	-0.703	0.047	222.674	<0.001
		FFY 2020 COVID Indicator	-0.428	0.089	23.371	<0.001
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-5	2-14	Intercept	-2.721	0.058	2,205.291	<0.001
		Post Implementation Indicator	0.015	0.069	0.046	0.831
		FFY 2020 COVID Indicator	-0.165	0.090	3.387	0.066
<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>						
2-5	2-15	Intercept	-3.266	0.038	7,352.355	<0.001
		Post Implementation Indicator	0.113	0.045	6.282	0.012
		FFY 2020 COVID Indicator	-0.119	0.059	4.081	0.043
<b>Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)</b>						
2-5	2-16	Intercept	-1.447	0.029	2,486.425	<0.001
		Post Implementation Indicator	0.090	0.034	7.067	0.008
		FFY 2020 COVID Indicator	0.016	0.043	0.138	0.710

Note: Statistical testing results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department

CHP

Table A-20—CHP Full Measure Calculations, 2015–2018

RQ	Meas Num	Measure Description	2015		2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of children and adolescents with access to PCPs	12,293	95.4%	14,350	95.3%	13,718	94.2%	11,707	95.0%
1-1	1-2	Percentage of beneficiaries with an annual dental visit	12,412	67.6%	14,404	66.3%	13,351	70.2%	11,426	72.6%
2-1	2-1	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	3,581	68.9%	4,152	69.4%	3,797	69.8%	3,147	69.6%
2-1	2-2	Percentage of beneficiaries with an adolescent well-care visit	3,925	60.6%	4,619	61.3%	4,451	63.2%	4,096	67.0%
2-1	2-3	Percent of children two years of age with appropriate immunization status	--	--	--	--	--	--	--	--
2-1	2-4	Percent of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--	--	--
2-2	2-5	Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year	168	68.3%	172	74.4%	160	73.7%	134	74.9%
2-3	2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	354	55.2%	468	62.0%	485	63.2%	535	67.1%
2-3	2-7	Percentage of children and adolescents on antipsychotics with metabolic monitoring	929	50.5%	1,072	50.2%	1,005	55.0%	1,008	57.8%
2-3	2-8	Percentage of beneficiaries with screening for depression and follow-up plan	--	--	--	--	--	--	--	--
2-3	2-9	Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)	756	2.3%	**	1.8%	**	0.6%	**	0.6%
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	183,591	36.5%	203,589	36.9%	188,914	40.0%	163,715	48.6%
2-3	2-10	ED	183,591	0.1%	203,589	0.0%	188,914	0.1%	163,715	0.1%
2-3	2-10	Intensive outpatient or partial hospitalization	183,591	1.6%	203,589	1.6%	188,914	1.7%	163,715	1.5%
2-3	2-10	Inpatient	183,591	2.6%	203,589	2.9%	188,914	3.2%	163,715	4.2%
2-3	2-10	Outpatient	183,591	36.3%	203,589	36.6%	188,914	39.8%	163,715	48.3%
2-3	2-10	Telehealth	183,591	0.6%	203,589	1.1%	188,914	1.4%	163,715	2.4%
2-4	2-11	Number of ED visits per 1,000 member months (no desired direction)	195,897	44.3	212,284	41.8	195,322	40.9	169,678	42.1
2-4	2-12	Number of inpatient stays per 1,000 member months (no desired direction)	195,897	3.3	212,284	3.1	195,322	2.8	169,678	3.1

Note: Rates for Measures 2-3, 2-4, and 2-8 are not presented in all years due to insufficient data and calculated rates that are artificially low from using administrative data. Measures with numerators or denominators between 1 and 10 are suppressed to ensure anonymity and are indicated with \*\*\*.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in CHP.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioners

**Table A-21—CHP Full Measure Calculations, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of children and adolescents with access to PCPs	10,494	95.3%	11,129	93.7%	11,510	94%	11,435	93.4%
1-1	1-2	Percentage of beneficiaries with an annual dental visit	10,297	73.6%	10,801	66.3%	10,967	75%	10,719	74.7%
2-1	2-1	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	2,866	74.2%	3,041	67.2%	3,197	72%	3,020	71.8%
2-1	2-2	Percentage of beneficiaries with an adolescent well-care visit	3,772	68.4%	3,990	60.3%	3,960	62%	3,875	63.5%
2-1	2-3	Percent of children two years of age with appropriate immunization status	--	--	--	--	--	--	--	--
2-1	2-4	Percent of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--	--	--
2-2	2-5	Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year	107	80.5%	93	79.1%	70	90.1%	75	63.1%
2-3	2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	600	66.2%	627	65.3%	637	68.4%	559	72.5%
2-3	2-7	Percentage of children and adolescents on antipsychotics with metabolic monitoring	954	46.5%	996	38.7%	933	46.1%	791	52.7%
2-3	2-8	Percentage of beneficiaries with screening for depression and follow-up plan	--	--	--	--	--	--	--	--
2-3	2-9	Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)	**	0.9%	**	1.1%	**	0.8%	**	0.5%
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	149,178	57.1%	155,598	57.5%	157,920	52.8%	153,212	53.3%
2-3	2-10	ED	149,178	0.4%	155,598	0.6%	157,920	1.0%	153,212	0.6%
2-3	2-10	Intensive outpatient or partial hospitalization	149,178	1.9%	155,598	1.6%	157,920	1.3%	153,212	4.0%
2-3	2-10	Inpatient	149,178	4.8%	155,598	4.9%	157,920	4.6%	153,212	4.2%
2-3	2-10	Outpatient	149,178	56.8%	155,598	57.0%	157,920	51.8%	153,212	52.6%
2-3	2-10	Telehealth	149,178	4.0%	155,598	7.7%	157,920	10.0%	153,212	10.2%
2-4	2-11	Number of ED visits per 1,000 member months (no desired direction)	155,903	46.1	161,687	35.0	162,966	33.5	158,090	39.8
2-4	2-12	Number of inpatient stays per 1,000 member months (no desired direction)	155,903	3.5	161,687	3.2	162,966	3.1	158,090	3.6

Note: Rates for Measures 2-3, 2-4, and 2-8 are not presented in all years due to insufficient data and calculated rates that are artificially low from using administrative data. Measures with numerators or denominators between 1 and 10 are suppressed to ensure anonymity and are indicated with "\*\*".

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in CHP.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioners

**Table A-22—CHP Supplemental Model Results, Renewal**

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of children and adolescents with access to PCPs</b>						
1-1	1-1	Intercept	3.021	0.029	10,778.075	<0.001
		Post Implementation Indicator	-0.211	0.034	38.408	<0.001
		FFY 2020 COVID Indicator	-0.103	0.043	5.750	0.016
<b>Percentage of beneficiaries with an annual dental visit</b>						
1-1	1-2	Intercept	0.705	0.013	2,953.324	<0.001
		Post Implementation Indicator	0.291	0.016	328.866	<0.001
		FFY 2020 COVID Indicator	-0.322	0.022	205.646	<0.001
<b>Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life</b>						
2-1	2-1	Intercept	0.808	0.025	1,077.221	<0.001
		Post Implementation Indicator	0.106	0.030	12.280	<0.001
		FFY 2020 COVID Indicator	-0.195	0.042	21.127	<0.001
<b>Percentage of beneficiaries with an adolescent well-care visit</b>						
2-1	2-2	Intercept	0.445	0.022	402.500	<0.001
		Post Implementation Indicator	0.164	0.027	37.771	<0.001
		FFY 2020 COVID Indicator	-0.192	0.036	29.295	<0.001
2-1	2-3	Percent of children two years of age with appropriate immunization status	--	--	--	--
2-1	2-4	Percent of adolescents 13 years of age with appropriate immunizations	--	--	--	--
<b>Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year</b>						
2-2	2-5	Intercept	0.914	0.120	58.085	<0.001
		Post Implementation Indicator	0.237	0.156	2.308	0.129
		FFY 2020 COVID Indicator	0.181	0.274	0.437	0.508
<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>						
2-3	2-6	Intercept	0.367	0.071	26.774	<0.001
		Post Implementation Indicator	0.370	0.082	20.582	<0.001
		FFY 2020 COVID Indicator	-0.102	0.093	1.213	0.271

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of children and adolescents on antipsychotics with metabolic monitoring</b>						
2-3	2-7	Intercept	0.014	0.045	0.096	0.757
		Post Implementation Indicator	0.056	0.053	1.090	0.297
		FFY 2020 COVID Indicator	-0.530	0.071	55.296	<0.001
2-3	2-8	<b>Percentage of beneficiaries with screening for depression and follow-up plan</b>	--	--	--	--
<b>Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)</b>						
2-3	2-9	Intercept	-3.890	0.177	484.600	<0.001
		Post Implementation Indicator	-1.093	0.266	16.917	<0.001
		FFY 2020 COVID Indicator	0.498	0.390	1.629	0.202
<b>Percentage of beneficiaries receiving mental health services (no desired direction)</b>						
<b>Any</b>						
		Intercept	-0.545	0.012	2,229.919	<0.001
		Post Implementation Indicator	0.540	0.014	1,515.017	<0.001
		FFY 2020 COVID Indicator	0.307	0.019	252.196	<0.001
<b>ED</b>						
		Intercept	-7.402	0.226	1,077.270	<0.001
		Post Implementation Indicator	1.925	0.233	68.119	<0.001
		FFY 2020 COVID Indicator	0.347	0.129	7.174	0.007
<b>Intensive outpatient or partial hospitalization</b>						
2-3	2-10	Intercept	-4.121	0.044	8,611.266	<0.001
		Post Implementation Indicator	0.252	0.052	23.352	<0.001
		FFY 2020 COVID Indicator	-0.241	0.075	10.404	0.001
<b>Inpatient</b>						
		Intercept	-3.559	0.034	11,000.735	<0.001
		Post Implementation Indicator	0.421	0.039	116.306	<0.001
		FFY 2020 COVID Indicator	0.178	0.045	15.632	<0.001
<b>Outpatient</b>						
		Intercept	-0.555	0.012	2,301.851	<0.001
		Post Implementation Indicator	0.530	0.014	1,455.264	<0.001
		FFY 2020 COVID Indicator	0.306	0.019	250.357	<0.001
<b>Telehealth</b>						
		Intercept	-4.756	0.061	6,168.818	<0.001
		Post Implementation Indicator	1.892	0.063	905.015	<0.001
		FFY 2020 COVID Indicator	0.376	0.037	102.719	<0.001



Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-4	2-11	Intercept	-3.145	0.059	2,876.272	<0.001
		Post Implementation Indicator	-0.062	0.069	0.800	0.371
		FFY 2020 COVID Indicator	-0.145	0.091	2.540	0.111
<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>						
2-4	2-12	Intercept	-5.751	0.047	15,213.787	<0.001
		Post Implementation Indicator	0.017	0.056	0.090	0.765
		FFY 2020 COVID Indicator	0.000	0.075	0.000	0.996

Note: Statistical testing results for Measures 2-3, 2-4, and 2-8 are not presented in all years due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioners

**Table A-23—CHP Supplemental Model Results, Integration**

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of children and adolescents with access to PCPs</b>						
1-1	1-1	Intercept	2.951	0.018	25,724.784	<0.001
		Post Implementation Indicator	-0.296	0.042	49.613	<0.001
		FFY 2020 COVID Indicator	-0.245	0.043	32.063	<0.001
<b>Percentage of beneficiaries with an annual dental visit</b>						
1-1	1-2	Intercept	0.838	0.009	9,158.281	<0.001
		Post Implementation Indicator	0.247	0.024	107.000	<0.001
		FFY 2020 COVID Indicator	-0.163	0.022	54.110	<0.001
<b>Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life</b>						
2-1	2-1	Intercept	0.857	0.017	2,697.627	<0.001
		Post Implementation Indicator	0.077	0.044	3.141	0.076
		FFY 2020 COVID Indicator	-0.138	0.042	10.840	<0.001
<b>Percentage of beneficiaries with an adolescent well-care visit</b>						
2-1	2-2	Intercept	0.574	0.014	1,582.814	<0.001
		Post Implementation Indicator	-0.021	0.036	0.319	0.572
		FFY 2020 COVID Indicator	-0.158	0.035	19.799	<0.001
2-1	2-3	Percent of children two years of age with appropriate immunization status	--	--	--	--

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
2-1	2-4	<b>Percent of adolescents 13 years of age with appropriate immunizations</b>	--	--	--	--
2-2	2-5	<b>Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year</b>				
		Intercept	1.038	0.084	154.158	<0.001
		Post Implementation Indicator	-0.500	0.254	3.884	0.049
		FFY 2020 COVID Indicator	0.295	0.268	1.211	0.271
2-3	2-6	<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>				
		Intercept	0.550	0.042	171.654	<0.001
		Post Implementation Indicator	0.421	0.104	16.466	<0.001
		FFY 2020 COVID Indicator	0.084	0.094	0.803	0.370
2-3	2-7	<b>Percentage of children and adolescents on antipsychotics with metabolic monitoring</b>				
		Intercept	0.083	0.028	8.566	0.003
		Post Implementation Indicator	0.025	0.077	0.110	0.741
		FFY 2020 COVID Indicator	-0.544	0.071	58.692	<0.001
2-3	2-8	<b>Percentage of beneficiaries with screening for depression and follow-up plan</b>	--	--	--	--
2-3	2-9	<b>Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)</b>				
		Intercept	-4.399	0.143	941.780	<0.001
		Post Implementation Indicator	-0.903	0.599	2.274	0.132
		FFY 2020 COVID Indicator	-0.086	0.365	0.056	0.813

Meas RQ	Meas Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries receiving mental health services (no desired direction)</b>						
<b>Any</b>						
		Intercept	-0.282	0.007	1,442.254	<0.001
		Post Implementation Indicator	0.416	0.019	467.360	<0.001
		FFY 2020 COVID Indicator	0.584	0.019	919.352	<0.001
<b>ED</b>						
		Intercept	-6.610	0.100	4,347.082	<0.001
		Post Implementation Indicator	1.470	0.154	91.651	<0.001
		FFY 2020 COVID Indicator	1.480	0.152	94.293	<0.001
<b>Intensive outpatient or partial hospitalization</b>						
2-3	2-10	Intercept	-4.088	0.029	20,081.758	<0.001
		Post Implementation Indicator	0.903	0.054	282.566	<0.001
		FFY 2020 COVID Indicator	-0.022	0.075	0.087	0.769
<b>Inpatient</b>						
		Intercept	-3.327	0.020	27,437.132	<0.001
		Post Implementation Indicator	0.208	0.048	18.518	<0.001
		FFY 2020 COVID Indicator	0.366	0.045	65.448	<0.001
<b>Outpatient</b>						
		Intercept	-0.291	0.007	1,540.450	<0.001
		Post Implementation Indicator	0.395	0.019	423.025	<0.001
		FFY 2020 COVID Indicator	0.572	0.019	885.343	<0.001
<b>Telehealth</b>						
		Intercept	-4.014	0.028	20,796.034	<0.001
		Post Implementation Indicator	1.837	0.040	2,068.987	<0.001
		FFY 2020 COVID Indicator	1.527	0.043	1,250.412	<0.001
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-4	2-11	Intercept	-3.145	0.017	35,658.284	<0.001
		Post Implementation Indicator	-0.078	0.041	3.610	0.057
		FFY 2020 COVID Indicator	-0.207	0.041	24.937	<0.001
<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>						
2-4	2-12	Intercept	-5.759	0.024	56,397.429	<0.001
		Post Implementation Indicator	0.136	0.060	5.183	0.023
		FFY 2020 COVID Indicator	0.025	0.061	0.174	0.677

Note: Statistical testing results for Measures 2-3, 2-4, and 2-8 are not presented in all years due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department; PCP: primary care practitioners

**RBHA**

**Table A-24—RBHA Full Measure Calculations, 2012–2015**

RQ	Meas Num	Measure Description	2012		2013		2014		2015	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of adults who accessed preventive/ambulatory health services	27,915	84.1%	29,165	92.8%	31,210	93.5%	36,972	92.0%
1-2	1-5	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	4,027	46.6%	4,361	47.0%	4,543	50.1%	5,987	42.6%
1-2	1-6	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	4,027	3.1%	4,361	1.6%	4,543	1.9%	5,987	6.9%
2-2	2-2	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	42	60.9%	399	59.5%	585	44.7%	593	50.1%
2-2	2-3	Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test	6,173	80.1%	7,466	79.4%	9,292	79.1%	9,937	81.2%
2-2	2-4	Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications	4,300	57.5%	5,387	58.5%	6,263	53.3%	6,879	52.7%
2-3	2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	1,112	39.3%	1,504	46.3%	1,740	44.2%	2,545	42.5%
2-3	2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	1,112	23.3%	1,504	27.5%	1,740	26.9%	2,545	26.4%
2-3	2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	4,275	0	4,928	40.1%	5,357	47.2%	6,665	65.1%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	1,645	56.1%	1,543	59.3%	1,815	61.0%	2,000	62.0%
2-3	2-8	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	855	18.8%	875	18.4%	1,014	17.5%	1,408	21.6%
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--

RQ	Meas Num	Measure Description	2012		2013		2014		2015	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	351,223	73.6%	373,922	83.4%	416,155	85.5%	472,501	82.5%
2-3	2-10	ED	351,223	0.0%	373,922	0.1%	416,155	0.4%	472,501	0.9%
2-3	2-10	Intensive outpatient or partial hospitalization	351,223	12.3%	373,922	13.2%	416,155	12.8%	472,501	12.1%
2-3	2-10	Inpatient	351,223	12.2%	373,922	13.1%	416,155	13.2%	472,501	14.2%
2-3	2-10	Outpatient	351,223	72.8%	373,922	82.9%	416,155	85.0%	472,501	81.9%
2-3	2-10	Telehealth	351,223	0.1%	373,922	0.8%	416,155	1.6%	472,501	2.1%
2-4	2-11	Percentage of beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	1,582	20.2%	1,660	20.9%	1,868	19.0%	2,041	18.8%
2-4	2-12	Percentage of beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	5,300	43.7%	5,459	41.9%	6,097	39.2%	6,695	34.7%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	359,731	145.9	386,711	140.8	437,450	141.9	487,965	142.1
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	359,731	22.7	386,711	21.4	437,450	20.5	487,965	18.6
2-5	2-16	Percentage of inpatient discharges with an unplanned readmission within 30 days (lower is better)	10,241	22.1%	11,621	22.5%	11,594	21.6%	13,556	22.8%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in RBHA.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-25—RBHA Full Measure Calculations, 2016–2018**

RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of adults who accessed preventive/ambulatory health services	34,326	93.0%	35,123	92.4%	35,420	91.8%
1-2	1-5	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	5,252	42.9%	5,147	44.5%	5,119	44.9%
1-2	1-6	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	5,252	8.7%	5,147	9.8%	5,119	11.0%
2-2	2-2	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	564	54.8%	620	50.1%	695	51.7%
2-2	2-3	Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test	10,373	77.8%	10,495	77.4%	10,594	75.8%

Meas RQ	Meas Num	Measure Description	2016		2017		2018	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-2	2-4	Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications	7,354	57.8%	7,569	60.4%	7,703	55.4%
2-3	2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	2,167	45.7%	2,054	46.2%	2,057	43.5%
2-3	2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	2,167	28.9%	2,054	27.7%	2,057	24.8%
2-3	2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	6,756	70.7%	7,497	70.6%	7,897	70.0%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	1,755	62.7%	1,674	63.8%	1,467	61.5%
2-3	2-8	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	1,364	21.1%	1,369	19.7%	1,160	21.0%
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)						
2-3	2-10	Any	460,510	85.9%	473,111	86.4%	480,365	85.9%
2-3	2-10	ED	460,510	1.5%	473,111	1.5%	480,365	1.2%
2-3	2-10	Intensive outpatient or partial hospitalization	460,510	14.3%	473,111	14.8%	480,365	14.9%
2-3	2-10	Inpatient	460,510	14.9%	473,111	16.0%	480,365	16.3%
2-3	2-10	Outpatient	460,510	85.4%	473,111	85.9%	480,365	85.3%
2-3	2-10	Telehealth	460,510	2.8%	473,111	4.2%	480,365	6.7%
2-4	2-11	Percentage of beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	4,884	17.2%	4,255	16.2%	3,272	12.8%
2-4	2-12	Percentage of beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	5,570	31.8%	4,899	27.6%	3,722	20.7%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	472,144	140.3	484,549	136.8	496,832	123.5
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	472,144	16.8	484,549	16.6	496,832	15.4
2-5	2-16	Percentage of inpatient discharges with an unplanned readmission within 30 days (lower is better)	12,197	22.3%	13,165	24.5%	13,100	23.5%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in RBHA.

RQ: research question; Denom: denominator; ED: emergency department



**Table A-26—RBHA Full Measure Calculations, 2019–2022**

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
1-1	1-1	Percentage of adults who accessed preventive/ambulatory health services	35,389	91.7%	37,974	90.4%	42,270	89.5%	44,326	87.9%
1-2	1-5	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)	4,632	42.2%	4,502	41.9%	5,557	44.6%	5,696	46.2%
1-2	1-6	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)	4,632	11.2%	4,502	10.1%	5,557	10.6%	5,696	11.6%
2-2	2-2	Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent	612	54.9%	626	63.1%	677	74.9%	615	58.7%
2-2	2-3	Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test	10,754	78.5%	10,375	76.2%	11,462	79.8%	11,399	81.1%
2-2	2-4	Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications	7,843	56.5%	7,541	60.8%	8,226	60.1%	8,182	59.6%
2-3	2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	2,131	42.5%	1,965	41.7%	2,170	46.8%	2,194	45.0%
2-3	2-5	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	2,131	24.2%	1,965	24.0%	2,170	27.6%	2,194	25.8%
2-3	2-6	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	7,924	68.5%	7,861	66.9%	9,178	68.1%	8,921	67.6%
2-3	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	1,207	58.6%	1,052	56.8%	956	57.1%	937	52.7%
2-3	2-8	Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence	1,008	19.3%	1,007	19.9%	997	19.8%	928	17.2%
2-3	2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--

RQ	Meas Num	Measure Description	2019		2020		2021		2022	
			Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>	Denom <sup>1</sup>	Rate <sup>1</sup>
2-3	2-10	Percentage of beneficiaries receiving mental health services (no desired direction)								
2-3	2-10	Any	474,099	84.8%	495,560	82.3%	540,088	79.4%	564,720	76.4%
2-3	2-10	ED	474,099	1.0%	495,560	0.8%	540,088	0.5%	564,720	0.4%
2-3	2-10	Intensive outpatient or partial hospitalization	474,099	15.1%	495,560	12.9%	540,088	12.7%	564,720	12.5%
2-3	2-10	Inpatient	474,099	16.4%	495,560	15.8%	540,088	16.5%	564,720	15.7%
2-3	2-10	Outpatient	474,099	84.2%	495,560	81.5%	540,088	78.1%	564,720	75.1%
2-3	2-10	Telehealth	474,099	7.3%	495,560	10.8%	540,088	13.6%	564,720	13.4%
2-4	2-11	Percentage of beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	2,845	11.5%	2,346	11.3%	2,040	10.7%	1,686	10.7%
2-4	2-12	Percentage of beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)	3,072	11.0%	2,581	9.0%	2,372	8.2%	1,995	7.5%
2-5	2-14	Number of ED visits per 1,000 member months (no desired direction)	498,762	116.6	515,688	101.5	554,476	97.3	578,830	96.8
2-5	2-15	Number of inpatient stays per 1,000 member months (no desired direction)	498,762	15.3	515,688	15.3	554,476	16.2	578,830	16.4
2-5	2-16	Percentage of inpatient discharges with an unplanned readmission within 30 days (lower is better)	14,682	26.9%	13,061	26.1%	17,000	27.7%	17,511	27.6%

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

<sup>1</sup>Reported denominator and rate have been weighted by beneficiaries' duration of enrollment in RBHA.

RQ: research question; Denom: denominator; ED: emergency department

**Table A-27—RBHA Full Measure Calculations, Surveys**

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-1	1-2	<b>Percentage of beneficiaries who reported they received care as soon as they needed</b>				
		Intercept	1.516	0.179	71.574	<0.001
		Post Implementation Indicator	-0.321	0.212	2.290	0.130
1-1	1-3	<b>Percentage of beneficiaries who reported they were able to schedule an appointment for a checkup or routine care at a doctor's office or clinic as soon as they needed</b>				
		Intercept	1.402	0.142	97.846	<0.001
		Post Implementation Indicator	-0.099	0.167	0.347	0.556

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-1	1-4	<b>Percentage of beneficiaries who reported they were able to schedule an appointment with a specialist as soon as they needed</b>				
		Intercept	1.506	0.161	87.302	<0.001
		Post Implementation Indicator	-0.291	0.187	2.403	0.121
2-1	2-1	<b>Percentage of beneficiaries who reported having a flu shot or nasal flu spray since July 1</b>				
		Intercept	0.018	0.096	0.037	0.848
		Post Implementation Indicator	-0.114	0.112	1.025	0.311
2-5	2-13	<b>Percentage of beneficiaries who indicated smoking cigarettes or using tobacco</b>				
		Intercept	-0.290	0.096	9.161	0.002
		Post Implementation Indicator	0.124	0.112	1.216	0.270
3-1	3-1	<b>Percentage of beneficiaries who reported a high rating of overall health</b>				
		Intercept	-1.559	0.125	154.584	<0.001
		Post Implementation Indicator	0.079	0.146	0.291	0.590
3-1	3-2	<b>Percentage of beneficiaries who reported a high rating of overall mental or emotional health</b>				
		Intercept	-1.701	0.131	168.785	<0.001
		Post Implementation Indicator	-0.003	0.154	0.001	0.982
4-1	4-1	<b>Percentage of beneficiaries who reported a high rating of overall health care</b>				
		Intercept	0.599	0.110	29.643	<0.001
		Post Implementation Indicator	-0.003	0.132	0.000	0.984
4-1	4-2	<b>Percentage of beneficiaries who reported a high rating of health plan</b>				
		Intercept	0.693	0.102	46.443	<0.001
		Post Implementation Indicator	0.273	0.121	5.106	0.024
4-2	4-3	<b>Percentage of beneficiaries who reported their doctor seemed informed about the care they received from other health providers</b>				
		Intercept	1.024	0.151	46.253	<0.001
		Post Implementation Indicator	0.170	0.183	0.860	0.354

**Table A-28—RBHA Supplemental Model Results**

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of adults who accessed preventive/ambulatory health services</b>						
1-1	1-1	Intercept	2.045	0.013	24,214.519	<0.001
		Post Implementation Indicator	0.303	0.015	426.197	<0.001
		FFY 2020 COVID Indicator	-0.105	0.019	31.535	<0.001
<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)</b>						
1-2	1-5	Intercept	-0.127	0.022	33.806	<0.001
		Post Implementation Indicator	-0.086	0.024	12.926	<0.001
		FFY 2020 COVID Indicator	-0.114	0.032	12.952	<0.001
<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)</b>						
1-2	1-6	Intercept	-3.752	0.073	2,646.335	<0.001
		Post Implementation Indicator	1.443	0.075	371.337	<0.001
		FFY 2020 COVID Indicator	0.126	0.052	5.812	0.016
<b>Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent</b>						
2-2	2-2	Intercept	0.392	0.097	16.296	<0.001
		Post Implementation Indicator	-0.180	0.101	3.177	0.075
		FFY 2020 COVID Indicator	0.324	0.088	13.641	<0.001
<b>Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test</b>						
2-2	2-3	Intercept	1.367	0.021	4,124.910	<0.001
		Post Implementation Indicator	-0.051	0.023	4.902	0.027
		FFY 2020 COVID Indicator	-0.152	0.025	38.280	<0.001
<b>Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications</b>						
2-2	2-4	Intercept	0.326	0.021	251.354	<0.001
		Post Implementation Indicator	-0.038	0.022	2.932	0.087
		FFY 2020 COVID Indicator	0.151	0.025	36.590	<0.001
<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)</b>						
2-3	2-5	Intercept	-0.267	0.039	45.795	<0.001
		Post Implementation Indicator	0.047	0.042	1.240	0.265
		FFY 2020 COVID Indicator	-0.114	0.048	5.621	0.018

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)</b>						
2-3	2-5	Intercept	-1.062	0.045	563.444	<0.001
		Post Implementation Indicator	0.044	0.048	0.828	0.363
		FFY 2020 COVID Indicator	-0.136	0.056	6.005	0.014
<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>						
2-3	2-6	Intercept	-0.401	0.029	190.801	<0.001
		Post Implementation Indicator	1.098	0.030	1,310.747	<0.001
		FFY 2020 COVID Indicator	0.007	0.025	0.078	0.779
<b>Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness</b>						
2-3	2-7	Intercept	0.307	0.036	73.584	<0.001
		Post Implementation Indicator	0.125	0.040	9.539	0.002
		FFY 2020 COVID Indicator	-0.160	0.065	6.057	0.014
<b>Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence</b>						
2-3	2-8	Intercept	-1.475	0.062	570.207	<0.001
		Post Implementation Indicator	0.079	0.067	1.373	0.241
		FFY 2020 COVID Indicator	0.002	0.083	0.001	0.980
2-3	2-9	<b>Percentage of beneficiaries with a screening for depression and follow-up plan</b>	--	--	--	--
<b>Percentage of beneficiaries receiving mental health services (no desired direction)</b>						
<b>Any</b>						
		Intercept	1.304	0.010	17,260.739	<0.001
2-3	2-10	Post Implementation Indicator	0.287	0.011	683.306	<0.001
		FFY 2020 COVID Indicator	-0.053	0.014	15.147	<0.001
<b>ED</b>						
		Intercept	-7.790	0.200	1,515.906	<0.001
		Post Implementation Indicator	3.111	0.201	239.788	<0.001
		FFY 2020 COVID Indicator	-0.179	0.059	9.180	0.002

Meas RQ	Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Intensive outpatient or partial hospitalization</b>						
		Intercept	-1.920	0.012	24,841.140	<0.001
		Post Implementation Indicator	0.073	0.013	30.387	<0.001
		FFY 2020 COVID Indicator	-0.063	0.016	16.475	<0.001
<b>Inpatient</b>						
		Intercept	-1.932	0.012	24,926.376	<0.001
		Post Implementation Indicator	0.233	0.013	313.443	<0.001
2-3	2-10	FFY 2020 COVID Indicator	0.025	0.014	2.964	0.085
<b>Outpatient</b>						
		Intercept	1.267	0.010	16,636.975	<0.001
		Post Implementation Indicator	0.271	0.011	621.509	<0.001
		FFY 2020 COVID Indicator	-0.053	0.013	15.680	<0.001
<b>Telehealth</b>						
		Intercept	-5.392	0.061	7,924.429	<0.001
		Post Implementation Indicator	2.781	0.061	2,080.163	<0.001
		FFY 2020 COVID Indicator	0.497	0.017	820.945	<0.001
<b>Percentage of beneficiaries who have prescriptions for opioids at a high dosage (lower is better)</b>						
2-4	2-11	Intercept	-1.353	0.043	968.589	<0.001
		Post Implementation Indicator	-0.388	0.047	67.564	<0.001
		FFY 2020 COVID Indicator	-0.319	0.068	22.108	<0.001
<b>Percentage of beneficiaries with concurrent use of opioids and benzodiazepines (lower is better)</b>						
2-4	2-12	Intercept	-0.292	0.019	224.017	<0.001
		Post Implementation Indicator	-0.704	0.023	939.533	<0.001
		FFY 2020 COVID Indicator	-1.320	0.070	356.540	<0.001
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-5	2-14	Intercept	-1.943	0.090	463.936	<0.001
		Post Implementation Indicator	-0.142	0.101	1.970	0.161
		FFY 2020 COVID Indicator	-0.204	0.135	2.269	0.132



Meas RQ Num	Variable	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Number of inpatient stays per 1,000 member months (no desired direction)</b>					
2-5 2-15	Intercept	-3.815	0.057	4,414.206	<0.001
	Post Implementation Indicator	-0.261	0.064	16.542	<0.001
	FFY 2020 COVID Indicator	-0.104	0.086	1.469	0.225
<b>Percentage of inpatient discharges with an unplanned readmission within 30 days (lower is better)</b>					
2-5 2-16	Intercept	-1.248	0.016	5,901.148	<0.001
	Post Implementation Indicator	0.145	0.018	67.650	<0.001
	FFY 2020 COVID Indicator	0.061	0.021	8.259	0.004

Note: Statistical testing results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data.

RQ: research question; Denom: denominator; ED: emergency department

PQC

Table A-29—PQC Full Measure Calculations, 2018-2022

Meas RQ Num	Measure Description	SFY 2018		SFY 2019		SFY 2020		SFY 2021		SFY 2022	
		Denominator	Rate	Denominator	Rate	Denominator	Rate	Denominator	Rate	Denominator	Rate
1-1 1-1	Percentage of estimated eligible Medicaid recipients enrolled, by eligibility group										
1-1 1-1	Eligible - Total	1,459,810	38.9%	1,435,146	39.1%	1,425,829	38.3%	1,401,602	36.5%	1,352,249	39.8%
1-1 1-1	Eligible - Adult	961,150	36.3%	928,879	36.3%	929,467	36.9%	927,727	34.3%	864,570	39.3%
1-1 1-1	Eligible - Disabled (FTW)	93,825	25.5%	100,584	30.2%	104,928	25.2%	104,393	26.8%	113,423	25.7%
1-1 1-1	Eligible - Parent	244,852	57.6%	244,616	55.1%	214,771	51.0%	197,730	52.1%	194,573	54.7%
1-1 1-1	Eligible - Senior (DIS)	72,468	43.2%	76,979	43.9%	81,731	47.7%	79,419	48.8%	80,849	43.0%
1-1 1-1	Eligible - SSI Aged	87,515	25.1%	84,088	28.9%	94,932	29.3%	92,333	25.8%	98,834	28.7%
1-1 1-2	Percentage of estimated eligible Medicaid recipients newly enrolled, by eligibility group										
1-1 1-2	Eligible - Total	1,459,810	11.1%	1,435,146	11.3%	1,425,829	12.1%	1,401,602	10.6%	1,352,249	9.1%
1-1 1-2	Eligible - Adult	961,150	11.3%	928,879	11.7%	929,467	12.6%	927,727	11.2%	864,570	9.7%
1-1 1-2	Eligible - Disabled (FTW)	93,825	0.4%	100,584	0.4%	104,928	0.4%	104,393	0.3%	113,423	0.2%
1-1 1-2	Eligible - Parent	244,852	17.0%	244,616	17.0%	214,771	20.7%	197,730	17.9%	194,573	14.7%
1-1 1-2	Eligible - Senior (DIS)	72,468	0.9%	76,979	0.8%	81,731	0.7%	79,419	0.6%	80,849	0.7%
1-1 1-2	Eligible - SSI Aged	87,515	12.1%	84,088	12.6%	94,932	10.7%	92,333	10.1%	98,834	9.9%

Meas RQ	Num	Measure Description	SFY 2018		SFY 2019		SFY 2020		SFY 2021		SFY 2022	
			Denominator	Rate	Denominator	Rate	Denominator	Rate	Denominator	Rate	Denominator	Rate
1-2	1-6	Average number of months with Medicaid coverage	1,011,255	9.76	979,487	9.89	1,004,549	9.94	1,065,264	10.91	1,184,595	11.07
1-3	1-7	Percentage of Medicaid beneficiaries who re-enroll after a gap of up to six months	140,532	24.8%	124,388	24.1%	128,860	25.8%	39,868	34.9%	45,620	27.2%
1-3	1-8	Average number of months without Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	34,878	2.28	29,988	2.27	33,211	2.15	13,922	1.43	12,406	1.70
1-3	1-9	Average number of gaps in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	34,878	1.20	29,988	1.20	33,211	1.22	13,922	1.45	12,406	1.35
1-3	1-10	Average number of days per gap in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months	41,775	57.06	36,123	56.54	40,483	52.85	20,225	29.63	16,746	37.71
5-2	5-3	Percentage of beneficiaries with a visit to a specialist	1,011,461	41.1%	979,546	42.2%	1,004,617	40.7%	1,065,439	41.4%	1,188,332	39.5%

Note: Year 1 of PQC baseline period extends from July 1, 2017, through June 30, 2018. Year 2 extends from July 1, 2018, through June 30, 2019. Data from IPUMS used in Measures 1-1, and 1-2 utilize 2017 and 2018 data, for years 1 and 2, respectively.

Table A-30—PQC Supplemental Model Results

Meas RQ	Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of estimated eligible Medicaid recipients enrolled, by eligibility group</b>						
<b>Eligible - Total</b>						
		Intercept	-0.449	0.001	138,604.829	<0.001
		Post Implementation Indicator	-0.033	0.002	450.495	<0.001
<b>Eligible - Adult</b>						
		Intercept	-0.561	0.002	137,657.949	<0.001
		Post Implementation Indicator	0.019	0.002	90.931	<0.001
<b>Eligible - Disabled (FTW)</b>						
1-1	1-1	Intercept	-0.947	0.005	35,122.832	<0.001
		Post Implementation Indicator	-0.104	0.006	259.913	<0.001
<b>Eligible - Parent</b>						
		Intercept	0.255	0.003	7,816.618	<0.001
		Post Implementation Indicator	-0.153	0.004	1,560.102	<0.001
<b>Eligible - Senior (DIS)</b>						
		Intercept	-0.259	0.005	2,473.130	<0.001
		Post Implementation Indicator	0.119	0.007	322.173	<0.001
<b>Eligible - SSI Aged</b>						
		Intercept	-0.996	0.005	33,505.832	<0.001
		Post Implementation Indicator	0.048	0.007	49.828	<0.001

Meas RQ	Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of estimated eligible Medicaid recipients newly enrolled, by eligibility group</b>						
<b>Eligible - Total</b>						
		Intercept	-2.071	0.002	1,234,329.905	<0.001
		Post Implementation Indicator	-0.057	0.002	551.732	<0.001
<b>Eligible - Adult</b>						
		Intercept	-2.039	0.002	800,812.748	<0.001
		Post Implementation Indicator	-0.032	0.003	117.170	<0.001
<b>Eligible - Disabled (FTW)</b>						
1-1	1-2	Intercept	-5.472	0.035	24,267.500	<0.001
		Post Implementation Indicator	-0.402	0.048	69.116	<0.001
<b>Eligible - Parent</b>						
		Intercept	-1.585	0.004	173,583.370	<0.001
		Post Implementation Indicator	0.058	0.005	132.645	<0.001
<b>Eligible - Senior (DIS)</b>						
		Intercept	-4.728	0.028	29,029.092	<0.001
		Post Implementation Indicator	-0.229	0.037	38.432	<0.001
<b>Eligible - SSI Aged</b>						
		Intercept	-1.958	0.007	71,308.833	<0.001
		Post Implementation Indicator	-0.216	0.010	507.150	<0.001
<b>Average number of months with Medicaid coverage</b>						
1-2	1-6	Intercept	9.822	0.002	4,461.248	<0.001
		Post Implementation Indicator	0.847	0.003	303.085	<0.001
<b>Percentage of Medicaid beneficiaries who re-enroll after a gap of up to six months</b>						
1-3	1-7	Intercept	-1.126	0.005	62,134.027	<0.001
		Post Implementation Indicator	0.171	0.007	667.266	<0.001
<b>Average number of months without Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months</b>						
1-3	1-8	Intercept	2.274	0.007	342.243	<0.001
		Post Implementation Indicator	-0.388	0.010	-40.345	<0.001

Meas RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
1-3	1-9	<b>Average number of gaps in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months</b>				
		Intercept	0.183	0.004	2,610.911	<0.001
		Post Implementation Indicator	0.080	0.005	248.412	<0.001
1-3	1-10	<b>Average number of days per gap in Medicaid coverage for beneficiaries who re-enroll after a gap of up to six months</b>				
		Intercept	56.818	0.180	315.565	<0.001
		Post Implementation Indicator	-13.305	0.255	-52.176	<0.001
5-2	5-3	<b>Percentage of beneficiaries with a visit to a specialist</b>				
		Intercept	-0.329	0.001	52,558.054	<0.001
		Post Implementation Indicator	-0.056	0.002	946.005	<0.001

TI

Table A-31—TI Full Measure Calculations, 2015–2022

Meas RQ	Meas Num	Measure Description	2015		2016		2019		2020		2021		2022	
			Denom	Rate	Denom	Rate	Denom	Rate	Denom	Rate	Denom	Rate	Denom	Rate
1-2	1-3	Percentage of beneficiaries with a well-child visit in the third, fourth, fifth, and sixth years of life	18,480	72.5%	21,010	69.4%	23,546	73.3%	25,459	65.1%	26,275	69.5%	22,137	70.1%
1-2	1-4	Percentage of beneficiaries with a depression screening and follow-up plan	--	--	--	--	--	--	--	--	--	--	--	--
1-2	1-5	Percentage of beneficiaries with an adolescent well-care visit	24,840	57.7%	29,402	56.8%	34,565	61.2%	35,863	53.1%	39,464	59.0%	34,043	58.5%
1-3	1-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	997	67.0%	1,279	71.9%	1,686	70.1%	1,585	73.6%	1,955	76.9%	1,581	74.0%
2-2	2-3	Percentage of beneficiaries with a depression screening and follow-up plan	--	--	--	--	--	--	--	--	--	--	--	--
2-3	2-5	Number of ED visits per 1,000 member months (no desired direction)	1,067,467	115.5	1,292,611	104.4	1,424,025	84.8	1,479,565	72.2	1,693,605	65.8	1,795,569	63.7
2-3	2-6	Number of ED visits for substance use disorder (SUD) or opioid use disorder (OUD) per 1,000 member months (no desired direction)	1,067,467	1.9	1,292,611	2.1	1,424,025	1.7	1,479,565	1.5	1,693,605	1.2	1,795,569	1.0
2-4	2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	3,361	58.5%	4,707	61.2%	6,125	59.2%	5,907	58.6%	6,250	60.4%	5,717	61.5%
2-4	2-8	Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness	1,371	54.2%	1,534	56.5%	1,326	50.9%	1,032	52.5%	909	50.7%	820	48.3%

RQ	Meas Num	Measure Description	2015		2016		2019		2020		2021		2022	
			Denom	Rate	Denom	Rate	Denom	Rate	Denom	Rate	Denom	Rate	Denom	Rate
2-5	2-9	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment												
2-5	2-9	Total	7,957	44.6%	9,184	47.8%	9,381	46.6%	8,951	46.1%	10,029	46.9%	9,829	46.8%
2-5	2-9	Alcohol	2,798	45.1%	3,156	48.7%	3,211	43.8%	3,107	45.5%	3,667	45.8%	3,451	45.3%
2-5	2-9	Opioid	1,503	51.6%	2,031	54.3%	1,988	60.5%	2,005	54.1%	2,240	56.9%	2,099	59.1%
2-5	2-9	Other Drug	4,204	42.4%	4,642	45.9%	5,028	43.4%	4,693	45.2%	5,220	46.2%	5,336	46.1%
2-5	2-10	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment												
2-5	2-10	Total	7,957	12.2%	9,184	14.6%	9,381	16.7%	8,951	15.5%	10,029	13.3%	9,829	13.0%
2-5	2-10	Alcohol	2,798	10.8%	3,156	13.8%	3,211	13.5%	3,107	14.0%	3,667	11.3%	3,451	11.1%
2-5	2-10	Opioid	1,503	20.6%	2,031	18.5%	1,988	30.0%	2,005	25.1%	2,240	22.1%	2,099	23.2%
2-5	2-10	Other Drug	4,204	8.8%	4,642	12.8%	5,028	12.1%	4,693	11.5%	5,220	10.1%	5,336	9.8%
2-5	2-11	Percentage of beneficiaries with OUD receiving any medication assisted treatment (OUD-MAT)	5,335	24.6%	7,360	19.8%	10,962	41.6%	11,727	41.0%	12,246	37.0%	10,865	38.0%
3-2	3-3	Percentage of recently released beneficiaries who had a preventive/ambulatory health service visit	N/A	N/A	1,344	75.1%	2,028	73.8%	2,641	69.3%	3,300	67.3%	2,965	62.6%
3-3	3-6	Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment												
3-3	3-6	Total	N/A	N/A	486	56.8%	692	52.3%	746	49.1%	854	52.5%	773	48.9%
3-3	3-6	Alcohol	N/A	N/A	167	58.7%	207	46.9%	216	49.1%	223	46.2%	198	46.0%
3-3	3-6	Opioid	N/A	N/A	124	63.7%	152	67.1%	171	66.1%	241	65.1%	238	57.6%
3-3	3-6	Other Drug	N/A	N/A	247	56.7%	415	49.4%	476	45.4%	556	50.5%	468	48.1%
3-3	3-7	Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment												
3-3	3-7	Total	N/A	N/A	486	21.4%	692	21.0%	746	17.6%	854	17.8%	773	17.6%
3-3	3-7	Alcohol	N/A	N/A	167	21.0%	207	16.9%	216	16.2%	223	15.2%	198	16.2%
3-3	3-7	Opioid	N/A	N/A	124	28.2%	152	31.6%	171	26.9%	241	24.1%	238	23.1%
3-3	3-7	Other Drug	N/A	N/A	247	17.0%	415	16.1%	476	13.7%	556	13.5%	468	12.4%
3-3	3-8	Percentage of beneficiaries with OUD receiving any medication assisted treatment (OUD-MAT)	N/A	N/A	537	17.5%	1,202	34.9%	1,452	32.6%	1,477	31.0%	1,279	25.8%
3-4	3-9	Number of ED visits per 1,000 member months (no desired direction)	N/A	N/A	27,811	158.7	45,276	155.8	51,401	137.5	57,631	110.4	51,146	100.6
3-4	3-10	Number of ED visits for substance use disorder (SUD) or opioid use disorder (OUD) per 1,000 member months (no desired direction)	N/A	N/A	27,811	9.5	45,276	8.6	51,401	7.6	57,631	5.5	51,146	4.9
3-5	3-11	Percentage of recently released beneficiaries who have prescriptions for opioids at a high dosage (lower is better)	N/A	N/A	167	13.2%	**	2.9%	**	9.3%	**	4.2%	**	7.1%
3-5	3-12	Percentage of recently released beneficiaries who have prescriptions for concurrent use of opioids and benzodiazepines (lower is better)	N/A	N/A	211	19.4%	**	3.5%	**	4.3%	**	4.4%	**	4.1%

Note: Results for Measures 1-4 and 2-3 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Measures with numerators or denominators between 1 and 10 are suppressed to ensure anonymity and are indicated with "\*\*". RQ: research question; Denom: denominator

TI supplemental model results for FFY 2022 are displayed in Table A-32.

**Table A-32—TI Supplemental Model Results**

Meas RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
<b>Percentage of beneficiaries with a well-child visit in the third, fourth, fifth, and sixth years of life</b>						
1-2	1-3	Intercept	0.552	0.016	1,158.672	<0.001
		TI Indicator	0.338	0.020	296.248	<0.001
		Post Implementation Indicator	-0.077	0.025	9.319	0.002
		TI * Post Implementation Interaction	0.038	0.031	1.489	0.222
1-2	1-4	<b>Percentage of beneficiaries with a depression screening and follow-up plan</b>	--	--	--	--
<b>Percentage of beneficiaries with an adolescent well-care visit</b>						
1-2	1-5	Intercept	0.004	0.016	0.063	0.802
		TI Indicator	0.286	0.018	241.243	<0.001
		Post Implementation Indicator	-0.016	0.024	0.411	0.521
		TI * Post Implementation Interaction	0.068	0.028	5.804	0.016
<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>						
1-3	1-7	Intercept	-0.174	0.416	0.175	0.676
		TI Indicator	1.008	0.418	5.816	0.016
		Post Implementation Indicator	0.810	0.735	1.215	0.270
		TI * Post Implementation Interaction	-0.599	0.739	0.656	0.418
2-2	2-3	<b>Percentage of beneficiaries with a depression screening and follow-up plan</b>	--	--	--	--
<b>Number of ED visits per 1,000 member months (no desired direction)</b>						
2-3	2-5	Intercept	-3.072	0.013	52,848.595	<0.001
		TI Indicator	0.820	0.017	2,465.848	<0.001
		Post Implementation Indicator	-0.464	0.029	262.905	<0.001
		TI * Post Implementation Interaction	-0.120	0.033	13.199	<0.001
<b>Number of ED visits for substance use disorder (SUD) or opioid use disorder (OUD) per 1,000 member months (no desired direction)</b>						
2-3	2-6	Intercept	-7.741	0.068	12,916.870	<0.001
		TI Indicator	1.542	0.079	378.718	<0.001
		Post Implementation Indicator	-0.556	0.140	15.658	<0.001
		TI * Post Implementation Interaction	-0.143	0.157	0.823	0.364
<b>Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness</b>						
2-4	2-7	Intercept	-0.054	0.240	0.050	0.823
		TI Indicator	0.463	0.241	3.705	0.054
		Post Implementation Indicator	-0.030	0.474	0.004	0.950
		TI * Post Implementation Interaction	0.088	0.476	0.034	0.854



RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square		
<b>Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness</b>								
2-4	2-8	Intercept	-0.704	0.238	8.737	0.003		
		TI Indicator	0.921	0.241	14.621	<0.001		
		Post Implementation Indicator	-0.813	0.932	0.761	0.383		
		TI * Post Implementation Interaction	0.527	0.936	0.318	0.573		
<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment</b>								
<b>Total</b>								
2-5	2-9	Intercept	-0.511	0.071	52.430	<0.001		
		TI Indicator	0.363	0.072	25.272	<0.001		
		Post Implementation Indicator	-0.419	0.154	7.387	0.007		
		TI * Post Implementation Interaction	0.439	0.156	7.879	0.005		
		<b>Alcohol</b>						
		Intercept	-0.710	0.121	34.240	<0.001		
		TI Indicator	0.590	0.124	22.623	<0.001		
		Post Implementation Indicator	-0.455	0.247	3.388	0.066		
		TI * Post Implementation Interaction	0.386	0.251	2.364	0.124		
		<b>Opioid</b>						
		Intercept	0.062	0.193	0.103	0.748		
		TI Indicator	0.065	0.195	0.111	0.739		
Post Implementation Indicator	-0.458	0.431	1.128	0.288				
TI * Post Implementation Interaction	0.700	0.435	2.592	0.107				
<b>Other Drug</b>								
Intercept	-0.497	0.093	28.715	<0.001				
TI Indicator	0.267	0.095	7.852	0.005				
Post Implementation Indicator	-0.301	0.210	2.047	0.152				
TI * Post Implementation Interaction	0.376	0.213	3.119	0.077				

Meas RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment</b>				
		<b>Total</b>				
		Intercept	-1.412	0.086	268.712	<0.001
		TI Indicator	-0.448	0.089	25.313	<0.001
		Post Implementation Indicator	-1.203	0.260	21.438	<0.001
		TI * Post Implementation Interaction	1.159	0.263	19.511	<0.001
		<b>Alcohol</b>				
		Intercept	-1.824	0.165	122.492	<0.001
		TI Indicator	-0.131	0.169	0.601	0.438
2-5	2-10	Post Implementation Indicator	-1.145	0.456	6.303	0.012
		TI * Post Implementation Interaction	1.017	0.461	4.866	0.027
		<b>Opioid</b>				
		Intercept	-0.999	0.217	21.193	<0.001
		TI Indicator	-0.428	0.221	3.756	0.053
		Post Implementation Indicator	-0.999	0.623	2.574	0.109
		TI * Post Implementation Interaction	1.229	0.626	3.852	0.050
		<b>Other Drug</b>				
		Intercept	-1.350	0.111	147.238	<0.001
		TI Indicator	-0.754	0.116	42.003	<0.001
		Post Implementation Indicator	-1.138	0.346	10.800	0.001
		TI * Post Implementation Interaction	1.024	0.351	8.515	0.004
		<b>Percentage of beneficiaries with OUD receiving any medication assisted treatment (OUD-MAT)</b>				
2-5	2-11	Intercept	-0.908	0.102	78.574	<0.001
		TI Indicator	-0.368	0.105	12.373	<0.001
		Post Implementation Indicator	0.282	0.208	1.836	0.175
		TI * Post Implementation Interaction	0.506	0.210	5.798	0.016
		<b>Percentage of recently released beneficiaries who had a preventive/ambulatory health service visit</b>				
3-2	3-3	Intercept	0.390	0.174	5.045	0.025
		TI Indicator	0.712	0.185	14.881	<0.001
		Post Implementation Indicator	-0.359	0.251	2.048	0.152
		TI * Post Implementation Interaction	-0.228	0.262	0.759	0.384

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment</b>				
		<b>Total</b>				
		Intercept	-0.397	0.457	0.757	0.384
		TI Indicator	0.671	0.466	2.074	0.150
		Post Implementation Indicator	0.724	0.958	0.570	0.450
		TI * Post Implementation Interaction	-1.041	0.965	1.162	0.281
		<b>Alcohol</b>				
		Intercept	**	**	**	**
		TI Indicator	**	**	**	**
3-3	3-6	Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**
		<b>Opioid</b>				
		Intercept	0.254	1.145	0.049	0.824
		TI Indicator	0.309	1.160	0.071	0.790
		Post Implementation Indicator	1.834	2.490	0.543	0.461
		TI * Post Implementation Interaction	-2.092	2.500	0.700	0.403
		<b>Other Drug</b>				
		Intercept	-0.467	0.588	0.630	0.427
		TI Indicator	0.735	0.601	1.495	0.221
		Post Implementation Indicator	0.721	1.503	0.230	0.632
		TI * Post Implementation Interaction	-1.066	1.511	0.498	0.480
		<b>Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment</b>				
		<b>Total</b>				
3-3	3-7	Intercept	**	**	**	**
		TI Indicator	**	**	**	**
		Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
		<b>Alcohol</b>				
		Intercept	**	**	**	**
		TI Indicator	**	**	**	**
		Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**
		<b>Opioid</b>				
		Intercept	**	**	**	**
3-3	3-7	TI Indicator	**	**	**	**
		Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**
		<b>Other Drug</b>				
		Intercept	**	**	**	**
		TI Indicator	**	**	**	**
		Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**
		<b>Percentage of beneficiaries with OUD receiving any medication assisted treatment (OUD-MAT)</b>				
3-3	3-8	Intercept	-1.769	0.665	7.074	0.008
		TI Indicator	0.218	0.675	0.105	0.746
		Post Implementation Indicator	0.496	1.240	0.160	0.689
		TI * Post Implementation Interaction	-0.002	1.247	0.000	0.999
		<b>Number of ED visits per 1,000 member months (no desired direction)</b>				
3-4	3-9	Intercept	-2.725	0.058	2,175.593	<0.001
		TI Indicator	0.694	0.067	107.935	<0.001
		Post Implementation Indicator	-0.515	0.109	22.229	<0.001
		TI * Post Implementation Interaction	0.082	0.119	0.471	0.493

RQ	Meas Num	Measure Description	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square
3-4	3-10	<b>Number of ED visits for substance use disorder (SUD) or opioid use disorder (OUD) per 1,000 member months (no desired direction)</b>				
		Intercept	-6.992	0.621	126.696	<0.001
		TI Indicator	2.339	0.624	14.038	<0.001
		Post Implementation Indicator	-0.568	1.214	0.219	0.640
		TI * Post Implementation Interaction	-0.092	1.217	0.006	0.940
3-5	3-11	<b>Percentage of recently released beneficiaries who have prescriptions for opioids at a high dosage (lower is better)</b>				
		Intercept	**	**	**	**
		TI Indicator	**	**	**	**
		Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**
3-5	3-12	<b>Percentage of recently released beneficiaries who have prescriptions for concurrent use of opioids and benzodiazepines (lower is better)</b>				
		Intercept	**	**	**	**
		TI Indicator	**	**	**	**
		Post Implementation Indicator	**	**	**	**
		TI * Post Implementation Interaction	**	**	**	**

Note: Results for Measures 1-4 and 2-3 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Model results are suppressed for measures with unweighted numerators or denominators between 1 to 10 to ensure anonymity and are represented with "\*\*".

RQ: research question; Denom: denominator

**Table A-33—Member Month and Claims Distribution by Program and TI Provider Participation**

SFY	TI Participation	Member Month Distribution					Claims Distribution				
		ACC	RBHA	CHP	ALTCS-DD	ALTCS-EPD	ACC	RBHA	CHP	ALTCS-DD	ALTCS-EPD
2017	TI	90.4%	6.1%	3.0%	0.3%	0.2%	70.0%	22.7%	4.5%	1.0%	1.8%
2018	TI	89.8%	6.5%	3.1%	0.4%	0.2%	70.0%	22.6%	4.4%	1.2%	1.8%
2019	TI	89.0%	7.0%	3.3%	0.4%	0.2%	68.7%	23.3%	5.0%	1.1%	1.9%
2020	TI	87.8%	8.3%	3.3%	0.4%	0.2%	64.7%	27.7%	4.8%	1.0%	1.8%
2021	TI	87.8%	8.7%	2.9%	0.4%	0.2%	65.0%	28.4%	4.1%	1.0%	1.6%

SFY	TI Participation	Member Month Distribution					Claims Distribution				
		ACC	RBHA	CHP	ALTCS-DD	ALTCS-EPD	ACC	RBHA	CHP	ALTCS-DD	ALTCS-EPD
2022	TI	88.2%	8.7%	2.5%	0.4%	0.2%	64.1%	29.4%	3.7%	1.1%	1.7%
2017	Non-TI	93.3%	2.0%	0.7%	2.1%	1.9%	63.3%	7.6%	1.2%	13.2%	14.6%
2018	Non-TI	93.2%	1.9%	0.5%	2.3%	2.1%	61.8%	7.2%	1.0%	14.4%	15.6%
2019	Non-TI	93.3%	1.7%	0.3%	2.5%	2.2%	61.8%	6.4%	0.9%	15.0%	16.0%
2020	Non-TI	93.6%	1.4%	0.3%	2.5%	2.1%	60.7%	4.9%	0.7%	16.8%	16.9%
2021	Non-TI	94.4%	1.2%	0.3%	2.3%	1.8%	64.5%	4.1%	0.7%	16.4%	14.3%
2022	Non-TI	94.8%	1.1%	0.3%	2.2%	1.6%	64.5%	4.2%	0.7%	16.5%	14.2%

**Table A-34—ACC Counterfactual Trend Development**

	Metric	Baseline Period	Ending Period	Trend
Reference Population	PMPM Costs	\$263.87	\$308.58	16.9%
	Avg Risk Score	1.101	1.090	-1.0%
	Average Age Factor	0.991	1.021	3.0%
	Average Race Factor	1.023	1.001	-2.2%
	Average Area Factor	0.999	0.999	0.1%
	Normalized PMPM Costs	\$263.87	\$309.22	17.2%
Intervention Population	PMPM Costs	\$348.22	\$428.06	22.9%
	Avg Risk Score	1.483	1.537	3.7%
	Average Age Factor	0.961	1.005	4.6%
	Average Race Factor	1.023	1.003	-1.9%
	Average Area Factor	1.004	1.003	-0.2%
	Normalized PMPM Costs	\$348.22	\$403.34	15.8%



**Table A-35—ACC TI Counterfactual Savings Development**

Metric	Formula	Total
Baseline Intervention Cost PMPM	A	\$348.22
Normalized Reference Population Trend Factor	B	1.172
Counter-factual Intervention Population Cost PMPM	C = A*B	\$408.07
Actual Intervention Population Cost PMPM	D	\$428.06
Intervention Population Normalization Factor	E	1.061
Normalized Intervention Population Cost PMPM	F = D/E	\$403.34
Counterfactual (Savings)/Costs PMPM	G = F-C	(\$4.73)
Member Months 2017-2022	H	19,062,128
Total Counterfactual (Savings)/Costs	I = G*H	(\$90,159,182)

**Table A-36—ALTCs-DD TI Counterfactual Trend Development**

	Metric	Baseline Period	Ending Period	Trend
Reference Population	PMPM Costs	\$2,335.27	\$3,361.24	43.9%
	Avg Risk Score	1.564	1.507	-3.7%
	Average Age Factor	0.511	0.497	-2.7%
	Average Race Factor	1.446	1.413	-2.3%
	Average Area Factor	1.287	1.276	-0.8%
	Normalized PMPM Costs	\$2,335.27	\$3,700.83	58.5%
Intervention Population	PMPM Costs	\$1,539.41	\$1,443.75	-6.2%
	Avg Risk Score	1.446	1.328	-8.2%
	Average Age Factor	1.017	1.053	3.5%
	Average Race Factor	1.030	1.027	-0.3%
	Average Area Factor	1.013	1.011	-0.2%
	Normalized PMPM Costs	\$1,539.41	\$1,527.18	-0.8%

**Table A-37—ALTCS-DD TI Counterfactual Savings Development**

Metric	Formula	Total
Baseline Intervention Cost PMPM	A	\$1,539.41
Normalized Reference Population Trend Factor	B	1.585
Counter-factual Intervention Population Cost PMPM	C = A*B	\$2,439.59
Actual Intervention Population Cost PMPM	D	\$1,443.75
Intervention Population Normalization Factor	E	0.945
Normalized Intervention Population Cost PMPM	F = D/E	\$1,527.18
Counterfactual (Savings)/Costs PMPM	G = F-C	(\$912.41)
Member Months 2017-2022	H	85,301
Total Counterfactual (Savings)/Costs	I = G*H	(\$77,829,761)

**Table A-38—ALTCS-EPD TI Counterfactual Trend Development**

	Metric	Baseline Period	Ending Period	Trend
Reference Population	PMPM Costs	\$2,826.40	\$4,074.74	44.2%
	Avg Risk Score	2.802	2.975	6.1%
	Average Age Factor	1.759	1.752	-0.4%
	Average Race Factor	0.311	0.327	5.3%
	Average Area Factor	0.562	0.573	1.9%
	Normalized PMPM Costs	\$2,826.40	\$3,589.88	27.0%
Intervention Population	PMPM Costs	\$4,430.79	\$5,494.50	24.0%
	Avg Risk Score	4.391	4.239	-3.5%
	Average Age Factor	1.316	1.350	2.6%
	Average Race Factor	1.026	1.004	-2.2%
	Average Area Factor	1.006	1.004	-0.1%
	Normalized PMPM Costs	\$4,430.79	\$5,678.42	28.2%

**Table A-39—ALTCS-EPD TI Counterfactual Savings Development**

Metric	Formula	Total
Baseline Intervention Cost PMPM	A	\$4,430.79
Normalized Reference Population Trend Factor	B	1.270
Counter-factual Intervention Population Cost PMPM	$C = A*B$	\$5,627.65
Actual Intervention Population Cost PMPM	D	\$5,494.50
Intervention Population Normalization Factor	E	0.968
Normalized Intervention Population Cost PMPM	$F = D/E$	\$5,678.42
Counterfactual (Savings)/Costs PMPM	$G = F-C$	\$50.77
Member Months 2017-2022	H	40,717
Total Counterfactual (Savings)/Costs	$I = G*H$	\$2,067,194

**Table A-40—CHP TI Counterfactual Trend Development**

	Metric	Baseline Period	Ending Period	Trend
Reference Population	PMPM Costs	\$565.06	\$999.38	76.9%
	Avg Risk Score	1.853	2.358	27.3%
	Average Age Factor	0.918	0.890	-3.1%
	Average Race Factor	1.008	1.065	5.6%
	Average Area Factor	0.999	1.036	3.7%
	Normalized PMPM Costs	\$565.06	\$739.54	30.9%
Intervention Population	PMPM Costs	\$646.38	\$868.59	34.4%
	Avg Risk Score	1.819	1.900	4.5%
	Average Age Factor	0.996	1.023	2.7%
	Average Race Factor	1.003	1.080	7.7%
	Average Area Factor	1.016	1.015	-0.1%
	Normalized PMPM Costs	\$646.38	\$752.20	16.4%

**Table A-41—CHP TI Counterfactual Savings Development**

Metric	Formula	Total
Baseline Intervention Cost PMPM	A	\$646.38
Normalized Reference Population Trend Factor	B	1.309
Counter-factual Intervention Population Cost PMPM	C = A*B	\$845.97
Actual Intervention Population Cost PMPM	D	\$868.59
Intervention Population Normalization Factor	E	1.155
Normalized Intervention Population Cost PMPM	F = D/E	\$752.20
Counterfactual (Savings)/Costs PMPM	G = F-C	(\$93.76)
Member Months 2017-2022	H	648,060
Total Counterfactual (Savings)/Costs	I = G*H	(\$60,765,325)

**Table A-42—RBHA TI Counterfactual Trend Development**

	Metric	Baseline Period	Ending Period	Trend
Reference Population	PMPM Costs	\$1,440.81	\$1,658.53	15.1%
	Avg Risk Score	2.249	2.347	4.4%
	Average Age Factor	1.241	1.272	2.5%
	Average Race Factor	1.018	1.014	-0.5%
	Average Area Factor	0.994	0.982	-1.2%
	Normalized PMPM Costs	\$1,440.81	\$1,577.00	9.5%
Intervention Population	PMPM Costs	\$1,726.79	\$1,994.02	15.5%
	Avg Risk Score	2.415	2.656	10.0%
	Average Age Factor	1.235	1.284	4.0%
	Average Race Factor	1.017	1.015	-0.2%
	Average Area Factor	1.007	1.013	0.6%
	Normalized PMPM Costs	\$1,726.79	\$1,735.32	0.5%

**Table A-43—RBHA TI Counterfactual Savings Development**

Metric	Formula	Total
Baseline Intervention Cost PMPM	A	\$1,726.79
Normalized Reference Population Trend Factor	B	1.095
Counter-factual Intervention Population Cost PMPM	$C = A * B$	\$1,890.01
Actual Intervention Population Cost PMPM	D	\$1,994.02
Intervention Population Normalization Factor	E	1.149
Normalized Intervention Population Cost PMPM	$F = D / E$	\$1,735.32
Counterfactual (Savings)/Costs PMPM	$G = F - C$	(\$154.69)
Member Months 2017-2022	H	1,648,821
Total Counterfactual (Savings)/Costs	$I = G * H$	(\$255,058,173)

## Renewal Results

### ALTCS

Results presented in this section are reported separately for the ALTCS-DD program for beneficiaries with developmental disabilities (DD) and ALTCS-EPD program for beneficiaries who are elderly and/or who have physical disabilities (EPD) and organized by hypothesis and by research question within each hypothesis. Most hypotheses include multiple research questions, and most research questions use multiple measures. While most research questions pertain to both groups, some research questions are only applicable to the ALTCS-DD population. Most measures presented in this section use administrative claims/encounter data calculated during the baseline period of October 1, 2014, through September 30, 2016, and the demonstration period of October 1, 2017, through September 30, 2022. Where possible, data from the National Core Indicator (NCI) surveys were used to assess beneficiary access to care, satisfaction with living arrangements, and social supports among the ALTCS-DD population. These data provide additional perspectives that cannot be easily obtained through claims/encounter data.

#### ***Research Question 1.1: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?***

Table A-44 shows that the *Percentage of beneficiaries who accessed preventative/ambulatory health services* trended upward during the baseline and demonstration period. The rates slightly decreased in federal fiscal year (FFY) 2020, which was possibly due to the coronavirus disease 2019 (COVID-19) public health emergency (PHE), as a similar trend was seen in other Demonstration groups including Arizona Health Care Cost Containment System (AHCCCS) Complete Care (ACC) and Comprehensive Health Plan (CHP).

#### **Key Findings:**

- **ALTCS-DD, Renewal**
  - The average *Percentage of beneficiaries who accessed preventative/ambulatory health services* increased between the baseline and demonstration periods by 1.0 percentage point, ( $p < 0.001$ ).
- **ALTCS-EPD**
  - The average *Percentage of beneficiaries who accessed preventative/ambulatory health services* increased between the baseline and demonstration periods by 2.5 percentage points ( $p < 0.001$ ).
  - Compared to the National Committee for Quality Assurance (NCQA) Quality Compass<sup>1</sup> 2019 benchmarks, the evaluation average for ALTCS-EPD beneficiaries of 92.3 percent exceeds the 95th percentile.

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A-1 Quality Compass<sup>®</sup> is a registered trademark of the National Committee for Quality Assurance (NCQA).



**Table A-44—Research Question 1.1, Renewal**

Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCs-DD Population</b>										
1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	87.1%	87.8%	88.0%	88.7%	89.4%	87.8%	88.0%	88.3%	
<b>ALTCs-EPD Population</b>										
1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	88.6%	91.0%	91.4%	92.0%	93.2%	91.4%	92.2%	92.7%	

Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or higher access to care compared to baseline rates and out-of-state comparisons?

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCs-DD Population</b>							
1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	87.5%	88.5%	1.0pp (<0.001)	0.5pp to 1.4pp	-1.7pp	Better
<b>ALTCs-EPD Population</b>							
1-1	Percentage of beneficiaries who accessed preventive/ambulatory health services	89.8%	92.3%	2.5pp (<0.001)	2.2pp to 2.8pp	-1.6pp	Better

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCs.

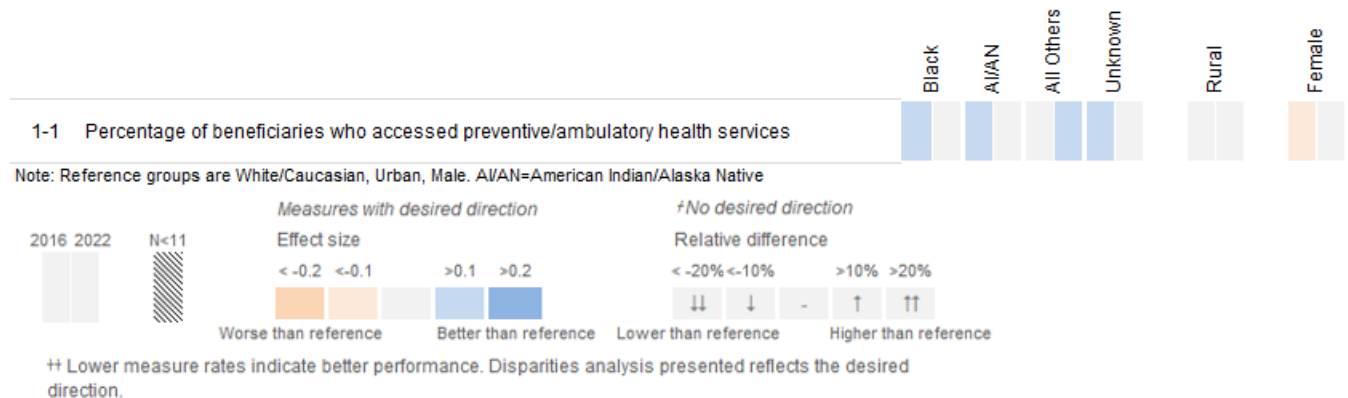
<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-1 ALTCs-DD Conclusion:** Supports the hypothesis  
**Measure 1-1 ALTCs-EPD Conclusion:** Supports the hypothesis

Table A-45 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section.

**Table A-45—Research Question 1.1, EPD Demographics**





**Research Question 1.2: Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparison?**

Table A-46 shows that the *Percentage of children and adolescents who accessed primary care practitioners* and *Percentage of beneficiaries under 21 with an annual dental visit* remained steady between the baseline and evaluation years. The decrease in the FFY 2020 annual dental visit rate was possibly attributable to the COVID-19 PHE and can be seen in other Demonstration groups including ACC and CHP.

**Key Findings:**

- The average *Percentage of children and adolescents who accessed primary care practitioners* decreased by 0.3 percentage points in the demonstration period compared to the baseline period ( $p=0.096$ ). Non-inferiority testing shows that rates in the demonstration period were the same or better than rates in the baseline period.
- The average *Percentage of beneficiaries under 21 with an annual dental visit* increased by 0.1 percentage points from the baseline to demonstration period ( $p=0.830$ ). Rates in the demonstration period were the same or better than rates in the baseline period based on non-inferiority testing.

**Table A-46—Research Question 1.2, Renewal**

		Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?								
		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
1-2	Percentage of children and adolescents who accessed primary care practitioners	91.1%	91.2%	91.0%	91.0%	91.6%	91.1%	90.2%	90.5%	
1-3	Percentage of beneficiaries under 21 with an annual dental visit	55.5%	53.4%	56.4%	57.1%	53.2%	40.2%	52.3%	54.2%	
		Do child beneficiaries with DD have the same or higher rates of access to care compared to baseline rates and out-of-state comparisons?								
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>		95% CI	NI Threshold	Non-Inferiority <sup>3</sup>		
<b>ALTCS-DD Population</b>										
1-2	Percentage of children and adolescents who accessed primary care practitioners	91.2%	90.8%	-0.3pp (0.096)		-0.7pp to 0.1pp	-1.5pp	Not Meaningfully Worse		
1-3	Percentage of beneficiaries under 21 with an annual dental visit	54.4%	54.5%	0.1pp (0.830)		-0.6pp to 0.7pp	-2.5pp	Not Meaningfully Worse		

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-2 ALTCS-DD Conclusion:** Supports the hypothesis

**Measure 1-3 ALTCS-DD Conclusion:** Supports the hypothesis

**Research Question 1.3: Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?**

As shown in Table A-47, baseline data collected in 2015–2016 and demonstration period data collected in 2017–2018 and 2018–2019 from NCI surveys of ALTCS-DD adults provide another view on access to care for this population. Virtually all Arizona respondents across the baseline and both demonstration period surveys indicate that they have a primary care practitioner (PCP), but fewer respondents report having a physical, dental, or eye exam, or influenza vaccination. To contextualize outcomes for Arizona beneficiaries with DD, these measures utilize a difference-in-differences (DiD) analysis to compare Arizona rates to those reported by individuals with DD nationally. The national averages were calculated by NCI. The authors caution that for some states at least 25 percent of data were missing data or consisted of “don’t know” responses. The applicability of this varies by measure.<sup>A-2</sup> Please see Appendix B for further details on Research Question 1.3.

**Key Findings:**

• **ALTCS-DD**

- Survey results indicate that the percentage of Arizona adults with DD who *Had a complete physical exam in the past year* increased by 8.0 ( $p < 0.001$ ) and 7.0 ( $p = 0.011$ ) percentage points greater than the change in rate for the national comparison group between baseline and 2017/2018 and 2018/2019, respectively.

**Table A-47—Research Question 1.3**

Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?							
		Baseline Period	Evaluation Period		2017/2018	2018/2019	
		2015/2016	2017/2018	2018/2019	DiD (p-value)	DiD (p-value)	
<b>ALTCS-DD Population</b>							
1-4	Has a primary care doctor or practitioner	Arizona	97.0%	97.0%	96.0%	1.0pp (0.284)	-1.0pp (0.431)
		National	98.0%	97.0%	98.0%		
1-5	Had a complete physical exam in the past year	Arizona	81.0%	87.0%	88.0%	8.0pp (0.001)	7.0pp (0.011)
		National	89.0%	87.0%	89.0%		
1-6	Had a dental exam in the past year	Arizona	75.0%	81.0%	76.0%	6.0pp (0.057)	1.0pp (0.769)
		National	81.0%	81.0%	81.0%		
1-7	Had an eye exam in the past year	Arizona	61.0%	60.0%	60.0%	0.0pp (1.000)	0.0pp (1.000)
		National	59.0%	58.0%	58.0%		
1-8	Had a flu vaccine in the past year	Arizona	80.0%	74.0%	78.0%	-2.0pp (0.612)	4.0pp (0.431)
		National	78.0%	74.0%	72.0%		

Note: pp=percentage point

Source: National Core Indicators Adult Consumer Survey Arizona Report 2015-2016 (total sample size = 476), In-Person Survey Arizona Report 2017-2018 (total sample size = 493), In-Person Survey Arizona Report 2018-2019 (total sample size = 413), National Core Indicators Adult Consumer Survey National Report 2015-2016 (total sample size = 17,682), In-Person Survey National Report 2017-2018 (total sample size = 25,671), In-Person Survey National Report 2018-2019 (total sample size = 22,009).

<sup>A-2</sup> National Core Indicators. *2018-19 NCI IPS Overview*. Available at: [https://legacy.nationalcoreindicators.org/upload/core-indicators/NCI\\_IPS\\_--Overview\\_508\\_IPS\\_18\\_19.pdf](https://legacy.nationalcoreindicators.org/upload/core-indicators/NCI_IPS_--Overview_508_IPS_18_19.pdf). Accessed on: Oct 24, 2023.

**Measure 1-4 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-5 ALTCS-DD Conclusion:** Supports the hypothesis

**Measure 1-6 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-7 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-8 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 2.1: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventative care compared to baseline rates and out-of-state comparisons?**

Table A-48 shows the *Percentage of adult beneficiaries with a breast cancer screening* and *Percentage of adult beneficiaries with a cervical cancer screening* decreased between the baseline and evaluation years for ALTCS-DD beneficiaries. The *Percentage of adult beneficiaries with a breast cancer screening* generally increased and the *Percentage of adult beneficiaries with a cervical cancer screening* stayed consistent between the baseline and evaluation years for ALTCS-EPD beneficiaries. In addition, the table shows that the *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased substantially between FFY 2019 and FFY 2021 before decreasing in FFY 2022 for ALTCS-DD and ALTCS-EPD beneficiaries.

**Key Findings:**

• **ALTCS-DD**

- Between the baseline and demonstration period, the average *Percentage of adult beneficiaries with a breast cancer screening* and *Percentage of adult beneficiaries with a cervical cancer screening* decreased by 1.0 and 2.9 percentage points, respectively ( $p=0.439$ ,  $p<0.001$ ) for ALTCS-DD beneficiaries.
- Compared to the 2019 National Committee for Quality Assurance (NCQA) Quality Compass benchmarks, the evaluation average for *Percentage of adult beneficiaries with a breast cancer screening* and *Percentage of adult beneficiaries with a cervical cancer screening* rates of 43.7 percent and 14.7 percent, respectively, for ALTCS-DD beneficiaries fell below the 5th percentile.<sup>A-3</sup>
- The average *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased by 4.1 percentage points ( $p=0.002$ ).
- The evaluation average of 82.2 percent for *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* among ALTCS-DD beneficiaries was well above the 95th percentile of the 2019 NCQA Quality Compass benchmarks.

• **ALTCS-EPD**







- Between the baseline and demonstration period, the average *Percentage of adult beneficiaries with a breast cancer screening* and *Percentage of adult beneficiaries with a cervical cancer screening* increased by 3.9 and 1.1 percentage points, respectively ( $p<0.001$ ,  $p=0.101$ ) for ALTCS-EPD beneficiaries. Rates of cervical cancer screening were the same or better in the demonstration period compared to the baseline period based on non-inferiority testing.

<sup>A-3</sup> Quality Compass® is a registered trademark of the NCQA.

- Compared to the 2019 NCQA Quality Compass benchmarks, the evaluation average for *Percentage of adult beneficiaries with a breast cancer screening* and *Percentage of adult beneficiaries with a cervical cancer screening* rates of 33.3 and 23.4 percent for ALTCS-EPD beneficiaries fell below the 5th percentile.
- The average *Percentage of beneficiaries with persistent asthma who had a ratio of controller medications to total asthma medications of at least 50 percent* increased by 1.9 percentage points ( $p=0.698$ ) for ALTCS-EPD beneficiaries.

**Table A-48—Research Question 2.1, Renewal**

**Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-1	Percentage of adult beneficiaries with a breast cancer screening	43.9%	45.7%	46.2%	45.1%	44.0%	42.0%	41.5%	42.2%	
2-2	Percentage of adult beneficiaries with a cervical cancer screening	17.8%	17.4%	16.5%	16.3%	15.8%	14.0%	12.9%	12.6%	
2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	77.1%	79.0%	79.8%	76.2%	82.1%	86.7%	92.5%	80.0%	
<b>ALTCS-EPD Population</b>										
2-1	Percentage of adult beneficiaries with a breast cancer screening	28.0%	31.1%	34.3%	33.5%	36.6%	34.4%	31.2%	30.9%	
2-2	Percentage of adult beneficiaries with a cervical cancer screening	21.4%	23.3%	23.7%	24.4%	24.8%	23.7%	21.4%	22.6%	
2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	65.9%	67.7%	73.5%	62.7%	60.6%	63.8%	74.8%	70.4%	

**Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCS-DD Population</b>							
2-1	Percentage of adult beneficiaries with a breast cancer screening	44.8%	43.7%	-1.0pp (0.439)	-3.6pp to 1.6pp	-2.5pp	Insufficient Data
2-2	Percentage of adult beneficiaries with a cervical cancer screening	17.6%	14.7%	-2.9pp (<0.001)	-3.7pp to -2.0pp	-1.9pp	Worse
2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	78.1%	82.2%	4.1pp (0.002)	1.6pp to 6.5pp	-2.1pp	Better
<b>ALTCS-EPD Population</b>							
2-1	Percentage of adult beneficiaries with a breast cancer screening	29.4%	33.3%	3.9pp (<0.001)	2.6pp to 5.2pp	-2.3pp	Better
2-2	Percentage of adult beneficiaries with a cervical cancer screening	22.3%	23.4%	1.1pp (0.101)	-0.2pp to 2.4pp	-2.0pp	Not Meaningfully Worse
2-3	Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	66.7%	68.6%	1.9pp (0.698)	-8.0pp to 10.3pp	-2.4pp	Insufficient Data

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-1 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 2-1 ALTCS-EPD Conclusion:** Supports the hypothesis

**Measure 2-2 ALTCS-DD Conclusion:** Does not support the hypothesis

**Measure 2-2 ALTCS-EPD Conclusion:** Supports the hypothesis

**Measure 2-3 ALTCS-DD Conclusion:** Supports the hypothesis

**Measure 2-3 ALTCS-EPD Conclusion:** Neither supports nor fails to support the hypothesis

Table A-49 show the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section.



**Table A-49—Research Question 2.1, EPD Demographics**

	Black	AI/AN	All Others	Unknown	Rural	Female
2-1 Percentage of adult beneficiaries with a breast cancer screening <sup>1</sup>	Blue	Light Blue	Light Blue	Blue	Orange	Hatched
2-2 Percentage of adult beneficiaries with a cervical cancer screening <sup>1</sup>	Blue	Light Blue	Light Blue	Blue	Orange	Hatched
2-3 Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent	Hatched	Hatched	Hatched	Blue	Hatched	Light Blue

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native

<sup>1</sup>Disparities analysis was not performed for this measure because it only pertains to females.



†† Lower measure rates indicate better performance. Disparities analysis presented reflects the desired direction.

**Research Question 2.2: Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?**

Table A-50 shows that the *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* and the *Percentage of beneficiaries with an adolescent well-care visit* increased between the baseline and demonstration periods for ALTCS-DD beneficiaries. Notably, both measures saw a decrease in rates in FFY 2020, before increasing throughout the remainder of the demonstration period. The decline in FFY 2020 was likely attributable to the COVID-19 PHE, as other Demonstration groups such as ACC and CHP saw similar declines. Measure 2-6, *Percentage of beneficiaries with an influenza vaccine*, is not presented in this report due to the unavailability of immunization registry data.

**Key Findings:**

- The average *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* increased by 4.6 percentage points between the baseline and demonstration periods ( $p<0.001$ ).
- Compared to 2019 benchmarks calculated from the Centers for Medicare & Medicaid Services (CMS) Child Core Set,<sup>A-4</sup> the evaluation average of *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* of 56.2 percent fell below the 25th percentile.
- Between the baseline and demonstration periods, the average *Percentage of beneficiaries with an adolescent well-care visit* increased by 5.1 percentage points ( $p<0.001$ ).

<sup>A-4</sup> Benchmarks for measures that utilize a hybrid methodology are reported where available using CMS Core Set data from states that reported administrative only methodology.



**Table A-50—Research Question 2.2, Renewal**

		Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?								
		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-4	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	52.2%	51.2%	53.5%	56.9%	58.9%	52.5%	55.3%	56.4%	
2-5	Percentage of beneficiaries with an adolescent well-care visit	39.8%	43.1%	43.3%	45.9%	48.1%	42.4%	46.5%	48.3%	
<b>Do child beneficiaries with DD have the same or higher rates of preventive care compared to baseline rates and out-of-state comparisons?</b>										
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>			
<b>ALTCS-DD Population</b>										
2-4	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	51.7%	56.2%	4.6pp (<0.001)	3.1pp to 6.0pp	-2.5pp	Better			
2-5	Percentage of beneficiaries with an adolescent well-care visit	41.5%	46.5%	5.1pp (<0.001)	4.2pp to 5.9pp	-2.5pp	Better			

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-4 ALTCS-DD Conclusion:** Supports the hypothesis

**Measure 2-5 ALTCS-DD Conclusion:** Supports the hypothesis

**Research Question 2.3: Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?**

Table A-51 and Table A-52 show that the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased between the baseline and demonstration periods, a trend also seen in ACC beneficiaries. The *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* increased across the 84- and 180- day treatment periods for ALTCS-DD beneficiaries, while the percentages decreased for ALTCS-EPD beneficiaries. There was no change in the *Percentage of beneficiaries receiving any mental health service* between the baseline and demonstration periods for ALTCS-DD beneficiaries, while ALTCS-EPD beneficiaries saw an increase across the baseline and demonstration periods. Although rates for screening for clinical depression (Measure 2-9) were calculated, as described in the Methodology Limitations section, this measure relies on level II Healthcare Common Procedure Coding System (HCPCS) codes to identify numerator compliance, which yields artificially low rates calculated through administrative data; therefore, no results for this measure are displayed. There is no desired direction for Measure 2-10, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.










**Key Findings:**

- **ALTCS-DD**
  - The average *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased by 5.4 percentage points between the baseline and demonstration periods ( $p=0.004$ ).

- Compared to the NCQA Quality Compass 2019 benchmarks, the evaluation average of 74.1 percent among ALTCS-DD beneficiaries with a follow-up visit within 7-days after hospitalization exceeded the 95th percentile.
- The average *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* increased by 8.8 percentage points for the 84-day period ( $p=0.067$ ) and by 4.1 percentage points for the 180-day period ( $p=0.388$ ) between the baseline and demonstration period. Non-inferiority testing shows that rates for the 84-day period in the demonstration period were the same or better than rates in the baseline period.
- There was no change in the *Percentage of beneficiaries receiving any mental health service* between the baseline and demonstration periods ( $p=0.981$ ). When compared to the NCQA Quality Compass 2019 benchmarks, the evaluation average of 31.3 percent exceeded the 95th percentile.
- **ALTCS-EPD**
  - The average *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased by 12.5 percentage points between the baseline and demonstration periods ( $p<0.001$ ).
  - The average *Percentage of adult beneficiaries who remained on an antidepressant medication treatment* decreased by 4.1 percentage points for the 84-day period ( $p=0.138$ ) and decreased by 2.5 percentage points for the 180-day period ( $p=0.360$ ) between the baseline and demonstration period.
  - The *Percentage of beneficiaries receiving any mental health services* increased by 2.8 percentage points between the baseline and demonstration periods ( $p<0.001$ ).

**Table A-51—Research Question 2.3, Renewal–DD Population**

**Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCs-DD Population</b>										
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	68.3%	69.2%	75.2%	73.6%	73.2%	73.4%	74.1%	74.6%	
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	52.3%	45.9%	51.8%	47.3%	59.3%	47.8%	60.5%	66.1%	
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	38.8%	33.1%	33.0%	35.7%	45.1%	28.7%	43.5%	40.1%	
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--	
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)									
	<b>Any</b>	<b>31.2%</b>	<b>31.5%</b>	<b>32.0%</b>	<b>32.1%</b>	<b>33.4%</b>	<b>32.4%</b>	<b>29.5%</b>	<b>30.1%</b>	
	ED	0.2%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	
	Intensive outpatient or partial hospitalization	0.9%	0.9%	1.1%	1.1%	1.2%	0.9%	0.7%	1.4%	
	Inpatient	1.2%	1.2%	1.2%	1.3%	1.3%	1.2%	1.3%	1.3%	
	Outpatient	31.1%	31.4%	31.9%	32.0%	33.3%	32.0%	28.4%	29.0%	
	Telehealth	0.4%	0.7%	0.8%	1.3%	1.3%	3.5%	5.0%	5.0%	

**Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCS-DD Population</b>							
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	68.7%	74.1%	<b>5.4pp (0.004)</b>	<b>1.8pp to 8.7pp</b>	<b>-2.3pp</b>	<b>Better</b>
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	49.0%	57.8%	<b>8.8pp (0.067)</b>	<b>-0.6pp to 17.6pp</b>	<b>-2.5pp</b>	<b>Not Meaningfully Worse</b>
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	35.9%	40.0%	<b>4.1pp (0.388)</b>	<b>-4.9pp to 13.7pp</b>	<b>-2.4pp</b>	<b>Insufficient Data</b>
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)						
	<b>Any</b>	<b>31.3%</b>	<b>31.3%</b>	<b>0.0pp (0.981)</b>	<b>-0.4pp to 0.4pp</b>	--	--
	ED	0.2%	0.3%	<b>0.0pp (0.135)</b>	<b>0.0pp to 0.1pp</b>	--	--
	Intensive outpatient or partial hospitalization	0.9%	1.1%	<b>0.2pp (&lt;0.001)</b>	<b>0.1pp to 0.3pp</b>	--	--
	Inpatient	1.2%	1.3%	<b>0.1pp (0.295)</b>	<b>0.0pp to 0.2pp</b>	--	--
	Outpatient	31.3%	30.8%	<b>-0.5pp (0.038)</b>	<b>-0.9pp to 0.0pp</b>	--	--
	Telehealth	0.6%	2.8%	<b>2.2pp (&lt;0.001)</b>	<b>1.9pp to 2.6pp</b>	--	--

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Indicators in bold denote inclusion for evaluation in summary table for Measure 2-10. pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

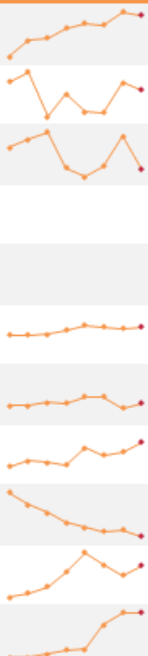
<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

**Table A-52—Research Question 2.3, Renewal–EPD Population**

**Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-of-state comparisons?**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCs-EPD Population</b>										
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	21.4%	29.9%	31.3%	36.5%	39.0%	38.0%	45.1%	43.1%	
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	61.3%	63.2%	54.8%	59.0%	55.7%	55.6%	61.2%	59.6%	
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	44.2%	45.7%	47.0%	40.8%	39.2%	41.0%	46.2%	40.5%	
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--	--	--	
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)									
	<b>Any</b>	<b>19.8%</b>	<b>19.7%</b>	<b>20.3%</b>	<b>22.1%</b>	<b>24.3%</b>	<b>23.4%</b>	<b>22.8%</b>	<b>23.4%</b>	
	ED	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	
	Intensive outpatient or partial hospitalization	0.2%	0.3%	0.3%	0.2%	0.5%	0.4%	0.5%	0.6%	
	Inpatient	7.4%	6.9%	6.5%	6.1%	5.9%	5.8%	5.8%	5.5%	
	Outpatient	13.7%	14.2%	15.1%	17.0%	19.6%	18.0%	16.5%	17.8%	
	Telehealth	0.1%	0.1%	0.4%	0.8%	0.9%	3.5%	4.8%	4.8%	

**Do beneficiaries who are EPD and beneficiaries with DD have the same or better management of BH conditions compared to baseline rates and out-**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCS-EPD Population</b>							
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	26.0%	38.6%	<b>12.5pp</b> ( <b>&lt;0.001</b> )	6.0pp to 19.5pp	-2.2pp	Better
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	62.2%	58.1%	-4.1pp (0.138)	-9.6pp to 1.3pp	-2.4pp	Insufficient Data
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	44.9%	42.4%	-2.5pp (0.360)	-7.8pp to 2.9pp	-2.5pp	Insufficient Data
2-9	Percentage of beneficiaries with a screening for depression and follow-up plan	--	--	--	--	--	--
2-10	Percentage of beneficiaries receiving mental health services (no desired direction)						
	Any	19.7%	22.6%	<b>2.8pp</b> ( <b>&lt;0.001</b> )	2.4pp to 3.3pp	--	--
	ED	0.1%	0.2%	0.0pp (0.123)	0.0pp to 0.1pp	--	--
	Intensive outpatient or partial hospitalization	0.2%	0.4%	0.2pp ( <b>&lt;0.001</b> )	0.1pp to 0.3pp	--	--
	Inpatient	7.1%	6.0%	-1.1pp ( <b>&lt;0.001</b> )	-1.4pp to -0.9pp	--	--
	Outpatient	14.0%	17.2%	3.2pp ( <b>&lt;0.001</b> )	2.8pp to 3.6pp	--	--
	Telehealth	0.1%	2.3%	2.2pp ( <b>&lt;0.001</b> )	1.6pp to 3.0pp	--	--

Note: Results for Measure 2-9 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Indicators in bold denote inclusion for evaluation in summary table for Measure 2-10. pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

- Measure 2-7 ALTCS-DD Conclusion:** Supports the hypothesis
- Measure 2-7 ALTCS-EPD Conclusion:** Supports the hypothesis
- Measure 2-8 (84-Days) ALTCS-DD Conclusion:** Supports the hypothesis
- Measure 2-8 (180-Days) ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 2-8 (84-Days) ALTCS-EPD Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 2-8 (180-Days) ALTCS-EPD Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 2-10 ALTCS-DD Conclusion:** N/A
- Measure 2-10 ALTCS-EPD Conclusion:** N/A

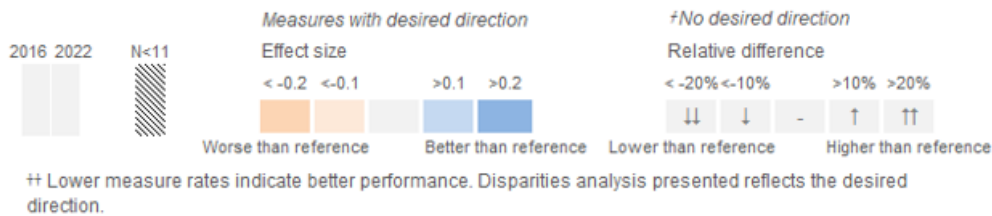
Table A-53 show the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section.



**Table A-53—Research Question 2.3, EPD Demographics**

		Black	AI/AN	All Others	Unknown	Rural	Female
2-7	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	▨	▨	▨	▨	▨	▨
2-8	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)	▨	▨	▨	▨	▨	▨
	Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)	▨	▨	▨	▨	▨	▨
2-10	Percentage of beneficiaries receiving mental health services (Any) <sup>†</sup>	-	-	▨	▨	▨	-
	Percentage of beneficiaries receiving mental health services (ED) <sup>†</sup>	▨	▨	▨	▨	▨	▨
	Percentage of beneficiaries receiving mental health services (Inpatient) <sup>†</sup>	▨	▨	▨	▨	▨	▨
	Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization) <sup>†</sup>	▨	▨	▨	▨	▨	▨
	Percentage of beneficiaries receiving mental health services (Outpatient) <sup>†</sup>	-	-	▨	▨	▨	-
	Percentage of beneficiaries receiving mental health services (Telehealth) <sup>†</sup>	▨	▨	▨	▨	▨	▨
	Percentage of beneficiaries receiving mental health services (Telehealth) <sup>†</sup>	▨	▨	▨	▨	▨	▨

Note: Reference groups are White/Caucasian, Urban, Male. AI/AN=American Indian/Alaska Native



**Research Question 2.4: Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?**

Table A-54 illustrates that the *Percentage of adult beneficiaries with monitoring for persistent medications* (including monitoring for beneficiaries on angiotensin converting enzyme [ACE] inhibitors or angiotensin receptor blockers [ARB] and beneficiaries on diuretics) increased overall between the baseline and demonstration periods, although rates fluctuated between years for ALTCS-DD beneficiaries. ALTCS-EPD beneficiaries experienced a slight decrease in rates during the same period. Both ALTCS-DD and ALTCS-EPD beneficiaries had declines in rates with opioid use at high dosage between the baseline and demonstration periods. Following a similar trend, the *Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines* decreased between the baseline and demonstration periods for ALTCS-DD and ALTCS-EPD beneficiaries, although the decline for ALTCS-EPD beneficiaries was far greater than the decline seen among ALTCS-DD beneficiaries.

**Key Findings:**

- **ALTCS-DD**







- The average *Percentage of adult beneficiaries with monitoring for persistent medications* increased by 5.2 percentage points between the baseline and demonstration periods ( $p=0.002$ ).



- The average *Percentage of beneficiaries with opioid use at high dosage* decreased by 3.3 percentage points between the baseline and demonstration periods ( $p=0.205$ ).
- The average *Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines* declined by 0.3 percentage points for ALTCS-DD ( $p=0.912$ ) between the baseline and demonstration period.
- **ALTCS-EPD**
  - The average *Percentage of adult beneficiaries with monitoring for persistent medications* decreased by 1.1 percentage points between the baseline and demonstration periods ( $p=0.025$ ).
  - The *Percentage of beneficiaries with opioid use at high dosage* decreased between the baseline and demonstration periods by 6.7 percentage points ( $p<0.001$ ).
  - The average *Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines* decreased by 14.3 percentage points between the baseline and demonstration periods, respectively ( $p<0.001$ ).

**Table A-54—Research Question 2.4, Renewal**

**Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	72.6%	79.3%	83.8%	79.8%	83.2%	79.2%	81.9%	77.7%	
2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	8.5%	10.0%	8.5%	9.6%	4.3%	5.7%	5.0%	1.9%	
2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	16.7%	18.6%	18.4%	20.4%	16.6%	13.6%	15.2%	13.1%	
<b>ALTCS-EPD Population</b>										
2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	95.9%	92.5%	91.2%	92.2%	94.8%	93.5%	93.2%	93.4%	
2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	23.5%	25.8%	24.9%	20.7%	18.2%	15.9%	13.3%	12.5%	
2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	36.3%	36.3%	32.0%	26.7%	18.7%	15.5%	14.0%	12.2%	

**Do adult beneficiaries who are EPD and adult beneficiaries with DD have the same or better management of prescriptions compared to baseline rates and out-of-state comparisons?**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCS-DD Population</b>							
2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	76.0%	81.2%	5.2pp (0.002)	2.1pp to 7.9pp	-2.2pp	Better
2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	9.8%	6.5%	-3.3pp (0.205)	-6.4pp to 2.4pp	1.5pp	Insufficient Data
2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	17.6%	17.4%	-0.3pp (0.912)	-4.9pp to 5.5pp	1.9pp	Insufficient Data
<b>ALTCS-EPD Population</b>							
2-11	Percentage of adult beneficiaries with monitoring for persistent medications (Total)	94.1%	93.0%	-1.1pp (0.025)	-2.3pp to -0.1pp	-1.2pp	Insufficient Data
2-12	Percentage of beneficiaries with opioid use at high dosage (lower is better)	25.3%	18.6%	-6.7pp (<0.001)	-8.5pp to -4.7pp	2.2pp	Better
2-13	Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines (lower is better)	36.3%	22.0%	-14.3pp (<0.001)	15.8pp to -12.7p	2.4pp	Better

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

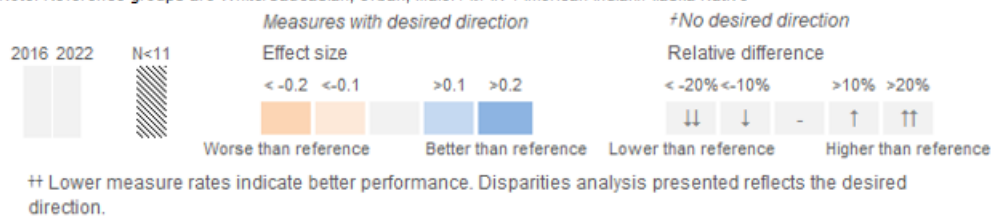
- Measure 2-11 ALTCS-DD Conclusion:** Supports the hypothesis
- Measure 2-11 ALTCS-EPD Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 2-12 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 2-12 ALTCS-EPD Conclusion:** Supports the hypothesis
- Measure 2-13 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis
- Measure 2-13 ALTCS-EPD Conclusion:** Supports the hypothesis

Table A-55 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section.

**Table A-55—Research Question 2.4, EPD Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
2-11 Percentage of adult beneficiaries with monitoring for persistent medications (Total)	Blue	Orange	White	White	Orange	White
2-12 Percentage of beneficiaries with opioid use at high dosage <sup>††</sup>	Blue	Diagonal lines	Diagonal lines	Blue	White	White
2-13 Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines <sup>††</sup>	Blue	Diagonal lines	Diagonal lines	Blue	White	Orange

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Research Question 2.5: Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-of-state comparisons?**

Table A-56 shows that among ALTCS-DD beneficiaries, the *Number of emergency department (ED) visits per 1,000 member months* and the *Number of inpatient (IP) stays per 1,000 member months* decreased throughout most of the demonstration period. The *Number of ED visits per 1,000 member months* for ALTCS-EPD beneficiaries remained largely consistent throughout the demonstration period while the *Number of IP stays per 1,000 member months* increased. Both ED visits and IP stays were likely impacted by the COVID-19 PHE as can be seen across both the ALTCS-DD and ALTCS-EPD beneficiary groups in FFY 2020 and among all other Demonstration groups. The *Percentage of adult IP discharges with an unplanned readmission within 30 days* increased during the demonstration period for ALTCS-DD and ALTCS-EPD beneficiaries. There is no desired direction for Measure 2-14 and 2-15, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.







**Key Findings:**

- ALTCS-DD**
  - Compared to the baseline period, the average *Number of ED visits per 1,000 member months* and *Number of IP stays per 1,000 member months* among ALTCS-DD beneficiaries decreased by 6.22 and 1.27 percentage points in the demonstration period, respectively ( $p=0.158$ ,  $p=0.057$ ).
  - The average *Percentage of adult IP discharges with an unplanned readmission within 30 days* increased for ALTCS-DD beneficiaries by 1.8 percentage points ( $p=0.018$ ).
- ALTCS-EPD**
  - Compared to the baseline period, the average *Number of ED visits per 1,000 member months* and *Number of IP stays per 1,000 member months* among ALTCS-EPD beneficiaries increased by 0.97 visits and 4.56 stays per 1,000 member months, respectively, in the demonstration period, respectively ( $p=0.831$ ,  $p=0.012$ ).
  - The average *Percentage of adult IP discharges with an unplanned readmission within 30 days* increased for ALTCS-EPD beneficiaries by 1.4 percentage points ( $p=0.008$ ).

- Compared to the 2019 benchmarks calculated from the CMS Adult Core Set, the evaluation average of beneficiaries with an unplanned readmission within 30 days of 20.5 percent fell below the 25th percentile.

**Table A-56—Research Question 2.5, Renewal**

**Do beneficiaries who are EPD and beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-of-state comparisons?**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
2-14	Number of ED visits per 1,000 member months (no desired direction)	44.47	45.96	43.86	43.75	43.14	32.90	29.27	34.98	
2-15	Number of inpatient stays per 1,000 member months (no desired direction)	10.77	9.80	9.65	9.78	9.69	7.96	7.58	8.38	
2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	14.7%	13.3%	14.8%	15.3%	14.1%	13.6%	17.5%	17.2%	
<b>ALTCS-EPD Population</b>										
2-14	Number of ED visits per 1,000 member months (no desired direction)	63.60	68.00	71.16	69.91	74.78	56.60	56.92	61.06	
2-15	Number of inpatient stays per 1,000 member months (no desired direction)	37.11	39.20	42.57	43.58	47.48	37.92	39.06	40.89	
2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	19.2%	18.9%	19.3%	19.6%	20.0%	20.7%	22.1%	21.7%	

**Do beneficiaries who are EPD and adult beneficiaries with DD have the same or higher rates of utilization of care compared to baseline rates and out-**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>ALTCS-DD Population</b>							
2-14	Number of ED visits per 1,000 member months (no desired direction)	45.22	39.00	-6.22 (0.158)	-13.5 to 2.7	--	--
2-15	Number of inpatient stays per 1,000 member months (no desired direction)	10.29	9.01	-1.27 (0.057)	-2.4 to 0.0	--	--
2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	14.0%	15.8%	1.8pp (0.018)	0.3pp to 3.4pp	1.8pp	Insufficient Data
<b>ALTCS-EPD Population</b>							
2-14	Number of ED visits per 1,000 member months (no desired direction)	65.80	66.77	0.97 (0.831)	-7.4 to 10.6	--	--
2-15	Number of inpatient stays per 1,000 member months (no desired direction)	38.16	42.72	4.56 (0.012)	1.0 to 8.5	--	--
2-16	Percentage of adult inpatient discharges with an unplanned readmission within 30 days (lower is better)	19.0%	20.5%	1.4pp (0.008)	0.4pp to 2.5pp	2.0pp	Insufficient Data

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. Because Measures 2-14 and 2-15 examine counts of services, a negative binomial model is used to appropriately conduct statistical testing. Estimates and confidence intervals have been transformed to rates per 1,000 member months for ease of interpretation.

<sup>1</sup>Rates are weighted by duration of enrollment in ALTCS.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

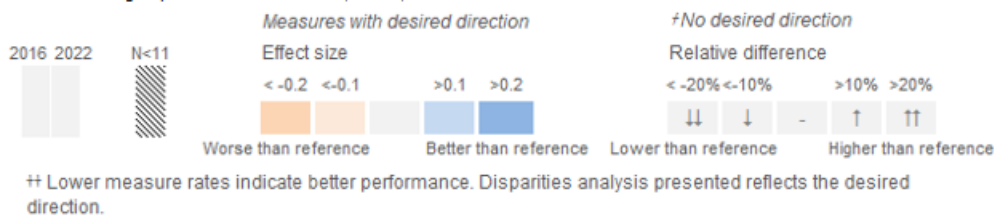
**Measure 2-14 ALTCS-DD Conclusion:** N/A  
**Measure 2-14 ALTCS-EPD Conclusion:** N/A  
**Measure 2-15 ALTCS-DD Conclusion:** N/A  
**Measure 2-15 ALTCS-EPD Conclusion:** N/A  
**Measure 2-16 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis  
**Measure 2-16 ALTCS-EPD Conclusion:** Neither supports nor fails to support the hypothesis

Table A-57 shows the effect sizes and/or relative percentage differences for various demographic stratifications when compared to their reference groups for 2016 and 2022. Additional information on interpreting the demographic results can be found in the Methodology section.

**Table A-57—Research Question 2.5, EPD Demographics**

	Black	A/AN	All Others	Unknown	Rural	Female
2-14 Number of ED visits per 1,000 member months†	↑↑ ↑↑	↑↑ ↑↑	↑↑ ↓↓	↑ -	- ↑↑	- -
2-15 Number of inpatient stays per 1,000 member months†	↑↑ ↑↑	↑↑ ↑↑	↑↑ ↓↓	↓ -	↑↑ ↑↑	↑ -
2-16 Percentage of adult inpatient discharges with an unplanned readmission within 30 days††						

Note: Reference groups are White/Caucasian, Urban, Male. A/AN=American Indian/Alaska Native



**Research Question 3.1: Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?**

Independent living and community integration are thought to be positively associated with improved quality of life among the disabled population. *Percentage of beneficiaries living in their own home* is a measure of independent living. Two different data sources were used to address this research question: administrative residential placement data from AHCCCS and survey data collected through NCI. NCI survey data are only available through 2019 and may not give a complete picture of the demonstration period.

As shown in Table A-58, AHCCCS placement data indicate that the proportion of the ALTCS-DD population residing in a home setting (including both their own house or apartment and living with their parents or other relatives) increased slightly between the baseline and demonstration periods, while the proportion of the ALTCS-EPD population doing the same decreased by a small amount over the same time frame. NCI survey data regarding type of residence for the adult ALTCS-DD population indicate a much lower percentage live in a home setting and that there was no significant change in the proportion doing so when compared to the change in the national rates between the baseline and demonstration periods. Unlike the AHCCCS placement data, the survey data do not include children, and that may help explain the difference in the observed percentages living in a home setting. Please see Appendix B for further details on Research Question 3.1.

**Key Findings:**

• **ALTCS-DD**


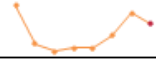
- According to AHCCCS placement data, the rate of ALTCS-DD beneficiaries residing in a home setting increased by 1.1 percentage points between the baseline and demonstration periods ( $p < 0.001$ ).
- According to NCI survey data, the rate of adults with DD in Arizona who reported their residence as their own home or apartment increased by 1.0 percentage point when compared to the change in the national rates in 2017/2018 ( $p = 0.951$ ). In 2018/2019, adults with DD in Arizona who reported living in their own home or apartment declined by 2.0 percentage points when compared to the change in the national rates ( $p = 0.103$ ).
- Between 2015/2016 and 2017/2018, the percentage of adults with DD who reported residing in a parent’s or relative’s home decreased by 8.0 percentage points compared to the change in rate for national survey respondents ( $p = 0.011$ ). Between 2015/2016 and 2018/2019, the rate of adults with DD in Arizona who reported living in a parent’s or relative’s home increased by 3.0 percentage points relative to national rates ( $p = 0.356$ ).
- The percentage of adults with DD in Arizona who indicated they lived in a home-based setting decreased by 7.0 percentage points between 2015/2016 and 2017/2018 when compared to the change in rate for national respondents ( $p = 0.011$ ). This trend changed direction between 2015/2016 and 2018/2019, when the rate of adults with DD in Arizona increased by 1.0 percentage point relative to the change in rate for national respondents ( $p = 0.653$ ).

• **ALTCS-EPD**

- The rate of ALTCS-EPD beneficiaries residing in a home setting decreased by 0.6 percentage points between the baseline and demonstration periods ( $p < 0.001$ ). Although traditional statistical testing found a statistically significant decrease, the magnitude was not large enough to be considered a meaningful difference based on the non-inferiority threshold.

**Table A-58—Research Question 3.1, Measure 3-1, Renewal**

Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?

		Rate								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>ALTCS-DD Population</b>										
3-1	Percentage of beneficiaries residing in their own home	84.5%	84.7%	85.0%	85.2%	85.6%	85.9%	86.1%	86.6%	
<b>ALTCS-EPD Population</b>										
3-1	Percentage of beneficiaries residing in their own home	54.1%	52.1%	51.8%	51.9%	51.9%	52.5%	53.7%	53.1%	



Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?							
		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>1</sup>	95% CI	NI Threshold	Non-Inferiority <sup>2</sup>
<b>ALTCS-DD Population</b>							
3-1	Percentage of Beneficiaries Residing in Their Own Home	8462.3%	8572.5%	110.2pp (<0.001)	1.1pp to 1.1pp	-1.8pp	Better
<b>ALTCS-EPD Population</b>							
3-1	Percentage of Beneficiaries Residing in Their Own Home	5304.6%	5245.2%	-59.4pp (<0.001)	-0.6pp to -0.6pp	-2.5pp	Not Meaningfully Worse

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>2</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Table A-59—Research Question 3.1, Measure 3-2**

Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?							
		Baseline Period		Evaluation Period		2017/2018 DiD	2018/2019 DiD
		2015/2016		2017/2018	2018/2019	(p-value)	(p-value)
<b>ALTCS-DD Population</b>							
3-2	Type of residence for adult beneficiaries with DD						
3-2.1	NCI Type of Residence: Own home or apartment	Arizona	10.0%	9.0%	6.0%	1.0pp	-2.0pp
		National	20.0%	18.0%	18.0%	(0.951)	(0.103)
3-2.2	NCI Type of Residence: Parent or relative's home	Arizona	61.0%	57.0%	67.0%	-8.0pp	3.0pp
		National	35.0%	39.0%	38.0%	(0.011)	(0.356)
3-2.3	NCI Type of Residence: Total home-based (own home/apartment or parent/relative's home)	Arizona	71.0%	66.0%	73.0%	-7.0pp	1.0pp
		National	55.0%	57.0%	56.0%	(0.011)	(0.653)

Note: pp=percentage point

Source: National Core Indicators Adult Consumer Survey Arizona Report 2015-2016 (total sample size = 476), In-Person Survey Arizona Report 2017-2018 (total sample size = 493), In-Person Survey Arizona Report 2018-2019 (total sample size = 413), National Core Indicators Adult Consumer Survey National Report 2015-2016 (total sample size = 17,682), In-Person Survey National Report 2017-2018 (total sample size = 25,671), In-Person Survey National Report 2018-2019 (total sample size = 22,009).

**Measure 3-1 ALTCS-DD Conclusion:** Supports the hypothesis

**Measure 3-1 ALTCS-EPD Conclusion:** Supports the hypothesis

**Measure 3-2 ALTCS-DD Conclusion:** Neither supports nor fails to support the hypothesis

**Research Question 3.2: Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?**

As evidenced in Table A-60, relatively few surveyed adults with DD in Arizona *Wants to live somewhere else* and almost all believed that *Services and supports help the person live a good life*. This was true in the baseline and both demonstration period surveys. Rates for ALTCS-DD adults were consistently better than national rates for both measures. Please see Appendix B for further details on Research Question 3.2.



**Key Findings:**

- The percentage of Arizona adults with DD who indicated that they *Want to live somewhere else* decreased by 4.0 percentage points relative to the change in the national rates between the baseline and 2018/2019 ( $p=0.035$ ).
- The percentage of surveyed Arizona adults with DD agreeing that *Services and supports help the person live a good life* declined by 4.0 percentage points compared to the change in the national rates between the baseline period and 2017/2018 ( $p=0.015$ ).

**Table A-60—Research Question 3.2**

Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?

		Baseline Period	Evaluation Period		2017/2018 DiD (p-value)	2018/2019 DiD (p-value)	
		2015/2016	2017/2018	2018/2019			
<b>ALTCS-DD Population</b>							
3-3	Wants to live somewhere else	Arizona	13.0%	13.0%	7.0%	2.0pp	-4.0pp
		National	27.0%	25.0%	25.0%	(0.639)	(0.035)
3-4	Services and supports help the person live a good life	Arizona	97.0%	93.0%	96.0%	-4.0pp	-2.0pp
		National	91.0%	91.0%	92.0%	(0.015)	(0.315)

Note: pp=percentage point

Source: National Core Indicators Adult Consumer Survey Arizona Report 2015-2016 (total sample size = 476), In-Person Survey Arizona Report 2017-2018 (total sample size = 493), In-Person Survey Arizona Report 2018-2019 (total sample size = 413), National Core Indicators Adult Consumer Survey National Report 2015-2016 (total sample size = 17,682), In-Person Survey National Report 2017-2018 (total sample size = 25,671), In-Person Survey National Report 2018-2019 (total sample size = 22,009).

**Measure 3-3 ALTCS-DD Conclusion:** Supports the hypothesis

**Measure 3-4 ALTCS-DD Conclusion:** Does not support the hypothesis

**Research Question 3.3: Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?**

The measures shown in Table A-61 address community engagement and individual autonomy among DD adults in Arizona. The results are suggestive of at least moderate engagement and autonomy, although there are indications of lessened autonomy in the demonstration period compared to the baseline period. These measures were calculated using the NCI survey data which was only available up to 2018/2019, as such does not cover the integration of care for adults with DD. Please see Appendix B for further details on Research Question 3.3.

**Key Findings:**

- Between 2015/2016 and 2017/2018, the rate of adults with DD in Arizona who indicated that they are *Able to go out and do the things [they like] to do in the community* decreased by 9.0 percentage points relative to the change in national rates ( $p<0.001$ ). The trend continued in 2018/2019, with adults with DD in Arizona decreasing by 6.0 percentage point when compared to the change in the national rates ( $p=0.010$ ).
- The rate of adults with DD in Arizona who reported they *[Have] friends who are not staff or family members* decreased by 6.0 percentage points between 2015/2016 and 2017/2018 relative to the change in national rates ( $p=0.079$ ). The trend continued between 2015/2016 and 2018/2019 as the rate decreased by 12.0 percentage points relative to the change in national rates ( $p<0.001$ ).
- The rate of adults with DD in Arizona who reported that they *Decide or have input in deciding [their] daily schedule* declined by 14.0 percentage points when compared to the change in national rates

between 2015/2016 and 2017/2018 ( $p<0.001$ ). Between 2015/2016 and 2018/2019, the trend continued as the rate decreased by 16.0 percentage points relative to the change in national rates ( $p<0.001$ ).

**Table A-61—Research Question 3.3**

Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?

			Baseline Period		Evaluation Period		2017/2018	2018/2019
			2015/2016	2017/2018	2018/2019	DiD	DiD	
						(p-value)	(p-value)	
<b>ALTCS-DD Population</b>								
3-5	Able to go out and do the things s/he like to do in the community	Arizona	93.0%	84.0%	87.0%	-9.0pp	-6.0pp	
		National	85.0%	85.0%	85.0%	(<0.001)	(0.010)	
3-6	Has friends who are not staff or family members	Arizona	67.0%	62.0%	57.0%	-6.0pp	-12.0pp	
		National	77.0%	78.0%	79.0%	(0.079)	(0.001)	
3-7	Decides or has input in deciding daily schedule	Arizona	89.0%	76.0%	74.0%	-14.0pp	-16.0pp	
		National	84.0%	85.0%	85.0%	(<0.001)	(<0.001)	

Note: pp=percentage point

Source: National Core Indicators Adult Consumer Survey Arizona Report 2015-2016 (total sample size = 476), In-Person Survey Arizona Report 2017-2018 (total sample size = 493), In-Person Survey Arizona Report 2018-2019 (total sample size = 413). National Core Indicators Adult Consumer Survey National Report 2015-2016 (total sample size = 17,682), In-Person Survey National Report 2017-2018 (total sample size = 25,671), In-Person Survey National Report 2018-2019 (total sample size = 22,009).

**Measure 3-5 Conclusion:** Does not support the hypothesis

**Measure 3-6 Conclusion:** Does not support the hypothesis

**Measure 3-7 Conclusion:** Does not support the hypothesis

## CHP

The following section details measure results by research question and related hypotheses for the Comprehensive Health Plan (CHP) Demonstration program. This section offers measure calculations for the renewal baseline period and demonstration period.


### Research Question 1.1: Do CHP beneficiaries have the same or increased access to PCPs and specialists in the remeasurement period compared to the baseline?

Table A-62 shows that the *Percentage of children and adolescents with access to PCPs* remained stable across all baseline and evaluation years while the *Percentage of beneficiaries with an annual dental visit* generally increased throughout the demonstration period. The decrease in the FFY 2020 annual dental visit rate is possibly attributable to the COVID-19 PHE and can be seen in other Demonstration groups including ACC and ALTCS-DD.

#### Key Findings:

- The average *Percentage of children and adolescents with access to PCPs* decreased by 1.0 percentage points between the baseline and demonstration period ( $p<0.001$ ).
- The average *Percentage of beneficiaries with an annual dental visit* increased by 6.1 percentage points from the baseline to demonstration period ( $p<0.001$ ).
- Compared to the NCQA Quality Compass 2019 benchmarks, the evaluation average for annual dental visits of 73.0 percent falls firmly above the 95<sup>th</sup> percentile.

**Table A-62—Research Question 1.1, Renewal**

		Weighted Rate <sup>1</sup>							
		Baseline Period		Evaluation Period					
		2015	2016	2017	2018	2019	2020	2021	
<b>1-1</b>	Percentage of children and adolescents with access to PCPs	95.4%	95.3%	94.2%	95.0%	95.3%	93.7%	93.7%	93.4%
<b>1-2</b>	Percentage of beneficiaries with an annual dental visit	67.6%	66.3%	70.2%	72.6%	73.6%	66.3%	74.7%	74.7%

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>1-1</b>	Percentage of children and adolescents with access to PCPs	95.4%	94.3%	-1.0pp (<0.001)	-1.4pp to -0.7pp	-1.1pp	Insufficient Data
<b>1-2</b>	Percentage of beneficiaries with an annual dental visit	66.9%	73.0%	6.1pp (<0.001)	5.5pp to 6.7pp	-2.4pp	Better

Note: pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in CHP.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 1-1 Conclusion:** Neither supports nor fails to support the hypothesis

**Measure 1-2 Conclusion:** Supports the hypothesis



**Research Question 2.1: Do CHP beneficiaries have the same or higher rates of preventive or wellness services in the remeasurement period compared to the baseline?**

As shown in Table A-63, both the *Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life* and the *Percentage of beneficiaries with an adolescent well-care visit* generally increased until FFY 2020 when rates fell before gradually returning to levels seen prior to FFY 2020. This trend was likely due to the immediate and ongoing effects of the COVID-19 PHE and can be seen across other programs including ACC and ALTCS-DD. Rates for childhood and adolescent immunizations are not presented in this report due to the unavailability of immunization registry data.

**Key Findings:**

- Between the baseline and demonstration periods, the average Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life increased by 2.2 percentage points ( $p<0.001$ ), and the average Percentage of beneficiaries with an adolescent well-care visit increased by 3.8 percentage points ( $p<0.001$ ).

**Table A-63—Research Question 2.1, Renewal**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>2-1</b>	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	68.9%	69.4%	69.8%	69.6%	74.2%	67.2%	72.1%	71.8%	
<b>2-2</b>	Percentage of beneficiaries with an adolescent well-care visit	60.6%	61.3%	63.2%	67.0%	68.4%	60.3%	62.0%	63.5%	
<b>2-3</b>	Percent of children two years of age with appropriate immunization status	--	--	--	--	--	--	--	--	
<b>2-4</b>	Percent of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--	--	--	

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI	
						Threshold	Non-Inferiority <sup>3</sup>
<b>2-1</b>	Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life	69.2%	71.4%	<b>2.2pp (&lt;0.001)</b>	<b>1.0pp to 3.4pp</b>	<b>-2.3pp</b>	<b>Better</b>
<b>2-2</b>	Percentage of beneficiaries with an adolescent well-care visit	60.9%	64.8%	<b>3.8pp (&lt;0.001)</b>	<b>2.6pp to 5.0pp</b>	<b>-2.5pp</b>	<b>Better</b>
<b>2-3</b>	Percentage of children two years of age with appropriate immunization status	--	--	--	--	--	--
<b>2-4</b>	Percentage of adolescents 13 years of age with appropriate immunizations	--	--	--	--	--	--

Note: Results for Measures 2-3 and Measure 2-4 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. pp=percentage point; CI=confidence interval; NI=non-inferiority. The evaluation average and Pre/Post testing controls for the effect of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in CHP.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-1 Conclusion:** Supports the hypothesis

**Measure 2-2 Conclusion:** Supports the hypothesis

**Research Question 2.2: Do CHP beneficiaries have the same or better management of chronic conditions in the remeasurement period compared to the baseline?**


Table A-64 shows that the *Percentage of beneficiaries ages 5 to 18 who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year* increased throughout both the baseline and demonstration periods until FFY 2022 when a sharp decline in the rate occurred. This decline in FFY 2022 can be seen across all programs including ACC, ALTCS-DD, ALTCS-EPD, and Regional Behavioral Health Authority (RBHA) although CHP demonstrated the greatest decline.

**Key Findings:**

- The average *Percentage of beneficiaries ages 5 to 18 who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of 0.50 or greater* during the measurement year increased by 4.6 percentage points between the baseline and demonstration period ( $p=0.129$ ). Non-inferiority testing shows that rates in the demonstration period were the same or better than the baseline period.

**Table A-64—Research Question 2.2, Renewal**

		Weighted Rate <sup>1</sup>							
		Baseline Period		Evaluation Period					
		2015	2016	2017	2018	2019	2020	2021	2022
<b>2-5</b>	Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year	68.3%	74.4%	73.7%	74.9%	80.5%	79.1%	90.1%	63.1%



		Baseline	Evaluation	Pre/Post	95% CI	NI	
		Average	Average	Change in Rate <sup>2</sup>		Threshold	Non-Inferiority <sup>3</sup>
<b>2-5</b>	Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year	71.4%	76.0%	4.6pp (0.129)	-1.4pp to 9.7pp	-2.3pp	Not Meaningfully Worse

Note: pp=percentage point. The evaluation and Pre/Post testing controls for the effects of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in CHP.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold.

**Measure 2-5 Conclusion:** Supports the hypothesis

**Research Question 2.3: Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period compared to the baseline?**

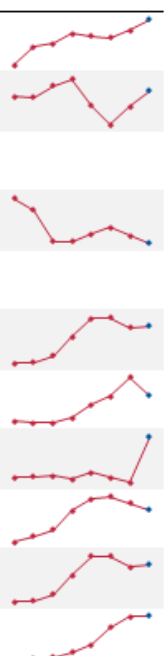
As illustrated in Table A-65, the *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased throughout both the baseline and demonstration periods. Approximately half of children and adolescents on antipsychotic prescriptions had metabolic testing in all years apart from FFY 2020 when a notable decrease in the rate was observed. The baseline trend of children and adolescents using multiple concurrent antipsychotics decreased, and this trend continued into the demonstration period. The *Percentage of beneficiaries receiving mental health services* generally increased throughout both the baseline and demonstration periods. As described in the Methodology Limitations section, the screening for depression and follow-up plan measure relied on level II HCPCS codes to identify numerator compliance, which contributed to the low observed rate calculated through administrative data. As such, results for this measure are not shown. There is no desired direction for Measure 2-10, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.

**Key Findings:**

- The average *Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness* increased by 8.6 percentage points from the baseline to the demonstration period ( $p<0.001$ ).
- The *Percentage of children and adolescents on antipsychotics with metabolic monitoring* increased by 1.4 percentage points between the baseline and evaluation average ( $p=0.297$ ). Non-inferiority testing shows that rates in the demonstration period were the same or better than rates in the baseline period.
- The average *Percentage of children and adolescents with use of multiple concurrent antipsychotics* declined by 1.3 percentage points from the baseline to the demonstration period ( $p<0.001$ ).
- The average *Percentage of beneficiaries receiving mental health services* increased by 13.2 percentage points from the baseline to the demonstration period ( $p<0.001$ ).

**Table A-65—Research Question 2.3, Renewal**

Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period as compared to the baseline?

	Weighted Rate <sup>1</sup>								
	Baseline Period		Evaluation Period						
	2015	2016	2017	2018	2019	2020	2021	2022	
<b>2-6</b> Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	55.2%	62.0%	63.2%	67.1%	66.2%	65.3%	68.4%	72.5%	
<b>2-7</b> Percentage of children and adolescents on antipsychotics with metabolic monitoring	50.5%	50.2%	55.0%	57.8%	46.5%	38.7%	46.1%	52.7%	
<b>2-8</b> Percentage of beneficiaries with screening for depression and follow-up plan	--	--	--	--	--	--	--	--	
<b>2-9</b> Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)	2.3%	1.8%	0.6%	0.6%	0.9%	1.1%	0.8%	0.5%	
<b>2-10</b> Percentage of beneficiaries receiving mental health services (no desired direction)									
<b>Any</b>	<b>36.5%</b>	<b>36.9%</b>	<b>40.0%</b>	<b>48.6%</b>	<b>57.1%</b>	<b>57.5%</b>	<b>52.8%</b>	<b>53.3%</b>	
ED	0.1%	0.0%	0.1%	0.1%	0.4%	0.6%	1.0%	0.6%	
Intensive outpatient or partial hospitalization	1.6%	1.6%	1.7%	1.5%	1.9%	1.6%	1.3%	4.0%	
Inpatient	2.6%	2.9%	3.2%	4.2%	4.8%	4.9%	4.6%	4.2%	
Outpatient	36.3%	36.6%	39.8%	48.3%	56.8%	57.0%	51.8%	52.6%	
Telehealth	0.6%	1.1%	1.4%	2.4%	4.0%	7.7%	10.0%	10.2%	



**Do CHP beneficiaries have the same or better management of BH conditions in the remeasurement period as compared to the baseline?**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI	NI Threshold	Non-Inferiority <sup>3</sup>
<b>2-6</b>	Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness	59.1%	67.6%	<b>8.6pp</b> ( <b>&lt;0.001</b> )	<b>5.0pp to 12.0pp</b>	<b>-2.5pp</b>	<b>Better</b>
<b>2-7</b>	Percentage of children and adolescents on antipsychotics with metabolic monitoring	50.3%	51.7%	<b>1.4pp</b> ( <b>0.297</b> )	<b>-1.2pp to 4.0pp</b>	<b>-2.5pp</b>	<b>Not Meaningfully Worse</b>
<b>2-8</b>	Percentage of beneficiaries with screening for depression and follow-up plan	--	--	--	--	--	--
<b>2-9</b>	Percentage of children and adolescents with use of multiple concurrent antipsychotics (lower is better)	2.0%	0.7%	<b>-1.3pp</b> ( <b>&lt;0.001</b> )	<b>-1.6pp to -0.9pp</b>	<b>0.8pp</b>	<b>Better</b>
<b>2-10</b>	Percentage of beneficiaries receiving mental health services (no desired direction)						
	<b>Any</b>	<b>36.7%</b>	<b>49.9%</b>	<b>13.2pp</b> ( <b>&lt;0.001</b> )	<b>12.5pp to 13.9pp</b>	--	--
	ED	0.1%	0.4%	<b>0.4pp</b> ( <b>&lt;0.001</b> )	<b>0.2pp to 0.6pp</b>	--	--
	Intensive outpatient or partial hospitalization	1.6%	2.0%	<b>0.4pp</b> ( <b>&lt;0.001</b> )	<b>0.3pp to 0.7pp</b>	--	--
	Inpatient	2.8%	4.2%	<b>1.4pp</b> ( <b>&lt;0.001</b> )	<b>1.1pp to 1.7pp</b>	--	--
	Outpatient	36.5%	49.4%	<b>12.9pp</b> ( <b>&lt;0.001</b> )	<b>12.2pp to 13.6pp</b>	--	--
	Telehealth	0.9%	5.4%	<b>4.5pp</b> ( <b>&lt;0.001</b> )	<b>3.9pp to 5.2pp</b>	--	--

Note: Results for Measure 2-8 are not presented due to insufficient data and calculated rates that are artificially low from using administrative data. Indicators in bold denote inclusion for evaluation in summary table for Measure 2-10. pp=percentage point. The evaluation average and Pre/Post testing controls for the effect of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A.

<sup>1</sup>Rates are weighted by duration of enrollment in CHP.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

<sup>3</sup>Non-inferiority testing was used to test whether rates in the evaluation period were at least as good as rates in the baseline period based on the non-inferiority threshold. Non-inferiority testing was not conducted for measures with no desired direction.

- Measure 2-6 Conclusion:** Supports the hypothesis
- Measure 2-7 Conclusion:** Supports the hypothesis
- Measure 2-9 Conclusion:** Supports the hypothesis
- Measure 2-10 Conclusion:** N/A

**Research Question 2.4: Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?**

Table A-66 shows that the *Number of ED visits per 1,000 member months* increased steadily during the demonstration period until FFY 2020 when a notable decline was observed. This decline in FFY 2020 and the impacts in the subsequent evaluation years could be due to immediate and ongoing impacts of the COVID-19 PHE and was observed across all Demonstration groups. The *Number of IP stays per 1,000 member months* remained largely stable throughout the baseline and demonstration periods. There is no desired direction for these measures, or the desired direction is dependent on context; therefore, no conclusion can be drawn regarding support of the hypothesis.





**Key Findings:**

- The *Number of ED visits per 1,000 member months* declined by 2.59 visits per 1,000 member months between the baseline and demonstration period ( $p=0.371$ ) while the rate of IP stays increased by 0.05 stays per 1,000 member months ( $p=0.765$ ).

**Table A-66—Research Question 2.4, Renewal**

**Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?**

		Weighted Rate <sup>1</sup>								
		Baseline Period		Evaluation Period						
		2015	2016	2017	2018	2019	2020	2021	2022	
<b>2-11</b>	Number of ED visits per 1,000 member months (no desired direction)	44.33	41.83	40.87	42.14	46.14	35.01	33.47	39.81	
<b>2-12</b>	Number of inpatient stays per 1,000 member months (no desired direction)	3.28	3.09	2.84	3.15	3.46	3.23	3.15	3.61	

**Do CHP beneficiaries have the same or lower hospital utilization in the remeasurement period compared to the baseline?**

		Baseline Average	Evaluation Average	Pre/Post Change in Rate <sup>2</sup>	95% CI
<b>2-11</b>	Number of ED visits per 1,000 member months (no desired direction)	43.08	40.48	<b>-2.59</b> <b>(0.371)</b>	<b>-7.7 to 3.3</b>
<b>2-12</b>	Number of inpatient stays per 1,000 member months (no desired direction)	3.18	3.23	<b>0.05</b> <b>(0.765)</b>	<b>-0.3 to 0.4</b>

Note: pp=percentage point. The evaluation average and Pre/Post testing controls for the effect of COVID-19 in FFY 2020 through a dummy variable indicator. Full results are available in Appendix A. Because Measures 2-11 and 2-12 examine counts of services, a negative binomial model is used to appropriately conduct statistical testing. Estimates and confidence intervals have been transformed to rates per 1,000 member months for ease of interpretation.

<sup>1</sup>Rates are weighted by duration of enrollment in CHP.

<sup>2</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

**Measure 2-11 Conclusion: N/A**

**Measure 2-12 Conclusion: N/A**

## Supplemental Demographic Results

Table A-67 through Table A-189 present rates stratified by race, urbanicity, and sex to better understand how measure rates varied across demographic groups for ACC, ALTCS, CHP and RBHA.

Stratifications for race include American Indian/Alaska Native (AI/AN), Black, White, Unknown, and All Others. For urbanicity stratifications, the average rate across rural counties and the average rate across urban counties are reported. For gender stratifications, the rates of female and male beneficiaries are reported. For the race stratified charts, the green line depicts the rates for the respective race category and the grey lines shows the rates for the remaining race categories.

Demographic data utilized in this report may not provide a full picture of the racial makeup of AHCCCS as the race for 34 percent for AHCCCS beneficiaries is listed as “Unknown” according to AHCCCS’ October 2023 Population Demographics report.<sup>A-1</sup> AHCCCS is aware of the issue and is working to use supplemental demographic data, which will be utilized in future evaluations.

Rates are reported for all years that data was available and reliable. Most programs (ACC, ALTCS-DD, ALTCS-EPD, and CHP) report rates beginning in 2015, while rates for the RBHA population are available beginning in 2012. Rates involving denominators or numerators smaller than 11 beneficiaries are suppressed due to potentially unreliable rate calculation and to ensure anonymity. Therefore, not all rates are reported in all years.

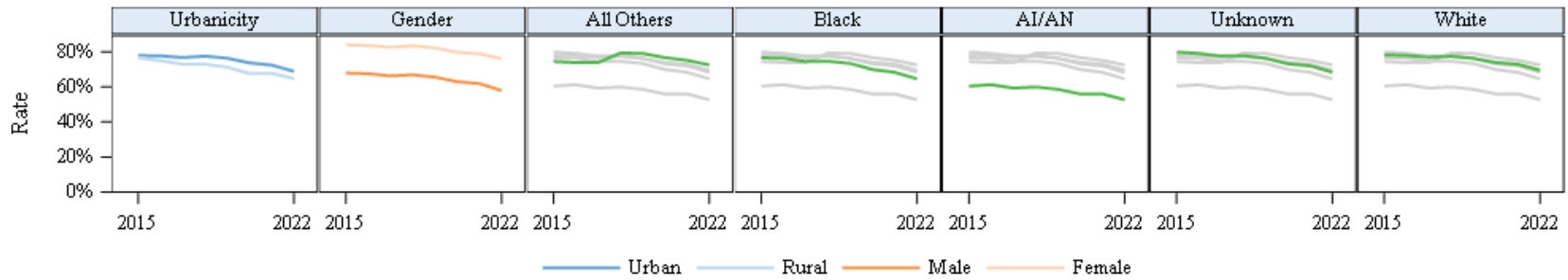
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<sup>A-1</sup> Arizona Health Care Cost Containment System. *AHCCCS Population Demographics*.  
[https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2023/Demographic\\_10012023.pdf](https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2023/Demographic_10012023.pdf). Accessed on Dec 6, 2023.

ACC

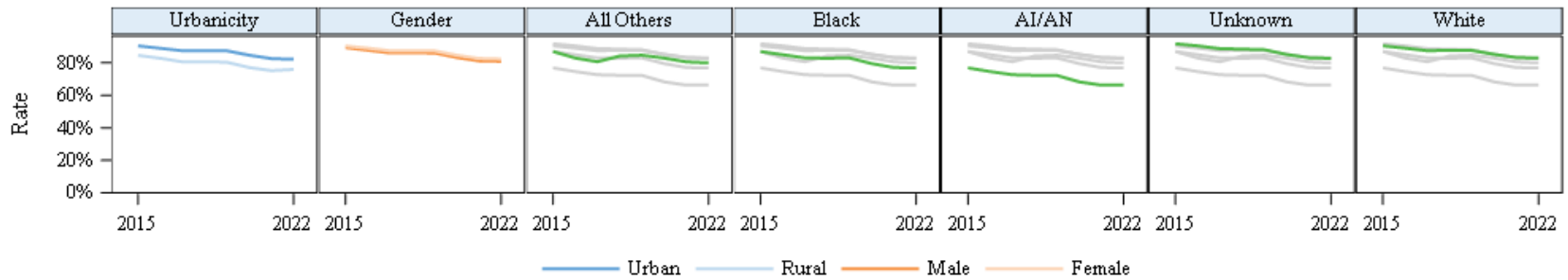
**Table A-67—ACC Measure 2-1, Demographics**

ACC Measure 2-1: Percentage of adults who accessed preventive/ambulatory health services



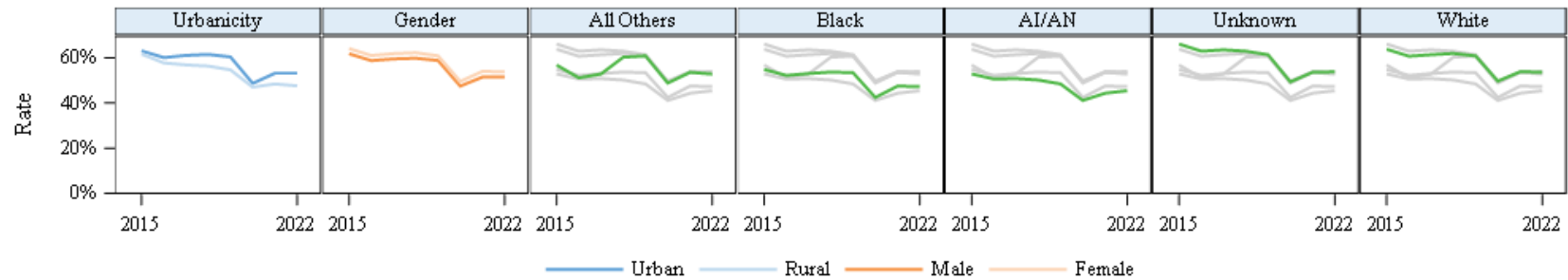
**Table A-68—ACC Measure 2-2, Demographics**

ACC Measure 2-2: Percentage of children and adolescents who accessed PCPs



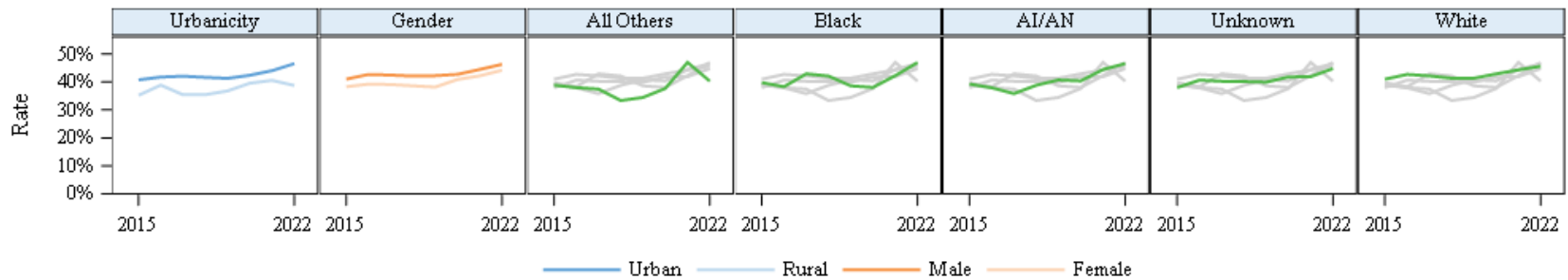
**Table A-69—ACC Measure 2-3, Demographics**

ACC Measure 2-3: Percentage of beneficiaries under 21 with an annual dental visit



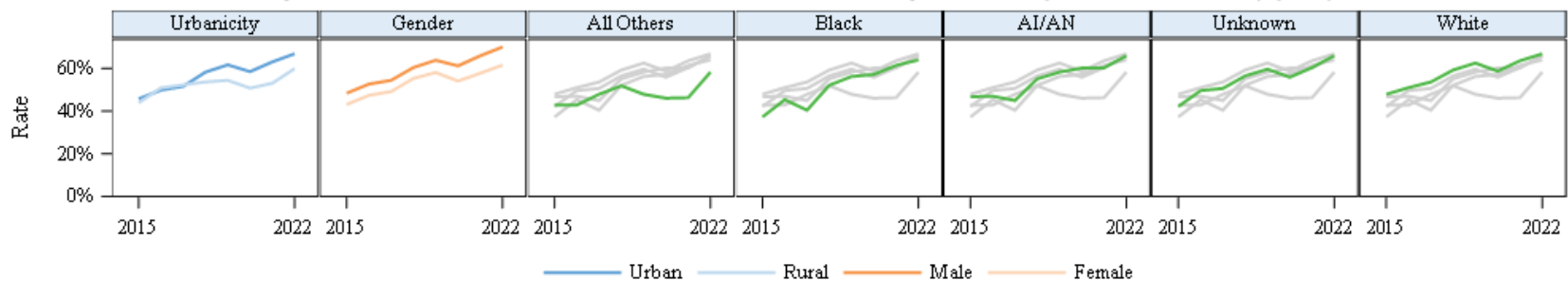
**Table A-70—ACC Measure 2-7 (Alcohol), Demographics**

ACC Measure 2-7: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Alcohol)



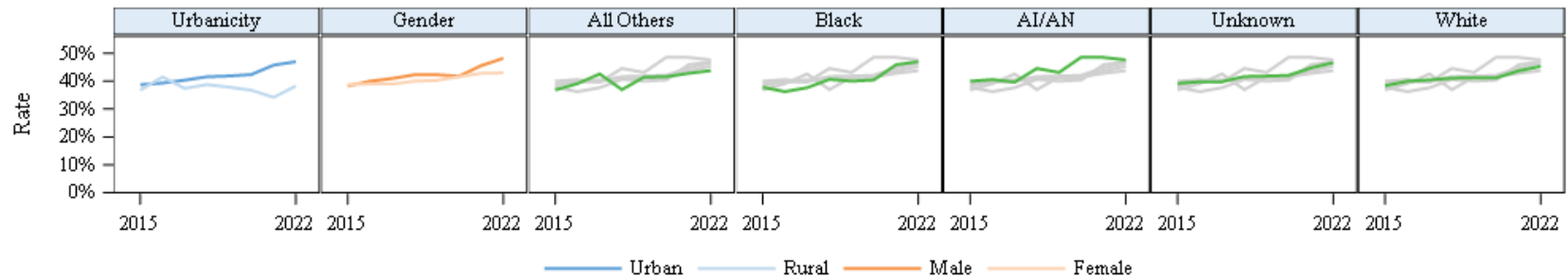
**Table A-71—ACC Measure 2-7 (Opioid), Demographics**

ACC Measure 2-7: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Opioid)



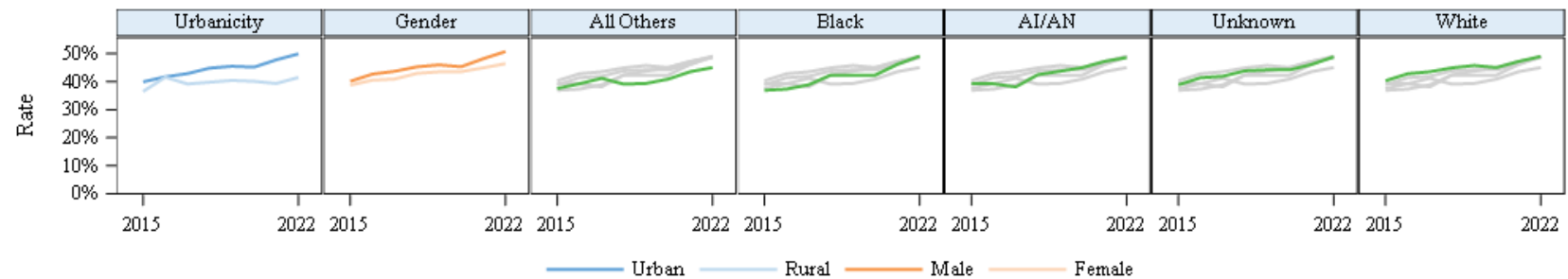
**Table A-72—ACC Measure 2-7 (Other Drug), Demographics**

ACC Measure 2-7: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Other Drug)



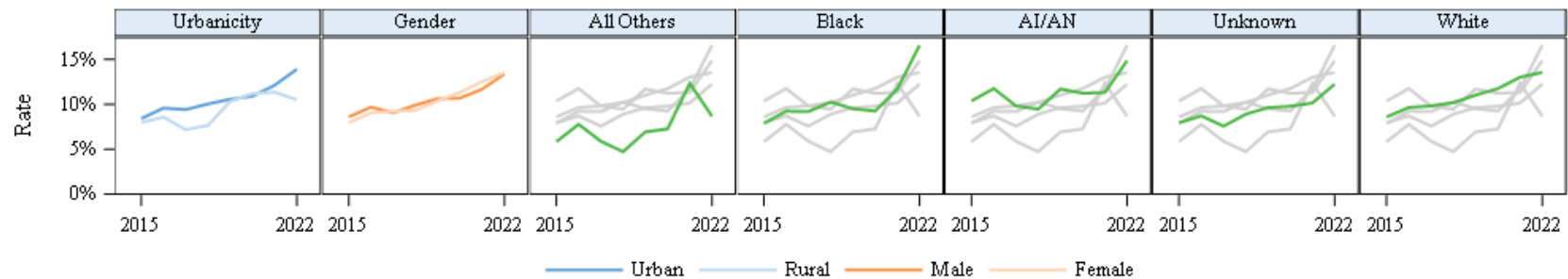
**Table A-73—ACC Measure 2-7 (Total), Demographics**

ACC Measure 2-7: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)



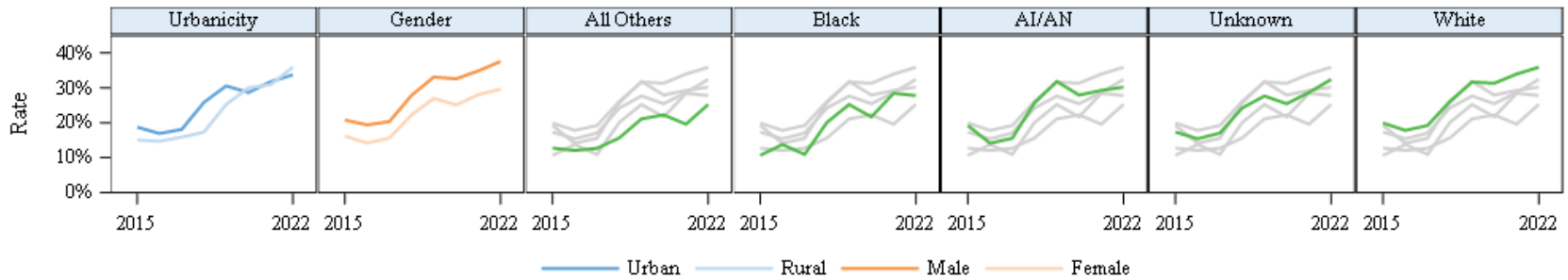
**Table A-74—ACC Measure 2-8 (Alcohol), Demographics**

ACC Measure 2-8: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Alcohol)



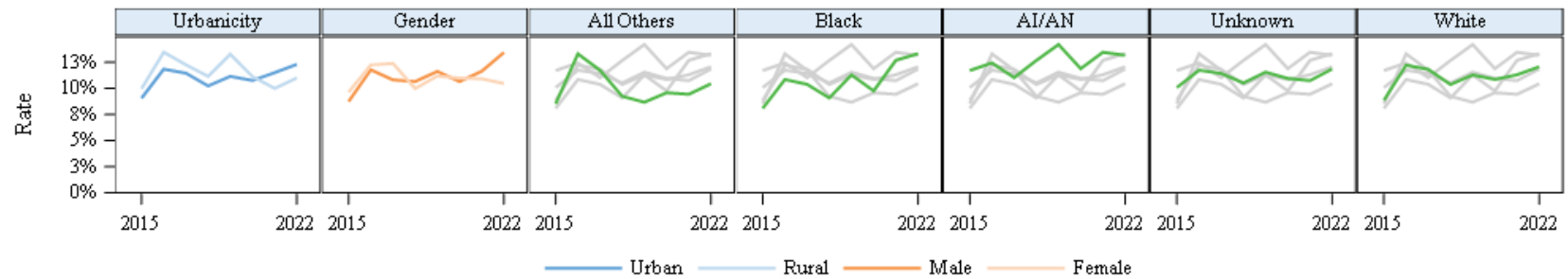
**Table A-75—ACC Measure 2-8 (Opioid), Demographics**

ACC Measure 2-8: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Opioid)



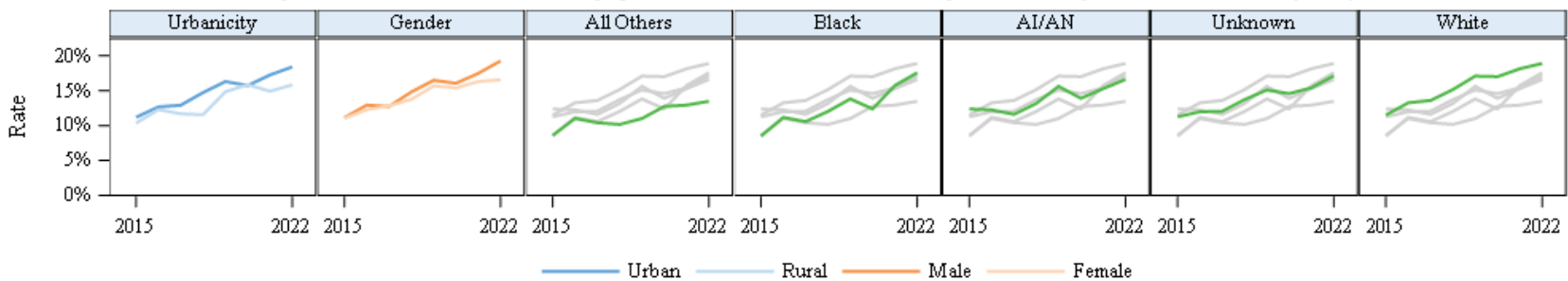
**Table A-76—ACC Measure 2-8 (Other Drug), Demographics**

ACC Measure 2-8: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Other Drug)



**Table A-77—ACC Measure 2-8 (Total), Demographics**

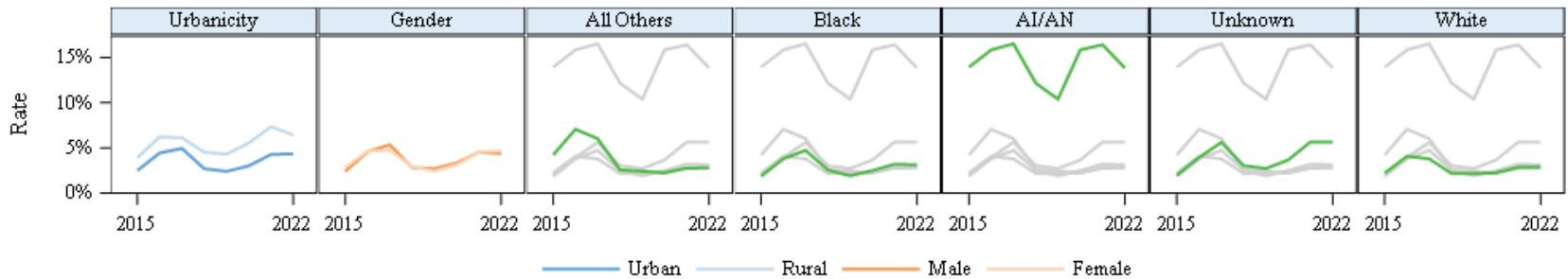
ACC Measure 2-8: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)





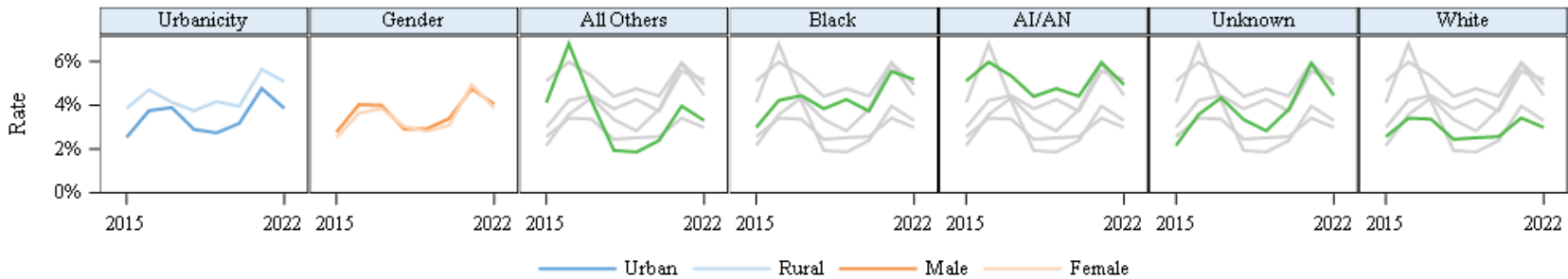
**Table A-78—ACC Measure 3-1 (0 Visits), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (0 Visits)



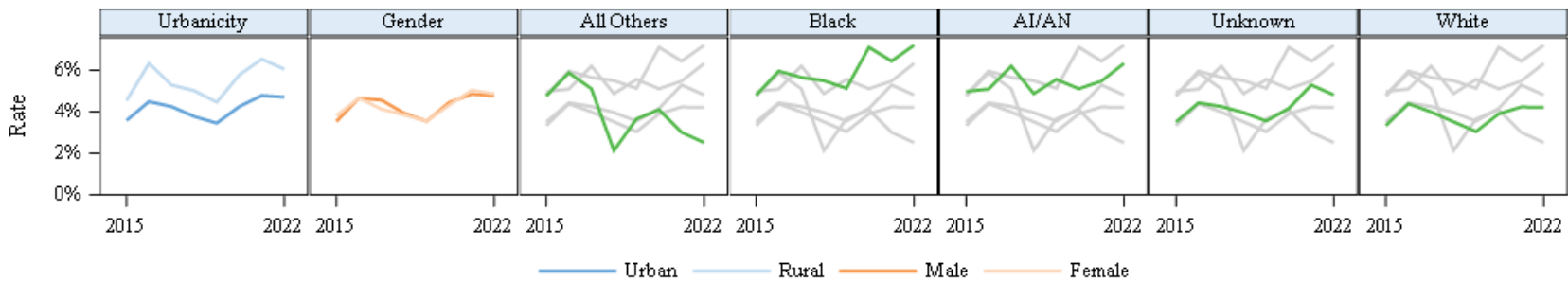
**Table A-79—ACC Measure 3-1 (1 Visit), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (1 Visit)



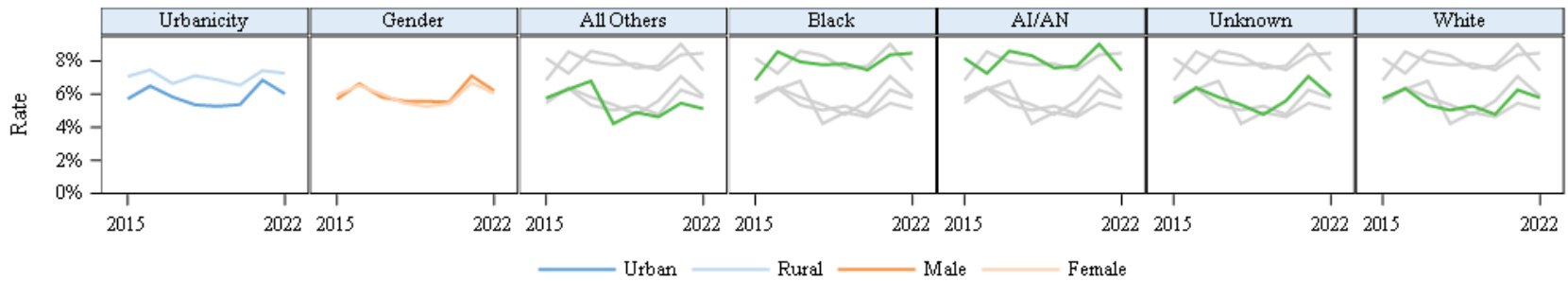
**Table A-80—ACC Measure 3-1 (2 Visits), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (2 Visits)



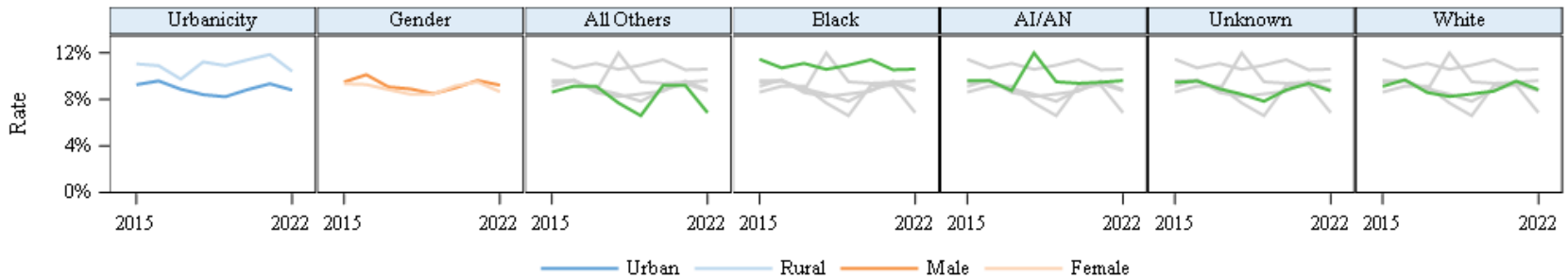
**Table A-81—ACC Measure 3-1 (3 Visits), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (3 Visits)



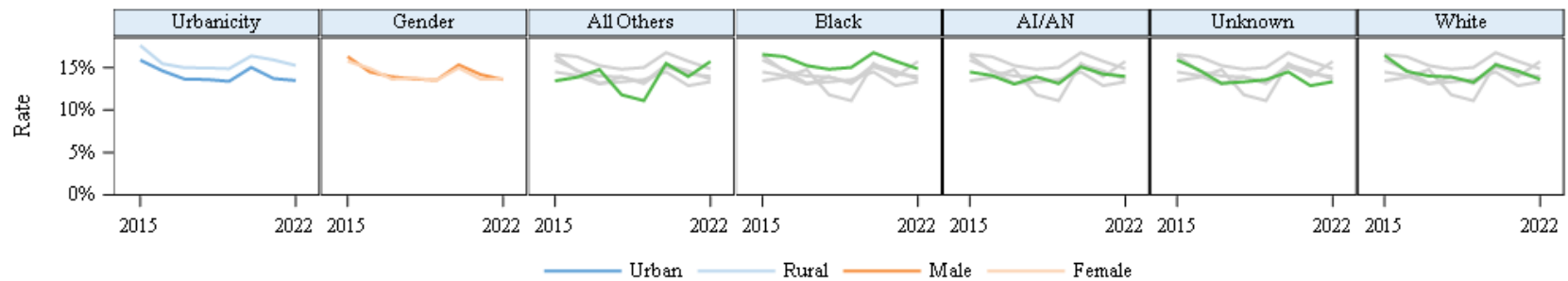
**Table A-82—ACC Measure 3-1 (4 Visits), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (4 Visits)



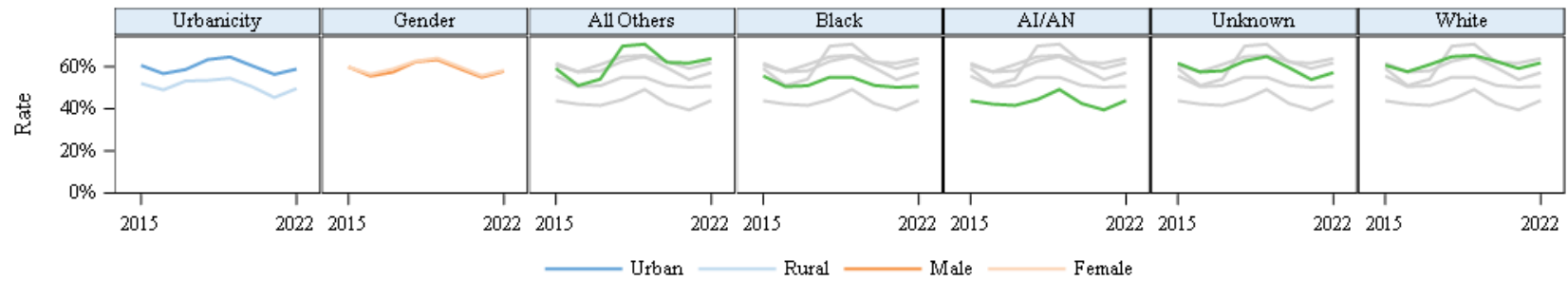
**Table A-83—ACC Measure 3-1 (5 Visits), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (5 Visits)



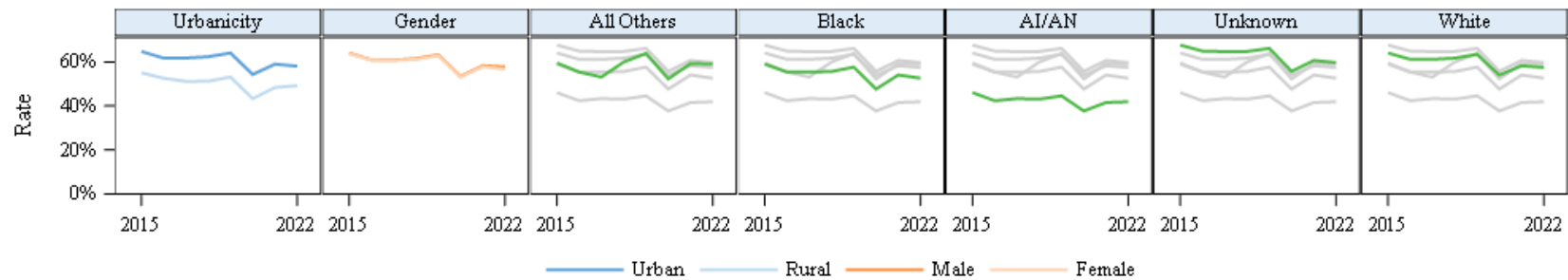
**Table A-84—ACC Measure 3-1 (6+ Visits), Demographics**

ACC Measure 3-1: Percentage of beneficiaries with a well-child visit in the first 15 months of life (6+ Visits)



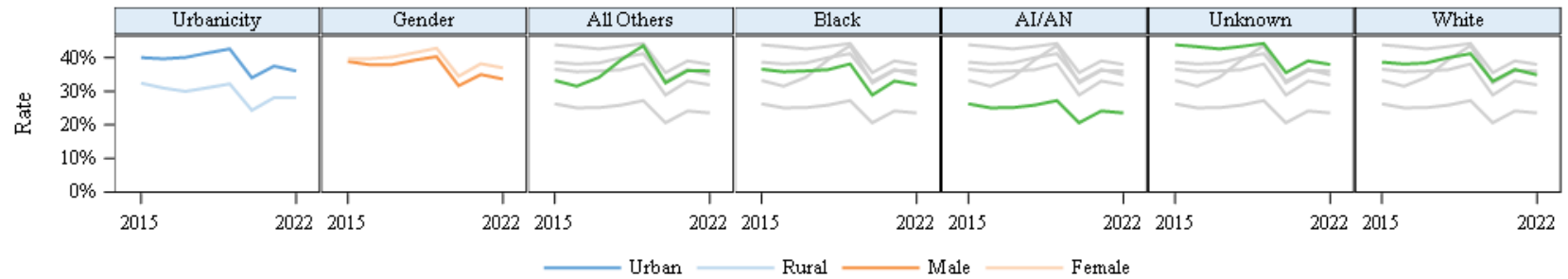
**Table A-85—ACC Measure 3-2, Demographics**

ACC Measure 3-2: Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life



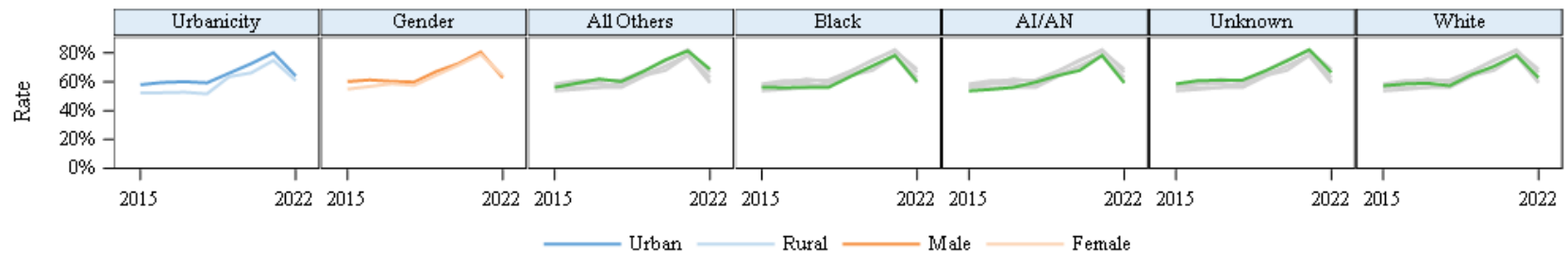
**Table A-86—ACC Measure 3-3, Demographics**

ACC Measure 3-3: Percentage of beneficiaries with an adolescent well-care visit



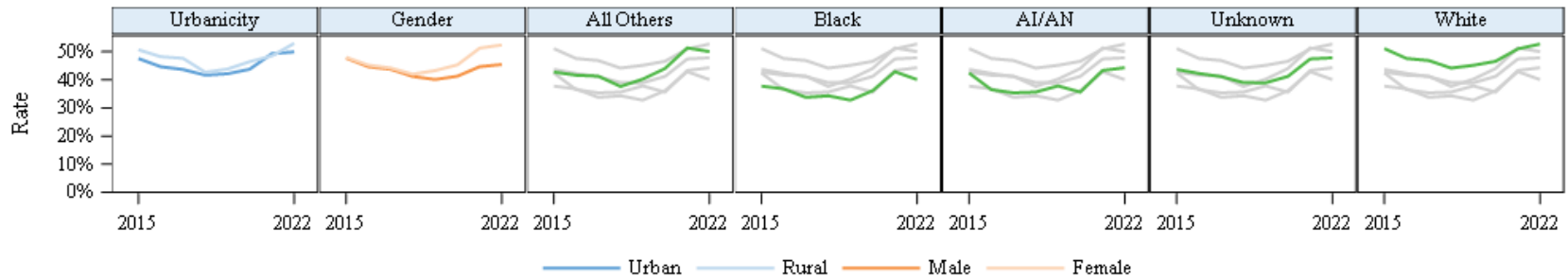
**Table A-87—ACC Measure 3-7, Demographics**

ACC Measure 3-7: Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent



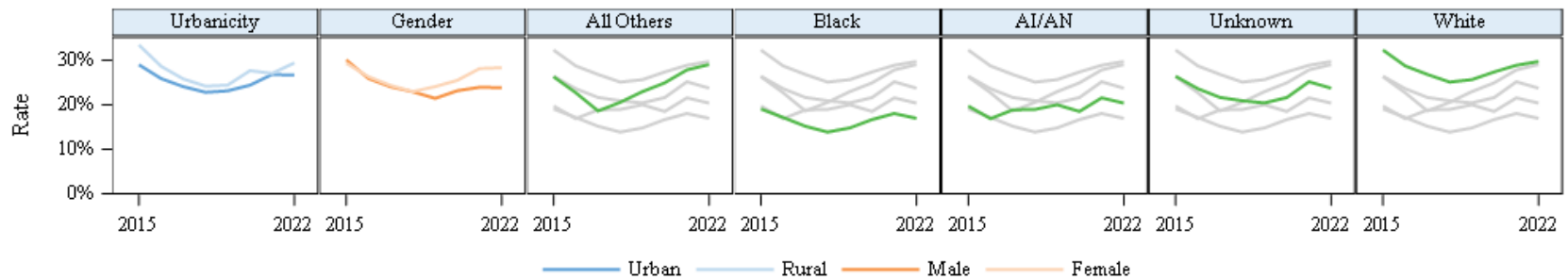
**Table A-88—ACC Measure 3-8 (84 Days), Demographics**

ACC Measure 3-8: Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)



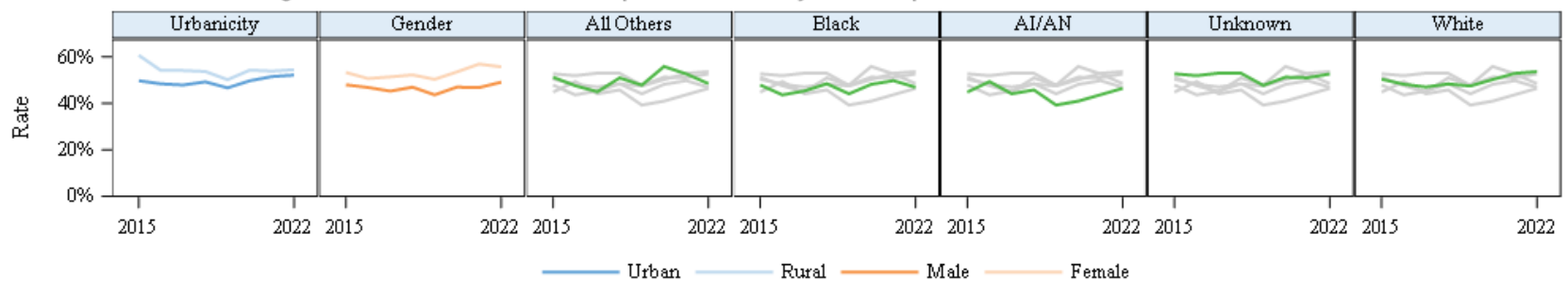
**Table A-89—ACC Measure 3-8 (180 Days), Demographics**

ACC Measure 3-8: Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)



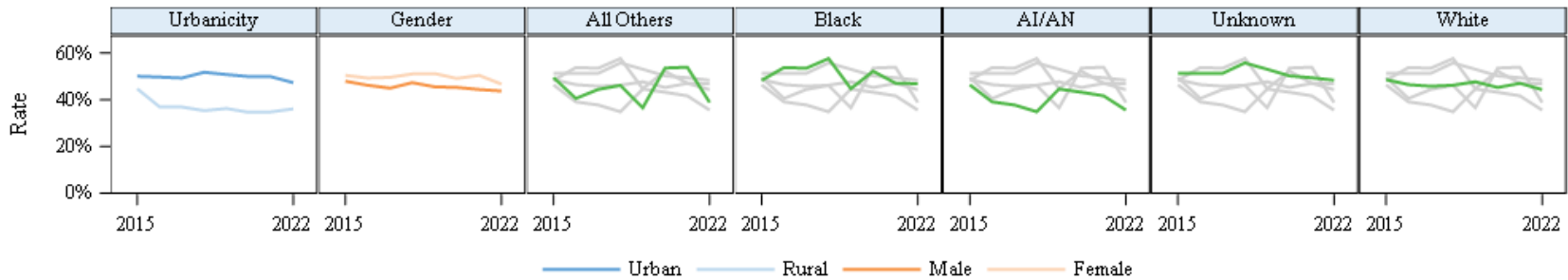
**Table A-90—ACC Measure 3-9, Demographics**

ACC Measure 3-9: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness



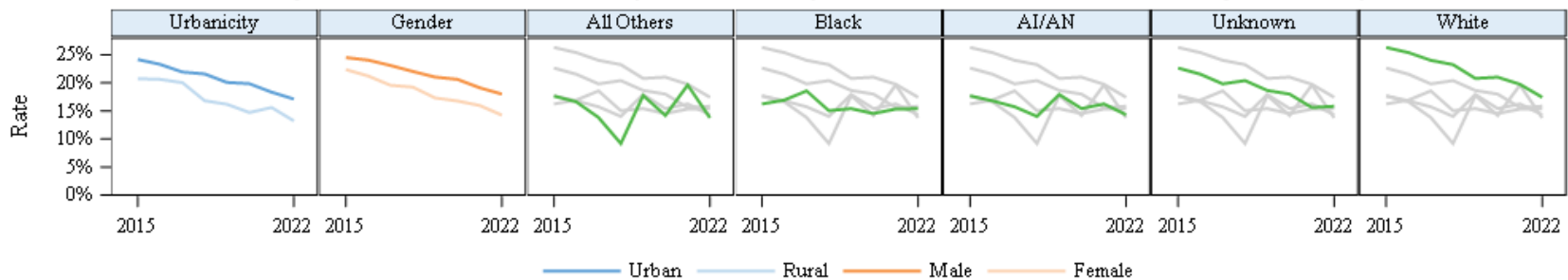
**Table A-91—ACC Measure 3-10, Demographics**

**ACC Measure 3-10: Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness**



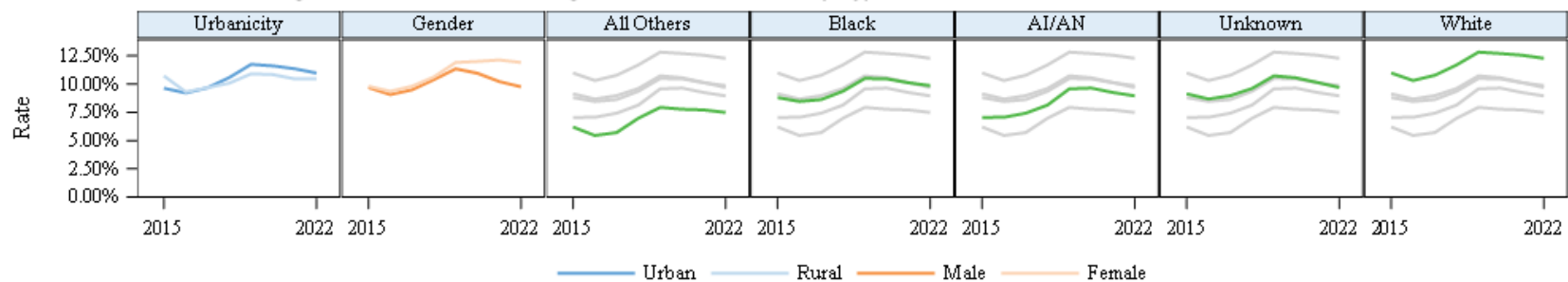
**Table A-92—ACC Measure 3-11, Demographics**

**ACC Measure 3-11: Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence**



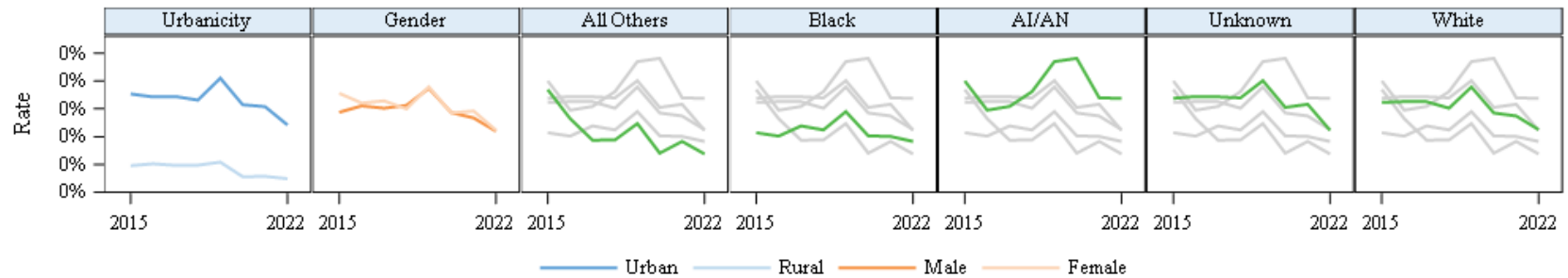
**Table A-93—ACC Measure 3-13 (Any), Demographics**

**ACC Measure 3-13: Percentage of beneficiaries receiving mental health services (Any)**



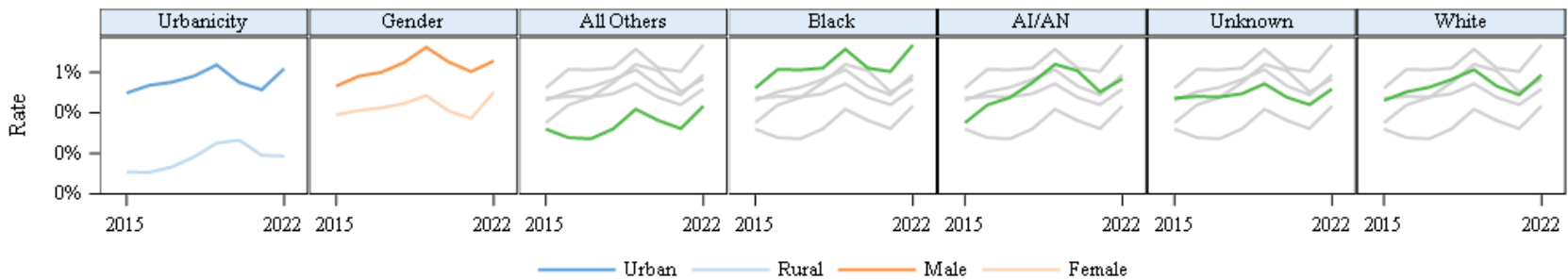
**Table A-94—ACC Measure 3-13 (ED), Demographics**

ACC Measure 3-13: Percentage of beneficiaries receiving mental health services (ED)



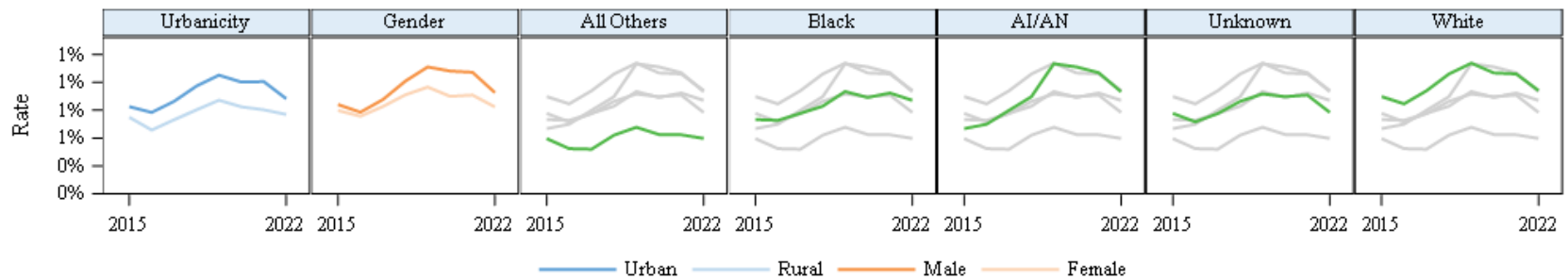
**Table A-95—ACC Measure 3-13 (Intensive Outpatient or Partial Hospitalization), Demographics**

ACC Measure 3-13: Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization)



**Table A-96—ACC Measure 3-13 (Inpatient), Demographics**

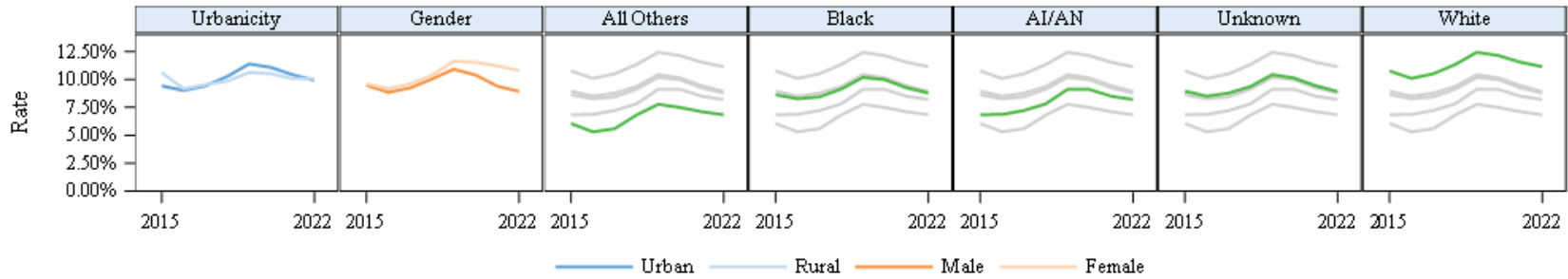
ACC Measure 3-13: Percentage of beneficiaries receiving mental health services (Inpatient)





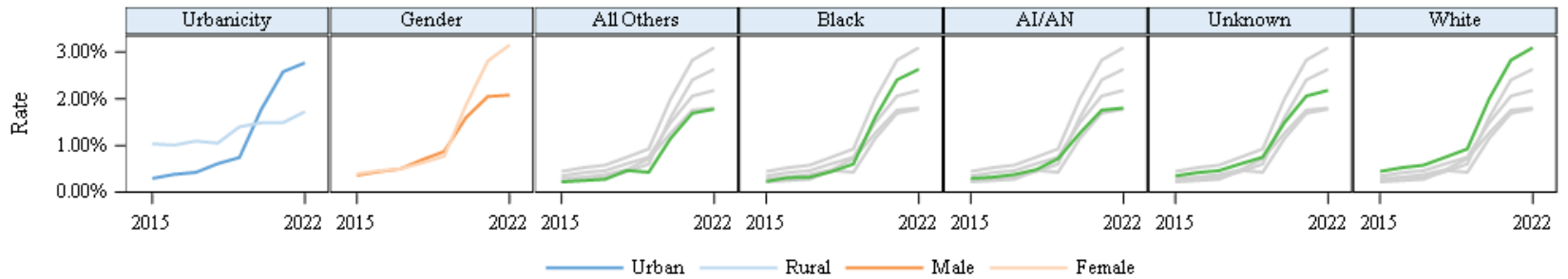
**Table A-97—ACC Measure 3-13 (Outpatient), Demographics**

ACC Measure 3-13: Percentage of beneficiaries receiving mental health services (Outpatient)



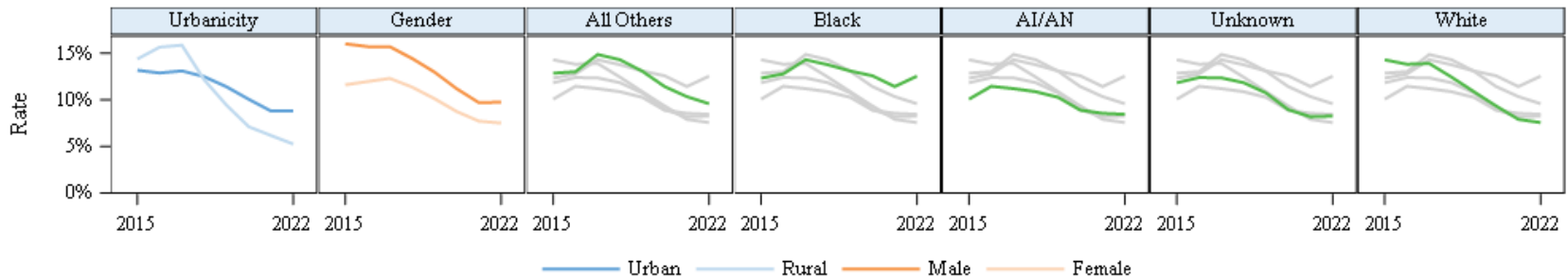
**Table A-98—ACC Measure 3-13 (Telehealth), Demographics**

ACC Measure 3-13: Percentage of beneficiaries receiving mental health services (Telehealth)



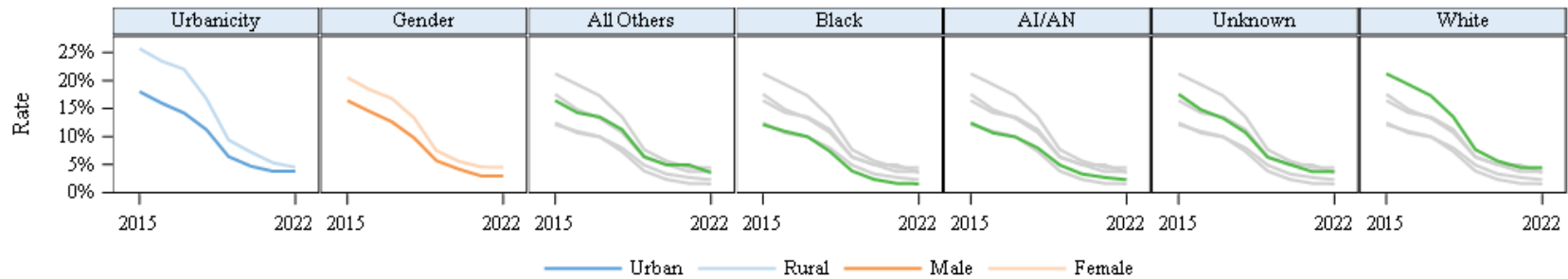
**Table A-99—ACC Measure 3-14, Demographics**

**ACC Measure 3-14: Percentage of adult beneficiaries who have prescriptions for opioids at a high dosage**



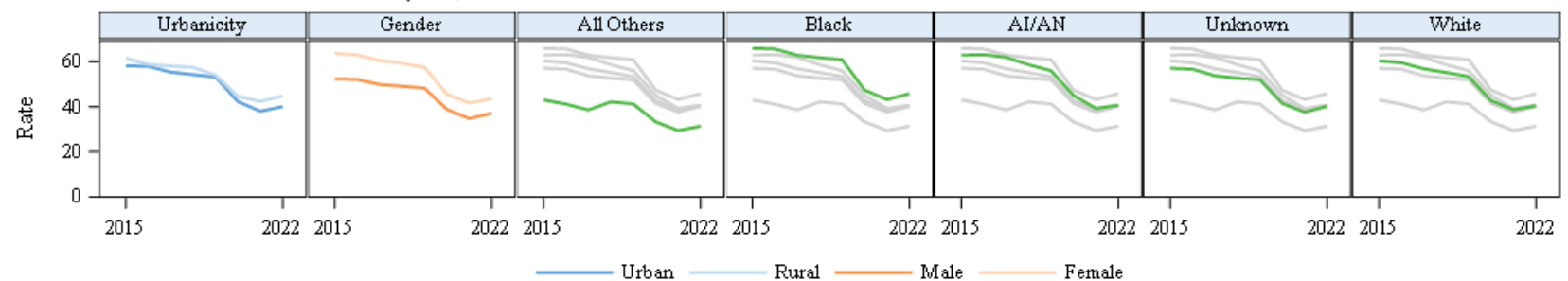
**Table A-100—ACC Measure 3-15, Demographics**

**ACC Measure 3-15: Percentage of adult beneficiaries with concurrent use of opioids and benzodiazepines**



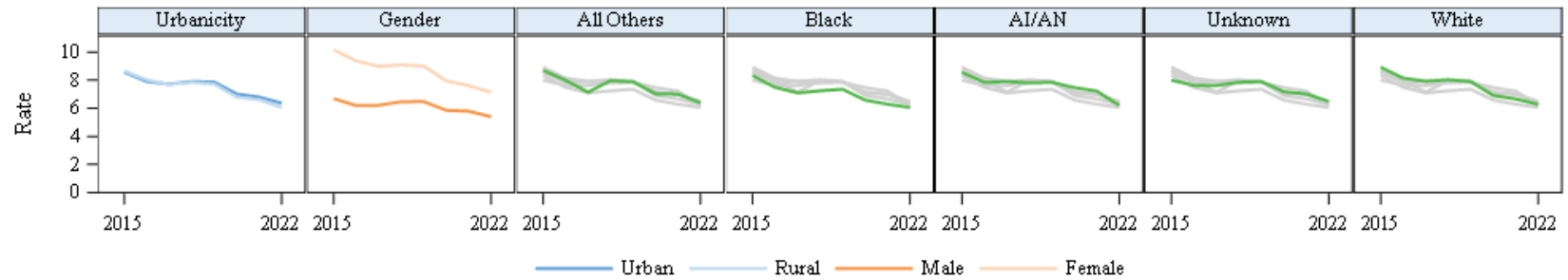
**Table A-101—ACC Measure 3-16, Demographics**

**ACC Measure 3-16: Number of ED visits per 1,000 member months**



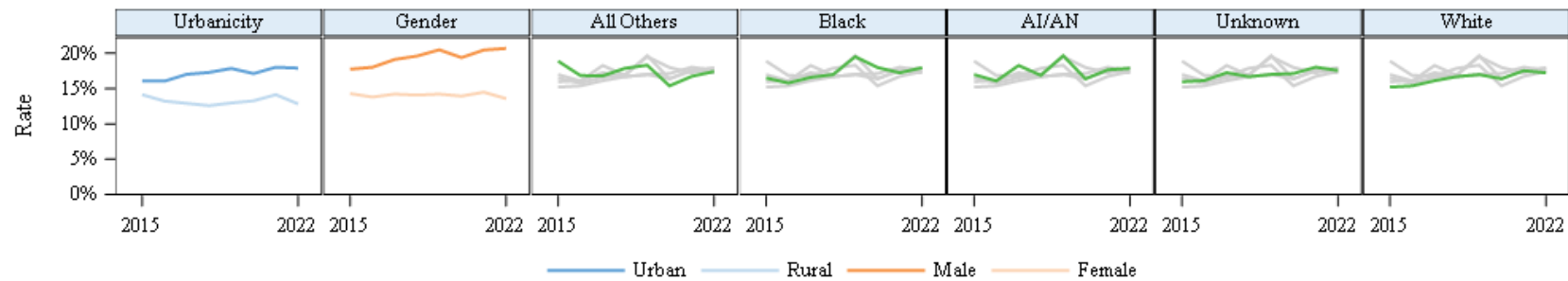
**Table A-102—ACC Measure 3-17, Demographics**

ACC Measure 3-17: Number of inpatient stays per 1,000 member months



**Table A-103—ACC Measure 3-18, Demographics**

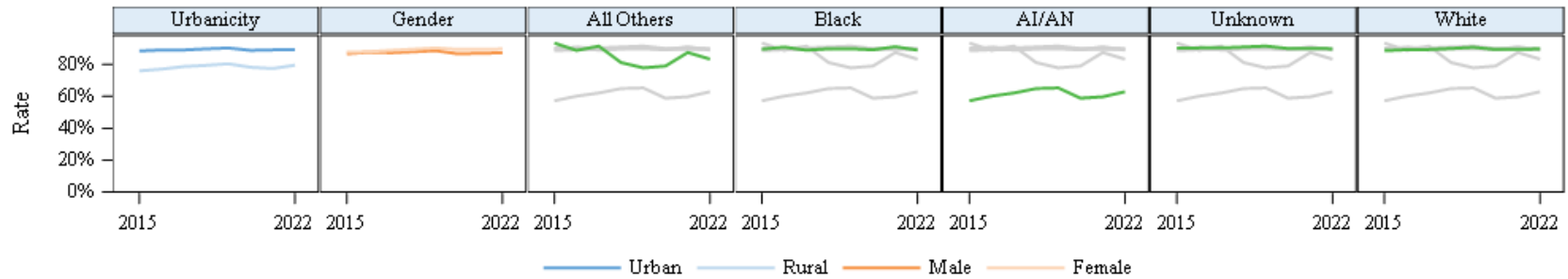
ACC Measure 3-18: Percentage of adult inpatient discharges with an unplanned readmission within 30 days



ALTCS

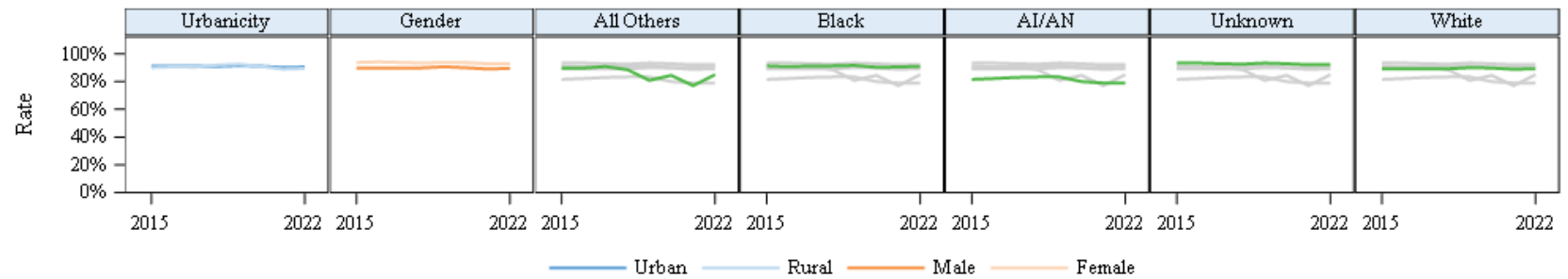
**Table A-104—ALTCS-DD Measure 1-1, Demographics**

ALTCS-DD Measure 1-1: Percentage of beneficiaries who accessed preventive/ambulatory health services



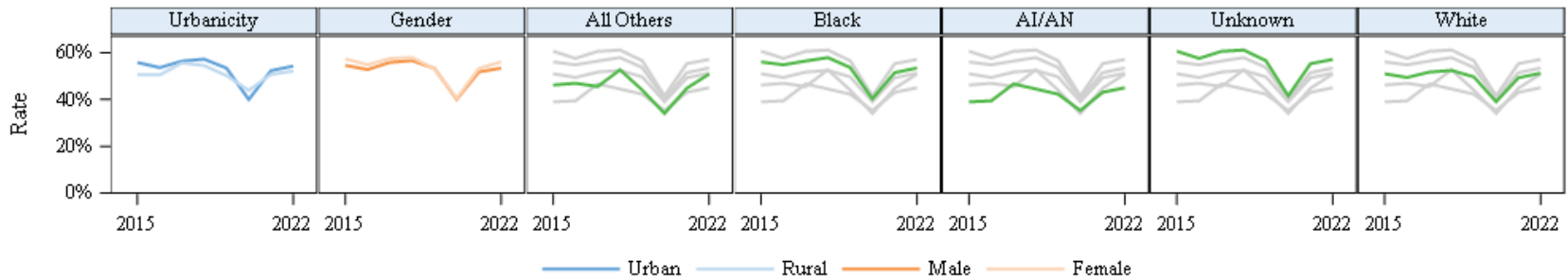
**Table A-105—ALTCS-DD Measure 1-2, Demographics**

ALTCS-DD Measure 1-2: Percentage of children and adolescents who accessed primary care practitioners



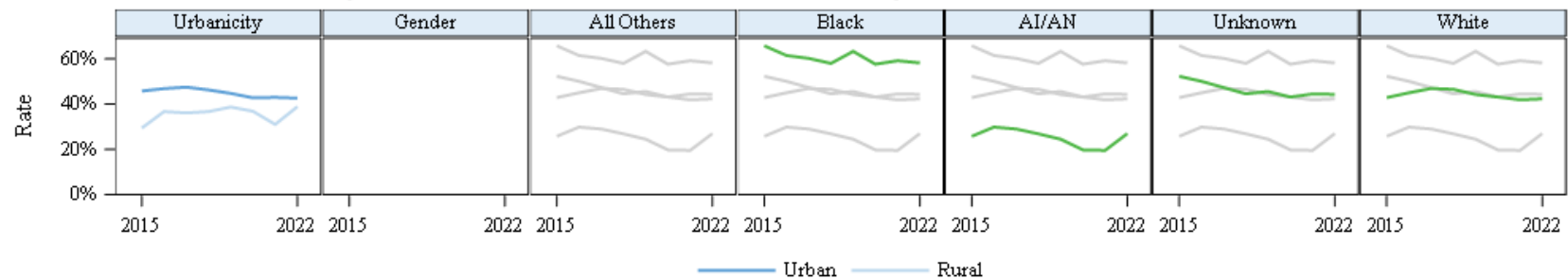
**Table A-106—ALTCS-DD Measure 1-3, Demographics**

ALTCS-DD Measure 1-3: Percentage of beneficiaries under 21 with an annual dental visit



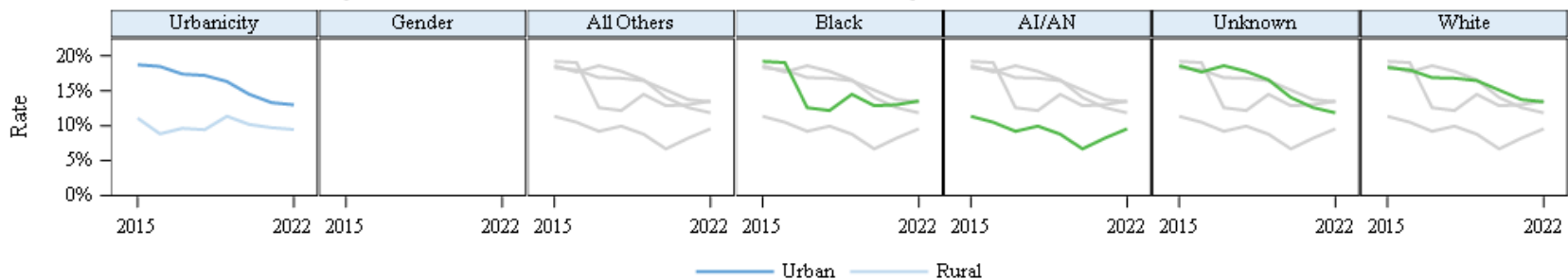
**Table A-107—ALTCS-DD Measure 2-1, Demographics**

ALTCS-DD Measure 2-1: Percentage of adult beneficiaries with a breast cancer screening



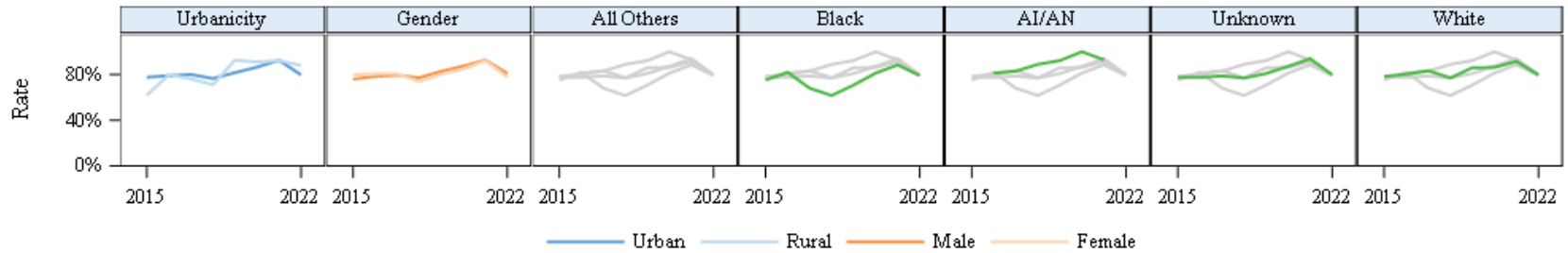
**Table A-108—ALTCS-DD Measure 2-2, Demographics**

ALTCS-DD Measure 2-2: Percentage of adult beneficiaries with a cervical cancer screening



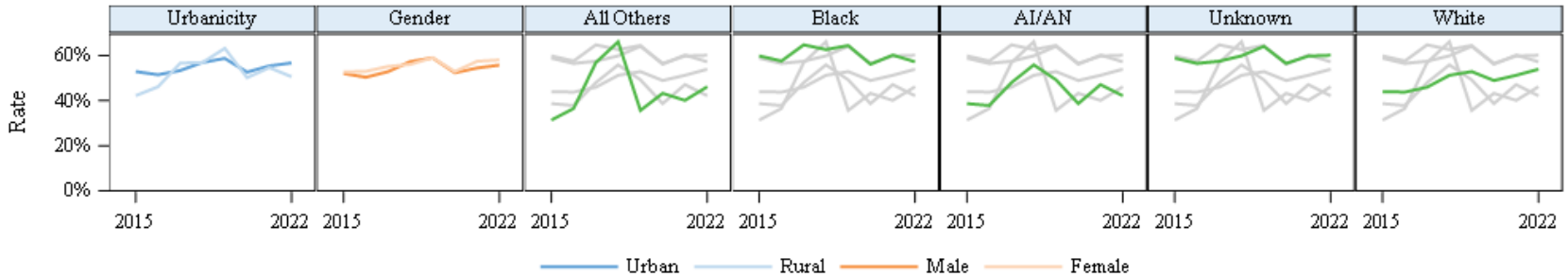
**Table A-109—ALTCS-DD Measure 2-3, Demographics**

**ALTCS-DD Measure 2-3: Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent**



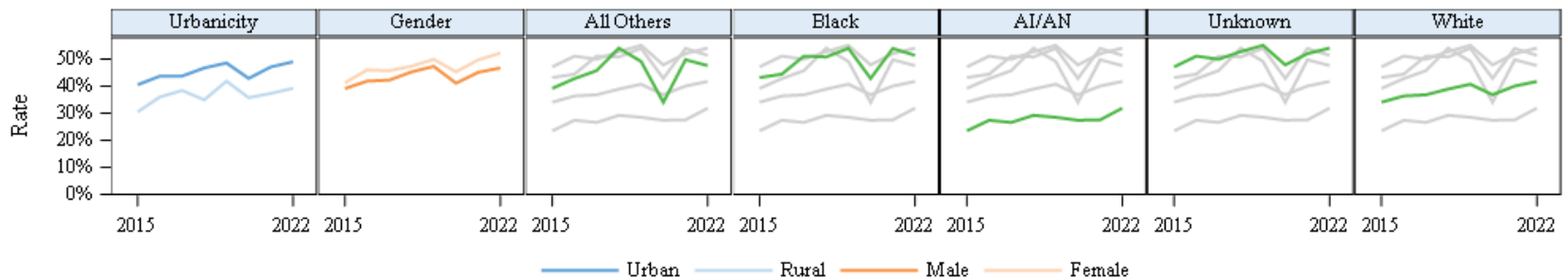
**Table A-110—ALTCS-DD Measure 2-4, Demographics**

**ALTCS-DD Measure 2-4: Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life**



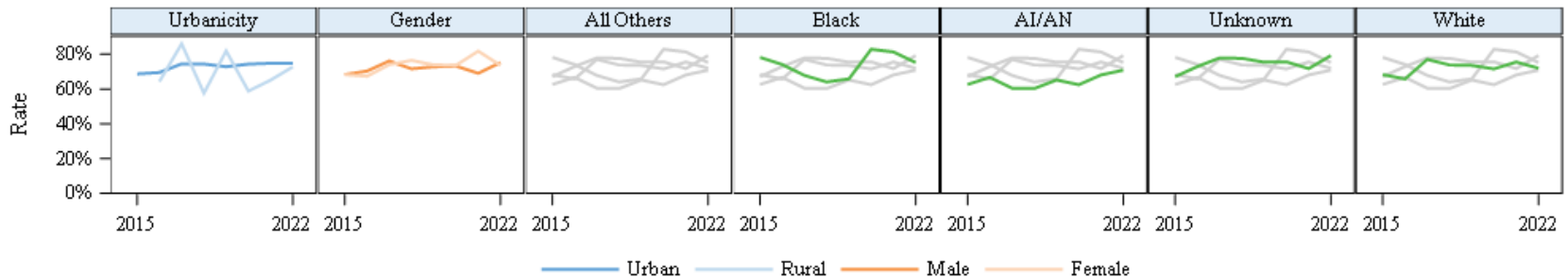
**Table A-111—ALTCS-DD Measure 2-5, Demographics**

**ALTCS-DD Measure 2-5: Percentage of beneficiaries with an adolescent well-care visit**



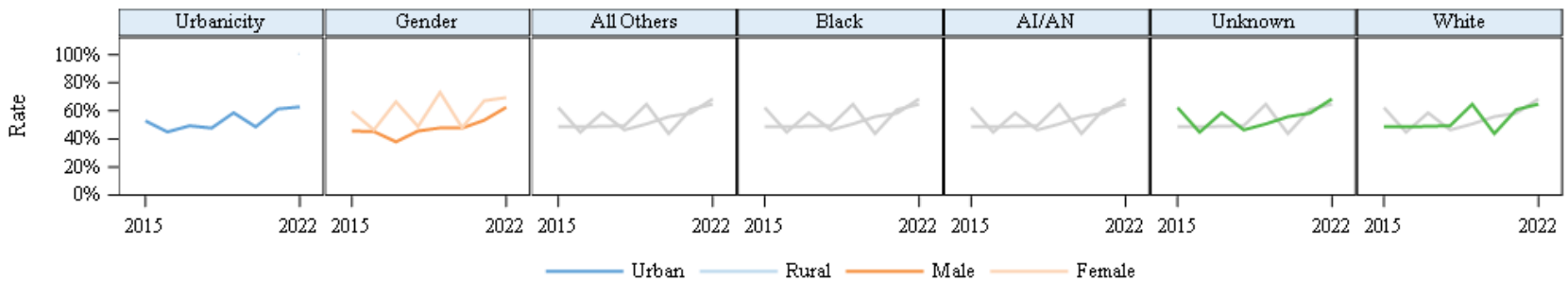
**Table A-112—ALTCS-DD Measure 2-7, Demographics**

ALTCS-DD Measure 2-7: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness



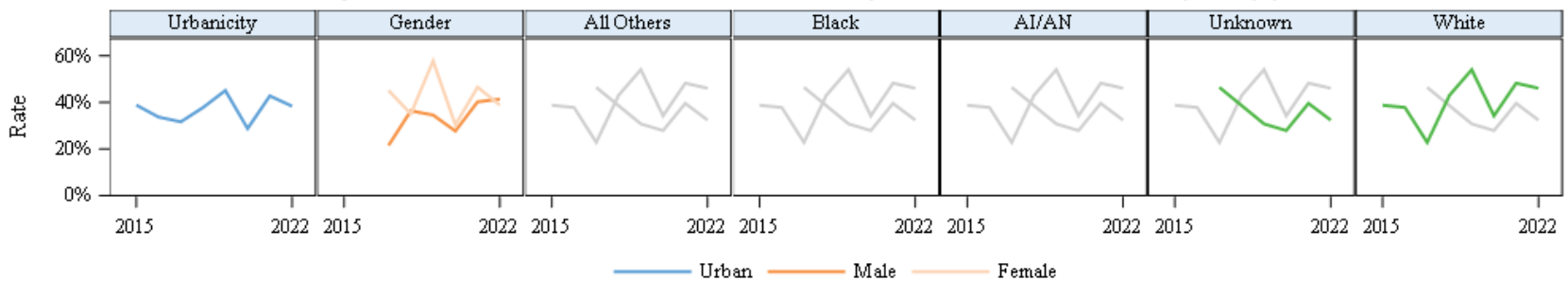
**Table A-113—ALTCS-DD Measure 2-8 (84 Days), Demographics**

ALTCS-DD Measure 2-8: Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)



**Table A-114—ALTCS-DD Measure 2-8 (180 Days), Demographics**

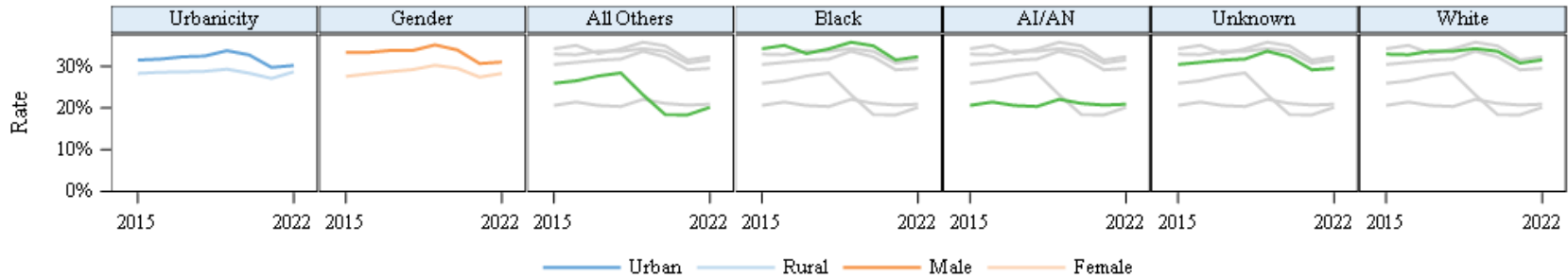
ALTCS-DD Measure 2-8: Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)





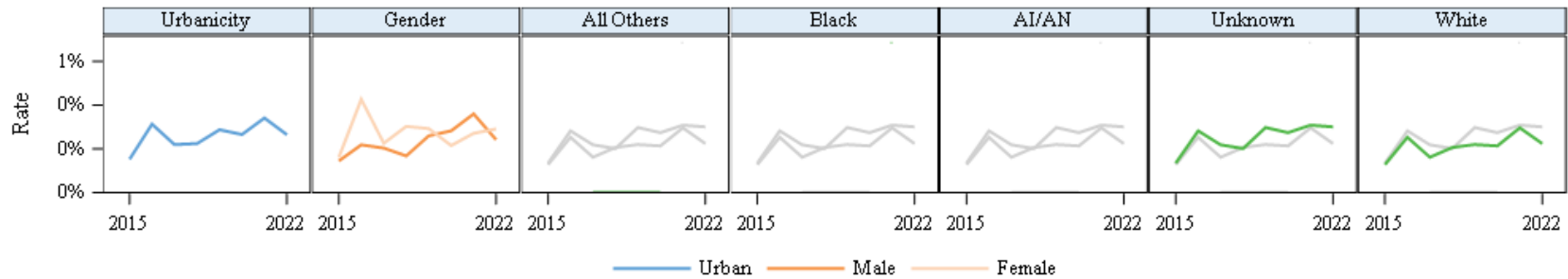
**Table A-115—ALTCS-DD Measure 2-10 (Any), Demographics**

ALTCS-DD Measure 2-10: Percentage of beneficiaries receiving mental health services (Any)



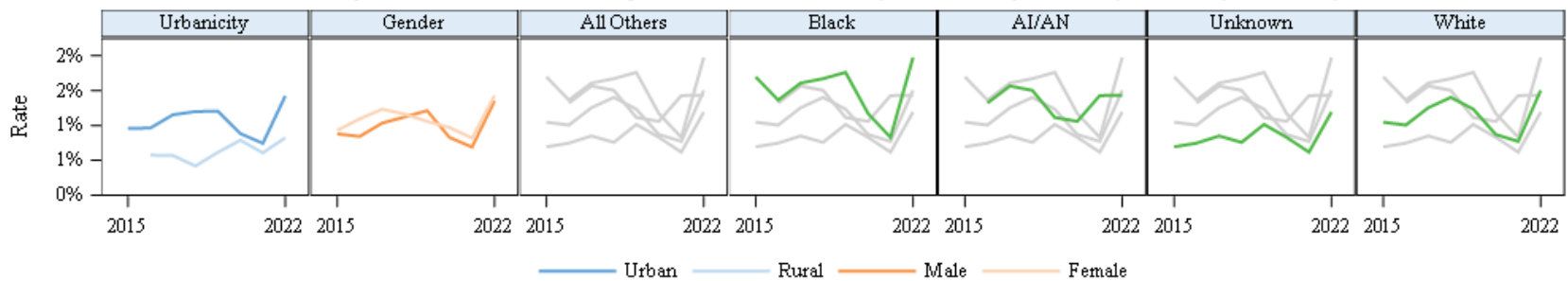
**Table A-116—ALTCS-DD Measure 2-10 (ED), Demographics**

ALTCS-DD Measure 2-10: Percentage of beneficiaries receiving mental health services (ED)



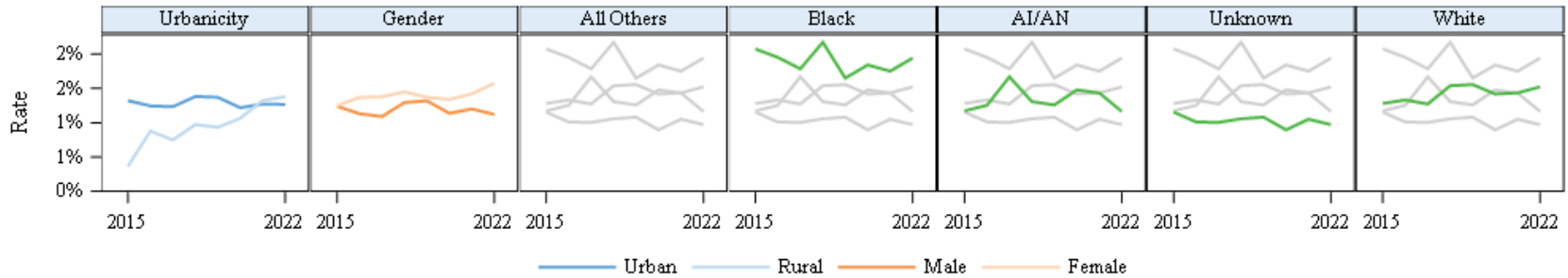
**Table A-117—ALTCS-DD Measure 2-10 (Intensive Outpatient or Partial Hospitalization), Demographics**

ALTCS-DD Measure 2-10: Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization)



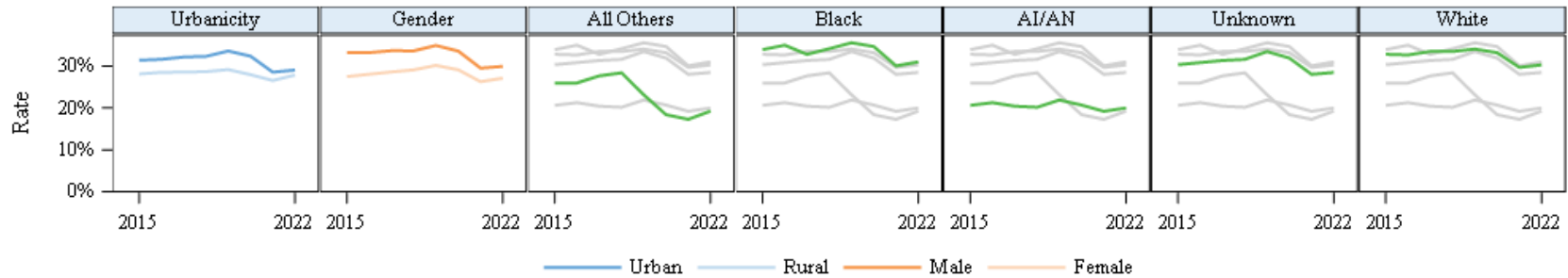
**Table A-118—ALTCS-DD Measure 2-10 (Inpatient), Demographics**

ALTCS-DD Measure 2-10: Percentage of beneficiaries receiving mental health services (Inpatient)



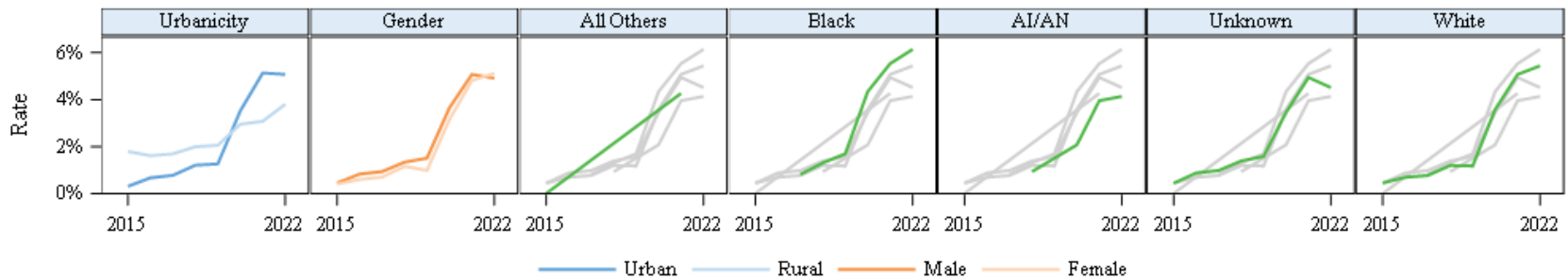
**Table A-119—ALTCS-DD Measure 2-10 (Outpatient), Demographics**

ALTCS-DD Measure 2-10: Percentage of beneficiaries receiving mental health services (Outpatient)



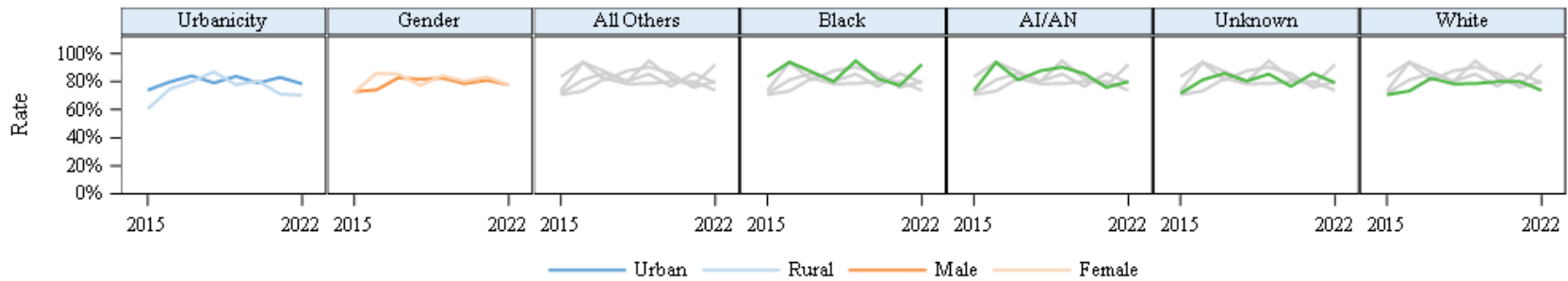
**Table A-120—ALTCS-DD Measure 2-10 (Telehealth), Demographics**

ALTCS-DD Measure 2-10: Percentage of beneficiaries receiving mental health services (Telehealth)



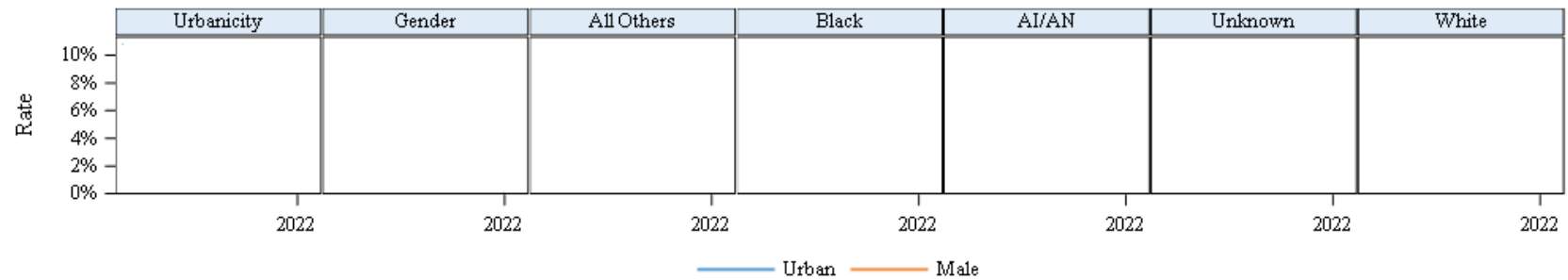
**Table A-121—ALTCS-DD Measure 2-11, Demographics**

ALTCS-DD Measure 2-11: Percentage of adult beneficiaries with monitoring for persistent medications (Total)



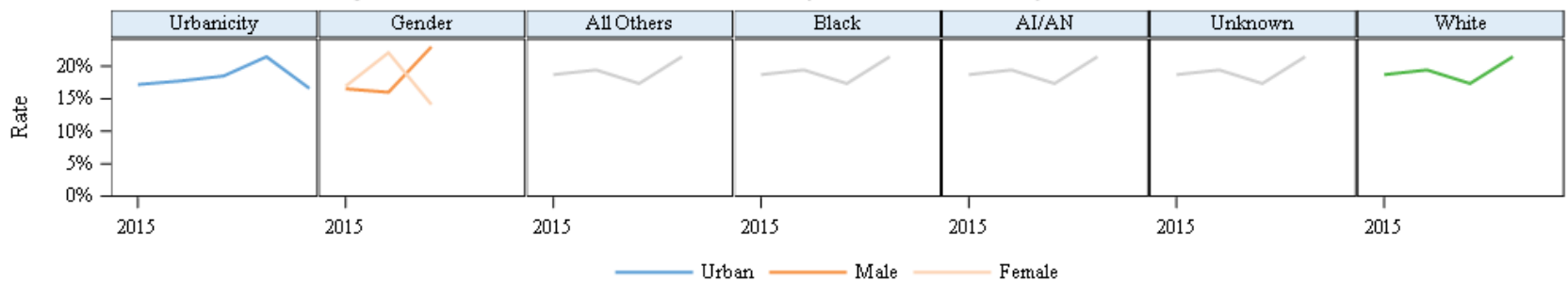
**Table A-122—ALTCS-DD Measure 2-12, Demographics**

ALTCS-DD Measure 2-12: Percentage of beneficiaries with opioid use at high dosage



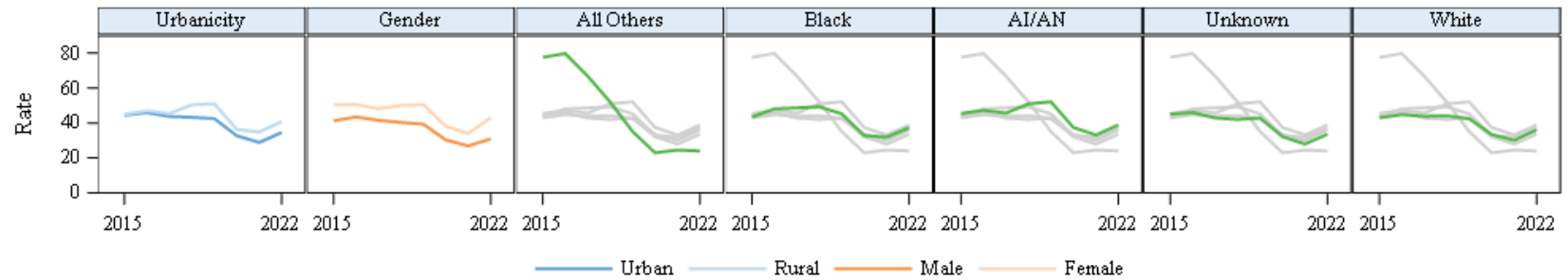
**Table A-123—ALTCS-DD Measure 2-13, Demographics**

ALTCS-DD Measure 2-13: Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines



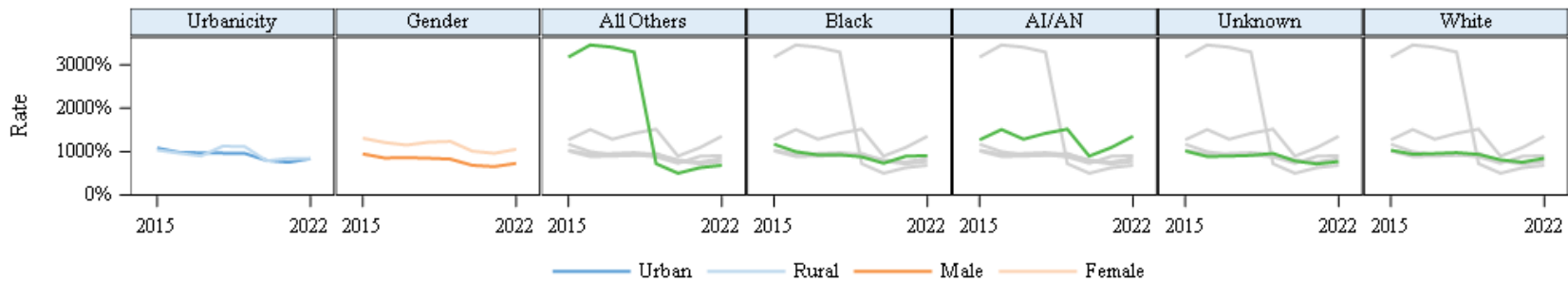
**Table A-124—ALTCS-DD Measure 2-14, Demographics**

ALTCS-DD Measure 2-14: Number of ED visits per 1,000 member months



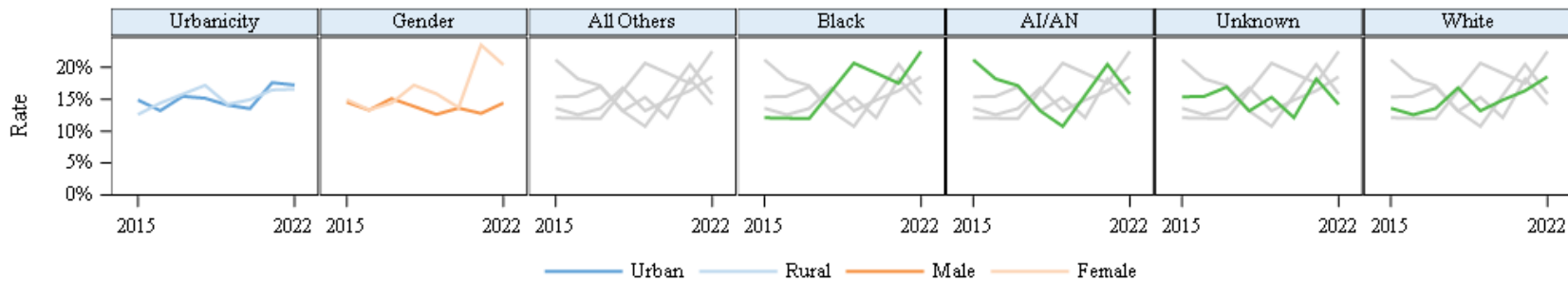
**Table A-125—ALTCS-DD Measure 2-15, Demographics**

ALTCS-DD Measure 2-15: Number of inpatient stays per 1,000 member months



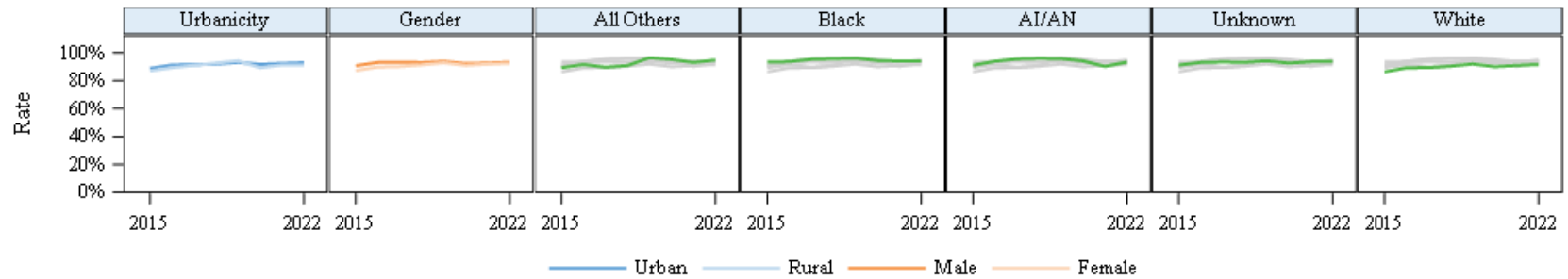
**Table A-126—ALTCS-DD Measure 2-16, Demographics**

ALTCS-DD Measure 2-16: Percentage of adult inpatient discharges with an unplanned readmission within 30 days



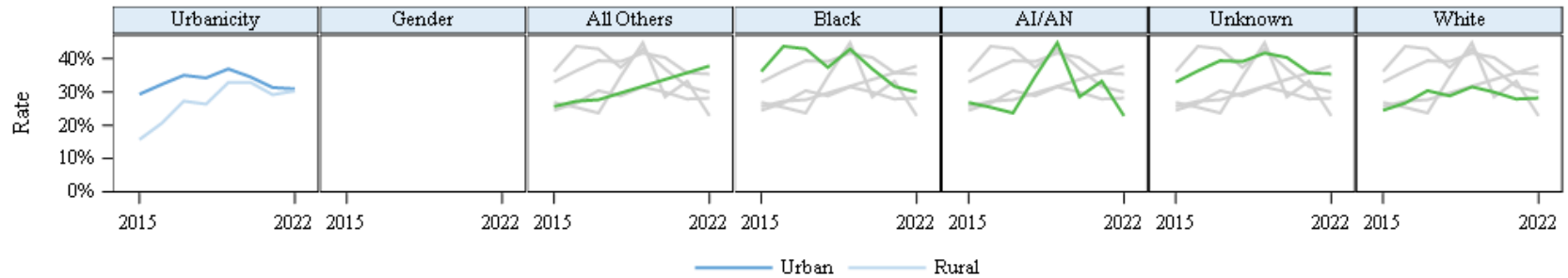
**Table A-127—ALTCS-EPD Measure 1-1, Demographics**

ALTCS-EPD Measure 1-1: Percentage of beneficiaries who accessed preventive/ambulatory health services



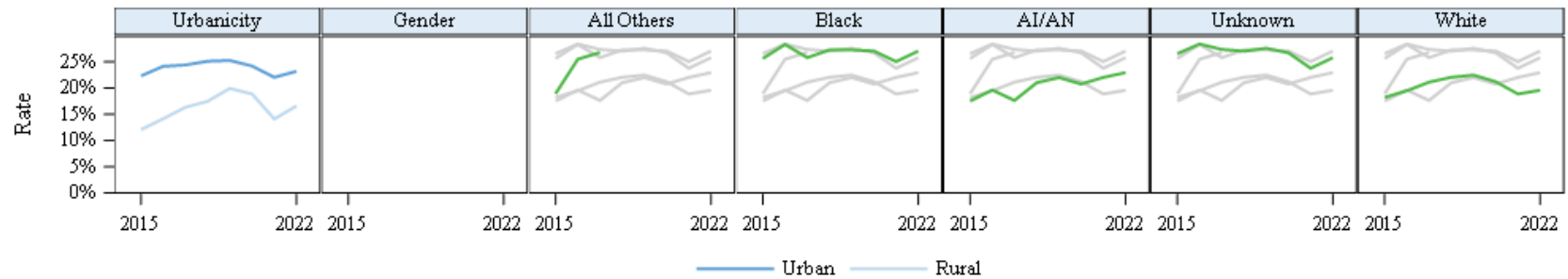
**Table A-128—ALTCS-EPD Measure 2-1, Demographics**

ALTCS-EPD Measure 2-1: Percentage of adult beneficiaries with a breast cancer screening



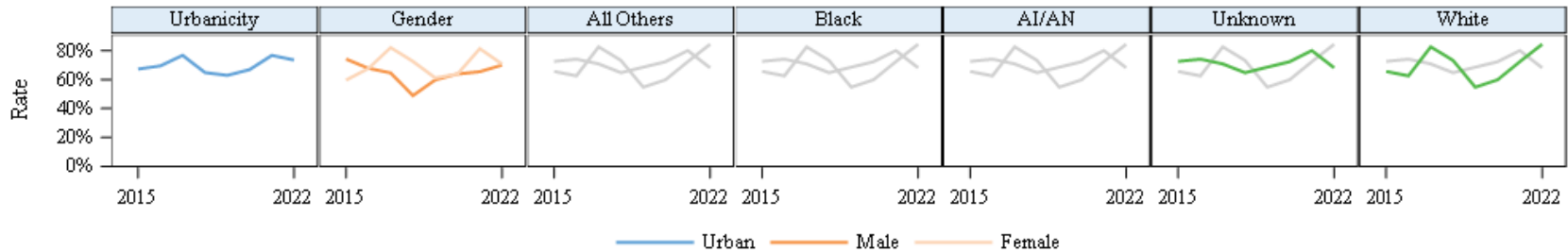
**Table A-129—ALTCS-EPD Measure 2-2, Demographics**

ALTCS-EPD Measure 2-2: Percentage of adult beneficiaries with a cervical cancer screening



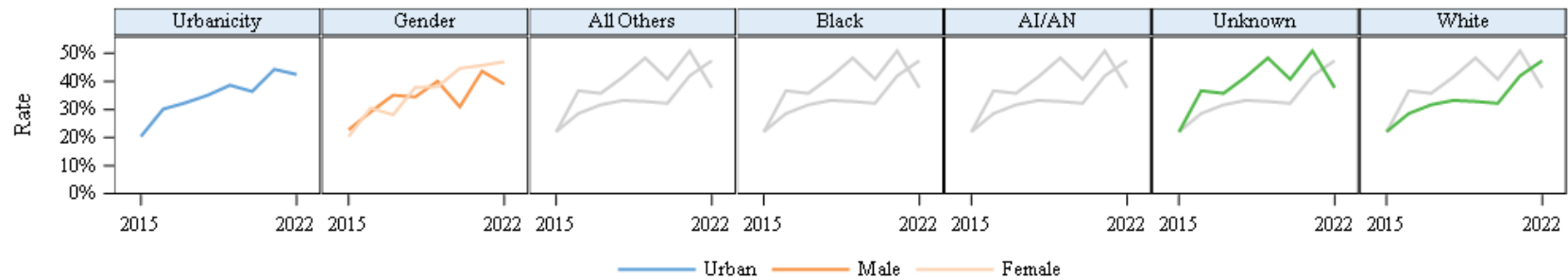
**Table A-130—ALTCS-EPD Measure 2-3, Demographics**

ALTCS-EPD Measure 2-3: Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent



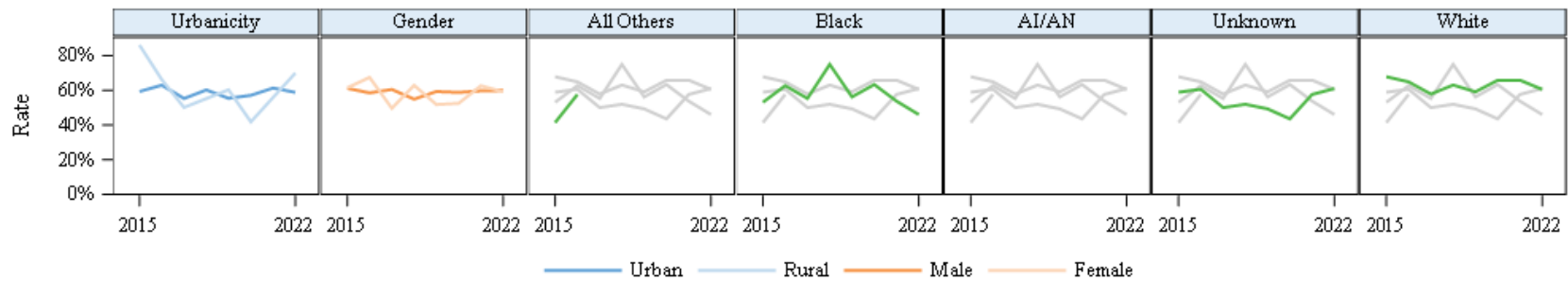
**Table A-131—ALTCS-EPD Measure 2-7, Demographics**

ALTCS-EPD Measure 2-7: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness



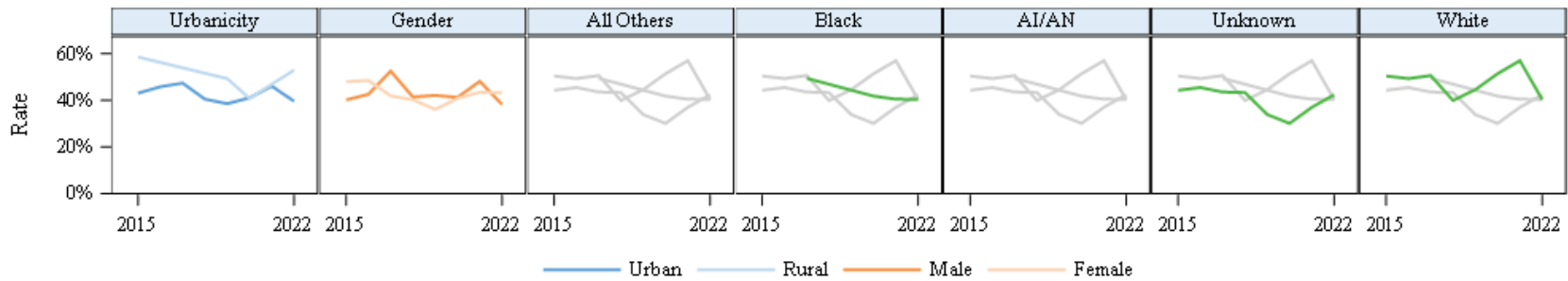
**Table A-132—ALTCS-EPD Measure 2-8 (84 Days), Demographics**

ALTCS-EPD Measure 2-8: Percentage of adult beneficiaries who remained on an antidepressant medication treatment (84 days)



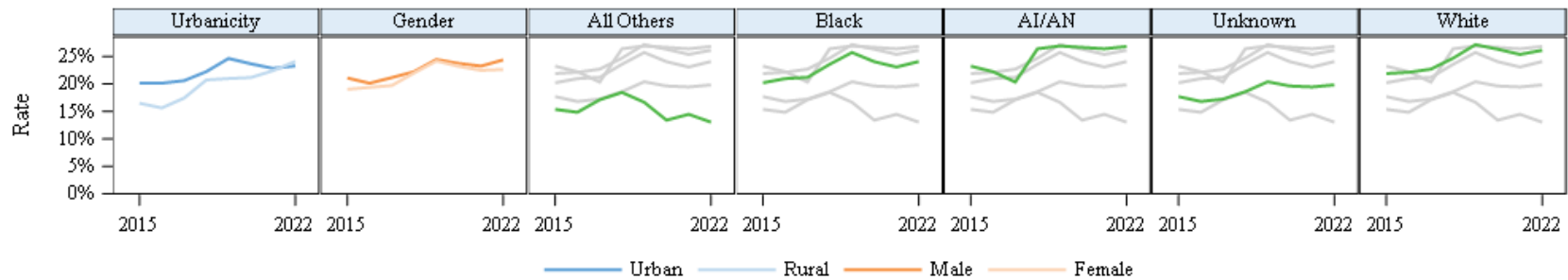
**Table A-133—ALTCS-EPD Measure 2-8 (180 Days), Demographics**

ALTCS-EPD Measure 2-8: Percentage of adult beneficiaries who remained on an antidepressant medication treatment (180 days)



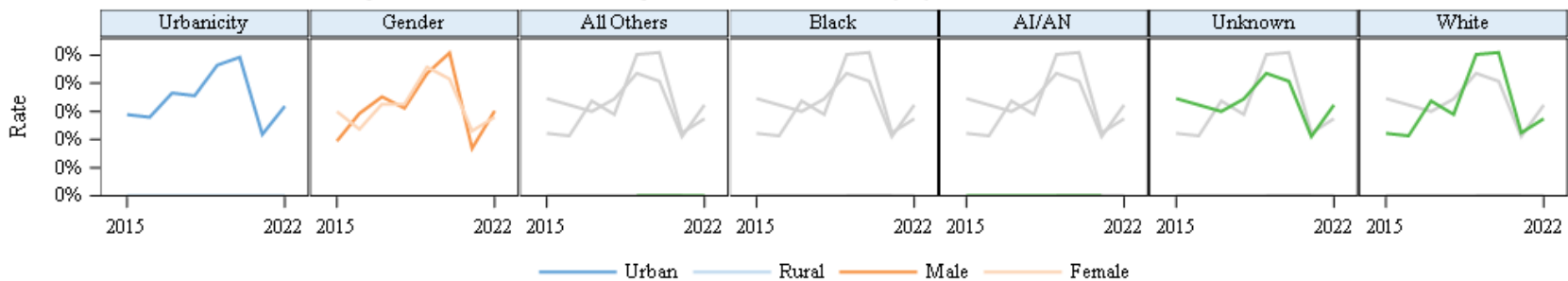
**Table A-134—ALTCS-EPD Measure 2-10 (Any), Demographics**

ALTCS-EPD Measure 2-10: Percentage of beneficiaries receiving mental health services (Any)



**Table A-135—ALTCS-EPD Measure 2-10 (ED), Demographics**

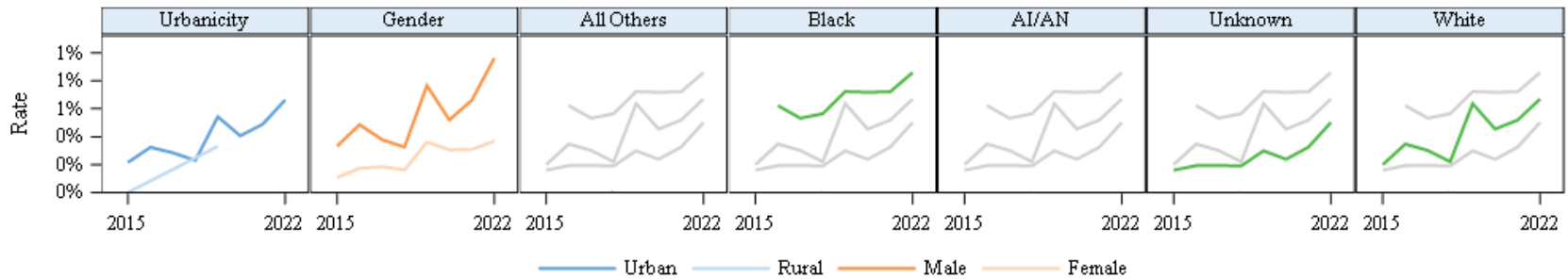
ALTCS-EPD Measure 2-10: Percentage of beneficiaries receiving mental health services (ED)





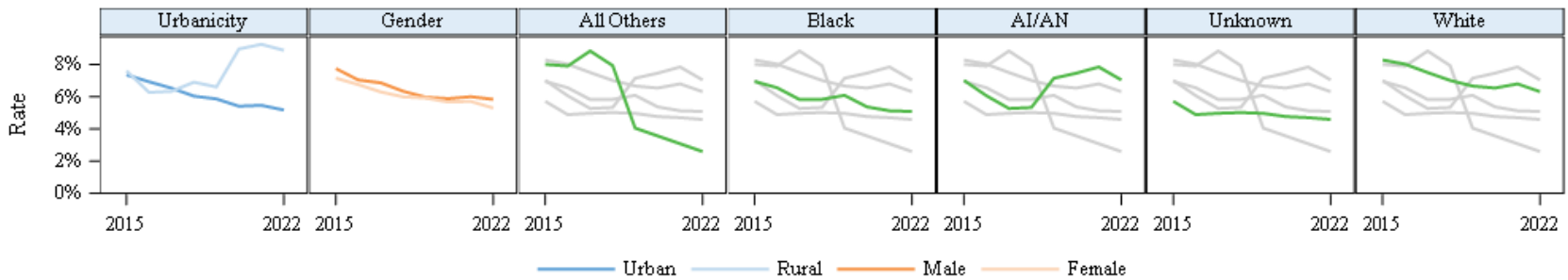
**Table A-136—ALTCS-EPD Measure 2-10 (Intensive Outpatient or Partial Hospitalization), Demographics**

ALTCS-EPD Measure 2-10: Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization)



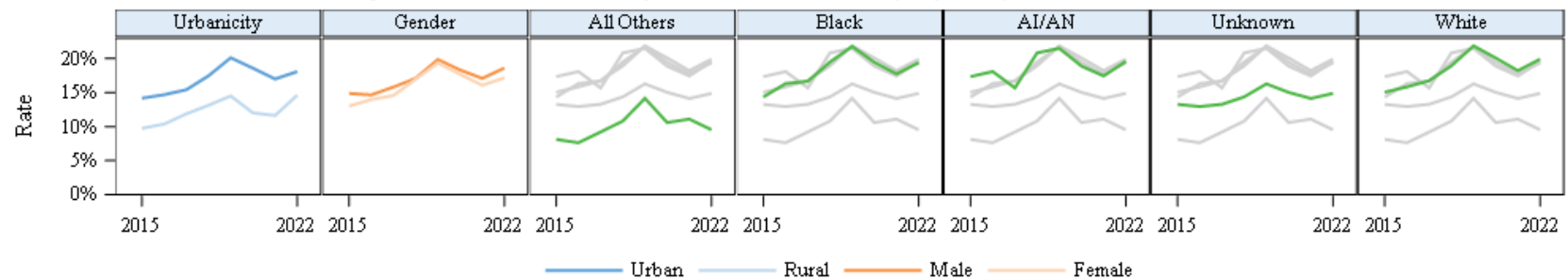
**Table A-137—ALTCS-EPD Measure 2-10 (Inpatient), Demographics**

ALTCS-EPD Measure 2-10: Percentage of beneficiaries receiving mental health services (Inpatient)



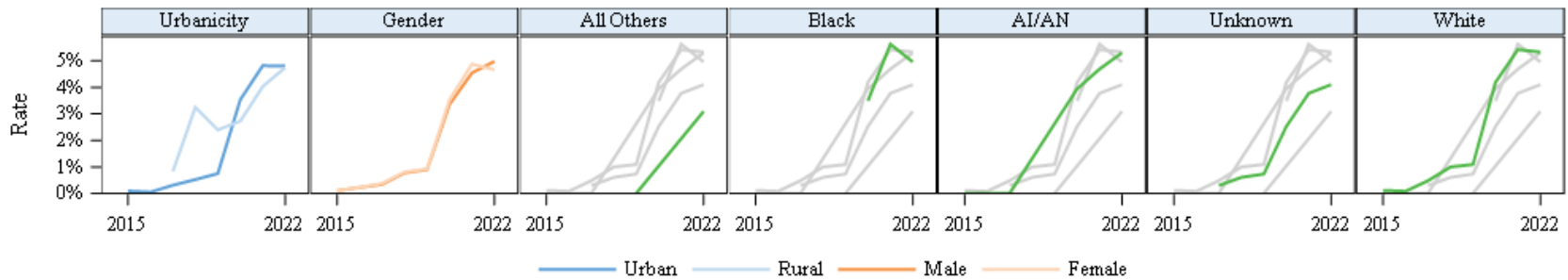
**Table A-138—ALTCS-EPD Measure 2-10 (Outpatient), Demographics**

ALTCS-EPD Measure 2-10: Percentage of beneficiaries receiving mental health services (Outpatient)



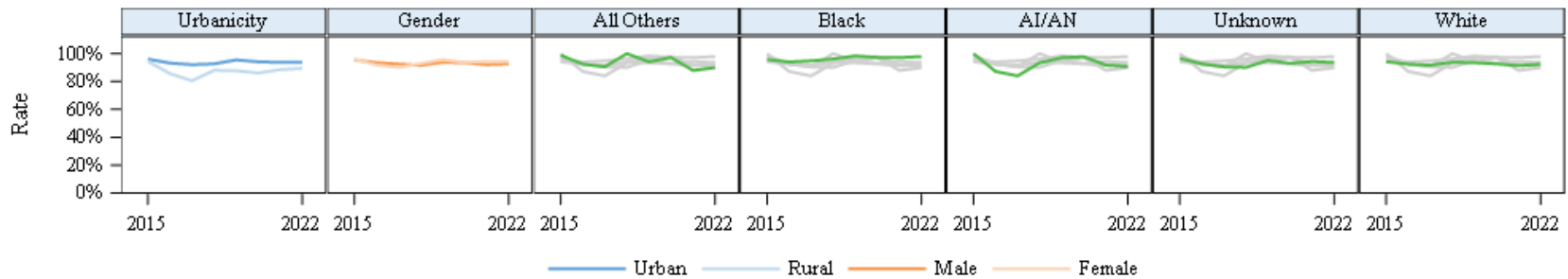
**Table A-139—ALTCS-EPD Measure 2-10 (Telehealth), Demographics**

ALTCS-EPD Measure 2-10: Percentage of beneficiaries receiving mental health services (Telehealth)



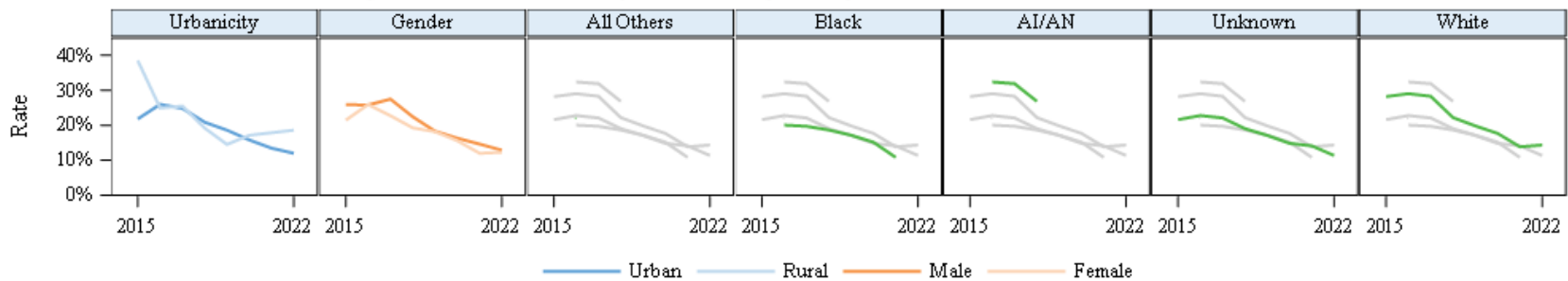
**Table A-140—ALTCS-EPD Measure 2-11 (Total), Demographics**

ALTCS-EPD Measure 2-11: Percentage of adult beneficiaries with monitoring for persistent medications (Total)



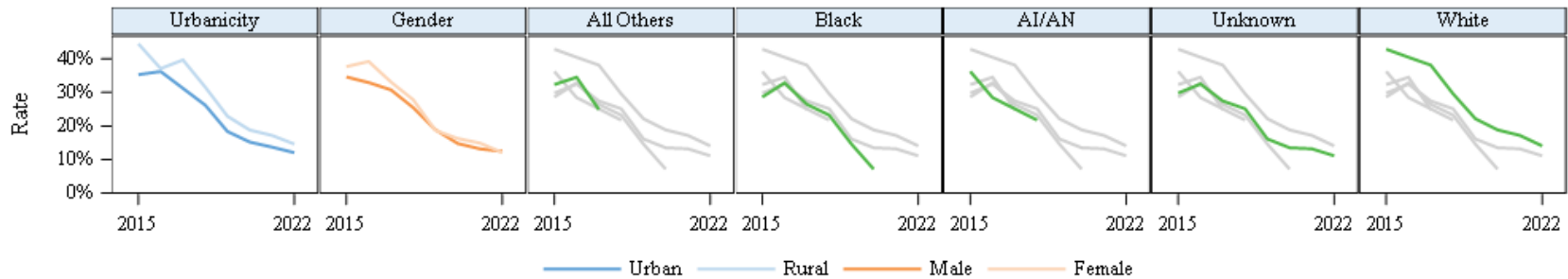
**Table A-141—ALTCS-EPD Measure 2-12, Demographics**

ALTCS-EPD Measure 2-12: Percentage of beneficiaries with opioid use at high dosage



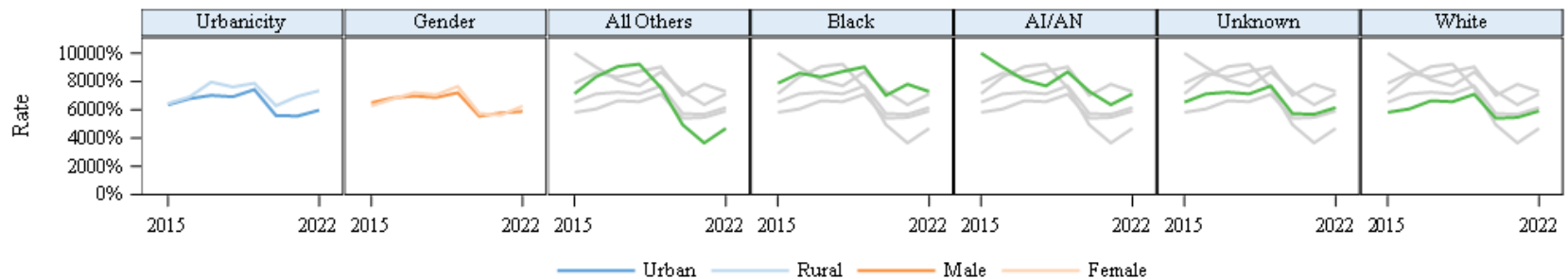
**Table A-142—ALTCS-EPD Measure 2-13, Demographics**

ALTCS-EPD Measure 2-13: Percentage of beneficiaries with a concurrent use of opioids and benzodiazepines



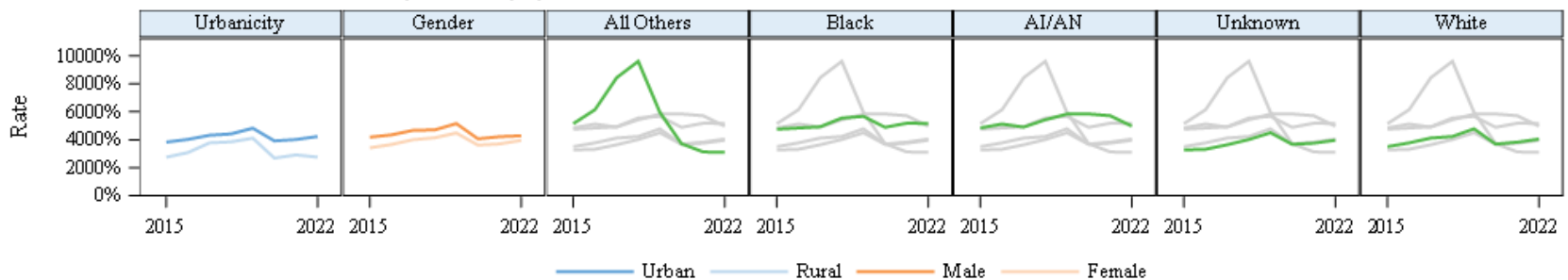
**Table A-143—ALTCS-EPD Measure 2-14, Demographics**

ALTCS-EPD Measure 2-14: Number of ED visits per 1,000 member months



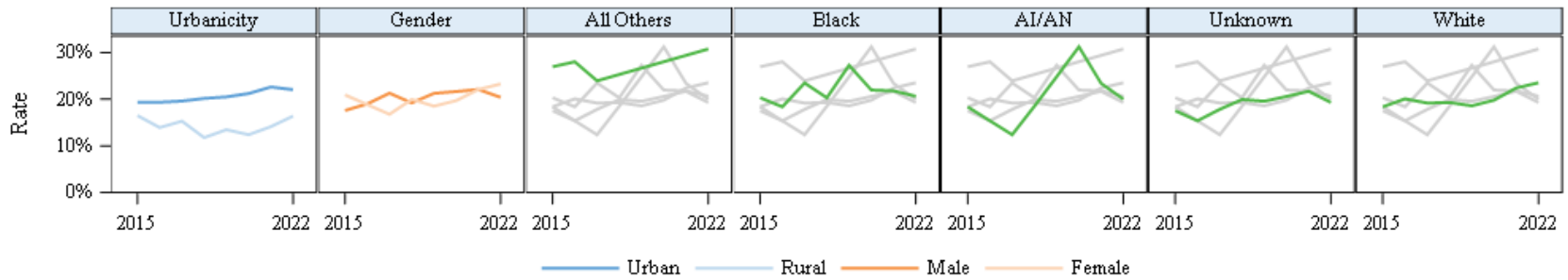
**Table A-144—ALTCS-EPD Measure 2-15, Demographics**

ALTCS-EPD Measure 2-15: Number of inpatient stays per 1,000 member months



**Table A-145—ALTCES-EPD Measure 2-16, Demographics**

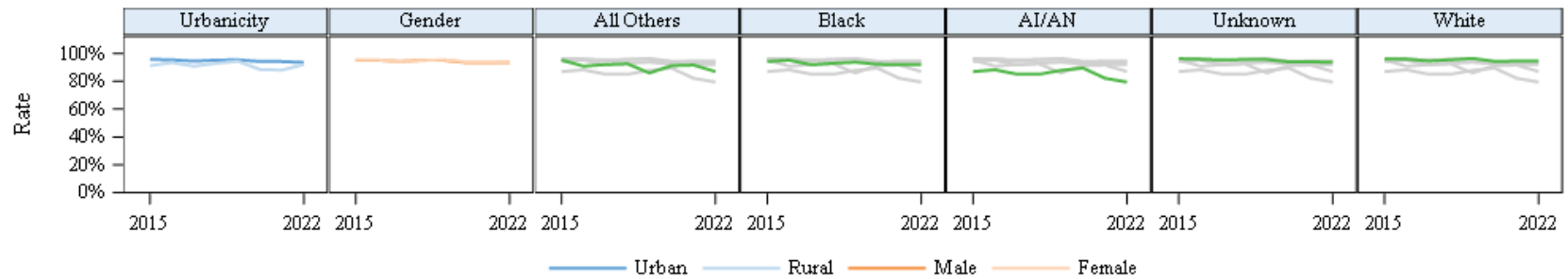
ALTCES-EPD Measure 2-16: Percentage of adult inpatient discharges with an unplanned readmission within 30 days



**CHP**

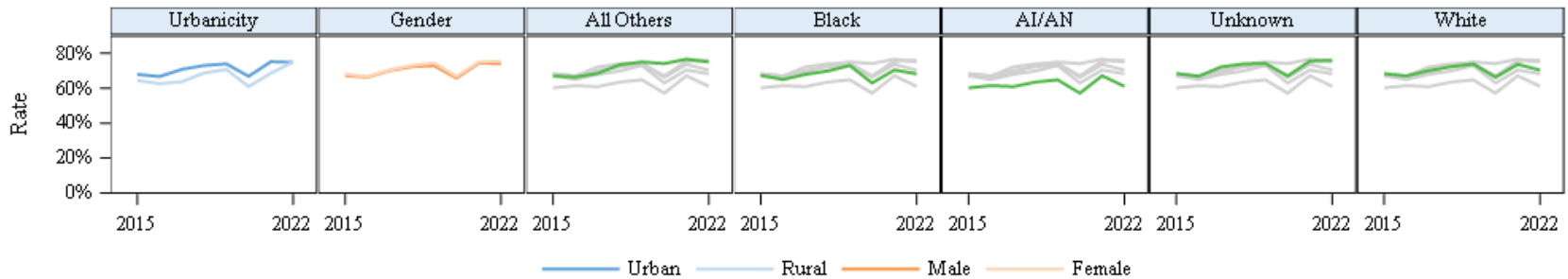
**Table A-146—CHP Measure 1-1, Demographics**

CHP Measure 1-1: Percentage of children and adolescents with access to PCPs



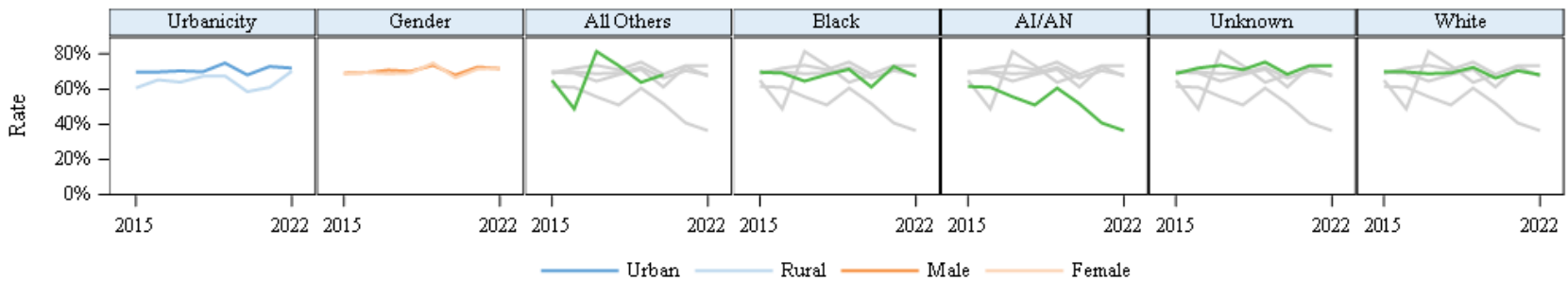
**Table A-147—CHP Measure 1-2, Demographics**

**CHP Measure 1-2: Percentage of beneficiaries with an annual dental visit**



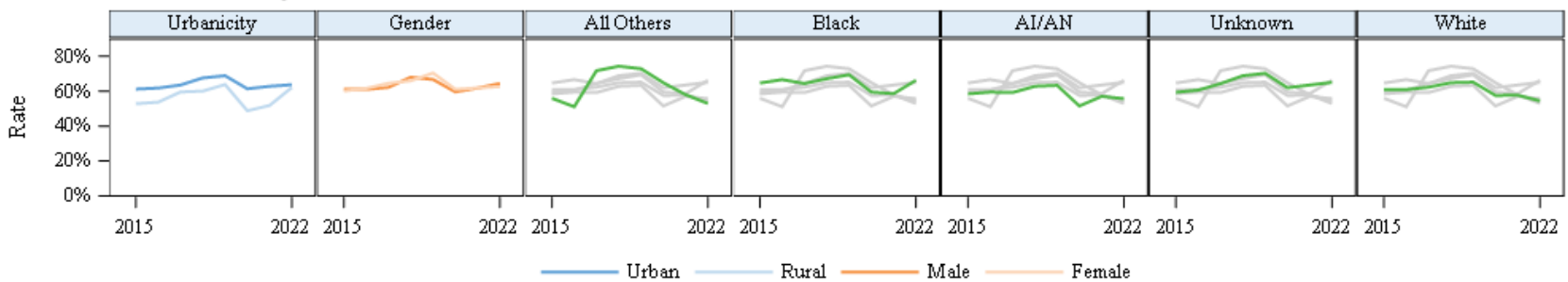
**Table A-148—CHP Measure 2-1, Demographics**

**CHP Measure 2-1: Percentage of beneficiaries with well-child visits in the third, fourth, fifth, and sixth years of life**



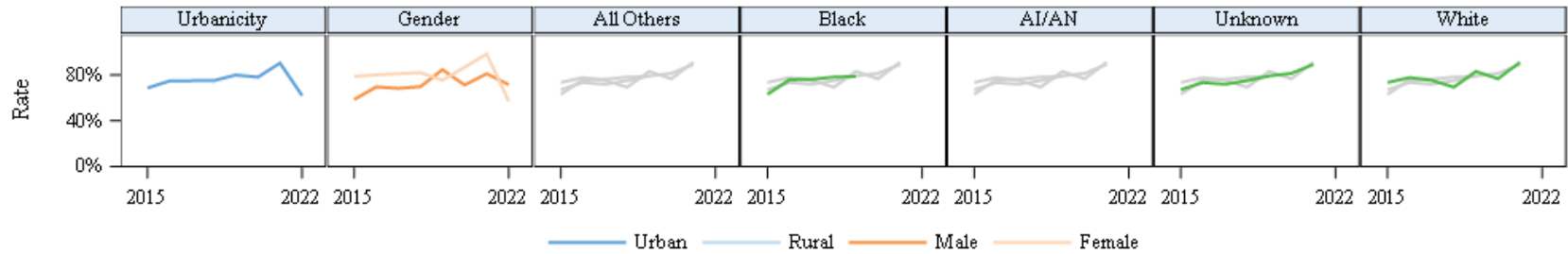
**Table A-149—CHP Measure 2-2, Demographics**

**CHP Measure 2-2: Percentage of beneficiaries with an adolescent well-care visit**



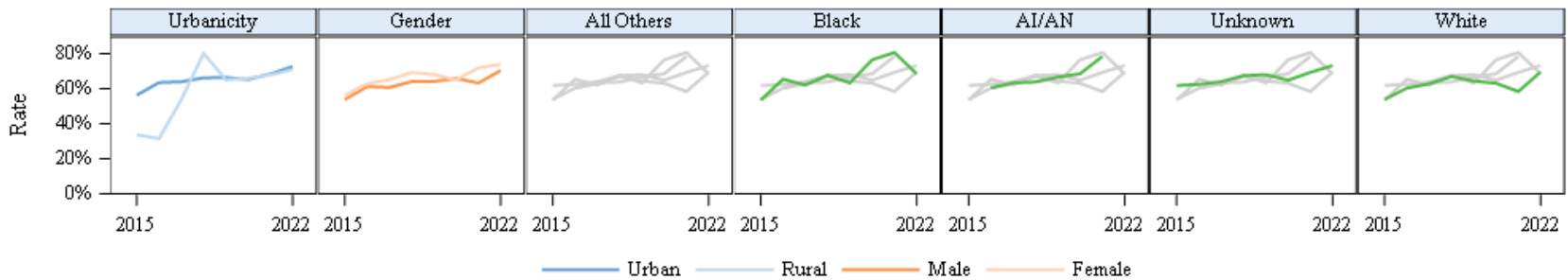
**Table A-150—CHP Measure 2-5, Demographics**

CHP Measure 2-5: Percentage of beneficiaries ages 5 to 18 who were identified as having persistent Asthma and had a ratio of controller medications to total Asthma medications of 0.50 or greater during the measurement year



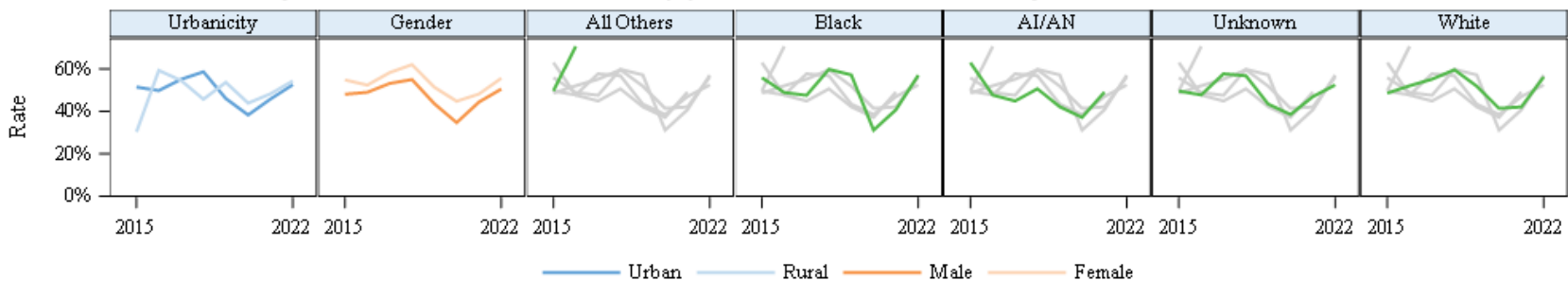
**Table A-151—CHP Measure 2-6, Demographics**

CHP Measure 2-6: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness



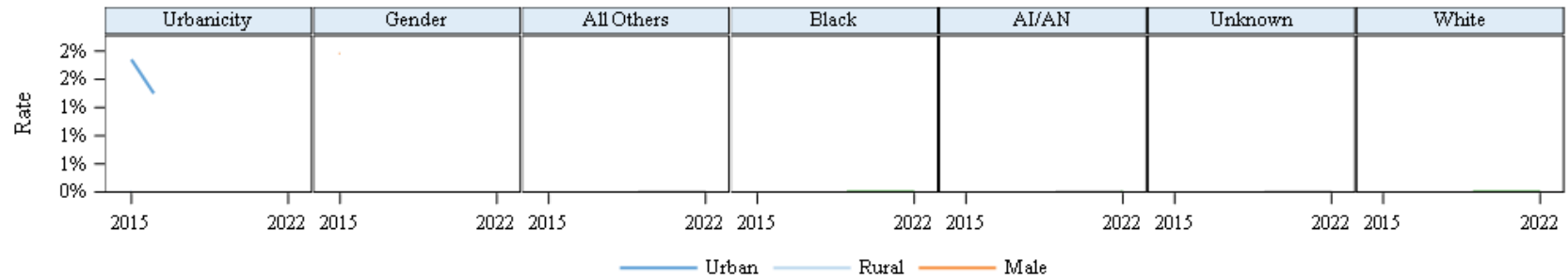
**Table A-152—CHP Measure 2-7, Demographics**

CHP Measure 2-7: Percentage of children and adolescents on antipsychotics with metabolic monitoring



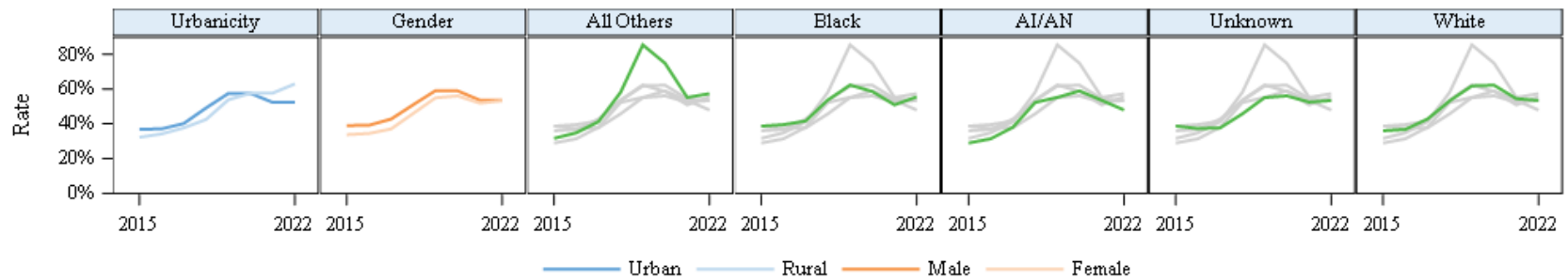
**Table A-153—CHP Measure 2-9, Demographics**

CHP Measure 2-9: Percentage of children and adolescents with use of multiple concurrent antipsychotics



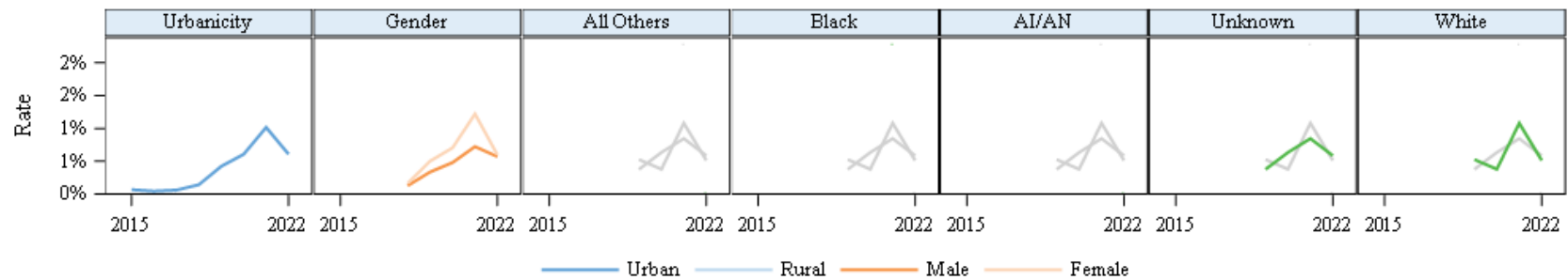
**Table A-154—CHP Measure 2-10 (Any), Demographics**

CHP Measure 2-10: Percentage of beneficiaries receiving mental health services (Any)



**Table A-155—CHP Measure 2-10 (ED), Demographics**

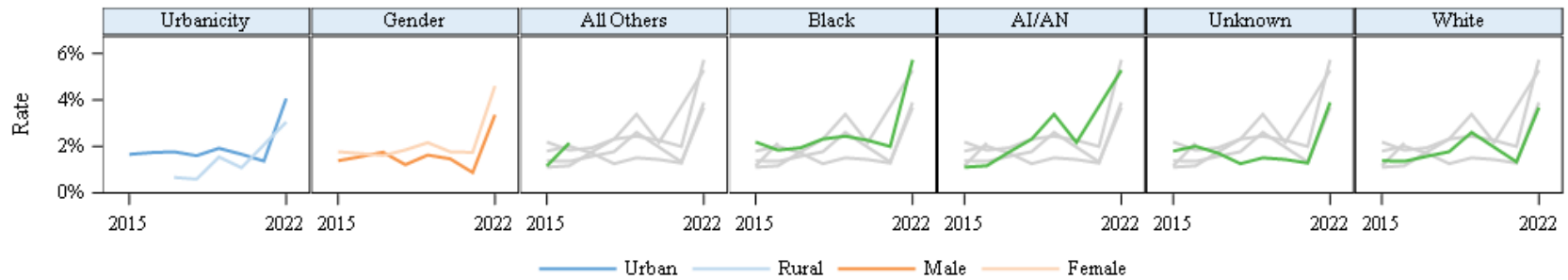
CHP Measure 2-10: Percentage of beneficiaries receiving mental health services (ED)





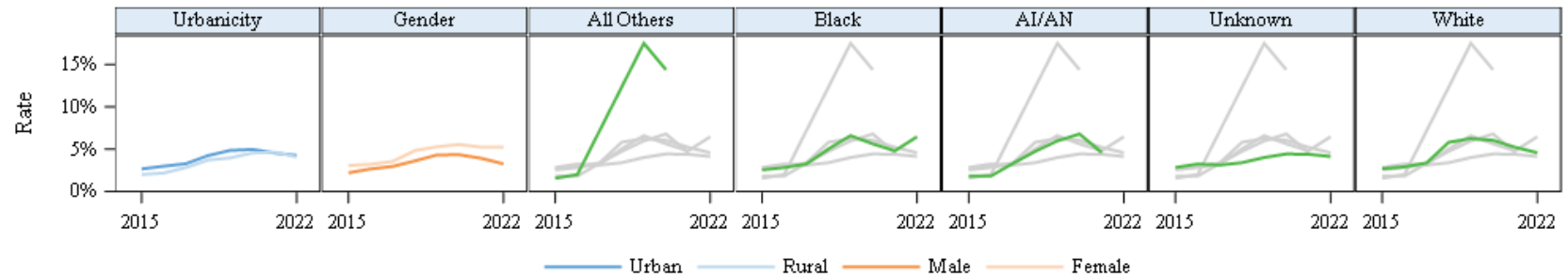
**Table A-156—CHP Measure 2-10 (Intensive Outpatient or Partial Hospitalization), Demographics**

CHP Measure 2-10: Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization)



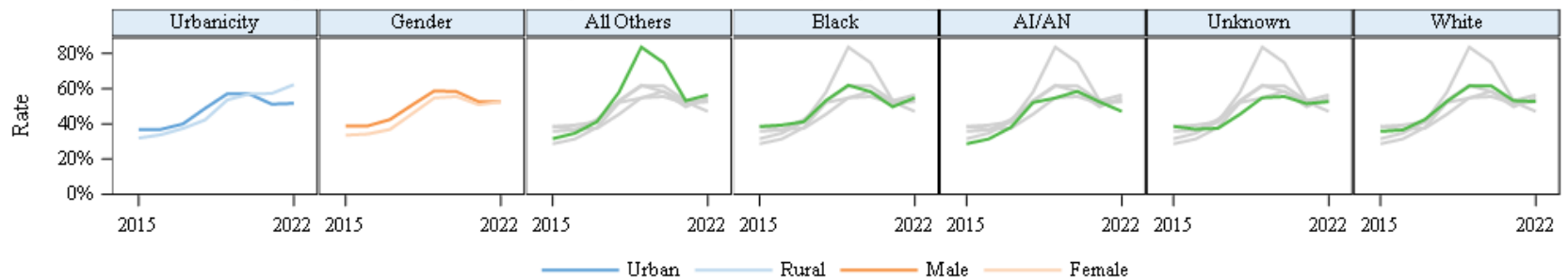
**Table A-157—CHP Measure 2-10 (Inpatient), Demographics**

CHP Measure 2-10: Percentage of beneficiaries receiving mental health services (Inpatient)



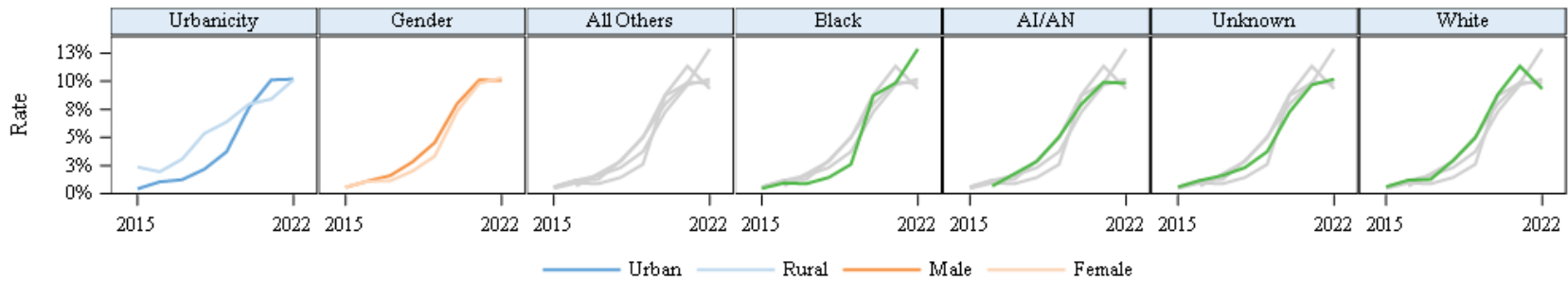
**Table A-158—CHP Measure 2-10 (Outpatient), Demographics**

CHP Measure 2-10: Percentage of beneficiaries receiving mental health services (Outpatient)



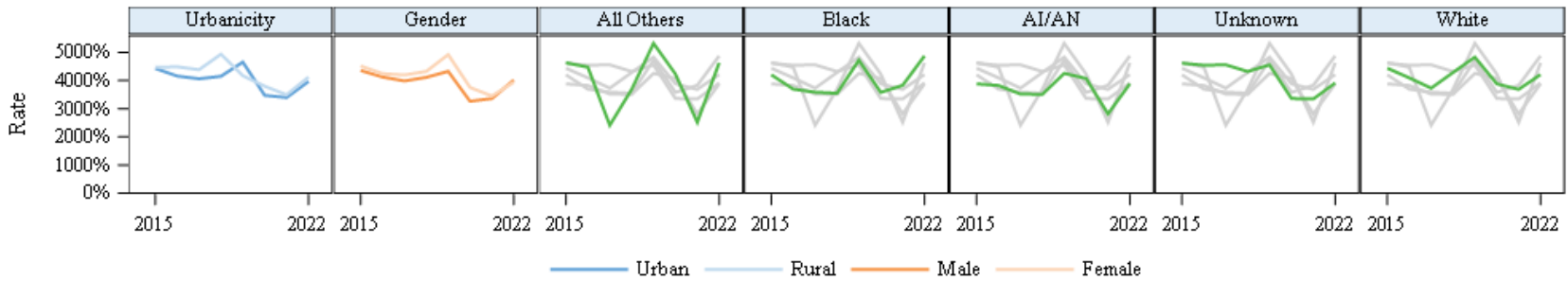
**Table A-159—CHP Measure 2-10 (Telehealth), Demographics**

**CHP Measure 2-10: Percentage of beneficiaries receiving mental health services (Telehealth)**



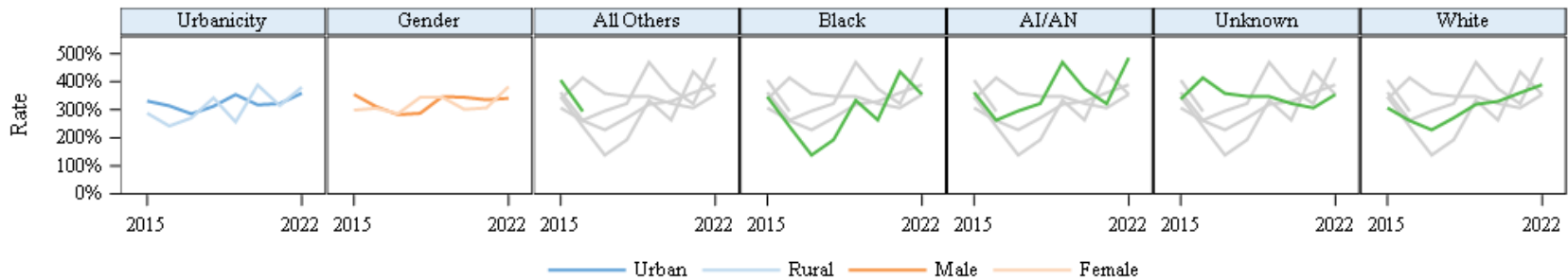
**Table A-160—CHP Measure 2-11, Demographics**

**CHP Measure 2-11: Number of ED visits per 1,000 member months**



**Table A-161—CHP Measure 2-12, Demographics**

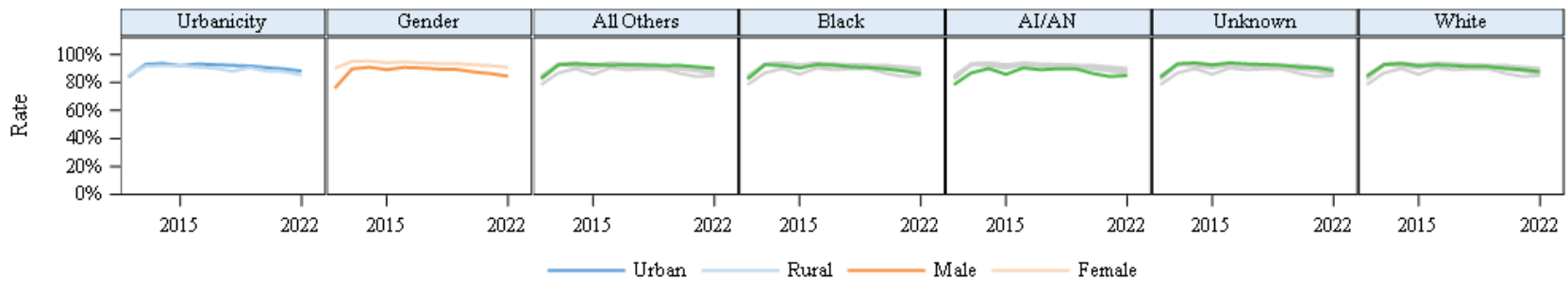
**CHP Measure 2-12: Number of inpatient stays per 1,000 member months**



**RBHA**

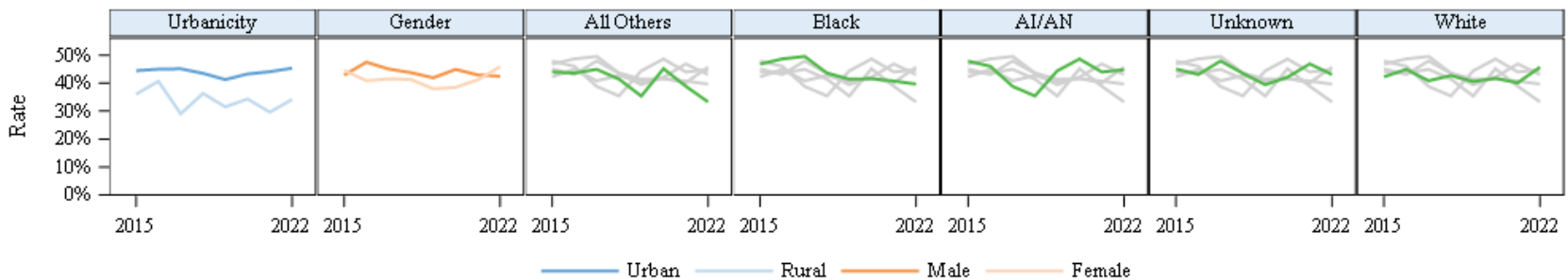
**Table A-162—RBHA Measure 1-1, Demographics**

RBHA Measure 1-1: Percentage of adults who accessed preventive/ambulatory health services



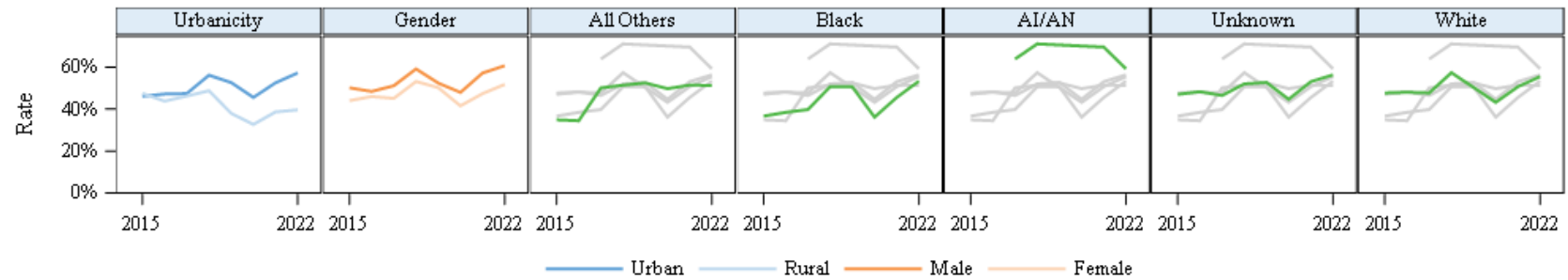
**Table A-163—RBHA Measure 1-5 (Alcohol), Demographics**

RBHA Measure 1-5: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Alcohol)



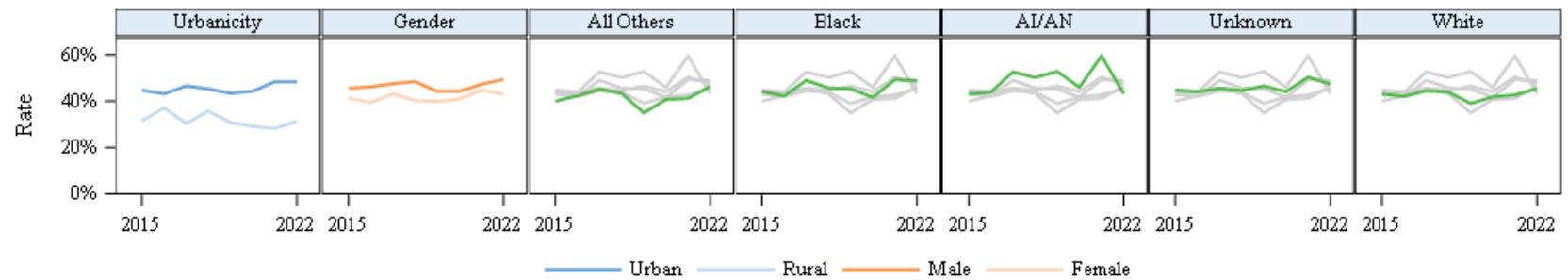
**Table A-164—RBHA Measure 1-5 (Opioid), Demographics**

RBHA Measure 1-5: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Opioid)



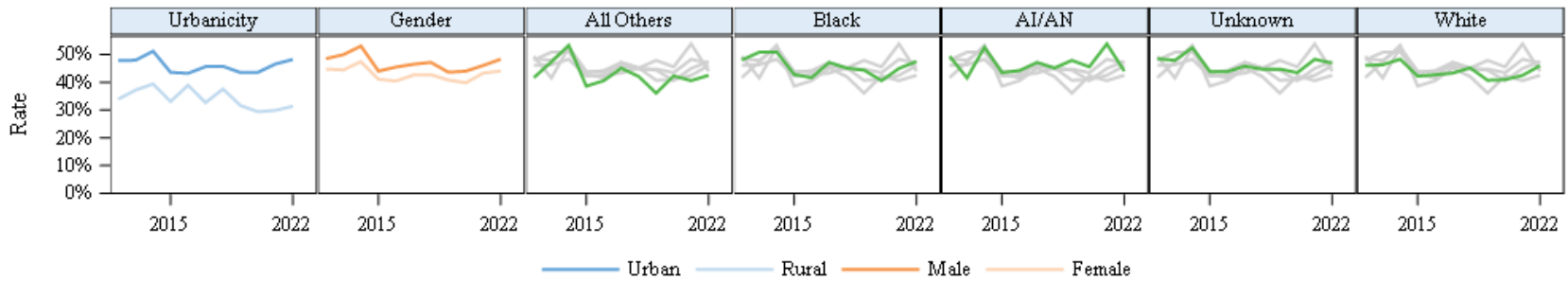
**Table A-165—RBHA Measure 1-5 (Other Drug), Demographics**

RBHA Measure 1-5: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Other Drug)



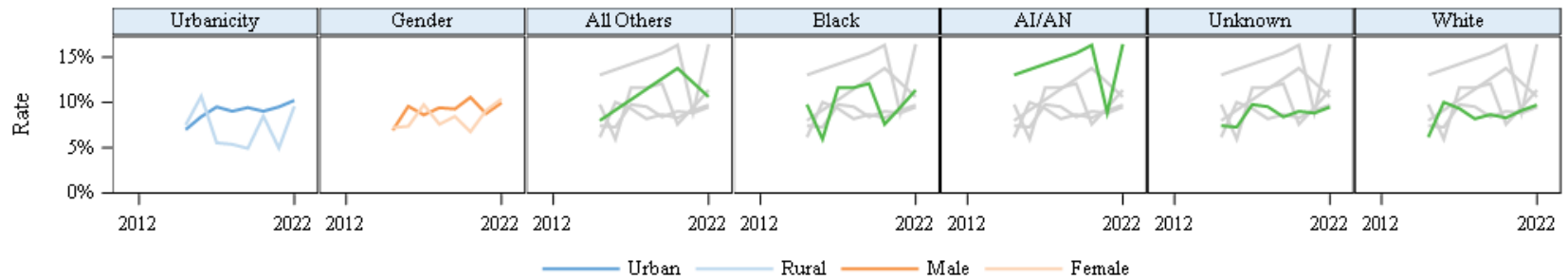
**Table A-166—RBHA Measure 1-5 (Total), Demographics**

**RBHA Measure 1-5: Percentage of beneficiaries who had initiation of alcohol and other drug abuse or dependence treatment (Total)**



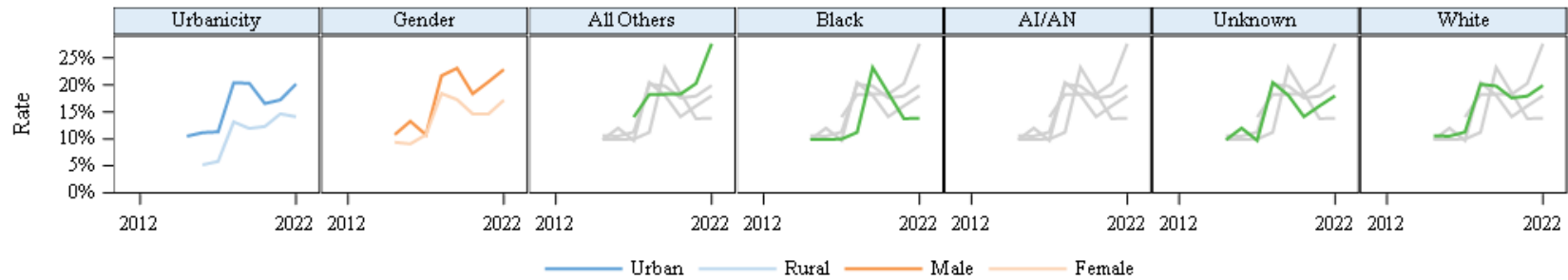
**Table A-167—RBHA Measure 1-6 (Alcohol), Demographics**

**RBHA Measure 1-6: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Alcohol)**



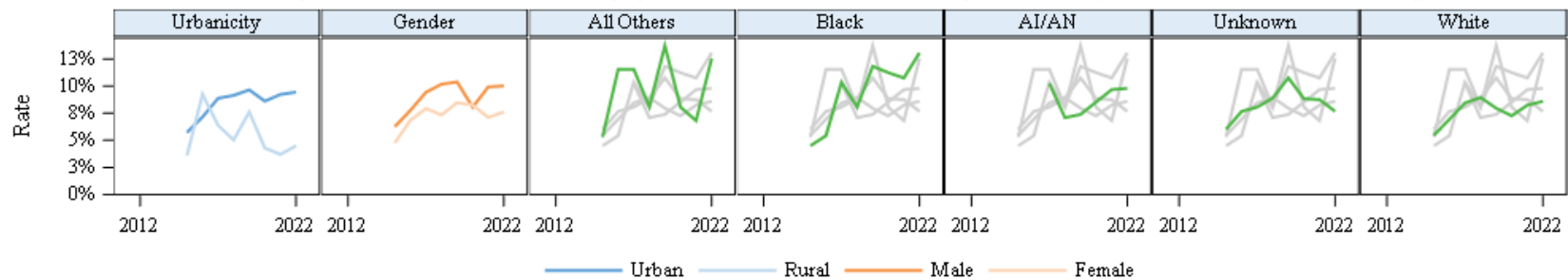
**Table A-168—RBHA Measure 1-6 (Opioid), Demographics**

**RBHA Measure 1-6: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Opioid)**



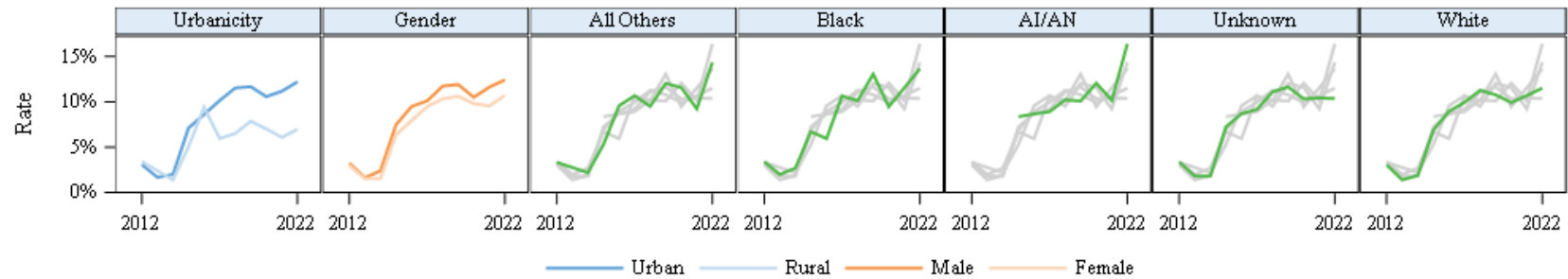
**Table A-169—RBHA Measure 1-6 (Other Drug), Demographics**

**RBHA Measure 1-6: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Other Drug)**



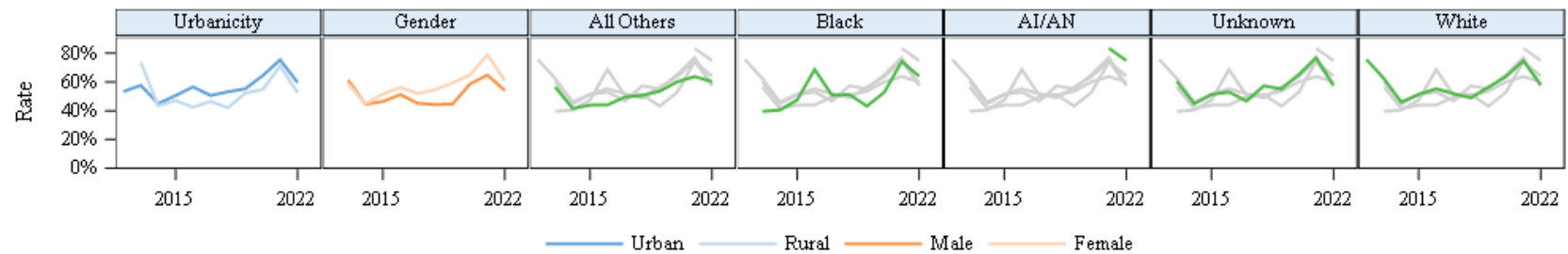
**Table A-170—RBHA Measure 1-6 (Total), Demographics**

**RBHA Measure 1-6: Percentage of beneficiaries who had engagement of alcohol and other drug abuse or dependence treatment (Total)**



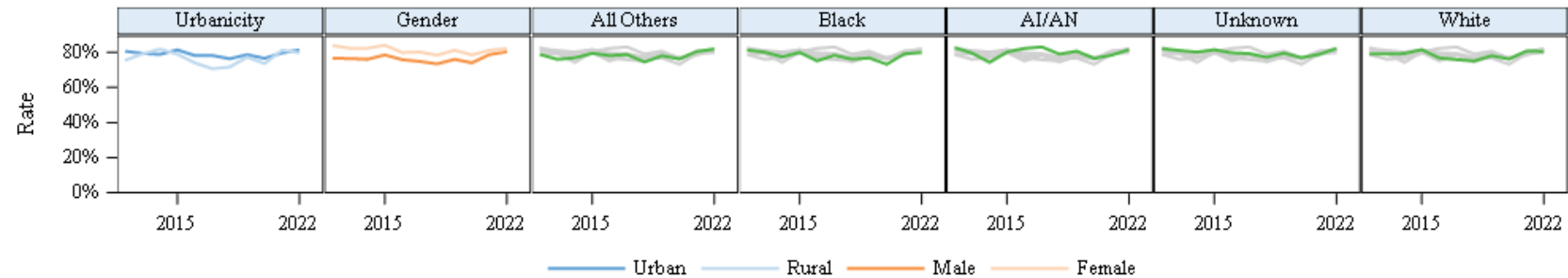
**Table A-171—RBHA Measure 2-2, Demographics**

**RBHA Measure 2-2: Percentage of beneficiaries with persistent Asthma who had a ratio of controller medications to total Asthma medications of at least 50 percent**



**Table A-172—RBHA Measure 2-3, Demographics**

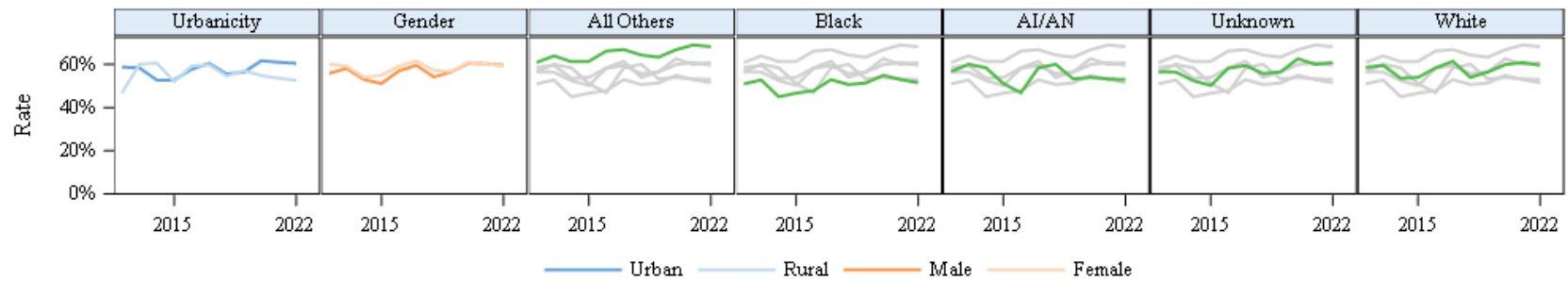
**RBHA Measure 2-3: Percentage of beneficiaries with schizophrenia or bipolar disorder using antipsychotic medications who had a diabetes screening test**





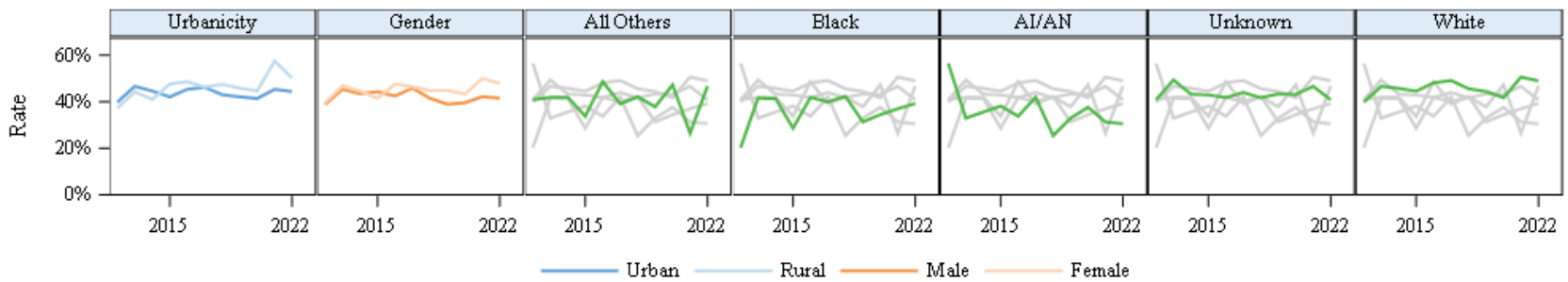
**Table A-173—RBHA Measure 2-4, Demographics**

**RBHA Measure 2-4: Percentage of beneficiaries with schizophrenia who adhered to antipsychotic medications**



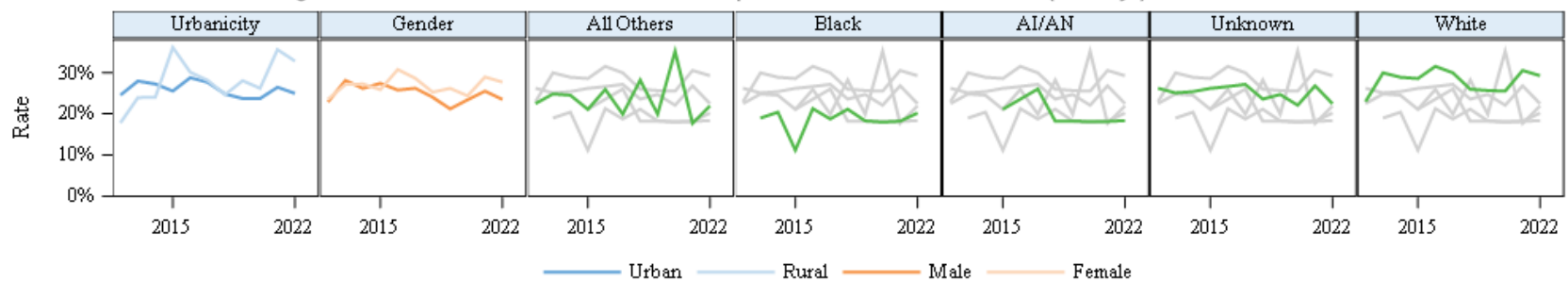
**Table A-174—RBHA Measure 2-5 (84 Days), Demographics**

**RBHA Measure 2-5: Percentage of beneficiaries who remained on antidepressant medication treatment (84 days)**



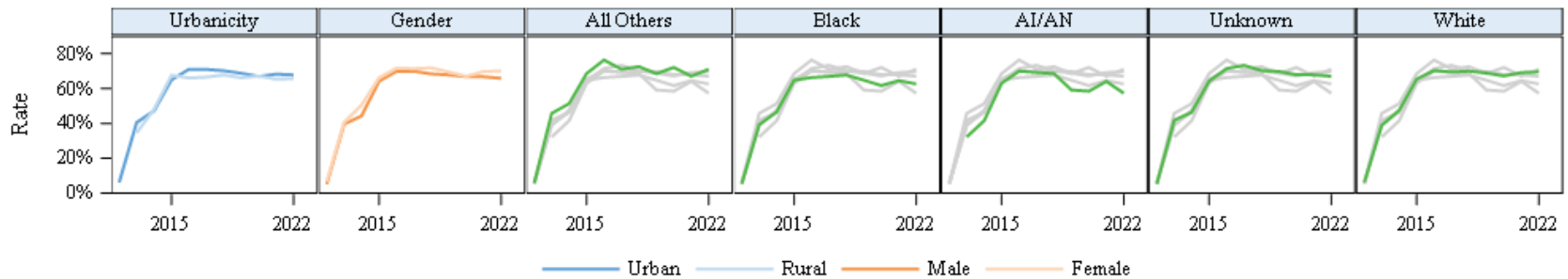
**Table A-175—RBHA Measure 2-5 (180 Days), Demographics**

**RBHA Measure 2-5: Percentage of beneficiaries who remained on antidepressant medication treatment (180 days)**



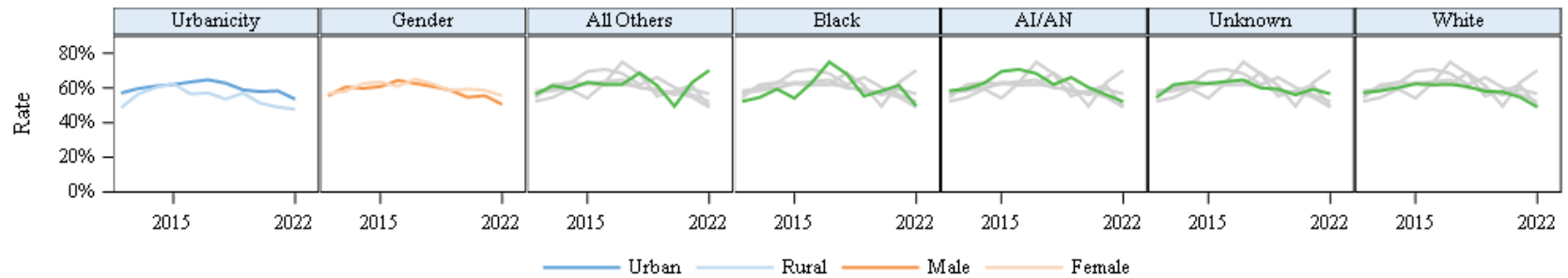
**Table A-176—RBHA Measure 2-6, Demographics**

**RBHA Measure 2-6: Percentage of beneficiaries with a follow-up visit within 7-days after hospitalization for mental illness**



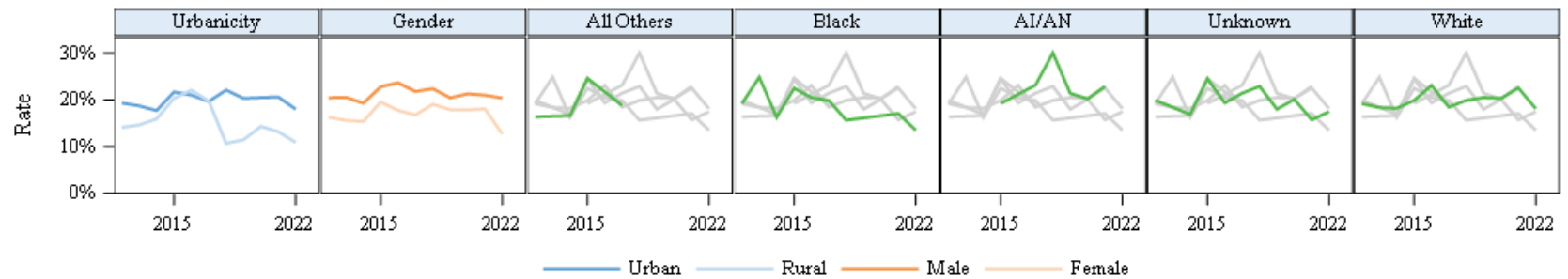
**Table A-177—RBHA Measure 2-7, Demographics**

**RBHA Measure 2-7: Percentage of beneficiaries with a follow-up visit within 7-days after emergency department (ED) visit for mental illness**



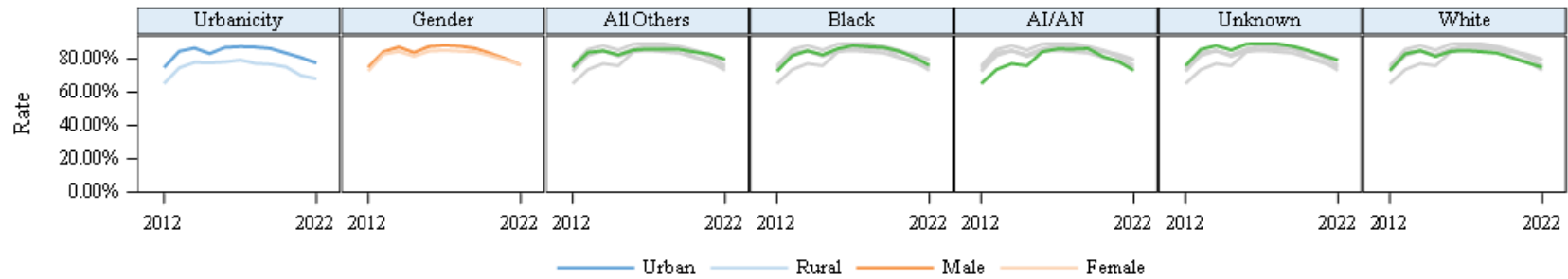
**Table A-178—RBHA Measure 2-8, Demographics**

**RBHA Measure 2-8: Percentage of beneficiaries with a follow-up visit within 7-days after ED visit for alcohol and other drug abuse or dependence**



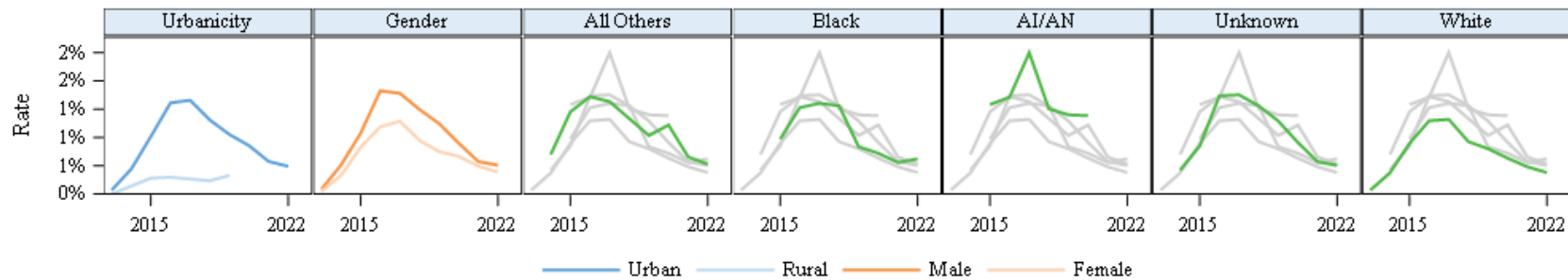
**Table A-179—RBHA Measure 2-10 (Any), Demographics**

RBHA Measure 2-10: Percentage of beneficiaries receiving mental health services (Any)



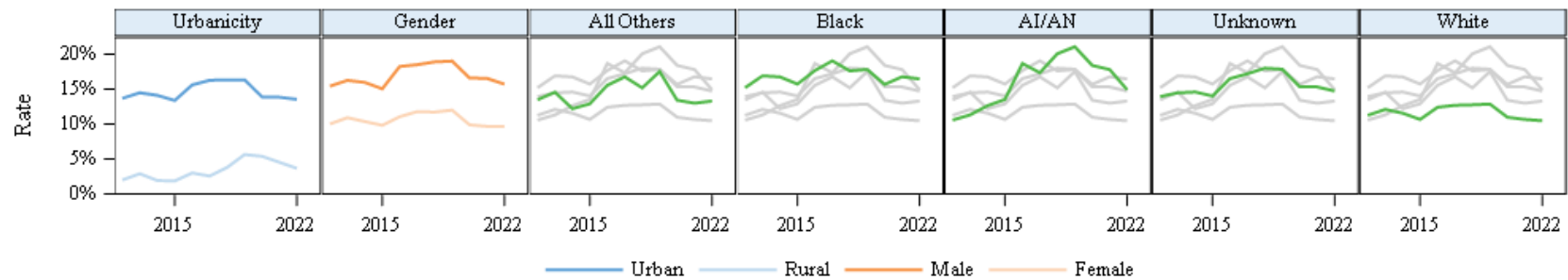
**Table A-180—RBHA Measure 2-10 (ED), Demographics**

RBHA Measure 2-10: Percentage of beneficiaries receiving mental health services (ED)



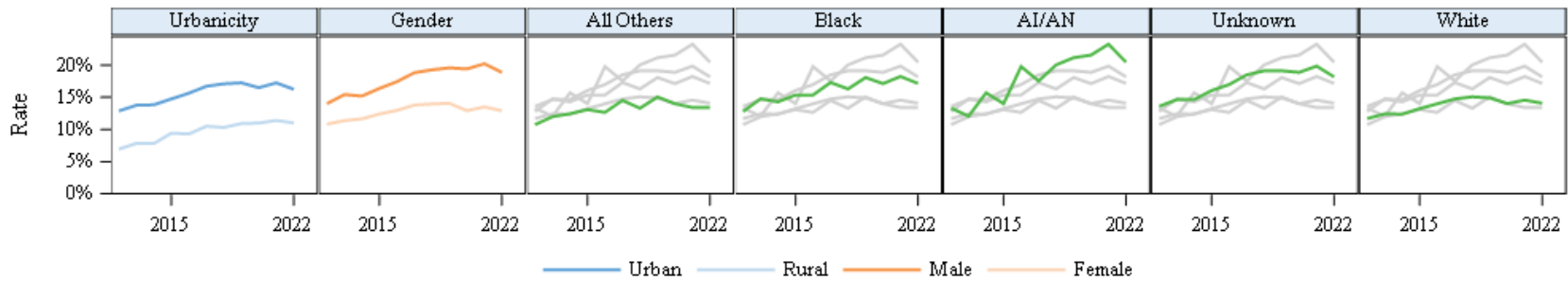
**Table A-181—RBHA Measure 2-10 (Intensive Outpatient or Partial Hospitalization), Demographics**

RBHA Measure 2-10: Percentage of beneficiaries receiving mental health services (Intensive outpatient or partial hospitalization)



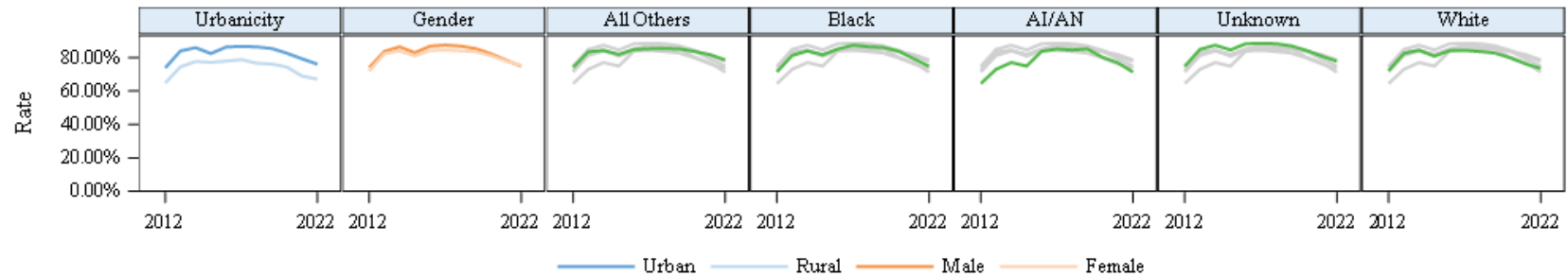
**Table A-182—RBHA Measure 2-10 (Inpatient), Demographics**

RBHA Measure 2-10: Percentage of beneficiaries receiving mental health services (Inpatient)



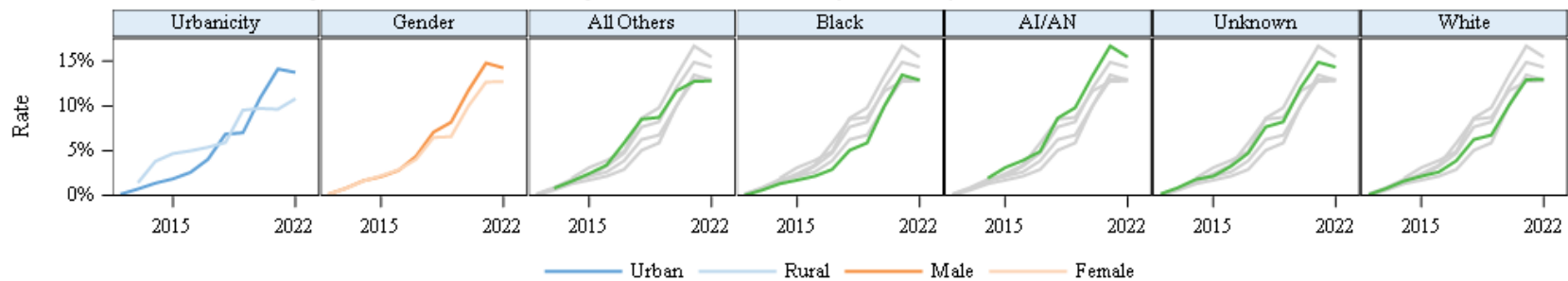
**Table A-183—RBHA Measure 2-10 (Outpatient), Demographics**

RBHA Measure 2-10: Percentage of beneficiaries receiving mental health services (Outpatient)



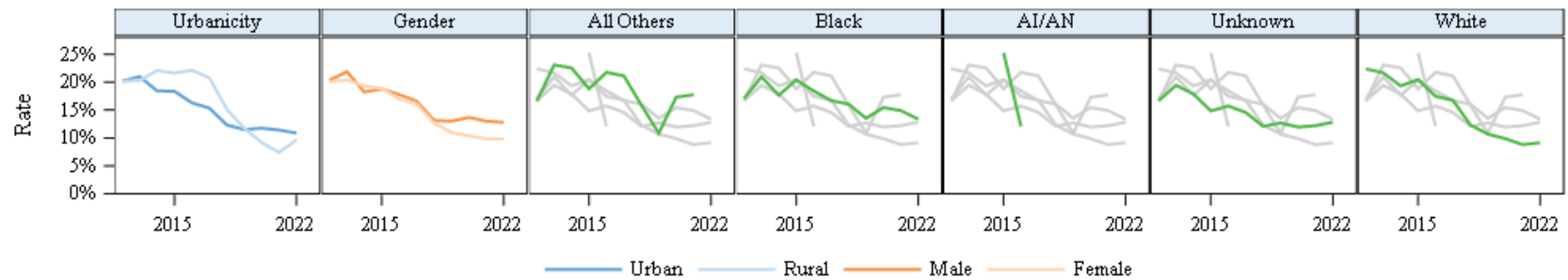
**Table A-184—RBHA Measure 2-10 (Telehealth), Demographics**

RBHA Measure 2-10: Percentage of beneficiaries receiving mental health services (Telehealth)



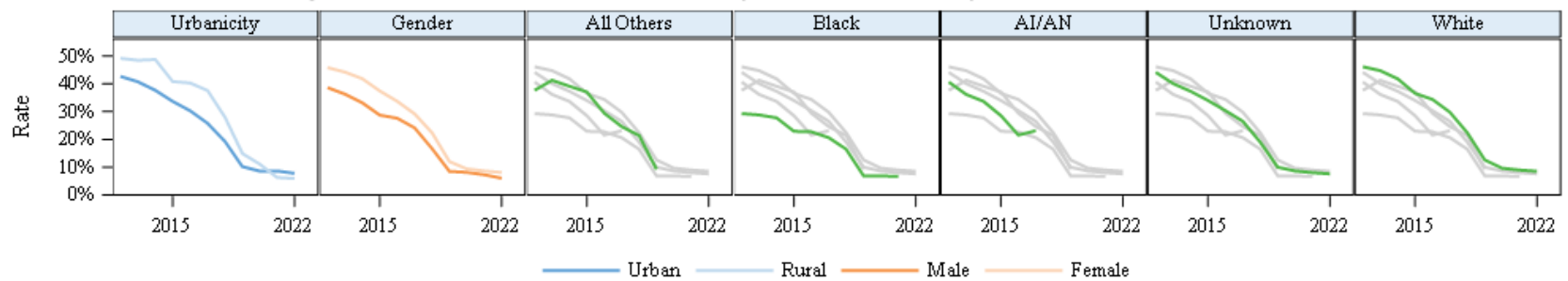
**Table A-185—RBHA Measure 2-11, Demographics**

**RBHA Measure 2-11: Percentage of beneficiaries who have prescriptions for opioids at a high dosage**



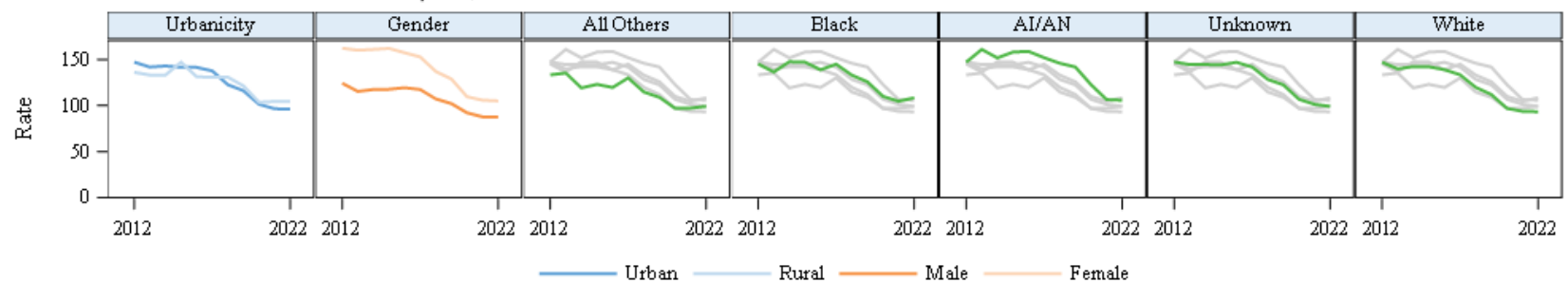
**Table A-186—RBHA Measure 2-12, Demographics**

**RBHA Measure 2-12: Percentage of beneficiaries with concurrent use of opioids and benzodiazepines**



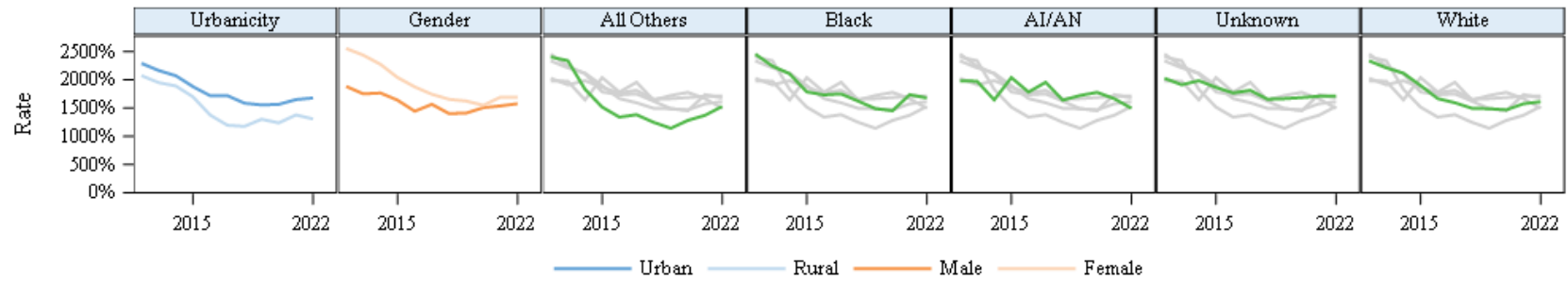
**Table A-187—RBHA Measure 2-14, Demographics**

**RBHA Measure 2-14: Number of ED visits per 1,000 member months**



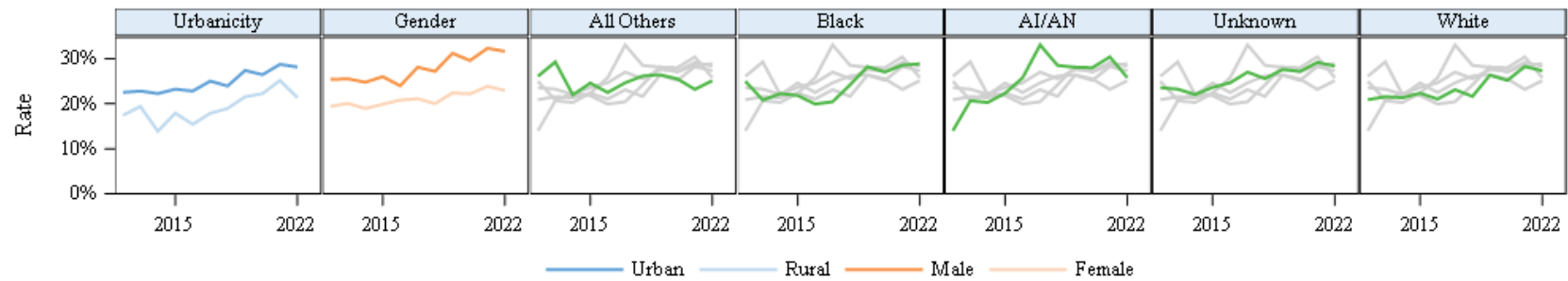
**Table A-188—RBHA Measure 2-15, Demographics**

**RBHA Measure 2-15: Number of inpatient stays per 1,000 member months**



**Table A-189—RBHA Measure 2-16, Demographics**

**RBHA Measure 2-16: Percentage of inpatient discharges with an unplanned readmission within 30 days**



## Appendix B. ALTCS NCI Supplemental Tables

Table B-1 through Table B-6 provide further details on Research Questions 1.3, 3.1, 3.2, and 3.3 regarding the Arizona Long Term Care System–developmentally disabled (ALTCS–DD) population. The data sources are the 2015–2016 Adult Consumer Survey (ACS) and the 2017–2018 In-Person Survey (IPS) administered for the National Core Indicators (NCI) project. The 2015–2016 survey represents the baseline period measurement, and the 2017–2018 survey represents the evaluation period measurement. Stratified rates were unavailable following the 2017–2018 survey. Using a tool provided by NCI, it was possible to stratify each measure by six beneficiary characteristics that may be related to outcomes:

- **Age** (18–22, 23–34, 35–54, 55–74, 75 and above)
- **Sex** (Male, Female)
- **Race/Ethnicity** (American Indian/Alaska Native, *Asian*, Black, or African American, *Pacific Islander*, White, Hispanic/Latino, *Other Race Not Listed*, *Two or More Races*, *Don't Know*)
- **Type of Residence** (*Intermediate Care Facility for Individuals with Intellectual Disability [ICF/ID]*, *nursing home or other institutional setting*; Group residential setting [group home]; Own home or apartment; Parent or relative's home; Foster care/host home)
- **Level of ID** (Mild ID, Moderate ID, Severe ID, *Profound ID*, diagnosed but unspecified level, *ID diagnosis status unknown*, No ID diagnosis)
- **Preferred Means of Communication** (Spoken, Gestures/body language, *Sign language/finger spelling*, *Communication aid/device*, *Other*)

Rates for italicized categories did not meet minimum data quality standards and are not shown in the tables below.

The tables below show changes in rates between the baseline period and the evaluation period for each DD adult population subgroup for each measure. Statistical tests were conducted and results were examined to determine whether the outcomes moved in the desired direction (improved), moved opposite the desired direction (worsened), or did not exhibit a statistically significant change.<sup>B-1</sup>

### **Research Question 1.3: Do adult beneficiaries with DD have the same or improved rates of access to care as a result of the integration of care for beneficiaries with DD?**

Table B-1 through Table B-3 presents stratified rates and changes over time for Measures 1-4 through 1-8 from Research Question 1.3 regarding access to care. There were few statistically significant changes, but where there were changes, almost all indicated improved access to care. Notable findings include:

- Between the baseline and evaluation periods, several survey respondent subgroups experienced statistically significant improvements in the percentage having had a physical exam in the past year, including:
  - Those in the 18–22 age range, with a 15-percentage point increase to 83 percent.
  - Female respondents, with an 8-percentage point increase to 89 percent.

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<sup>B-1</sup> Statistical significance was determined based on the traditional confidence level of 95 percent.



- Black or African American respondents, with a 31-percentage point increase to 88 percent.
- Hispanic/Latino respondents, with a 12-percentage point increase to 87 percent.
- Those living in a parent or relative’s home, with a 9-percentage point increase to 85 percent.
- Those who prefer spoken communication, with a 6-percentage point increase to 86 percent.
- Between the baseline and evaluation periods, two survey respondent subgroups experienced statistically significant improvements in the percentage having had a dental exam in the past year, including:
  - Hispanic/Latino respondents, with a 26-percentage point increase to 77 percent.
  - Those with severe ID, with a 32-percentage point increase to 80 percent.
- Between the baseline and evaluation periods, one survey respondent subgroup experienced statistically significant worsening in the percentage having received a flu vaccination in the past year:
  - Those in the 23–34 age range, with a 14-percentage point decrease to 66 percent.

**Table B-1—Research Question 1.3**

Respondent Characteristics	Measure 1-4: Has a primary care doctor or practitioner			Measure 1-5: Had a complete physical exam in the past year		
	Baseline	Evaluation	Pre-Post	Baseline	Evaluation	Pre-Post
<b>Age</b>						
18–22	98%	98%	0% (1.000)	68%	83%	15% (0.037)
23–34	99%	98%	-1% (0.423)	83%	88%	5% (0.203)
35–54	95%	96%	1% (0.695)	81%	86%	5% (0.305)
55–74	95%	97%	2% (0.573)	90%	89%	-1% (0.866)
<b>Sex</b>						
Male	98%	96%	-2% (0.165)	81%	85%	4% (0.243)
Female	97%	99%	2% (0.159)	81%	89%	8% (0.042)
<b>Race/Ethnicity</b>						
American Indian or Alaska Native	100%	92%	-8% (0.166)	-	83%	-
Black or African American	100%	100%	0% (1.000)	57%	88%	31% (0.017)
White	97%	97%	0% (1.000)	84%	87%	3% (0.346)
Hispanic/Latino	96%	98%	2% (0.386)	75%	87%	12% (0.038)
<b>Type of Residence</b>						
Group residential setting	98%	96%	-2% (0.408)	89%	91%	2% (0.642)
Own home or apartment	93%	100%	7% (0.088)	85%	79%	-6% (0.523)
Parent or relative's home	98%	97%	-1% (0.450)	76%	85%	9% (0.014)
Foster care/host home	97%	97%	0% (1.000)	85%	97%	12% (0.081)
<b>Level of ID</b>						
Mild ID	98%	97%	-1% (0.602)	79%	87%	8% (0.107)
Moderate ID	96%	97%	1% (0.613)	82%	85%	3% (0.491)
Severe ID	98%	94%	-4% (0.331)	79%	92%	13% (0.078)
Diagnosed but unspecified level	100%	100%	0% (1.000)	-	85%	-
No ID diagnosis	96%	100%	4% (0.103)	77%	88%	11% (0.130)
<b>Preferred Means of Communication</b>						
Spoken	97%	97%	0% (1.000)	80%	86%	6% (0.048)
Gestures/body language	97%	99%	2% (0.377)	79%	88%	9% (0.159)

"-" indicates the cell did not meet minimum data quality requirements for reporting.

Source: National Core Indicators (NCI), 2015–2016 Adult Consumer Arizona Survey and 2017-2018 In-Person Arizona Survey.

Notes: N = 476 for 2015-2016 and total N = 493 for 2017-2018. Sample size varies across measures and between different types of respondent characteristics. Categories with no cells meeting minimum data quality requirements were omitted from the table. For further information see the NCI website at <https://www.nationalcoreindicators.org/survey-reports/>.

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

**Table B-2—Research Question 1.3 (Continued)**

Respondent Characteristics	Measure 1-6: Had a dental exam in the past year			Measure 1-7: Had an eye exam in the past year		
	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>
<b>Age</b>						
18–22	79%	88%	9% (0.178)	63%	70%	7% (0.451)
23–34	73%	81%	8% (0.113)	58%	58%	0% (1.000)
35–54	74%	81%	7% (0.233)	58%	55%	-3% (0.699)
55–74	77%	75%	-2% (0.815)	72%	67%	-5% (0.615)
<b>Sex</b>						
Male	76%	80%	4% (0.327)	63%	60%	-3% (0.575)
Female	74%	82%	8% (0.097)	57%	60%	3% (0.646)
<b>Race/Ethnicity</b>						
American Indian or Alaska Native	-	83%	-	-	-	-
Black or African American	68%	75%	7% (0.599)	-	57%	-
White	82%	83%	1% (0.785)	64%	61%	-3% (0.562)
Hispanic/Latino	51%	77%	26% (0.001)	57%	56%	-1% (0.911)
<b>Type of Residence</b>						
Group residential setting	74%	82%	8% (0.193)	72%	63%	-9% (0.249)
Own home or apartment	75%	68%	-7% (0.570)	73%	71%	-2% (0.873)
Parent or relative's home	72%	80%	8% (0.064)	52%	56%	4% (0.490)
Foster care/host home	90%	86%	-4% (0.619)	67%	70%	3% (0.809)
<b>Level of ID</b>						
Mild ID	75%	84%	9% (0.113)	65%	65%	0% (1.000)
Moderate ID	82%	80%	-2% (0.683)	64%	61%	-3% (0.659)
Severe ID	48%	80%	32% (0.004)	-	50%	-
Diagnosed but unspecified level	-	74%	-	-	57%	-
No ID diagnosis	79%	79%	0% (1.000)	60%	62%	2% (0.852)
<b>Preferred Means of Communication</b>						
Spoken	76%	82%	6% (0.084)	62%	58%	-4% (0.388)
Gestures/body language	64%	76%	12% (0.180)	52%	65%	13% (0.271)

"-" indicates the cell did not meet minimum data quality requirements for reporting.

Source: National Core Indicators (NCI), 2015–2016 Adult Consumer Arizona Survey and 2017-2018 In-Person Arizona Survey.

Notes: N = 476 for 2015-2016 and total N = 493 for 2017-2018. Sample size varies across measures and between different types of respondent characteristics. Categories with no cells meeting minimum data quality requirements were omitted from the table. For further information see the NCI website at <https://www.nationalcoreindicators.org/survey-reports/>.

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

**Table B-3—Research Question 1.3 (Continued)**

Respondent Characteristics	Measure 1-8: Had a flu vaccine in the past year		
	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>
<b>Age</b>			
18–22	71%	74%	3% (0.788)
23–34	80%	66%	-14% (0.046)
35–54	77%	76%	-1% (0.901)
55–74	93%	88%	-5% (0.474)
<b>Sex</b>			
Male	78%	70%	-8% (0.163)
Female	83%	79%	-4% (0.504)
<b>Race/Ethnicity</b>			
American Indian or Alaska Native	-	-	-
Black or African American	-	-	-
White	77%	73%	-4% (0.458)
Hispanic/Latino	80%	75%	-5% (0.590)
<b>Type of Residence</b>			
Group residential setting	85%	86%	1% (0.879)
Own home or apartment	-	71%	-
Parent or relative's home	73%	66%	-7% (0.265)
Foster care/host home	-	89%	-
<b>Level of ID</b>			
Mild ID	80%	74%	-6% (0.443)
Moderate ID	86%	75%	-11% (0.094)
Severe ID	-	84%	-
Diagnosed but unspecified level	-	-	-
No ID diagnosis	70%	68%	-2% (0.873)
<b>Preferred Means of Communication</b>			
Spoken	82%	75%	-7% (0.132)
Gestures/body language	71%	72%	1% (0.931)

“-” indicates the cell did not meet minimum data quality requirements for reporting.

Source: National Core Indicators (NCI), 2015–2016 Adult Consumer Arizona Survey and 2017-2018 In-Person Arizona Survey.

Notes: N = 476 for 2015-2016 and total N = 493 for 2017-2018. Sample size varies across measures and between different types of respondent characteristics. Categories with no cells meeting minimum data quality requirements were omitted from the table. For further information see the NCI website at <https://www.nationalcoreindicators.org/survey-reports/>.

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

***Research Question 3.1: Do beneficiaries have the same or higher rates of living in their own home as a result of the ALTCS waiver renewal?***

Table B-4 presents stratified rates and changes over time for Measure 3-2 from Research Question 3.1. For this measure, the proportion of beneficiaries living in their own home is disaggregated into those living in their own home or apartment and those living in the home of a parent or other relative. Notable findings include:

- Between the baseline and evaluation periods, just one survey respondent subgroup experienced statistically significant changes in the percentage living in their own home:
  - The percentage of males living in a parent or relative’s home decreased by 8 percentage points to 58 percent.
  - The combined percentage of males living in their own home or apartment or living in a parent or relative’s home decreased by 9 percentage points to 66 percent.

**Table B-4—Research Question 3.1**

Respondent Characteristics	Measure 3-2: Type of Residence (Own home or apartment)			Measure 3-2: Type of Residence (Parent or relative's home)			Measure 3-2: Type of Residence (Combined)		
	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>
<b>Age</b>									
18–22	6%	**	**	82%	85%	3% (0.590)	88%	87%	-1% (0.840)
23–34	8%	8%	0% (1.000)	68%	67%	-1% (0.834)	76%	75%	-1% (0.819)
35–54	10%	9%	-1% (0.778)	53%	48%	-5% (0.410)	63%	57%	-6% (0.313)
55–74	19%	19%	0% (1.000)	24%	11%	-13% (0.059)	43%	30%	-13% (0.137)
<b>Sex</b>									
Male	9%	8%	-1% (0.668)	66%	58%	-8% (0.049)	75%	66%	-9% (0.018)
Female	12%	10%	-2% (0.528)	53%	56%	3% (0.553)	65%	66%	1% (0.836)
<b>Race/Ethnicity</b>									
American Indian or Alaska Native	4%	4%	0% (1.000)	43%	48%	5% (0.724)	47%	52%	5% (0.725)
Black or African American	7%	8%	1% (0.888)	57%	48%	-9% (0.506)	64%	56%	-8% (0.546)
White	11%	10%	-1% (0.694)	57%	54%	-3% (0.466)	68%	64%	-4% (0.308)
Hispanic/Latino	10%	8%	-2% (0.604)	75%	67%	-8% (0.198)	85%	75%	-10% (0.070)
<b>Level of ID</b>									
Mild ID	14%	15%	1% (0.815)	58%	49%	-9% (0.138)	72%	64%	-8% (0.158)
Moderate ID	4%	7%	3% (0.225)	63%	62%	-1% (0.847)	67%	69%	2% (0.689)
Severe ID	0%	**	**	64%	55%	-9% (0.363)	64%	57%	-7% (0.477)
Diagnosed but unspecified level	17%	4%	-13% (0.126)	61%	48%	-13% (0.358)	78%	52%	-26% (0.056)
No ID diagnosis	15%	11%	-4% (0.490)	63%	65%	2% (0.808)	78%	76%	-2% (0.782)
<b>Preferred Means of Communication</b>									
Spoken	11%	11%	0% (1.000)	59%	55%	-4% (0.277)	70%	66%	-4% (0.249)
Gestures/body language	3%	**	**	62%	61%	-1% (0.901)	65%	62%	-3% (0.706)

“–” indicates the cell did not meet minimum data quality requirements for reporting.

Source: National Core Indicators (NCI), 2015–2016 Adult Consumer Arizona Survey and 2017-2018 In-Person Arizona Survey.

Notes: N = 476 for 2015-2016 and total N = 493 for 2017-2018. Sample size varies across measures and between different types of respondent characteristics. Categories with no cells meeting minimum data quality requirements were omitted from the table. Additional suppression applied to ensure anonymity is indicated with “\*\*\*”. For further information see the NCI website at <https://www.nationalcoreindicators.org/survey-reports/>.

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model

***Research Question 3.2: Do adult beneficiaries have the same or higher rates of feeling satisfied with their living arrangements as a result of the integration of care for beneficiaries with DD?***

Table B-5 presents stratified rates and changes over time for Measures 3-3 and 3-4 from Research Question 3.2; notable findings include:

- Between the baseline and evaluation periods, there were no statistically significant changes in the percentage of surveyed DD adults who wanted to live somewhere else.
- Between the baseline and evaluation periods, six survey respondent subgroups showed statistically significant decreases in the percentage who agreed that services and supports help the person live a good life, including:
  - Respondents aged 55–74, with a 17-percentage point decline, to 81 percent.
  - Female respondents, with a 5-percentage point decline to 93 percent.
  - White respondents, with a 4-percentage point decline to 93 percent.
  - Hispanic/Latino respondents, with a 10-percentage point decline to 89 percent.
  - Those living in a parent or relative’s home, with a 5-percentage point decline to 93 percent.
  - Those who prefer spoken communication, with a 5-percentage point decline to 92 percent.



**Table B-5—Research Question 3.2**

Respondent Characteristics	Measure 3-3: Wants to live somewhere else			Measure 3-4: Services and supports help the person live a good life		
	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>
<b>Age</b>						
18–22	12%	17%	5% (0.400)	98%	93%	-5% (0.129)
23–34	13%	12%	-1% (0.795)	96%	94%	-2% (0.425)
35–54	11%	10%	-1% (0.818)	97%	94%	-3% (0.298)
55–74	23%	15%	-8% (0.348)	98%	81%	-17% (0.008)
<b>Sex</b>						
Male	13%	12%	-1% (0.758)	96%	92%	-4% (0.077)
Female	14%	13%	-1% (0.799)	98%	93%	-5% (0.034)
<b>Race/Ethnicity</b>						
Black or African American	4%	-	-	100%	-	-
White	15%	13%	-2% (0.541)	97%	93%	-4% (0.045)
Hispanic/Latino	12%	13%	1% (0.849)	99%	89%	-10% (0.007)
<b>Type of Residence</b>						
Group residential setting	21%	19%	-2% (0.756)	95%	92%	-3% (0.450)
Own home or apartment	20%	17%	-3% (0.732)	93%	89%	-4% (0.538)
Parent or relative's home	10%	11%	1% (0.738)	98%	93%	-5% (0.009)
Foster care/host home	6%	4%	-2% (0.735)	100%	100%	0% (1.000)
<b>Level of ID</b>						
Mild ID	13%	14%	1% (0.818)	96%	91%	-5% (0.104)
Moderate ID	12%	11%	-1% (0.799)	98%	93%	-5% (0.051)
Severe ID	11%	-	-	97%	-	-
No ID diagnosis	14%	12%	-2% (0.764)	97%	93%	-4% (0.329)
<b>Preferred Means of Communication</b>						
Spoken	14%	14%	0% (1.000)	97%	92%	-5% (0.006)
Gestures/body language	12%	7%	-5% (0.499)	98%	96%	-2% (0.622)

“-” indicates the cell did not meet minimum data quality requirements for reporting.

Source: National Core Indicators (NCI), 2015–2016 Adult Consumer Arizona Survey and 2017-2018 In-Person Arizona Survey.

Notes: N = 476 for 2015-2016 and total N = 493 for 2017-2018. Sample size varies across measures and between different types of respondent characteristics. Categories with no cells meeting minimum data quality requirements were omitted from the table. For further information see the NCI website at <https://www.nationalcoreindicators.org/survey-reports/>.

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

**Research Question 3.3: Do adult beneficiaries have the same or higher rates of feeling engaged as a result of the integration of care for beneficiaries with DD?**

Table B-6 presents stratified rates and changes over time for Measure 3-5 and 3-6 from Research Question 3.3. NCI no longer provides stratified rates for Measure 3-7, so that measure is not reported here. Notable findings include:

- Between the baseline and evaluation periods, nine survey respondent subgroups showed statistically significant decreases in the percentage who agreed that they are able to go out and do the things they like in the community, including:
  - DD survey respondents aged 18–22 and 35–54; the former registered a 9-percentage point decline to 88 percent, while the latter saw a decline of 15 percentage points to 76 percent.
  - Male and female survey respondents; the former registered a decline of 6 percentage points to 86 percent, while the latter saw a decline of 13 percentage points to 82 percent.
  - White survey respondents, with a 6-percentage point decline to 86 percent.
  - Those living in a parent or relative’s home, with a 10-percentage point decline to 86 percent.
  - Those with a Mild or Moderate level of ID; the former registered a decline of 9 percentage points to 84 percent, while the latter saw a decline of 10 percentage points to 85 percent.
  - Those who prefer spoken communication, with an 8-percentage point decline to 85 percent.
- Between the baseline and evaluation periods, two survey respondent subgroups showed statistically significant decreases in the percentage who reported having friends who were not staff or family members, including:
  - DD survey respondents aged 35–54, with a 19-percentage point decline to 47 percent.
  - Those who prefer communicating with gestures or body language, with a 31 percent decline to 26 percent.

**Table B-6—Research Question 3.3**

Respondent Characteristics	Measure 3-5: Able to go out and do the things s/he like to do in the community			Measure 3-6: Has friends who are not staff or family members		
	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>	2015-2016	2017-2018	Pre/Post Change in Rate <sup>1</sup>
<b>Age</b>						
18–22	97%	88%	-9% (0.035)	77%	70%	-7% (0.343)
23–34	93%	88%	-5% (0.139)	63%	69%	6% (0.271)
35–54	91%	76%	-15% (0.004)	66%	47%	-19% (0.006)
55–74	92%	83%	-9% (0.209)	60%	53%	-7% (0.523)
<b>Sex</b>						
Male	92%	86%	-6% (0.048)	64%	59%	-5% (0.291)
Female	95%	82%	-13% (0.000)	70%	64%	-6% (0.264)
<b>Race/Ethnicity</b>						
American Indian or Alaska Native	-	76%	-	-	62%	-
Black or African American	100%	-	-	75%	-	-
White	92%	86%	-6% (0.040)	66%	66%	0% (1.000)
Hispanic/Latino	94%	85%	-9% (0.071)	64%	53%	-11% (0.160)
<b>Type of Residence</b>						
Group residential setting	87%	82%	-5% (0.395)	67%	53%	-14% (0.075)
Own home or apartment	93%	83%	-10% (0.168)	67%	73%	6% (0.562)
Parent or relative's home	96%	86%	-10% (0.000)	68%	65%	-3% (0.511)
Foster care/host home	90%	79%	-11% (0.255)	61%	56%	-5% (0.706)
<b>Level of ID</b>						
Mild ID	93%	84%	-9% (0.025)	67%	66%	-1% (0.868)
Moderate ID	95%	85%	-10% (0.007)	69%	59%	-10% (0.087)
Severe ID	100%	-	-	65%	-	-
Diagnosed but unspecified level	-	-	-	-	-	-
No ID diagnosis	88%	91%	3% (0.622)	68%	74%	6% (0.503)
<b>Preferred Means of Communication</b>						
Spoken	93%	85%	-8% (0.002)	68%	66%	-2% (0.600)
Gestures/body language	98%	-	-	57%	26%	-31% (0.012)

“-” indicates the cell did not meet minimum data quality requirements for reporting.

Source: National Core Indicators (NCI), 2015–2016 Adult Consumer Arizona Survey and 2017-2018 In-Person Arizona Survey.

Notes: N = 476 for 2015-2016 and total N = 493 for 2017-2018. Sample size varies across measures and between different types of respondent characteristics. Categories with no cells meeting minimum data quality requirements were omitted from the table. For further information see the NCI website at <https://www.nationalcoreindicators.org/survey-reports/>.

<sup>1</sup>Change in Rate compares the average rate in the evaluation period to the baseline period using a pre/post model.

## Appendix C. Supplemental Qualitative Results

Health Services Advisory Group, Inc. (HSAG) conducted semi-structured interviews with providers, administrators, and health plans to collect qualitative information regarding Arizona’s Section 1115 Waiver Demonstration (the Waiver) in fall 2020 through summer 2021. The interviews focused on understanding impacts of physical health (PH) and behavioral health (BH) integration, successes and challenges integrating care and maintaining the Waiver, and impacts on quality of and access to care. The interviews also examined how the unexpected burden of responding to the coronavirus disease 2019 (COVID-19) public health emergency (PHE) impacted the Waiver.

HSAG developed flexible interview protocols using an open-ended questions format to maximize the diversity and richness of responses and ensure a holistic understanding of the subject’s experience. To understand the evolving implementation of the Waiver, HSAG returned to many of the same informants in each round of interviews. The responses from the interviews are aggregated and summarized, organized according to the interview protocols.

### ACC

Hypothesis 1 was designed to identify activities conducted to further the Arizona Health Care Cost Containment System’s (AHCCCS’) goal of care integration by implementing strategies supporting care coordination and management.

Measures in Hypothesis 1 were evaluated through beneficiary surveys, provider focus groups, and key informant interviews with AHCCCS Complete Care (ACC) health plan staff, AHCCCS State administrator staff, and provider organizations. These methods allowed for an in-depth analysis detailing activities focused on care integration and any potential successes or barriers surrounding these activities.

The following sections contain descriptions of drivers of success, unintended consequences of the Demonstration, and ways in which the COVID-19 PHE impacted beneficiaries or the Demonstration. These results are followed by descriptive narrative of specific topics raised by health plan representatives regarding their care coordination strategies and by State administrators and health plans regarding encountered barriers, related or unrelated to ACC.

### Drivers of Success

The ACC program exhibited several key drivers of success that helped move the program toward its goals. Notably, AHCCCS had a long history of integrating PH and BH care in a step-by-step fashion

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*“Whatever you do, don’t deny beneficiaries care that they need. . . . [That clear direction by AHCCCS had] a profound and beneficial effect in making the transition go as well as it did.”*  
– Health Plan representative

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for its subpopulations, providing AHCCCS with substantive experience in managing large-scale program transitions. For example, State

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*“. . . we didn't have significant issues with the transition. Again, beneficiaries didn't go without care and services. There wasn't widespread confusion. . . . But it takes a lot of work for it to look like it's easy at the end.”* – State administrator

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administrators recognized the importance of gathering input from

a broad range of stakeholders and learning about their needs and issues. The AHCCCS team was flexible, teachable, and open to course corrections where necessary. AHCCCS' processes for managing change, as well as its generosity in sharing those processes with other agencies and health plans, were key factors to the successful roll out of the ACC program.

State agencies and health plans participated in this intensive readiness process and felt their long term and detailed collaboration was critical to the overall success of integration. State administrators clearly communicated that providers should prioritize beneficiaries' needs, driving the success of integration.

### **Unintended Consequences**

Prior to integration, State administrators understood and expected challenges; however, unexpected challenges arose. Primarily, State administrators and health plans commented on the decision to award ACC contracts to seven separate health plans. Contracting with seven health plans was a factor in a prolonged period of negotiation. Contract finalization took longer than expected and led to challenges for provider groups and health plans.

### **COVID-19 PHE**

While the totality of the impacts from the COVID-19 PHE were still emerging at the time of the interviews, major impacts on beneficiaries were clear. Key informants believed that the integrated ACC system managed the impacts of the PHE better than it would have prior to integration. Several key informants believed that telehealth flexibilities would have a lasting impact on care in Arizona and may improve access to care.

#### **Research Question 1.1: What care coordination strategies did the plans implement as a result of ACC?**

Health plans used several strategies for improving care coordination as they integrated PH and BH. Several health plan informants learned about the unique communities they would be serving through community outreach via public meetings, visits to providers, and listening sessions. Some health plans worked closely with other entities like first responders, the Arizona Department of Corrections, the State Ombudsman's office, or the Department of Health. Depending on the health plan's traditional focus (PH or BH), they worked to employ new practice models; for example, health plans introduced outpatient PH teams to assertive community treatment teams used by the Regional Behavioral Health Authorities (RBHAs) for beneficiaries with serious mental illness (SMI).

Informants commented on the importance of building relationships and improving communication between providers, given the history of bifurcation between the PH and BH provider communities. PH and BH providers received education on each other's services and processes. Some health plans encouraged cross-discipline communication between providers, including sharing contact information between organizations. Some health plans held regular integrated meetings with PH and BH providers, others facilitated physical integration by visiting practices and offering the ability to deliver services in other providers' offices. Although less frequent, health plans sought to contract with provider groups with fully integrated PH and BH offices.

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*“Some of the most effective things have been very simple, and the integrated care planning process, which provides [providers] with information about each other, and gives emails and contact information was vital.” – Health Plan Representative*

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During integration planning, health plans created a comprehensive list of all necessary implementation activities. Health plans were aware that providers used a variety of technology and information sharing platforms, and they collaborated with providers to accommodate legacy systems. Some health plans

clarified processes, standards for care and case management, and appropriate levels of contact with beneficiaries. They devised strategies to collaborate with providers' care management, clinical, and multi-disciplinary team beneficiaries that included rehabilitation specialists, peers, and family beneficiaries.

Once health plans formulated a comprehensive plan for integration, they educated providers about the new integrated systems. Health plans noted they had to be prepared for a wide range of different system configurations including different provider sizes, levels of integration, and collaborative needs with other providers or specialties. One health plan allowed each provider to determine the right level of integration for the provider's organization, which was a productive tactic. Some encouraged integrating information and communication through financial incentives such as value-based initiatives or arrangements. Others expanded their networks to include more integrated providers.

Health plans used several strategies to facilitate patient-centered care:

- Recognizing that each beneficiary is unique and has various levels of need, which change over time.
- Developing processes to create interdisciplinary teams, either within beneficiaries' health home or among disparate providers, to coordinate care targeted to the needs of the individual.
- Providing beneficiaries with the ability to choose which services they receive.
- Building awareness of the role of social determinants of health (SDOH) and providing resources.

***Research Question 1.2: Did the plans encounter barriers to implementing care coordination strategies?***

Key informants encountered several beneficiary-level barriers to care coordination. Informants experienced challenges properly identifying beneficiaries of vulnerable populations in a timely manner when there were no prior claims or formal BH diagnoses. Similarly, informants struggled to quickly identify beneficiaries located in out-of-home placements; health plans educated providers on the importance of maintaining up-to-date beneficiary address information. Communication regarding beneficiaries receiving BH services, such as treatment for substance use disorder (SUD), required complex consent requirements that slowed or impaired information sharing. Accordingly, informants developed procedures for obtaining and documenting beneficiary consent to share information among providers. In addition, some populations or cultures were less likely to allow open access to BH records or engage with the health plans' care management services.

Other barriers cited by providers included:

- Some providers were resistant to change and not interested in integrating care.
- Providers required education for all staff at their organizations, including education about:
  - How certain processes would change because of the Demonstration, particularly regarding the need for increased coordination/collaboration with the health plans.
  - Providers' roles in the continuum of care and how to coordinate transitions to other providers.
- Providers worked with multiple health plans, each with its own processes and criteria for medical management, prior authorizations, concurrent review, or inpatient utilization.
- BH providers experienced financial pressures as funding transitioned away from block grant funding to unfamiliar claims-based systems.

Other barriers encountered by health plans included:

- Administrative challenges in transitioning 1.5 million beneficiaries to different health plans.
- Difficulties attaining economies of scale due to the number of ACC contracts awarded small market shares.
- Practical differences in procedures between PH and BH providers.
  - For example, systems developed different transportation standards, used different vendors, and had different rules for children with BH issues.
- Lack of prior experience dealing with courts or multiple jurisdictions involved with the justice population.
- For some plans, difficulties transitioning beneficiaries to health plans with less experience in BH.
- Challenges seeking contracts with Centers of Excellence due to a limited supply.
  - Health plans overlapped with one another and caused a certain amount of conflict between health plans.

***Research Question 1.3: Did the plans encounter barriers not related specifically to implementing care coordination strategies during the transition to ACC?***

Health plans noted that several of the barriers they encountered were not related to the transition to ACC, including:

- Shortage of pharmacies in rural communities.
- Transitioning from operating in one geographical area of the State to another.
- Poor cellular phone coverage in much of the northern region.
- Consent issues raised by Title 42 Code of Federal Regulations Part 2 (42 CFR Part 2) requirements for consent related to SUD data.

***Research Question 1.4: Did AHCCCS encounter barriers related to the transition to ACC?***

**Barriers Recognized in Planning**

State administrators described the barriers they identified before, during, and after ACC integration. Prior to the launch of ACC, State administrators experienced difficulties identifying short-term solutions to problems identified in its 2016 analysis and advisory report while State administrators phased in the whole suite of Demonstration programs. State administrators felt that while the plan-level integration of PH and BH was a solution to many barriers, it could not solve all problems. While the rollout structure AHCCCS utilized resulted in controlled integration, frustrations remained as different sectors awaited their turn to transition to integrated care.

Informants explained that understanding the differences between the PH and BH systems was a major challenge. The two systems used different terminology; providers in each system had different understandings about how the other system worked and utilized separate information sharing systems. Moreover, they had different paradigms of care. PH episodes tended to be more short term, wherein providers addressed acute problems with cures. In contrast, BH services unfolded over a longer time frame and may not have resulted in a cure or defined endpoint. Key informants acknowledged that maintaining BH in a residential facility incurred costs but felt it was less expensive than not treating a beneficiary, possibly requiring emergency services and inpatient admissions.

State administrators addressed anticipated challenges by conducting broad public outreach, education, and communication campaigns. The outreach effort included conducting over 100 public forums across Arizona to engage and educate beneficiaries, where State administrators presented frequently asked questions (FAQs) and other materials created to spread consistent messages about integration to a variety of audiences. State



administrators actively engaged with entities such as the Council of Human Service Providers, the BH community, health plans, and other stakeholders to understand their views on how to improve issues, and to prepare them for integration.

State administrators worked with health plans to plan care coordination, including asking health plans for clear descriptions of care managers' responsibilities, required levels of experience, and the contents of proposed risk assessment forms. State administrators outreached to and communicated with individuals with lived experience to seek input as they made decisions about care systems. State administrators incorporated public feedback including requiring a Beneficiary Advisory Council for each health plan, which served as a dedicated point of contact for specialty populations to advocate for their points of view.

During integration State administrators focused their attention on ensuring:

- Health plans were mindful of how beneficiaries moved between providers and health plans to ensure proper placement.
- Beneficiaries knew their new health plan.
- Continuity of care for beneficiaries.
- The new health plan was aware of services that had previously received a prior authorization.
  - For example, State administrators stressed the importance of developing a plan for transportation to dialysis appointments to reduce interrupted transportation due to confusion about integration.

To deal with the range of differences among the seven health plans, State administrators described the need for more restricted requests for proposals (RFPs) than typical. They felt it necessary to impose requirements for health plans including:

- Creating a dedicated team, constructing nationally normalized solutions.
- Creating specific audit requirements for providers.
- Standardizing audit forms for BH providers.
- Instructing health plans to defer to provider models of operation as much as possible.

### **Barriers Encountered During Implementation**

In the months leading up to the integration date, State administrators monitored the call volume to health plans to understand beneficiaries' questions and concerns. State administrators reported daily on metrics during the immediate rollout, and gradually dropped off in frequency over the first six months. Additionally, State administrators reviewed call logs to analyze how quickly health plans answered phone calls, the category of concern, and the type of question. State administrators closely followed the critical service utilization, a key metric that indicated potential problems if rates were to decrease.

State administrators were prepared for an array of challenges to integration, including its timing in relation to weekends. State administrators planned integration accordingly to avoid interruptions to services. State administrators shared their expertise through weekly calls with health plans and public forums to receive feedback from the community.

State administrators noted that BH providers faced financial challenges. Prior to integration, BH providers received lump sum block funding rather than fee-for-service (FFS) funding wherein payment required providers to submit a claim. Health plans that did not have a history of working with BH providers had no concept of the

financial challenges BH providers faced or the impacts on BH providers' cash flow and business practices. Meanwhile, State administrators built financial accountability into the financial structure to monitor service delivery and to incentivize value-based care. Strategies to address barriers included educating providers and health plans on integration. State administrators extended block payments on a short-term basis to providers at risk of going under during integration. Providers experienced challenges related to receiving payment for claims, including the timeliness of payments and difficulties dealing with multiple health plans with different systems.

#### ***Research Question 1.5: Did providers encounter barriers related to the transition to ACC?***

The biggest challenge providers cited was the number of health plan contracts. As a result of working with seven health plans, providers experienced variations in credentialing, fee schedules, payment methodologies, case coordination, and management procedures in addition to the time needed to negotiate multiple contracts. Providers noted that while some plans had the skills and knowledge base needed to work with BH services, others did not. Providers had to report to health plans and coordinate with providers/plans with which they had not contracted. Initially, providers experienced hardships caring for all patients, regardless of insurance; however, this was beneficial to beneficiaries.

Providers discussed the steep learning curve required to navigate the transition to ACC; providers felt that if there had been more time to prepare for the transition, they could have avoided such a steep learning curve. Some providers expressed frustration that the system was not working as intended despite extensive planning sessions. During the time of the interviews, providers continued to struggle with obtaining health information through the health information exchange's (HIE's) patient portal, particularly with respect to BH services. Physicians noted it was easier to obtain reports regarding hospitalizations and emergency department (ED) visits than information about BH visits, acknowledging that part of this barrier was the opt-in requirement of 42 CFR Part 2. Some providers expected health plans to increase communication about care beneficiaries received from other providers.

One provider pointed out that the quality incentives for integrating care did not account for the positive impact that BH care has on PH outcomes and urged that the system create contractual opportunities to reward that synergistic effect.

There was consensus among providers that the financial downside of integration of care fell disproportionately on BH providers. Payment rates did not reflect the higher costs and risks associated with BH payments.

## **ALTCS**

HSAG performed qualitative analysis using transcripts from key informant interviews with AHCCCS State administrators, Arizona Department of Economic Security (DES)/Division of Developmental Disabilities (DDD) staff, and representatives of health plans contracted to provide services under the Arizona Long Term Care System (ALTCS) program. The below sections provide descriptions of drivers of success, unintended consequences of the Demonstration, and ways in which the COVID-19 PHE impacted beneficiaries and the Demonstration. These results are followed by narrative describing specific topics about care coordination strategies implemented by DES/DDD and contracted health plans, and any related barriers, as well as any barriers State administrators encountered while integrating care for beneficiaries with DD.

Hypothesis 4 discusses impacts on the provision of BH services for developmentally disabled (DD) beneficiaries during the PH and BH integration process. DD beneficiaries began receiving integrated PH and BH care on October 1, 2019, through health plans contracted with DES/DDD. Hypothesis 4 consists of research questions that

address integration of care, answered through key informant interviews or focus groups with DES/DDD staff, contracted health plans, AHCCCS State administrators, and provider organizations.

### **Drivers of Success**

ALTCS has provided integrated PH and BH care for the people who are elderly and/or who have a developmental disability (EPD) in need of long-term care (LTC) services since its founding in 1989. This experience contributed to the success of the Demonstration's expansion to the DD population.

ALTCS encouraged and facilitated care coordination among primary care providers (PCPs) and BH providers beginning with the design of the RFP and the selection of contractors. This process began with extensive collaboration between State administrators and DES/DDD on system model design and RFP development. State administrators worked with DES/DDD to make decisions about the integrated care provided to DD beneficiaries through ALTCS.

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*"And I think that [success] was in large part [because] DDD stepped up and really was involved in the day to day. They listened to our technical assistance and lessons learned as we had done other transitions." – State administrator*

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Once State administrators finalized the model and selected contractors, State administrators continued to work with DES/DDD in extensive planning meetings and readiness reviews. State administrators provided feedback to DES/DDD regarding issues with health plans and the tools they created. State administrators worked with DES/DDD in self-analysis, developed training modules, assessed staff on knowledge about what change was going to happen, why it was happening, why it was important, and what would be necessary to manage the system and its new structure. Education and training took place at every level in the agency, including with staff who collaborated directly with beneficiaries, case managers, and administrators.

Based on prior experience, State administrators assisted with the operational transition, provided checklists and best practices, and communicated with both DES/DDD and health plans about their special legal responsibilities. As integration approached, State administrators and DES/DDD monitored call volumes to identify and address issues and reviewed call logs and utilization, including transportation and critical services.

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*"I just think that the extent that AHCCCS was involved in that process [integration] really helped to make it a success . . . the level of review and recommendation and facts and ideas that were coming from the AHCCCS team, going back to DDD, as they were making decisions, I think were extremely helpful. . . . [T]he extent of AHCCCS' involvement really helped make that a successful integration." – State administrator*

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Health plan informants identified several drivers of success for the transition, including:

- A rigorous readiness process.
- A high degree of direct stakeholder communication.
- AHCCCS' close involvement working with DDD.
- AHCCCS' history of integrating care and transitioning programs.

Providers noted that both DDD health plans allowed them to utilize a Behavioral Analyst training code, allowing providers to use trainees who were not yet fully credentialed as long as they provided care under the supervision

of a Licensed Behavior Analyst.<sup>C-1</sup> This allowed providers alternative staffing options compared to previous models that required fully credentialed providers to perform services such as evaluating and revising behavior plans to meet individual needs, assisting caregivers in carrying out the behavior plan, providing on-site assistance in behavior reduction or skill acquisition, observing the implementation plan to monitor fidelity, or observing the beneficiary's behavior to determine the efficacy of the behavior plan.

Providers also noted that pre-authorization for assessment of applied behavior analysis services was not required, which helped open access to patients in a timely manner. Additionally, authorization periods for some services increased from one month to three months, resulting in less administrative burden than monthly follow-ups.

### **Unintended Consequences**

The original plan for AHCCCS and ALTCS was to move to a fully integrated plan for the DD population. However, given the special issues with the population and DES/DDD's depth of understanding and experience with the population, AHCCCS compromised on partial integration.

Several providers reported that the time required to receive payment from the health plans was longer than previously required when receiving payments directly from DDD. The providers attributed this change to the processes that the two DDD health plans used, which were like the billing processes used by commercial insurance. The result increased time to payment to between 60 and 90 days.

### **COVID-19 PHE**

The PHE severely impacted people with DD. The DD population experienced the following difficulties due to the PHE:

- Being averse to mask wearing
- Disrupted group care
- Disrupted family engagement
- Increased negative behaviors
- Longer wait times
- Stress on families and providers

Key informants felt that the flexibilities permitted by AHCCCS and the Centers for Medicare & Medicaid Services (CMS) benefited this population in several respects:

- In-person assessments, planning, etc., could be conducted via telephone.
  - Informants predicted telehealth would continue long term as it worked better for some beneficiaries.
- Health plans and beneficiaries signed documents electronically.

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<sup>C-1</sup> A Licensed Behavior Analyst may be either a Board-Certified Behavior Analyst® (BCBA®) or Board-Certified Behavior Analyst-Doctoral™ (BCBA-D™) who has successfully completed all applicable requirements imposed by the State of Arizona to practice ABA (see A.R.S. §32-2091). Board Certified Analyst®, and BCBA® are registered trademarks, and Board-Certified Behavior Analyst-Doctoral™ and BCBA-D™ are trademarks of the Behavior Analyst Certification Board, Inc.

- Parents of minor children temporarily received payments to cover care at day facilities.

Although not a direct impact of the COVID-19 PHE on ALTCS beneficiaries, State administrators planned to implement electronic visit verification (EVV) prior to the PHE and implemented EVV during the PHE beginning January 2, 2021. State administrators had to implement EVV pursuant to Section 1903 of the Social Security Act (42 U.S.C. 1396b) for non-skilled in-home services (e.g., attendant care, personal care, homemaker, habilitation, and respite), and for in-home skilled nursing services (i.e., home health). The system required providers to verify the type of service performed, individual receiving the service, date of service, location of service delivery, the individual providing the service, and the time service begins and ends. To perform EVV there are a number of ways to capture the required data with the most popular being the use of a mobile application on a smart phone the provider would use to log in when starting service; and the system would transmit Global Positioning Systems (GPS) coordinates to demonstrate that the provider was at the correct location. Several providers reported that some clients and family beneficiaries did not want their provider to use EVV because of fear, anxiety, or religious beliefs. Beneficiaries experienced enhanced concerns to using EVV due to personal health and safety during the PHE. Additionally, providers reported that case managers did not fully understand the requirements for EVV and was not always able to communicate the requirements effectively to beneficiaries and their families. Providers therefore needed to perform additional outreach to clarify the process and requirements for beneficiaries.

***Research Question 4.1: Did DES/DDD or its contracted plans encounter barriers during the integration of care for beneficiaries with DD?***

DDD personnel anticipated most barriers prior to integration and therefore addressed the barriers in the planning phase. As a result, they were not aware of any major difficulties. They attributed their success in large part to AHCCCS' experience with other integrations, long-term collaboration with both health plans, and extensive work with health plans to understand contract requirements and how to implement these policy changes.

One key informant described difficulties reaching agreements with DES/DDD and AHCCCS on integration design. This was partly due to agency turnover and various levels of understanding about how the programs operated individually, as well as in conjunction with other programs. DES/DDD completed most work in-house, without significant communication with AHCCCS on issues. This contributed to a large learning curve for other agencies to understand DES/DDD's priorities.

Rates for some services were less than what providers agreed to, causing providers to no longer contract with either ALTCS health plan. As a result, some beneficiaries had to change providers. Other financial challenges included deciding payment responsibility for nursing facilities. Traditionally, after 90 days, responsibility for payment transitioned from the health plan to DES/DDD; however, following integration, health plans covered these services regardless of length of stay.

***Research Question 4.2: What care coordination strategies did DES/DDD and its contracted plans implement as a result of integration of care?***

Key informants familiar with DES/DDD highlighted the fact that DES/DDD became person-centered and focused on holistic care. Its strategy for improving care coordination in the ALTCS program was to continue that mission to ensure beneficiaries could easily access services from a single integrated plan for both PH and BH services. One strategy was to take steps to include project teams and inform DES/DDD support coordinators regarding integration planning. DES/DDD gathered feedback from stakeholders including the advocacy community, professional associations, patients, families, and consumer groups, to understand their vision for an integrated

health plan. DES/DDD provided a dedicated hotline with trained staff to address beneficiaries' questions and concerns.

DES/DDD expected that it would see a natural progression over time starting with integration of payments, as addressed by the Demonstration, to the integration of care in physical locations, such as a clinic, and integration within the community for all people with disabilities. DES/DDD listened to the ideas of stakeholders, including the health plans, who offered a variety of approaches and experiences.

DES/DDD assigned each beneficiary to a support coordinator in addition to a PCP who helped the beneficiary navigate the system. DES/DDD focused on having processes in place for referrals from a support coordinator to the health plan, if necessary, and arranged for health plan liaisons to help with barriers as needed. The support coordinator ensured that beneficiaries were linked to home- and community-based services (HCBS), and understood, consented to, and participated in their care. The PCPs assessed beneficiaries for and provided PH and BH services. The DES/DDD support coordinator spent more time face-to-face with the beneficiary than the beneficiary spent time with their PCP, which might only be once a year. DES/DDD opened lines of communication between DES/DDD's support coordinators and health plans. As a result of integration, support coordinators only needed to deal with one entity for PH and BH services when helping beneficiaries navigate the system.

DES/DDD established joint training for division support coordinators and health plan staff so that all parties shared a mutual understanding. DES/DDD assessed employees to ensure they comprehended the training and periodically revisited issues after training to keep the memory fresh. DES/DDD developed job aids for support coordinators and health plans.

DES/DDD worked with the health plans to develop a guide to activities and home services that were available to beneficiaries with DD to avoid major decompensating events and prevent escalation. Residential providers received the guide, with the goal of increasing awareness of available services.

***Research Question 4.3: Did DES/DDD or its contracted plans encounter barriers to implementing care coordination strategies?***

DES/DDD trained its staff and health plan staff together to understand contract responsibilities and care coordination responsibilities. DES/DDD sought to ensure that division and health plan staff shared a mutual understanding of their responsibilities and procedures through providing job aids and formal standards for evaluating trainees.

***Research Question 4.4: Did AHCCCS encounter barriers related to integration of care for beneficiaries with DD?***

State administrators explained that understanding the changing relationships between the government agency staff and their responsibilities was challenging. While the DES/DDD staff were familiar with the developmental needs of the population, they were less knowledgeable about the full range of PH and BH care issues they needed to understand to integrate care. This population has unique PH and BH needs and required providers and a health plan who understand those needs. The DES/DDD staff needed to achieve a deeper level of understanding of the duties they historically outsourced to AHCCCS, to educate DES/DDD staff on monitoring and providing oversight BH services. AHCCCS and DES/DDD worked together to build the expertise of subject matter experts (SMEs) in BH delivery systems.

Another challenge to integrating care was the evolving needs of this population, specifically, the increasingly complex care needs associated with aging beneficiaries. In addition, beneficiaries may have been intellectually



impaired or nonverbal. Health plans collaborated with providers to determine how providers would obtain consent and discussed DD beneficiary participation in decisions. Challenges remained in finding willing providers who understood how to support beneficiaries with intellectual disability.

Another barrier reported was that the Demonstration did not specifically address the age grading of services and therapy, leaving ambiguity about which BH services were appropriate for children only, and which should be available to the general adult DD population. There were issues understanding which types of care qualified as habilitative or rehabilitative therapy; whether services were PH or BH services; and whether people under the age of 21 years, or the entire population, required services.

**Research Question 4.5: Did providers encounter barriers related to integration of care for beneficiaries with DD?**

According to providers, beneficiaries experienced a long history of evolution with DES/DDD and expressed concerns related to a history of trauma in the system, fear of managed care, and fear of regressing. Beneficiaries and providers expressed concerns about how the provider network would differ after Demonstration implementation and were concerned about how it would impact their working relationships with DES/DDD. Despite concerted efforts, some providers chose not to contract with either of the ALTCS plans, causing disruptions in care. Anticipating that this might be the case, DES/DDD directly supervised the experience of approximately 40 of the highest need beneficiaries impacted by the transition. As with the ACC transition, the 12-month grace period during which health plans covered out-of-network claims minimized this disruption and allowed beneficiaries and providers time to find acceptable solutions.

Providers reported improved access to BH and coordination, despite initial disjointed information and communication. Providers identified a substantial challenge for beneficiaries and families participating in the Early Childhood Autism Specialized Habilitation program. When applied behavioral analysis moved from DDD over to the health plans, the health plans communicated the change in a manner that caused numerous beneficiaries and families to believe that services would be ending. The documentation provided by DDD was accurate; however, providers reported that case management staff were unaware of how the change was being operationalized. Providers spent additional resources to manage communication with beneficiaries and families to correct any misunderstandings. Providers reported sending DDD's materials back to case managers, contacting supervisors, and pointing out the training issues for DDD to resolve.

Providers also identified issues credentialing with DDD health plans. Specifically, providers identified challenges in identifying the correct representative to talk to regarding staff credentialing to deliver necessary services. Providers had to make numerous phone calls and wait several weeks to complete the credentialing task that previously took only a few days. This impacted the timeliness of providing care to beneficiaries and receiving payment.

## CHP

Hypothesis 3 was designed to identify in detail the activities the Department of Child Safety (DCS) conducted to further AHCCCS' goal of integrating care by implementing strategies supporting care coordination and management. Qualitative interviews with AHCCCS State administrators, DCS staff, and providers were conducted from October 2020 through August 2021 to discuss preparations for the transition away from the Comprehensive Medical and Dental Program (CMDP) and early experiences following Comprehensive Health Plan (CHP) integration. A second round of qualitative interviews was completed in February and March 2023 to



capture additional developments that occurred in the time following integration. Key informant interviews gathered qualitative insights regarding CHP's activities, barriers encountered during the transition to integrated care, and barriers specific to implementing care coordination strategies.

The following sections summarize key informants' descriptions of drivers of success in implementing the Demonstration, unintended consequences of the Demonstration, ways in which the COVID-19 PHE impacted beneficiaries, and implementation of the Demonstration. These sections also include narrative text describing the barriers to integrating care, implementing care coordination strategies, barriers encountered during implementation, and strategies DCS utilized to address those barriers.

### **Drivers of Success**

Informants thought DCS made an excellent decision in contracting with Mercy Care to deliver the CHP program. Mercy Care had pre-existing billing, contracts, a provider network in place, and had already ranked the quality of providers based on health outcomes and performance metrics. Providers were confident that Mercy Care's processes could be tailored to CHP's specific needs.

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*"First . . . DCS recognized their strengths as well as areas for improvement and recogniz[ed] . . . the need to leverage a health plan. . . . Second . . . they were able to [contract with a] health plan that's already been working in this space." – State administrators*

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Providers also appreciated DCS' decision to implement integration through a single health plan, rather than multiple health plans throughout the State. Mercy Care had experience working with DCS beneficiaries and had relationships with many providers throughout Arizona. Many of the beneficiaries under the purview of DCS come from backgrounds with significant trauma, and having a single plan to coordinate care keeps their care stable.

Most providers stated that CHP and AHCCCS initiatives were well-aligned. DCS and Mercy Care proactively engaged with providers to ensure that changes due to integration were clear despite challenges in understanding initial operational planning. DCS and Mercy Care rapidly addressed system and implementation issues early in the integration process and used Mercy Care's past experience with other Arizona programs to limit challenges.

Informants believed the transition from CMDP to CHP and integrated care was smooth and, in many respects, better than expected. Informants attributed the smooth transition to the considerable number of working sessions on a variety of subjects including care management, networking, and administrative operations. These working sessions created alignment in approaches across organizations and promoted an open communication strategy. Additionally, providers noted an increase in the number of trainings offered by Mercy Care.

In addition to the open communication promoted by the working sessions, several informants praised the general communication between State administrators, DCS, Mercy Care, and provider groups. Mercy Care utilized an open communication system, provided relevant and accurate alerts to providers, and regularly met with large provider groups. DCS met with the following groups regularly:

- Providers to help complete day-to-day work, receive feedback, and solve issues as they arise.
- Mercy Care to provide feedback.
- AHCCCS to discuss changes and challenges for DCS beneficiaries.

Providers mentioned that clear communication aided in starting up CHP and continued to assist in delivering services. As a result of this coordination, providers felt their relationship with DCS and Mercy Care was strong.

Prior to implementing the CHP program, State administrators reviewed CHP's readiness to ensure that CHP could perform tasks previously completed by CMDP. The readiness work included providing DCS with specific contract expectations and requiring DCS to submit documentation that supported the ability to complete its contractual obligations. In addition, AHCCCS requested information on subcontractors—in this case, Mercy Care. AHCCCS reviewed and approved the documentation provided by DCS. The readiness work proved successful in ensuring a smooth transition as it ensured DCS was prepared to execute the contract. AHCCCS continued to monitor DCS and Mercy Care to ensure both entities met contract standards, an activity that will remain ongoing for the extent of the contract.

Overall, informants were grateful for the integration of PH and BH for DCS beneficiaries. Aligning PH and BH allowed providers to serve beneficiaries holistically and focus on providing quality care to beneficiaries with complex conditions and histories. According to providers, families shared a similar sentiment and enjoyed the ease of receiving services through one entity.

### ***Unintended Consequences***

When key informants from AHCCCS and DCS were interviewed prior to integration of CHP, no informants predicted any specific unintended consequences that might result from the program design. However, during the second round of interviews, DCS reported encountering unintended consequences. Prior to integration, DCS functioned as an open network. Beneficiaries could access any AHCCCS provider, which limited DCS' ability to ensure that the provider was appropriate for the specific beneficiaries. Following integration, DCS functioned as a contract network, narrowing the provider base while focusing on improving the quality of providers serving the beneficiaries.

Informants believed that the integration of care improved DCS' ability to provide quality care coordination; however, despite improvements, difficulties persisted. Difficulties were prevalent for beneficiaries placed out of state. If a provider was not contracted with AHCCCS, as would be the case for an out-of-state provider, then the provider had to obtain a single case agreement to treat the beneficiaries and be reimbursed by CHP. DCS encountered difficulties identifying out-of-state providers willing to sign single case agreements.

Unlike interviewed State administrators and DCS, a number of providers identified potential unintended consequences during the first round of interviews that were not mentioned during the second round of interviews:

- Due to the Family First Prevention Services Act (FFPSA), providers anticipated that DCS would shift funding away from congregate care settings.
  - Providers were concerned DCS would pressure them into placing beneficiaries in in-home settings or reunifying families before they are ready.
- Credentialing took up to 60 days under the new CHP system; previously, under the CMDP system, credentialing took as little as one day.
- Financial stipends to cover administrative work prior to a beneficiary's intake were unavailable after integration.
- Under CMDP, the rapid response process began with DCS individually selecting a provider for each beneficiary. Under CHP, the rapid response process was initiated with the provider physically located closest to the beneficiaries.

Initially following integration, providers indicated awareness that DCS and Mercy Care were working to develop a more streamlined model for how children receive services. DCS and Mercy Care were attempting to develop a one-stop shop concept where beneficiaries could receive BH and PH services at one time. Several rural providers noted that this would be challenging to accomplish in rural counties where the pool of providers was smaller than in urban areas. Providers expressed that when a beneficiary entered the DCS system, there was a significant amount of communication and coordination to complete, and the one-stop shop concept would create an administrative burden for these rural providers. By the second round of interviews, providers felt as though receiving care in a single place was generally a positive experience and beneficial to beneficiaries.

In the first round of interviews, providers felt that the Mercy Care DCS CHP model did not address the immediate needs of the beneficiary as well as the former CMDP model. Under the CMDP model, DCS traditionally focused on the safety of its beneficiaries and care for immediate needs. Providers perceived that under CHP, Mercy Care would approach care from a BH perspective, focusing on treatment and longer-term needs. Providers felt that this approach would negatively impact beneficiaries coming from traumatic situations with high acuity needs and elevated costs. In spite of these initial concerns, providers shared a general sentiment in the second round of interviews that the Mercy Care DCS CHP model was successful.

Despite the overall success, lingering negative unintended consequences remained, as discussed by individual providers:

- Duplicative administrative requests from Mercy Care and DCS.
- Difficulties obtaining consent to perform services when DCS was short staffed.
- Alternative standards for DCS beneficiaries compared to non-DCS children caused stigma for DCS beneficiaries and created an inappropriate sense of safety and security at a system level.
  - For example, DCS requested that one provider not disenroll DCS beneficiaries unless they were in care for at least a year. This is not the standard operating procedure for non-DCS children.
- A desire for more in-person, face-to-face communication with DCS and Mercy Care.
- Additional time spent with DCS personnel to educate them on how the BH systems worked.

## **COVID-19 PHE**

The changes made in response to the COVID-19 PHE exceptionally impacted beneficiaries in foster care or State custody. Examples of this included:

- Beneficiaries felt the burden of closing the schools acutely, since parents were not always present to step in and arrange childcare.
- Beneficiaries were socially isolated due to the risks of entering the community.
  - Beneficiaries experienced disrupted care delivered in group settings.
  - Beneficiaries experienced disrupted family engagement.
- Beneficiaries were averse to mask wearing.
- Beneficiaries experienced longer wait times for services.
- Families and providers encountered increased stress.
- Providers were unable to enter hospitals to help care for their beneficiaries.

Informants described steps taken by CMDP and CHP to support this population. These steps included:

- Proactiveness in tracking beneficiaries exposed to or testing positive for COVID-19.
- Collaborating with caregivers to provide information and assistance including personal protective equipment (PPE) and as time passed, testing, and test results.

Providers reported that, due to the PHE, the planning meetings for integration may not have been as effective as they could have been in an in-person setting. Hosting virtual meetings may have limited some discussions on feedback or expectations for the rollout. Informants did not mention issues related to virtual meetings in the second round of interviews.

Providers expressed concern regarding the back log of needed preventive care because preventive care was not a high priority during the PHE. Additionally, many providers encountered beneficiaries and their families who were at higher risk for exposure from living in congregate settings such as shelters during the COVID-19 PHE.

Transportation for visitation was a challenge during the COVID-19 PHE. However, if a beneficiary was unable to make an appointment using their pre-planned transportation, providers could quickly substitute the in-person appointment with a Zoom link.

Prior to the COVID-19 PHE, AHCCCS was working on expanding telehealth coverage. As a result, telehealth infrastructure was already in place when the COVID-19 PHE began, and the State was prepared for the sudden transition to utilizing telehealth services. The rapid implementation of telehealth allowed beneficiaries to have more frequent contact with families and providers. Providers planned to continue the use of telehealth in their practices following the conclusion of the PHE due to the flexibilities offered. Though many providers reported positive experiences, challenges utilizing telehealth during the COVID-19 PHE existed. Challenges cited by informants included:

- Many beneficiaries and providers tired of telehealth quickly.
- Some services, specifically PH services, were not compatible with telehealth.
- There was confusion around whether a beneficiary was attending their appointment in-person or via telehealth as well as which provider was going to see the beneficiary.
- Virtual care was an issue for families that did not have Wi-Fi, or beneficiaries in group home settings that did not have a private space to take their appointment.
- Young beneficiaries or beneficiaries with certain conditions including complex trauma and attention-deficit/hyperactivity disorder (ADHD) struggled with receiving care via telehealth.

During 2020, providers reported a loss of capacity in the care system, both in the number of beds available for beneficiaries and in staff available to provide care. In some cases, these issues were conjoined, with providers closing beds due to a lack of staff. Providers recognized that AHCCCS, DCS, and Mercy Care took steps to mitigate this issue.

During the second round of interviews, providers reported long-lasting COVID-19-related challenges:

- BH providers leaving the profession, in many cases due to burnout
- Supervisors carrying caseloads
- Providers sharing resources to keep up with demand
- Recently hired staff not showing up to work or quitting during orientation
- High staff turnover resulting in a possible decrease in quality of care

Despite the challenges informants faced with handling the COVID-19 PHE, informants recognized the successes they experienced. Informants were grateful for providers' perseverance in continuing to provide services throughout the COVID-19 PHE, whether the services were performed via telehealth or in-person. State administrators were quick, creative, and flexible in their decision making throughout the COVID-19 PHE. State administrators relied on their relationships with DCS, Mercy Care, and providers. AHCCCS implemented COVID-19 protocols quickly and permanently developed the infrastructure needed to implement protocols in the future should another PHE occur. Several providers noted that specific COVID-19 grants available through the American Rescue Plan Act (ARPA) were useful in setting up child-specific crisis centers in the northern Geographic Service Area (GSA).

***Research Question 3.1: What barriers did CHP anticipate/encounter during the integration?***

While all of the programs impacted by the Demonstration encountered some barriers to the smooth integration of care, CHP experienced additional barriers due in part to the unique DCS population and the history of legislative and court supervision. That the population mostly consists of beneficiaries and youth removed from their homes presented additional barriers.

Communication between providers, Mercy Care, DCS, and State administrators proved to be difficult during integration. State administrators experienced challenges receiving timely answers to questions. When State administrators posed questions, they asked DCS first before going to Mercy Care. This communication barrier between Mercy Care and AHCCCS resulted in negative repercussions. For example, Mercy Care began performing CHP-specific audits for providers on top of an already existing comprehensive BH audit. This created an administrative burden and duplication of effort for providers. Mercy Care reported that AHCCCS required the CHP audits, while State administrators insisted that the CHP audits were not required.

Communication issues also existed in AHCCCS' relationship with DCS. AHCCCS viewed DCS as a contractor who subcontracted Mercy Care. As a result, AHCCCS expected DCS to oversee Mercy Care and its work. One State administrator noted that instead, DCS and Mercy Care moved forward with a collaborative relationship in which DCS expected AHCCCS to oversee both agencies. To remedy this issue, AHCCCS provided DCS education on its role and relationship with Mercy Care, interacting with the DCS leadership teams verbally and in writing to ensure legal and regulatory nuances of the relationship were understood.

Another challenge to integrating care was compliance with a settlement agreement with implications for how to coordinate and supervise care. Issues raised in the litigation included the adequacy of processes for assuring accountability, such as supervision of care managers, and the use and oversight of child and family teams in providing services. The settlement agreement set out specific obligations and metrics for the State to track:

- Increased/ongoing monitoring of utilization of both PH and BH,
- Fidelity to child and family team practice models, and
- Communication between DCS caseworkers and Mercy Care plan care managers to discuss beneficiaries' care.

DCS, Mercy Care, and providers negotiated how to collect and report the data for these measures. The CHP program was based on this settlement agreement, so the process for assessing readiness and planning for change differed from other Demonstration populations. CHP needed to meet specific requirements for reporting and plan for who was responsible for collecting the data and developing reports. This created additional stress between DCS and Mercy Care.

During implementation, DCS' data tracking system, Guardian, which stored confidential, non-healthcare-related information, proved to be challenging for State administrators:

- There was a lag in data processing, leading to difficulties getting all information loaded into Guardian.
- State administrators experienced difficulties transferring data from the old system into Guardian.
- Guardian did not have a way to automatically enroll beneficiaries and thus no automatic way to track services.
- Implementation of Guardian was delayed during the start of integration.

There were heightened barriers related to information sharing for beneficiaries. Stakeholders agreed that caring for beneficiaries required communication, support, and services for families; however, complicated legal protections and consent requirements caused challenges to accessing essential records. Of note, informants did not mention these issues during the second round of interviews.

Historically, beneficiaries experienced difficulties in utilizing transportation services. Informants noted that difficulties with transportation services continued following CHP's integration. One provider noted Mercy Care's lack of understanding of the capabilities of transportation services, such as not knowing that beneficiaries under 12 years of age can receive transportation. Additionally, there were frequent issues of transportation availability, particularly during popular times for transportation, such as after school. One provider provided an example of an instance when a vehicle without car seats was sent to pick up beneficiaries. As a result, beneficiaries could not be transported and missed their appointments. The aftermath of missed appointments created an administrative burden for the provider.

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*"So, it's much more complex than any other health plan or health program that I believe we oversee" – State administrator*

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During the second round of interviews, providers reported additional ongoing administrative burdens:

- BH providers filled out more paperwork compared to PH providers.
  - When a change was made, BH providers were required to complete and submit more paperwork than a PH provider causing more ground level work when a change is made.
- BH providers noted they can access FFPSA funding. However, if a BH provider uses this money for a patient, they are unable to use Medicaid funding for the same patient.
- Integration prompted a culture change in how PH and BH providers approach care.
  - Providers described PH and BH as fundamentally different services that must be treated differently, despite integration. For example, BH providers faced diverse types of legal challenges compared to PH providers, and the systems for contracting with PH and BH providers are different.
- Mercy Care asked providers for information that should be readily available to Mercy Care through DCS' system, Guardian.
  - Providers submitted information to Mercy Care and DCS multiple times.
- BH providers expressed difficulties contacting external PCPs, resulting in unnecessary time spent searching for answers to questions.



- Working with CHP created more paperwork and deliverables for providers.

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*“So ultimately [there is] a much higher risk of behavioral health conditions in children that were exposed to abuse and/or neglect. Then [there is] the trauma experienced by the removal itself as far as removing a child from their family. So, we knew that just on the onset that children in foster care [are] at a much higher risk for behavioral health disorder or a potential for one than children not in foster care.” – State administrator*

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### **Research Question 3.2: What care coordination strategies did CHP plan/implement during integration?**

Preparing for the transition from CMDP to CHP was a lengthy process involving engaging interested stakeholders to create overarching goals and principles including:

- Viewing each beneficiary as an individual with unique needs.
- Validating trauma beneficiaries experienced.
- Providing effective wrap-around support.

CHP emphasized the importance of trauma-informed care for the DCS population and built a strong network of specialists prepared to provide appropriate care for beneficiaries ages 0–5 years.

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*“[The integration of PH and BH] ... said to all of us providers we want you to think differently, we want you to work differently, we want this to feel different.”  
– Provider*

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A representative of DCS, acting as a care coordinator, and a care manager from Mercy Care were required to attend all meetings related to a beneficiary’s care to reduce concerns about bifurcation of care and lack of coordinated communication. At the time of the first round of interviews, DCS care coordinators acted as the guardian for the beneficiary in out-of-home

placements, and helped caregivers and providers navigate the DCS system by streamlining processes and connecting them with appropriate BH and preventive medical, and dental services. One provider found the addition of the DCS care coordinators was helpful. The care coordinator worked directly with clients’ care and joined group emails from the provider to stay up to date on information coming from the provider.

In the first round of interviews, informants reported that DCS served as the interpreter between the child welfare system, the healthcare system, insurance systems, and families/caregivers. DCS performed initial outreach and created teams for beneficiaries when they entered the system. DCS staff continuously followed up with caregivers through Mercy Care network management updates. These updates were shared with the entire resource coordination team to ensure all participants of the care team were equally informed. During integration, State administrators and DCS provided population-specific training to foster parents.

An expanded care coordination team required rapid, comprehensive communication. Mercy Care and DCS implemented the following methods to ensure successful communication:

- Incorporated a user feedback line in all email signatures.
- Provided beneficiaries of the public correct resources or transferred them to the correct department regardless of the DCS department they initially reached.



- Responded to communication requests in under two hours.
- Provided notifications of inpatient hospitalizations or ED utilizations to PCPs.

To effectively coordinate care, providers held rapid response meetings within the first 24 hours of a beneficiary's placement to accurately assess their PH and BH needs. The rapid response meetings were followed by a comprehensive evaluation within the first 30 days of placement, and monthly BH visits for six months. Quality oversight and improvement of systemic efforts increased, including monthly detailed monitoring and reporting on follow-up referrals and services, and updates to the beneficiary's condition to identify and address gaps in care immediately.

DCS required Mercy Care develop a specialty provider network that was well-versed in evidence-based interventions, trauma-based cognitive behavioral therapy, and other complex trauma work, particularly for beneficiaries from birth to 5 years of age. DCS analyzed a year of claims data for beneficiaries to ensure that existing providers were included in the new network.

***Research Question 3.3: What barriers to implementing care coordination strategies did the CHP anticipate/encounter?***

The initial round of qualitative interviews with AHCCCS and DCS staff occurred prior to the start of integration, and thus, no emerging issues were identified. DCS shared that it would observe processes to improve coordination between DCS, providers, and ancillary services. For example, DCS planned to improve technological connections within pharmacy benefit managers and court systems.

Providers recognized that Mercy Care sought ways to improve care coordination and integration. However, there were several challenges unique to DCS beneficiaries; for example, DCS beneficiaries were less likely to have longstanding relationships with a single PCP or specialty provider. As a result, providers experienced difficulties obtaining a complete medical history. In response to this challenge, providers hired staff specifically to contact beneficiaries' former providers, attempting to obtain more complete histories. Temporary guardians to beneficiaries were also unfamiliar with the beneficiary's medical history. Providers reported that this was an essential element of care coordination and an area of potential improvement for DCS and Mercy Care. Additionally, providers stated that having access to information from Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) forms for all AHCCCS beneficiaries under 21 years of age would provide useful information for care coordination.

Other reported care coordination challenges that were unique to DCS beneficiaries include:

- Beneficiaries frequently transitioned in and out of coverage quickly and at odd hours.
- Foster families were often unaware of the resources available to them through AHCCCS, DCS, or Mercy Care.
- Beneficiaries and their families not already connected to Mercy Care were not aware of changes to their care due to integration.
- Beneficiaries experienced difficulties scheduling and receiving transportation to appointments.
- There were not enough kinship and foster placements available to beneficiaries.
- Providers struggled with scheduling appointments around beneficiary's school and foster parents' work schedules.

Some beneficiaries under DCS care transitioned from receiving services through an ALTCS health plan to receiving care through CHP. These beneficiaries eventually lost eligibility altogether due to the challenges in determining the correct line of business to provide services to the beneficiary. Additionally, DCS experienced issues in BH providers' ability to bill for CHP-related services. CHP beneficiaries received a personal ID instead of an AHCCCS ID, which BH providers did not know how to use in billing processes.

Providers indicated that the prior authorization process was unclear. Specifically, providers did not know what documentation to send or to whom at Mercy Care should receive it. Nor was it clear who was responsible for reaching out to potential placements and engaging foster parents. As one provider noted, it was difficult to complete the primary care placement if the placement did not understand the process and had no knowledge of the beneficiary.

Many providers explained that staffing challenges impacted their ability to provide care to DCS beneficiaries. Staff turnover and burnout, especially on the BH side, remained high; without a steady workforce, quality of care for beneficiaries was likely to decrease. Rural locations remained the most difficult to staff for most organizations. Providers attributed difficulties in hiring staff to low payment rates for services and high minimum wages in certain areas of the State. Prominent levels of administrative burden also contributed to provider burnout. Additionally, due to the complex needs of DCS beneficiaries, some existing providers were hesitant to take on beneficiaries with complicated needs. One State administrator discussed providers' secondary trauma from interacting with some of the difficult beneficiaries and associated situations shared by DCS beneficiaries. Providers' hesitancy to engage with DCS beneficiaries left beneficiaries without adequate care. Staffing issues were not unique to providers, and they also affected DCS. The COVID-19 PHE further exacerbated existing staffing issues across Arizona.

DCS and providers were initially concerned about whether there would be network adequacy in rural areas of the State, particularly in Northern Arizona. However, two years after integration, CHP shared that network adequacy was no longer a concern. Rather, CHP began to turn down new providers in areas with high provider saturation.

Individual providers shared additional barriers related to DCS beneficiaries and care coordination:

- Court systems assigned beneficiaries to providers using criteria that might differ from that recommended by the beneficiary's care team.
  - For example, one provider explained that courts preferred to place beneficiaries with provider organizations that employ pediatricians, which sometimes resulted in sending beneficiaries to provider organizations that were unable to provide the appropriate level of care.
- Respite care was difficult to find. If a parent could not find respite care, they frequently asked for a higher level of care than otherwise would be necessary to accommodate for the absence of standard respite.
- Beneficiaries felt uncomfortable with the addition of unfamiliar Mercy Care observers during child and family support team (CFT) meetings.
  - According to the provider, Mercy Care observers sat in silently on CFT meetings to ensure compliance with AHCCCS principles. However, introducing new people unknown to the beneficiary to CFT meetings may have seemed counter-productive and invasive to the beneficiary; normal and natural conversation was disrupted with no perceived benefit to the beneficiary.

## RBHA

Hypothesis 5 was designed to identify the activities health plans conducted to further AHCCCS' goal of care integration by implementing strategies supporting care coordination and management.

Measures in Hypothesis 5 were evaluated through provider focus groups and key informant interviews with health plan subject matter experts, AHCCCS State administrators, and other pertinent stakeholders. These methods allow for an in-depth analysis detailing activity focused on care integration and potential successes or barriers surrounding these activities.

Qualitative analysis was performed using transcripts from key informant interviews with State administrators, RBHA health plan staff, and providers. The below sections contain descriptions of drivers of success, unintended consequences of the Demonstration, and ways in which the COVID-19 PHE impacted beneficiaries and the Demonstration. These results are followed by descriptive narratives on specific topics about the care coordination strategies used by the RBHAs for their beneficiaries with an SMI, whether those strategies changed since the RBHAs became focused solely on beneficiaries with an SMI, and the care coordination strategies that AHCCCS used to benefit beneficiaries with an SMI.

### *Drivers of Success*

RBHAs identified several drivers of success, or factors, which helped the Demonstration achieve its goals. The main driver of success RBHAs reported was the communication and flexibility of State administrators and the Health Plan Association. State administrators maintained the quality of care for beneficiaries throughout the Demonstration transition period by ensuring providers did not deny necessary care due to transition-related confusion. State administrators and the health plans recognized potential flaws in processes from the beginning of integration, including potential issues with payment systems, prior authorization services, and systems for data sharing. State administrators assured providers that they would resolve payments in a timely manner and followed up with providers about issues regarding incorrectly denied claims and delayed payments, as needed.

Second, RBHAs identified the depth of specialized knowledge of their staff and the ability to have a single point of contact for beneficiaries with an SMI as key factors for improving the overall level of care and coordination that those beneficiaries received. RBHAs considered the change in population focus to be an overall positive for their beneficiaries as RBHA staff were able to focus on a smaller subset of beneficiaries with complex needs.

Finally, by integrating staff across the PH and BH spectrum, RBHAs were able to better manage and respond to beneficiary concerns and grievances without needing to transfer beneficiaries across multiple staff to resolve an issue. Each RBHA identified situations in their care coordination strategies in which they could leverage the collaboration and coordination across previously divided health care systems to better address the holistic needs of their beneficiaries.

Several providers noted that the RBHAs were responsive to inquiries about patient-related needs. These providers tended to be employed at larger provider organizations. Smaller providers experienced more variability in RBHA responsiveness, with small providers indicating difficulty receiving timely responses to inquiries about operational requirements.

## *Unintended Consequences*

Initially in 2014, AHCCCS experienced an issue with some beneficiaries living with an SMI wanting to opt out of integrated care because their PH specialist did not contract with their RBHA, although this was not widespread and did not continue beyond a minimal number of beneficiaries. Nevertheless, one unintended consequence experienced at the beginning of the integration process was the challenge of numerous PH providers not wanting to contract with the RBHAs, suggesting a social stigma against beneficiaries with BH concerns. As a result, the RBHAs required additional time and effort to build their integrated networks. That stigma has decreased over time, and many providers have since adopted the perspective that integrated care is both essential and effective for providing the best service to beneficiaries. Still, the structural and operational differences between the PH and BH systems in Arizona remain a source of misunderstanding for some providers, requiring ongoing education to develop an integrated workforce.

A second unintended consequence highlighted by the RBHAs was that some BH providers were accustomed to submitting batched claims periodically for encounter reporting and receiving capitated payments monthly regardless of the timing of their claim's submissions. Some BH providers transitioned to working with multiple ACC plans, some of which were using a fee-for-service payment method. As a result, a portion of providers experienced challenges with submitting timely claims for payment, causing significant financial strain. More than one RBHA reported providing financial and operational assistance to their contracted providers to make the transition successful.

One RBHA struggled to ensure that providers received payments in a timely manner. Providers perceived that the RBHAs may not have received enough support and direction from State administrators, resulting in the RBHAs not being able to be effectively coordinate across providers and maintain the network. Providers noted an uncharacteristic reduction in communication from the RBHA executive suite, and confusion among the RBHA staff about processes and policies at the beginning of the implementation; however, providers reported that these challenges improved after the first several months.

According to several providers, communication regarding the roles, responsibilities, and processes for the transition was not always clear. Changes in the organizations contracted to provide housing services were unclear to providers involved in the process, resulting in uncertainties about whether their staff and housing services were useful after October 1, 2021. While these providers reported being able to pivot their staff into new roles, they indicated that the lack of a detailed plan left them uncertain. Providers understood the magnitude of the implemented transitions and expressed empathy with the challenges involved; however, they expressed a desire to improve the clarity of the transition plans, roles, and responsibilities.

Hospital providers indicated that it was unclear when payment responsibilities would change for hospitalized non-SMI beneficiaries with a court-ordered evaluation. Providers reported it was unclear whether the ACC health plans or the RBHA would pay for the hospitalization if a patient received an SMI designation during their hospital stay. The coordination of care for newly designated SMI beneficiaries required that health plans work together to ensure that beneficiaries received proper care. Providers reported that the coordination of the process could have been improved.

Multiple providers stated that the transitions of the RBHA program in 2015 and again in 2018 resulted in an integrated payer, but not necessarily in integrated care. Providers shared the perspective that resources were unavailable, and that the regulatory environment remained constrained in ways that did not allow fully integrated care for those with an SMI designation.

Providers noted there did not appear to be sufficient testing performed prior to implementing the transitioned systems to ensure that providers could obtain information about client needs in a timely manner. As a result, providers were frustrated that their questions did not receive timely responses. While the timeliness of responding improved over time, this remained a persistent challenge at the time of the interviews.

Providers noted that residential placements after 2018 were less centralized than earlier placements, necessitating more effort by case managers to stay informed of which residential programs have open housing placements.

Some providers identified issues with receiving payment at incorrect rates. While the RBHAs communicated awareness of the issue and worked to correct the erroneous information in their system, providers reported significant delays in obtaining proper reimbursement.

One provider reported not receiving support from the RBHA because the RBHA did not identify the provider as an adult provider, despite providing care for several adult beneficiaries. While the RBHA did not identify this provider as an adult provider, the RBHA's auto-attribution system continued to assign adult beneficiaries to the provider. Providers also noted that RBHAs auto-attributed beneficiaries but with incomplete or incorrect information that made outreach impossible. For other beneficiaries attributed to the provider, outreach efforts resulted in the beneficiary telling the provider that they did not wish to receive services, or that the beneficiary no longer lived at that address. While the RBHA offered to correct the roster of attributed beneficiaries, this had not happened at the time of the interviews.

Prior to 2015, BH providers reported the ability to look up a beneficiary, determine their SMI designation status, understand if the beneficiary had a court-ordered evaluation, and identify their provider. Providers noted that having access to information of this type was critical, particularly in crisis services and hospitals when patients were unable to communicate properly. The HIE further limited data because BH information was inaccessible due to legal permissions required by Title 42 CFR, Part 2 for sharing those records. These changes in system operations and accessibility of data are a key reason several providers described the current system as having taken a step backward in care coordination, relative to the processes and systems in place between 2015 and 2018.

## **COVID-19 PHE**

The COVID-19 PHE created challenges for beneficiaries living with an SMI, especially those experiencing homelessness. Congregate care setting and homeless shelters experienced elevated infection rates and difficulties maintaining the health of their clients. This challenge extended to other residential care settings, such as nursing homes and long-term care facilities that provided care for RBHA beneficiaries with an SMI. State administrators collaborated with providers across the State to develop creative solutions using alternative care sites, such as using empty hotel rooms to transition beneficiaries who may no longer need hospitalization for COVID-19, rather than sending them back to a shelter. The RBHAs partnered with skilled nursing facilities to use empty beds for recent hospital-discharged beneficiaries but still needed additional time to test negative twice before returning to their regular residential facility.

RBHAs made special adaptations to and accommodations for transportation services for their beneficiaries during the COVID-19 PHE. One RBHA collaborated with its transportation provider to modify vehicles for infection control purposes and develop a payment model for drivers who needed additional training.

One RBHA that was contracted with rural providers saw a few instances of providers encountering staffing issues due to staff exhaustion and contracting COVID-19. Staff from the RBHA assisted these providers until they could identify more permanent solutions.



Providers contracted with RBHAs increased their use of telehealth to offset the risks of providing in-person healthcare where possible. Providers curtailed home visits with beneficiaries during the COVID-19 PHE. State administrators provided telehealth assistance to beneficiaries and broke down barriers to ensure providers could deliver care safely. While many beneficiaries with an SMI did not have the technology required to join online video conferencing, telephone calls were a suitable method to maintain contact with beneficiaries. Using telehealth and mobile applications to assist beneficiaries had positive impacts overall, and providers anticipated retaining the technology permanently in the future.

**Research Question 5.1: What care coordination strategies are the RBHAs conducting for their SMI population?**

Interviewed RBHA staff indicated that their organizations adopted beneficiary-focused strategies geared toward maintaining beneficiary choice and providing seamlessly integrated care. All RBHAs indicated that their community partnerships with providers, first responders, and other social agencies at the local, county, and State levels were critical to assisting beneficiaries as they transitioned through various touch points across agencies. RBHAs specifically highlighted their relationships with the Arizona Rehabilitation Services Administration (RSA), the Arizona Department of Corrections Rehabilitation and Reentry (ADCRR), Ombudsman’s Offices, and the Arizona Department of Health Services (ADHS).

While each RBHA discussed integrated care teams, the structure of these teams differed across organizations. Two RBHAs developed integrated health home models, leveraging BH providers as a vital component and

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*“...we had interdisciplinary team meetings to talk about complex beneficiaries who were having multiple admissions across both physical and behavioral health facilities [and] were able to draw on expertise in both behavioral health and physical health, as well as... representation from our programs, such as housing, employment, [and] substance abuse, and we would have the expertise to have discussions about complex beneficiaries from a very holistic approach.” – RBHA Staff*

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building community partnerships with PH providers to deploy integrated care management teams. While these in-network integrated teams allowed the RBHAs and their providers to leverage integrated data from the complete provider network, the health plans recognized that the principle of beneficiary choice resulted in some beneficiaries choosing to retain providers that were not a part of the health home. The care coordination of these beneficiaries was challenging to RBHAs as some of their records were outside the network. RBHAs recognized that this challenge was inherent to a beneficiary-centric model.

One RBHA created a BH home model by leveraging a geographically based community provider system founded on historical block grants for BH to integrate PH providers. Using community based BH providers as the foundation for the system, the RBHA partnered with local PH providers to create a BH home model. The RBHA added a layer of integrated care coordination over the local PH and BH providers to ensure that beneficiaries received integrated care at the local level. Additionally, the RBHA hired population health leads to collect and analyze data from the community-based sites to identify emerging trends and opportunities to target resources and improve care. The RBHA introduced this model for care coordination in 2015, and its continued success led the RBHA to implement the same model in its ACC line of business.

Two RBHAs partnered with external organizations to provide population management and engagement activities for hard-to-reach populations, such as homeless beneficiaries. RBHAs had greater success when they made the effort to meet beneficiaries in surroundings that were familiar to the beneficiaries rather than when outreach and engagement efforts relied solely on telephonic outreach. In some cases, this meant sending staff into the field to engage beneficiaries on the street.

All RBHAs offered education to integrate their teams internally and bridge the knowledge gap between PH and BH providers. Due to operational differences across the two sides of the healthcare system, PH and BH providers were accustomed to diverse ways of approaching care. All three RBHAs developed various training and education sessions to bring PH and BH providers together to understand how their respective systems work and how they could collaborate to improve care.

RBHAs partnered with external organizations to use proprietary data tools for identifying beneficiaries who were addicted to opioids or on a pathway leading to opioid addiction so that care managers could reach out directly to these beneficiaries and providers. Care managers ensured plans were in place to address existing opioid dependencies and avoid future opioid addiction. This partnership facilitated network development with pain clinics and established protocols to provide services to beneficiaries and prevent future opioid addiction.

One RBHA focused on proper discharge planning and follow-up to avoid future readmissions to prevent an over-reliance on inpatient psychiatric care. That information was collected and shared with the RBHA's BH homes to facilitate proper outreach to beneficiaries with higher risks of inpatient utilization.

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*"[W]e've had a system in place now for many years when it comes to behavioral health hospitalization. On the physical health side... as well as the current review team and at [RBHA] as a whole in making sure to work directly with those hospitals to make sure that hospitalizations were appropriate. We are involved and have a dedicated concurrent review team that is involved with those from day one, and as long as we get notified appropriately, we get directly involved to help with discharge planning. We really haven't had nearly as big of a challenge, frankly, on the inpatient side as we have watched our peers in [Another] County in particular deal with." – RBHA Staff on reducing inpatient utilization*

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Another RBHA involved care managers embedded in SMI clinics using a referral process to care management based on the "no wrong door" concept. Beneficiaries could be referred to all levels of care management by providers, clinic staff, internal staff, or utilization management teams. All medical management and care coordination took place through an integrated team of clinicians who leveraged expertise from both the PH and BH systems. This RBHA also incorporated PH care providers into its Assertive Community Treatment (ACT) teams.

All of the RBHAs reported using mobile applications (apps) for various purposes to assist their beneficiaries. Specifically, mobile apps were used to combat social isolation by providing beneficiaries with interactive engagement and allowing beneficiaries to connect with resources easily through the plan if necessary. Another RBHA leveraged a mobile app and behavioral economics to incentivize beneficiaries to improve medication adherence by offering financial rewards for checking into the app and taking their medications consistently for a period of 90 or 180 days.

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*"We have ACTs with PCP partnership teams, and we have a medical ACT team, so the PCP is an actual partner of the team, or PCP partnership teams have an actual PCP on-site. They're co-located. They have an integrated EMR [electronic medical record] and then they work to meet those needs of the beneficiaries." – RBHA Staff*

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All RBHAs used specialized teams to target specific populations and issues. Two RBHAs used focused teams to connect with the criminal justice system and to accept referrals for individuals being released from incarceration. The jail liaison connected beneficiaries with necessary services immediately upon release. This team interacted with law enforcement to divert beneficiaries in crisis to observational units, rather than sending them to a jail or an ED. One RBHA increased the number of crisis stabilization units as diversion settings to reduce the reliance on inpatient psychiatric facilities. RBHAs used focused crisis teams to engage beneficiaries faster by increasing the number of teams and having them placed in geographically strategic locations. Crisis teams were equipped with better technology to allow real-time scheduling of appointments immediately upon de-escalation of a crisis situation. Finally, one RBHA used a care management team that focused on its population with the most complex needs and developed beneficiary-driven plans and goals. The focused care management team worked closely with those beneficiaries for three to four months until the beneficiaries met their goals and transitioned back to their primary care and regular BH providers.

One RBHA used a specialized risk roster to identify high-risk beneficiaries with an SMI. The risk roster contained an integrated snapshot of each beneficiary's PH and BH conditions, medications, as well as SDOH, such as housing. The contents of the risk roster were shared with the RBHA's contracted providers to ensure that the beneficiary was treated with a holistic understanding of their background and current situation.

Finally, peer support was a key strategy. One RBHA's peer support program was available for inpatient facilities and helped to bridge beneficiaries to community support, and peers stayed connected to beneficiaries for up to 45 days post-discharge. RBHAs used peer support employees to provide guidance to beneficiaries who needed assistance or transitioned from inpatient to community care settings.

***Research Question 5.2: Have care coordination strategies for the SMI population changed as a result of ACC?***

The RBHAs increased their capacity to focus resources on complex care for beneficiaries living with an SMI once the general BH/substance use population transitioned from the RBHAs to the ACC health plans, the DD population transitioned to the ALTCS program, and CHP integrated PH and BH care. The transition of the general mental health/substance use population to integrated care under the ACC model did not impact the strategies used by the RBHAs to coordinate care for beneficiaries living with an SMI. If anything, care coordination strategies were better focused on the complexities and nuances of the population living with an SMI.

***Research Question 5.3: What care coordination strategies is AHCCCS conducting for its SMI population?***

Noting the stigma surrounding individuals living with an SMI, AHCCCS leveraged its Office of Individual and Family Affairs (OIFA) and Office of Human Rights to promote peer and family engagement, particularly in decision-making capacities, to effect change. AHCCCS expanded this approach and included a requirement in the RBHA contracts that the RBHAs have an OIFA.<sup>C-2</sup> This service was critically important for beneficiaries who were in a crisis state or experiencing a complex clinical case due to concurrent PH and BH conditions. AHCCCS and RBHA OIFA teams provided beneficiaries with a structure that helped increase independence. The peer and family engagement approaches to care coordination provided beneficiaries with support and engagement throughout the healthcare system.

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C-2 This requirement was not unique to RBHAs as it was also included in ACC contracts.

AHCCCS chose to maintain a single RBHA contract in each GSA of Arizona, providing a single health plan for beneficiaries living with an SMI. By maintaining a single point of contact, AHCCCS reduced the burden of navigating a bifurcated PH and BH system when beneficiaries have complex and nuanced needs.

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*“[H]aving that single entity is absolutely critical, I think, in terms of just offering that stability for them to be successful and find their path to recovery.” – State administrator on the importance of one RBHA per GSA.*

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AHCCCS worked directly with ACT teams in Maricopa County and expanded into outlying areas of the State. The ACT teams coordinated with the RBHAs through an ACT manager at the RBHA and provided intensive case management for beneficiaries by reducing the case manager workloads and allowing teams to navigate both the PH and BH needs of their beneficiaries. The ACT teams were beginning to specialize in various populations such as previously incarcerated beneficiaries, or medical specialties.

Finally, AHCCCS adopted an approach used by many health plans and providers to engage beneficiaries living with an SMI using a “meet them where they are” concept. This approach acknowledges that beneficiaries have different care needs and capabilities and seeks to assist those beneficiaries in making incremental progress toward their care goals while simultaneously listening and incorporating their feedback into AHCCCS’ efforts.

***Research Question 5.4: What care coordination strategies and/or activities are providers conducting for their SMI patients served by the RBHAs?***

Trainings offered by the RBHAs were more robust since 2018, with an increased focus on employment and independent living. The improved focus on employment and independent living helped to increase beneficiaries’ abilities to live more complete lives in their communities.

One hospital facility gave office space to a discharge planner from the RBHA who helped facilitate a client’s discharge. This was a good relationship because it was easier for inpatient psychiatrists to coordinate the discharge and the RBHA could help facilitate shorter hospital stays. Overall, this strategy was identified as positive for all parties involved.

Providers noted that RBHAs used the Pyx Health Program (Pyx) application for beneficiaries to combat loneliness and identify depressed beneficiaries. The application connected beneficiaries to the crisis line and assisted providers in performing immediate outreach. Providers were universally in favor of using applications such as Pyx.

In addition to these successful strategies to help coordinate care for beneficiaries, providers reported several challenges with some care coordination strategies. There were challenges coordinating care with outpatient health home providers and the RBHA helped with that coordination. Outpatient health homes were better incentivized to keep beneficiaries out of the hospital prior to October 2018, but they no longer had those incentives.

The RBHAs assisted with care coordination by contracting with transportation services. The contracted transportation companies required advance notice of up to three days which was challenging for beneficiaries with an SMI designation. Transportation companies were unreliable; providers feared patients were stranded at facilities or not given the assistance they needed to and from transportation vehicles.

The crisis response system had difficulties meeting all its requirements. Mobile response teams were required to show up within 30 minutes; response times were often longer. Additionally, while responders used to be two-

person teams with one licensed clinician, the teams switched to consist of a single case manager. Crisis responders did not always report back to providers with information needed for proper care coordination. Potential delays in care and failure to report back to providers on the results of crisis services were challenges to proper care coordination.

## PQC

The following sections provide descriptions of drivers of success, unintended consequences of the Demonstration, and ways in which the COVID-19 PHE impacted the beneficiaries and the Demonstration. These results are followed by descriptive narrative of specific topics about the education activities AHCCCS used prior to implementing the Demonstration, provider knowledge of the Demonstration, and any barriers to providing education encountered by AHCCCS prior to the implementation.

### *Drivers of Success*

Providers credited State administrators' communication and transparency during the implementation of the prior quarter coverage (PQC) waiver. Early and clear communication allowed providers to enact processes that assisted Medicaid-eligible patients in enrolling in a timely manner.

### *Unintended Consequences*

One unintended consequence of the elimination of PQC was the potential negative impact on beneficiaries who did not qualify for the dual-eligible Medicare Savings program but did qualify for the Special Low-Income Medicaid Beneficiary (SLMB) program. While this population may represent a small group of beneficiaries receiving services under PQC, the monetary impact on these beneficiaries could be significant when services are necessary.

One BH hospital contracted with a RBHA indicated that the cost for uncompensated care increased since the implementation of the PQC waiver because the hospital provided care to patients regardless of insurance status. Staff ensured that eligible patients were enrolled in Medicaid when necessary and noted that adults with an SMI designation were at a heightened risk of losing coverage due to the complexities of the system and challenges associated with living with a mental illness. The hospital reported an increase in uncovered days of care following the implementation of the PQC waiver and change in retroactive eligibility.

Other providers did not report this experience. Some providers discussed successful efforts in ensuring that eligible patients without coverage became enrolled in Medicaid as quickly as possible to prevent the accrual of uncompensated costs.

## COVID-19 PHE

State administrators did not report any challenges from the COVID-19 PHE that uniquely impacted beneficiaries with reduced retroactive eligibility.

One BH provider shared that the COVID-19 PHE special enrollment period provided by Healthcare.gov allowed individuals to easily enroll in Medicaid. When the BH provider identified individuals enrolled on Healthcare.gov as Medicaid eligible, the website redirected them to the appropriate state Medicaid enrollment process. This process increased Medicaid enrollments outside of the PQC waiver.

Several providers stated that the number of patients with Medicaid coverage increased following the implementation of the PQC waiver; however, these providers noted that the onset of the COVID-19 PHE six months after the implementation of the PQC waiver was a strong contributor to increased enrollments. Increases in unemployment and losses of employer-provided coverage resulted in more Medicaid-eligible and enrolled beneficiaries. No providers reported that the increase in Medicaid coverage was a result of the PQC waiver. It is important to note that the impact of the COVID-19 PHE was a confounding factor that individual perceptions were unlikely to disentangle effectively.

**Research Question 8.1: What activities did AHCCCS perform to educate beneficiaries and providers about changes to retroactive eligibility?**

State administrators performed several educational activities to prepare both providers and the public for the elimination of PQC. State administrators used the web-based provider portal and fee-for-service (FFS) and health plan newsletters to disseminate information about the proposed Demonstration. State administrators provided numerous materials for public review when planning to request the PQC waiver. These materials included a draft proposal for the waiver amendment and a FAQ sheet.<sup>C-3,C-4</sup> State administrators held community outreach events during which leadership met with the public in conference centers including a tribal consultation meeting, multiple public forums, and a State Medicaid Advisory Committee meeting.

60 percent of providers were aware of the PQC waiver and its policy change on retroactive eligibility; however, a portion of providers were not aware of the waiver. Of those providers who were not aware of the waiver, half noted that they probably missed a communication from State administrators since the agency was historically transparent. Two-thirds of the providers that were aware of the PQC waiver changes learned about the waiver from AHCCCS, while the remainder learned of the waiver from health plans.

**Research Question 8.2: Did AHCCCS encounter barriers related to informing providers about eliminating PQC?**

State administrators reported no barriers or challenges to providing education and outreach to the public or providers about the elimination of PQC.

## TI

The following sections provide descriptions of drivers of success, unintended consequences of the Demonstration, and ways in which the COVID-19 PHE impacted beneficiaries, providers, and the Demonstration. These results are followed by a narrative describing specific topics raised by AHCCCS State administrators concerning the barriers it encountered related to the implementation of the Targeted Investments (TI) Demonstration and its phases of implementation.

State administrators spent the first year implementing the TI program and enrolling eligible providers who applied to participate. State administrators sought stakeholder input from those impacted by the TI program to inform the

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C-3 Arizona Health Care Cost Containment System. Arizona Section 1115 Waiver Amendment Request: Draft Proposal to Waiver Prior Quarter Coverage. Available at: <https://www.azahcccs.gov/Resources/Downloads/PQCWaiverAmendmentRequest.pdf>. Accessed on: Nov 30, 2023.

C-4 Arizona Health Care Cost Containment System. Changes to Retroactive (Prior Quarter) Coverage FAQs Available at: <https://azahcccs.gov/PlansProviders/Downloads/190424RetroactiveFAQformattedv2.pdf>. Accessed on: Nov 30, 2023.

development process through a series of stakeholder meetings throughout the State. Providers, health plans, the HIE, and internal SMEs participated in the stakeholder meetings.

## Drivers of Success

State administrators identified four drivers of success centered on the concept of collaboration. First, State administrators engaged with stakeholders during the planning and implementation phases of the TI program to leverage their unique knowledge bases and ensure that the program dovetailed with other AHCCCS initiatives. Specifically, State administrators engaged the RBHAs to advise on the most appropriate provider organizations to engage the justice component of the TI program. Similarly, State administrators engaged DCS to advise on care coordination strategies best suited for children in foster care. Finally, State administrators engaged the health plans, the State HIE, and other health networks to obtain valuable insight regarding the use of HIEs and electronic health records (EHRs) to improve care integration and coordination.

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*“Our philosophy with the program was to be as transparent as possible.”*  
– State administrator

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*“...they were invaluable for being able to identify good strategies for using HIE and EHRs to improve care coordination and integration.”*  
– State administrator, speaking on the value of stakeholder meetings

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A second driver of success was State administrators’ extensive outreach efforts for recruitment during the first year of the TI program. State administrators’ outreach efforts to health plans, accountable care organizations (ACOs), and other large provider organizations raised engagement from smaller provider organizations through word-of-mouth. State administrators identified multiple networks that became champions of the program and encouraged others to participate. Applications to participate surged toward the end

of the first year, with program participants in approximately 600 sites.

A third driver of success came from AHCCCS’ partners in the Arizona State University (ASU) College of Health Solutions and Ira A. Fulton School of Engineering. The ASU Targeted Investment Program Quality Improvement Collaborative (TIP QIC)<sup>C-5</sup> provided a virtual environment for provider groups to meet to disseminate best practices and timely information for success in meeting TI program performance measure targets through real-time performance dashboards. Participation from both primary care and BH providers allowed both groups to better understand the concerns and issues experienced by others and react accordingly in a productive, success-oriented environment. The TIP QIC was beneficial in bringing together subject matter experts from across the State and allowing providers to share the solutions they found useful for leveraging technology to better integrate PH and BH.

A final driver of success involved the work of Health Current, the State HIE, which collaborated with providers throughout the State to resolve technical issues, provide solutions, and educate providers on how best to use the data within the HIE. State administrators noted that this collaboration by the HIE would benefit later years of the program, when performance measures for which the providers were accountable would influence how well they were using admit-discharge-transfer (ADT) alerts and data available from the HIE.

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<sup>C-5</sup> Targeted Investments Program Quality Improvement Collaborative. About. Available at: <https://tipqic.org/about.html>. Accessed on: Nov 16, 2023.

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*“[I]n some cases we’re kind of the tip of the spear on things that are happening in general.” – State administrator on the TI program at the forefront of quality improvement through integration.*

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State administrators did not encounter quality improvement and performance measurement issues associated with care integration in non-integrated settings. To measure performance that drove provider incentive payments, the TI program and ASU College of Health Solutions and Ira A. Fulton School of Engineering developed original approaches to the attribution of beneficiaries to providers and were transparent about how the approaches impacted

performance measure calculation. State administrators noted that issues with the TI program were common across other Demonstration programs, and the TI program informed the State of potential strategies and resolutions. For instance, State administrators created enhanced PCP assignment and value-based purchase policies to increase transparency and align attribution methodologies for quality incentives. The BH attribution methodology garnered attention from the American Public Health Association (APHA).

State administrators identified the providers who participated in the TI program since inception to work with the State and their payors in making the transition from integrated PH and BH care to more complex models of whole person care (WPC). The work that long-term participants did to be successful in the TI program provided insights about the future potential of collaborative care.

## COVID-19 PHE

In the preliminary stages of the COVID-19 PHE, AHCCCS advanced \$41 million in TI provider payments ahead of schedule to financially support health care providers participating in the TI program.<sup>C-6</sup> AHCCCS’ partner, ASU College of Health Solutions and the Ira A. Fulton Schools of Engineering, engaged in an analysis of the impact of the COVID-19 PHE restrictions on TI performance measures. Providers furnished services through telehealth, even services not previously provided through an electronic format. The TIP QIC facilitated this effort by providing a virtual platform for discussing related concerns (e.g., Telehealth Peds Well-Visit) engagement and sharing solutions with TI providers.

### **Research Question 6.1: Did AHCCCS encounter barriers related to the pre-implementation and implementation phases of TI?**

The shift from the initial larger Delivery System Reform Incentive Payment (DSRIP) proposal to the scaled-down TI program resulted in barriers. AHCCCS received approval for the TI program on January 18, 2017. At that time, State administrators still needed to complete significant development work for the program to be fully operational. Therefore, State administrators had limited time to acquire stakeholder input on the TI design, as many stakeholders still required education on the new program design. The first year required substantial effort by State administrators to educate providers on the design of the new program, the benefits of participation, and why the significant effort involved would be worthwhile. Enrolling eligible providers was a key focus of the State during the first year of operation.

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<sup>C-6</sup> Arizona Health Care Cost Containment System. (2020, April 27) *Arizona Medicaid Program Advances \$41 Million in Provider Payments to Address COVID-19 Emergency*. Available at: <https://azahcccs.gov/shared/News/GeneralNews/AHCCCSAdvancesFortyOneMilProviderPayments.html>. Accessed on: Nov 16, 2023.



State administrators revised many aspects of the program design quickly and concurrently with the implementation of the program following the shift in program design. Following the release of the core components and milestones for the program, providers presented State administrators with questions and input on program components that would reduce ambiguity and improve operational integrity. State administrators spent the first two years of the TI program working with health plans to ensure that the requirements of participation and TI milestones did not conflict with, or duplicate, the health plan network requirements. For example, State administrators worked with the health plans to ensure that requirements for care management and identification of

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*“We did not hesitate to edit or refine those requirements based on stakeholder feedback.”*  
– State administrator

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high-risk beneficiaries were complementary to the requirements of the health plan. Additionally, State administrators broadened the requirements around the qualifications for a care manager to accommodate staff collaborating with rural participants. While having years of lived experience in a care manager role, some staff did not meet the initial requirement of holding a master’s degree in social work or a registered nurse license.

The State faced challenges establishing the threshold for primary care assignment that determined which provider organizations were eligible to participate in the TI program. State administrators attempted to optimize limited funding and program impact by limiting primary care participation to Medicaid-facing practices. One approach to establish this threshold was to use PCP assignment as a proxy. State administrators found, however, that there were limitations to the health plans’ ability to report primary care assignment beyond the level of the Tax Identifier Number (TIN) used to identify specific provider organizations. For example, when provider organizations with multiple clinics across the State applied to participate in TI for a single clinic, State administrators and the health plans found that they needed to perform address matching to identify assigned beneficiaries for the organization as a whole and parse them into specific clinic locations. While establishing thresholds for the TI program was successful, developing a solution required collaboration between State administrators and the health plans in addition to substantial resource allocations to analyze the data.

The retention of participating providers in the TI program was another challenge. Some providers chose to terminate their participation in the TI program after a brief time once they received their incentive to apply. Other provider organizations experienced turnover in their leadership, losing the internal champion for the TI program who drove the initial application. The new staff assigned the responsibility of engaging with the TI program at some provider organizations were unfamiliar with the Demonstration and were not invested in the program, leading to attrition. In contrast, large provider organizations, integrated clinics, and hospitals were well-equipped for the requirements of the program and were already engaged in many of the required practices, thus improving their retention rates. While not discussed during the key informant interview process, it is important to note that in 2021, Arizona had a 42.3 percent turnover rate for direct support professionals (DSPs).<sup>C-7</sup>

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<sup>C-7</sup> National Core Indicators® Intellectual and Developmental Disabilities. *2021 State of the Workforce Survey Report*. Available at: <https://idd.nationalcoreindicators.org/wp-content/uploads/2023/02/2021StateoftheWorkforceReport-20230209.pdf>. Accessed on Feb. 1, 2024.



### Research Question 6.2: Did providers encounter barriers related to the pre-implementation and implementation phases of TI?

Providers reported operational challenges to implementing the TI program. Some noted that while the program goals and performance measure targets were clear, the lack of clear direction on how to make improvements was a barrier to success. These providers noted that many of the collaborative peer-learning meetings were unavailable at the beginning of the program, when they would have been most helpful.

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*“I really felt like we were flying blind in the beginning...having that peer collaborative in the beginning would have been helpful.” – Rural integrated clinic staff member*

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Providers operating near State borders struggled to collaborate with providers in other states to serve Arizona beneficiaries receiving services outside of the State or out-of-state residents receiving services in Arizona. The differences between the healthcare systems in Arizona and in neighboring states hindered effective communication, follow-up, and outreach to

patients. Unfamiliarity with the programs, regulations, and health plans in Arizona, and vice versa, effectively disabled care coordination efforts by these providers, even when they developed robust data infrastructures for the TI program.

A challenge raised by all TI providers, although not unique to the TI program, was the number of ACC health plans. Providers indicated that working with up to seven ACC health plans was both time-consuming and complicated. Each ACC health plan used different attribution methods, required different reporting systems, employed different requirements for prior authorizations, and focused on various aspects of quality improvement in the delivery of care. While providers understood and appreciated the competition, they indicated a desire for either fewer plans or greater standardization of administrative processes across health plans to reduce burden.

Providers struggled with the increased oversight by health plans regarding clinical decisions. Providers perceived this oversight as the health plans overstepping and becoming too involved in the patient-provider relationship. At the same time, providers reported that health plans were responsive to patients’ needs and were helpful in making connections with other providers in the community to facilitate the coordination of care.

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*“It is exhausting, to be totally honest, because there’s just so many, everybody wants their own [processes and reporting], and it’s really, really complicated. If they could all kind of consolidate and do things similar, it would be really helpful, but we spend an inordinate amount of time trying to follow along.” – Urban integrated clinic staff member speaking about the challenge of working with seven ACC health plans.*

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*“Until HIE can really figure out how to incorporate behavioral health, specifically, substance use into the data, it kind of fails us, to be honest.” – Rural integrated clinic staff member*

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Finally, providers voiced appreciation for the HIE, including the ADT alerts and the PH data that were available to them. Providers experienced challenges because of the lack of data available for BH and SUD due to Title 42 CFR, Part 2. While providers may use the HIE, those treating beneficiaries with SUD found substantial challenges to using the data.



## Appendix D. CMS Approved Evaluation Design

The Evaluation Design for Arizona's Section 1115 Waiver Demonstration (the Waiver) was approved by the Centers for Medicare & Medicaid Services (CMS) on November 19, 2020. The CMS-approved Evaluation Design can be found at the following link:

[https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign\\_without\\_letter.pdf](https://www.azahcccs.gov/Resources/Downloads/1115Waiver/CMSApprovedAHCCCSEvaluationDesign_without_letter.pdf).