

Allegheny County School Immunization Report

School Year 2018-2019



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Executive Summary

To ensure that schools in Allegheny County are complying with state and county immunization regulations, the Allegheny County Health Department (ACHD) requires all schools (public, private/independent, parochial/religious, charter, and cyber) to submit the immunization status of their students annually.

This report summarizes the immunization data from the 2018-19 school 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. Also included are data from previous school years.

Highlights:

- The percentage of students with all immunizations required for school entry was 96.4% in December 2018, 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 (93.3%), as this grade had new immunization requirements for students as of school year 2017-18.
- The majority of Allegheny County schools (78.3%) had at least 95% of their students fully immunized.
- In Allegheny County, 0.6% of all students started school in the fall with provisional enrollment status; kindergarten (1.3%), 7th grade (1.1%), and 12th grade (2.2%) had higher percentages of students enrolled provisionally due to new or additional immunization requirements as of school year 2017-18.
- Overall, 2.9% of students submitted medical or religious/moral exemptions. Students at parochial/religious schools (4.0%) and private/independent schools (6.6%) had the highest percentage of exemptions.

Introduction

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 pertussis (DTaP), hepatitis B (HBV), measles, mumps, and rubella (MMR), polio, and varicella (VZV) vaccines.¹ For students enrolled in 7th through 11th grade, two additional vaccines are required at a single dose each: tetanus, diphtheria, and pertussis (Tdap) and meningococcal (MCV4).¹ A new requirement for the 2017-18 school year was an additional dose of MCV4 for all 12th graders.² Information regarding the immunization status of students by vaccine type is reported by schools to the Allegheny County Health Department (ACHD) and the Pennsylvania Department of Health (PA DOH) in December of each school year.²

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. 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 in place 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 or religious, 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/moral exemptions are submitted in writing by the student's parent or guardian.

Immunization has been recognized as 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* sets a 95% immunization coverage goal for children entering kindergarten for all five required vaccines and an 80% coverage goal for children ages 13-15 for the Tdap and MCV4 vaccines.³

This report utilizes data submitted in December 2018⁴ by all Allegheny County schools to summarize the immunization status of students for the 2018-19 school year. 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 July 24, 2018); available from <https://www.alleghenycounty.us/Health-Department/Health-Department-Regulations.aspx>

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 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>

⁴ Data updated as of August 23, 2019

Overall Student Immunization Coverage in Allegheny County

Based on the reported data, 161,801 students were enrolled in 383 Allegheny County schools in December 2018 (two schools did not submit responses). Of the students enrolled, a large majority (83.8%) attended public schools, with the fewest number of students (3.4%) enrolled in private/independent schools (Table 1).

Table 1. Allegheny County School Enrollment, December 2018

School Type	Number of Students Enrolled	Number of Schools
	N (%)	N (%)
Charter	7,195 (4.4)	19 (5.0)
Parochial/Religious	13,461 (8.3)	66 (17.2)
Private/Independent	5,520 (3.4)	49 (12.8)
Public	135,625(83.8)	249 (65.0)
Total	161,801 (100)	383 (100)

The overall percentage of students in Allegheny County with all immunizations required for school entry was 96.4% for the 2018-19 school year (Figure 1). Individual grades showed high percentages of fully immunized students, with only 12th grade (93.3%) falling short of reaching the *Healthy People 2020* goal of 95% coverage (Table 2). Twelfth grade most likely had lower coverage due to an additional immunization requirement added in the previous year.

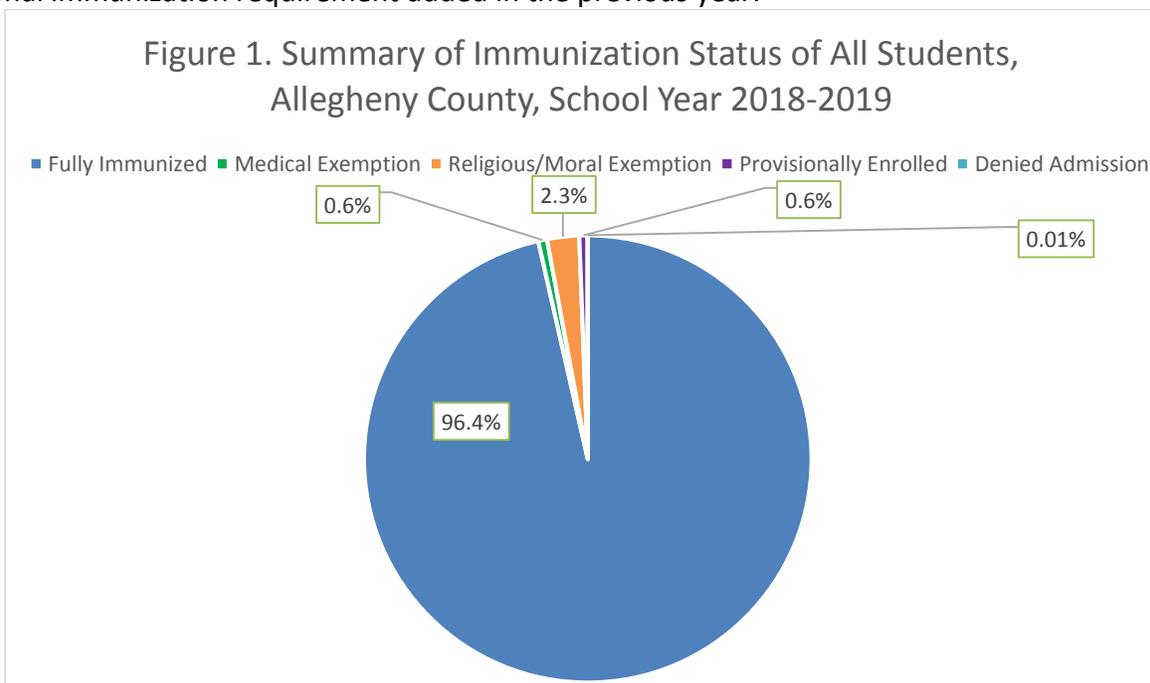


Table 2. Percentage of Fully Immunized Students by Grade, Allegheny County, December 2018

Grade	Number of Students	Number of Students with Complete
	Enrolled N	Immunizations N (%)
K	12,791	12,259 (95.8)
1st	12,300	11,945 (97.1)
2nd	12,212	11,841 (97.0)
3rd	12,534	12,197 (97.3)
4th	12,524	12,140 (96.9)
5th	12,852	12,503 (97.3)
6th	12,539	12,182 (97.2)
7th	12,460	11,911 (95.6)
8th	12,165	11,755 (96.6)
9th	12,830	12,328 (96.1)
10th	12,365	11,934 (96.5)
11th	12,054	11,672 (96.8)
12th	12,175	11,364 (93.3)
Total	161,801	156,031 (96.4)

The percentage of students with complete immunizations (96.4%) was similar to the previous school year (Table 3). Overall coverage still exceeds the *Healthy People 2020* goal of 95%; however, there has been a downward trend in overall coverage since the 2011-12 school year. Year-to-year variations by grade have been minimal, apart from a drop in 12th grade coverage from 2016-17 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, 2011-12 SY to 2018-19 SY

Grade	Mar-12 %	Mar-13 %	Mar-14 %	Apr-15 %	Apr-16 %	Apr-17 %	Dec-17 %	Dec-18 %
K	95.4	95.3	94.7	94.3	94.9	94.9	96.4	95.8
1st	97.1	97.3	97.0	96.3	96.2	96.8	96.7	97.1
2nd	97.1	97.3	97.2	96.9	96.8	96.4	97.3	97.0
3rd	97.3	97.2	97.3	96.9	96.9	96.8	96.6	97.3
4th	97.5	97.4	97.1	97.1	97.2	97.0	97.1	96.9
5th	97.2	97.6	97.4	97.3	97.0	97.2	96.9	97.3
6th	97.4	97.2	97.5	97.4	97.2	97.3	97.3	97.2
7th	96.8	96.5	96.4	96.4	96.2	94.8	95.9	95.6
8th	97.1	97.0	96.8	96.7	96.7	96.4	96.5	96.6
9th	97.4	97.1	96.9	96.5	96.8	96.2	96.4	96.1
10th	97.7	97.0	96.9	97.3	96.6	96.2	96.0	96.5
11th	97.4	97.7	97.0	97.3	97.2	96.1	96.3	96.8
12th	97.7	97.4	97.5	97.2	97.2	96.9	92.9	93.3
Total	97.2	97.1	96.9	96.7	96.7	96.4	96.3	96.4

Allegheny County schools were classified as charter, parochial/religious, private/independent, or public. Public schools, which account for 65% of the schools and 83.8% 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 (97.0%). Both private/independent (92.2%) and parochial/religious schools (94.8%) fell short of meeting the *Healthy People 2020* goal of 95% coverage.

Table 4. Percentage of Fully Immunized Students by School Type, Allegheny County, December 2018

School Type	Number of Students Enrolled N	Number of Students with Complete Immunizations N (%)
Charter	7,195	6,979 (97.0)
Parochial/Religious	13,461	12,759 (94.8)
Private/Independent	5,520	5,091 (92.2)
Public	135,625	131,202 (96.7)
Total	161,801	156,031 (96.4)

Historically, public schools and charter schools have consistently reached at least 95% complete immunization coverage (Table 5). Over the last six years, parochial/religious schools fell just below this goal while private/independent schools fell below the goal four of the last five school years.

Table 5. Percentage of Fully Immunized Students by School Type, Allegheny County, 2011-2018

School Type	Mar-12	Mar-13	Mar-14	Apr-15	Apr-16	Apr-17	Dec-17	Dec-18
Charter	95.0%	97.5%	96.3%	97.9%	98.0%	95.6%	96.7%	97.0%
Parochial/Religious	95.0%	95.9%	94.9%	94.8%	94.8%	94.4%	94.2%	94.8%
Private/Independent	95.6%	95.3%	95.0%	92.9%	95.1%	94.6%	94.2%	92.2%
Public	97.5%	97.3%	97.2%	97.2%	96.9%	96.7%	96.6%	96.7%

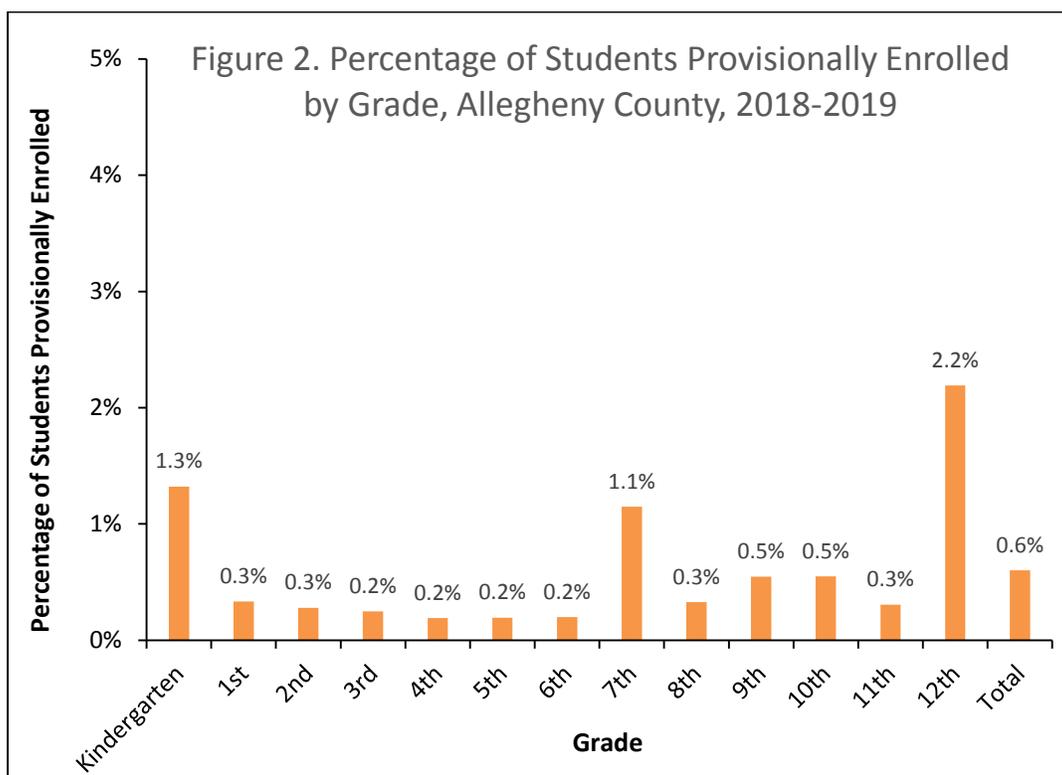
Overall, 78.3% of all Allegheny County schools met the *Healthy People 2020* goal (Table 6). Most public and charter schools met this goal, while slightly more than half of parochial/religious schools were able to reach 95% coverage. Less than 50% of private/independent schools were able to meet the *Healthy People 2020* goal this school year.

Table 6. Percentage of Schools Meeting *Healthy People 2020* Goal of 95% Coverage by School Type, Allegheny County, December 2018

School Type	Number of Schools	Number of Schools that Met
	N	95% Goal n (%)
Charter	19	16 (84.2%)
Parochial/Religious	66	37 (56.1%)
Private/Independent	49	24 (49.0%)
Public	249	223 (89.6%)
Total	383	300 (78.3%)

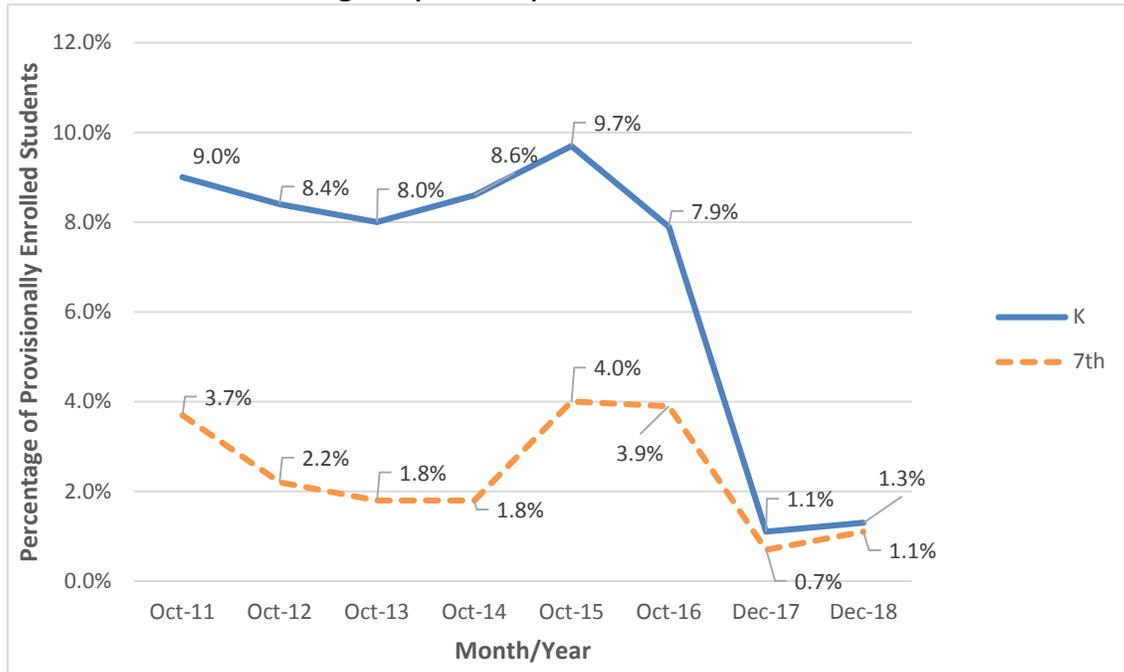
Provisional Enrollment in Allegheny County

As of December 2018, 0.6% 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 (Figure 2).

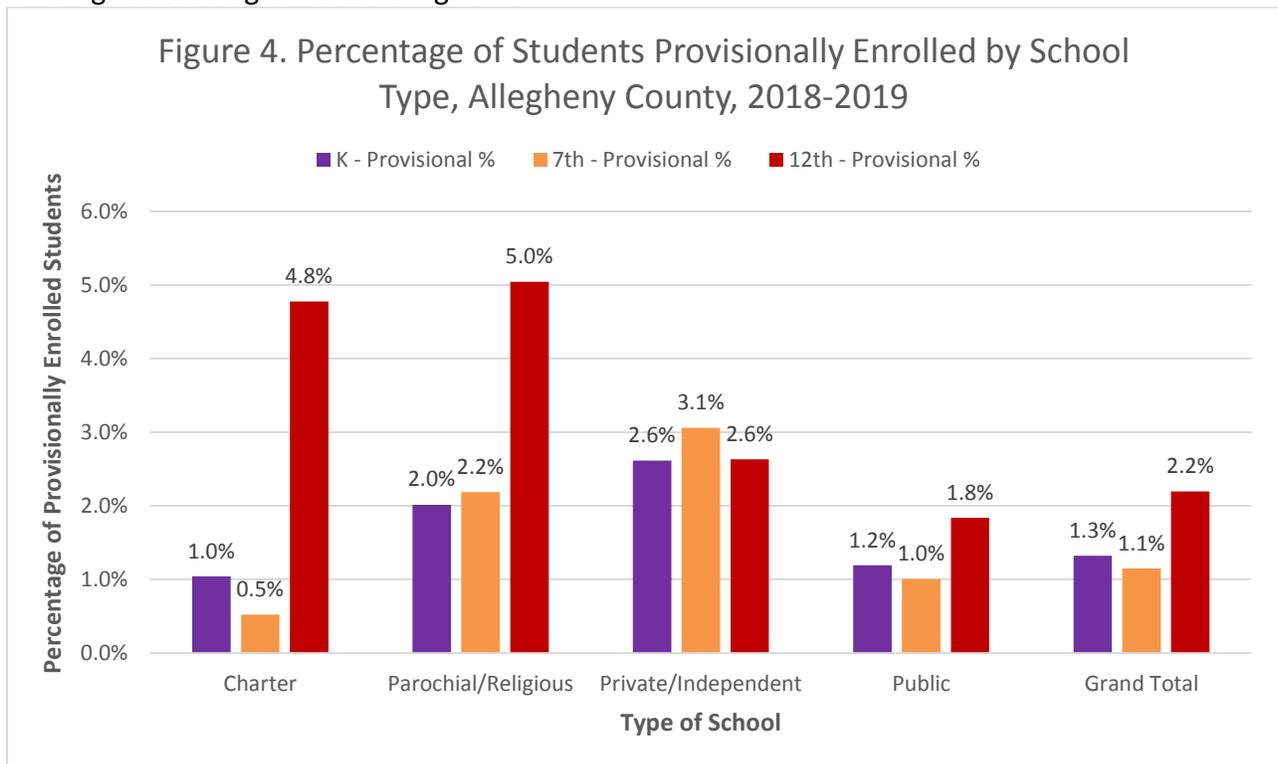


Provisional enrollments in Kindergarten and 7th grade slightly increased this year compared to last year (Figure 3). A large drop in provisional enrollment occurred in 2017-18 most likely because the provisional period was changed. It now ends before the deadline for reporting immunization data.

Figure 3. Percentage of Provisionally Enrolled Kindergarten and 7th Grade Students by Year, Allegheny County, 2011-12 SY to 2018-19 SY



As seen in Figure 4, charter and parochial/religious schools had the highest percentages of provisionally enrolled students in 12th grade and private/independent schools had the highest percentage in Kindergarten and 7th grade.



Immunization Exemptions in Allegheny County

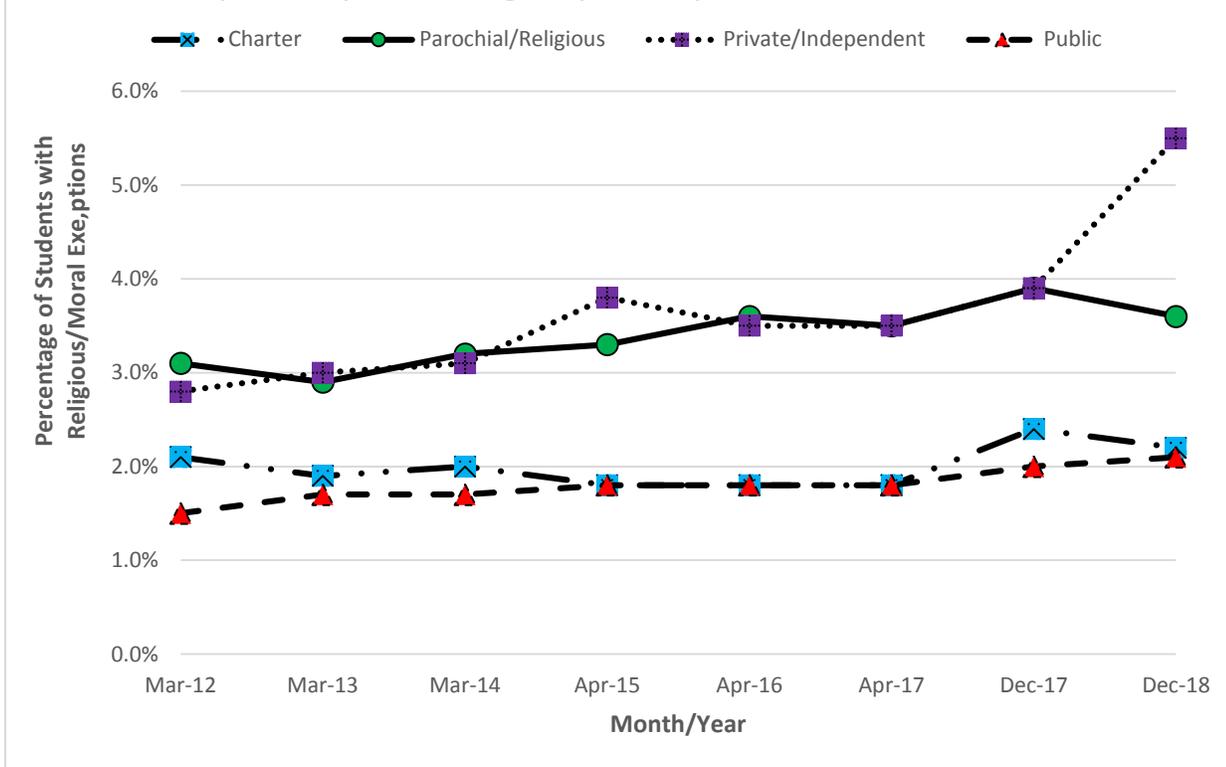
In Allegheny County, 2.9% of students submitted a medical or religious/moral exemption from being fully immunized by December 2018 (Table 7). Medical exemptions were low at 0.6% and religious/moral exemptions (2.3% of students overall) were more common among private/independent and parochial/religious schools.

Table 7. Percentage of Students with Medical or Religious/moral exemptions by School Type, Allegheny County, December 2018

School Type	Number of Students Enrolled	Number of Medical Exemptions	Number of Religious/moral exemptions
	N	N (%)	N (%)
Charter	7,195	24 (0.3)	157 (2.2)
Parochial/Religious	13,461	53 (0.4)	479 (3.6)
Private/Independent	5,520	62 (1.1)	302 (5.5)
Public	135,625	889 (0.7)	2,799 (2.1)
Total	161,801	1,028 (0.6)	3,737 (2.3)

Religious/moral exemptions did increase slightly in the 2018-19 school year (Figure 5). The percentage of religious/moral exemptions at private/independent schools in 2018-19 (5.5%) was much higher than during the past eight school years, mostly because additional schools were classified as private/independent. Private/independent schools in 2018-19 had 482 more students and 103 more religious/moral exemptions than in 2017-18.

Figure 5. Percentage of Students with Religious/Moral Exemptions by Year, Allegheny County, 2011-12 SY to 2018-19 SY



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 8). 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% (Table 8).

Table 8. Percentage of Students Immunized by Vaccine Type, Allegheny County, December 2018

	Kindergarten					7 th Grade		12 th Grade
	MMR (2)	VZV (2)	Hep B (3)	Polio (4)	DTaP (5)	MCV4 (1)	Tdap (1)	MCV4 2
	%	%	%	%	%	%	%	%
Allegheny County ¹	97.0	96.9	97.4	96.7	97.3	96.7	96.7	94.3

Coverage during the 2018-19 school year was slightly lower than coverage last year for almost every type of vaccine among Allegheny County kindergarteners (Table 9). The decline in coverage from the

previous school year is most likely explained by the increase in religious/moral exemptions and provisional enrollment that occurred this year.

Table 9. Percentage of Kindergarten Students Immunized by Vaccine Type, Allegheny County, 2012-13 SY through 2018-19 SY

Vaccine	Oct 2012 ¹	Oct 2013 ¹	Oct 2014 ¹	Oct 2015 ²	Oct 2016 ²	Dec 2017 ²	Dec 2018 ²
MMR (2)	91.1	89.9	91.4	91.0	92.0	97.6	97.0
VZV (2)	90.6	89.3	90.6	90.5	91.0	97.4	96.9
HBV (3)	95.3	94.5	95.4	94.2	95.4	97.9	97.9
Polio (4)	96.1	95.1	95.6	94.9	95.8	97.3	96.7
DTaP (4+)	92.6	92.7	93.7	92.6	93.2	97.8	97.3

Data Sources: ¹Pennsylvania Department of Health's Division of Immunization (2011-2013), ²Allegheny County Health Department (2014-2018)

In the 2018-19 school year there was a slight decrease in coverage among 7th grade students for Tdap and MCV4 vaccines from the 2017-18 school year (Table 10). Coverage decreased from 97.5% to 96.7% for Tdap and from 97.3% to 96.7% for MCV4.

Table 10. Percentage of 7th Grade Students Immunized by Vaccine Type, Allegheny County, School Years 2012-13 to 2018-19

Vaccine	Oct 2012 ¹	Oct 2013 ¹	Oct 2014 ²	Oct 2015 ²	Oct 2016 ²	Dec 2017 ²	Dec 2018 ²
MCV4 (1)	92.9	95.2	95.8	92.9	93.5	97.3	96.7
Tdap (1)	92.9	94.0	95.9	93.3	94.1	97.5	96.7

Allegheny County students entering kindergarten at public and charter schools had higher coverage for all required vaccines than students enrolled at parochial/religious and private/independent schools (Table 11). Coverage among kindergarten students fell below the *Healthy People 2020* Goal of 95% coverage at parochial/religious schools for all vaccines and at private/independent schools for all vaccines except DTaP. Public and charter schools met the *Healthy People 2020* goal for all vaccines.

Table 11. Percentage of Kindergarten Students Immunized by School Type and Vaccine, Allegheny County, December 2018

Vaccine	Charter	Parochial/Religious	Private/Independent	Public
MMR (2)	96.9%	94.8%	92.7%	97.5%
VZV (2)	96.7%	94.6%	92.0%	97.5%
HBV (3)	98.5%	94.7%	94.0%	97.8%
Polio (4)	97.0%	94.4%	92.9%	97.2%
DTaP (4+)	97.5%	94.7%	95.9%	97.6%

For 7th grade students, charter and public schools in Allegheny County showed higher coverage for both Tdap and MCV4 vaccines than parochial/religious and private/independent schools (Table 12). All school types exceeded the *Healthy People 2020* goal of 80%.

Table 12. Percentage of 7th Grade Students Immunized by School Type and Vaccine, Allegheny County, December 2018

Vaccine	Charter	Parochial/Religious	Private/Independent	Public
MCV4 (1)	97.0%	95.4%	93.1%	96.9%
Tdap (1)	97.2%	95.3%	93.4%	97.0%

For 12th grade students, public schools in Allegheny County had higher coverage than other school types for the second dose of MCV4 (Table 13). While there is no *Healthy People 2020* goal for a second dose of MCV4, all schools exceeded the 80% benchmark used for the first dose of MCV4.

Table 13. Percentage of 12th Grade Students Immunized by School Type and Vaccine, Allegheny County, December 2018

Vaccine	Charter	Parochial/Religious	Private/Independent	Public
MCV4 (2)	91.1%	91.8%	88.2%	94.9%

Summary

In Allegheny County, overall immunization coverage for the required school vaccinations was 96.4% for the 2018-19 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 2018-19 school year. 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 reflect more accurate data than an actual decline in coverage, but this is not definitively known.

Overall, 78.3% of all schools in Allegheny County had at least 95% of their students fully immunized with public schools having the highest percentage with 95% coverage (89.6% of schools), followed by charter schools (84.2% of schools), parochial/religious schools (56.1% of schools), and private/independent schools (49.0% 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 2.3%. Private/independent and parochial/religious schools continue to have the highest percentages of religious/moral exemptions, whereas charter and public schools have remained consistent with lower percentages.

The higher percentages of provisional enrollment for kindergarten, 7th, and 12th grade students point to a need to increase immunization efforts specifically for these age groups. Schools may need to provide additional information to parents about immunization requirements for students. Overall, provisional enrollments were lower than 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 2018-19 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.