



Performance Improvement Project Developmental Screening - Final Report

September 2022

Background

The first three years of a child's life are full of immense growth and development. Early development typically follows a sequence. For example, the process of motor development follows this sequence: hold head up, roll over, sit, roll from back to stomach to sit, crawl or creep, move from sit to crawl and back again, pull to stand, stand alone, cruise, and finally, walk¹. Knowledge and awareness of developmental norms are necessary to identify developmental delays. Concurrently, early identification of developmental delays is crucial when providing effective interventions. The Centers for Disease Control and Prevention (CDC) identify developmental disabilities as "a group of conditions caused by an impairment in one or more developmental domains (e.g., physical, learning, communication, behavior, or self-help)²." All children develop at different rates; however, a child may need a developmental screening if that child fails to demonstrate a skill that should be mastered by a certain age.

Developmental disabilities occur within all racial, ethnic, and socioeconomic populations. They can include ADHD, autism, learning and intellectual disabilities, and cerebral palsy. The Journal of the American Academy of Pediatrics estimates that in the United States, about one in six children ages 3 through 17 years have at least one developmental delay; that accounts for 15 percent of children within that age group³. Another study within the journal showed that at 24 months of age, nearly 14 percent of children have developmental delays, with only 10 percent of those children receiving services for their needs⁴.

Children with identified developmental disabilities need health care services that supply them with the education and tools needed to live healthy, productive, and fulfilling lives. While some developmental disabilities can be improved with the right types of therapeutic interventions, others may be lifelong disabilities which can be managed with the right types of interventions. In addition, some health conditions, such as asthma, gastrointestinal symptoms, eczema and skin allergies, and migraine headaches, have been found to be more common among children with developmental disabilities⁵.

During a well-child visit, a pediatrician looks for potential concerns using both developmental surveillance and discussions with parents regarding concerns they may have about their child's development. If any issues are noted, a pediatrician should follow through with a developmental screening. AHCCCS has approved developmental screening tools which should be utilized for developmental screenings by all participating PCPs who care for Early and Periodic Screening, Diagnostic and Treatment (EPSDT)-aged members. PCPs must be trained in the use and scoring of the developmental screening tools, as indicated by the American Academy of Pediatrics. The developmental screening should be completed for EPSDT-aged members from birth through three years of age during the 9 month, 18 month, and 24 month EPSDT visits.

Purpose

The purpose of this Performance Improvement Project was to increase the number of children screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the twelve months preceding their first, second, or third birthday.

Population

The population included:

- Acute-care members, Medicaid, ages 0-3
- Comprehensive Medical and Dental program (CMDP) members, ages 0-3
- Arizona Long Term Care System (ALTCS) Developmental Disabilities (DD) members, ages 0-3

Note: Eligible population criteria are defined within the *CMS Child Core Set Technical Specifications and Resource Manual* ⁶ for the associated measurement period.

Indicator Criteria

Indicator 1:

The percent (overall and by Contractor) of AHCCCS-enrolled members who received a screening for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.

Numerator

Indicator 1: The total number of members in the eligible population who had an encounter with CPT code 96110 (with or without the use of an EP modifier) in the 12 months preceding their first, second, or third birthday.

Denominator

Indicator 1: The total number of AHCCCS-enrolled members who turned 1, 2, or 3 during the measurement period and meet the population criteria.

Data Sources

AHCCCS administrative data sources were used to identify indicator data. It is important to note, only the following tools were utilized for this study: Ages and Stages Questionnaire (ASQ) – 2 months to 5 years; Parent’s Evaluation of Developmental Status (PEDS) – Birth to 8 years; and Modified Checklist for Autism in Toddlers (MCHAT) – 16 months to 30 months.

Data Validation

The data validation studies examine professional encounters and facility encounters. The studies produce an overall accuracy rate based on receipt, accuracy, and timeliness. The population was

validated to ensure that members meet the criteria for inclusion in the study and that data collected from administrative sources (i.e., AHCCCS encounters) meet numerator and denominator criteria. The data were validated through review of a random sample of members included in the denominator (as well as those not selected for the denominator), and a random sample of numerator data.

Arizona Snapshot (Total PIP Population)

CYE 2016

There was a total of 106,227 members who turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 25,122 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 23.6 percent of members were screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.

CYE 2018

There was a total of 111,880 members who turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 33,472 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 29.9 percent of members were screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percentage of change of 26.7 percent and a statistical significance value of $P < .001$ when compared to CYE 2016 rates.

CYE 2019

There was a total of 102,196 members who turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 35,246 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 34.5 percent of members were screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percentage of change of 46.2 percent and a statistical significance value of $P < .001$ when compared to CYE 2016 rates.

Acute Care/AHCCCS Complete Care (ACC) Snapshot

CYE 2016

For the Acute Care/AHCCCS Complete Care (ACC) health plans, a total of 105,889 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 25,038 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 23.6 percent of members were screened for risk of developmental, behavioral, and social

delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.

CYE 2018

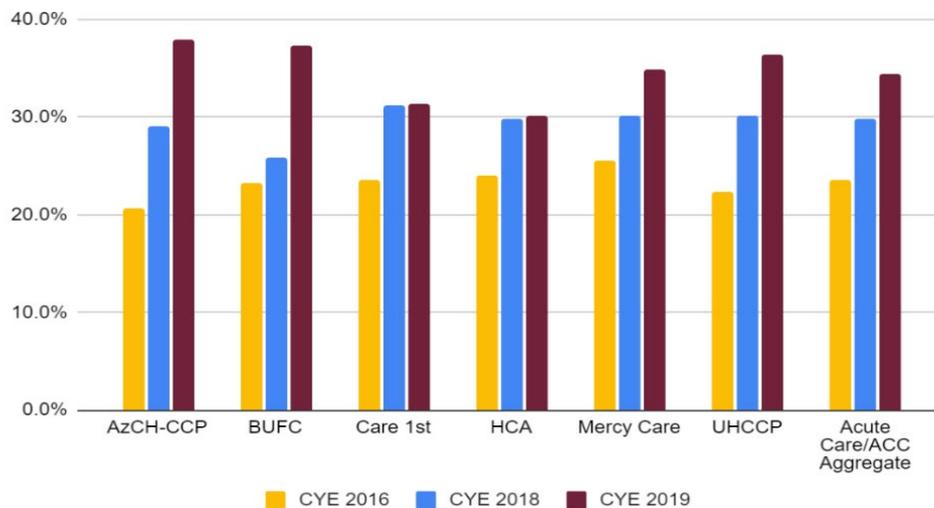
For the Acute Care/AHCCCS Complete Care (ACC) health plans, a total of 111,505 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 33,378 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 29.9 percent of members were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percent of change of 26.7 percent and a statistical significance value of P<.001 when compared to CYE 2016 rates.

CYE 2019

For the Acute Care/AHCCCS Complete Care (ACC) health plans, a total of 100,231 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 34,447 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 34.4 percent of members were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percent of change of 45.8 percent and a statistical significance value of P<.001 when compared to CYE 2016 rates.¹

Performance Trend

Table 1: Acute Care/ACC Developmental Screening Rates - Total by Contractor^{1,2}



¹ Caution should be exercised when comparing the CYE 2018 Acute Care aggregate rates with the CYE 2019 ACC aggregate rates due to the changes to the ACC program, the addition of one new ACC Contractor, the removal of CMDP from the ACC aggregate rates, and the integration of the CRS population into the ACC program.

² AzCH = Arizona Complete Health – Complete Care Plan; BUFC = Banner-University Family Care, HCA = Health Choice Arizona; UHCCP = UnitedHealthcare Community Plan

For additional information specific to Contractor-specific rates and interventions, please refer to the CYE 2019 EQR Reports published on the AHCCCS website.

Comprehensive Medical and Dental Program (CMDP)³ Snapshot

CYE 2016

For the Comprehensive Medical and Dental Program (CMDP) health plan, a total of 2,178 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 654 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 30 percent of members were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.

CYE 2018

For the Comprehensive Medical and Dental Program (CMDP) health plan, a total of 1,793 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 676 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 37.7 percent of members were screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percentage of change of 25.7 percent and a statistical significance value of $P < .001$ when compared to CYE 2016 rates.

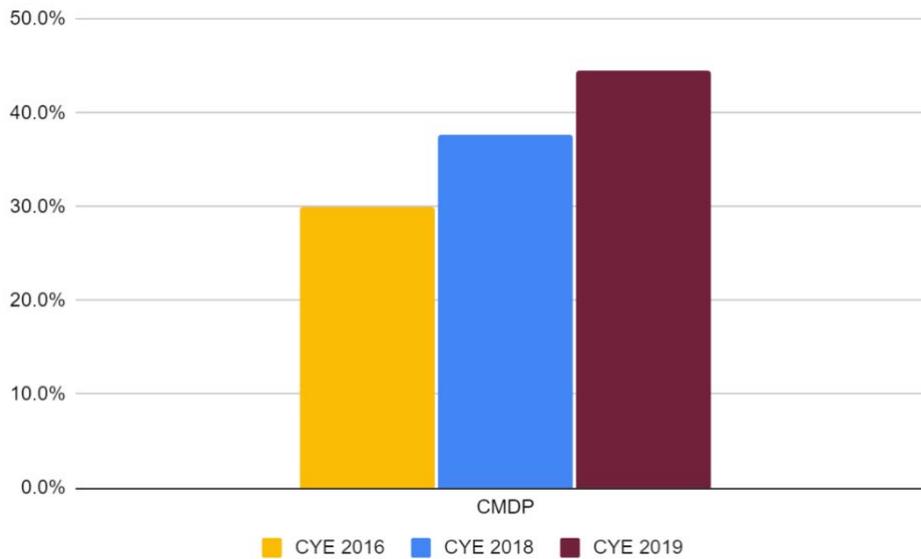
CYE 2019

For the Comprehensive Medical and Dental Program (CMDP) health plan, a total of 1,558 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 694 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 44.5 percent of members were screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percentage of change of 48.3 percent and a statistical significance value of $P < .001$ when compared to CYE 2016 rates.

Department of Child Safety (DCS) Comprehensive Health Plan (CHP) was known as the Comprehensive Medical and Dental Program (CMDP) prior to April 1, 2022.

Performance Trend

Table 2: CMDP Developmental Screening Rate - Total



For additional information related to Contractor-specific rates and interventions, please refer to the CYE 2019 EQR Reports published on the AHCCCS website.

ALTCS Developmental Disabilities (DD) Snapshot

CYE 2016

For the ALTCS-DD health plan, a total of 338 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 84 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 24.9 percent of members were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.

CYE 2018

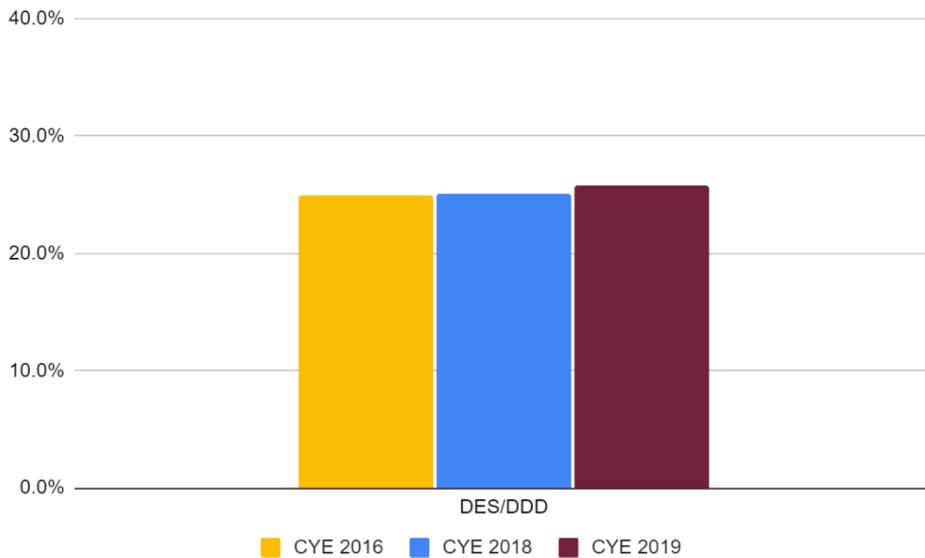
For the ALTCS-DD health plan, a total of 375 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 94 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 25.1 percent of members were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percentage of change of 0.8 percent and a statistical significance value of P=0.947 when compared to CYE 2016 rates.

CYE 2019

For the ALTCS-DD health plan, a total of 407 members turned 1, 2, or 3 years of age during the measurement period and met the population criteria. Of those members, 105 were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This indicates 25.8 percent of members were screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday. This reflects a relative percentage of change of 3.6 percent and a statistical significance value of P=0.768 when compared to CYE 2016 rates.

Performance Trend

Table 3: DDD Developmental Screening Rate - Total



For additional information related to Contractor-specific rates and interventions, please refer to the CYE 2019 EQR Reports published on the AHCCCS website.

Disparities

The CYE 2018 and CYE 2019 data were analyzed by age, gender, county, and race/ethnicity in order to determine if any disparities existed. Disparities identified using both the Comparative Disparity Method and chi squared statistical significance testing are included below.

Age

The percent of members in the eligible population screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday are based on standardized Developmental Screening measure age stratifications. The developmental screening rates (stratified by age and total) are presented

below.

Table 4: Arizona Snapshot: Rates by Associated Age Ranges

Arizona Snapshot	Members Who Turned 1	Members Who Turned 2	Members Who Turned 3	Total: Members Who Turned 1, 2, or 3
CYE 2016	21.1%	27.5%	23.1%	23.6%
CYE 2018	27.1%	34.0%	29.2%	29.9%
CYE 2019	30.0%	40.3%	34.7%	34.5%

With regards to the total number of members in the eligible population screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday, no disparities were identified based on age for CYE 2018 and CYE 2019.

Gender

With regards to the total number of members in the eligible population screened for a risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday, no disparities were identified based on gender for CYE 2018 and CYE 2019.

Region and County

The total number of members in the eligible population screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday, was analyzed in both urban and rural communities to determine if any disparities existed by region. At an aggregate level, CYE 2018 reporting did not demonstrate disparities for urban or rural regions. The CYE 2018 aggregate results were also analyzed by county, which demonstrated disparities for the Apache, Gila, Navajo, Santa Cruz, and Yavapai counties. The CYE 2019 aggregate results were also analyzed by county, which demonstrated disparities for the Apache, Gila, Graham, Greenlee, Navajo, Santa Cruz, and Yavapai counties.

Race/Ethnicity

The same data was analyzed by race/ethnicity to determine if any disparities existed. At an aggregate level, a disparity was noted for the American Indian population in CYE 2018 and CYE 2019 reporting, when compared to all other ethnic and racial groups in the total number of members screened for risk of developmental, behavioral, and social delays using a standardized screening tool in the 12 months preceding their first, second, or third birthday.

Data Limitations

The following data limitations were noted as part of the AHCCCS Developmental Screening Performance Improvement Project:

- Disparity analysis was conducted for the following measurement periods: CYE 2018 and CYE 2019.
- Due to system limitations, the CYE 2018 and CYE 2019 disparity analysis is reflective of combined race and ethnicity categories.
- Overrepresentation of “unknown” race/ethnicity noted within the data due to system limitations.⁴
- CYE 2016 rates included two Contractors no longer contracted with AHCCCS as an acute care health plan for CYE 2018; as such, the two Contractors were not included within the CYE 2018 and CYE 2019 rates reported above.
- Data reported for the CYE 2019 ACC aggregate rates reflect changes to the ACC program, which include the addition of one new ACC Contractor that was not included within the CYE 2016 and CYE 2018 rates, the removal of CMDP from the ACC aggregate rates, and the integration of the CRS population into the ACC program.

⁴ The CYE 2018 interim report omitted the unknown race/ethnicity category; however, the analysis was updated to align with the methodology utilized for CYE 2019 which is inclusive of the unknown category.

Works Cited

1. **Ashford, Jose B and LeCroy, Craig Winston.** *Human Behavior in the Social Environment A Multidimensional Perspective.* Belmont: Brooks/Cole, Cengage learning, 2010.
2. **Rice, Catherine E, et al., et al.** Screening for Developmental Delays Among Young Children - National Survey of Children's Health, United States, 2007. *Morbidity and Mortality Report.* 2014, Vol. 63, 2.
3. Trends in the Prevalence of Developmental Disabilities in US Children. **Boyle, Coleen A, et al., et al.** Elk Grove Village: Pediatrics, 2011, Vol. 127.
4. *Prevalence of developmental delays and participation in early intervention services for your children.* **Rosenberg, S A and Zhang, Robinson D.** 6, Elk Grove Village: Pediatrics, 2008, Vol. 121.
5. **Centers for Disease Control and Prevention.** Facts About Developmental Disabilities. *Centersfor Disease Control and Prevention.* [Online] CDC, February 12, 2012. [Cited: May 14, 2015.] <http://www.cdc.gov/ncbddd/developmentaldisabilities/facts.html>.
6. **Centers for Disease Control and Prevention.** Core Set of Children's Health Care Quality Measures for Medicaid and CHIP (Child Core Set) Technical Specifications and Resource Manual for Federal Fiscal Year 2020 Reporting. [Online] CDC, March, 2020. [Cited: December 14, 2020] <https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-and-chip-child-core-set-manual.pdf>