



**NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE**
Mary T. Bassett, M.D., M.P.H.
Commissioner

ALERT # 12: Varicella in New York City

Distribute to All Primary Care, Infectious Disease, Emergency Medicine, Internal Medicine, Pediatrics, Family Medicine, Obstetrics and Gynecology, Laboratory Medicine, and Infection Control Staff

- **An outbreak of varicella is occurring in the Orthodox Jewish community of Brooklyn.**
- **Ensure that children are up to date with varicella-containing vaccine.**
- **Give early treatment to high-risk groups and post-exposure prophylaxis as indicated.**

May 16, 2016

Dear Colleagues,

The Health Department is investigating an outbreak of varicella (chickenpox) in the Orthodox Jewish community of Williamsburg, Brooklyn. To date, there have been 75 reports of persons with varicella who became ill during or after March 2016. The median age of patients is 3 years (range 0 to 10 years); 72% were not vaccinated against varicella, and 14% had not yet received the recommended number of doses.

Clinical Presentation

Varicella is an illness characterized by a generalized, pruritic rash. It progresses from macules to papules to vesicular lesions and then crusts over. Lesions are usually most concentrated on the trunk. Persons who were previously vaccinated may develop varicella, but symptoms of infection are often mild; fewer lesions may develop, lesions may not be vesicular, and fever may be absent. It is important to maintain a high index of suspicion for varicella in patients presenting with a compatible illness, regardless of vaccination history. Infants, adolescents, adults, pregnant women, and immunocompromised persons are at risk for more severe disease and complications. Complications include pneumonia, bacterial infection of the skin and soft tissues, meningitis, encephalitis, birth defects, and death.

Transmission and Infection Control

Varicella is highly contagious. People with varicella are contagious beginning 2 days before rash onset until all lesions have crusted and no new lesions have appeared for a 24 hour period. People who are not immune to varicella are at risk for getting sick from 10 to 21 days after exposure, and they may be contagious as early as 8 days after exposure. In healthcare settings, providers should institute contact, droplet and airborne precautions. All healthcare workers should have evidence of immunity to varicella (see below).

Laboratory Testing

Because widespread vaccination has made varicella uncommon, diagnosis based on history and physical examination may be difficult, and laboratory confirmation is important. The preferred diagnostic test is polymerase chain reaction (PCR) of skin lesions (vesicles, scabs, maculopapular lesions). PCR testing can be performed at commercial laboratories. For additional information on specimen collection, see: www.cdc.gov/chickenpox/hcp/lab-tests.html. IgM serologic testing is less sensitive than PCR.

Vaccination

Please ensure that your patients and staff are up to date with varicella vaccine. Two doses of the vaccine are up to 98% effective at preventing chickenpox. Varicella vaccine should be given to children at 12 months of age with a second dose at 4 years of age. Two doses of vaccine are recommended for older children and adults who do not have evidence of varicella immunity. Adults who do not know if they had varicella and who do not have their immunization records should either be vaccinated or can have varicella IgG titers checked to confirm whether they are immune. Vaccination histories of children can be obtained through the Citywide Immunization Registry at www.nyc.gov/health/cir or by calling 347-396-2400.

Evidence of immunity

People exposed to varicella should be assessed for presumptive evidence of immunity:

- 1) Documentation of age-appropriate vaccination with varicella vaccine,
- 2) Laboratory evidence of immunity or laboratory confirmation of disease,
- 3) Birth in the United States before 1980 (except for health-care personnel, pregnant women, and immunocompromised persons), or
- 4) Health-care provider diagnosis or verification of a history of varicella or herpes zoster.

People exposed to varicella who do not have evidence of immunity should remain home while at risk from getting sick, through 21 days after their last exposure.

Post-exposure Prophylaxis

Varicella vaccine should be administered as post-exposure prophylaxis to persons without immunity to varicella within 3 days of an initial exposure to prevent infection. Vaccination beyond this time frame, while still important for protecting a person from future exposures, may not protect against exposures that have already occurred. These people would still need to be excluded from their school or workplace. Varicella zoster immune globulin (VariZIG) post-exposure prophylaxis is reserved for persons at high risk for severe disease who lack evidence of immunity to varicella and for whom varicella vaccine is contraindicated. This includes immunocompromised or pregnant persons without evidence of immunity, newborn infants whose mothers have symptoms of varicella around the time of delivery, and certain hospitalized premature infants. People who receive VariZIG should not receive measles- or varicella-containing vaccine for at least 5 months after receiving VariZIG. Information about ordering VariZIG, indications, dosing is at: www.cdc.gov/mmwr/preview/mmwrhtml/mm6228a4.htm.

Treatment

Antiviral treatment is not recommended for routine use in otherwise healthy children with varicella. Oral acyclovir or valacyclovir should be considered for persons at increased risk of moderate to severe varicella, including unvaccinated persons aged >12 years. Intravenous acyclovir is recommended for pregnant women with serious varicella complications and immunocompromised persons. For additional information on treatment, please refer to the Red Book, at <http://redbook.solutions.aap.org/>.

Sincerely,

Jennifer Rosen

Jennifer Rosen, MD
Director, Epidemiology and Surveillance
Bureau of Immunization

Jane Zucker

Jane Zucker, MD, MSc
Assistant Commissioner
Bureau of Immunization