VACCINE-PREVENTABLE CHILDHOOD DISEASES

Polio

- Polio is a disease of the lymphatic and nervous systems that is spread by contact with an infected person.
- Polio virus causes fever, sore throat, nausea, headaches, and stomach aches and may also cause stiffness in the neck, back and legs.
- Polio virus may cause paralysis that can lead to permanent disability and death.
- Polio vaccine (Inactivated Poliovirus vaccine) can prevent this disease.

Diphtheria

- Diphtheria is a respiratory disease caused by bacteria and spread by coughing and sneezing.
- It is marked by the gradual onset of sore throat and low-grade fever.
- Airway obstruction, coma, and death can result if the disease is not treated.
- Diphtheria toxoid (contained in DTP, DTaP, DT and Td vaccines) can prevent this disease.

Tetanus (lockjaw)

- Tetanus is a disease of the nervous system caused by a bacteria that enters the body through a break in the skin.
- Early symptoms include lockjaw, stiffness in the neck and abdomen, and difficulty swallowing.
- Later symptoms include fever, elevated blood pressure, and severe muscle spasms.
- One third of the cases are fatal, especially in people over age 50.
- Tetanus toxoid (contained in DTP, DT, DTaP and Td vaccines) can prevent this disease.

Pertussis (whooping cough)

- Pertussis is a highly contagious respiratory disease caused by bacteria and spread by coughing and sneezing.
- Symptoms include severe spasms of coughing that can interfere with eating, drinking, and breathing.
- Severe cases result in pneumonia, encephalitis (swelling of the lining of the brain) due to lack of oxygen, and possibly death, especially in infants.
- Pertussis vaccine (contained in DTP and DTaP) can prevent this disease.

Measles

- Measles is a highly contagious respiratory disease caused by a virus and spread by coughing and sneezing.
- Measles virus causes rash, high fever, cough, runny nose, and red, watery eyes, lasting about a week.
- More severe symptoms include diarrhea, ear infections, pneumonia, encephalitis (swelling of the lining of the brain), seizures, and death.
- Measles vaccine (contained in MMR, MR and measles vaccines) can prevent this disease.

Mumps

- Mumps is a disease of the salivary glands caused by a virus and spread by coughing and sneezing.
- Symptoms include fever, headache, muscle ache, and swelling of the salivary glands close to the jaw.
- Other symptoms include meningitis, inflammation of the testicles or ovaries, inflammation of the pancreas and deafness, usually permanent.
- Mumps vaccine (contained in MMR) can prevent this disease.

Rubella (German measles)

- Rubella is a respiratory disease caused by bacteria and spread by coughing and sneezing.
- Symptoms in children and young adults include rash and fever for 2 to 3 days.
- Causes devastating birth defects if acquired by a pregnant woman; there is at least a 20 percent chance of damage to the fetus if a woman is infected early in pregnancy.
- Birth defects include deafness, cataracts, heart defects, mental retardation and liver and spleen damage.
- Rubella vaccine (contained in MMR vaccine) can prevent this disease.

Haemophilus influenzae type b (Hib)

- *Haemophilus influenzae* type b causes meningitis, pneumonia, sepsis, arthritis, and skin and throat infections.
- Spread by coughing and sneezing.
- More serious in children under age 1; after age 5, there is little risk of getting the disease.
- One out of 20 children who get Hib meningitis will die and 10 percent - 30 percent of survivors will have permanent brain damage.
- Hib vaccine can prevent this disease.

Varicella (chickenpox)

- Varicella-zoster is a virus of the herpes family.
- Highly contagious and is spread through coughing and sneezing.
- Causes a skin rash of a few or hundreds of blister-like lesions, usually on the face, scalp, or trunk.
- Usually more severe in older children (13 or older) and adults.
- Complications include bacterial infection of the skin, swelling of the brain, and pneumonia.
- Often leads to children to missing school and parents to missing work.
- Varicella vaccine can prevent this disease.

Hepatitis A

- Hepatitis A is a disease of the liver caused by hepatitis A virus.
- The virus is spread by the fecal-oral route, usually from person to person by putting something in the mouth that has been contaminated with the stool of a person with hepatitis A. Less often, the virus is spread by swallowing food or water that contains the virus.
- The younger a person is, the less likely he or she will have symptoms. If symptoms occur, they are similar to the other types of hepatitis and may include yellow skin or eyes, tiredness, stomach ache, loss of appetite, or nausea.

- Since young children may not have symptoms, disease is not often recognized until the child?s caregiver becomes ill with hepatitis A.
- Hepatitis A vaccine can prevent this disease.

Hepatitis B

- Hepatitis B is a disease of the liver caused by hepatitis B virus.
- The virus is spread through contact with the blood of an infected person or by having sex with an infected person.
- The younger a person is, the less likely he or she will have symptoms when first infected. If symptoms do occur, they may include yellow skin or eyes, tiredness, stomach ache, loss of appetite, nausea, or joint pain.
- The younger a person is, the more likely he or she will stay infected with the virus and have life-long liver problems, such as scarring of the liver and liver cancer.

Hepatitis B vaccine can prevent this disease.

Meningococcal Disease

- Meningococcal disease is a serious illness, caused by a bacteria. It is a leading cause of bacterial meningitis
- in children 2-18 years old in the United States. Meningitis is an infection of fluid surrounding the brain and the spinal cord. Meningococcal disease also causes blood infections.

Two meningococcal vaccines are available in the U.S.:

- **Meningococcal polysaccharide vaccine (MPSV4)** has been available since the 1970s.
- **Meningococcal conjugate vaccine (MCV4)** was licensed in 2005.

Both vaccines can prevent **4 types** of meningococcal disease, including 2 of the 3 types most common in the United States and a type that causes epidemics in Africa. Meningococcal vaccines cannot prevent all types of the disease. But they do protect many

Who should get meningococcal vaccine and when?

- people who might become sick if they didn't get the vaccine.
- Both vaccines work well, and protect about 90% of those who get it. MCV4 is expected to give better, longer-lasting protection.
- MCV4 should also be better at preventing the disease from spreading from person to person.