

IDRS Infectious Disease Reporting System

Disease Reporting 24 Hours a Day

Columbus Public Health and Franklin County Public Health

QUICK FACTS FOR PROVIDERS: Varicella (Chickenpox)

REPORTING INFORMATION

Class B2: Report by the end of the business week in which the case or suspected case presents and/or a positive laboratory result to the local public health department where the patient resides. If patient residence is unknown, report to the local public health department in which the reporting health care provider or laboratory is located. Zoster (Shingles) is not reportable.

Agent

Varicella-zoster virus (VZV), a member of the herpesvirus group.

Source

Humans are the only source of infection.

Occurrence

Worldwide, most cases of chickenpox occur in children 5-10 years of age. Chickenpox is seen most often during the late winter and early spring. The vast majority of people contract the disease during childhood. Cases in adults are often severe.

Zoster occurs mainly in older adults although there is some evidence that almost 10% of children being treated for a malignant neoplasm are prone to develop zoster. Intrauterine infection with VZV or chickenpox infection acquired before two years of age is also associated with zoster at an early age.

Mode of Transmission

Transmission may be either direct or indirect. Persons with chickenpox spread the disease to others via direct contact with the drainage from lesions, droplets or airborne respiratory tract secretions. Vesicle fluid of patients with zoster is infectious. Indirect transmission occurs through articles freshly soiled with discharge from vesicles and mucous membranes of infected persons. Scabs of chickenpox lesions are not infective.

While chickenpox is highly infective, patients with zoster have a much lower rate of transmission. Susceptible contacts of either develop chickenpox. Introduction of a case of VZV into a household generally results in infection for almost all susceptible persons.

Period of Communicability (chickenpox)

One or 2 days (maximum of 5 days) prior to rash onset through a maximum of 6 days after the first appearance of vesicles, or until lesions have formed crusts and dried. Immunocompromised patients with progressive chickenpox probably are contagious during the entire period that new lesions are appearing. Breakthrough cases often do not develop vesicles or have crusting and are considered contagious as long as new lesions are appearing.

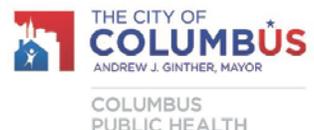
Incubation Period



c/o Franklin County Public Health, 280 East Broad Street, Columbus, Ohio 43215-4562

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Incubation is generally 14-16 days, with a range of 11-21 days. The incubation period may be prolonged in Varicella Zoster Immune Globulin (VZIG) recipients and tends to be shortened in immunocompromised persons.

Treatment

Symptomatic. Aspirin should not be used to treat infants, children or teenagers with chickenpox, because of the increased risk for developing Reye syndrome. Oral acyclovir given to children with varicella within 24 hours of rash onset results in decreased duration and severity of disease and should be considered for those at risk for severe complications of varicella, such as those >14 years of age or those having chronic respiratory or skin diseases.

Isolation

The Ohio Administrative Code (OAC 3701-3-13, (C)) states that “a person with chickenpox shall be isolated, including exclusion from school, child care center, and public places until the sixth day after onset of rash, or until all lesions are dry. Contagiousness may be prolonged in patients with altered immunity. Persons with chickenpox shall avoid contact with susceptible persons.”

Exclusion of children with zoster from school or child care should be individualized. Lesions that are covered pose little risk to susceptible individuals. Children with zoster who are excluded from school or child care may return after the lesions have crusted.

Health care workers with VZV infection should not work until all lesions are dry and crusted.

Contact

ACIP recommends the chickenpox vaccine for use in persons who do not have evidence of varicella immunity following exposure to varicella, and they recommend varicella vaccination for outbreak control. The vaccine is 70-100% effective in preventing illness or modifying the severity of illness if used within 3 days, and possibly up to 5 days, after exposure.

Individuals with an immune deficiency and a recent history of exposure to a chickenpox case may be candidates for varicella zoster immunoglobulin (VZIG). VZIG is most effective in preventing varicella infection when given within 96 hours of exposure to varicella. The VZIG product currently licensed in the United States, VariZIG, is available under an Investigational New Drug Application Expanded Access protocol (IND) submitted to the FDA. This product can be requested from the sole authorized U.S. Distributor, FFF Enterprises (Temecula, California) by calling 1-800-843-7477. The decision to administer VZIG depends on three factors: 1) whether the patient lacks evidence of immunity, 2) whether the exposure is likely to result in infection, and 3) whether the patient is at greater risk for complications than the general population.

Additional information concerning the acquisition and use of VZIG is available in the Centers for Disease Control and Prevention's March 3, 2006 edition of the *Morbidity and Mortality Weekly Report (MMWR)*.

Prevention and Control

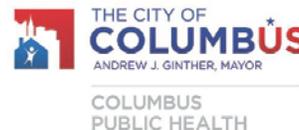
A live attenuated varicella vaccine was licensed in the United States in 1995. After one dose of vaccine, 97% of children 12 months to 12 years of age develop detectable antibody titers. Among healthy



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adolescents and adults, an average of 78% develop antibody after one dose and 99% develop antibody after a second dose given 4-8 weeks later.

Present control measures are limited to vaccination as described above and isolation of cases from neonates, pregnant women and immunocompromised individuals. Drainage from lesions is infectious and should be covered by a dressing or clothing. Hand washing by those caring for patients or touching lesions should be emphasized.



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