2023 Performance Improvement Project Snapshot Report

Breast Cancer Screening

April 2024

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1. Background

The Arizona Health Care Cost Containment System (AHCCCS) contracted with Health Services Advisory Group, Inc. (HSAG), a qualified external quality review organization (EQRO), to conduct evaluation and validation of its AHCCCS-mandated performance improvement projects (PIP). HSAG used the Department of Health and Human Services, Centers for Medicare & Medicaid Services (CMS) publication, *Protocol 1. Validation of Performance Improvement Projects: A Mandatory EQR-Related Activity*, February 2023 (CMS Protocol 1).[1-1]

HSAG's evaluation of the PIP included two key components of the quality improvement (QI) process:

1. HSAG evaluated the technical structure of the PIP to ensure that the Contractor designs, conducts, and reports the PIP in a methodologically sound manner, meeting all State and federal requirements. HSAG's review determines whether the PIP design (e.g., aim statement, population, indicator(s), sampling methods, and data collection methodology) is based on sound methodological principles and could reliably measure outcomes. Successful execution of this component ensures that reported PIP results are accurate and capable of measuring sustained improvement.
2. HSAG evaluated the implementation of the PIP. Once designed, a Contractor's effectiveness in improving outcomes depends on the systematic data collection process, analysis of data, and the identification of barriers and subsequent development of relevant interventions. Through this component, HSAG evaluates how well the Contractor improves its rates through implementation of effective processes (i.e., barrier analyses, intervention design, and evaluation of results).

The goal of HSAG's PIP validation was to ensure that AHCCCS and key stakeholders could have confidence that a Contractor executed a methodologically sound improvement project, and any reported improvement was related to and could be reasonably linked to the QI strategies and activities conducted by a Contractor during the PIP.

Methodology

Breast cancer is the most common female cancer in the United States for every major ethnic group, the second most common cause of cancer death in women,[1-2] and accounts for 15 percent of all new cancer diagnoses in the U.S.[1-3] Ensuring that all women receive regular breast cancer screening is critically

[1-1] Department of Health and Human Services, Centers for Medicare & Medicaid Services. *Protocol 1. Validation of Performance Improvement Projects: A Mandatory EQR-Related Activity*, February 2023. Available at: https://www.medicaid.gov/medicaid/quality-of-care/downloads/2023-eqr-protocols.pdf. Accessed on: Mar. 15, 2024.

[1-2] Jemal A, Siegel R, Ward E, et al. Cancer Statistics, 2009. CA Cancer J Clin. 2009 Jul-Aug;59(4):225-49.Epub 2009 May 27. Available at: Cancer Statistics, 2009 - Jemal - 2009 - CA: A Cancer Journal for Clinicians - Wiley Online Library. Accessed on: Mar 15, 2024.

[1-3] Howlader N, Noone AM, Krapcho M, et al. SEER Cancer Statistics Review, 1975-2016, National Cancer Institute. Bethesda, MD; 2016. Available at: Cancer Statistics Review, 1975-2016 - SEER Statistics. Accessed on: Mar 15, 2024.

important in disease prevention, early detection, and treatment. In 2019, an estimated 268,600 new cases of invasive breast cancer will be diagnosed among women.[1-4] breast cancer screening for women is aimed at identifying breast abnormalities as early as possible, and ideally, before warning signs or symptoms are present when the chances of survival are the highest. Approximately one in eight women (13 percent) will be diagnosed with invasive breast cancer in their lifetime, and one in 39 women (3 percent) will die from breast cancer.[1-5]

Breast cancer is most frequently diagnosed among women ages 55–64 years with the median age of diagnosis at 62 years of age.[1-2] While there are other factors that affect a woman's risk of developing breast cancer, age is a primary risk factor. By age 40, the chances are one in 68; by age 50 it becomes one in 43; by age 60, it is one in 29.[1-6] Even if breast cancer incidences cannot be substantially reduced for some women who are at high risk for developing the disease, the risk of death from breast cancer can be reduced by regular screenings.

Purpose

For this year's 2023 validation, the Contractors continued this state-mandated clinical PIP topic: *Breast Cancer Screening (BCS)*. The topic addressed CMS' requirements related to quality outcomes—specifically, the quality, timeliness, and accessibility of care and services.

The purpose of the *BCS* PIP is to increase the number and percentage of breast cancer screenings. The aim of this PIP is to achieve, through ongoing measurements and interventions, significant improvement sustained over time.

Contractors Reviewed

AHCCCS maintains managed care agreements with several Contractors to administer its Medicaid Managed Care program. A general description of each AHCCCS program and the associated Contractors reviewed are included below.

Arizona Long Term Care System-Elderly and Physically Disabled (ALTCS-EPD) Program

The ALTCS-EPD Program provides long-term services and supports (LTSS) as well as integrated physical and behavioral health services to eligible members who are elderly and/or have a physical disability.

[1-4] American Cancer Society. Breast Cancer Facts & Figures 2019–2020. Atlanta: American Cancer Society, Inc. 2019. Available at: Breast Cancer Facts & Figures 2019-2020. Accessed on: Mar 15, 2024.
[1-5] Howlader N, Noone AM, Krapcho M, et al. SEER Cancer Statistics Review, 1975-2016, National Cancer Institute. Bethesda, MD; 2016. Available at: Cancer Statistics Review, 1975-2016 - SEER Statistics. Accessed on: Mar 15, 2024.
[1-6] National Business Group on Health. 2011. "Pathways to Managing Cancer in the Workplace." (May 8, 2012).

Table 1-1—ALTCS-EPD Program Contracted MCOs

ALTCS-EPD Program Contractors	
Contractor Name	**Contractor Abbreviation**
Banner-University Family Care	BUFC LTC
Mercy Care	Mercy Care LTC
UnitedHealthcare Community Plan	UHCCP LTC

Population

The population included women, aged 50 to 74, who are continuously enrolled with no more than one gap in enrollment of up to 45 days during the measurement period, in alignment with the associated measure specifications.

Indicator Criteria

The focus of the *BCS* PIP was to increase the number and percentage of breast cancer screenings. The PIP had one aim statement: *The goal is to demonstrate a statistically significant increase in the number and percentage of women receiving breast cancer screening followed by sustained improvement for one consecutive year*.

Table 1-2 outlines the indicator criteria for the *BCS* PIP.

Table 1-2—Performance Indicator Criteria for *BCS* PIP

Performance Indicator	Numerator (N) and Denominator (D)
The percentage of women 50–74 years of age who had a mammogram to screen for breast cancer.	**N**—Number of women who had one or more mammograms any time on or between October 1 two years prior to the measurement year and December 31 of the measurement year.* **D**—The eligible population

**One or more mammograms any time on or between July 1 two years prior to the measurement year and September 30 of the measurement year for calendar year ending (CYE) 2019 measurement year only.*

Data Sources

The PIP was conducted by using administrative data collection methodologies in alignment with the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set

(HEDIS®) technical specifications. AHCCCS administrative encounter data and Contractor-specific claims were used to identify performance indicator data.

Measurement Periods

For Contract Year Ending (CYE) 2023 validation, the Contractors submitted Remeasurement 1 data for the *BCS* PIP. The measurement period dates for the PIP are listed below. Table 1-3 presents the measurement periods for the *BCS* PIP.

Table 1-3—Measurement Periods for *BCS* PIP

***BCS* PIP**				
CYE 2019	**Calendar Year (CY) 2020**	**CY 2021**	**CY 2022**	**CY 2023**
Baseline Measurement (10/1/2018–09/30/2019)	Intervention Year 1 (01/01/2020–12/31/2020)	Intervention Year 2 (01/01/2021–12/31/2021)	Remeasurement Year 1 (01/01/2022–12/31/2022)	Remeasurement Year 2 (01/01/2023–12/31/2023)

Typically, PIPs include one intervention year; however, to account for the impact of the coronavirus disease 2019 (COVID-19) public health emergency (PHE), the *BCS* PIP includes two intervention years within its design during which Contractors implemented strategies and interventions to improve performance. CYE 2019 served as the baseline year for most Contractors, except BUFC LTC[1-7] To evaluate performance indicator improvement, the remeasurement years align with CYs; the first remeasurement year is reflective of CY 2022 (January 1, 2022, through December 31, 2022), and the second remeasurement year is reflective of CY 2023 (January 1, 2023, through December 31, 2023.

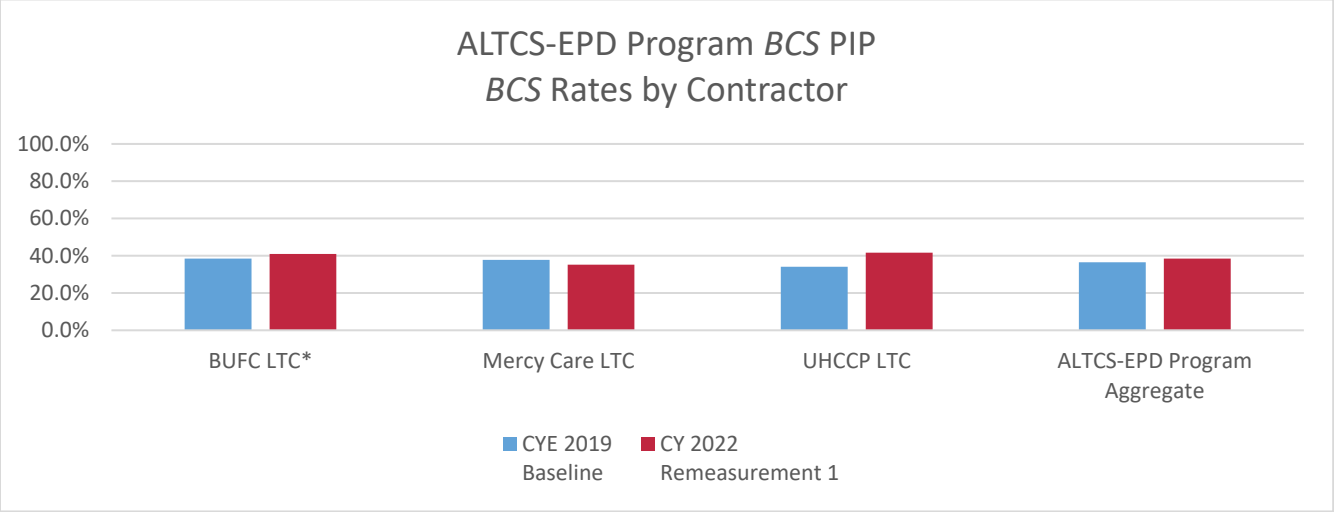
[1-7] In CYE 2019, the BUFC LTC indicator rate had a small denominator, which did not allow reporting of the measure. As such, CY 2020 served as the baseline for BUFC LTC.

Performance Indicator Results

ALTCS-EPD Program

For each Contractor, the performance indicator results for baseline and Remeasurement 1 are compared in Figure 2-1 below. To account for the impact of the COVID-19 PHE, this PIP is inclusive of two intervention years. [2-1]

Figure 2-1— ALTCS-EPD Program *BCS* PIP—*BCS* Rates by Contractor



*In CY 2019, the BUFC LTC performance measure rate for Performance Indicator 1 had a small denominator, which did not allow reporting of the measure. Therefore, the rate above reflects CY 2020 as the baseline period for Performance Indicator 1 for BUFC LTC.

Baseline Results

Contractor *BCS* rates ranged from a low of 34.1 percent (UHCCP LTC) to a high of 38.5 percent (BUFC LTC). The ALTCS-EPD Program Aggregate baseline rate was 36.5 percent. The baseline rate for two of the three Contractors exceeded the ALTCS-EPD Program Aggregate rate. In CYE 2019, the BUFC LTC indicator rate had a small denominator, which did not allow reporting of the measure. As such, CY 2020 served as baseline.

[2-1] To account for the impact of the coronavirus disease 2019 (COVID-19) public health emergency (PHE), the *Back to Basics* PIP includes two intervention years within its design during which Contractors implemented strategies and interventions to improve performance.

Remeasurement 1 Results

Contractor-level indicator rates demonstrated an increase at Remeasurement 1 compared to baseline rates with one exception. As a result, the ALTCS-EPD Program Aggregate rate increased at Remeasurement 1.

Two of the three Contractors showed an increase in the rates between baseline and Remeasurement 1, with a 2.0 percentage point increase for the ALTCS-EPD Program Aggregate rate. UHCCP LTC had a statistically significant 7.5 percentage point increase from 34.1 percent to 41.6 percent, while BUFC LTC [2-2] had a non-statistically significant 2.5 percentage point increase from 38.5 percent to 41.0 percent.

Disparities

AHCCCS requires each of its Contractors to conduct and include subpopulation and disparity analysis findings for the *BCS* PIP. The Contractors must also ensure that interventions are initiated to address specific data analysis findings.

HSAG identified that each Contractor provided evidence that the required subpopulation, disparity analysis and interventions were present in the *BCS* PIP and submitted for annual validation.

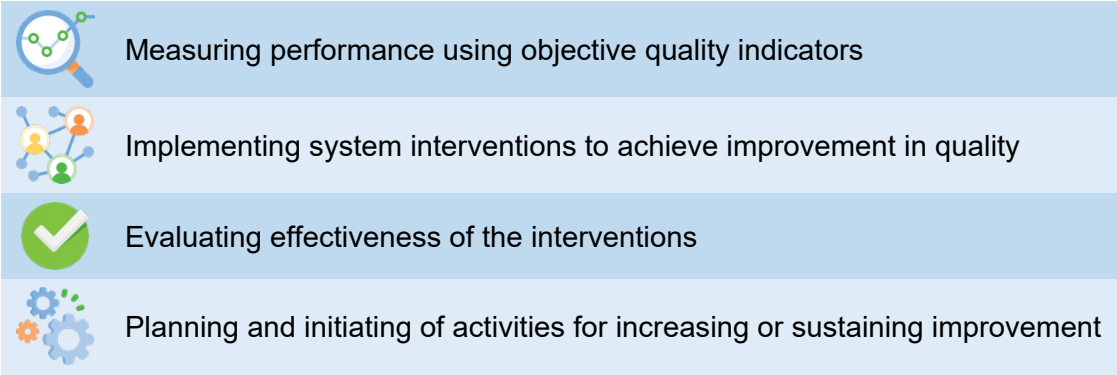
Data Validation

For the project to achieve real improvements in care and for interested parties to have confidence in the reported improvements, the PIPs must be designed, conducted, and reported using sound methodology and must be completed in a reasonable time. This structured method of assessing and improving Contractor processes is expected to have a favorable effect on health outcomes and member satisfaction.

The primary objective of PIP validation is to determine the validity and reliability of a PIP through assessing a Contractor's compliance with State and federal requirements. For CYE 2023, AHCCCS required Contractors to conduct PIPs in accordance with Title 42 Code of Federal Regulations (CFR) §438.330(b)(1) and §438.330(d)(2)(i–iv). In accordance with §438.330(d)(2)(i–iv), each PIP must include:

[2-2] CY 2020 served as the baseline measurement period for BUFC LTC when comparing the baseline rate to the Remeasurement 1 rate.

Figure 2-2—PIP Validation Requirements



HSAG used the AHCCCS PIP Report, which each Contractor completed and submitted to HSAG, for its review and validation. The AHCCCS PIP Report standardizes the process for submitting information regarding PIPs and ensures alignment with the CMS protocol requirements.

HSAG, with AHCCCS's input and approval, developed a PIP Validation Tool to ensure a uniform validation of the PIPs. Using this tool, HSAG evaluated each of the PIPs according to CMS Protocol 1. The HSAG PIP Team consisted of, at a minimum, an analyst with expertise in statistics, PIP design, and performance improvement processes, and a clinician with expertise in performance improvement processes. CMS Protocol 1 identifies nine steps that should be validated for each PIP. The nine steps included in the PIP Validation Tool are listed below:

Table 2-1—CMS Protocol Steps

Protocol Steps	
Step Number	**Description**
1	Review the Selected PIP Topic
2	Review the PIP Aim Statement
3	Review the Identified PIP Population
4	Review the Sampling Method
5	Review the Selected Performance Indicator(s)
6	Review the Data Collection Procedures
7	Review the Data Analysis and Interpretation of PIP Results
8	Assess the Improvement Strategies
9	Assess the Likelihood that Significant and Sustained Improvement Occurred

HSAG used the methodology described below to evaluate PIPs conducted by the Contractors to determine PIP validity and to rate the compliance with CMS Protocol 1.

Each required step is evaluated on one or more elements that form a valid PIP. The HSAG PIP Review Team scores each evaluation element within a given step as *Met*, *Partially Met*, *Not Met*, *Not Applicable*, or *Not Assessed*. HSAG designates evaluation elements pivotal to the PIP process as "critical elements." For a PIP to produce valid and reliable results, all critical elements must be *Met*. Given the importance of critical elements to the scoring methodology, any critical element that receives a *Not Met* score results in an overall rating of *No Confidence* for the PIP. The Contractor is assigned two confidence levels, the overall confidence of adherence to acceptable methodology for all phases of the PIP and the overall confidence that the PIP achieved significant improvement.

In addition to the two overall confidence levels, HSAG assigns the PIP a percentage score for all evaluation elements (including critical elements) for each confidence level. HSAG calculates the percentage scores by dividing the total number of elements scored as *Met* by the total number of elements scored as *Met*, *Partially Met*, and *Not Met* with *Not Assessed* and *Not Applicable* elements removed. HSAG also calculates a critical element percentage score by dividing the total number of critical elements scored as *Met* by the sum of the critical elements scored as *Met*, *Partially Met*, and *Not Met* with *Not Assessed* and *Not Applicable* elements removed. HSAG assessed the PIP's results for the two confidence levels using the following methods.

1. Overall Confidence of Adherence to Acceptable Methodology for All Phases of the PIP

- *High Confidence*: High confidence in reported PIP results. All critical evaluation elements were *Met*, and 90 to 100 percent of all evaluation elements were *Met* across all steps.
- *Moderate Confidence*: Moderate confidence in reported PIP results. All critical evaluation elements were *Met*, and 80 to 89 percent of all evaluation elements were *Met* across all steps.
- *Low Confidence*: Low confidence in reported PIP results. Across all steps, 65 to 79 percent of all evaluation elements were *Met*; or one or more critical evaluation elements were *Partially Met*.
- *No Confidence*: No confidence in reported PIP results. Across all steps, less than 65 percent of all evaluation elements were *Met*; or one or more critical evaluation elements were *Not Met.*

2. Overall Confidence That the PIP Achieved Significant Improvement

- *High Confidence*: All performance indicators demonstrated *statistically significant* improvement over the baseline.
- *Moderate Confidence*: To receive Moderate Confidence for significant improvement, one of the three scenarios below occurred:
  - All performance indicators demonstrated improvement over the baseline **and** some but not all performance indicators demonstrated *statistically significant* improvement over the baseline.
  - All performance indicators demonstrated improvement over the baseline **and** none of the performance indicators demonstrated *statistically significant* improvement over the baseline.
  - Some but not all performance indicators demonstrated improvement over baseline **and** some but not all performance indicators demonstrated *statistically significant* improvement over baseline.

- *Low Confidence*: The remeasurement methodology was not the same as the baseline methodology for at least one performance indicator **or** some but not all performance indicators demonstrated improvement over the baseline and none of the performance indicators demonstrated *statistically significant* improvement over the baseline.
- *No Confidence*: The remeasurement methodology was not the same as the baseline methodology for all performance indicators **or** none of the performance indicators demonstrated improvement over the baseline.

The Contractors had the opportunity to receive initial PIP validation scores and detailed feedback, request technical assistance and guidance from HSAG, make any necessary corrections, and resubmit the PIP for final validation. HSAG provided the completed validation tools to AHCCCS and the Contractors.

Validation Findings

HSAG's validation evaluates the technical methods of the PIP (i.e., the design, data analysis, implementation, and outcomes). Based on its review, HSAG determined the overall methodological validity of the PIP. Table 2-2 summarizes the Contractors' *BCS* PIP validated during the review period with an overall confidence level of *High Confidence, Moderate Confidence, Low Confidence* or *No Confidence* for the two required confidence levels identified below. In addition, Table 2-2 displays the percentage score of evaluation elements that received a *Met* validation score, as well as the percentage score of critical elements that received a *Met* validation score. Critical elements are those within the PIP Validation Tool that HSAG has identified as essential for producing a valid and reliable PIP.

Table 2-2 displays the overall confidence levels for the *BCS* PIP for the ALTCS-EPD Program.

Table 2-2—ALTCS-EPD Program *BCS* PIP Overall Confidence Levels

Contractor	Overall Confidence of Adherence to Acceptable Methodology for All Phases of the PIP			Overall Confidence That the PIP Achieved Significant Improvement		
	Percentage Score of Evaluation Elements *Met*[1]	Percentage Score of Critical Elements *Met*[2]	Confidence Level[3]	Percentage Score of Evaluation Elements *Met*[1]	Percentage Score of Critical Elements *Met*[2]	Confidence Level[3]
BUFC LTC	87%	89%	*Low Confidence*	67%	100%	*Moderate Confidence*
Mercy Care LTC	100%	100%	*High Confidence*	33%	100%	*No Confidence*
UHCCP LTC	100%	100%	*High Confidence*	100%	100%	*High Confidence*

[1] **Percentage Score of Evaluation Elements *Met***—The percentage score is calculated by dividing the total elements *Met* (critical and non-critical) by the sum of the total elements of all categories (*Met*, *Partially Met*, and *Not Met)*.
[2] **Percentage Score of Critical Elements *Met***—The percentage score of critical elements *Met* is calculated by dividing the total critical elements *Met* by the sum of the critical elements *Met*, *Partially Met*, and *Not Met*.
[3] **Confidence Level**—Populated from the PIP Validation Tool and based on the percentage scores.

All but one Contractor adhered to acceptable methodology through all phases of the PIP. BUFC LTC did not perform statistical testing between the baseline performance indicator rate and the Remeasurement 1 performance indicator rate, resulting in a *Low Confidence* level for adhering to acceptable methodology for all phases of the PIP. However, BUFC LTC did achieve non-statistically significant improvement between the *BCS* baseline rate and Remeasurement 1 rate, resulting in a *Moderate Confidence* level related to achieving significant improvement. Only UHCCP LTC achieved statistically significant improvement between the baseline rate and the Remeasurement 1 rate, resulting in a *High Confidence* for both confidence levels.

Data Limitations

The following data limitations were noted as part of the AHCCCS *BCS* PIP:

- As of CYE 2020, AHCCCS has transitioned to Contractor-calculated performance measure rates reflective of CY measurement periods for evaluating Contractor performance to support MCO oversight and external quality review (EQR) annual reporting. As such, the baseline measurement period did not use the same 12-month period as the Remeasurement 1 period. The baseline measurement period was October 1, 2019, through September 30, 2020. The Remeasurement 1 measurement period was CY 2022—January 1, 2022, through December 31, 2022.
- CYE 2019 served as the baseline year for most Contractors, except BUFC LTC which used CY 2020 as the baseline year for Performance Indicator 1. In CYE 2019, the BUFC LTC performance indicator rate had a small denominator, which did not allow reporting of the measure; therefore, CY 2020 served as the baseline year.

3. Conclusions and Recommendations

Conclusions

All Contractors adhered to acceptable methodology through all phases of the PIP with one exception. All Contractors were able to measure the effectiveness of interventions and perform accurate statistical testing except one Contractor that did not perform statistical testing between the baseline rate and the Remeasurement 1 rate. One Contractor was able to achieve statistically significant improvement when comparing the baseline rate to Remeasurement 1 rate, while a second Contractor achieved non-statistically significant improvement at Remeasurement 1. As such, the ALTCS-EPD Program Aggregate rate demonstrated an increase at Remeasurement 1 compared to the baseline rate.

Recommendations

To support successful progression of the *BCS* PIP in the next CY, HSAG recommends that the Contractors:

- Seek technical assistance from HSAG to understand the requirements for statistical testing, if needed.
- Revisit the causal/barrier analysis used to develop interventions and adjust the interventions to facilitate improvement.
- Continue to implement identified interventions with clearly defined intervention effectiveness measures to assess the effectiveness of each intervention.
- Develop interventions that affect a large enough percentage of the eligible population to drive improvement in the overall indicator rates.

Appendix A. Acknowledgements and Copyrights

HEDIS® refers to the Healthcare Effectiveness Data and Information Set and is a registered trademark of the NCQA.