

# Vaccine Education Module: Vaccine-Preventable Diseases

Updated: February 2015



# Diseases Caused by Bacteria

- Diphtheria
- Haemophilus influenzae* type b
- Meningococcal disease
- Pertussis
- Pneumococcal disease
- Tetanus



## Diphtheria

**This child has diphtheria and has developed a pseudo-membrane, a thick gray coating over the back of his throat.**

Photo courtesy of CDC



## *Haemophilus influenzae* type b

**This child has a swollen face due to Hib infection.**

Courtesy Children's Immunization Project, St. Paul, Minn.



## Meningococcal Disease

**This 4-month-old has gangrene due to infection with meningococcus.**

Photo courtesy of CDC



## Pertussis

**Child with broken blood vessels in eyes and bruising on face due to severe coughing caused by pertussis.**

Courtesy Thomas Schlenker, M.D., M.P.H., Chief Medical Officer,

Children's Hospital of Wisconsin

# Pneumococcal Disease

- Caused by the bacterium *Streptococcus pneumoniae*
- Can infect different parts of the body leading to:
  - Pneumonia
  - Bacteremia (blood infection)
  - Meningitis
  - Ear infection



## Tetanus

**This child was experiencing painful muscle spasms due to infection with tetanus.**

Courtesy CDC

# Diseases Caused by Viruses

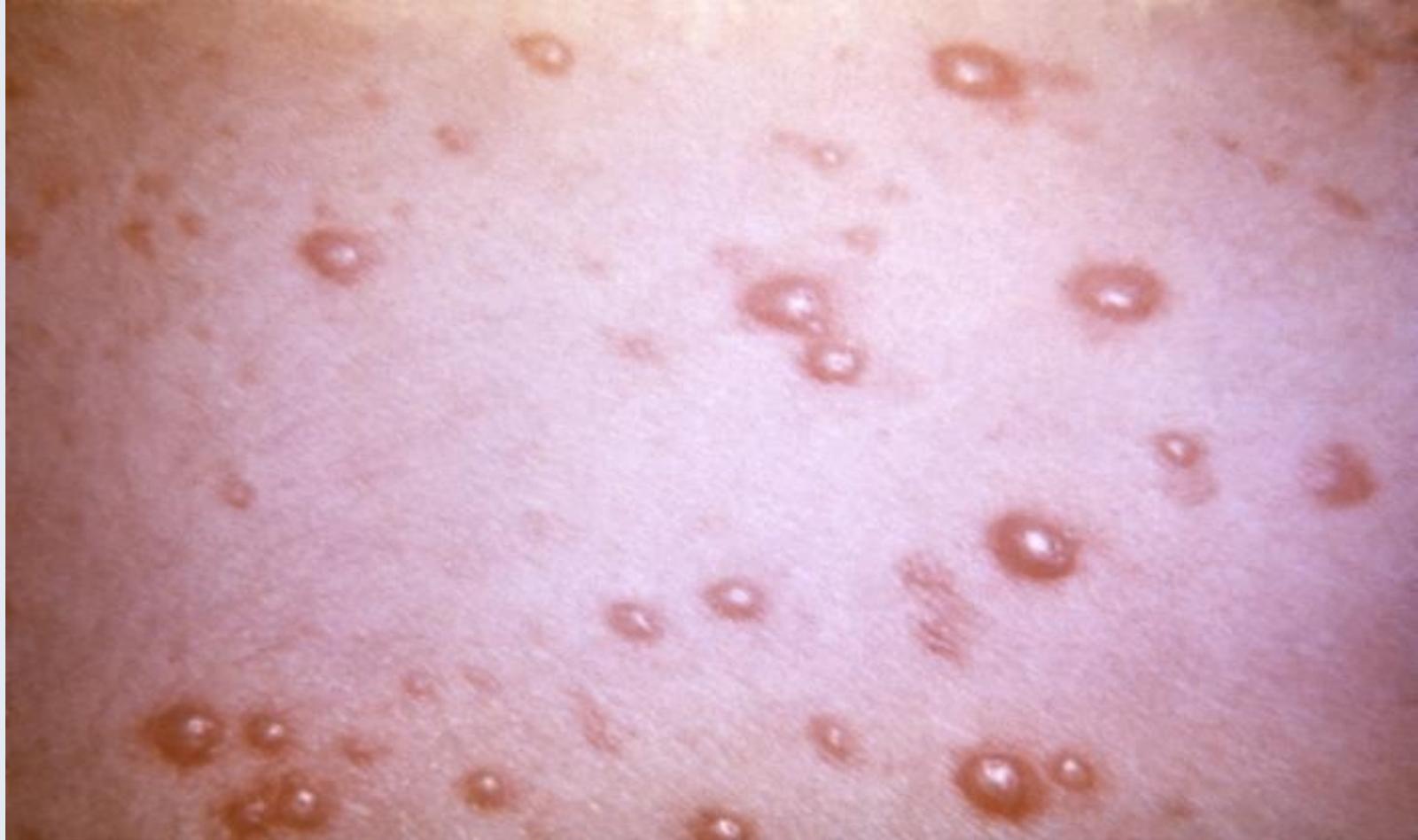
- Hepatitis A
- Hepatitis B
- Shingles
- Human papillomavirus (HPV)
- Influenza
- Measles
- Mumps
- Rotavirus
- Chickenpox
- Polio



## Hepatitis A

**This man developed jaundice as a result of hepatitis A infection.**

Courtesy CDC



## Shingles

**This woman has a skin rash from shingles.**

Courtesy CDC

# Human Papillomavirus (HPV)

- HPV is the most common sexually transmitted disease
- Most people who are infected do not have any symptoms
- Pap tests are performed on females to evaluate cells from the cervix under a microscope
  - Cells are examined for abnormal changes that if left untreated may develop into cervical cancer.



## Influenza

**This photo shows how influenza germs spread through the air when someone coughs.**

Courtesy CDC



## Measles

**Head and shoulders of a boy with measles.**

Courtesy CDC



## Mumps

- **This child is very swollen under the jaw and in the cheeks due to mumps.**

Courtesy CDC



## Rubella

**This child was born with cataracts caused by a rubella infection his mother transmitted to him before birth.**

Courtesy CDC

# Rotavirus

- Causes severe vomiting and diarrhea that can lead to dehydration.
- Dehydration can lead to death particularly in countries where medical care is not readily accessible.
- Before there was a vaccine, virtually all children had this infection by the age of 5.



## Chickenpox

**Patient with chickenpox infection**

Courtesy CDC



## Chickenpox

**One of the chickenpox lesions became infected leading to complications.**

Courtesy CDC



## Polio

**This young man suffers from upper extremity paralysis due to infection with poliovirus.**

Courtesy CDC