



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) 221-7553.

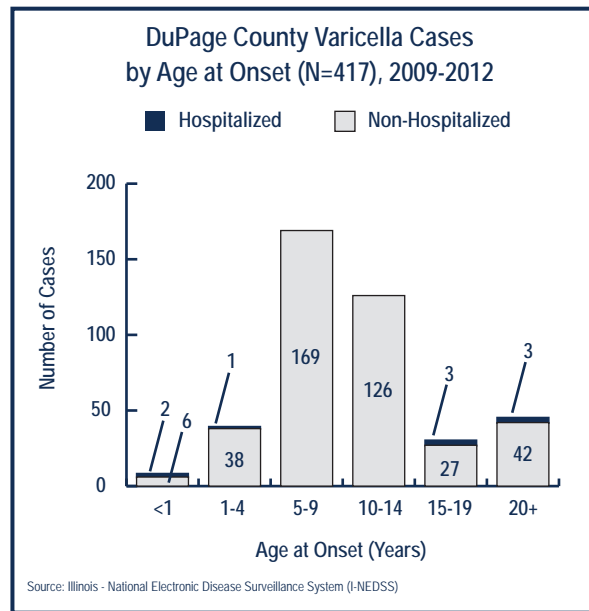
**Varicella (chickenpox)** is an acute, highly infectious disease caused by the **varicella zoster virus (VZV)**. Secondary attack rates for this virus might reach 90% for susceptible household contacts. VZV causes a systemic infection that results typically in lifetime immunity. In otherwise healthy persons, clinical illness after re-exposure is rare.<sup>1</sup> 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 in adults**. Infections may be severe and include septicemia, toxic shock syndrome, necrotizing fasciitis, osteomyelitis, bacterial pneumonia, and septic arthritis. Other complications caused by VZV include cerebellar ataxia, encephalitis, and viral pneumonia.<sup>2,3</sup>

**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.<sup>2</sup> 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.<sup>1</sup>

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.<sup>1</sup>

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, determine the cause of an outbreak, establish cause of death, or to determine susceptibility to varicella.<sup>4</sup> Skin lesion testing is the preferable method for laboratory confirmation of varicella, and blood specimens should be used to test for varicella immunity.<sup>4,5</sup> Varicella used to be very common in the U.S. before varicella vaccine became available, and was frequently diagnosed by clinical assessment alone. The reduced incidence 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. Therefore, laboratory confirmation of varicella is becoming increasingly important in routine clinical practice.<sup>4</sup>

**Prevention:** Since implementation of a universal childhood varicella vaccination program in 1995, the epidemiology and clinical characteristics of varicella in the U.S. have changed, with substantial declines in morbidity and mortality attributable to varicella. No consistent changes in HZ epidemiology have been documented.<sup>1</sup>



**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.<sup>6</sup>

**Varicella Vaccine:** Current CDC 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 and older** without evidence of immunity (2 doses of single-antigen varicella vaccine 4-8 weeks apart); 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.<sup>1,7,8</sup>

**Herpes Zoster Vaccine:** Zoster vaccine is recommended for **all persons aged ≥60 years** who have no contraindications, including persons who report a previous episode of zoster or who have chronic medical conditions. A booster dose is not licensed for the vaccine. Before administration of zoster vaccine, patients do not need to be asked about their history of varicella (chickenpox) or to have serologic testing conducted to determine varicella immunity.<sup>9</sup>

### References:

1. [www.cdc.gov/mmwr/PDF/rr/rr5604.pdf](http://www.cdc.gov/mmwr/PDF/rr/rr5604.pdf)
2. [www.cdc.gov/vaccines/pubs/pinkbook/downloads/varicella.pdf](http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/varicella.pdf)
3. [www.cdc.gov/chickenpox/hcp/clinical-overview.html](http://www.cdc.gov/chickenpox/hcp/clinical-overview.html)
4. [www.cdc.gov/chickenpox/hcp/lab-tests.html](http://www.cdc.gov/chickenpox/hcp/lab-tests.html)
5. [www.cdc.gov/chickenpox/lab-testing/collecting-specimens.html](http://www.cdc.gov/chickenpox/lab-testing/collecting-specimens.html)
6. [www.cdc.gov/vaccines/vpd-vac/varicella/default.htm](http://www.cdc.gov/vaccines/vpd-vac/varicella/default.htm)
7. [www.cdc.gov/vaccines/vpd-vac/varicella/default-hcp.htm](http://www.cdc.gov/vaccines/vpd-vac/varicella/default-hcp.htm)
8. [www.cdc.gov/vaccines/vpd-vac/varicella/hcp-vacc.htm](http://www.cdc.gov/vaccines/vpd-vac/varicella/hcp-vacc.htm)
9. [www.cdc.gov/vaccines/vpd-vac/shingles/default.htm](http://www.cdc.gov/vaccines/vpd-vac/shingles/default.htm)



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### General Information

Communicable Disease and Epidemiology  
(630) 221-7553

Environmental Health  
(630) 682-7400

Immunizations  
(630) 682-7400

Sexually Transmitted Diseases  
(630) 221-7553

HIV/AIDS  
(630) 221-7553

Tuberculosis  
(630) 221-7522

School Health  
(630) 221-7300

Travel Clinic  
(630) 682-7400

Animal Care & Control  
(630) 407-2800

Please contact Communicable Disease and Epidemiology at (630) 221-7553 or [palak.panchal@dupagehealth.org](mailto:palak.panchal@dupagehealth.org) to send suggestions or to be added to the distribution list.

DUPAGE COUNTY HEALTH DEPARTMENT

CASES<sup>1</sup> OF REPORTABLE DISEASES\*

\* Last updated by the Illinois Department of Public Health in March 2008

CD REVIEW

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	Report Within	2012		2011	2010	2009	2008	Median
		Dec	Total	Total	Total	Total	Total	Total ('08-'11)
<b>Vaccine Preventable Diseases</b>								
Chickenpox (varicella)	24 hrs	1	93	82	95	146	236	120.5
Diphtheria	24 hrs	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> , invasive	24 hrs	2	11	15	7	11	6	9
Hepatitis A	24 hrs	1	8	8	3	6	11	7
Hepatitis B	7 days	1	5	0	4	8	3	3.5
Hepatitis B (carriers)	7 days	7	97	113	108	127	128	120
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	1	0	0
Influenza, ICU admissions	3 hrs	46	59	24	3	NR	NR	13.5
Measles (rubeola)	24 hrs	0	0	0	0	1	14	0.5
Mumps	24 hrs	0	1	3	2	2	2	2
<i>Neisseria meningitidis</i> , invasive	24 hrs	0	0	2	1	6	4	3
Pertussis (whooping cough)	24 hrs	3	195	268	92	26	13	59
Polioyelitis	24 hrs	0	0	0	0	0	0	0
Rubella	24 hrs	0	0	0	0	0	0	0
<i>Streptococcus pneumoniae</i> , invasive disease, in those < 5 yrs old	7 days	0	5	13	8	8	6	8
Tetanus	7 days	0	0	0	0	0	0	0
<b>Other Communicable Diseases</b>								
Anaplasmosis <sup>2</sup>	7 days	0	2	3	0	0	0	0
Anthrax	3 hrs	0	0	0	0	0	0	0
Botulism, foodborne	3 hrs	0	0	0	0	0	0	0
Botulism, other	24 hrs	0	0	0	0	0	0	0
Brucellosis	3 hrs	0	0	0	0	0	0	0
California encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	0
Cholera	24 hrs	0	0	0	0	0	1	0
Creutzfeldt-Jakob disease	7 days	0	1	3	1	0	1	1
Cryptosporidiosis	7 days	0	2	5	5	5	1	5
Cyclosporiasis	7 days	0	0	0	0	1	0	0
Dengue fever <sup>3</sup>	7 days	0	1	1	4	4	0	2.5
Ehrlichiosis <sup>2</sup>	7 days	0	0	0	0	0	0	0
Enteric <i>E. coli</i> infections <sup>4</sup>	24 hrs	0	18	22	18	12	21	19.5
Giardiasis	7 days	2	34	44	49	40	53	46.5
Glomerulonephritis <sup>5</sup>	24 hrs	0	0	0	0	0	0	0
Hantavirus pulmonary syndrome	24 hrs	0	0	0	0	0	0	0
Hemolytic uremic syndrome	24 hrs	0	1	1	0	0	1	0.5
Hepatitis C (cases & carriers)	7 days	1	171	189	187	213	246	201
Hepatitis D	7 days	0	0	1	0	0	0	0
Histoplasmosis	7 days	0	2	1	2	2	6	2
Influenza A, novel virus	3 hrs	0	0	0	11	181	0	5.5
Legionellosis	7 days	1	25	14	11	13	5	12
Leprosy	7 days	0	0	0	0	0	1	0
Leptospirosis	7 days	0	0	0	0	0	0	0
Listeriosis	7 days	0	2	2	6	3	1	2.5
Lyme disease <sup>2</sup>	7 days	0	27	32	19	17	16	18
Malaria	7 days	0	2	7	4	4	4	4
Ophthalmia neonatorum	7 days	0	0	0	0	0	0	0
Plague	3 hrs	0	0	0	0	0	0	0
Psittacosis	7 days	0	0	0	0	0	0	0
Q fever <sup>6</sup>	3 hrs	0	0	0	0	0	0	0
Rabies, human case	24 hrs	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	0	43	30	54	15	45	37.5
Reye syndrome	7 days	0	0	0	0	0	0	0
Rheumatic fever <sup>5</sup>	24 hrs	0	0	0	0	0	0	0
Rocky Mountain spotted fever <sup>2</sup>	7 days	0	1	0	0	0	0	0
Salmonellosis	7 days	3	123	95	136	89	105	100
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0
Shigellosis	7 days	0	20	22	277	12	24	23
Smallpox	3 hrs	0	0	0	0	0	0	0
Smallpox vaccination, complications	24 hrs	0	0	0	0	0	0	0
St. Louis encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	7	3	6	6	3	4.5
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), community cluster <sup>7</sup>	24 hrs	0	1	0	1	1	4	1
<i>Staphylococcus aureus</i> (vancomycin-resistant)	24 hrs	0	0	1	1	0	0	0.5
Streptococcal infections, group A invasive disease <sup>8</sup>	24 hrs	2	20	30	20	14	16	18
Toxic shock syndrome <sup>9</sup>	7 days	0	0	1	0	0	1	0.5
Trichinosis	7 days	0	0	0	0	0	0	0
Tuberculosis (Category III)	7 days	5	26	18	26	29	43	27.5
Tularemia	3 hrs	0	1	0	0	0	0	0
Typhoid fever	24 hrs	0	2	3	3	5	3	3
Typhus	24 hrs	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	4	3	1	2	0	1.5
West Nile disease <sup>3</sup>	7 days	0	56	2	17	0	1	1.5
Yersiniosis	7 days	0	3	3	0	5	1	2
<b>STDs, HIV and AIDS</b>								
AIDS <sup>10</sup> (October-December)	7 days	**	17	16	26	19	22	20.5
Chancroid	7 days	0	0	0	0	0	0	0
Chlamydia	7 days	44	1650	1599	1542	1555	1587	1571
Gonorrhea	7 days	4	196	241	223	225	268	233
HIV infection <sup>10</sup> (October-December)	7 days	**	20	24	27	40	23	25.5
Syphilis	7 days	0	12	24	25	33	18	24.5

DuPage County healthcare providers and hospitals **must report any suspected or confirmed case of these diseases** to the local health authorities within the number of hours or days indicated.

**REPORTING NUMBERS:**

**Communicable Diseases**

(630) 221-7553  
24 hours: (630) 682-7400

**Tuberculosis**

(630) 221-7522

**STDs**

(630) 221-7553

**HIV/AIDS:**

(630) 221-7553

<sup>1</sup> Provisional cases, based on date of onset

<sup>2</sup> Listed in CD Rules and Regulations under "Tickborne Disease"

<sup>3</sup> Listed in CD Rules and Regulations under "Arboviral Infections"

<sup>4</sup> O157:H7, STEC, EIEC, ETEC, EPEC

<sup>5</sup> Listed in CD Rules and Regulations under "Streptococcal infections, group A invasive disease sequelae"

<sup>6</sup> Q fever case in 2004 not related to any suspected bioterrorism threat or event

<sup>7</sup> Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period

<sup>8</sup> Includes streptococcal toxic shock syndrome and necrotizing fasciitis

<sup>9</sup> Due to *Staphylococcus aureus*

<sup>10</sup> HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis

NR = Not reported

\*\* = Count of 5 cases or less

**Websites**

**CDC:**  
[www.cdc.gov](http://www.cdc.gov)

**IDPH:**  
[www.idph.state.il.us](http://www.idph.state.il.us)

**DuPage:**  
[www.dupagehealth.org](http://www.dupagehealth.org)

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