



DuPage County Health Department R E V I E W

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The purpose of this two-page surveillance update is to promote the control and prevention of **communicable disease (CD)** by providing clinically relevant information and resources to healthcare professionals in DuPage County.



Under the Microscope Varicella (Chickenpox)

For questions or to report a suspect or known case of varicella (chickenpox), please call the DuPage County Health Department at (630) 682-7979, ext. 7553.

Varicella (chickenpox) is an acute, highly infectious disease caused by the **varicella zoster virus (VZV)**. Secondary attack rates for this virus might reach 90% for susceptible household contacts. VZV causes a systemic infection that results typically in lifetime immunity. In otherwise healthy persons, clinical illness after re-exposure is rare.¹ Acute varicella is generally mild and self-limited, but it may be associated with complications. The most common complications from varicella are bacterial infections of the skin and soft tissues in children and pneumonia (viral or bacterial) in adults.²

Herpes zoster (HZ), or shingles, occurs when latent VZV reactivates and causes recurrent disease. Factors associated with recurrent disease include aging, immunosuppression, intrauterine exposure to VZV, and having had varicella at a young age (younger than 18 months). In immunocompromised persons, zoster may disseminate, causing generalized skin lesions and central nervous system, pulmonary, and hepatic involvement.³ The most common complication of HZ, particularly in older persons, is postherpetic neuralgia (PHN), the persistence of sometimes debilitating pain weeks to months after resolution of HZ.¹

VZV is **transmitted from person to person** by direct contact, inhalation of aerosols from vesicular fluid of skin lesions of acute varicella or zoster, or infected respiratory tract secretions that also might be aerosolized. The virus enters the host through the upper respiratory tract or the conjunctiva.¹

Laboratory confirmation of varicella zoster virus is not normally required, because varicella diagnosis is most commonly made by clinical assessment. Laboratory testing has been recommended to confirm the diagnosis of severe or unusual cases or to determine susceptibility to varicella. Skin lesion testing is the preferable method for laboratory confirmation of varicella, and blood specimens should be used to test for varicella immunity.⁴

Varicella incidence has declined dramatically as a result of routine varicella immunization in the United States. This has had the combined effect of increasing the number of atypical cases (either vaccine adverse events or breakthrough wild-type infection in immunized persons) and of reducing physicians' experience in diagnosing varicella. As a result, the need for laboratory confirmation of varicella has increased.³

Prevention:

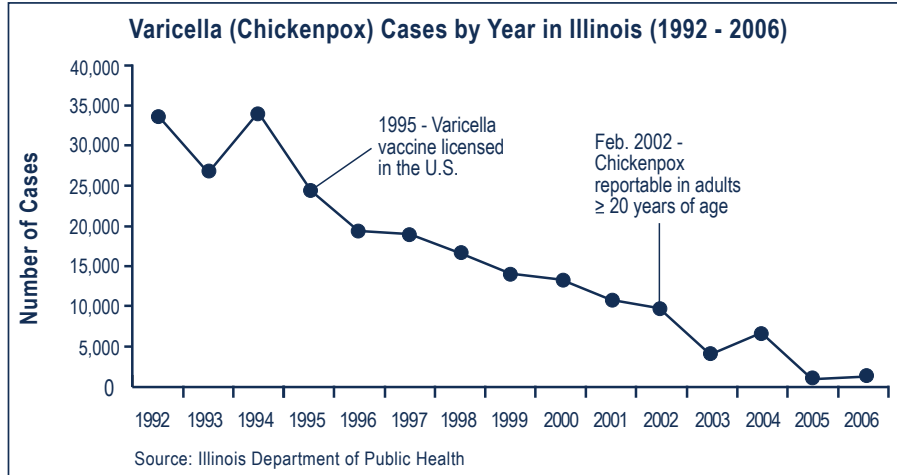
Since implementation of a universal childhood varicella vaccination program in 1995, the epidemiology and clinical characteristics of varicella in the United States have changed, with substantial declines in morbidity and mortality attributable to varicella. No consistent changes in HZ epidemiology have been documented.¹ **Chickenpox vaccine is the best way to prevent chickenpox.** Vaccination not only protects vaccinated persons, it also reduces the risk for exposure in the community for persons unable to be vaccinated because of illness or other conditions, including those who may be at greater risk for severe disease.²

Varicella Vaccine: The CDC's updated recommendations include 1) implementation of a **routine 2-dose varicella vaccination program** for children, with the **first dose administered at age 12-15 months** and the **second dose at age 4-6 years**; 2) a **second dose catch-up varicella vaccination** for children, adolescents, and adults who previously had received 1 dose; 3) **routine vaccination of all healthy persons aged ≥13 years without evidence of immunity**; and 4) **prenatal assessment and postpartum vaccination**. These recommendations also include approved **criteria for evidence of immunity to varicella**, and advise healthcare institutions to ensure that all healthcare providers have evidence of immunity to varicella.^{1,5}

Herpes Zoster Vaccine: A single dose of zoster vaccine is recommended for **adults 60 years of age and older whether or not they report a prior episode of herpes zoster**. Persons with a chronic medical condition may be vaccinated unless a contraindication or precaution exists for the condition.⁶

References:

1. www.cdc.gov/mmwr/PDF/rr/rr5604.pdf
2. www.cdc.gov/vaccines/vpd-vac/varicella/default.htm
3. www.cdc.gov/vaccines/pubs/pinkbook/downloads/varicella.pdf
4. www.cdc.gov/vaccines/vpd-vac/varicella/surv-collect-virus-spec.htm
5. www.cdc.gov/vaccines/vpd-vac/varicella/vac-faqs-clinic-hcp.htm
6. www.cdc.gov/vaccines/recs/provisional/downloads/zoster-11-20-06.pdf



Please contact Peggy Iverson, BS at (630) 682-7979, ext. 7534 or piverson@dupagehealth.org to send suggestions or to be added to the distribution list.

