



Vaccines 101

Information for WIC Staff



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Introduction

Every Child By Two – Carter/Bumpers Champions for Immunization (ECBT) created this Guide to provide WIC staff with an overview of key vaccine messages and a list of vaccine-preventable diseases, their symptoms, and the vaccines that protect against them. The Guide also provides an overview of how WIC staff can screen young children to determine if they are up-to-date on their vaccinations and how to refer those individuals in need of life-saving vaccines to an appropriate provider. Immunization Resources can be found at the end of this Guide.

Key Messages about Vaccines

Why are vaccines important?

- Vaccines save lives. Vaccines offer the best-known protection against a number of devastating illnesses, but they must be administered according to the recommended immunization schedule in order to best protect children, adolescents and adults.
- Serious diseases that were previously thought to be eradicated in the United States, such as measles, are returning due to low vaccination rates.
- Large outbreaks of pertussis (also known as whooping cough) are occurring in the U.S. There were approximately 50,000 cases of pertussis in the U.S. in 2012 and the disease outbreaks have continued into 2013.
- Approximately 100 children under five years of age die from influenza (flu) each year in the U.S. and pregnant women are also at high risk of complications from influenza.

What happens when we don't vaccinate children on time?

- Parents who exempt their children from receiving their recommended immunizations are putting their children at risk for serious disease. For example, studies have shown that children with exemptions are 22 times more likely to contract measles than non-exempt peers.
- Parents who choose to delay vaccines or not vaccinate their children also put others at risk. In order to protect the larger population, including those who cannot be immunized, from vaccine preventable diseases, vaccination rates must remain high. The concept is referred to as "Herd immunity" or "Community Immunity".

How can we protect ourselves and others around us?

- Immunizing yourself can protect others around you from contracting dangerous vaccine-preventable diseases, especially young babies who have yet to begin the vaccine series or have not yet received all their vaccines. For example, to help protect infants from diseases such as pertussis and flu, women should be vaccinated during every pregnancy to help protect both themselves and their newborn from serious illness. In addition, parents should request that anyone who will be around their newborn (including healthcare providers, childcare providers,



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friends and family members), receive their Tdap and flu vaccinations at least two weeks prior to the delivery date. **This concept is often referred to as “cocooning.”**

- When women get vaccinated against flu and pertussis during pregnancy, antibodies are transferred to the fetus, protecting the newborn for the first few months of life. However, this immunity decreases over time. Babies need to be vaccinated according to the recommended schedule to stay protected against 14 serious and potentially life threatening diseases.
- People should get information about vaccines and their family’s health from their doctor and other reputable organizations such as the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP), the American College of Obstetricians and Gynecologists (ACOG), the Vaccine Education Center at the Children’s Hospital of Philadelphia (CHOP), and Every Child By Two.

Why is it important to follow the recommended vaccine schedule?

- Doctors, scientists and public health experts work diligently to develop the optimal vaccination schedule, affording the most complete and safest protection from diseases possible. Following the CDC’s Advisory Committee on Immunization Practices’ (ACIP) schedule is the best way to ensure your children are protected against deadly vaccine-preventable diseases.
- “Alternative” vaccine schedules, which are not tested or approved by experts, put children at risk. It is not advisable to skip or delay vaccines, as this will leave a child vulnerable to diseases for a longer period of time, a practice that can prove deadly for vulnerable infants.

Are vaccines safe?

- Since vaccines are administered to otherwise healthy people, they are among the most rigorously tested and safest medical products on the market. It can take 10 or more years and millions of dollars to thoroughly test a new vaccine before it is licensed and made available to the public. Once on the market, continuous monitoring by government officials and the medical community ensures that each dose of the vaccine is as safe and any questions of harm are investigated.
- Concerns about the safety of vaccines and the possible link between vaccines and autism should be put to rest. No credible, scientific study has ever found a link between vaccines and autism. **In fact, the researcher who made this initial claim has since had his medical license revoked and his study, which was proven to be falsified, has been retracted.**
- Vaccines may cause mild side effects (such as fever or soreness at the injection site). Vaccines may also have severe, but extremely rare side effects (such as an allergic reaction). The potential harm from the actual diseases far outweighs the potential for vaccine side effects.



Information about Vaccines and Vaccine-Preventable Diseases



Diphtheria

Diphtheria is a serious bacterial disease that affects the heart and nerves. Symptoms include sore throat, low-grade fever, and swollen neck glands. The toxin or poison, caused by the bacteria, also causes a thick coating on the tonsils, throat and/or nasal cavity. Symptoms at a later stage include difficulty breathing or swallowing, double vision, slurred speech, signs of shock with pale/cold skin, rapid heartbeat and sweating. As the disease progresses, the toxin from the bacteria spreads into the blood stream causing life-threatening injuries to the heart, kidney and other organs. Nerve damage and paralysis can also result.

Approximately 1 out of 10 people who contract diphtheria dies from the disease. In children younger than 5 years of age, as many as 1 out of 5 who contract diphtheria die. In the 1920s, there were 100,000-200,000 reported cases of diphtheria each year and 13,000-15,000 people died from the disease. Since the introduction of the vaccine for diphtheria, the disease has dramatically declined. In the last 10 years, only 5 cases have been reported per year in the U.S.

The DTaP vaccine is a combination vaccine that protects children from diphtheria, tetanus and pertussis. The Td and Tdap vaccines protect older children and adults against these diseases.



Haemophilus Influenzae Type b (Hib)

Hib disease is very serious. Hib can cause acute bacterial meningitis, pneumonia, seizures, permanent deafness and mental retardation. Other symptoms of Hib infection can include cellulitis (an inflammation of the underlying tissues of the skin), osteomyelitis (an infection of the bone and/or bone marrow), joint infections, bacteria in the blood, and inflammation of the epiglottis (the flap of tissue that sits at the base of the tongue that keeps food from going into the trachea, or windpipe, during swallowing). Most children with Hib disease need care in the hospital. Even with treatment, as many as 1 out of 20 children with Hib meningitis die. As many as 1 out of 5 children who survive Hib meningitis will have brain damage or become deaf.

Before the Hib vaccine was available, Hib caused serious infections in 20,000 children and killed about 1,000 children each year. Since the vaccine's introduction in 1987, the incidence of severe Hib disease has declined by 99 percent in the United States.

Recent outbreaks of Hib have resulted in the hospitalization and deaths of children in several states.



Hepatitis A

Hepatitis A is a viral disease that affects the liver. The virus spreads primarily through food or water contaminated by feces from an infected person, and rarely through contact with infected blood.

Symptoms include yellow skin or eyes, fever, weakness, tiredness, stomach ache, nausea, abdominal pain, loss of appetite and dark urine. Signs and symptoms are more apparent in adolescents and adults than

in young children, who may not develop the typical symptoms.

Hepatitis A disease tends to occur in community-wide outbreaks when many people eat from the same hepatitis A-infected food. It also transmits from person-to-person in households and extended family settings.

An infected person is most likely to spread hepatitis A virus during the two-week period before they know they are infected. Since most infected pre-school children show no symptoms of hepatitis A infection, they often unknowingly spread the virus to others including their pre-school classmates.

Since the introduction of the hepatitis A vaccine in 1995, rates of the disease have been on the decline. The most recent *Summary of Notifiable Diseases---United States, 2011* from the CDC estimated 1,400 cases of hepatitis A (acute) in the United States in 2011.



Hepatitis B

National studies show that about 12.5 million Americans have been infected with hepatitis B virus at some point in their lifetime. The proportion of the world's population currently infected with the virus is estimated to be between 3 and 6 percent. Over 10 percent of infected individuals develop chronic infection, increasing chances for chronic liver disease, cirrhosis and liver cancer. However, with the recommendation for routine hepatitis B vaccination of children, the number of new infections per year has declined approximately 82 percent.

Many parents mistakenly believe that hepatitis B is strictly a sexually transmitted disease and are therefore reluctant to have their child vaccinated at the recommended age. In fact, an individual who is unaware that they have hepatitis B can easily pass on the disease to an unvaccinated child through actions as simple as a kiss on the mouth, the sharing of a toothbrush or contact with blood. At least 30 percent of reported hepatitis B infections among adults cannot be associated with an identifiable risk factor. Newborns that become infected with hepatitis B virus have a 90 percent chance of developing lifelong infection.

If a person becomes infected, he or she can develop serious liver damage and may be susceptible to liver cancer later in life.



Human Papillomavirus (HPV)

Human Papillomavirus (HPV) is a common virus that is spread through sexual contact. It is the most common sexually transmitted disease. Anyone who has sex can get HPV. Approximately 79 million Americans are currently infected with HPV and about 14 million people become newly infected each year. There are approximately 40 types of genital HPV. These HPV types can also infect the mouth and throat.

Health problems that can be caused by HPV include genital warts; recurrent respiratory papillomatosis; cervical cancer; and other, less common, but serious cancers, including genital cancers (cancer of the vulva, vagina, penis, or anus), and a type of head and neck cancer called oropharyngeal cancer (cancer in the back of throat, including the base of the tongue and tonsils).

Very rarely, a pregnant woman with genital HPV can pass HPV to her baby during delivery. In these cases, the child can develop recurrent respiratory papillomatosis (RRP), a rare condition in which warts grow in the throat. In children, this is also referred to as juvenile-onset recurrent respiratory papillomatosis. There is no certain way to tell who will develop health problems from HPV and who will not. In most cases, HPV goes away by itself before it causes any health problems, and most people who become infected with HPV do not even know they have it.

HPV vaccination is currently recommended for preteen girls and boys at age 11 or 12. For those who did not get all three doses of the vaccine when they were younger, the vaccine is recommended for all teen girls and women through age 26 and all teen boys and men through age 21.



Influenza

Influenza is spread by direct and indirect contact with an infected person. In an average year, the flu causes anywhere between 3,300 and 48,600 deaths and 200,000 hospitalizations in the U.S.

Historically, complications from the flu occur in up to 25 percent of those who contract the disease, including severe bacterial pneumonia, dehydration and the worsening of chronic medical conditions such as congestive heart failure, asthma or diabetes. Inflammation of the heart (myocarditis) may also occur as a result of a flu infection.

While the majority of deaths resulting from flu occur in the elderly during a typical flu season, rates of infection are highest among children and hospitalization rates among children less than one year old are similar to those of the elderly. In fact, more than 20,000 children under the age of five are hospitalized due to the flu each year. In addition, influenza kills approximately 100 American children less than five years of age every year.



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The flu vaccine is the best way to protect your family against the disease and it is available in 2 forms – the shot and the nasal spray. The medical community recommends that everyone over 6 months of age receive the flu vaccine. Since the flu vaccine is not approved for use in infants younger than 6 months old, the best way to protect these children is to make certain that their household contacts and caregivers are vaccinated. Changes to a pregnant woman’s immune system can make her more sensitive to the flu and she should be vaccinated as soon as the flu vaccine is available in her community. In addition, being vaccinated while pregnant will provide some protection to a woman’s baby after he or she is born (up to 6 months old). By getting vaccinated during pregnancy, mothers build antibodies that are transferred to the newborn providing protection against influenza before the baby can start getting the flu vaccine at 6 months of age. Once the baby is born, breastfeeding will also help an infant stay healthy during flu season. Breastfeeding protects babies because breast milk passes a mother’s antibodies to her baby, which help fight off infection.



Measles

Measles is a highly contagious disease caused by a virus that grows in the cells that line the back of the throat and lungs. The disease develops from a high fever, runny nose and cough to a rash that erupts on the face and upper neck. Life-threatening complications may accompany the disease, including blindness, encephalitis (an infection that causes brain swelling), severe diarrhea, ear infections or severe respiratory infections (i.e. pneumonia).

In the U.S., roughly one in five people who develop measles require hospitalization for one or more of these complications. Widespread introduction of the measles vaccine has resulted in a significant reduction of measles cases.

Despite this great success, outbreaks are still occurring in the U.S. and abroad. According to the Centers for Disease Control and Prevention (CDC), in 2011, there were 222 cases of measles reported in the U.S. Most of the cases are associated with importations from other countries. Eighty-six percent of the patients were unvaccinated or had unknown vaccination status.

The MMR vaccine protects against measles, mumps and rubella. Two doses of the vaccine are needed. The first dose is given to children between 12-15 months of age. The second dose is given between 4 and 6 years of age. Today, studies show that children with exemptions from the measles vaccine are 22 times more likely to contract measles than non-exempt peers, making immunizations that protect from this deadly disease critical.



Meningococcal disease

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

About 1,000 people get meningococcal disease each year in the United States. Although meningococcal infections can be treated with drugs such as penicillin



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10 to 14 percent of those people die from the disease. Of those who survive, 11 to 19 percent will lose their arms or legs, become deaf, have problems with their nervous systems, become mentally retarded or suffer seizures or strokes.

Although anyone can contract meningococcal disease, it is most common in infants less than one year of age, in adolescents 16-21 years of age, and in people with certain medical conditions, such as the lack of a spleen. College freshmen who live in dormitories have an increased risk of getting meningococcal disease. The Meningococcal Conjugate Vaccine (MCV) protects against meningococcal disease. The MCV4 vaccine requires two doses. The first dose is given to adolescents between 11 and 12 years of age. The second dose is given at 16 years of age. For children between 2 and 10 years old who have certain high-risk conditions, MCV is needed. However, the number of doses of vaccine depends upon the specific high-risk condition.



Mumps

The name "mumps" came from the phrase "to mumble," which was a description of the disease because of the side effects it causes. This "mumbling" resulted from the painful swelling of the salivary glands which is the most typical symptom of the disease. Mumps spreads from an infected person to a healthy person through coughing, sneezing and regular conversation.

While usually a mild disease, mumps can also produce swelling of the brain, nerves and spinal cord, and, in some cases, can lead to paralysis, seizures and fluid in the brain. Permanent deafness occurs in 1 out of 2,000 cases. About one out of every four male teenagers or adults who get mumps develop a painful swelling of the testicles (orchitis), which can lead to sterility and testicular cancer.

The MMR vaccine protects against measles, mumps and rubella. Prior to the mumps vaccine, the United States suffered approximately 200,000 cases of mumps and 20 to 30 deaths per year. At that time, the mumps virus was the leading cause of viral meningoencephalitis (a medical condition that resembles both meningitis and encephalitis). Since a second dose of mumps vaccine was added to the standard childhood MMR vaccine series, annual cases have declined from thousands to hundreds.

Unfortunately, in 2009 and 2010 there was a U.S. outbreak of mumps, which resulted in a total of 1,521 reported cases. This was the largest mumps outbreak that has occurred in the United States since 2006 and cases continue to occur. Although mumps vaccination alone was not sufficient to prevent the 2009-2010 outbreak, maintaining high MMR vaccination coverage remains the most effective way to prevent outbreaks and limit their size when they occur.



Pertussis

Pertussis, also known as whooping cough, is one of the most common vaccine-preventable diseases in the United States. It is caused by bacteria that spread easily from person to person through personal contact, coughing, and sneezing. It can be very serious for babies and can cause them to stop breathing.

Also known as whooping cough, pertussis is a highly contagious disease that can result in prolonged coughing spells and even death for 50 out of every 10,000 infected people. Ninety-percent of pertussis-associated deaths have been among babies less than one year old.

The disease begins as a mild respiratory infection with symptoms such as coughing, sneezing, and runny nose. After one to two weeks, the cough increases and develops a "whooping" sound. In severe cases, vomiting induced by the coughing fits can lead to malnutrition and dehydration. Pneumonia, encephalitis, pulmonary hypertension and secondary bacterial super infections are among the many problems that people with pertussis might have to face. In adults, the disease often seems like a bad cold with mild symptoms. Since most adults won't recognize that they have pertussis, it is not unusual for the disease to be passed on to vulnerable children.

Vaccination is the best way to protect against pertussis. Before pertussis vaccines became widely available in the 1940s, about 200,000 children got sick with it each year in the U.S. and about 9,000 died as a result of the infection. Although an effective vaccine is available, many children fail to receive all of the required doses and remain vulnerable. During a pertussis outbreak, children who have received all of their pertussis vaccinations are six times less likely to become infected than those who have never been vaccinated.

Pertussis is naturally cyclic in nature with peaks in disease every 3-5 years. However, since the 1980s, the peaks have gotten higher and the overall case counts are going up. Possible reasons for this include increased awareness, improved diagnostic tests, better reporting, more circulation of the bacteria, waning immunity, and exemptions from vaccinations. As previously mentioned, the U.S. has been experiencing a large number of pertussis cases over the last few years. There were approximately 50,000 cases of pertussis in the U.S. in 2012 and outbreaks have continued into 2013.

Children need to receive all 5 doses of DTaP, a combined tetanus, diphtheria and pertussis vaccine, to be protected. One dose is needed at each of the following ages: 2 months, 4 months, and 6 months, between 15-18 months, and between 4-6 years. In addition, adults can help to protect young children by getting immunized with the adult pertussis vaccine (Tdap). Pregnant women should receive a dose of Tdap during each pregnancy, preferably in the third trimester, to protect themselves and their baby. By getting vaccinated during pregnancy, mothers build antibodies that are transferred to the newborn providing protection against pertussis before the baby can start getting the DTaP vaccine at 2 months of age. Tdap also protects mothers during delivery, which makes them less likely to transmit pertussis to their infants. Tdap is also important for families and caregivers of infants. Parents should proactively request that all those who will be in contact with their newborn, including healthcare workers, get a



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Tdap vaccine at least two weeks prior to delivery to protect the infant until the time he or she is fully vaccinated for pertussis.



Pneumococcal Disease

Pneumococcal disease is caused by a bacterium known as pneumococcus bacterium. While pneumococcus bacterium is present in many people's noses and throats, it is still unknown why it suddenly invades the body and causes the disease.

Pneumococcus bacterium is spread by coughing and sneezing. It is the most common cause of pneumonia, meningitis (inflammation of the coverings of the brain and spinal cord), bacteremia (bloodstream infection), ear infections and sinusitis (sinus infections) in children under 2 years of age. Serious pneumococcal infections are most common in infants, toddlers and the elderly. Each year in the United States, pneumococcus causes about 4,000 cases of bacteremia, meningitis, or other invasive disease in children younger than 5 years of age. Children under 2 years of age average more than 1 middle ear infection each year, many of which are caused by pneumococcus.

Pneumococcal disease has a higher incidence in individuals with certain health problems such as immune deficiencies, sickle cell disease or lack of a functioning spleen. Additionally, there is a higher rate of infection in children of certain ethnic populations including African-American, Alaskan Native and specific Native American populations. Children younger than 5 years of age in out-of-home day care are at increased risk (approximately 2 fold higher) of experiencing invasive pneumococcal infections than other children.

There are two different kinds of vaccines available to protect against pneumococcal disease in children and adults – PCV13 and PPSV23.



Polio

Polio is a crippling and potentially deadly infectious disease caused by a virus that spreads from person to person invading the brain and spinal cord, and causing paralysis. Since polio has no cure, vaccination is the best way to protect individuals and it is the only way to stop the disease from spreading. There are two types of vaccine that can prevent polio: inactivated polio vaccine (IPV) and oral polio vaccine (OPV). Since 2000, only IPV has been used in the U.S.; however, OPV is still used throughout much of the world.

Before the polio vaccine was available, an average of 50,000 polio cases was reported in the United States each year. Polio was one of the most dreaded childhood diseases of the 20th century with annual epidemics, primarily during the summer months. This often left thousands of victims – mostly children – permanently in braces, crutches, wheelchairs or in iron lungs. Because polio



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can paralyze the diaphragm, in the 1940s and 1950s, entire wards of hospitals housed polio victims who were dependent on large iron lungs that breathed for them.

Thanks to the discovery of the vaccine, polio has been eradicated from the U.S. and the entire Western Hemisphere. We continue to vaccinate against polio because it still remains a threat in some countries and could easily be transported by an infected person back into the United States.



Rotavirus

Rotavirus is a disease of the digestive tract caused by any one of three strains of rotavirus. Infection from rotavirus causes acute gastroenteritis (vomiting and diarrhea). People of all ages are susceptible to rotavirus infection. Children 6 months to 2 years of age, premature infants, the elderly and the immune-compromised are particularly prone to more severe symptoms.

The disease is the most common cause of severe diarrhea in children worldwide, infecting about 120 million people every year. It is also responsible for the death of up to 453,000 children per year in developing countries.

In 2006, rotavirus vaccination was recommended for children in the United States. Prior to that, almost every child had been infected with rotavirus by age 5 and the disease was responsible for more than 200,000 emergency room visits and 55,000 to 70,000 hospitalizations of young children each year. In addition, 20 to 60 children under five years of age died each year.

Rotavirus infection is also known by other names such as "infantile diarrhea," "winter diarrhea," "stomach flu," "acute nonbacterial infectious gastroenteritis" and "acute viral gastroenteritis."



Rubella

Rubella is also called German measles because the disease was first described by German physicians in the mid-18th century. While the disease is usually mild in children and adults, up to 90 percent of infants born to mothers infected with rubella during the first trimester of pregnancy will develop Congenital Rubella Syndrome (CRS), resulting in heart defects, cataracts, mental retardation and/or

deafness in the newborn child. It can also cause premature birth, low birth weight, neonatal thrombocytopenia (an abnormal drop in the number of blood cells involved in forming blood clots), anemia and hepatitis.

Before the rubella vaccine was introduced in 1969, widespread outbreaks usually occurred every six to nine years in the United States, mostly affecting children in the five-to-nine year age group. Between 1962 and 1965, rubella infections during pregnancy were estimated to have caused 30,000 still births and 20,000 children to be born impaired or disabled.

The MMR vaccine protects against rubella, in addition to measles and mumps. Due to the widespread use of the vaccine, only 4 cases of rubella were reported in 2011. In 2004, the CDC announced that both



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the congenital and acquired forms of rubella had been eliminated from the United States. The U.S. continues to vaccinate to prevent the possibility of rubella being imported from countries where it is still common.



Tetanus

Commonly known as lockjaw, tetanus is a severe disease that causes stiffness and spasms of the muscles. Tetanus kills 10 to 20 percent of those who contract the bacteria. Unlike other vaccine-preventable diseases, which are transferred from person to person, tetanus bacteria grow in soil and can therefore never be eradicated. The bacterium usually enters the body through a cut or a puncture wound to the skin.

It is critical to vaccinate babies on time, before they start to crawl, and then to attain booster shots (Td or Tdap) every ten years throughout a person's life. From 1922 to 1926, there were an estimated 1,314 cases of tetanus per year in the U.S. By 2011, as a result of extensive immunization, only 36 cases of tetanus were reported.

The Diphtheria, Tetanus, and Acellular Pertussis (DTaP) vaccine provides protection from tetanus, in addition to diphtheria and pertussis. Children need five doses of the combination vaccine. For older children and adults who haven't received the adult version of the combined tetanus, diphtheria, pertussis vaccine (Tdap) yet, the easiest thing to do is to get Tdap instead of their next regular tetanus booster. The dose of Tdap can be given earlier than the 10-year mark, so it's a good idea to talk to a doctor about getting the vaccine.



Varicella/Chickenpox

Although generally mild, varicella (also known as chickenpox) is a highly contagious virus that can lead to severe illness with complications such as secondary bacterial infections, severe dehydration, pneumonia, central nervous system irregularities and shingles. Once the varicella virus infects the body, it remains there for life and may reappear as shingles, particularly in elderly people.

The virus can pass from infected pregnant women to the fetus, resulting in abnormalities in two percent of cases. The fetus can develop scars on the skin and limb(s), limb deformities (hypoplasia), eye damage, low birth weight, brain atrophy (loss of neurons) and mental retardation. The virus sometimes leads to fetal death and/or spontaneous abortion. Some babies who got infected in the fetal stage die in infancy.

The varicella vaccine protects against varicella and two doses are needed. Before the varicella vaccine, the U.S. reported an estimated four million cases of disease a year, leading to approximately 11,000 hospitalizations and 100 deaths. Historically one out of every 10,000 cases of chickenpox proved fatal with 23 out of every 10,000 cases progressing to pneumonia. Since the chickenpox vaccine was licensed in 1995, the number of people who get chickenpox as well as hospitalizations and deaths from chickenpox each year has declined dramatically in the United States.



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Shingles (Herpes Zoster)

Shingles is a painful localized skin rash often with blisters that is caused by the varicella zoster virus (VZV) - the same virus that causes chickenpox. After a person recovers from chickenpox, the virus stays in the body in a dormant state. For reasons that are not fully known, the virus can reactivate years later, causing shingles. Almost 1 out of every 3 people in the United States will develop shingles, also known as zoster or herpes zoster. The risk of the disease increases as a person gets older and about half of all cases occur among men and women over 60 years of age. However, it is important to note that even children can get shingles. There are an estimated 1 million cases of the disease each year in the United States. People who develop shingles typically have only one episode in their lifetime, but long-term pain often occurs. In rare cases, a person may have second or even a third episode. The only way to reduce the risk of developing shingles and the long-term pain that can follow shingles is to get vaccinated. One dose of the vaccine is needed and should be given to adults 60 years of age and older.



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Screening WIC participants for Up-to-Date Vaccination Status and Making Referrals

Counting DTaP Vaccinations

In 2003, the CDC, in cooperation with USDA and the National WIC Association, developed a simplified method for WIC staff to monitor vaccination status of children less than two years of age. The 4th dose of DTaP (diphtheria, tetanus and acellular pertussis vaccine) was chosen to be the marker to identify whether or not children were up-to-date on their vaccinations.

(<http://neoreviews.aappublications.org/content/pediatrics/111/6/1297.abstract>) Use of this strategy increased the immunization rates of WIC participants by ten percent.

When asked if a child is up-to-date, parents typically overestimate their child's immunization status. A documented record of immunizations is more accurate than a parent's memory. A documented record is a record (computerized or paper) in which actual vaccination dates are recorded. This includes a parent's hand-held immunization record (from the provider), a client chart (paper copy), or a printout from an Immunization Information Systems (IIS) or electronic medical record (EMR).

Immunization Information Systems (IIS), also known as immunization registries, are confidential, computerized systems that contain vaccination histories and provide immediate access to a child's current immunization status. They are one of the most accurate ways to determine a child's immunization status. IIS were created in conjunction with the CDC and are available in every state. Some states, such as California, have more than one IIS. The majority of immunization information systems in the United States allow WIC staff to access children's immunization records in the system. Some IIS allow "read only" access, while others allow WIC staff both "read" and "write" access. To find out if your WIC clinic is able to view immunization records in your state or local IIS, please contact the IIS manager. A list of IIS staff can be found on the CDC website at www.cdc.gov/vaccines/programs/iis/contacts-registry-staff.html

An easy tool has been created to assist WIC staff members in assessing children's immunization status by counting the number of DTaP vaccinations they have received. It is called *Easy IZ Guide* and it can be found online at

www.nal.usda.gov/wicworks/Sharing_Center/Immunizations/ImmAssessToolFour.pdf



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WHAT IS UP-TO-DATE?	
By Age	Minimum Number of DTaP Doses
Birth through 1month	0
3 months	1
5 months	2
7 months	3
19 months	4



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CDC's *Immunization Tracker* can be used to keep track of children's immunizations, developmental milestones, and growth from birth through 6 years old. It can be downloaded from the CDC website at www.cdc.gov/vaccines/parents/record-reqs/immuniz-records-child.html.

**Immunizations and Developmental Milestones
for Your Child from Birth Through 6 Years Old**

Child's Name _____ Birth Date _____

		Birth	1 MONTH	2 MONTHS	4 MONTHS	6 MONTHS
Recommended Immunizations	Hepatitis B	<input type="radio"/> HepB	<input type="radio"/> HepB ¹			<input type="radio"/> HepB
	Rotavirus			<input type="radio"/> RV	<input type="radio"/> RV	<input type="radio"/> RV
	Diphtheria, Tetanus, Pertussis			<input type="radio"/> DTaP	<input type="radio"/> DTaP	<input type="radio"/> DTaP
	Haemophilus influenzae type b			<input type="radio"/> Hib	<input type="radio"/> Hib	<input type="radio"/> Hib
	Pneumococcal			<input type="radio"/> PCV	<input type="radio"/> PCV	<input type="radio"/> PCV
	Inactivated Poliovirus			<input type="radio"/> IPV	<input type="radio"/> IPV	<input type="radio"/> IPV
	Influenza					<input type="radio"/> Influenza, first dose ² <input type="radio"/> second dose
Milestones*	Milestones should be achieved by the end of the age indicated. Talk to your child's doctor about age-appropriate milestones if your child was born prematurely.	<input type="radio"/> Recognizes caregiver's voice <input type="radio"/> Turns head toward breast or bottle <input type="radio"/> Communicates through body language, fussing or crying	<input type="radio"/> Starts to smile <input type="radio"/> Raises head when on tummy <input type="radio"/> Calms down when rocked, cradled or sung to	<input type="radio"/> Begins to smile at people <input type="radio"/> Coos, makes gurgling sounds <input type="radio"/> Begins to follow things with eyes <input type="radio"/> Can hold head up	<input type="radio"/> Babbles with expression <input type="radio"/> Likes to play with people <input type="radio"/> Reaches for toy with one hand <input type="radio"/> Brings hands to mouth	<input type="radio"/> Knows familiar faces <input type="radio"/> Responds to own name <input type="radio"/> Brings things to mouth <input type="radio"/> Rolls over in both directions
Growth	At each well child visit, enter date, length, weight, and percentile information to keep track of your child's progress.	WEIGHT / PERCENTILE	WEIGHT / PERCENTILE	WEIGHT / PERCENTILE	WEIGHT / PERCENTILE	WEIGHT / PERCENTILE
		LENGTH / PERCENTILE	LENGTH / PERCENTILE	LENGTH / PERCENTILE	LENGTH / PERCENTILE	LENGTH / PERCENTILE
		HEAD CIRCUMFERENCE	HEAD CIRCUMFERENCE	HEAD CIRCUMFERENCE	HEAD CIRCUMFERENCE	HEAD CIRCUMFERENCE

continues on back page

Shaded boxes indicate the vaccine can be given during shown age range.

VISIT DATE _____ VISIT DATE _____ VISIT DATE _____ VISIT DATE _____ VISIT DATE _____

¹ The second dose of HepB may be given either at the 1 month or 2 month visit.
² Two doses given at least four weeks apart are recommended for children aged 6 months through 8 years of age who are getting a flu vaccine for the first time and for some other children in this age group.
 * Milestones adapted from Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents Third Edition, edited by Joseph Hagan, Jr., Judith S. Shaw, and Paula M. Duncan, 2008, Elk Grove Village, IL: American Academy of Pediatrics.
 If your child has any medical conditions that put him at risk for infections or is traveling outside the United States, talk to your child's doctor about additional vaccines that he may need.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



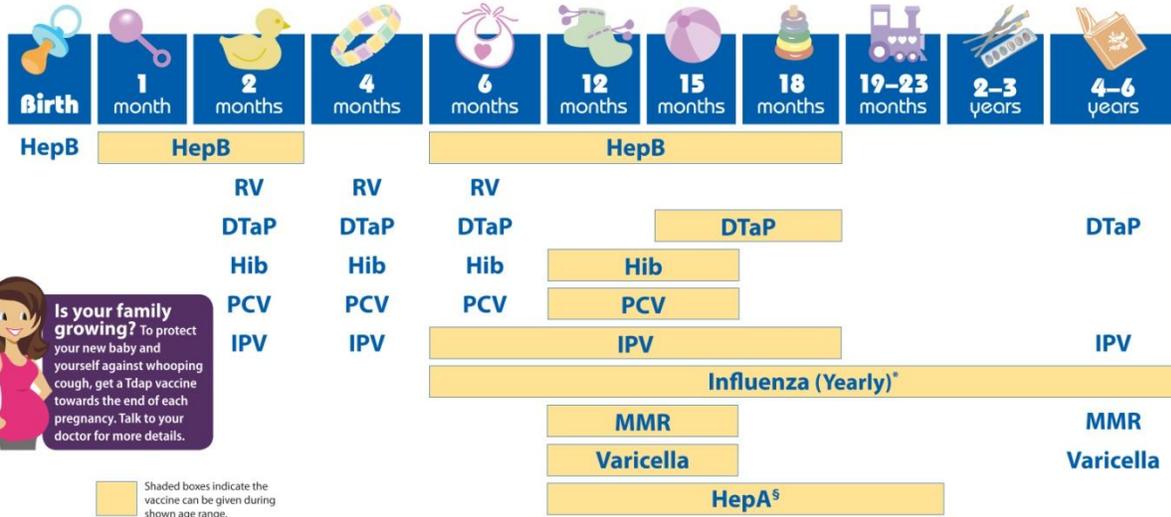
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The CDC Recommended Childhood Immunization Schedule for Children through 6 Years Old. This schedule is supported by the American Academy of Family Physicians (AAFP) and the American Academy of Pediatrics (AAP).

2013 Recommended Immunizations for Children from Birth Through 6 Years Old



Is your family growing? To protect your new baby and yourself against whooping cough, get a Tdap vaccine towards the end of each pregnancy. Talk to your doctor for more details.

Shaded boxes indicate the vaccine can be given during shown age range.

NOTE: If your child misses a shot, you don't need to start over, just go back to your child's doctor for the next shot. Talk with your child's doctor if you have questions about vaccines.

FOOTNOTES: * Two doses given at least four weeks apart are recommended for children aged 6 months through 8 years of age who are getting a flu vaccine for the first time and for some other children in this age group.

^s Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 to 18 months later. HepA vaccination may be given to any child 12 months and older to protect against HepA. Children and adolescents who did not receive the HepA vaccine and are at high-risk, should be vaccinated against HepA.

If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child's doctor about additional vaccines that he may need.



SEE BACK PAGE FOR MORE INFORMATION ON VACCINE-PREVENTABLE DISEASES AND THE VACCINES THAT PREVENT THEM.

For more information, call toll free **1-800-CDC-INFO** (1-800-232-4636) or visit <http://www.cdc.gov/vaccines>



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Making Referrals

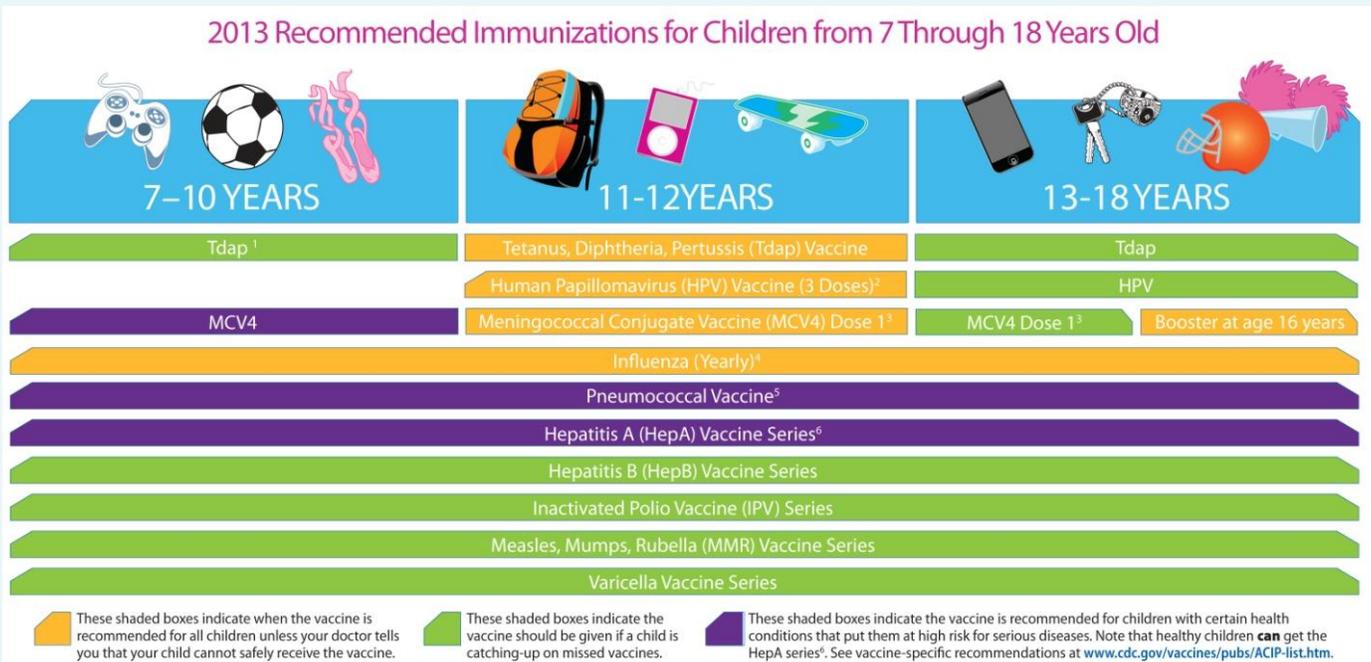
Another important part of the vaccination assessment process is advising the parent about the results of the child's immunization screening and if necessary, referring them to a healthcare provider that gives childhood vaccinations. In addition, WIC staff may also want to provide them with other valuable resources such as a copy of the official immunization schedule. Sample scripts for WIC staff to use during the assessment process can be found in the *Easy IZ Guide*.

If possible, work with your local immunization program staff to identify providers in your community who offer immunizations. Make a list of providers including private providers (pediatricians/family practice doctors); walk-in clinics; appointment only clinics; mobile vans; and on-site immunization services.



Immunization Schedules for Older Children, Adults and Pregnant Women

The three schedules below are provided by the Centers for Disease Control and Prevention and outline the recommended immunization types for children 7 through 18 years of age, adults, and pregnant women. The recommended schedule for children 7 through 18 years old is also supported by the AAFP and the AAP. The American College of Obstetricians and Gynecologists (ACOG) supports the recommendations made for pregnant women. Childhood, Adolescent and Adult Immunization schedules are available on the CDC website at www.cdc.gov/vaccines/schedules/index.html.



FOOTNOTES

- ¹ Tdap vaccine is combination vaccine that is recommended at age 11 or 12 to protect against tetanus, diphtheria and pertussis. If your child has not received any or all of the DTaP vaccine series, or if you don't know if your child has received these shots, your child needs a single dose of Tdap when they are 7-10 years old. Talk to your child's health care provider to find out if they need additional catch-up vaccines.
- ² All 11 or 12 year olds – both girls and boys – should receive 3 doses of HPV vaccine to protect against HPV-related disease. Either HPV vaccine (Cervarix[®] or Gardasil[®]) can be given to girls and young women; only one HPV vaccine (Gardasil[®]) can be given to boys and young men.
- ³ Meningococcal conjugate vaccine (MCV) is recommended at age 11 or 12. A booster shot is recommended at age 16. Teens who received MCV for the first time at age 13 through 15 years will need a one-time booster dose between the ages of 16 and 18 years. If your teenager missed getting the vaccine altogether, ask their health care provider about getting it now, especially if your teenager is about to move into a college dorm or military barracks.
- ⁴ Everyone 6 months of age and older—including preteens and teens—should get a flu vaccine every year. Children under the age of 9 years may require more than one dose. Talk to your child's health care provider to find out if they need more than one dose.
- ⁵ A single dose of Pneumococcal Conjugate Vaccine (PCV13) is recommended for children who are 6-18 years old with certain medical conditions that place them at high risk. Talk to your healthcare provider about pneumococcal vaccine and what factors may place your child at high risk for pneumococcal disease.
- ⁶ Hepatitis A vaccination is recommended for older children with certain medical conditions that place them at high risk. HepA vaccine is licensed, safe, and effective for all children of all ages. Even if your child is not at high risk, you may decide you want your child protected against HepA. Talk to your healthcare provider about HepA vaccine and what factors may place your child at high risk for HepA.

For more information, call toll free 1-800-CDC-INFO (1-800-232-4636) or visit <http://www.cdc.gov/vaccines/teens>



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AMERICAN ACADEMY OF FAMILY PHYSICIANS
STRONG MEDICINE FOR AMERICA



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Recommended Immunizations for Adults

Talk to your doctor or nurse about these vaccines:	If you are this age,					
	19 - 21 years	22 - 26 years	27 - 49 years	50 - 59 years	60 - 64 years	65+ years
Influenza (Flu) ¹	Get a flu vaccine every year					
Tetanus, diphtheria, pertussis (Td/Tdap) ²	Get a Tdap vaccine once, then a Td booster vaccine every 10 years					
Varicella (Chickenpox)	2 doses					
HPV Vaccine for Women ³	3 doses					
HPV Vaccine for Men ³	3 doses	3 doses				
Zoster (Shingles)					1 dose	
Measles, mumps, rubella (MMR) ⁴	1 or 2 doses					
Pneumococcal ⁵	1 - 3 doses					1 dose
Meningococcal	1 or more doses					
Hepatitis A	2 doses					
Hepatitis B	3 doses					

Boxes this color show that the vaccine is recommended for all adults who have not been vaccinated, unless your doctor or nurse tells you that you cannot safely receive the vaccine or that you do not need it.
 Boxes this color show when the vaccine is recommended for adults with certain risks related to their health, job or lifestyle that put them at higher risk for serious diseases. Talk to your doctor or nurse to see if you are at higher risk.
 No recommendation

FOOTNOTES:

(Influenza vaccine) ¹There are four different types of flu vaccines available—talk to your doctor or nurse about which flu vaccine is right for you.
(Tdap vaccine) ²Pregnant women are recommended to get Tdap vaccine with each pregnancy to increase protection for infants who are too young for vaccination but at highest risk for severe illness and death from pertussis (whooping cough).
(HPV vaccine) ³There are two different kinds of HPV vaccine but only one HPV vaccine (Gardasil[®]) can be given to men. Gay men or men who have sex with men who are 22 through 26 years old should get HPV vaccine if they haven't already started or completed the series.
(MMR vaccine) ⁴If you were born in 1957 or after, and don't have a record of being vaccinated or having had these infections, talk to your doctor or nurse about how many doses you may need.
(Pneumococcal vaccine) ⁵There are two different types of pneumococcal vaccine: PCV13 and PPSV23. Talk with your doctor or nurse to find out if one or both pneumococcal vaccines are recommended for you.

If you are traveling outside of the United States, you may need additional vaccines. Ask your doctor or nurse which vaccines you may need.
For more information, call toll free 1-800-CDC-INFO (1-800-232-4636) or visit <http://www.cdc.gov/vaccines>



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Immunization & Pregnancy

Vaccines help keep a pregnant woman and her growing family healthy.



Vaccine	Before pregnancy	During pregnancy	After pregnancy	Type of Vaccine
Hepatitis A	Yes, if indicated	Yes, if indicated	Yes, if indicated	Inactivated
Hepatitis B	Yes, if indicated	Yes, if indicated	Yes, if indicated	Inactivated
Human Papillomavirus (HPV)	Yes, if indicated, through 26 years of age	No, under study	Yes, if indicated, through 26 years of age	Inactivated
Influenza IIV	Yes	Yes	Yes	Inactivated
Influenza LAIV	Yes, if less than 50 years of age and healthy; avoid conception for 4 weeks	No	Yes, if less than 50 years of age and healthy; avoid conception for 4 weeks	Live
MMR	Yes, if indicated, avoid conception for 4 weeks	No	Yes, if indicated, give immediately postpartum if susceptible to rubella	Live
Meningococcal: • polysaccharide • conjugate	If indicated	If indicated	If indicated	Inactivated Inactivated
Pneumococcal Polysaccharide	If indicated	If indicated	If indicated	Inactivated
Tdap	Yes, if indicated	Yes, vaccinate during each pregnancy ideally between 27 and 36 weeks of gestation	Yes, immediately postpartum, if not received previously	Toxoid/ inactivated
Tetanus/Diphtheria Td	Yes, if indicated	Yes, if indicated, Tdap preferred	Yes, if indicated	Toxoid
Varicella	Yes, if indicated, avoid conception for 4 weeks	No	Yes, if indicated, give immediately postpartum if susceptible	Live

For information on all vaccines, including travel vaccines, use this table with www.cdc.gov/vaccines

Get an answer to your specific question by e-mailing cdcinfo@cdc.gov or calling 800-CDC-INFO (232-4636) • English or Spanish

National Center for Immunization and Respiratory Diseases
Immunization Services Division





Real Life Stories



Craig and Katie Van Tornhout wanted nothing more than a younger sibling for their son, Cole. After five years of miscarriages, Katie finally gave birth to a baby girl, whom they named Callie Grace. Callie was born six weeks early, but was strong and healthy. In January 2010, one-month old Callie developed a strange, dry cough. Katie took her to the pediatrician, who gave the baby a checkup but found no real signs of illness and sent the family home.

Over the next few days, Callie's coughing continued, she wasn't eating and she seemed lethargic, so her parents took her back to the doctor. During the visit, Callie suddenly stopped breathing. She was rushed to the hospital where doctors performed a variety of tests. Callie eventually regained her breathing and color and her parents were hopeful she would recover. But that Friday night, Callie again stopped breathing. Family members watched from behind a glass wall as a team of doctors and nurses performed CPR. Callie could not be saved. She was only 38 days old.

Days later, tests and the coroner's report confirmed that Callie had died of Acute **Pertussis** Pneumonia. The diagnosis shocked the family as they had taken care to keep Callie in the house and away from family and friends to protect her from sickness.

In the last few years, pertussis (also known as whooping cough) cases have increased significantly in the United States, including in northern Indiana, where Callie and her family lived. As pertussis is a highly contagious bacterial disease, experts point to a growing number of parents choosing not to immunize their children according to the recommended childhood immunization schedule as one possible reason for the surge. Other possible reasons include increased awareness of the disease, improved diagnostic tests, better reporting, more circulation of the bacteria and quickly waning immunity after vaccination.

The DTaP (pediatric diphtheria, tetanus and acellular pertussis) vaccine is given to children as a series of shots starting at two months of age. Five doses of the vaccine are needed. It is recommended that pregnant women be vaccinated with the Tdap (adult tetanus, diphtheria and acellular pertussis) vaccine during each pregnancy. In addition, new mothers (if not vaccinated during pregnancy), family members, and caregivers should receive the Tdap vaccine to protect newborns too young to be fully protected from these diseases. Callie was too young to receive the pertussis vaccine and no one in the family was offered the Tdap vaccine.

Despite their heartache, the Van Tornhouts hope sharing their story might help other parents learn about pertussis and the importance of immunizing children and the adults around them.



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During the evening of December 20, 2003, 15-month-old Breanne Palmer developed a slight fever and began to show symptoms similar to her brother who had recently been diagnosed with influenza. The next morning, Breanne's fever rose to 101.5 F. Her parents took her to the pediatrician where the influenza diagnosis was made. Breanne was given antibiotics and sent home.

After visiting the doctor, Breanne took a long nap and her temperature began to slowly come down. Her parents continued to monitor her condition and give Breanne medication for her fever. When Breanne went to bed that night her temperature was almost normal. However, as the night wore on, Breanne's temperature climbed again very rapidly reaching 105.5 F. Her parents put Breanne in a bath to help bring down her fever, but she began to have difficulty breathing so they called 911.

At the hospital, Breanne's temperature rose to 107 F. Her temperature was brought down by the doctors in the emergency room, but Breanne had to be transferred to another hospital for more intensive care. A special life-support machine was needed as the virus began to attack Breanne's heart and brain stem. After being transferred to yet another hospital, doctors told Breanne's parents that the damage to her young body was too extensive. There was nothing the life-support machine could do. Breanne died in her mother's arms on December 23, 2003 from Influenza A.

Breanne's parents tried to get her vaccinated against the flu in early December but because she was diagnosed with an ear infection at the time her pediatrician would not vaccinate her.

"There is not a day that goes by that I don't think about what if my daughter had been vaccinated against the flu? I believe had she been vaccinated she would still be alive today, and I would be able to hear her laughter."

— Denise Palmer, Mother of Breanne

Since losing their daughter to the flu, Breanne's parents have joined other parents who have lost their child to the flu in an effort to make sure children are protected against this deadly virus. Go to www.familiesfightingflu.org for more information.

For more stories and videos about victims of vaccine-preventable diseases, visit Families Fighting Flu (www.familiesfightingflu.org), ShotbyShot (shotbyshot.org), Vaccinate Your Baby (www.vaccinateyourbaby.org) and PKIDs (www.pkids.org).



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Immunization Resources

[Vaccinate Your Baby](http://www.vaccinateyourbaby.org) (www.vaccinateyourbaby.org)

Every Child by Two- Carter/Bumpers Champions for Immunization (ECBT)

This website contains information about immunizations including answers to the many questions parents have about vaccines and their safety. The site also contains a [personalized immunization schedule tool](#) to help parents keep better track of their children's immunizations.

[Parents' Guide to Immunizations](http://ecbt.org/share/FinalParentsGuideEnglish.pdf) (<http://ecbt.org/share/FinalParentsGuideEnglish.pdf>)

Every Child by Two- Carter/Bumpers Champions for Immunization (ECBT)

The *Parents' Guide to Immunizations* was created to provide resources to assist WIC staff and WIC participants who have questions about vaccines. The Guide, which brings together existing resources from the CDC, ECBT and the Immunization Action Coalition (IAC), addresses the importance of immunizations for both children and adults (including pregnant women). Also included are easy-to-read immunization schedules, information on the Vaccines for Children (VFC) program and information about immunization information systems. These Guides may be copied in full or individual documents in the Guide can also be copied and distributed by WIC staff.

[Parents' Guide to Immunizations –Spanish Version](http://ecbt.org/share/FinalParentsGuideSpanish.pdf)
(<http://ecbt.org/share/FinalParentsGuideSpanish.pdf>)

Every Child by Two- Carter/Bumpers Champions for Immunization (ECBT)

The Spanish version of the *Parents' Guide to Immunizations* was created to help answer questions that WIC staff and Spanish-speaking WIC participants may have about vaccines. The Guide, which brings together existing resources from the CDC, ECBT and the Immunization Action Coalition, addresses the importance of immunizations for both children and adults (including pregnant women). Also included are easy-to-read immunization schedules, information on the Vaccines for Children (VFC) program and information about immunization information systems. These Guides may be copied in full or individual documents in the Guide can also be copied and distributed by WIC staff.



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[Whooping Cough \(Pertussis\) Posters and Flyers \(www.ecbt.org/resources/tools.cfm\)](http://www.ecbt.org/resources/tools.cfm)

Every Child by Two- Carter/Bumpers Champions for Immunization (ECBT)

Every Child By Two created these free whooping cough (pertussis) posters to promote the importance of protecting a young child by vaccinating the adolescents and adults around them. (This is known as “cocooning”). The posters in PDF format are available in both English and Spanish, and can be printed in flier size on 8 ½"x11" paper or can be printed by a professional printer in poster size (24"x18").

[Vaccine Frequently-Asked Questions \(FAQs\) \(Videos\) \(www.vaccinateyourbaby.org/faq/index.cfm\)](http://www.vaccinateyourbaby.org/faq/index.cfm)

Every Child by Two- Carter/Bumpers Champions for Immunization (ECBT)

To assist parents who have questions about vaccine safety, Every Child By Two staff posed 21 frequently-asked questions (FAQs) about vaccines to several experts in the fields of immunization and autism. Their answers were videotaped and edited into short video clips. Questions fall under the following four categories – *Why Vaccinate, Why Follow the Recommended Immunization Schedule, Vaccine Testing, Ingredients & Safety, and Vaccines & Autism*. The transcript from all of the video clips can be downloaded and printed. The FAQs are also available on DVD so they may be played in clinic and office waiting rooms. Contact [ECBT](#) for more information.

[Vaccines and Immunizations \(www.cdc.gov/vaccines\)](http://www.cdc.gov/vaccines)

Centers for Disease Control and Prevention (CDC)

This section of the CDC website contains information for the public, healthcare providers and immunization partners on vaccines and immunizations. The CDC also created an immunization section written explicitly for [parents](#).

[Vaccination Materials in Spanish \(www.cdc.gov/spanish/inmunizacion/index.html\)](http://www.cdc.gov/spanish/inmunizacion/index.html)

Centers for Disease Control and Prevention (CDC)

This section of the CDC website contains a variety of vaccination materials, including videos and podcasts, in Spanish. The materials include information on childhood, teen and adult vaccines. WIC staff may download, print and distribute these documents.



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[Provider Resources for Vaccine Conversations with Parents \(PDF | 88 KB\)](http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/conv-materials.html)
[\(\[www.cdc.gov/vaccines/hcp/patient-ed/conversations/conv-materials.html\]\(http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/conv-materials.html\)\)](http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/conv-materials.html)

Centers for Disease Control and Prevention, the American Academy of Family Physicians, and the American Academy of Pediatrics

This CDC webpage provides resources that offer communication strategies for successful vaccine conversations with parents and caregivers. Many of these resources are in PDF format. In addition, the page includes a document that can be given to parents who choose to refuse or delay their children’s vaccines.

[Vaccines.gov](http://www.vaccines.gov) (www.vaccines.gov)

The U.S. Department of Health and Human Services (HHS)

Vaccines.gov is the federal gateway to information on vaccines and immunization for infants, children, teenagers, adults, and seniors.

[Flu.gov](http://www.flu.gov) (www.flu.gov)

The U.S. Department of Health and Human Services (HHS)

This website contains everything that the public needs to know about influenza (flu) and it is continuously updated during the flu season. The site houses the “Flu Vaccine Finder” to assist people in finding a flu clinic in their area, and it also contains links to free resources in PDF format (e.g., fliers, brochures and fact sheets) for printing and distribution

[Healthychildren.org](http://www.healthychildren.org) (www.healthychildren.org)

The American Academy of Pediatrics (AAP)

The immunization section of this website contains information and articles on vaccines for children, teens and adults.



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[Questions and Answers about Vaccines](#)

www.chop.edu/service/vaccine-education-center/order-educational-materials/order-educational-materials.html#downloadable-resources

Vaccine Education Center at the Children's Hospital of Philadelphia (CHOP)

The Vaccine Education Center created numerous fact sheets in Q&A format to help answer the many questions parents have about vaccines. These PDF documents may be copied and distributed to WIC staff and participants. The fact sheets are [also available in Spanish](#).

www.chop.edu/video/vaccines-and-your-baby/home.html

Vaccine Education Center at the Children's Hospital of Philadelphia (CHOP)

In this video, physicians at The Children's Hospital of Philadelphia explain how vaccines work and how they are made. The video also describes several vaccines and the diseases they prevent. Families share their stories of children affected by vaccine-preventable diseases.

www.immunizationforwomen.org

American College of Obstetricians and Gynecologists (ACOG)

This website, developed by the American College of Obstetricians and Gynecologists (ACOG), contains immunization information for both OB-GYNs and their patients.

www.healthcare.gov

The U.S. Department of Health and Human Services (HHS)

This website contains information on the Affordable Care Act (ACA) and how it will affect you. The site also contains health insurance basics and a tool to help individuals and families find the best health insurance for their needs. In addition, there is a section on how [immunizations](#), specifically, are being affected by the ACA. The site is also available in Spanish at <https://www.cuidadodesalud.gov/es/>.