

**Communicable Disease Epidemiology
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King County School Immunization Assessment Report, 2012-18

Healthy People 2020 objectives include maintaining high levels of vaccination coverage among children in kindergarten. The target is $\geq 95\%$ vaccinated for the following vaccines: poliovirus; diphtheria and tetanus toxoids and acellular pertussis (DTP/DTaP/DT); measles, mumps, and rubella (MMR); hepatitis B (HepB); and varicella.¹

The Washington State Department of Health Immunization and Child Profile Office collects data on the immunization status of students attending public, private or charter schools in Washington State, per state law (RCW 28A.210-110, and WAC 246-105-060). The Department of Health does not collect records of individual students. The *School Immunization Status Report* is an aggregate count of students in all grades, kindergarten and 6th grade by immunization status as of November 1st each year. Some schools submitted data that were excluded, including schools located in hospitals and jails, parent partnership programs, schools located out of district, online schools, and schools with fewer than 10 students enrolled.

The data is collected at the school level and is used by State and Local Health Departments to monitor vaccination coverage and exemption levels. The student immunization status is based on parent/guardian report and may not be verified by a healthcare provider. The Washington State Department of Health makes no claims about the accuracy of the data as reported by schools. Moreover, the summary data in this report is not weighted and does not account for the percentage of schools that did not report.

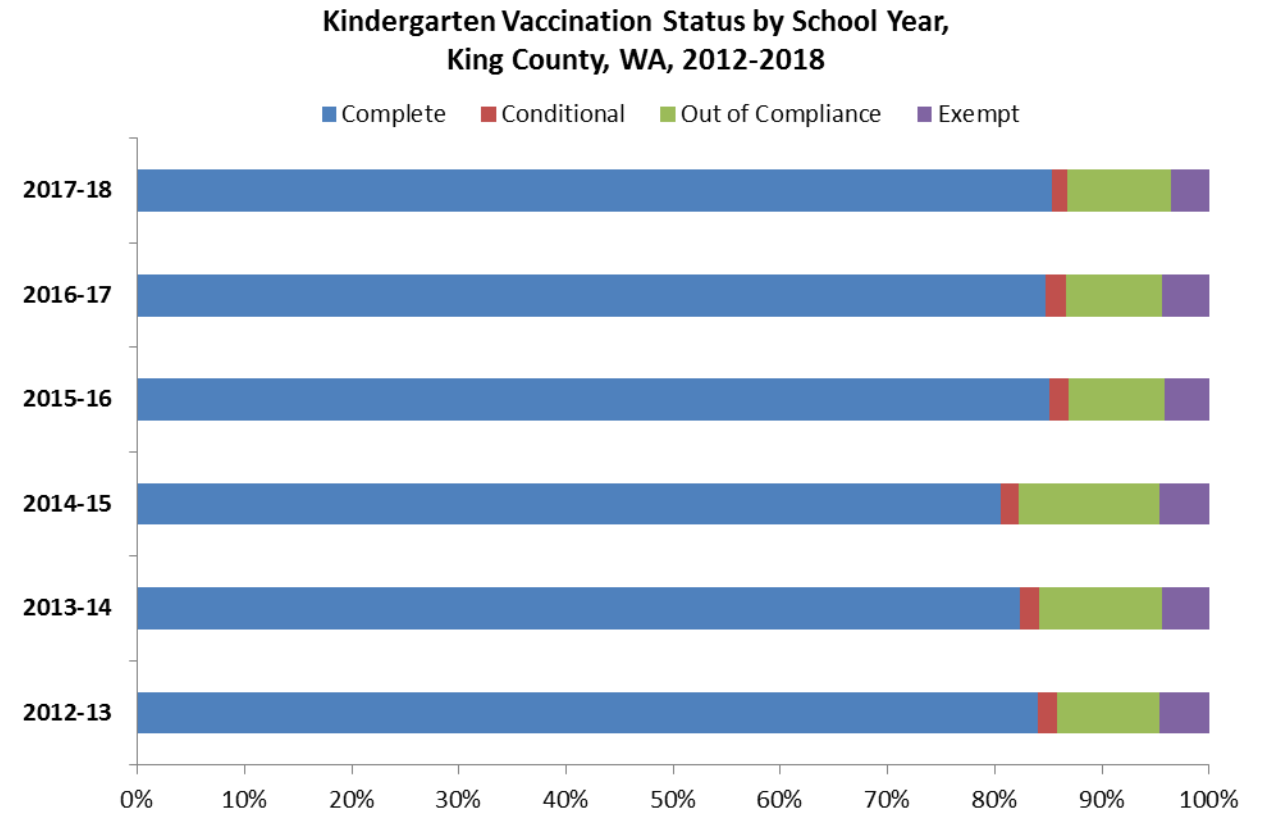
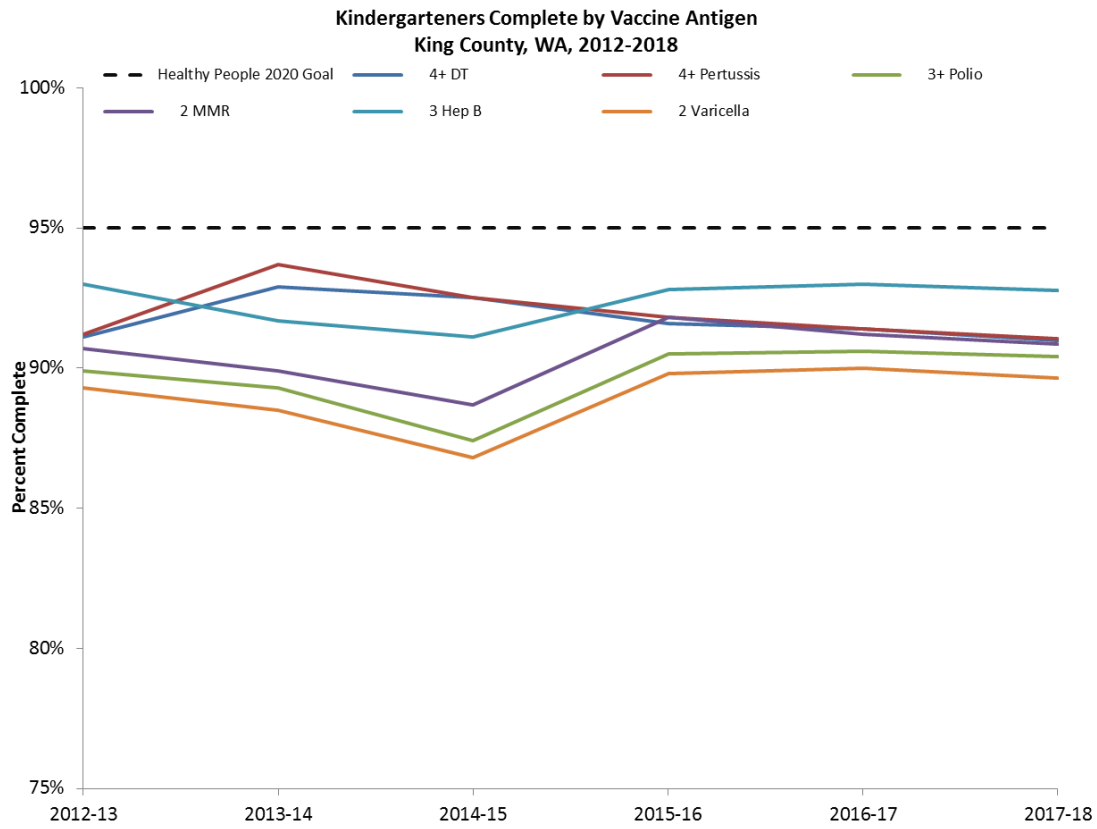
The King County School Immunization Assessment Report summarizes data from annual *School Immunization Status Reports* submitted by schools located in King County, Washington between 2012 and 2018.

Kindergarten Immunization Assessment, King County Schools, 2012-2018

	2012-13			2013-14			2014-15			2015-16			2016-17			2017-18		
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Number of Schools	299	162	461	297	168	465	296	163	459	290	176	466	290	173	463	301	158	459
Number of Schools Reporting	272	129	401	270	103	373	280	131	411	288	149	437	290	144	434	301	135	436
% Schools Reporting	91.0%	79.6%	87.0%	90.9%	61.3%	80.2%	95.0%	80.4%	89.5%	99.3%	84.7%	93.8%	100.0%	83.2%	93.7%	100.0%	85.4%	95.0%
Number Students (of Reporting Schools)	20,504	2,946	23,450	20,443	2,680	23,123	21,755	3,123	24,878	21,439	3,220	24,659	21,699	3,128	24,827	21,785	3,172	24,957
% Students Complete	84.0%	85.6%	84.2%	82.2%	84.4%	82.5%	80.3%	82.3%	80.5%	85.2%	84.3%	85.0%	85.0%	83.5%	84.8%	85.7%	84.9%	85.6%
% Conditional	1.2%	5.5%	1.8%	1.4%	5.1%	1.8%	1.3%	4.7%	1.7%	1.3%	5.4%	1.8%	1.4%	4.8%	1.9%	1.0%	4.3%	1.5%
% Out-of-Compliance	10.5%	2.9%	9.6%	12.5%	3.9%	11.5%	14.3%	5.2%	13.1%	9.8%	3.9%	9.0%	9.7%	3.6%	8.9%	9.9%	5.4%	9.3%
% Exempt	4.3%	7.0%	4.6%	4.0%	7.0%	4.4%	4.1%	7.8%	4.6%	3.8%	6.4%	4.1%	3.9%	8.0%	4.4%	3.4%	5.5%	3.7%
% Medical	1.4%	3.0%	1.6%	1.2%	0.9%	1.2%	1.2%	1.5%	1.2%	0.9%	0.9%	0.9%	0.8%	0.9%	0.8%	0.6%	0.5%	0.6%
% Personal Belief	2.8%	8.2%	3.5%	2.7%	6.3%	3.1%	2.9%	6.6%	3.4%	2.9%	5.2%	3.2%	3.1%	7.0%	3.6%	2.7%	4.8%	3.0%
% Religious Exemption	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
% Religious Member	<1%	<1%	<1%	<1%	0.0%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
% complete by antigen																		
4+ DT	91.0%	92.0%	91.1%	93.3%	90.2%	92.9%	92.9%	89.7%	92.5%	91.7%	91.0%	91.6%	91.5%	90.1%	91.4%	91.2%	90.6%	91.1%
4+ Pertussis	91.0%	92.4%	91.2%	93.9%	91.5%	93.7%	92.4%	89.7%	92.5%	92.0%	89.8%	91.8%	91.6%	89.9%	91.4%	91.2%	90.6%	91.2%
3+ Polio	89.7%	91.4%	89.9%	89.3%	89.6%	89.3%	87.1%	90.1%	87.4%	90.6%	90.1%	90.5%	90.7%	89.4%	90.6%	90.7%	89.8%	90.5%
2 MMR	90.7%	90.7%	90.7%	90.1%	89.0%	89.9%	88.7%	88.5%	88.7%	92.0%	89.8%	91.8%	91.6%	88.8%	91.2%	91.1%	90.0%	91.0%
3 Hep B	92.9%	93.4%	93.0%	91.8%	91.2%	91.7%	91.2%	90.3%	91.1%	93.0%	91.4%	92.8%	93.3%	90.9%	93.0%	93.1%	91.3%	92.9%
2 Varicella	89.3%	89.8%	89.3%	88.6%	87.8%	88.5%	86.9%	86.5%	86.8%	90.1%	88.2%	89.8%	90.4%	87.6%	90.0%	90.0%	88.8%	89.8%

King County Kindergarten Immunization Coverage by School District Service Area, 2017-18

School District Service Area	Kindergarten Enrollment	% Complete	% Conditional	% Out-of-compliance	% Exempt	% Complete					
						DT	Pertussis	MMR	Polio	Hep B	Varicella
Auburn	1351	84.5%	2.2%	7.8%	5.4%	89.0%	89.0%	89.7%	89.5%	93.3%	88.2%
Bellevue	2025	85.8%	0.7%	10.2%	3.3%	91.2%	91.3%	91.0%	91.7%	92.5%	88.5%
Enumclaw	357	84.6%	1.4%	7.0%	7.0%	88.8%	88.8%	90.8%	90.8%	91.6%	89.4%
Federal Way	1954	83.4%	1.4%	11.1%	4.1%	88.5%	88.6%	89.5%	89.2%	92.9%	88.1%
Highline	1694	85.5%	1.7%	11.0%	1.8%	92.6%	94.2%	92.0%	91.7%	94.9%	91.4%
Issaquah	1531	94.4%	0.7%	0.5%	4.4%	96.5%	96.5%	96.3%	96.1%	97.1%	96.0%
Kent	2045	86.8%	2.1%	7.0%	4.1%	90.6%	90.5%	91.2%	90.4%	93.7%	90.2%
Lake Washington	2535	79.9%	1.3%	16.0%	2.8%	89.5%	89.6%	88.8%	87.7%	92.1%	87.3%
Mercer Island	351	85.8%	0.0%	9.7%	4.6%	93.4%	93.4%	93.2%	93.7%	93.4%	93.7%
Northshore	1950	86.3%	0.9%	8.3%	4.4%	91.9%	91.4%	91.1%	90.7%	91.2%	90.3%
Renton	1259	90.3%	0.2%	3.7%	4.2%	93.4%	93.2%	93.1%	93.2%	95.6%	93.1%
Riverview	24	83.3%	0.0%	4.2%	12.5%	95.8%	95.8%	91.7%	87.5%	83.3%	91.7%
Seattle	5687	84.1%	1.2%	12.4%	2.3%	90.0%	90.0%	89.7%	89.1%	91.3%	88.5%
Shoreline	849	89.3%	4.0%	1.2%	5.5%	92.8%	92.9%	93.2%	92.7%	94.2%	91.9%
Skykomish	<10	*	*	*	*	*	*	*	*	*	*
Snoqualmie Valley	512	89.1%	1.2%	4.5%	5.3%	94.3%	94.3%	93.4%	93.0%	93.2%	92.0%
Tahoma	413	88.6%	0.5%	7.0%	3.9%	93.0%	93.0%	92.5%	92.3%	93.9%	92.3%
Tukwila	224	87.1%	5.4%	3.6%	4.0%	90.2%	90.2%	90.6%	89.7%	93.3%	90.2%
Vashon	95	73.7%	7.4%	7.4%	11.6%	87.4%	87.4%	88.4%	82.1%	80.0%	85.3%



There are 459 schools in King County with kindergartens. Thirty-four percent are private and 66% are public. The total number of enrolled kindergartners of reporting schools is 24,957. All public schools submitted Immunization Assessment reports for the 2017-18 school year and 85% of private schools with kindergartens submitted reports.

Completion:

Overall, 86% of enrolled kindergartners are reported as *complete* on required immunizations: (4+ Diphtheria/Tetanus, 4+ Pertussis, 3+ Polio, 3 Hepatitis B, 2 Measles/Mumps, Rubella, 2 Varicella), which is about the same as the previous two school years.

Eighty-seven percent of students who meet school entry vaccination requirements attend King County public schools and 13% attend private schools. There is little difference in the proportion of kindergartners who are complete by the type of school they attend, however there is significant variation in immunization completion levels by school district service area: 74% complete (Vashon) to 94% complete (Issaquah); median 86%.

Exemption:

Overall, 910 (3.7%) kindergartners claimed exemptions. Of these, 737 (81%) attend public schools and 173 (19%) attend private schools. Across all five school years, kindergartners attending private schools had higher exemption rates compared to kindergartners attending public schools, with the majority claiming personal belief exemptions.

Of the 737 enrolled kindergartners who claimed exemptions, personal belief / philosophical exemptions were the most common, following by medical and religious exemptions. Note that exemption categories are not mutually exclusive and some individuals reported two or more exemption types.

Out of Compliance:

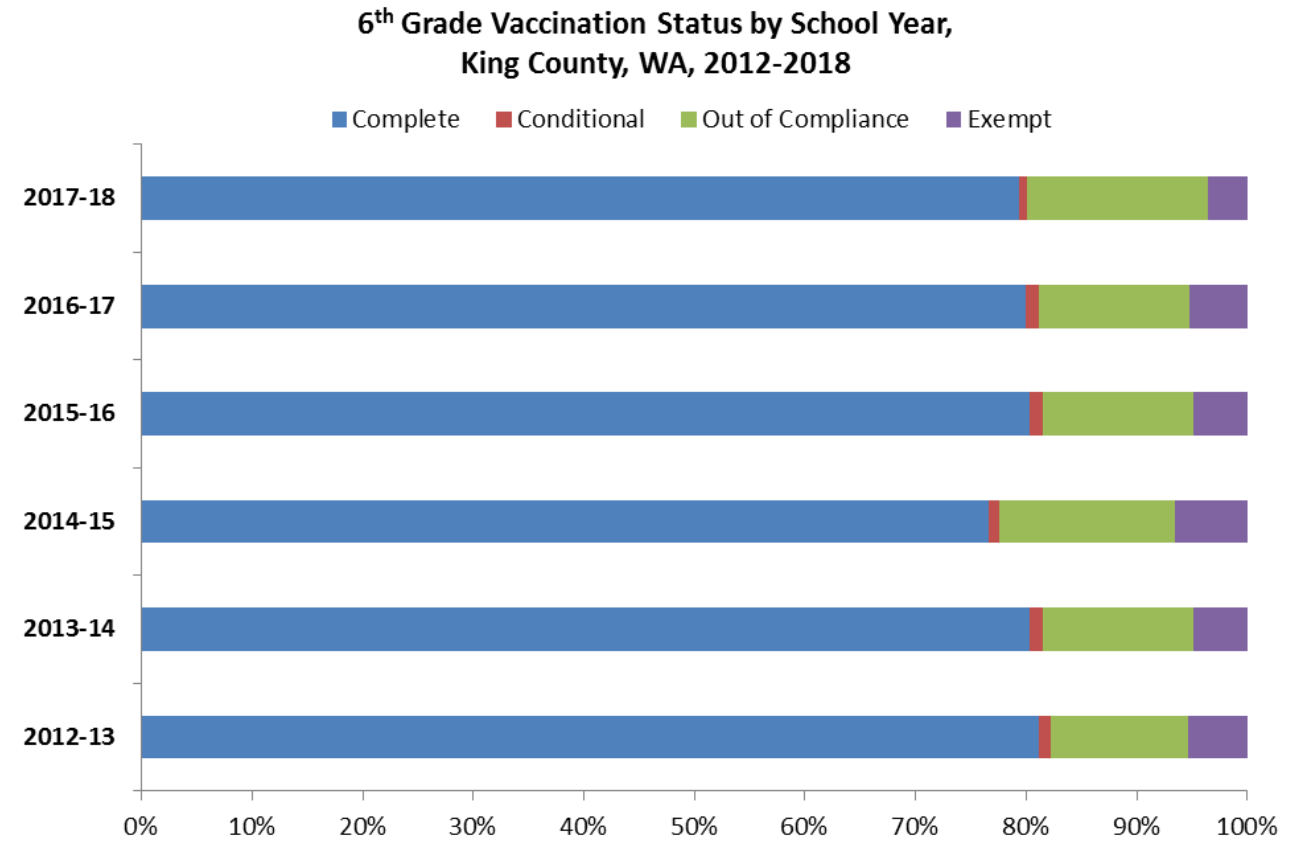
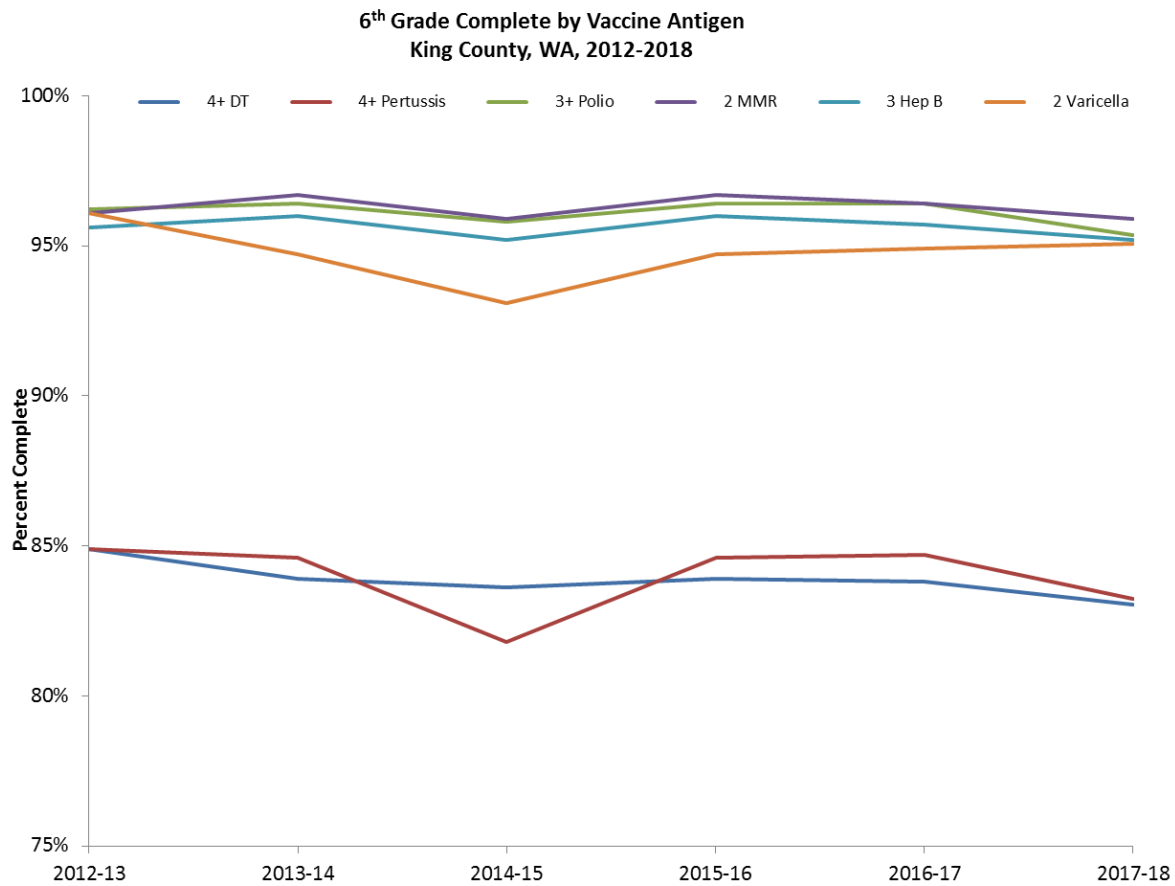
Nine percent of reported kindergarten students were *out of compliance* with school entry requirements at the time the report was submitted to the State Department of Health. Similar to previous school years, fewer than 2% of students were categorized as *conditional*. That is, they did not meet kindergarten entry requirements for the student's age, but were within 30 days of school entry or were making satisfactory progress towards meeting the requirements.

6th Grade Immunization Assessment, King County Schools, 2012-2018

	2012-13			2013-14			2014-15			2015-16			2016-17			2017-18		
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Number of Schools	164	149	313	158	153	311	164	150	314	158	153	311	162	156	318	190	150	340
Number of Schools Reporting	153	118	271	156	132	288	160	139	299	156	132	288	162	134	296	186	130	316
% Schools Reporting	93.3%	79.2%	86.6%	98.7%	86.3%	92.6%	97.6%	92.7%	95.2%	98.7%	86.3%	92.6%	100.0%	85.9%	93.1%	98.0%	86.6%	92.9%
Number Students (of Reporting Schools)	18,886	2,485	21,371	20,633	2,730	23,363	20,521	2,617	23,138	20,633	2,730	23,363	21,438	2,678	24,116	22,083	2,701	24,784
% Students Complete	80.7%	85.6%	81.3%	79.9%	83.5%	80.4%	76.0%	82.0%	76.7%	79.9%	83.5%	80.4%	79.9%	81.8%	80.1%	79.4%	84.6%	80.0%
% Conditional	<1%	6.2%	1.1%	<1%	7.5%	1.2%	<1%	5.3%	<1%	<1%	7.5%	1.2%	<1%	6.1%	1.1%	0.3%	3.9%	0.7%
% Out-of-Compliance	13.6%	3.7%	12.5%	14.8%	4.4%	13.6%	17.1%	6.9%	15.9%	14.8%	4.4%	13.6%	14.5%	6.6%	13.7%	16.9%	6.7%	15.8%
% Exempt	5.6%	5.1%	5.3%	4.9%	4.6%	4.9%	6.6%	5.7%	6.5%	4.9%	4.6%	4.9%	5.1%	5.5%	5.2%	3.5%	4.8%	3.6%
% Medical	<1%	<1%	<1%	1.3%	<1%	1.2%	1.7%	1.0%	1.6%	1.3%	<1%	1.2%	1.4%	<1%	1.3%	0.9%	0.3%	0.8%
% Personal Belief	4.3%	4.6%	4.4%	4.8%	4.7%	4.8%	4.9%	4.6%	4.9%	4.8%	4.7%	4.8%	3.9%	4.9%	4.1%	2.6%	4.3%	2.7%
% Religious Exemption	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
% Religious Member	0.0%	<1%	0.0%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
% complete by antigen																		
4+ DT	84.3%	89.5%	84.9%	83.6%	86.5%	83.9%	83.1%	87.0%	83.6%	83.6%	86.5%	83.9%	83.7%	84.8%	83.8%	82.9%	88.4%	83.5%
4+ Pertussis	84.2%	89.8%	84.9%	84.0%	88.7%	84.6%	81.2%	86.3%	81.8%	84.0%	88.7%	84.6%	84.2%	88.3%	84.7%	82.9%	90.7%	83.7%
3+ Polio	96.1%	96.4%	96.2%	96.6%	94.9%	96.4%	96.1%	93.4%	95.8%	96.6%	94.9%	96.4%	96.6%	95.3%	96.4%	95.6%	94.1%	95.5%
2 MMR	96.1%	96.2%	96.1%	96.8%	95.7%	96.7%	96.1%	94.3%	95.9%	96.8%	95.7%	96.7%	96.6%	95.4%	96.4%	96.2%	94.4%	96.0%
3 Hep B	95.5%	96.0%	95.6%	96.2%	94.9%	96.0%	95.4%	93.9%	95.2%	96.2%	94.9%	96.0%	95.8%	94.9%	95.7%	95.5%	93.7%	95.3%
2 Varicella	96.2%	95.1%	96.1%	94.8%	94.5%	94.7%	93.0%	93.1%	93.1%	94.8%	94.5%	94.7%	94.9%	94.7%	94.9%	95.3%	93.8%	95.2%

King County 6th Immunization Coverage by School District Service Area, 2017-18

School District Service Area	Kindergarten Enrollment	% Complete	% Conditional	% Out-of-compliance	% Exempt	% Complete					
						DT	Pertussis	MMR	Polio	Hep B	Varicella
Auburn	1280	82.3%	0.2%	13.0%	4.5%	83.7%	83.9%	97.0%	96.6%	97.6%	96.5%
Bellevue	1671	82.8%	0.2%	13.2%	3.8%	87.3%	87.1%	97.1%	97.1%	96.3%	95.5%
Enumclaw	352	84.7%	0.3%	8.2%	6.8%	88.1%	89.8%	96.6%	96.0%	96.3%	94.0%
Federal Way	1783	60.6%	0.2%	36.3%	2.9%	68.0%	65.7%	96.0%	95.7%	96.4%	95.0%
Highline	1604	82.1%	0.4%	15.8%	1.7%	86.5%	87.1%	98.1%	97.3%	97.1%	97.0%
Issaquah	1656	95.0%	0.4%	0.8%	3.7%	96.9%	97.3%	98.6%	98.2%	98.1%	97.5%
Kent	2126	81.6%	0.3%	15.4%	2.6%	82.7%	83.6%	97.9%	97.1%	97.8%	97.1%
Lake Washington	2667	74.8%	0.2%	19.3%	5.7%	78.4%	78.5%	95.5%	95.2%	94.9%	94.1%
Mercer Island	435	89.4%	0.2%	8.3%	2.1%	91.7%	92.9%	97.5%	97.7%	97.2%	96.8%
Northshore	1955	78.8%	0.5%	16.3%	4.5%	80.9%	81.1%	96.5%	96.1%	95.8%	95.8%
Renton	1256	91.4%	1.0%	3.5%	4.1%	92.8%	93.5%	97.5%	97.7%	97.6%	97.0%
Riverview	269	76.2%	0.0%	11.5%	12.3%	81.0%	84.4%	92.9%	93.3%	92.9%	91.4%
Seattle	5205	75.4%	1.2%	21.7%	1.6%	80.3%	80.6%	92.9%	91.7%	91.2%	92.3%
Shoreline	854	87.8%	4.2%	1.4%	6.6%	91.8%	92.2%	95.3%	95.4%	95.7%	98.2%
Skykomish	<10	*	*	*	*	*	*	*	*	*	*
Snoqualmie Valley	591	85.3%	0.3%	9.8%	4.6%	87.1%	87.6%	96.8%	96.6%	96.1%	96.4%
Tahoma	628	86.8%	0.3%	9.4%	3.5%	88.4%	88.9%	97.5%	97.8%	97.1%	96.3%
Tukwila	207	95.7%	2.4%	1.4%	0.5%	96.1%	97.1%	98.6%	97.6%	98.1%	98.6%
Vashon	131	74.0%	0.0%	10.7%	15.3%	81.7%	84.0%	87.0%	84.7%	80.2%	82.4%



There are 340 schools in King County with 6th graders. Forty-four percent of the schools are private (150) and 56% (190) are public. While almost all public schools submitted Immunization Assessment reports for the 2017-18 school year, 87% of private schools with 6th grades submitted reports. The total number of enrolled 6th graders of reporting schools is 24,784.

Completion:

19,821 (80%) enrolled 6th graders meet school entry vaccination requirements (4+ Diphtheria/Tetanus, 4+ Pertussis, 3+ Polio, 3 Hepatitis B, 2 Measles/Mumps, Rubella, 2 Varicella); 17,535 (89%) attend public schools and 2,286 (11%) attend private schools, with a greater proportion of students enrolled in private schools *complete* (85%) compared with students attending public schools (79%).

As with kindergarteners, there is significant variation in 6th grade immunization completion levels by school district service area (i.e., public and private schools located within the geographic boundaries of a school district): 60% complete (Federal Way) to 96% complete (Tukwila); median 82%.

Exemption:

Overall, 890 (3.6%) 6th graders claimed exemptions during the 2017-18 school year. Eighty-five percent of students claiming any kind of exemption attend public schools and 15% attend private schools. Personal belief/philosophical exemption accounts for the majority of reported exemption types followed by medical and religious exemptions. Note: Families may choose more than one type of exemption (i.e., exemption categories are not mutually exclusive).

Out of Compliance:

Sixteen percent of 6th grade students were *out-of-compliance* with school entry vaccination requirements at the time the report was submitted to the State Department of Health and less than 1% were categorized as *conditional*. Of the 168 students categorized as conditional, the majority (62%) attend private schools whereas of the 3,905 6th grade students identified as *out of compliance*, most (95%) attend public schools.

Definitions:

Complete: Percent of students in the school who meet school entry vaccination requirements for the student's age and grade, as reported by the school.

Conditional: Percent of students in the school who do not meet school entry requirements for the student's age and grade (e.g. they are missing one or more required vaccines), but are within 30 days of school entry or are making satisfactory progress towards meeting the requirements, as reported by the school. Students with conditional status can attend school or child care for a limited time until they finish their paperwork. From the time they get notified that their child is on conditional status, parents or guardians have 30 days to get the child vaccinated, show a record of past vaccination, or exempt their child for the missing vaccine.

Out of compliance: Percent of students in the school who do not meet school entry vaccination requirements for the student's age and grade, as reported by the school.

Exempt: Percent of students in the school who have at least one exemption, as reported by the school. A student may claim an exemption to immunization for medical, religious, or personal reasons. In addition, a student may be exempt for any or all required vaccines, as indicated on a completed and signed Certificate of Exemption (COE) on file at the school. Note: When students have exemption forms on file at school and an outbreak of a vaccine-preventable disease occurs, they may be sent home until the outbreak is over, until they bring in their vaccination records, or until they get vaccinated.

Reference:

1. US Department of Health and Human Services. Healthy people 2020: immunization and infectious diseases. Washington, DC: US Department of Health and Human Services; 2010. Available at <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicId=23>. Accessed May 26, 2011.