



District Health Department #10



Report to the Boards of Health

Jennifer Morse, M.D., Medical Director

District Health Department #10, Friday, December 15, 2017

Mid-Michigan District Health Department, Wednesday, December 20, 2017

Central Michigan Health Department, Wednesday, December 20

Varicella (Chickenpox)

Chickenpox, officially known as varicella, was first described over 400 years ago. Chickenpox is caused by a virus called varicella zoster. This virus can also cause a recurrent infection known as herpes zoster or shingles.

The varicella zoster virus enters the body through the eyes, nose, or mouth, starts reproducing, then spreads throughout the body. It mainly spreads to the liver, spleen, and sensory nerves. The virus continues to reproduce in these organs then travels to the skin, causing the classic rash of chickenpox. There may be fever, tiredness, loss of appetite, headache, or general feelings of illness during the 1 to 2 days before the rash.

It generally takes 14 to 16 days (but can be anywhere from 10 to 21 days) for the rash to develop after the virus first enters the body. This timeframe is called the incubation period. The rash usually starts on the head, then goes to the trunk, and then the arms and legs. Rash can also develop in other unpleasant places like the mouth, throat, respiratory tract, vagina, and eyes. The pox start as an itchy red spot, quickly become raised and fill with fluid or pus, then crust over. Typically, there will be 2 to 4 crops of rash going through this process, resulting in 200 to 500 pox overall.

Chickenpox is very contagious. It is spread mainly by touching or breathing in the virus that come from chickenpox blisters, and possibly through tiny droplets that enter the air when infected people breathe or talk. A person with chickenpox can spread the disease from 1 to 2 days before they get the rash until all their chickenpox blisters have formed scabs (usually 5-7 days).

The chickenpox rash is very itchy, and scratching can cause bacteria such as *Staphylococcus* or *Streptococcus* to enter the skin. This can cause bacterial skin infections, which is the most common reason for medical visits and cause of hospitalization. Some infections get very serious and lead to death. The rash commonly causes permanent scars. Pneumonia can also occur, especially in children under 1 year of age. The varicella virus can affect the neurologic system, causing meningitis, encephalitis, transverse myelitis, or Guillen-Barre syndrome. Other serious complications are also possible. Those at highest risk for complications are young infants, adolescents, adults, pregnant women, and people who have a weakened immune system.

The best way to prevent chickenpox is to get vaccinated. The vaccine is very safe and quite effective. After getting the appropriate 2 dose series, the vaccine is 70% to 90% effective against any degree of chickenpox disease and nearly all “breakthrough” cases that occur are very mild. The vaccine is 90% to 100% effective against severe chickenpox disease. If someone is

CHICKENPOX VACCINE SAVES LIVES and PREVENTS SERIOUS ILLNESS

Chickenpox-related deaths in the U.S. have decreased dramatically

Time Period	Deaths	Hospitalizations	Cases
BEFORE U.S. VACCINATION BEGAN	More than 100 Deaths every year	More than 10,000 hospitalizations every year	More than 4 million people got chickenpox every year
SINCE U.S. VACCINATION BEGAN *	90% decrease in Deaths meaning fewer than 20 people die from Chickenpox every year	84% fewer hospitalizations, meaning fewer than 1,700 people are hospitalized for chickenpox every year	92% fewer cases means fewer than 350,000 people get chickenpox every year

* after 15 years of vaccination

Two doses of vaccine are needed to protect against chickenpox.

Find out more about chickenpox at: <http://www.cdc.gov/chickenpox/>

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

exposed to chickenpox and has not been vaccinated, receiving the vaccine within 3 days of being exposed can prevent infection 70% to 90% of the time. If the person exposed is not able to receive the vaccine or is in a specific high risk group for complications from chickenpox infection, varicella zoster immune globulin (antibodies against the virus) can be given.

By preventing chickenpox infection, a secondary infection with varicella called shingles, or herpes zoster, is also prevented. Shingles occurs when varicella virus that has remained dormant in the sensory nerves reactivates, causing a blistering rash along the path of that nerve. This is typically very painful and the pain can last long after the rash goes away. Those that get the chickenpox vaccine and prevent infection with chickenpox will not suffer from shingles in the future.

Healthy Living Recommendations

1. Continue to encourage routine vaccination of children and adults as the best way to prevent chickenpox, and the 15 other diseases that are prevented with the recommended routine vaccinations.
2. Chickenpox still occurs. Suspected and confirmed cases are to be reported to the health department to ensure quick infection control.

Sources

- Centers for Disease Control and Prevention (2016, July 01). Chickenpox (Varicella). Retrieved November 1, 2017, from <https://www.cdc.gov/chickenpox/index.html>
- Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Hamborsky J, Kroger A, Wolfe S, eds. 13th ed. Washington D.C. Public Health Foundation, 2015.

Chickenpox Rates, DHD#10

Rate per 100,000



