



Immunizations for Adolescents Completion Rates



A biennial report evaluating the compliance rates of adolescent immunizations for adolescents thirteen years of age enrolled in AHCCCS, Arizona's Medicaid program.

**Acute Care, Comprehensive
Medical and Dental Program
(CMDP), Children's
Rehabilitative Services (CRS)
and the Division of Development
Disabilities (DDD) Contractors**

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Health Care Management**

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"Our first care is your health care."

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IMMUNIZATIONS FOR ADOLESCENTS COMPLETION RATES

A Biennial Report for the Measurement Period Ending September 30, 2017

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IMMUNIZATIONS FOR ADOLESCENTS COMPLETION RATES

A Biennial Report for the Measurement Period Ending September 30, 2017

EXECUTIVE SUMMARY

“Diseases that used to be common in this country and around the world, including polio, measles, diphtheria, pertussis (whooping cough), rubella (German measles), mumps, tetanus, rotavirus and *Haemophilus influenzae* type b (HiB) can now be prevented by vaccination”¹. Children are born with an immune system made up of cells, tissues and organs designed to defend the body against infectious organisms. When organisms are introduced into the body, several cell type work together to detect and respond to these organisms with antibodies². Once produced, antibodies remain in the body so that in the event the body encounters these organisms again they can respond quickly. Immunizations prevent specific diseases by introducing the body to antigens which will in turn protect a person from future attacks by organisms or germs by acting quickly to attack and remove them.

Since 1993, the Arizona Health Care Cost Containment System (AHCCCS) has regularly measured the immunization status of children 24 months of age. The Childhood Immunization Completion Rates report is presented in accordance to state law (ARS 36-2904), which requires a biennial status of 24-month immunization completion rates for children served by the AHCCCS. AHCCCS also measures the number of enrolled adolescents who received immunizations recommended by the Centers of Disease Control and Prevention (CDC) by thirteen years of age. This report evaluates adolescent immunization compliance for each AHCCCS Acute Care, Comprehensive Medical and Dental (CMDP), Children’s Rehabilitative Services (CRS) and Division of Development Disabilities (DDD) contracted health plans (Contractors).

Arizona law requires adolescents to receive specific vaccines to attend school with exceptions only for medical, religious or personal belief reasons. The Arizona Department of Health Services evaluates exemption rates and reported an increase in exemption rates from 2016 to 2017. The trend for Personal Belief Exemption (PBE) rates for 6th grade student increased from 4.4% to 5.1% respectively³.

AHCCCS has established minimum performance standards (MPS) for Immunizations for Adolescent rates which are used to evaluate Contractor performance. Contractors must meet the MPS for each vaccine and vaccine series; if they perform lower than the MPS they must implement a Corrective Action Plan (CAP) and may be subject to regulatory actions, which may include sanction(s) if they fail to improve their rates.

Methodology

AHCCCS used the Centers for Medicare and Medicaid Services (CMS) technical specifications developed for the *Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP*⁴ (*Child Core Set*). A random sample of adolescents who turned thirteen years of age on or between October 1, 2016 and September 30, 2017 and who were continuously enrolled twelve months prior to the child’s thirteenth birthday were included in this study.

All data was collected according to applicable privacy and confidentiality laws and safeguards. AHCCCS first sent the sample to the Arizona Department of Health Services (ADHS) to obtain data from the Arizona State Immunization Information System⁵ (ASIIS), which is an electronic registry maintained by ADHS. The ASIIS registry was searched by first and last name and date of birth within the AHCCCS file. ADHS then provided AHCCCS with all immunization dates in the registry for those members for which it was able to find a match. The sample was then sent to the Contractors who conducted a hybrid audit for those members, meaning they gathered medical records and/or claims to confirm a member’s receipt of documented vaccinations and potential receipt of missing vaccinations.

Overall Results and Analysis

Aggregate performance rates for individual and combination immunizations are shown in the table below. The final sample consisted of 3,943 adolescents enrolled with nine Contractors whose thirteenth birthdays occurred during Contract Year Ending (CYE) 2017.

Since last evaluated:

- The Immunizations for Adolescent (IMA) measure is now inclusive of human papillomavirus (HPV) and a Combination 2 rate that includes adolescents receiving all three of the recommended individual immunizations.
- In previous studies, HPV looked specifically at the number of female adolescents receiving the HPV immunization by thirteen years of age; however, as part of the Immunization for Adolescent measure, HPV now looks at both male and female adolescents receiving the HPV immunization by thirteen years of age.

**Aggregate Individual/Combination Immunizations for Adolescent Completion Rates
Measurement Period Ending September 30, 2017**

	Meningococcal (1 dose)	Tdap (1dose)	HPV (2 or 3 doses)	Combination 1	Combination 2
AHCCCS MPS (%)	75%	75%	50%*	75%	N/A**
Medicaid Mean FFY 2016	77.4%	84.9%	22.7%	75.1%	20.8%
Current AHCCCS Rate (%)	86.8%	89.9%	40.4%	86.2%	39.5%
Previous AHCCCS Rate (%)	89.5%	91.2%	N/A	88.8%	N/A

Rates in bold met or exceeded the AHCCCS MPS

** HPV MPS in Contract specific to female adolescents*

***Combination 2 was not a contractually required measure for CYE 2017; therefore, no established MPS in place for comparison*

AHCCCS rates were compared with the most recent national means for Medicaid health plans as reported by the National Committee for Quality Assurance (NCQA) within the State of Health Care Quality 2017 report⁶. NCQA produces this report annually and it focuses on quality issues the country faces and assists in driving improvement in the delivery of evidence-based medicine and care. The report trends performance over time, tracks variations in care and recommends quality improvement. When compared to the mean for Medicaid on a national level, Arizona met or exceeded the national mean for all adolescent immunizations.

Conclusion

AHCCCS will provide the data and rates for this measurement period to Contractors for additional analysis so they may identify barriers and develop interventions to improve their performance. Contractors continue comprehensive outreach efforts to encourage parents to complete scheduled immunizations for their adolescents and to providers to schedule appointments necessary to administer vaccinations. AHCCCS and its Contractors also continue to promote completion and timely immunizations for all populations served with a specific focus on childhood and adolescent immunizations. AHCCCS, AHCCCS Contractors, and relevant stakeholders work collaboratively to develop interventions and education

initiatives between measurement periods, which include monitoring local, state and national trends that could potentially impact immunization rates.

AHCCCS will continue to work with and monitor Contractors, especially those with lower compliance, to assist them in making progress toward reaching state and national goals.

IMMUNIZATIONS FOR ADOLESCENTS COMPLETION RATES

A Biennial Report for the Measurement Period Ending September 30, 2017

OVERVIEW

Background

Since 1993, AHCCCS has measured the immunization rates of adolescents thirteen years of age. Arizona Revised Statute 36-2904 requires that AHCCCS submit a report to the Governor and Legislature that represents a statistically valid sample evaluating the number of AHCCCS enrolled children who received immunizations recommended by the Centers for Disease Control and Prevention (CDC) by age two. AHCCCS also measures the number of enrolled adolescents who received immunizations recommended by the CDC by age thirteen. This report evaluates adolescent immunization compliance for each AHCCCS Acute Care, Comprehensive Medical and Dental (CMDP), Children's Rehabilitative Services (CRS) and Division of Development Disabilities (DDD) contracted health plans (Contractors).

This report includes 2017 measurement results of three individual vaccines and two combination vaccines, which protect against five different diseases and viruses: meningococcal, tetanus, diphtheria toxoids and acellular pertussis (Tdap); and human papillomavirus (HPV).

Vaccination is important not only to the individual, but also to those living in their communities. "When a sufficiently high proportion of a population is vaccinated against communicable diseases, the entire population can obtain protection."⁷ Within the United States childhood diseases have decreased by 95 percent due to immunizations since the end of the 20th century⁸. Monitoring of immunization completion rates is critical to identifying under-vaccinated populations and increasing coverage levels in order to prevent outbreaks of disease.

AHCCCS established Minimum Performance Standards (MPS) for adolescent immunization rates, both individual and combinations, which are used in evaluating Contractor performance. If a Contractor does not meet the MPS set for a specific immunization or combination, the Contractor must develop and implement a Corrective Action Plan (CAP) and may be subject to regulatory action which may include sanction(s).

Changes

Since last evaluated:

- The Immunizations for Adolescent (IMA) measure is now inclusive of human papillomavirus (HPV) and a Combination 2 rate that includes adolescents receiving all three of the recommended vaccinations.
- In previous studies, HPV looked specifically at the number of female adolescents receiving the HPV immunization by thirteen years of age; however, as part of the Immunization for Adolescent measure, HPV now looks at both male and female adolescents receiving the HPV immunization by thirteen years of age.

Medicaid Mean

AHCCCS rates were compared with the most recent national means for Medicaid health plans as reported by the National Committee for Quality Assurance (NCQA) within the State of Health Care Quality 2017 report⁶. NCQA produces this report annually and it focuses on quality issues this country faces and assists in driving improvement in the delivery of evidence-based medicine and care. The report trends performance over time, tracks variations in care and recommends quality improvement. When compared to the mean for Medicaid on a national level, Arizona met or exceeded the national mean for all adolescent immunizations.

AHCCCS Performance Measure Standards for Adolescent Immunizations
Measurement Period Ending September 30, 2017

Immunization	AHCCCS Minimum Performance Standard (MPS)	Medicaid Mean FFY 2016
Meningococcal - 1 doses	75%	77.4%
Tdap – 1 dose	75%	84.9%
HPV – 2 or 3 doses	50% *	22.7%
Combination 1	75%	75.1%
Combination 2	N/A**	20.8%

* HPV MPS in Contract specific to Female Adolescents

**Combination 2 was not a contractually required measure and, therefore, did not have an established MPS in place for comparison

PURPOSE OF THE MEASUREMENT

This study was conducted to determine the immunization rates of AHCCCS members who turned thirteen years of age by September 30, 2017 and to evaluate Contractor performance. Aggregate rates are reported to determine the compliance rates of adolescents enrolled in AHCCCS statewide. Individual Contractor rates are reported separately to evaluate the performance of each Contractor. Results of the current measurement year stratified by race/ethnicity and county are also included to determine if any disparities exist and assist in identifying opportunities for improvement.

QUALITY INDICATORS

This immunization study utilized the Centers for Medicare and Medicaid Services (CMS) technical specifications and resource manual for federal fiscal year 2017 reporting specific to the *Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP⁴ (Child Core Set)*. The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) included provisions to strengthen the quality of care provided to and health outcomes of children in Medicaid and CHIP. CHIPRA required the U.S. Department of Health and Human Services (HHS) to identify and publish a core measure set of children’s health care quality measures for voluntary use by State Medicaid and CHIP programs. All quality indicators are based on identical denominator criteria. These indicators are listed below with the numerator criteria.

- Meningococcal – the total number of adolescents in the denominator who received at least one meningococcal conjugate vaccine on or between the adolescent’s 11th and 13th birthdays.
- Tdap – the total number of adolescents in the denominator who received at least one tetanus, diphtheria toxoids, and acellular pertussis (Tdap) vaccine on or between the adolescent’s 10th and 13th birthdays.

- HPV – the total number of adolescents in the denominator who received either of the following on or between the adolescent’s 9th and 13th birthdays:
 - At least two HPV vaccines (HPV Vaccine Administered Value Set), with different dates of service on or between the adolescent’s 9th and 13th birthdays. There must be at least 146 days between the first and second dose of the HPV vaccine. For example, if the service date for the first vaccine was March 1, then the service date for the second vaccine must be after July 25
 - At least three HPV vaccines (HPV Vaccine Administered Value Set), with a different dates of service on or between the adolescent’s 9th and 13th birthdays
- Combination 1 – the total number of adolescents in the denominator who received at least one meningococcal conjugate vaccine on or between the adolescent’s 11th and 13th birthdays and at least one tetanus, diphtheria toxoids, and acellular pertussis (Tdap) vaccine on or before the adolescent’s 10th and 13th birthdays.
- Combination 2 – the total number of adolescents in the denominator who received at least one meningococcal conjugate vaccine on or between the adolescent’s 11th and 13th birthdays; at least one tetanus, diphtheria toxoids, and acellular pertussis (Tdap) vaccine on or before the adolescent’s 10th and 13th birthdays; and At least two HPV vaccines (HPV Vaccine Administered Value Set), with different dates of service on or between the adolescent’s 9th and 13th birthdays , or three HPV vaccines with a date of service on or before the adolescent’s 9th and 13th birthdays.

For further information related to technical specifications utilized, please refer to the CMS *Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP (Child Core Set) Technical Specifications and Resource Manual*⁹.

METHODOLOGY

The measurement included adolescents who turned thirteen years of age during the contract year ending (CYE) September 30, 2017, who were continuously enrolled with AHCCCS Contractors and were eligible under Medicaid (Title XIX of the Social Security Act).

Eligible population

- Adolescents who turn thirteen years old during the measurement year
- Adolescents who were continuously enrolled 12 months prior to the thirteenth birthday
- Adolescents with no more than one gap in enrollment of up to 45 days during the 12 months prior to the adolescent’s thirteenth birthday
- Adolescents who were enrolled on their thirteenth birthday

Study Sample

AHCCCS pulled a random sample of eligible members inclusive of an oversample for a total of 453 members per Contractor. One Contractor did not have a large enough population to pull a sample from; therefore, their entire eligible population was used for this measure. The total sample for all contractors was 3,943 members.

Data Collection

AHCCCS identified all eligible adolescents enrolled with AHCCCS and pulled a random sample of members inclusive of an oversample for each Contractor. AHCCCS then collaborated with the Arizona Department of Health Services (ADHS) to obtain data from the Arizona State Immunization Information System (ASIIS) which is an electronic registry maintained by ADHS. AHCCCS provided ADHS with an electronic file containing the members included for this study. The ASIIS registry was searched by first and last name and date of birth within the AHCCCS file. The registry was further searched to match against other factors such as adolescent or mothers' social security number; this was done only in the event that more than one member was found with the same name and date of birth. ADHS provided AHCCCS with all immunizations in the registry for those members included in the file if an immunization existed within the registry. The data was then merged with any vaccination data for administration of vaccines collected from the AHCCCS encounter system through the AHCCCS Data Warehouse.

Respective samples were provided to the Contractors with the vaccination data that had been collected through the means identified above. Contractor personnel were instructed on the purpose of the study, the methodology, data collection methods and internal quality control/validation procedures to ensure that data was collected and reported to AHCCCS in a consistent and reliable manner. Contractor staff collected additional data from medical records and/or any claims (encounter) not yet received or processed by AHCCCS. Dates collected were entered into an excel file and all relevant documentation which provides proof that a vaccine was administered was submitted by the Contractors to AHCCCS.

Data Validation

AHCCCS reviewed documentation submitted by Contractors to verify valid exclusions and validate the administration of vaccinations in accordance with CMS *Core Set of Children's Health Care Quality Measures for Medicaid and CHIP (Child Core Set) Technical Specifications and Resource Manual*⁹. This included the review and validation of any listed date of service that did not meet the standard methodology in regards to allowable time periods and/or supporting documentation requirements.

For further information related to technical specifications utilized, please refer to the CMS [*Core Set of Children's Health Care Quality Measures for Medicaid and CHIP \(Child Core Set\) Technical Specifications and Resource Manual*](#)⁹.

Data Analysis

Once data collection and validation was finalized, AHCCCS merged the data from the Contractors and performed a primary analysis. Following CMS technical specifications, if the data showed that an individual member received two doses of the same vaccine with dates of service that were within 14 days of each other as gathered through both administrative and medical record documentation, the doses were considered a single immunization. This allowed for data from different sources to be combined, while reducing the possibility of counting the same immunization twice due to data entry errors. The primary analysis provided results on the percentage of members who were age-appropriately immunized by thirteen years of age for each quality indicator overall, by individual Contractor, by county and by race/ethnicity.

Data Limitation

Data obtained from ASIIS and provided to the Contractors for hybrid review included dates of service outside of that allowed per CMS *Core Set of Children's Health Care Quality Measures for Medicaid and CHIP (Child Core Set) Technical Specifications and Resource Manual*⁹, thus potentially impacting the individual Contractor and AHCCCS aggregate rates provided as part of this report. Analysis of this limitation not available at the time this report was published.

RESULTS

The final sample consisted of 3,943 adolescents enrolled in AHCCCS across nine Contractors. The sample included 453 members for all but one health plan, of which had an eligible population too small to sample from; therefore, their entire population was used for the study. Compliance rates for the combined health plans along with comparative data are as follows:

Aggregate Individual/Combination Immunizations for Adolescent Completion Rates Measurement Period Ending September 30, 2017

	Meningococcal (1 dose)	Tdap (1dose)	HPV (2 or 3 doses)	Combination 1	Combination 2
AHCCCS MPS (%)	75%	75%	50%*	75%	N/A**
Medicaid Mean FFY 2016	77.4%	84.9%	22.7%	75.1%	20.8%
Current AHCCCS Rate (%)	86.8%	89.9%	40.4%	86.2%	39.5%
Previous AHCCCS Rate (%)	89.5%	91.2%	N/A	88.8%	N/A

Rates in bold met or exceeded the AHCCCS MPS

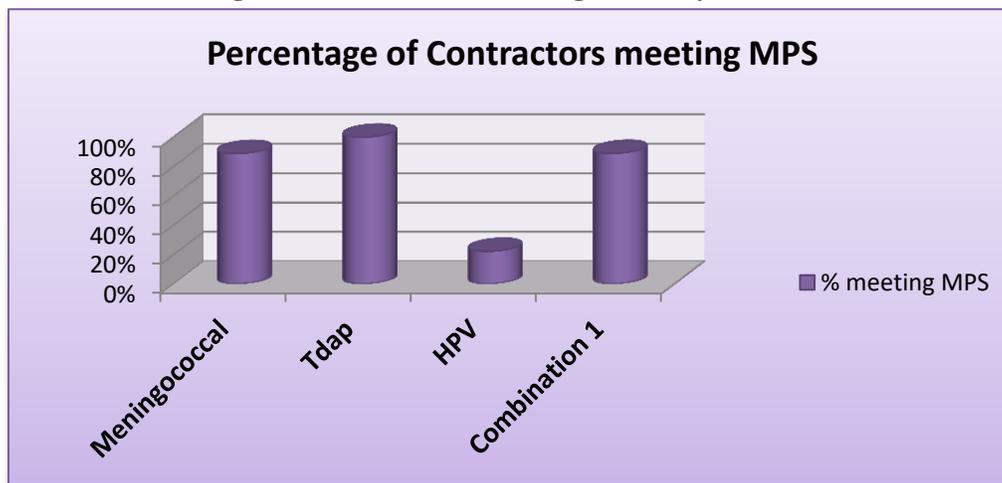
** HPV MPS in Contract specific to Female Adolescents*

***Combination 2 was not a contractually required measure for CYE 2017; therefore, no established MPS in place for comparison*

Statewide, two individual and one combination immunization rate met the MPS set; however, the total number of adolescents receiving the Meningococcal and Tdap individual immunizations and the Combination 1 immunization showed a statistically significant decrease from the previous measurement period. Statistical significance for HPV and Combination 2 were unable to be calculated as historical rates were not available or comparable due to changes in methodology noted within this report.

Refer to Graph 1 to review the percentage of Contractors who met or exceeded the AHCCCS established MPS by immunization.

**Graph 1:
Percentage of Contractors Meeting MPS, by Immunization**



Results by Contractor

For the Medicaid population, there were eighteen reported individual rates and nine combination rates that allowed for calculation of statistical significance when looking at immunizations by Contractor. For those eighteen reported individual rates, two Contractors demonstrated a statically significant increase for both Meningococcal and Tdap and one Contractor demonstrated a statically significant increase for Meningococcal; whereas, two Contractors demonstrated a statically significant decrease for both Meningococcal and Tdap and one Contractor demonstrated a statically significant decrease for Tdap. Of those nine combination rates, three Contractors demonstrated a statistically significant increase and two Contractors demonstrated a statistically significant decrease.

Two Contractors met the MPS for all measure evaluation as part of this study; yet, decreases were experienced in the aggregate for Meningococcal and Combination 1 Immunizations. At the Contractor level, it is important to note that nineteen of the twenty-seven reported rates for individual immunizations and eight of the nine Combination 1 rates met the established MPS. (Combination 2 was not a contractually required measure and, therefore, did not have an established MPS in place for comparison.)

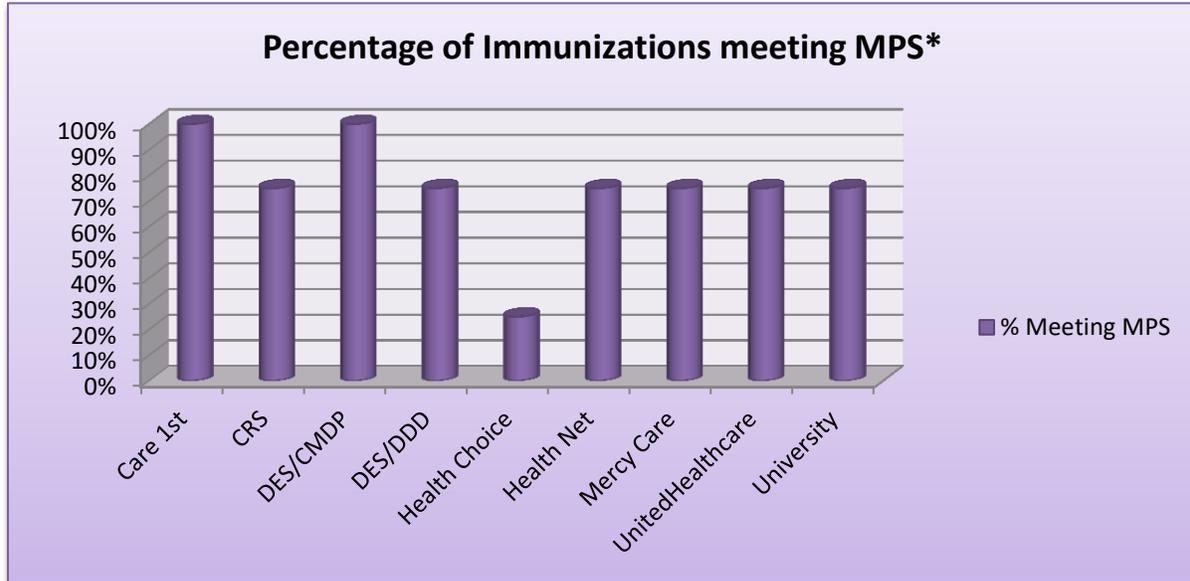
**Table 1:
Medicaid Rates for Individual and Combination Immunizations, by Contractor**

AHCCCS Contractor	Percent of Immunizations Completed by 13 Years of Age				
	Meningococcal (1 dose)	Tdap (1dose)	HPV (3 doses)	Combination 1	Combination 2
Care 1 st Arizona	92.1	91.8	55.4	91.6	55.4
	93.7	94.1	N/A	93.5	N/A
CRS	94.9	95.8	43.9	94.3	43.3
	90.1	92.9	N/A	89.5	N/A
DES/CMDP	95.6	97.2	59.9	95.3	59.2
	94.0	95.4	N/A	94.0	N/A
DES/DDD	83.2	84.5	22.5	81.7	22.1
	76.5	78.1	N/A	73.8	N/A
Health Choice Arizona	56.7	79.0	12.8	56.1	8.6
	85.8	87.4	N/A	85.6	N/A
Health Net Access	83.7	84.3	36.6	83.2	35.5
	72.4	77.4	N/A	70.4	N/A
Mercy Care Plan	94.7	94.7	44.6	94.7	44.6
	96.6	97.6	N/A	95.7	N/A
UnitedHealthcare	89.6	90.5	44.8	89.2	44.2
	86.2	90.9	N/A	85.4	N/A
University Family Care	93.4	93.6	49.0	92.7	48.6
	96.4	97.0	N/A	96.4	N/A
TOTAL	86.8	89.9	40.4	86.2	39.5
PREVIOUS TOTAL*	89.5	91.2	N/A	88.8	N/A

Note: The shaded lines are representative of previous (CYE 2015) measurements. Bolded CYE 2017 rates indicate results equal to or above the Minimum Performance Standard.

** Rates inclusive of two Contractors (Maricopa Health Plan and Phoenix Health Plan) no longer active as of CYE 2017.*

**Graph 2:
Percentage of Immunizations Meeting MPS, by Contractor**



**Graph not inclusive of Combination 2 as it was not a contractually required measure for CYE 2017; therefore, no established MPS in place for comparison*

Results by County

The data was analyzed by county in order to determine if any disparities (significant variance) exists by region. Counties who had 100 percent compliance for any immunization were not included in the disparity analysis. While these counties are included in the tables below, they were not used in calculating disparities. For individual immunizations: Mohave County had comparatively lower rates for three immunizations (Meningococcal, Tdap, and HPV); Pinal County had comparatively lower rates for two immunizations (Meningococcal and Tdap); Coconino County had comparatively lower rates for one immunization (Meningococcal); and Navajo County had comparatively lower rates for one immunization (Tdap). Combination 1 showed disparity within Coconino, Mohave and Pinal Counties; whereas, Combination 2 showed disparity within Coconino and Mohave County. Contractors which serve counties showing disparities for any vaccine will be encouraged to study potential barriers leading to lower compliance. (Note: Apache, Gila, Graham, Greenlee, and La Paz Counties not reported due to insufficient sample size for statistical analysis.)

**Table 3:
Percentage of Immunizations Completed by 13 Years of Age, by County**

County	Percent of Immunizations Completed by 13 Years of Age				
	Meningococcal (1 dose)	Tdap (1dose)	HPV (3 doses)	Combination 1	Combination 2
Apache	NRNR	NR	NR	NR	NR
Cochise	89.0%	90.1%	50.5%	89.0%	50.5%
Coconino	64.7%	88.2%	29.4%	64.7%	20.6%
Gila	NR	NR	NR	NR	NR

County	Percent of Immunizations Completed by 13 Years of Age				
	Meningococcal (1 dose)	Tdap (1dose)	HPV (3 doses)	Combination 1	Combination 2
Graham	NR	NR	NR	NR	NR
Greenlee	NR	NR	NR	NR	NR
La Paz	NR	NR	NR	NR	NR
Maricopa	87.9%	90.5%	39.0%	87.3%	38.2%
Mohave	51.6%	74.7%	20.9%	51.6%	13.2%
Navajo	80.0%	81.8%	34.5%	80.0%	34.5%
Pima	88.7%	91.4%	47.7%	88.0%	47.2%
Pinal	82.4%	84.8%	35.2%	81.4%	33.8%
Santa Cruz	97.4%	97.4%	40.8%	97.4%	40.8%
Yavapai	84.4%	85.3%	39.4%	84.4%	39.4%
Yuma	95.6%	95.6%	56.6%	94.1%	56.6%
TOTAL	86.8%	89.9%	40.4%	86.2%	39.5%

Bold indicates a disparity exists

NR- Insufficient sample size for statistical analysis

Results by Race/Ethnicity

The data was analyzed by race/ethnicity in order to determine if any disparities exists. At an aggregate level, no disparities were noted for any of the reported individual or combination immunization rates. Contractors should further analyze their data to identify any Contractor-specific disparities related to race/ethnicity and develop interventions to improve compliance rates. (Note: Race/Ethnicity category reflective of “Other” not reported due to insufficient sample size for statistical analysis.)

**Table 5:
Percentage of Immunizations Completed by 13 Years of Age, by Race/Ethnicity**

Race/Ethnicity	Percent of Immunizations Completed by 13 Years of Age				
	Meningococcal (1 dose)	Tdap (1dose)	HPV (3 doses)	Combination 1	Combination 2
Asian/Pacific Islander	84.1%	87.0%	39.1%	84.1%	37.7%
African American	87.6%	89.6%	36.8%	87.6%	36.2%
Caucasian	84.5%	88.6%	38.6%	84.0%	37.6%
Hispanic	88.9%	89.9%	41.6%	87.5%	40.8%
American Indian/ Alaska Native	89.6%	95.1%	35.4%	89.6%	34.7%
Other	NR	NR	NR	NR	NR
Unknown	89.3%	91.6%	44.8%	88.6%	43.9%
TOTAL	86.8%	89.9%	40.4%	86.2%	39.5%

Bold indicates disparity exists

NR- Insufficient sample size for statistical analysis

Results by Gender

Prior to CYE 2017, HPV was a stand-alone measure that looked specifically at the number of female adolescents receiving the HPV immunization by thirteen years of age; however, based on the changes within the CMS *Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP (Child Core Set) Technical Specifications and Resource Manual*⁹ HPV is now included as part of the Immunization for Adolescent measure which includes both male and female adolescents receiving the HPV immunization by thirteen years of age. Based on this change, the data was analyzed by gender in order to determine if a disparity existed. At an aggregate level, disparity was noted for male adolescents for the Tdap and HPV immunizations. Contractors must further analyze their data to identify any trends leading to these disparities and develop interventions to improve compliance rates.

**Table 6:
Percentage of Immunizations Completed by 13 Years of Age, by Gender**

Gender	Percent of Immunizations Completed by 13 Years of Age				
	Meningococcal (1 dose)	Tdap (1dose)	HPV (3 doses)	Combination 1	Combination 2
Female	87.9%	91.1%	42.2%	87.2%	41.1%
Male	85.8%	88.9%	38.9%	85.4%	38.1%
TOTAL	86.8%	89.9%	40.4%	86.2%	39.5%

DISCUSSION AND CONCLUSION

The methodology used to administer the performance measures has been used by Medicaid health plans since 1995 and provide a reliable method to measure compliance with immunization for adolescents thirteen years of age who have been enrolled in these health plans for a year or more. AHCCCS Contractors are contractually mandated to track and trend performance for adolescent immunizations and provide an action plan for how each will work to reach the established MPS and potential goals. Contractors who do not meet the MPS must submit a Corrective Action Plan (CAP) and may be subject to sanctions if improvement does not occur.

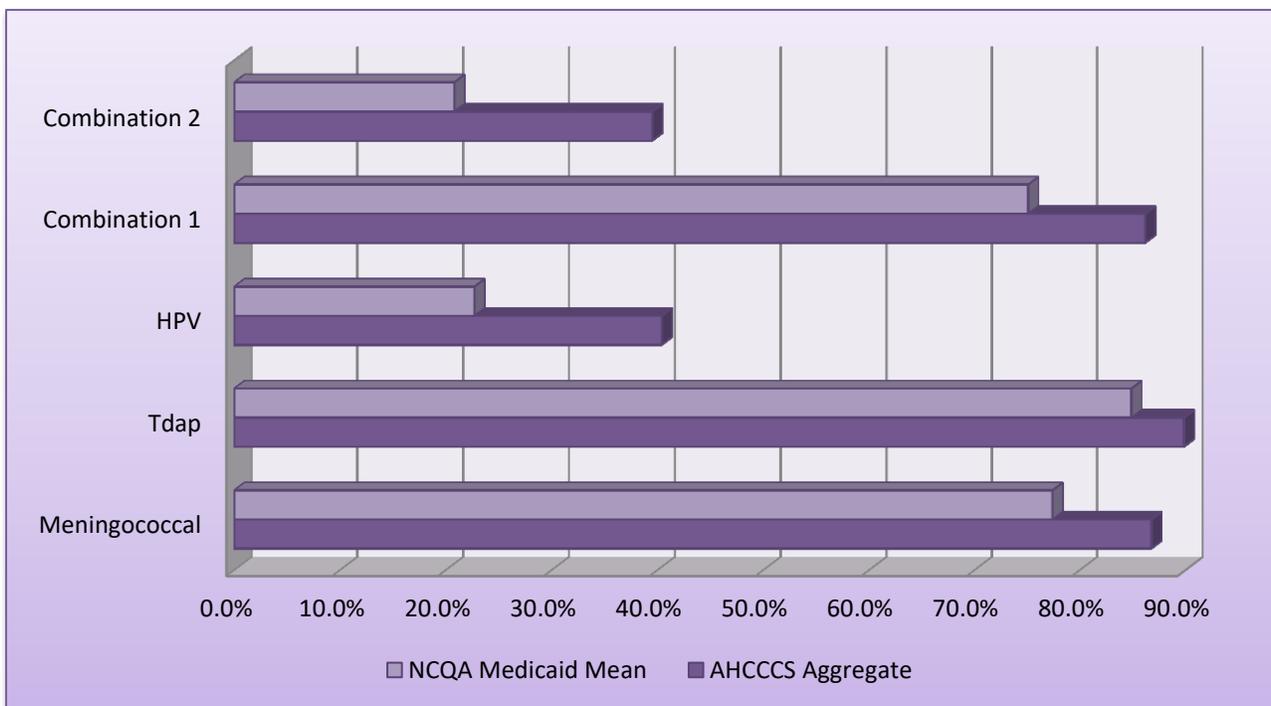
AHCCCS provides data to Contractors for further analysis and to identify barriers and areas in need of improvement so that interventions can be developed and implemented. AHCCCS will continue to work with Contractors, especially those with the lowest rates of adolescent immunizations, to assist them in making progress toward state and national goals. Sustained success and continual improvement will be the major focus over the next two years.

National Comparisons

AHCCCS rates were compared with the most recent national means for Medicaid health plans as reported by the National Committee for Quality Assurance (NCQA) within the State of Health Care Quality 2017 report. NCQA produces this report annually and it focuses on quality issues the country faces and assists in driving improvement in the delivery of evidence-based medicine and care. The report trends performance over time, tracks variations in care and recommends

quality improvement. When compared to the mean for Medicaid on a national level, Arizona met or exceeded the national mean for all adolescent immunizations.

**Graph 3:
Comparison of AHCCCS Immunization Rates
Compared with NCQA Medicaid Mean for FFY2016, by Immunization**



The following recommendations to improve or maintain immunization completion rates among thirteen year old members enrolled in AHCCCS were compiled from evidence-based research and identified best practices. Many AHCCCS Contractors have implemented several of these strategies, and their continued use should help sustain or further improve performance.

Contractors should continue using a variety of means to reach parents/guardians and encourage them to complete their adolescent’s immunizations¹⁰. Mail and telephone reminders to parents and providers have been found to be effective in improving immunization-completion rates. Since all adolescent vaccines can be completed as early as eleven years of age, with one immunization mandatory prior to the adolescents start of their sixth grade school year, Contractors should begin reaching out to reach out to parents/guardians prior to their eleven year old well-child visit encouraging them to complete all of the adolescent immunizations, if they have not completed one of the three prior to that visit. In addition, increasing the use of technology within member communication efforts, including the use of social media platforms and text messaging campaigns should also be considered.

In addition to ongoing monitoring of completion of all adolescent vaccinations, Contractors should focus on rates of HPV completion, particularly those adolescents who have received one of the two doses or two of the three doses required¹¹. Given the effect that missing the second/third dose has on completion rates for the full series of immunizations, Contractors and providers should focus on ensuring that adolescents receive all the necessary doses of this within the allowable timeframe.

Since all adolescent vaccines can be completed starting as early as eleven years of age Contractors should begin checking the immunization status of members reaching twelve years of age or sooner. If members are lacking doses, this could give parents time to get immunizations completed by the time their adolescent turns thirteen years of age. When adolescents are overdue, Contractors should consider the additional step of assisting parents/guardians with making appointments with their Primary Care Physicians (PCPs) and make arrangements for transportation assistance, if needed.

Contractors should continue or enhance member education to overcome parental fears regarding vaccination¹². This includes direct communication with members and working with providers to ensure that parents and guardians understand the potential consequences of not having children/adolescents fully immunized — including seizures, meningitis, hearing impairment and even death due to infectious diseases.

Contractors should use and encourage their network providers to utilize resources from the CDC’s National Immunization Program (NIP)¹³, such as Vaccine Information Statements, which provide easy-to-understand information on the benefits and risks of specific vaccines. A Vaccine Information Statement (VIS) must be provided to the recipient of any vaccine covered by the National Childhood Vaccine Injury Act (NVCIA) of 1986, which includes most immunizations given in childhood. These statements are available for all vaccines licensed in the U.S. Copies of VISs are available from state health authorities responsible for immunization. They can also be obtained from the CDC’s website (www.cdc.gov) or from the Immunization Action Coalition (www.immunize.org). Translations of VISs into languages other than English also are available from the Immunization Action Coalition website and may be available from state immunization programs.

One approach to overcoming unwarranted parental refusal that is seeing some success nationally is provider education in regard to a parent’s refusal at one visit and assisting them to understand that initial refusal may not mean that unnecessary fears and objections cannot be overcome in the future. Providers should continue attempts to educate parents that have previously refused vaccines, focusing on those that are the subject of the least amount of misinformation. Parents may agree to a few vaccines at first and their fears may be eased over time.

Contractors should target outreach activities in specific geographic areas, as needed. Results showed that Coconino, Mohave, Navajo, and Pinal County had comparatively lower rates for up to five of the individual and combination immunizations included. Contractors who serve these counties should work to bring rates in these areas up, including working with providers and possibly county health departments to identify barriers to immunizations and resources to address those barriers. Education in vaccine management and delivery for providers serving some areas of the state may be helpful.

Contractors should target outreach activities specific to HPV to address any noted gender disparity. Results showed that at an aggregate level, disparity was noted for male adolescents specific to HPV. Therefore, Contractors should review current outreach activities and identify areas of opportunity to revise or enhance current outreach to help reduce any disparity. This may include the customization of HPV outreach to focus on the differences in the misconceptions about the reasons for immunizing both genders. “Whereas the focus for adolescent girls should clarify the safety and efficacy of HPV vaccines in the protection against HPV infection and cervical cancer, educational materials for the parents of adolescent boys should highlight the relevancy of HPV immunization of males as a means to protect both genders from HPV infection and the many different malignancies associated with this virus”¹⁴.

Contractors should continue to ensure that health care professionals providing immunizations report all vaccinations to ASIIS. With complete reporting, an automated registry is a valuable tool in helping providers determine the immunization status of adolescents they are seeing at each visit, so that opportunities to vaccinate are not missed. This is especially important when adolescents receive immunizations at multiple sites and parents do not have current

immunization records. Use of ASIIS to check patients' immunization status should prevent the need for them to return for vaccinations.

Contractors should encourage providers to implement an Electronic Health Record (EHR) system. Not only is there value in automating health records for the providers, but automation also aids Contractors in gathering complete data without relying on paper records or disrupting physician office routines. In addition, providers may be eligible to receive incentive payments from CMS if they meet the necessary requirements, one of which is the electronically sharing of immunization information utilizing a certified EHR to the state immunization system, ASIIS.

AHCCCS and its Contractors will continue to monitor immunization coverage levels among adolescents. AHCCCS also will maintain its ongoing work with low-performing Contractors to ensure they meet contractual standards and goals.

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Appendix A – Statistical Significance Calculation Tables

AHCCCS Contractor	Percent of Immunizations Completed by 13 Years of Age				
	Meningococcal (1 dose)	Tdap (1dose)	HPV (3 doses)	Combination 1	Combination 2
Care 1 st Arizona	92.1	91.8	55.4	91.6	55.4
	93.7	94.1	N/A	93.5	N/A
<i>Statistical Significance (p value)</i>	P=.320	P=.168	N/A	P=.265	N/A
CRS	94.9	95.8	43.9	94.3	43.3
	90.1	92.9	N/A	89.5	N/A
<i>Statistical Significance (p value)</i>	P=.005	P=.054	N/A	P=.007	N/A
DES/CMDP	95.6	97.2	59.9	95.3	59.2
	94.0	95.4	N/A	94.0	N/A
<i>Statistical Significance (p value)</i>	P=.381	P=.254	N/A	P=.489	N/A
DES/DDD	83.2	84.5	22.5	81.7	22.1
	76.5	78.1	N/A	73.8	N/A
<i>Statistical Significance (p value)</i>	P=.010	P=.011	N/A	P=.004	N/A
Health Choice Arizona	56.7	79.0	12.8	56.1	8.6
	85.8	87.4	N/A	85.6	N/A
<i>Statistical Significance (p value)</i>	P<.001	P=.001	N/A	P<.001	N/A
Health Net Access	83.7	84.3	36.6	83.2	35.5
	72.4	77.4	N/A	70.4	N/A
<i>Statistical Significance (p value)</i>	P<.001	P=.022	N/A	P<.001	N/A
Mercy Care Plan	94.7	94.7	44.6	94.7	44.6
	96.6	97.6	N/A	95.7	N/A
<i>Statistical Significance (p value)</i>	P=.163	P=.021	N/A	P=.454	N/A
UnitedHealthcare	89.6	90.5	44.8	89.2	44.2
	86.2	90.9	N/A	85.4	N/A
<i>Statistical Significance (p value)</i>	P=.108	P=.847	N/A	P=.081	N/A
University Family Care	93.4	93.6	49.0	92.7	48.6
	96.3	97.0	N/A	96.3	N/A
<i>Statistical Significance (p value)</i>	P=.038	P=.014	N/A	P=.013	N/A
TOTAL	86.8	89.9	40.4	86.2	39.5
PREVIOUS TOTAL*	89.5	91.2	N/A	88.8	N/A
<i>Statistical Significance (p value)</i>	P<.001	P=.034	N/A	P<.001	N/A

Note: The shaded lines are representative of previous (CYE 2015) measurements. Bolded CYE 2017 rates indicate results equal to or above the Minimum Performance Standard.

* Rates inclusive of two Contractors (Maricopa Health Plan and Phoenix Health Plan) no longer active as of CYE 2017