

Allegheny County School Immunization Report

School Year 2019-2020



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A publication of the
**ALLEGHENY COUNTY HEALTH DEPARTMENT
BUREAU OF ASSESSMENT, STATISTICS, AND EPIDEMIOLOGY**

January 2021

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Executive Summary

The Allegheny County Health Department (ACHD) Rules and Regulations, Article X, "School Health Immunization," was promulgated to "ensure that all school children are immunized against diseases which spread easily in schools and interrupt school life and learning for individuals and groups. This subchapter affects all public, private, parochial, charter and cyber schools including all kindergartens, special education classes, home education programs, and vocational classes in Allegheny County." To assure that schools in Allegheny County comply with these regulations, the ACHD requires all schools (public, private/independent, parochial/religious, charter, and cyber) to submit the immunization status of all students annually. These school level data are provided to the public to provide ensure public awareness of the vaccination rates in our community.

This report summarizes the school immunization data from the 2019-20 academic year in Allegheny County. It is organized into four parts: overall immunization, provisional enrollment, immunization exemptions, and immunization status by type of vaccine. Data are primarily presented by school type or by grade. Previous school year data are provided to demonstrate trends over time.

Highlights:

- The percentage of students with all immunizations required for school entry was 96.3% in December 2019, which is above the *Healthy People 2020* goal of 95% coverage.
- The only grade that did not exceed 95% complete immunization coverage was 12th grade (93.4%), as students in this grade have a second dose of meningococcal conjugate vaccine (MCV) to complete before starting their 12th grade year.
- The majority of Allegheny County schools (77.7%) had at least 95% of their students fully immunized.
- In Allegheny County, 0.7% of all students started school in the fall with provisional enrollment status; kindergarten (1.3%), 7th grade (1.0%), and 12th grade (2.3%) had higher percentages of students enrolled provisionally due to new or additional immunization requirements upon entering those grade levels.
- Overall, 3.0% of students submitted medical or religious/moral exemptions. Students at parochial/religious schools (4.8%) and private/independent schools (5.4%) had the highest percentage of exemptions.

Introduction

The Allegheny County Health Department (ACHD) requires all schools (public, private/independent, parochial/religious, charter, and cyber) to submit data each school year detailing total enrollment, number of students fully immunized, number of students enrolled provisionally, and the number of students with medical or religious/moral exemptions, as per Article X of ACHD's Rules and Regulations.¹ ACHD collects data on every grade to obtain a comprehensive view of the immunization coverage at all grade levels. The Pennsylvania Department of Health (PADOH) collects data on immunization status from every school in the state, but only for students in kindergarten and 7th grade.² The ACHD provides immunization data by school to the public on its Vaccine Coverage webpage.³

To maintain healthy students and communities, all students enrolled in Kindergarten through 12th grade in Allegheny County are required to have the appropriate number of doses of the diphtheria, tetanus, and acellular pertussis (DTaP), hepatitis B virus (HBV), measles, mumps, and rubella (MMR), polio, and varicella (VZV) vaccines.¹ For students enrolled in 7th grade, two additional vaccines are required at a single dose each: tetanus, diphtheria, and acellular pertussis (Tdap) and meningococcal (MCV4).¹ A new requirement for the 2017-18 school year was a second dose of MCV4 for all 12th graders.²

Immunization is a national priority of the Healthy People 2020 initiative established by the United States Department of Health and Human Services. Outlining public health goals to be reached by the year 2020, Healthy People 2020 set a goal of 95% for immunization coverage goal for children entering kindergarten for all five required vaccines and a goal of 80% coverage goal for children ages 13-15 for the Tdap and MCV4 vaccines.⁴

Provisional enrollment allows students who have at least one dose in a multi-dose vaccine series to start the school year if there is an explicit plan for receiving or scheduling the remaining required doses over a five-day provisional period. If the provisional period expires before the student receives or is scheduled to receive all required doses, the student is to be denied admission to school. The provisional period was shortened from 8 months to 5 days beginning with school year 2017-2018.

Students may also be admitted to school without being fully immunized if their parents have submitted paperwork claiming an exemption. Exemptions can either be medical, religious, or moral/philosophical, and they do not expire as provisional enrollment does. Medical exemptions can be obtained for students who have a condition for which a vaccine is contraindicated and must be documented by the student's physician. Religious and moral exemptions are submitted in writing by the student's parent or guardian.

Vaccines recommended for children by the Advisory Committee on Immunization Practices but not required for school entry in Pennsylvania include those for rotavirus, *Haemophilus influenzae* type B (HiB), pneumococcal disease, influenza (flu), hepatitis A virus (HAV) and human papillomavirus (HPV). The list of required vaccines for school entry varies by state.

This report utilizes data submitted in December 2019⁵ by all Allegheny County schools to summarize the immunization status of students for the 2019-20 school year for the required vaccines. The Bureau of Assessment, Statistics, and Epidemiology (BASE) at ACHD was responsible for collecting, cleaning, and analyzing the data.

¹ Allegheny County Health Department, *Article X: School Health Immunization*. (Accessed August 31, 2020); available from https://alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Article-10-School-Immunizations.pdf

² Commonwealth of Pennsylvania, 28 Pa. Code Part III, Ch 23, Subch C §23.86. *School Reporting*. (Accessed July 24, 2018), available from <http://www.pacode.com/secure/data/028/chapter23/subchapCtoc.html>

³ Vaccine Coverage webpage available at <https://www.alleghenycounty.us/Health-Department/Resources/Data-and-Reporting/Infectious-Disease-Epidemiology/Vaccine-Coverage.aspx>

⁴ U.S. Department of Health and Human Services, *Healthy People 2020 Objectives: Immunization and Infectious Diseases*, July 2015, Accessed July 24, 2018, available from <https://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases/objectives>

⁵ Data updated as of May 27, 2020

Student Immunization Coverage in Allegheny County

Based on the reported data, 161,600 students were enrolled in 377 Allegheny County schools in December 2019. Of the students enrolled, a large majority (83.7%) attended public schools, with the fewest number of students (3.8%) enrolled in private/independent schools (Table 1).

Table 1. Allegheny County School Enrollment, December 2019

School Type	Number of Students Enrolled	Number of Schools
	N (%)	N (%)
Charter	7,920 (4.9)	20 (5.3)
Parochial/Religious	12,290 (7.6)	58 (15.4)
Private/Independent	6,152 (3.8)	51 (13.5)
Public	135,238 (83.7)	248 (65.8)
Total	161,600 (100)	377 (100)

The overall percentage of students in Allegheny County with all immunizations required for school entry was 96.3% for the 2019-20 school year (Figure 1). Individual grades showed high percentages of fully immunized students, with only 12th grade (93.4%) falling short of reaching the *Healthy People 2020* goal of 95% coverage (Table 2). Twelfth grade most likely had lower coverage due to the requirement for a second dose of the MCV vaccine.

Table 2. Allegheny County Immunization Status of All Students, School Year 2020-2021

Status	N	%
Total Enrollment	161,600	
Fully Immunized	155,671	96.3%
Medical Exemption	897	0.6%
Religious Exemption	2,117	1.3%
Moral/Philosophical Exemption	1,783	1.1%
Provisionally Enrolled	1,104	0.7%
Denied Admission	38	0.02%

The percentage of students with complete immunizations (96.3%) was similar to the previous school year (Table 3). Overall coverage still exceeds the *Healthy People 2020* goal of 95%; however, there was a downward trend in overall coverage since the 2011-12 school year. Year-to-year variations by grade has been minimal, apart from a drop in 12th grade coverage from 2016-17 (96.9%) to 2017-18 (92.9%) when the new requirement for a second dose of the MCV vaccine was introduced.

Table 3. Percentage of Fully Immunized Students by School Year and Grade, Allegheny County, 2012-13 to 2019-20

Grade	Mar-13 %	Mar-14 %	Apr-15 %	Apr-16 %	Apr-17 %	Dec-17 %	Dec-18 %	Dec-19 %
K	95.3	94.7	94.3	94.9	94.9	96.4	95.8	95.8
1st	97.3	97.0	96.3	96.2	96.8	96.7	97.1	96.7
2nd	97.3	97.2	96.9	96.8	96.4	97.3	97.0	97.2
3rd	97.2	97.3	96.9	96.9	96.8	96.6	97.3	97.0
4th	97.4	97.1	97.1	97.2	97.0	97.1	96.9	96.9
5th	97.6	97.4	97.3	97.0	97.2	96.9	97.3	96.7
6th	97.2	97.5	97.4	97.2	97.3	97.3	97.2	97.1
7th	96.5	96.4	96.4	96.2	94.8	95.9	95.6	95.7
8th	97.0	96.8	96.7	96.7	96.4	96.5	96.6	96.4
9th	97.1	96.9	96.5	96.8	96.2	96.4	96.1	95.9
10th	97.0	96.9	97.3	96.6	96.2	96.0	96.5	96.6
11th	97.7	97.0	97.3	97.2	96.1	96.3	96.8	96.9
12th	97.4	97.5	97.2	97.2	96.9	92.9	93.3	93.4
Total	97.1	96.9	96.7	96.7	96.4	96.3	96.4	96.3

Allegheny County schools were classified as charter, parochial/religious, private/independent, or public. Public schools, which account for 65.8% of the schools and 83.7% of the total students in Allegheny County (Table 1), had a complete immunization coverage of 96.7% (Table 4). Charter schools

also had high complete immunization coverage (96.4%). Both private/independent (93%) and parochial/religious schools (94.1%) fell short of meeting the *Healthy People 2020* goal of 95% coverage. Historically, public schools and charter schools have reached at least 95% complete immunization coverage (Table 4). Over the last seven years, parochial/religious schools fell below this goal while private/independent schools fell below the goal the last four school years.

Table 4. Percentage of Fully Immunized Students by School Type, Allegheny County, 2012-2019

School Type	Mar-13	Mar-14	Apr-15	Apr-16	Apr-17	Dec-17	Dec-18	Dec-19
Charter	97.5%	96.3%	97.9%	98.0%	95.6%	96.7%	97.0%	96.4%
Parochial/Religious	95.9%	94.9%	94.8%	94.8%	94.4%	94.2%	94.8%	94.1%
Private/Independent	95.3%	95.0%	92.9%	95.1%	94.6%	94.2%	92.2%	93.0%
Public	97.3%	97.2%	97.2%	96.9%	96.7%	96.6%	96.7%	96.7%

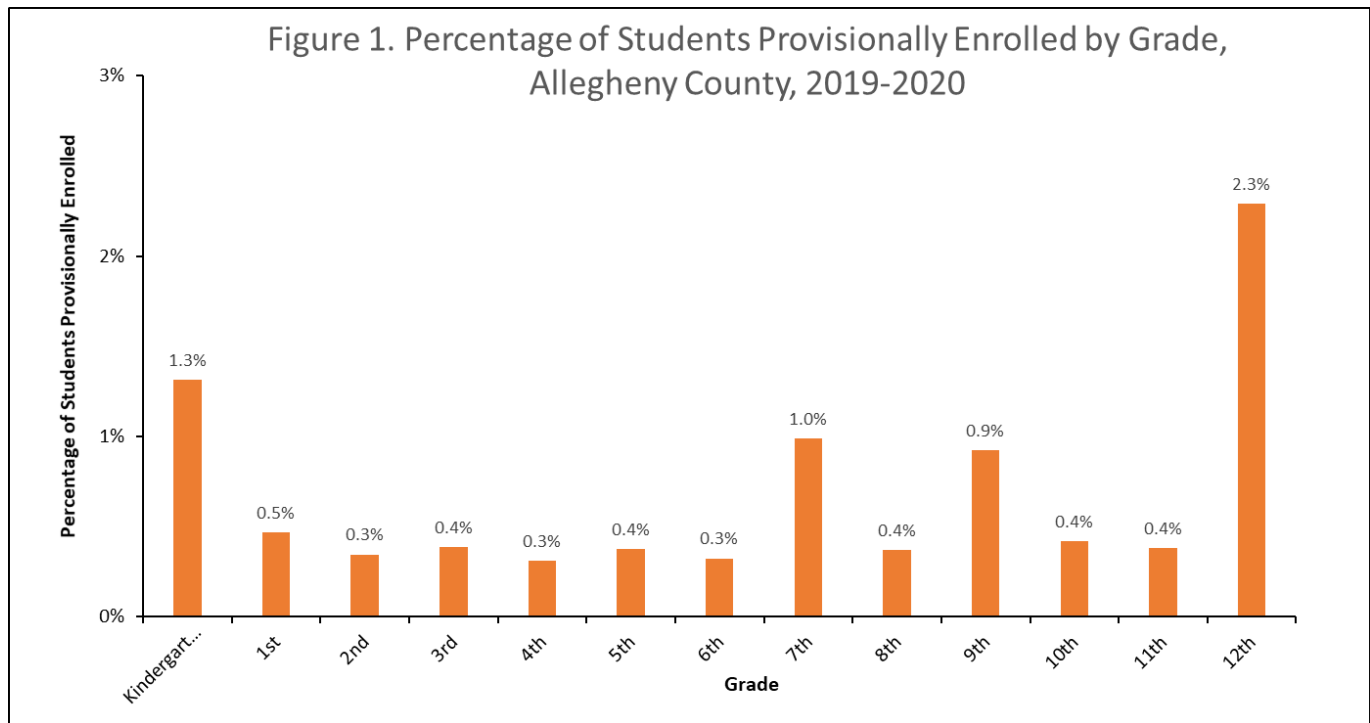
Overall, 77.7% of all Allegheny County schools met the *Healthy People 2020* goal (Table 5). Over 80% of both public and charter schools met this goal, while slightly more than half of parochial/religious and private/independent schools attained 95% coverage.

Table 5. Percentage of Schools Meeting Healthy People 2020 Goal of 95% Coverage by School Type, Allegheny County, December 2019

School Type	Number of Schools	Number of Schools that Met 95% Goal
	N	N (%)
Charter	20	17 (85.0%)
Parochial/Religious	58	33 (56.9%)
Private/Independent	51	28 (54.9%)
Public	248	215 (86.7%)
Total	377	293 (77.7%)

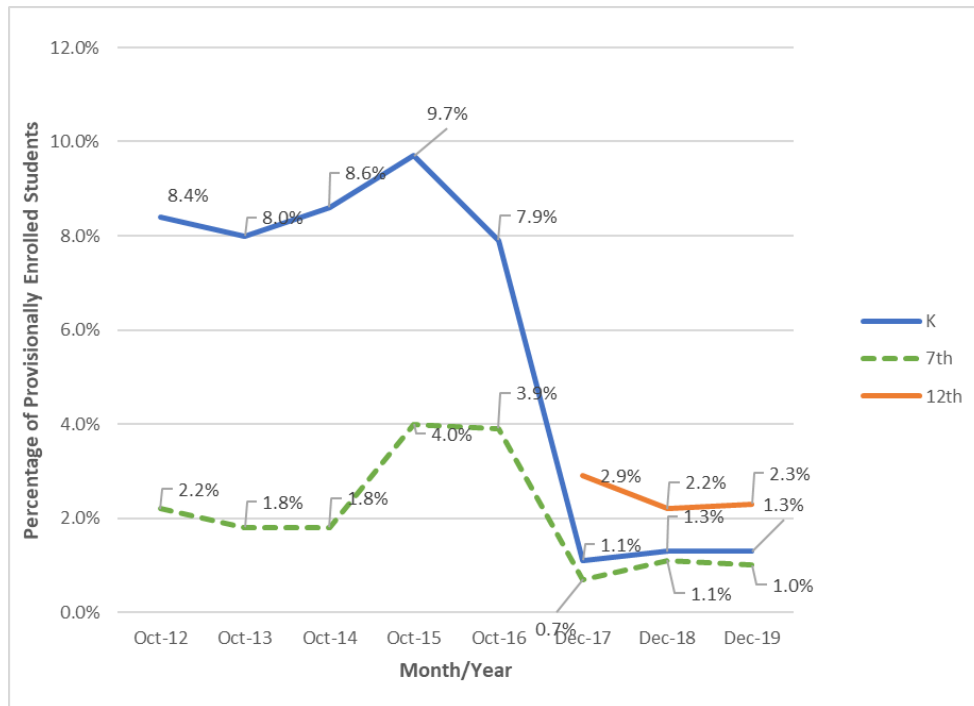
Provisional Enrollment in Allegheny County

As of December 2019, 0.7% of students in Allegheny County schools were provisionally enrolled. Higher levels of provisional enrollment were seen in kindergarten, 7th, and 12th grades than others due to additional immunization requirements at this grade levels (Figure 1).



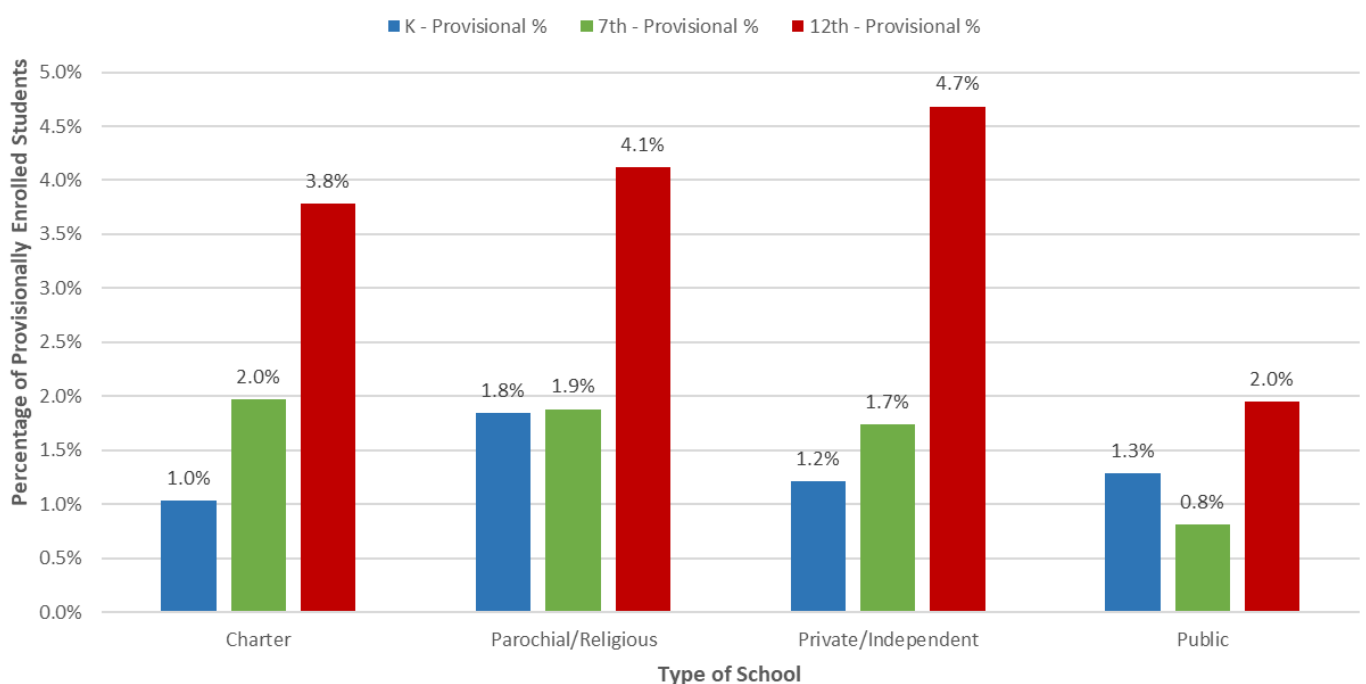
Provisional enrollments in Kindergarten and 7th grade remained steady this year compared to last year (Figure 2). A large drop in provisional enrollment occurred in 2017-18 most likely because the provisional period was changed. It now ends before the deadline for reporting immunization data.

Figure 2. Percentage of Provisionally Enrolled Kindergarten and 7th Grade Students by Year, Allegheny County, 2012-13 to 2019-20



As seen in Figure 3, all school types had a higher percentage of 12th grade students provisionally enrolled than 7th grade or Kindergarten students.

Figure 3. Percentage of Students Provisionally Enrolled by School Type, Allegheny County, 2019-2020



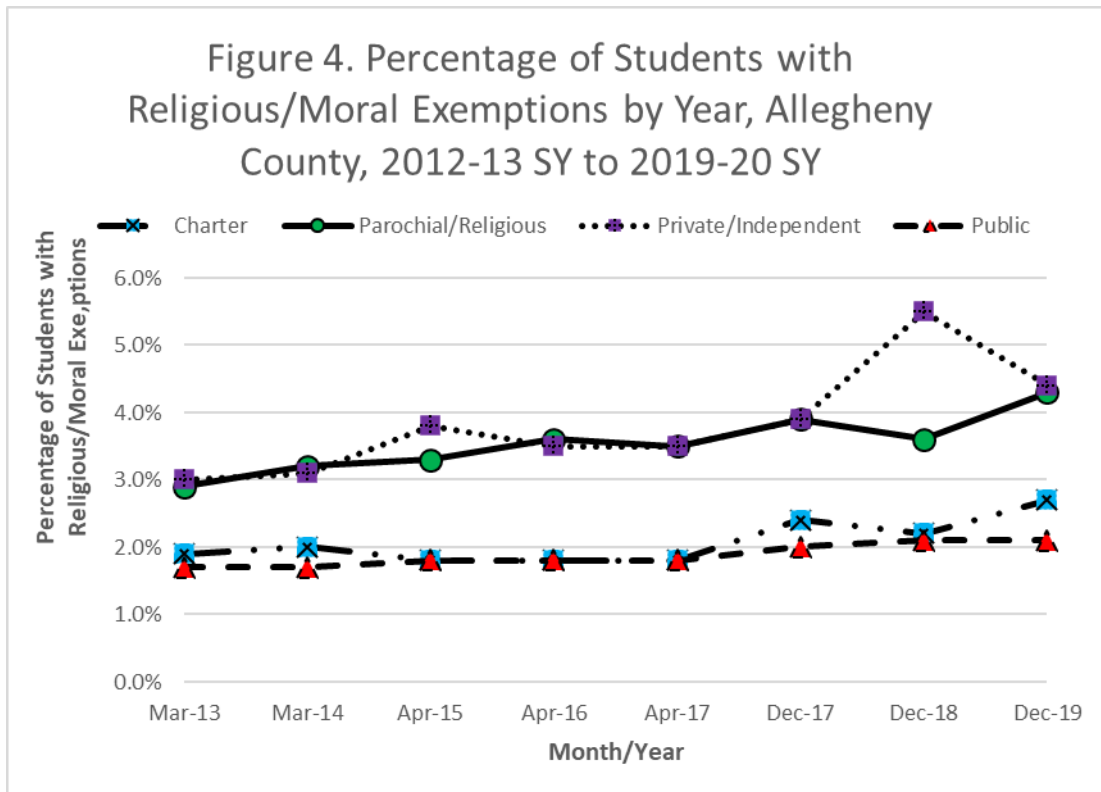
Immunization Exemptions in Allegheny County

In Allegheny County, 3.0% of students submitted a medical or religious/moral exemption from being fully immunized by December 2019 (Table 6). For all schools, medical exemptions were least common (0.6%), followed by moral/philosophical exemptions (1.1%), and then religious exemptions (1.3%). Public schools had the lowest percentage of total exemptions (2.6%), and private schools had the highest (5.4%).

Table 6. Percentage of Students with Medical, Religious or Moral Exemptions by School Type, Allegheny County, December 2019

School Type	Number of Students Enrolled	Number of Medical Exemptions	Number of Religious Exemptions	Number of Moral Exemptions
	N	N (%)	N (%)	N (%)
Charter	7,920	30 (0.4)	132 (1.7)	82 (1.0)
Parochial/Religious	12,290	65 (0.5)	311 (2.5)	224 (1.8)
Private/Independent	6,152	59 (1.0)	129 (2.1)	143 (2.3)
Public	135,238	743 (0.5)	1,545 (1.1)	1,334 (1.0)
Total	161,600	897 (0.6)	2,117 (1.3)	1,783 (1.1)

There were no major changes in religious/moral exemptions by school type except for an increase at private/independent schools in 2018 (Figure 4).



Immunization Status by Vaccine

Students entering kindergarten in Allegheny County exceeded the *Healthy People 2020* goal of 95% coverage for all five required vaccines (Table 7). Coverage during the 2019-20 school year was similar to coverage the previous year for almost every type of vaccine among Allegheny County kindergarteners (Table 7).

Table 7. Percentage of Kindergarten Students Immunized by Vaccine Type, Allegheny County, 2013-14 SY through 2019-20 SY

Vaccine	Oct 2013 ¹	Oct 2014 ¹	Oct 2015 ²	Oct 2016 ²	Dec 2017 ²	Dec 2018 ²	Dec 2019 ²
MMR (2 doses)	89.9	91.4	91.0	92.0	97.6	97.0	97.0
VZV (2 doses)	89.3	90.6	90.5	91.0	97.4	96.9	96.7
HBV (3 doses)	94.5	95.4	94.2	95.4	97.9	97.9	97.3
Polio (4 doses)	95.1	95.6	94.9	95.8	97.3	96.7	96.8
DTaP (4 doses)	92.7	93.7	92.6	93.2	97.8	97.3	97.1

Data Sources: ¹Pennsylvania Department of Health's Division of Immunization (2011-2013),

²Allegheny County Health Department (2014-2019)

Two additional vaccines, Tdap and MCV4, are required for students entering 7th grade, and a second dose of MCV4 is required for 12th grade students. Allegheny County exceeded the *Healthy People 2020* goal of 80% for both grades (Table 8).

Table 8. Percentage of 7th Grade Students Immunized by Vaccine Type, Allegheny County, School Years 2013-14 to 2019-20

Vaccine	Oct 2013 ¹	Oct 2014 ²	Oct 2015 ²	Oct 2016 ²	Dec 2017 ²	Dec 2018 ²	Dec 2019 ²
MCV4 (1 dose)	95.2	95.8	92.9	93.5	97.3	96.7	96.9
Tdap (1 dose)	94.0	95.9	93.3	94.1	97.5	96.7	97.0

Data Sources: ¹Pennsylvania Department of Health's Division of Immunization (2013), ²Allegheny County Health Department (2014-2019)

Allegheny County students entering kindergarten at public schools and private/independent schools had coverage greater than 95% for all required vaccines (Table 8). Coverage among kindergarten students fell below the *Healthy People 2020* Goal of 95% coverage at parochial/religious schools for all vaccines except DTaP, while charter schools met the goal for all vaccines except MMR and VZV.

Table 8. Percentage of Kindergarten Students Immunized by School Type and Vaccine, Allegheny County, December 2019

Vaccine	Charter	Parochial/Religious	Private/Independent	Public
MMR (2)	94.7%	94.6%	96.0%	97.5%
VZV (2)	94.7%	94.4%	95.8%	97.1%
HBV (3)	96.2%	94.9%	96.4%	97.7%
Polio (4)	95.0%	94.6%	96.2%	97.2%
DTaP (4+)	98.1%	95.8%	96.4%	98.7%

For 7th grade students, public and parochial/religious schools in Allegheny County showed higher coverage for both Tdap and MCV4 vaccines than charter and private/independent schools (Table 9). All school types exceeded the *Healthy People 2020* goal of 80%.

Table 9. Percentage of 7th Grade Students Immunized by School Type and Vaccine, Allegheny County, December 2019

Vaccine	Charter	Parochial/Religious	Private/Independent	Public
MCV4 (1 dose)	93.8%	95.2%	93.9%	97.4%
Tdap (1 dose)	94.1%	95.1%	94.1%	97.5%

For 12th grade students, public schools in Allegheny County had higher coverage than other school types for the second dose of MCV4 (Table 10). While there is no *Healthy People 2020* goal for a second dose of MCV4, all school types exceeded the 80% benchmark used for the first dose of MCV4.

Table 10. Percentage of 12th Grade Students Immunized by School Type and Vaccine, Allegheny County, December 2019

Vaccine	Charter	Parochial/Religious	Private/Independent	Public
MCV4 (2 doses)	88.6%	92.5%	87.8%	94.7%

Summary

In Allegheny County, overall immunization coverage for the required school vaccinations was 96.3% for the 2019-20 school year, which exceeds the *Healthy People 2020* goal of 95% coverage; however, there has been a slow downward trend from the 2011-12 school year to the present. Starting with the 2014-15 school year quality control measures in data collection and cleaning were implemented to improve the accuracy of the immunization data. The decline in coverage from 97% to 96% may partially reflect more accurate data as well as an actual decline in coverage.

Overall, 77.7% of all schools in Allegheny County had at least 95% of their students fully immunized with public schools having the highest percentage of schools (86.7%) with 95% coverage, followed by charter schools (85.0% of schools), parochial/religious schools (56.9% of schools), and private/independent schools (54.9% of schools).

The percentage of students with exemptions continues to be low in Allegheny County. Medical exemptions were submitted for only 0.6% of students and religious/moral exemptions increased slightly from the previous school year to 2.4%. Of these, 1.3% were religious exemptions and 1.1% were moral/philosophical exemptions. Private/independent and parochial/religious schools continue to have the highest percentages of religious and moral exemptions.

The higher percentages of provisional enrollment for kindergarten, 7th, and 12th grade students point to a need to increase immunization efforts before the school year starts. Schools may need to provide additional information to parents about immunization requirements for students. Overall, provisional enrollments were lower than in most previous school years, but no school type could reach the goal of zero provisional enrollments by the December deadline for submitting data. Decreasing the number of students provisionally enrolled when they start school is necessary to protect the health of these students and required by county regulations.

Immunization coverage in Allegheny County schools for the 2019-20 school year exceeded the *Healthy People 2020* goal of 95% overall coverage. Allegheny County's high immunization coverage can be attributed to the hard work and dedication of school nurses, parents, clinicians, and public health officials who help ensure students are fully immunized.