

Spokane Regional Health District- School Record Review Project

Purpose

The purpose of this project was to reduce the number of philosophical school exemptions and increase the number of children who have received the state required vaccines for public schools attendance within Spokane County. The overall goal of this project was to decrease vaccine-preventable disease by increasing the number of children and adolescents who receive recommended vaccines.

Rationale

In Washington State, children attending school in grades K-12 must present a signed Certificate of Immunization Status (CIS) form showing either 1) proof of immunizations per the WA state 2010 recommended childhood schedule, 2) a medical exemption (with a health care provider signature) or 3) personal or religious exemption (with a parent/guardian signature). For the 2008-2009 school year, the exemption rate for grades K-12 in Spokane County was 7.4% compared to 5.7% for the state. Out of all the 36 counties, Spokane has the 10th highest exemption rate for the 2008-2009 school year.

Overview

Spokane Regional Health District (SRHD) collaborated with five school districts in Spokane County (Spokane Public Schools, Mead School District, Deer Park School District, East Valley School District, and West Valley School District). SRHD and the participating school districts worked together to reduce the number of personal exemptions and increase the number of students vaccinated with school required immunizations. This was done by reviewing records and contacting parents by letter or phone. According to data from the 2007-2008 school year, the five school districts represent approximately 50,800 students which is about 68% of the children attending public school in Spokane County. There were a total of 8,570 records reviewed during the project. Records of children who had received all appropriate school required immunizations were not reviewed.

Strategy

Four strategies were used to update information regarding personal exemptions and students who had not received the appropriate immunizations:

1) CHILD Profile/ Data Management- Due to time restraints and a lack of staff, many school districts cannot thoroughly manage their immunization files or utilize CHILD Profile (Washington State Immunization Registry System) to complete records. One strategy of this

project was to help assist the districts by providing fiscal resources for staff time to assist with internal data clean up and to look up missing vaccine information in CHILD Profile.

2) Letters- Some districts sent letters to parents asking them to confirm exemption status or to provide missing immunization information.

3) Phone Calls- Some districts made phone calls to parents asking them to confirm exemption status or to provide missing immunization information.

4) Letters and Phone Calls- Some districts used both letters and follow up phone calls to parents.

Objectives

The overarching goal of this project is to reduce vaccine-preventable diseases by increasing the number of children and adolescents who receive recommended vaccines. Specific objectives are listed below:

- By July 31, 2010 personal exemption rates will decrease by 15% for all participating school districts.
- By July 31, 2010 immunization rates will increase by 15% for all participating school districts.

Methods

The methods used to complete this project varied by school district. This variance occurred due to several factors, such as, the size of the school district, each school districts immunization tracking system, the amount of time to implement the project, and staff time and resources.

The school districts had three options to choose from:

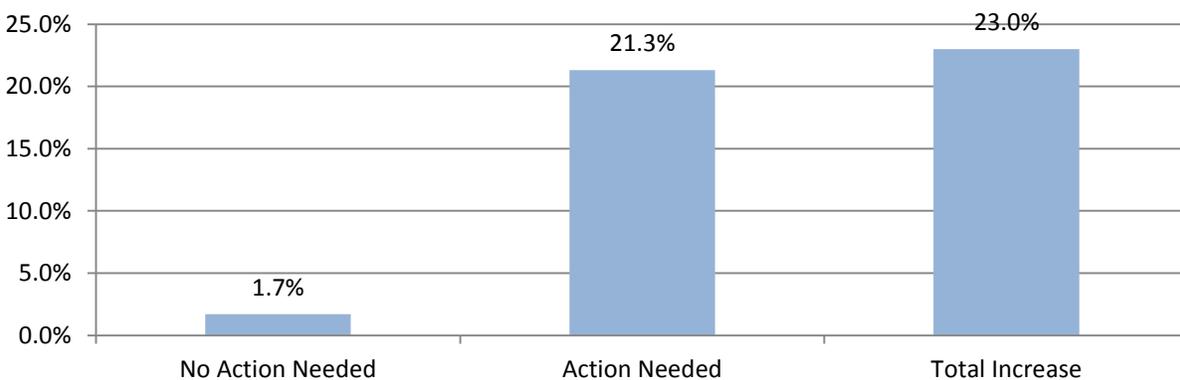
- They could send immunization information to SRHD to review and fill out letters that the school could then label and send out. SRHD did not receive data by student, each student was labeled with a unique identifier to track data and keep the identity of the student confidential. Due to FERPA (Family Educational Rights and Privacy Act) requirements, non-school staff cannot have access to student health information without parent permission.
- Hire school district staff to look up children in CHILD Profile and send letters.
- Hire school district staff to look up children in CHILD Profile and make phone calls.
- Hire school district staff to look up children in CHILD profile, send letters, and follow up with phone calls.

These options were used to help standardize the data, assist with the different circumstances within each school district, and to evaluate the best method of intervention.

Results

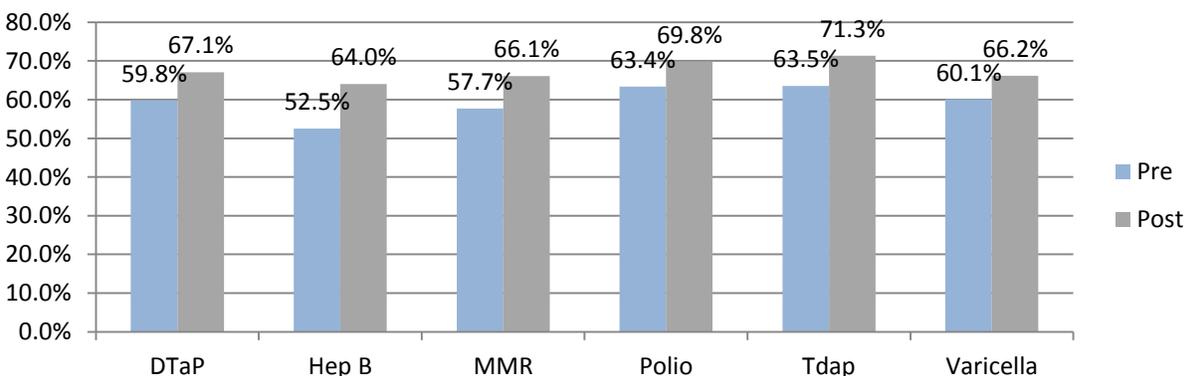
There were a total of 8,570 out of compliance records reviewed by staff to ensure students had received appropriate vaccines for school entry. There were several reasons a student would not have appropriate vaccines according to each school's immunization tracking system. The most common reasons were the students record did not have a date of vaccination for a particular vaccine, there was an exemption on file for that vaccine, or vaccination dates were not valid due to intervals or age requirements. Overall the number of students that were compliant after review rose to 23% by the end of the project across all five school districts.

Increase in Students Up-To-Date for School Required Immunizations from Out of Compliance Records

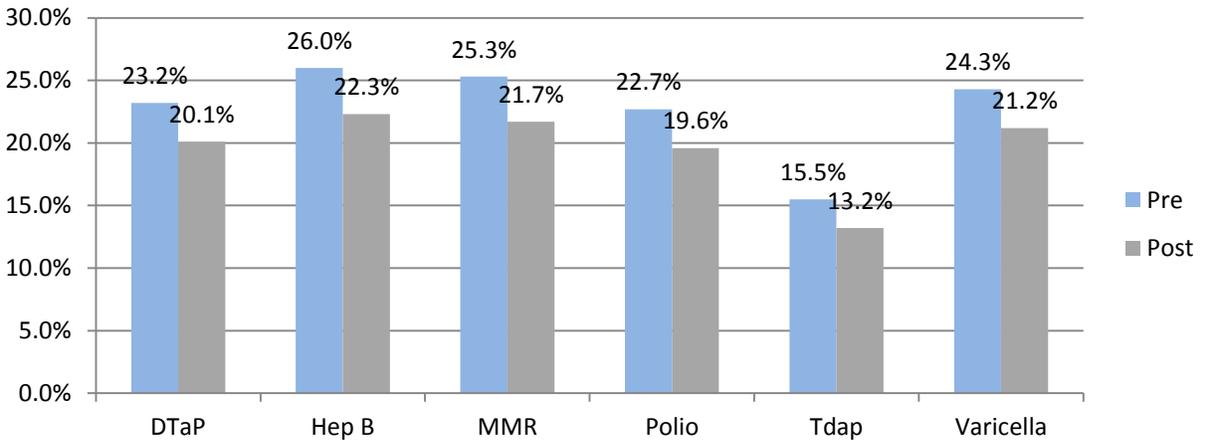


Below are graphs showing the increase in vaccine coverage, decrease in out of compliance, and decrease in personal exemption by vaccine for the entire project, including all five school districts. The out of compliance graphs indicates the decrease in the percentage of students who did not have the appropriate vaccines for school entry.

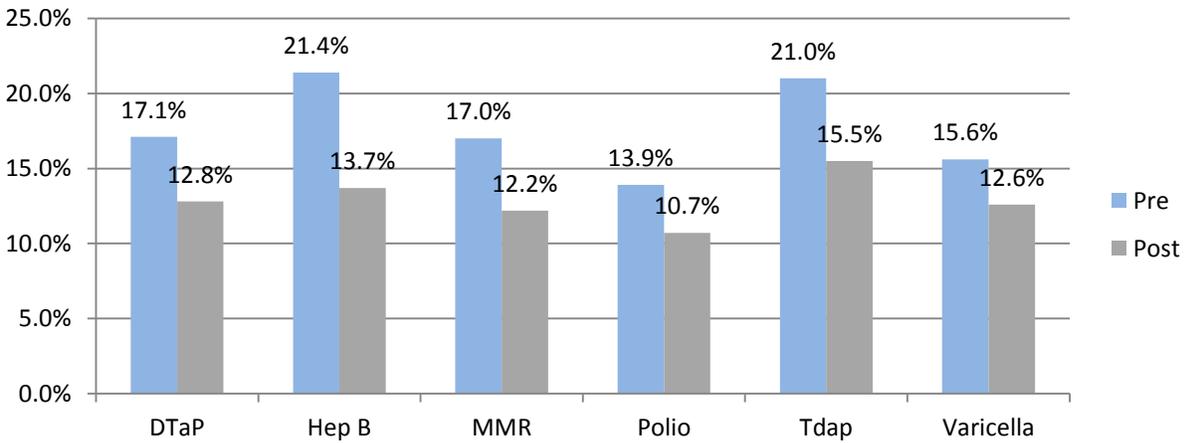
Total Project Increase in Vaccine Coverage for School Required Immunizations from Out of Compliance Records



Total Project Decrease in Personal Exemptions by Vaccine for School Required Immunizations from Out of Compliance Records

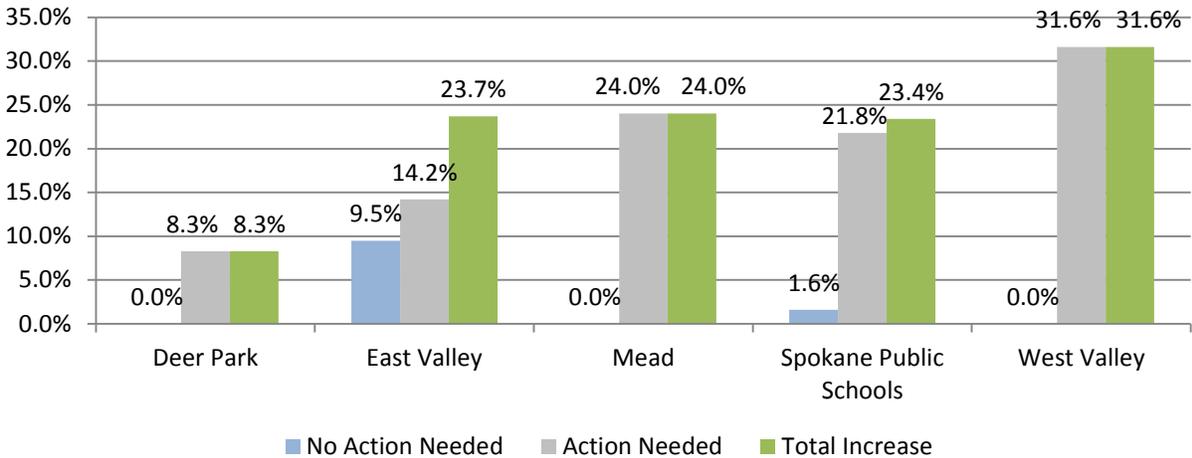


Total Project Decrease in Students Out of Compliance for School Required Immunizations by Vaccine from Out of Compliance Records



All school districts had an increase in students receiving required immunizations for school entry as seen in the graph below.

Increase in Students Up-To-Date For School Required Immunizations from Out of Compliance Records By School District

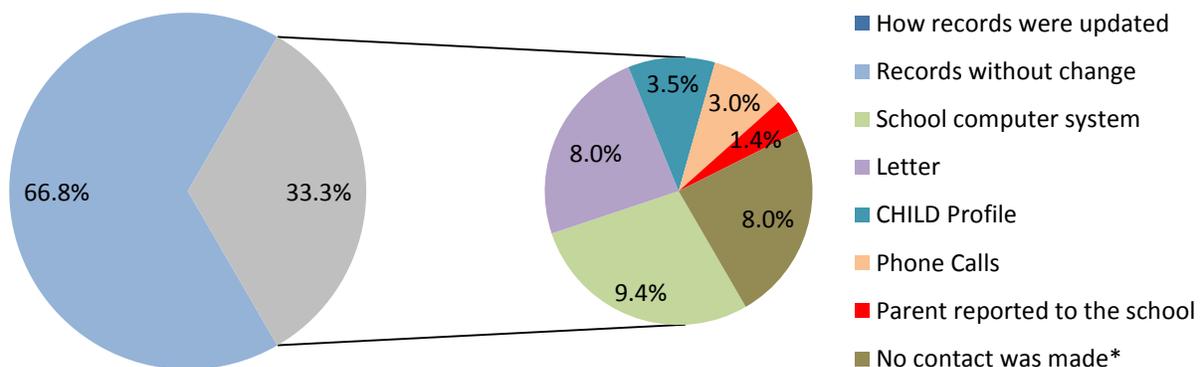


Results by school district can be found in [Appendix A](#).

Vaccine coverage for school required immunizations from out of compliance records can be found in [Appendix B](#).

There were many ways that students' records were updated. Most records were updated by the school computer system, which varies by school district. These updates occurred due to data cleanup only. For example, all the vaccination dates were in the computer system, but were out of order. The computer system would then flag the student as not current on immunizations. See results below.

How School Immunization Records were Updated

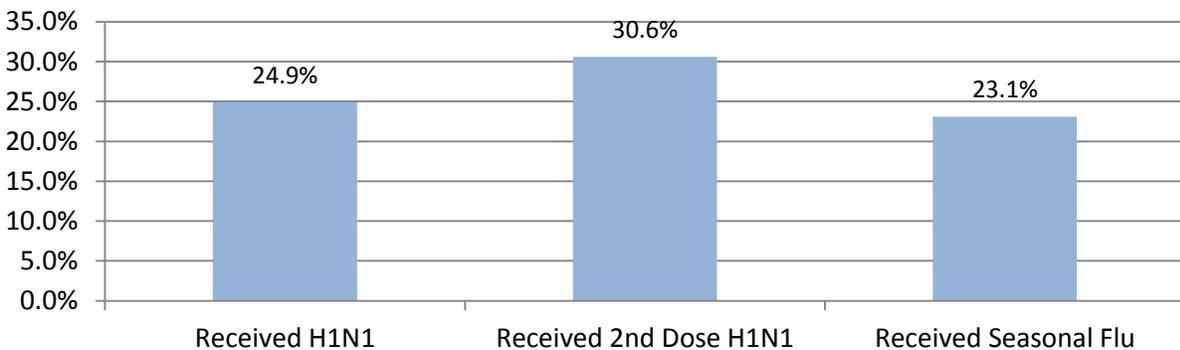


*Various reasons for no contact being made, such as child was too old to receive vaccine.

H1N1 Data

When parents were contacted either by letter or on the phone, they were also asked whether their child received an H1N1 or seasonal flu vaccine during the 2009-2010 flu season. A total of 683 parents answered the questions and 513 (75.1%) indicated their child did not receive the H1N1 vaccine with 170 (24.9%) indicating their child had received the H1N1 vaccine. Out of the 170 that received their first H1N1 vaccine, 52 (30.6%) children received the 2nd dose and 87 (51.2%) did not. Several people left this question blank. Out of the same parents, 522 (76.4%) indicated their child did not receive seasonal flu vaccine with 158 (23.1%) indicating their child had received the seasonal flu vaccine.

H1N1 and Seasonal Flu Uptake



Evaluation of Methods Used

Overall, there was significantly more improvement in vaccination rates when using only phone calls to contact parents compared to only sending letters and sending letters and then calling parents. For most immunizations and as an overall strategy, only making phone calls to parents worked the best. However, when rates were separated by antigen, letters followed by phone calls worked best to increase compliance for Varicella.

Conclusion

This project was successful in increasing vaccination rates and decreasing out of compliance and personal exemptions. In order to continue this work in the future, schools in Spokane County would need to take on the work of this project. With all the lessons learned and information we have gathered, a tool kit could be provided to the school districts that would give them examples of resources and step-by-step instructions on how to continue to review their records every year to ensure the data is accurate. At the very least, this project shows promising results for increasing compliance rates if schools would utilize CHILD Profile to update school records. The schools in Spokane County have access to CHILD Profile.

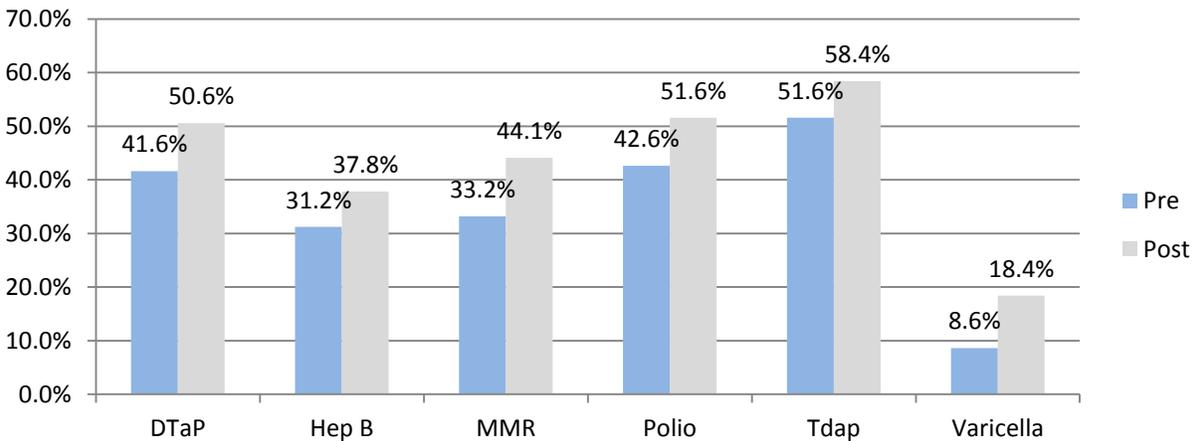
APPENDIX A –

- [Deer Park School District](#)
- [East Valley School District](#)
- [Mead School District](#)
- [Spokane Public Schools](#)
- [West Valley School District](#)

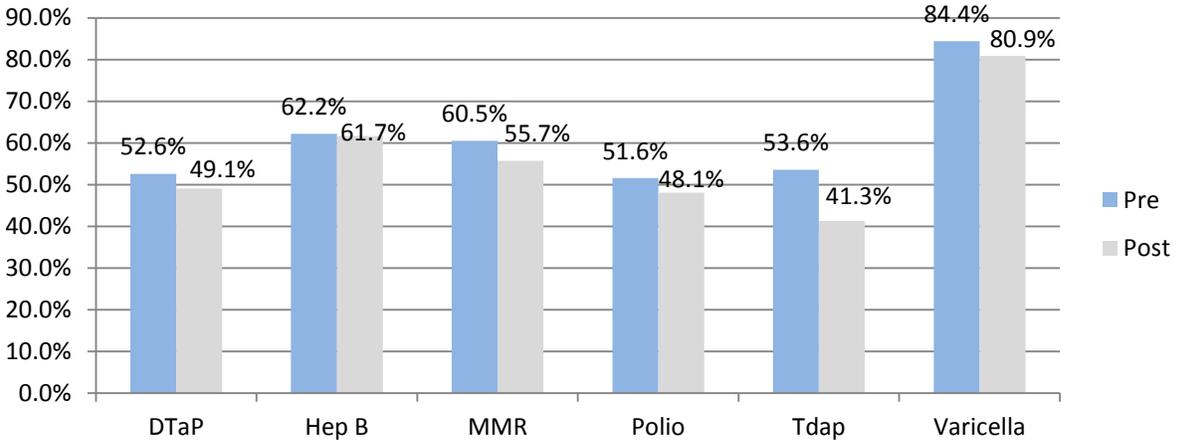
Deer Park School District

There were a total of 397 students included in this project from the Deer Park School District including Deer Park Elementary, Home Link, Arcadia Elementary, Deer Park High School, and Deer Park Middle School. Deer Park School District used only letters to contact parents about student immunization records. The number of students that were compliant in Deer Park rose from 0% to 8.3% by the end of the project. Below are the results. The out of compliance graphs indicates the decrease in the percentage of students who did not have the appropriate vaccines for school entry.

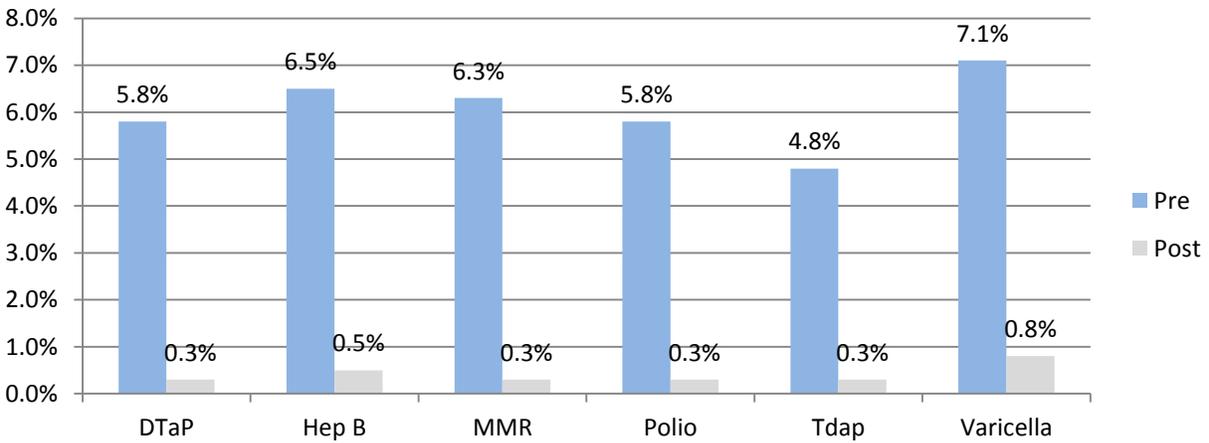
Deer Park School District Increase in Vaccine Coverage by Vaccine for School Required Immunizations from Out of Compliance Records



Deer Park School District Decrease in Personal Exemptions by Vaccine for School Required Immunizations from Out of Compliance Records



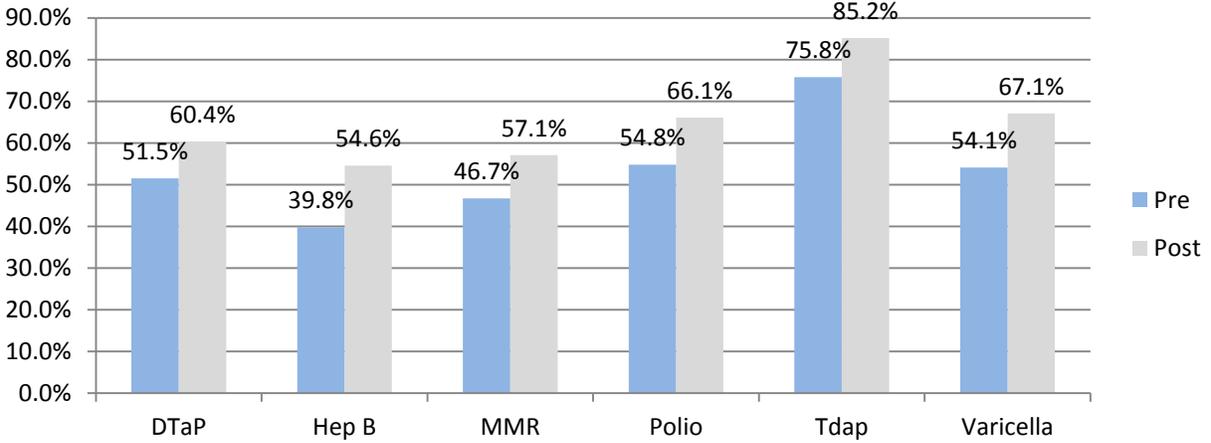
Deer Park School District Decrease in Out of Compliance by Vaccine for School Required Immunizations from Out of Compliance Records



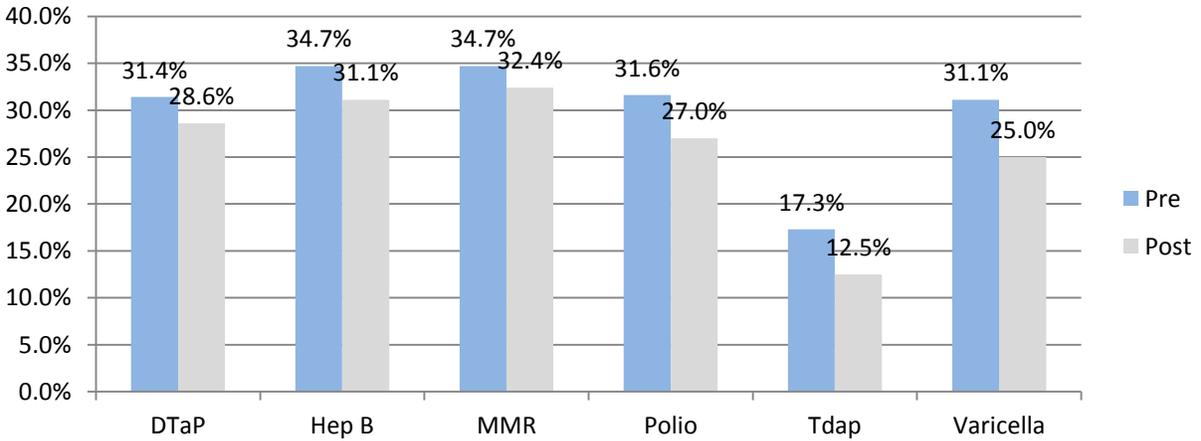
East Valley School District

There were a total of 392 students included in this project from the East Valley School District including Continuous Curriculum School, Connections, East Farms Elementary, East Valley HS, East Valley MS, GED, Home Link, EXT, Mountain View MS, Otis Orchard Elementary, Skyview Elementary, Teen, Trent Elementary, and Trentwood Elementary. The number of students that were compliant in East Valley School District rose from 9.5% to 23.7% by the end of the project. East Valley used only calls to contact parents about immunizations records. Below are the results. The out of compliance graphs indicates the decrease in the percentage of students who did not have the appropriate vaccines for school entry.

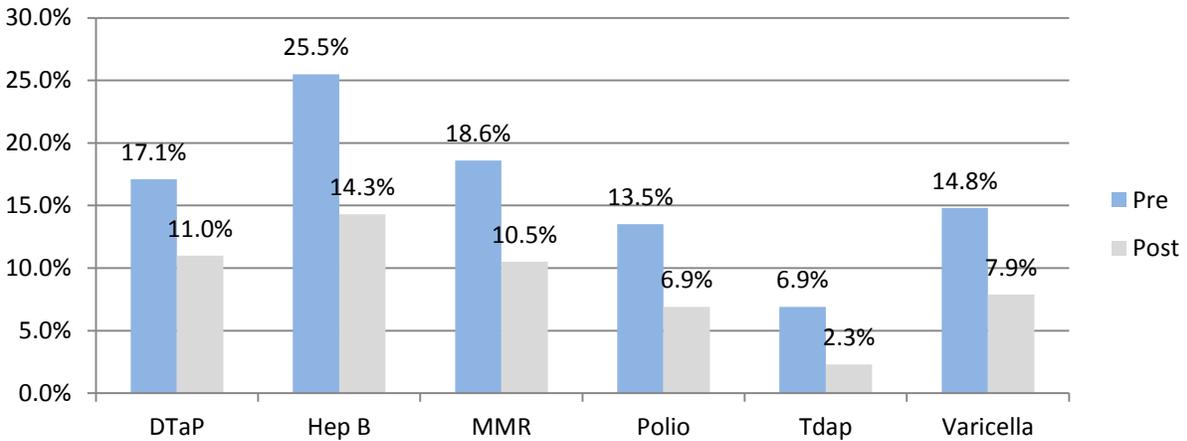
East Valley School District Increase in Vaccine Coverage by Vaccine for School Required Immunizations for Out of Compliance Records



East Valley School District Decrease in Personal Exemptions by Vaccine for School Required Immunizations from Out of Compliance Records



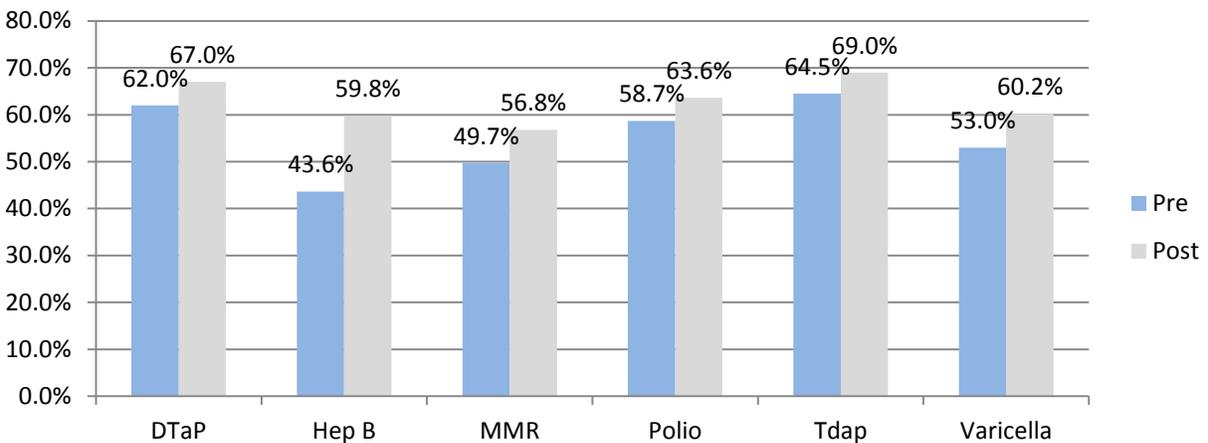
East Valley School District Decrease in Out of Compliance by Vaccine for School Required Immunizations from Out of Compliance Records



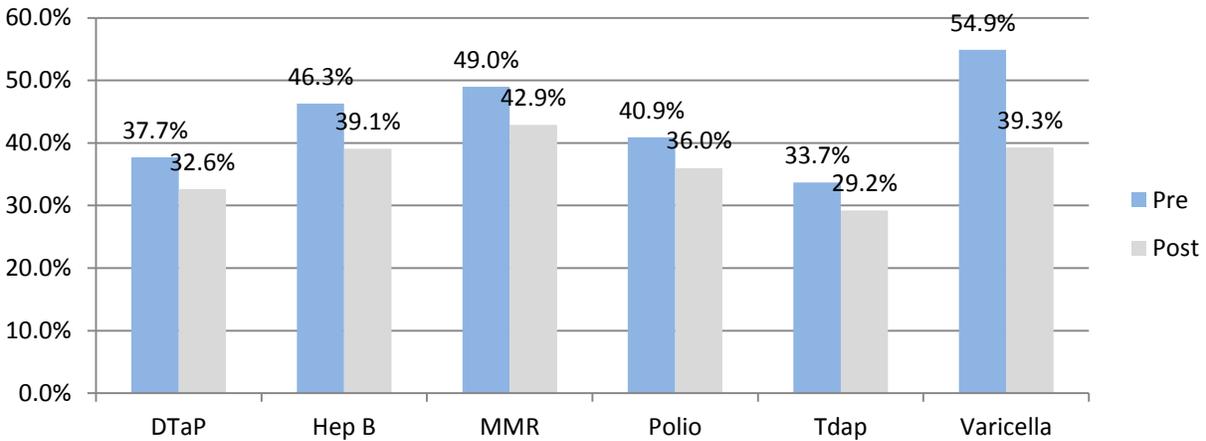
Mead School District

There were a total of 555 students included in this project from the Mead School District including Brentwood Elementary, Colbert Elementary, Evergreen Elementary, Farwell Elementary, Five Mile Prairie School, Meadowridge Elementary, Mead Alternative, Mead HS, Midway, Mountainside MS, Mount Spokane HS, Northwood MS, Prairie View Elementary, and Shiloh Hills Elementary. Mead School District used only letters to contact parents about student immunization records. The number of students that were compliant in Mead School District rose from 0% to 24% by the end of the project. Below are the results. The out of compliance graphs indicates the decrease in the percentage of students who did not have the appropriate vaccines for school entry.

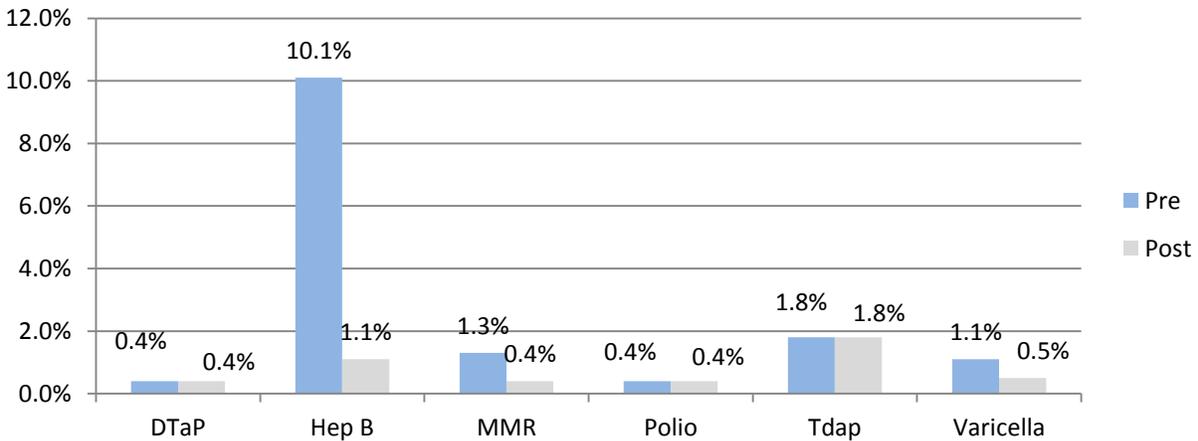
Mead School District Increase in Vaccine Coverage by Vaccine for School Required Immunizations from Out of Compliance Records



Mead School District Decrease in Personal Exemptions by Vaccine for School Required Immunizations from Out of Compliance Records



Mead School District Out of Compliance by Vaccine for School Required Immunizations for Out of Compliance Records

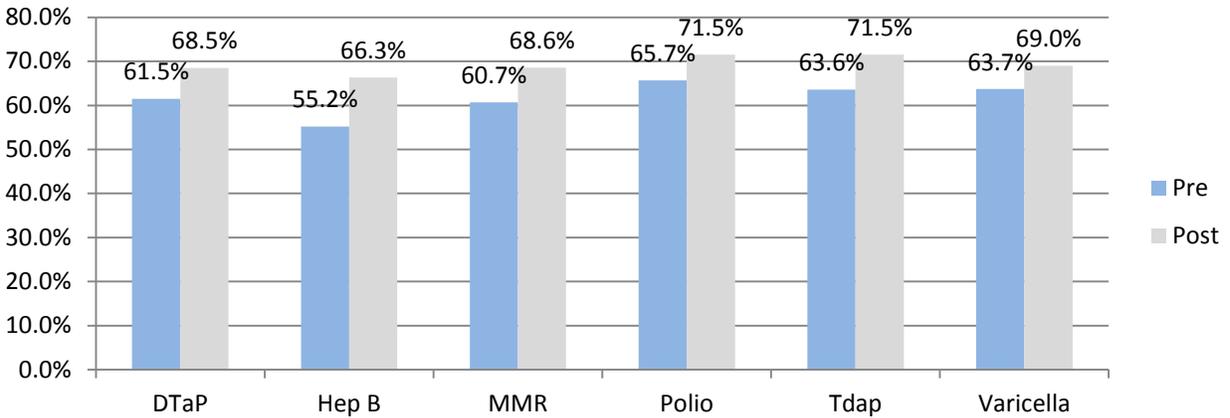


Spokane Public Schools

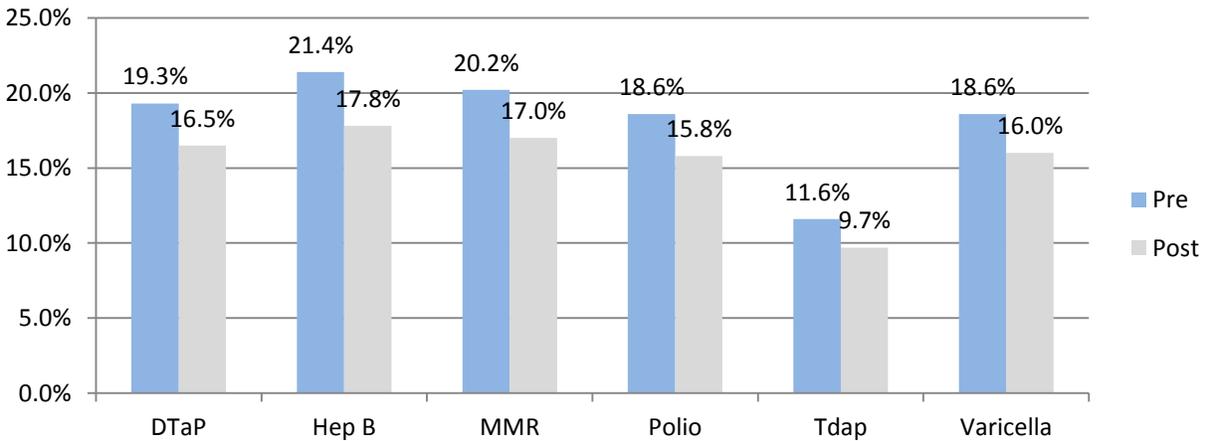
There were a total of 6,979 students included in this project from the Spokane Public School District including Adams Elementary, Arlington Elementary, ASkill Center, Audubon Elementary, Balboa Elementary, Bancroft, Bemiss Elementary, Brown Elementary, Bryant, Chase MS, Cooper Elementary, Ferris HS, Finch Elementary, Franklin Elementary, Garfield Elementary, Gary Middle School, Glover Middle School, Grant Elementary, Hamblen Elementary, Havermale HS, Holmes Elementary, Hutton Elementary, Indian Trail Elementary, Jefferson Elementary, Lewis & Clark HS, Libby Center, Lidgerwood Elementary, Lincoln Heights Elementary, Linwood Elementary, Logan Elementary, and Longfellow Elementary. Spokane Public Schools used only letters to contact parents about student immunization records. The number of students that were compliant in Spokane Public Schools rose from 1.6% to 23.4% by the end of the project. Below

are the results. The out of compliance graphs indicates the decrease in the percentage of students who did not have the appropriate vaccines for school entry.

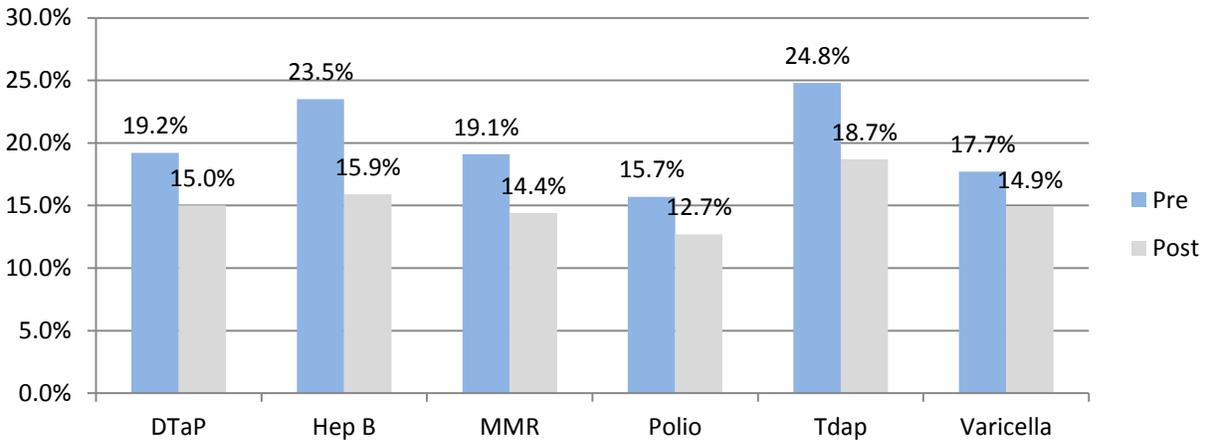
Spokane Public Schools Increase in Vaccine Coverage by Vaccine for School Required Immunizations from Out of Compliance Records



Spokane Public Schools Decrease in Personal Exemptions by Vaccine for School Required Immunizations from Out of Compliance Records



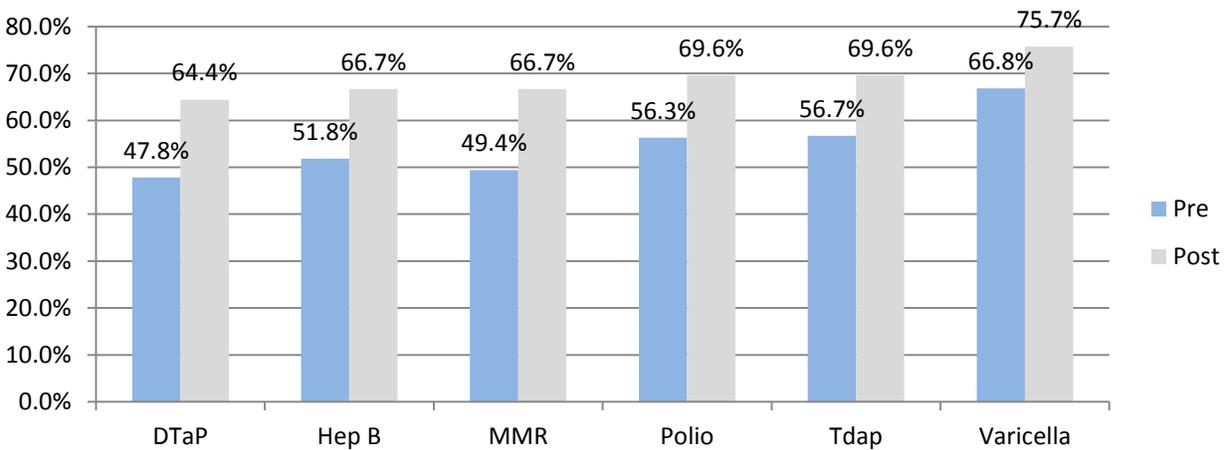
Spokane Public Schools Decrease in Out of Compliance by Vaccine for School Required Immunizations from Out of Compliance Records



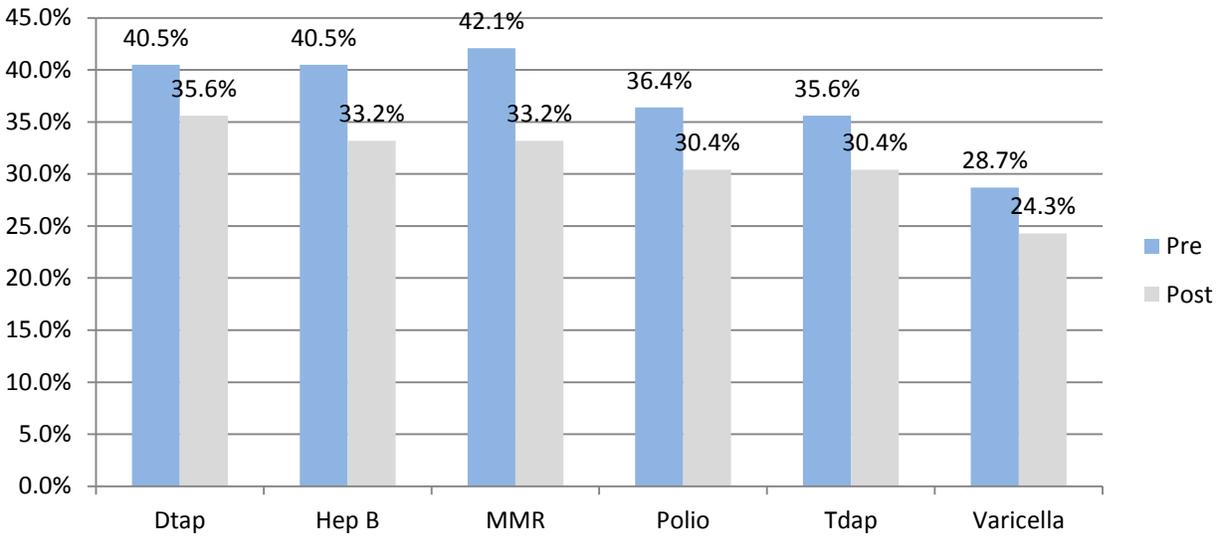
West Valley School District

There were a total of 247 students included in this project from the West Valley School District including Contract Based Education, City School, Centennial MS, Millwood Preschool, Arthur Ness Elementary, Orchard Center Elementary, Pasadena Park Elementary, Seth Woodard Elementary, Spokane Valley HS, and West Valley HS. West Valley School District used letters and phone calls to contact parents about student immunization records. The number of students that were compliant in West Valley School District rose from 0% to 31.6% by the end of the project. Below are the results.

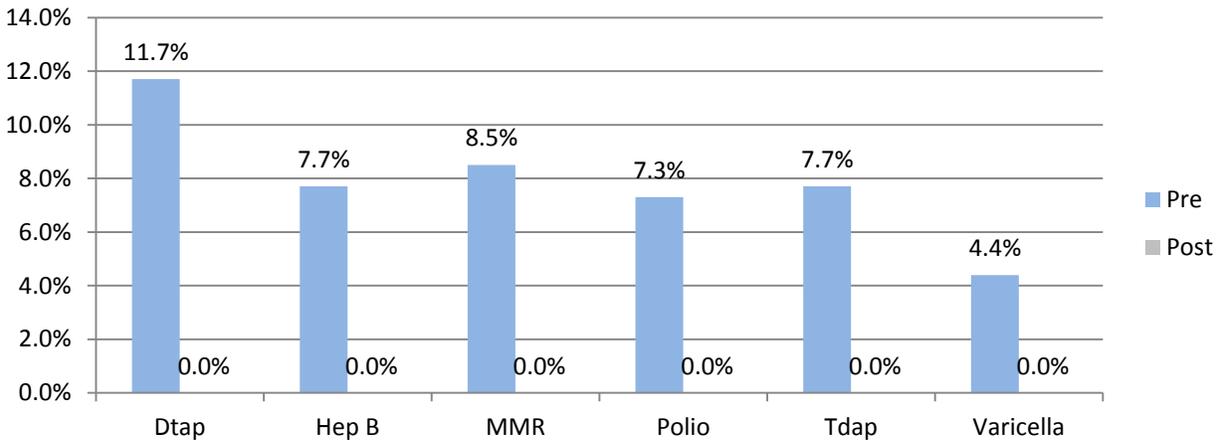
West Valley School District Increase in Vaccine Coverage by Vaccine for School Required Immunizations from Out of Compliance Records



West Valley School District Decrease in Personal Exemptions by Vaccine for School Required Immunizations from Out of Compliance Records



West Valley School District Decrease in Out of Compliance by Vaccine for School Required Immunizations from Out of Compliance Records



APPENDIX B –**DEER PARK**

		%	(#)		%	(#)
Arcadia (N=29)	No Action	0	(0)	Total Coverage	6.9	(2)
Deer Park Elementary (N=59)	No Action	0	(0)	Total Coverage	8.5	(5)
HL (N=249)	No Action	0	(0)	Total Coverage	8.4	(21)
Deer Park HS (N=33)	No Action	0	(0)	Total Coverage	0	(0)
Deer Park MS (N=25)	No Action	0	(0)	Total Coverage	20	(5)

EAST VALLEY

		%	(#)		%	(#)
CCS (N=12)	No Action	0	(0)	Total Coverage	16.7	(2)
Connections (N=12)	No Action	8.3	(1)	Total Coverage	16.7	(2)
East Farms (N=32)	No Action	0	(0)	Total Coverage	21.9	(7)
EVHS (N=70)	No Action	7.1	(5)	Total Coverage	11.4	(8)
EVMS (N=37)	No Action	43.2	(16)	Total Coverage	43.2	(16)
HomeLink (N=29)	No Action	6.9	(2)	Total Coverage	41.4	(12)
MVMS (N=21)	No Action	19	(4)	Total Coverage	23.8	(5)
Otis Orchard (N=44)	No Action	6.8	(3)	Total Coverage	31.8	(14)
Skyview (N=26)	No Action	0	(0)	Total Coverage	7.7	(2)
Trent (N=51)	No Action	7.8	(4)	Total Coverage	21.6	(11)
Trentwood (N=43)	No Action	2.3	(1)	Total Coverage	16.3	(7)

MEAD

		%	(#)		%	(#)
Brentwood (N=46)	No Action	0	(0)	Total Coverage	4.3	(2)
COL (N=38)	No Action	0	(0)	Total Coverage	28.9	(11)
Evergreen (N=44)	No Action	0	(0)	Total Coverage	29.5	(13)
Farwell (N=40)	No Action	0	(0)	Total Coverage	20	(8)
FMP (N=53)	No Action	0	(0)	Total Coverage	9.4	(5)
MDR (N=23)	No Action	0	(0)	Total Coverage	17.4	(4)
Mead High (N=84)	No Action	0	(0)	Total Coverage	35.7	(30)
Midway (N=25)	No Action	0	(0)	Total Coverage	28	(7)
Mead Middle School (N=57)	No Action	0	(0)	Total Coverage	14	(8)
Mt Spokane (N=38)	No Action	0	(0)	Total Coverage	18.4	(7)
Northwood (N=54)	No Action	0	(0)	Total Coverage	40.7	(22)
Prairie View (N=20)	No Action	0	(0)	Total Coverage	30	(6)
Shiloh Hills (N=23)	No Action	0	(0)	Total Coverage	21.7	(5)

SPS		%	(#)		%	(#)
Adams Elementary (N=29)	No Action	3.4	(1)	Total Coverage	13.8	(4)
Arlington Elementary	No Action	4.5	(3)	Total Coverage	15.2	(10)
Audubon Elementary (N=183)	No Action	1.1	(2)	Total Coverage	22.4	(41)
Balboa Elementary (N=57)	No Action	3.5	(2)	Total Coverage	14	(8)
Bancroft	No Action	0	(0)	Total Coverage	20.8	(5)
Bemiss Elementary (N=60)	No Action	6.7	(4)	Total Coverage	20	(12)
Brown Elementary (N=93)	No Action	0	(0)	Total Coverage	20.4	(19)
Bryant Campus (N=202)	No Action	3.0	(6)	Total Coverage	8.9	(18)
Chase Middle School (N=356)	No Action	0.3	(1)	Total Coverage	35.7	(127)
Cooper Elementary (N=200)	No Action	0	(0)	Total Coverage	23.5	(47)
Ferris High School (N= 287)	No Action	0.3	(1)	Total Coverage	27.2	(78)
Finch Elementary (N=106)	No Action	1.9	(2)	Total Coverage	23.6	(25)
Franklin Elementary (N=59)	No Action	1.7	(1)	Total Coverage	16.9	(10)
Garfield Elementary (N=258)	No Action	0	(0)	Total Coverage	19	(49)
Garry Middle School (N=144)	No Action	4.2	(6)	Total Coverage	25.7	(37)
Glover Middle School (N=277)	No Action	1.1	(3)	Total Coverage	15.2	(42)
Grant Elementary (N=145)	No Action	2.8	(4)	Total Coverage	23.4	(34)
Hamblen Elementary (N=197)	No Action	1.0	(2)	Total Coverage	25.4	(50)
Havermale High School (N-144)	No Action	0	(0)	Total Coverage	35.4	(51)
Homes Elementary (N=137)	No Action	1.5	(2)	Total Coverage	22.6	(31)
Hutton Elementary (N=89)	No Action	2.2	(2)	Total Coverage	19.1	(17)
Indian Trail Elementary (N=40)	No Action	5.0	(2)	Total Coverage	10	(4)
Jefferson Elementary (N=90)	No Action	2.2	(2)	Total Coverage	22.2	(20)
Lewis & Clark HS (N=305)	No Action	0.7	(2)	Total Coverage	23	(70)
Libby (N=56)	No Action	0	(0)	Total Coverage	42.9	(24)
Lidgerwood Elementary (N=100)	No Action	1.0	(1)	Total Coverage	24	(24)
Lincoln Heights Elem. (N=135)	No Action	1.5	(2)	Total Coverage	16.3	(22)
Linwood Elementary (N=38)	No Action	0	(0)	Total Coverage	28.9	(11)
Logan Elementary (N=53)	No Action	0	(0)	Total Coverage	22.6	(12)
Longfellow Elementary (N=182)	No Action	0	(0)	Total Coverage	22	(40)
Madison Elementary (N=49)	No Action	0	(0)	Total Coverage	30.6	(15)
MAP (N=9)	No Action	0	(0)	Total Coverage	77.8	(7)
Moran Prairie Elem. (N=67)	No Action	3.0	(2)	Total Coverage	26.9	(18)
Mullan Road Elementary (N=69)	No Action	2.9	(2)	Total Coverage	15.9	(11)
North Central HS (N=230)	No Action	2.6	(6)	Total Coverage	19.1	(44)
Regal Elementary (N=229)	No Action	2.2	(5)	Total Coverage	30.1	(69)
Ridgeview Elementary (N=34)	No Action	0	(0)	Total Coverage	26.5	(9)
Rogers High School (N=247)	No Action	3.2	(8)	Total Coverage	23.9	(59)
Roosevelt Elementary (N-237)	No Action	2.1	(5)	Total Coverage	23.6	(56)
Sacajawea MS (N-226)	No Action	0	(0)	Total Coverage	15.5	(35)
Salk Middle School (N=209)	No Action	1.9	(4)	Total Coverage	18.7	(39)
Shadle Park HS (N=227)	No Action	1.3	(3)	Total Coverage	25.1	(57)
Shaw Middle School (N-243)	No Action	2.1	(5)	Total Coverage	42.4	(103)
Sheridan Elementary (N=195)	No Action	0	(0)	Total Coverage	23.1	(45)
Stevens Elementary (N=119)	No Action	5.9	(7)	Total Coverage	18.5	(22)
Westview Elementary (N=91)	No Action	1.1	(1)	Total Coverage	22.0	(20)
Whitman Elementary (N=178)	No Action	0	(0)	Total Coverage	15.2	(27)
Willard Elementary (N=71)	No Action	8.5	(6)	Total Coverage	15.5	(11)
Wilson Elementary (N=91)	No Action	5.5	(5)	Total Coverage	41.8	(38)
Woodridge Elementary (N=40)	No Action	7.5	(3)	Total Coverage	17.5	(7)

WEST VALLEY

		%	(#)		%	(#)
CBE (N=19)	No Action	0	(0)	Total Coverage	84.2	(16)
City School (N=20)	No Action	0	(0)	Total Coverage	35	(7)
CMS (N=50)	No Action	0	(0)	Total Coverage	20	(10)
MV (N=9)	No Action	0	(0)	Total Coverage	22.2	(2)
Ness Elementary (N=19)	No Action	0	(0)	Total Coverage	57.9	(11)
OC (N=18)	No Action	0	(0)	Total Coverage	33.3	(6)
P.Park (N=34)	No Action	0	(0)	Total Coverage	26.5	(9)
Seth (N=30)	No Action	0	(0)	Total Coverage	30	(9)
SVHS (N=6)	No Action	0	(0)	Total Coverage	33.3	(2)
West Valley High School (N=42)	No Action	0	(0)	Total Coverage	14.3	(6)

