Immunization Status of Adolescents in Kittitas County

February 2010
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In 2009, the Kittitas County Public Health Department focused its attention on adolescent immunizations. We conducted chart audits of our own files and those of local health care providers, surveyed health care providers who care for adolescent patients age 13 – 18, and surveyed parents of children in 9th – 12th grade.

The information that was obtained through these activities is presented here. Surprisingly, this is the first estimate of adolescent immunization coverage rates that is specific to Kittitas County. Though this estimate is not perfect, it is better than many national surveys which may select only a few Kittitas County residents.

In this report we present:
• Estimates of adolescent coverage rates for each recommended vaccine;
• A list of the vaccines that are required for school entry in Washington State, by grade;
• Information and recommendations for each vaccine;
• How parents feel about different aspects of immunization; and
• Things parents can do to help Kittitas County health care providers make sure all recommended vaccines are administered.

We hope that this information is useful to all parents, not just parents of high-school aged children. Many of the immunizations listed here are recommended for the pre-adolescent immunization visit at age 11 – 12.

We hope that you will join us in our quest for a safer and healthier Kittitas County, and that “Immunization Status of Adolescents in Kittitas County” is useful to you in this mission.

Sincerely,

Mark W. Larson, M.D., Kittitas County Health Officer

For more information or extra copies of this report, please contact the Kittitas County Public Health Department’s Community Health Assessment Division at communityassessment@co.kittitas.wa.us, (509) 962-7515, or by mail at 507 N. Nanum St. Suite 102, Ellensburg, WA 98926.

To view this report online visit http://www.co.kittitas.wa.us/health/assessment.asp.
As a parent, I want to make sure that my child is as safe as possible. Would I really want to tell her that I could have prevented her chickenpox or other illness by taking her to get the vaccine?
- Candi, mother of one

As a nurse, I have seen the results of some vaccine-preventable diseases. As a parent, I can’t imagine not protecting my children against those possibilities.
- Linda, mother of two

The top three reasons parents give for not vaccinating their kids:
1. I’m uneasy with newer vaccines.
2. I’m afraid vaccination can cause other problems.
3. I don’t know the current recommendations for immunizations.

The top three reasons health care providers give that make it difficult to keep adolescents up-to-date on vaccines:
1. Incomplete immunization records for patients.
2. Lack of routine health care visits for adolescents.
3. Patients receive care at multiple facilities.
Between March and June 2009, Kittitas County Public Health Department staff audited 615 charts of children age 13 through 18 at local health care providers’ offices to determine vaccine coverage rates for childhood and adolescent immunizations. This review represented about 15% of active adolescent patient charts at all Kittitas County provider offices where four or more adolescent patients are seen each month.

The estimates provided here are likely overestimates. They do not include children who do not have a health care provider, those who have not visited a health care provider in the past three years, patients who see a health care provider located outside of Kittitas County, and patients who see a health care provider in Kittitas County where less than four adolescents are seen each month.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Up-to-date</th>
<th>95% Confidence Interval*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTaP, 5 doses</td>
<td>61.1%</td>
<td>57.3 – 65.0%</td>
</tr>
<tr>
<td>Hep A, 2 doses</td>
<td>23.3%</td>
<td>19.9 – 26.6%</td>
</tr>
<tr>
<td>Hep B, 3 doses</td>
<td>70.1%</td>
<td>66.5 – 73.7%</td>
</tr>
<tr>
<td>Hib</td>
<td>54.8%</td>
<td>50.9 – 58.7%</td>
</tr>
<tr>
<td>HPV, 3 doses (girls only)</td>
<td>15.2%</td>
<td>12.3 – 18.0%</td>
</tr>
<tr>
<td>Influenza (any dose)</td>
<td>19.3%</td>
<td>16.2 – 22.5%</td>
</tr>
<tr>
<td>Meningococcal</td>
<td>38.9%</td>
<td>35.0 – 42.7%</td>
</tr>
<tr>
<td>MMR, 2 doses</td>
<td>69.9%</td>
<td>66.3 – 73.5%</td>
</tr>
<tr>
<td>Polio, 4 doses</td>
<td>66.5%</td>
<td>62.8 – 70.2%</td>
</tr>
<tr>
<td>Tdap</td>
<td>46.8%</td>
<td>42.9 – 50.8%</td>
</tr>
<tr>
<td>Varicella, 2 doses (includes history of illness)</td>
<td>25.0%</td>
<td>21.6 – 28.5%</td>
</tr>
<tr>
<td>Varicella, past illness</td>
<td>12.0%</td>
<td>9.5 – 14.6%</td>
</tr>
</tbody>
</table>

*The confidence interval shows the range that will contain the actual coverage rate 95% of the time.
In Washington State, certain vaccines are required by law for public/private school or licensed child care. If children are not up-to-date on the required vaccines, parents must sign a Certificate of Exemption and those children can be excluded from school in the event of a vaccine-preventable disease outbreak for which they have not received vaccine to prevent against. In some cases, such as with varicella (chickenpox), children could be excluded from school for at least 21 days. The exclusion period is based on the longest amount of time after exposure that first symptoms could appear.

Vaccine requirements vary by age and grade, and change frequently as the national recommendations given by the Advisory Committee on Immunization Practices are updated. Most students are typically up-to-date at kindergarten entry and do not have any additional vaccination requirements until sixth grade entry.

### Vaccines Required for School Attendance, Grades K – 12
**July 1, 2010 – June 30, 2011**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Kindergarten – 2nd Grade</th>
<th>3rd – 6th Grades</th>
<th>7th – 12th Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Except: Students age 11 – 15 years who receive 2 doses of Recombivax HB separated by 4 months are acceptable.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTaP/DT/Td/Tdap</td>
<td></td>
<td>5 doses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Except: If dose 4 is given after the 4th birthday, dose 5 is not needed. Plus, one dose of Tdap is required for grades 6 – 9.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio (IPV/OPV)</td>
<td></td>
<td>4 doses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Except: If dose 3 is given after the 4th birthday, dose 4 is not needed.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td></td>
<td>2 doses</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>2 doses</td>
<td>1 dose</td>
<td>Recommended not required</td>
</tr>
<tr>
<td></td>
<td><em>Except: Recommended but not required for 5th grade</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Diptheria, Tetanus, and Pertussis (DTaP/DT/Td/Tdap):**
- Students older than 7 years should get Tdap or Td (NOT DTaP).
- A dose of Tdap is required for grades 6 – 9 **IF** the student is at least 10 years old and it has been at least 5 years since the last tetanus-containing vaccine.

**Polio (IPV/OPV):**
- Not recommended for students over 18 years unless traveling internationally.

**Measles, Mumps, and Rubella (MMR):**
- A blood test (titer) showing immunity to measles, mumps, or rubella is acceptable.
- MMR must be received the same day as varicella **OR** at least 28 days apart.

**Varicella:**
- A blood test (titer) showing immunity to varicella and/or provider diagnosis or verification of varicella disease.
- Parent reported history of disease is only acceptable for students in grades 4 – 6.
- Varicella must be received the same day as MMR **OR** at least 28 days apart.

For additional information about vaccines required for school entry, or to see a table of vaccines required for licensed child care attendance, see the Washington State Department of Health website at http://www.doh.wa.gov/cfh/Immunize/schools/vaccine.htm.
Hepatitis A & Hepatitis B

Hepatitis A

Hepatitis A is a serious liver disease caused by the hepatitis A virus. The virus is found in the stool of persons with hepatitis A. It is usually spread by close personal contact and sometimes by eating food or drinking water containing hepatitis A virus. A person who has hepatitis A can easily pass the disease to others within the same household.

Hepatitis A can cause mild flu-like illness, jaundice (yellow skin or eyes), and severe stomach pains and diarrhea. People with hepatitis A often have to be hospitalized (up to about one person in five). Sometimes people die as a result of hepatitis A (about three to five deaths per 1000 cases).

Hepatitis A vaccination is a two dose series for children. Adults can be vaccinated with a combination hepatitis A and B vaccine, which is a three dose series. International travelers are also recommended to receive hepatitis A vaccination.

Since hepatitis A vaccine was not routinely recommended for all children until 2005, only 23% of high school aged children who see a health care provider in Kittitas County have received the recommended two doses.

Children usually complete the hepatitis B vaccine series by 18 months of age. If they did not receive the vaccine as a baby, they should receive it at the earliest opportunity.

A series of three doses is required for school entry.

Hepatitis B

Hepatitis B is caused by the hepatitis B virus. It is a serious disease that affects the liver. Hepatitis B virus is spread through contact with the blood or other body fluids of an infected person.

Children who become infected with hepatitis B virus usually do not have acute illness – they develop chronic (long-term) infection. Chronic infection can lead to liver damage (cirrhosis), liver cancer, and death.

About 1.25 million people in the United States have chronic hepatitis B virus infection. Each year about 3000 to 5000 people die from cirrhosis or liver cancer caused by hepatitis B virus infection.

Hepatitis B vaccination usually begins at birth and is completed by 18 months of age. Children receive a three dose series. Adults can receive a three dose series that provides protection against both hepatitis A and B.

In 2005, the Advisory Committee on Immunization Practices began recommending hepatitis A for children as early as age 12 months. Two doses of vaccine are needed, at least six months apart.

This vaccine is recommended but not required for school entry.

70% of high school aged children who see a health care provider in Kittitas County have received the recommended three doses of hepatitis B.
Most children complete the *Hib* vaccine series before they are two years of age. If they did not receive the vaccine as a baby, they do not need to receive it as an adolescent, unless they have certain health conditions.

This vaccine is **recommended but not required** for school entry.

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*Haemophilus influenzae* type b (Hib) is a disease caused by a bacteria. It is usually spread by person to person contact, and only causes illness if the germs spread from the nose and throat into the lungs or bloodstream.

Children over five years old usually do not need Hib vaccine, but some older children with special health conditions should get it if they have a weakened immune system.

About **55%** of high school aged children who see a health care provider in Kittitas County received the recommended **three doses** of *Hib* during their childhood.

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*Human papillomavirus (HPV)* is the most common sexually transmitted virus in the United States. There are about 40 types of HPV. About 20 million people in the United States are infected. HPV is spread through sexual contact.

Most HPV infections do not cause any symptoms and go away on their own. However, HPV can cause cervical cancer in women and other less common types of cancer in both men and women. Cervical cancer is the second leading cause of cancer deaths among women around the world.

More than 50% of sexually active men and women are infected with HPV at some time in their lives. There is no treatment for HPV infection, but the conditions it causes can be treated.

The components of the HPV vaccine can prevent most cases of genital warts (90%) and most cases of cervical cancer (70%).

**HPV vaccination** is ideally given to girls at 11 to 12 years of age, and can be given as early as age 9. In 2010, the recommendations expanded to include boys age 9 through 18.

**HPV vaccination** is recommended at different times for girls and boys. Girls should be vaccinated between the ages of 9 and 26, but as close to age 11 or 12 as possible. Boys should receive vaccine between age 9 and 18.

This vaccine is **recommended but not required** for school entry.

Before 2010, **HPV vaccination** was recommended for girls only. About **15% of girls** who see a health care provider in Kittitas County have received the recommended **three doses**.
Influenza & Meningococcal Disease

Influenza

There are two types of seasonal influenza vaccine available, an inactivated vaccine which is given by injection, and a live, attenuated (weakened) vaccine which is sprayed into the nostrils. These vaccines can help protect against seasonal influenza, an illness that causes an average of 226,000 hospitalizations and 36,000 deaths each year in the United States. Most deaths occur in individuals over the age of 65.

Anyone can get influenza, but rates of infection are highest among children. For most people, it lasts only a few days and can cause fever, cough, sore throat, headache, chills, muscle aches, and fatigue.

Some populations are more likely to have complications from influenza, including those 65 years of age and older, people of any age with chronic medical conditions (such as asthma, diabetes, or heart disease), pregnant women, and young children. Common complications include pneumonia, bronchitis, and sinus and ear infections.

Many groups of individuals are recommended to receive yearly influenza vaccinations, including all children 6 months through 18 years of age.

Influenza vaccination is recommended every year for all children 6 months through 18 years of age.

This vaccine is recommended but not required for school entry.

Meningococcal Disease

Meningococcal disease is a serious bacterial illness. It is a leading cause of bacterial meningitis in children 2 through 18 years old in the United States. Meningitis is an infection of the fluid surrounding the brain and spinal cord.

About 1000 to 2600 people get meningococcal disease each year in the United States. Even when they are treated with antibiotics, 10-15% of these people die. Of those who survive, another 11-19% lose their arms or legs, become deaf, have problems with their nervous systems, become mentally retarded, or suffer seizures or strokes.

Anyone can get meningococcal disease. College freshman who live in dormitories and teenagers 15-19 have an increased risk of getting meningococcal disease.

Meningococcal vaccine is recommended at age 11-12 years. Those who did not get the vaccine at age 11-12 should get it at the earliest opportunity.

Meningococcal vaccination is recommended at age 11 or 12.

This vaccine is recommended but not required for school entry.

Meningococcal vaccination is recommended at age 11 or 12.

This vaccine is recommended but not required for school entry.

19% of high school aged children who see a health care provider in Kittitas County received an influenza vaccine during the most recent flu season.

39% of high school aged children who see a health care provider in Kittitas County have received a meningococcal vaccine.
Measles, Mumps, & Rubella

The vaccines for measles, mumps, and rubella usually come combined in one shot called an MMR. Vaccination is recommended at age 12 months, followed by a booster dose at age 4–6 years. All individuals born in 1957 or later are recommended to receive MMR vaccination.

Measles virus causes rash, cough, runny nose, eye irritation, and fever. About 30% of measles cases have one or more complications, including ear infection, pneumonia, seizures, brain damage, or death.

It is still a common and often fatal disease in developing countries. The World Health Organization estimates there were more than 20 million cases and 242,000 deaths from measles in 2006. A measles outbreak occurred in neighboring Grant County during early 2008.

Measles is spread by person to person through the air. Transmission of measles has been shown to occur in closed areas like an examination room for up to two hours after a person with measles occupied the area.

Vaccination with MMR is recommended at age 12 months, followed by a booster dose at age 4–6 years. All individuals born in 1957 or later are recommended to receive MMR vaccination.

Mumps virus causes fever, headache, and swollen glands. It can lead to deafness, meningitis (infection of the brain and spinal cord covering), painful swelling of the testicles or ovaries, and, rarely, death.

A multistate outbreak in the United States during 2006 resulted in more than 6000 reported cases of mumps. Mumps is spread by person to person through the air.

Vaccination with MMR is recommended at age 12 months, followed by a booster dose at age 4–6 years. All individuals born in 1957 or later are recommended to receive MMR vaccination.

Rubella virus, or German measles, causes rash, mild fever, and arthritis (mostly in women). If a woman gets rubella while she is pregnant, she could have a miscarriage or her baby could be born with serious birth defects.

Rubella is spread by person to person through the air.

Vaccination with MMR is recommended at age 12 months, followed by a booster dose at age 4–6 years. All individuals born in 1957 or later are recommended to receive MMR vaccination.

70% of high school aged children who see a health care provider in Kittitas County have received the recommended two doses of MMR vaccine.
The vaccines for tetanus, diphtheria, and pertussis usually come combined in one shot. Older children and adults receive a Tdap. For younger children, the vaccine is known as a DTaP.

**Tetanus**

Tetanus, or lockjaw, causes painful tightening of the muscles, usually all over the body. It can lead to “locking” of the jaw so the victim cannot open his mouth to swallow. Tetanus leads to death in up to two cases out of ten.

Tetanus is the only vaccine-preventable disease that is not contagious (not spread from person to person). The bacteria that causes tetanus enters the body through cuts, scratches, or wounds.

Booster doses of tetanus and diphtheria (Td) vaccine are recommended every ten years after the Tdap received at age 11 or 12.

**Tdap** is recommended at age 11 or 12.

It is **required for sixth grade entry** if it has been five years or more since the last tetanus-containing vaccine. This requirement began with the 2006–2007 school year.

**Diphtheria**

Diphtheria causes a thick covering in the back of the throat. It can lead to breathing problems, paralysis, heart failure, and even death. The illness was one of the top causes of death for children younger than age 15 before introduction of the vaccine in the 1920s.

Diphtheria is caused by a bacteria that is spread from person to person by respiratory secretions.

Booster doses of tetanus and diphtheria (Td) vaccine are recommended every ten years after the Tdap received at age 11 or 12.

**Pertussis**

Pertussis, or whooping cough, causes severe coughing spells, vomiting, and disturbed sleep. It can lead to weight loss, incontinence, rib fractures and passing out from violent coughing, pneumonia, and hospitalization due to complications.

Pertussis was one of the top causes of death for children in the United States before the introduction of vaccine in the 1940s. It remains a major health problem among children in developing countries, with almost 300,000 deaths resulting from the illness in 2002.

Pertussis is caused by a bacteria that is spread from person to person through physical contact with respiratory droplets or contact with airborne droplets of respiratory secretions. It is highly communicable. There was a local outbreak in 2009, causing restriction of after-school activities at some schools.

No booster doses of pertussis vaccine are recommended after the Tdap received at age 11 or 12. Older adolescents and adults under age 65 who have not received a Tdap are recommended to replace one tetanus and diphtheria (Td) booster with Tdap.

**Related vaccines**

Td (tetanus and diphtheria) is for use in adolescents and adults.

DT (tetanus and diphtheria) is for use in children younger than seven who should not get pertussis vaccine.

DTP is a vaccine that is no longer used. It has been replaced by the safer DTaP vaccine for children.

79.4% of Kittitas County parents surveyed reported that their child had received a tetanus containing vaccine in the past five years.

But really, only 47% of high school aged children who see a health care provider in Kittitas County had.
Polio & Varicella

**Polio** vaccination is recommended for all children. Vaccine schedules vary.

This vaccine is **required for school entry**.

Polio virus can cause paralysis of the arms or legs. It can also kill people who get it, usually by paralyzing the muscles that help them breathe.

Polio used to be very common in the United States. In the early 1950s there were more than 20,000 cases of polio each year. Polio vaccination began in 1955, and the number of reported polio cases dropped rapidly. The last reported case of polio acquired in the United States was in 1979.

Polio spreads from person to person by the fecal-oral route. In Washington State, three doses of polio vaccine are required for school entry if the last dose is given after the fourth birthday. If all doses are given before the fourth birthday, four doses are required.

67% of high school aged children who see a health care provider in Kittitas County have received four doses of **polio** vaccine.

**Varicella** vaccination is recommended for all individuals who have never had chickenpox disease.

This vaccine is **required for school entry**, but vaccine requirements vary by grade. During the 2010–2011 school year, children in kindergarten, 1st, and 2nd grades must have two doses of vaccine. Parent reported history of disease is no longer acceptable.

**Varicella (Chickenpox)**

Varicella, or chickenpox, is a common childhood disease that is usually mild. It can be serious, especially in young infants and adults. Varicella causes a rash, itching, fever, and tiredness. It can lead to severe skin infection, scars, pneumonia, brain damage, or death.

The chickenpox virus is spread from person to person through the air or by contact with fluid from chickenpox blisters.

Varicella vaccine can prevent chickenpox. This is also beneficial because a person who has had chickenpox can get a painful rash called shingles years later. Some people who are vaccinated with varicella vaccine can still get chickenpox, but when they do it is usually very mild. They will have fewer blisters, are less likely to have a fever, and will recover faster.

Children who have never had chickenpox should get two doses of vaccine. Vaccine is typically given at 12–15 months of age and 4–6 years of age. People 13 years of age and older who have never had chickenpox or been vaccinated should get two doses of vaccine at least 28 days apart.

Only 25% of high school aged children who see a health care provider in Kittitas County have received **two doses** of **varicella** vaccine or have a documented **history of chickenpox disease**.

All information in the “Vaccines” section of this report comes from the Vaccine Information Statements provided to patients when they receive vaccination or the eleventh edition of Epidemiology and Prevention of Vaccine-Preventable Diseases, 2009.
A random sample of parents with children who attended 9th–12th grades in Kittitas County during the 2009–2010 school year were invited to participate in a survey about immunizations.

Surveys were sent to 50% of families with children in grades 9–12 during late September and early October 2009. Parents had the opportunity to enter a drawing for one of four $50 gift certificates when they returned the survey. A total of 740 valid surveys were sent and 244 were returned, giving a response rate of 33.0%.

Survey instructions: If you have more than one child in grades 9–12 please answer these questions for the child whose birthday is closest to January 1.

**Does your child have a primary care provider?**
- Yes: 94.7%
- No: 5.3%

**Is this provider in Kittitas County?***
- Yes: 93.3%
- No: 6.7%

**Has this provider ever recommended immunizations for your child?***
- Yes: 90.6%
- No: 6.7%
- Unsure: 2.7%

**Has this child ever received immunizations from someone other than a primary care provider?** Select all that apply.
- No
- Yes, health department: 52.1%
- Yes, other: 14.9%
- Yes, free clinic: 5.4%
- Yes, emergency room: 5.0%
- Yes, specialist: 3.3%

**Do you have health insurance for your child?***
- Yes, private insurance: 80.6%
- Yes, Medicaid (medical coupons): 14.1%
- No: 5.4%

**Does your child’s health insurance cover immunizations?***
- Yes, all immunizations: 69.1%
- Yes, some immunizations: 17.6%
- Unsure: 9.4%
- No: 3.9%

**Has your child ever had a sports physical?**
- Yes: 91.0%
- No: 9.0%

**Does your child go to routine health visits (visits other than those for illness or injury, like yearly check-ups)?**
- Yes: 83.4%
- No: 16.6%
Following are some reasons parents have given that make it difficult to get their child immunized. Please select any that apply to you.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of these are a problem for me</td>
<td>71.1%</td>
</tr>
<tr>
<td>Knowing which vaccines my child needs</td>
<td>13.4%</td>
</tr>
<tr>
<td>Delay in getting appointments</td>
<td>6.9%</td>
</tr>
<tr>
<td>Doctor availability</td>
<td>6.5%</td>
</tr>
<tr>
<td>No health insurance or high deductible</td>
<td>6.0%</td>
</tr>
<tr>
<td>Other</td>
<td>4.3%</td>
</tr>
<tr>
<td>Knowing where to go</td>
<td>3.9%</td>
</tr>
<tr>
<td>Cost of vaccines</td>
<td>3.5%</td>
</tr>
<tr>
<td>Language barriers</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% due to multiple selections per respondent.

Which of these is the **biggest** obstacle for you. Please select one.

<table>
<thead>
<tr>
<th>Obstacle</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing which vaccines my child needs</td>
<td>34.7%</td>
</tr>
<tr>
<td>No health insurance or high deductible</td>
<td>20.0%</td>
</tr>
<tr>
<td>Delay in getting appointments</td>
<td>16.0%</td>
</tr>
<tr>
<td>Doctor availability</td>
<td>12.0%</td>
</tr>
<tr>
<td>Other</td>
<td>12.0%</td>
</tr>
<tr>
<td>Cost of vaccines</td>
<td>4.0%</td>
</tr>
<tr>
<td>Language barriers</td>
<td>1.3%</td>
</tr>
<tr>
<td>Knowing where to go</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% due to multiple selections per respondent.

Has your child had a tetanus containing vaccine in the past 5 years? This is not required for school entry but may include a Tdap, Td, or tetanus-only vaccine.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>79.4%</td>
</tr>
<tr>
<td>Unsure</td>
<td>13.0%</td>
</tr>
<tr>
<td>No</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

n = 238

Has your child ever had a varicella (chickenpox) vaccine or past illness of varicella? This vaccine is not required for school entry.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, had varicella vaccine</td>
<td>41.1%</td>
</tr>
<tr>
<td>Yes, had past illness</td>
<td>40.3%</td>
</tr>
<tr>
<td>No</td>
<td>12.0%</td>
</tr>
<tr>
<td>Unsure</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

n = 241

Has your child ever had any of these recommended vaccines? These are not required for school entry. Select all that apply.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td>30.0%</td>
</tr>
<tr>
<td>Flu shot in previous 12 months</td>
<td>26.3%</td>
</tr>
<tr>
<td>None of these</td>
<td>26.3%</td>
</tr>
<tr>
<td>Meningococcal</td>
<td>25.8%</td>
</tr>
<tr>
<td>Unsure</td>
<td>10.4%</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% due to multiple selections per respondent.

*For children in grades 9 – 12 required vaccines include 2 MMR, at least 3 polio, 3 hepatitis B, and 3 tetanus, diphtheria, and pertussis (DTaP, DT, Td, or Tdap).
Following are some reasons parents have given for why they choose not to give their children certain immunizations. Even if your child had all of the required and recommended vaccines, please tell us how you feel about the following statements.

- I’m uneasy with newer vaccines
- I don’t know the current recommendations for immunizations
- The illnesses prevented by immunizations aren’t serious
- I don’t want to return to the doctor’s office for vaccines requiring more than one dose
- Immunizing isn’t important because these diseases aren’t common anymore
- I’m afraid vaccination can cause other health problems
- I’m afraid vaccines can cause the diseases they are supposed to protect against
- It is inconvenient to vaccinate
- I oppose vaccinations for personal reasons
- I oppose vaccinations because of religious values

The next three questions are related to the pertussis outbreak in Kittitas County that occurred in February through April 2009.

Did your child have to miss school or other activities due to the pertussis outbreak?

- No: 84.4%
- Yes: 12.7%
- Unsure: 3.0%

Did you have to miss work or school due to the pertussis outbreak?

- No: 96.2%
- Yes: 3.8%

Did you know that your child in 9th – 12th grade may no longer be protected against pertussis unless they had a booster Tdap within the past 5 years? This is not required for school entry at this age.

- No: 56.2%
- Yes: 43.8%
The top three reasons parents gave for not vaccinating their kids:
1. I’m uneasy with newer vaccines.
2. I’m afraid vaccination can cause other problems.
3. I don’t know the current recommendations for immunizations.

**What grade is your child in?**

- 9th: 24.1%
- 10th: 30.7%
- 11th: 23.6%
- 12th: 21.7%

**How old is your child (as of today)?**

- 13: 1.9%
- 14: 19.2%
- 15: 27.1%
- 16: 27.1%
- 17: 21.0%
- 18: 3.7%

**Is your child male or female?**

- Male: 47.3%
- Female: 52.8%

**Is your child of Hispanic or Latino ethnicity?**

- No: 94.0%
- Yes: 6.0%

**What race do you consider your child to be? Select all that apply.**

- White: 96.8%
- Some other race: 2.3%
- American Indian or Alaska Black or African-American: 1.0%
- Asian: 0%
- Other: 1.0%

**What is the primary language spoken in your household?**

- English: 99.1%
- Spanish: 0.9%
- Other: 0%

**Please tell us where your child attends school.**

- Ellensburg School District: 64.4%
- Cle Elum–Roslyn School District: 17.1%
- Kittitas School District: 10.2%
- Thorp School District: 4.6%
- Easton School District: 2.8%
- Other: 1.0%
- Private school: 0%
In June 2009, a survey was distributed to each of the 67 local health care providers who give immunizations or consult with parents or adolescents about immunizations.

A total of 40 responses were received, giving a response rate of 60%.

- **Do you see four or more adolescents aged 13 – 18 per month?**
  - Yes: 92.5%
  - No: 7.5%

- **Please indicate your position.**
  - Physician or mid-level: 35.1%
  - Medical assistant: 35.1%
  - Nurse: 29.7%

- **Does your facility have an established policy or protocol for adolescent immunizations?**
  - Yes: 73.7%
  - No: 15.8%
  - Unsure: 10.5%

- **Do you have standing immunization orders at your facility?**
  - Yes: 46.2%
  - No: 35.9%
  - Unsure: 17.9%

- **Is your facility a Vaccines for Children (VFC) provider?**
  - Yes: 87.2%
  - Unsure: 12.8%
  - No: 0%

- **Please select all methods you consistently use to check immunization status.**
  - Parent provided immunization record: 92.3%
  - Paper chart review: 89.7%
  - Electronic health record: 89.7%
  - State immunization registry review: 33.3%
  - Questions on intake forms: 23.1%
  - Other*: 7.7%
  - Routine chart audits: 0%

*All “Other” responses were to requests records from other clinics/health departments.

**Percentages do not add to 100% due to multiple selections per respondent.

- **Please select all times during which you check immunization status and immunize adolescents, if necessary.**
  - Annual or well-child visits: 100%
  - Sports physicals: 97.4%
  - Follow-up visits: 56.4%
  - Acute illness visits (if not contraindicated): 48.7%

*Percentages do not add to 100% due to multiple selections per respondent.

- **Does your facility have a reminder/recall system in place that notifies patients of upcoming immunizations?**
  - No: 43.2%
  - Yes, using the electronic health record: 40.5%
  - Yes, using a paper system: 13.5%
  - Yes, other: 2.7%
  - Yes, using the state registry: 0%

*Percentages do not add to 100% due to multiple selections per respondent.
Health care providers report that lack of routine health care visits and missing immunization records make it difficult to keep adolescents up-to-date with all of the recommended immunizations.

Parents can help make sure their children are up to date on their immunizations by:
- taking their children to the doctor on a regular basis (once per year) and
- bringing records about any immunizations given somewhere else to their child's health care visit.
Health care providers think that parent perception that their child is at low-risk of contracting a vaccine preventable disease, insufficient parent knowledge about vaccine preventable illness, and parent fear of newer vaccines significantly contribute to underimmunization of adolescents.
Advisory Committee on Immunization Practices (ACIP): ACIP is part of the Centers for Disease Control and Prevention. Vaccine recommendation schedules are developed yearly by ACIP in collaboration with the American Academy of Family Physicians and the American Academy of Pediatrics. To see the most recent recommendations visit http://www.cdc.gov/vaccines/recs/acip/default.htm.

American Academy of Pediatrics (AAP): AAP is an organization of 60,000 pediatricians. They provide information about multiple areas of children’s health. You can find their immunization information at http://www.aap.org/immunization.

Centers for Disease Control and Prevention (CDC): The CDC is a division of the U.S. Department of Health and Human Services. The amount of information on the CDC website can be overwhelming, but parents looking for information about immunizations can’t do better than The Parents’ Guide to Childhood Immunizations. You can download the 68-page booklet from the website, or order a free printed copy. Visit http://www.cdc.gov/vaccines/pubs/parents-guide/default.htm#pguide for the parents’ guide, or http://www.cdc.gov/vaccines for all available vaccine information.

CHILD Profile: CHILD Profile is Washington State’s health promotion and immunization registry system. Most health care providers in Kittitas County enter information about the vaccines your child receives into this statewide database. CHILD Profile also sends health promotion mailings to the family of each child born in Washington State. These mailings provide information about immunizations and other topics. You can find the mailings and other information on their website at http://www.doh.wa.gov/cfh/childprofile/.

National Foundation for Infectious Diseases (NFID): This non-profit organization offers educational material about vaccine-preventable diseases and infections. They have a special website for adolescent immunizations that can be found at http://www.adolescentvaccination.org/.


### Primary Vaccines (Ages 11-12)
Primary vaccines are those that every child should get at 11 or 12 years old:
- Meningococcal
- Tetanus, diphtheria, and pertussis (Tdap)
- Human papillomavirus (HPV)*
- Influenza (1 dose annually for all adolescents through age 18)
*Routine for females; also available for males

### Catch-Up Vaccines
“Catch-up” vaccines are for adolescents who were not immunized, or were not fully immunized, as infants:
- Hepatitis B
- Polio
- Measles, mumps, and rubella (MMR)
- Varicella (chickenpox)

### Special Populations
Two vaccines are recommended for certain high-risk adolescents:
- Hepatitis A
- Pneumococcal