



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.

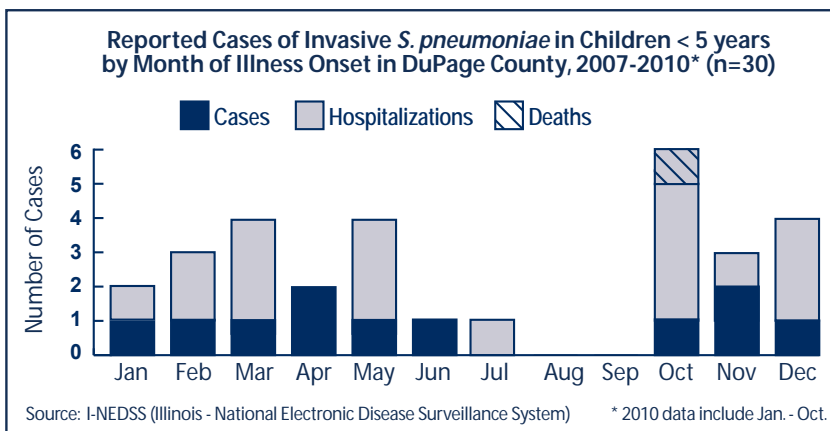


## Under the Microscope *Streptococcus pneumoniae*

For questions or to report suspect and known cases of invasive pneumococcal disease (e.g., bacteremia, meningitis, or other infection of a normally sterile site) in children < 5 years of age, please call the DuPage County Health Department at 630-682-7979, ext. 7553.

*Streptococcus pneumoniae* (pneumococcus) remains a leading cause of vaccine-preventable illness and death in the U.S. The major clinical syndromes of pneumococcal disease are **pneumonia, bacteremia, and meningitis**. Pneumococci are common inhabitants of the respiratory tract and may be isolated from the nasopharynx of 5% to 70% of healthy adults. Rates of asymptomatic carriage vary with age, environment, and the presence of upper respiratory infections. For example, only 5%–10% of adults without children are carriers. In schools and orphanages, 27%–58% of students and residents may be carriers. The immunologic mechanism that allows disease to occur in a carrier is not clearly understood. However, **disease most often occurs when a predisposing condition exists, particularly pulmonary disease.**<sup>1</sup>

As many as 175,000 hospitalizations from pneumococcal pneumonia are estimated to occur annually in the U.S. Pneumococci account for up to 36% of adult community-acquired pneumonia and 50% of hospital-acquired pneumonia. The **case-fatality rate is 5%–7%** and may be much higher among elderly persons.<sup>1</sup> Pneumonia, bronchitis, sinus infections and ear infections are examples of influenza-related complications; **pneumococcal infections are a serious complication of influenza infections and can cause death.**<sup>2</sup>



**Bacteremia without a known site of infection is the most common invasive clinical presentation of pneumococcal infection among children 2 years of age and younger**, accounting for approximately 70% of invasive disease in this age group. Bacteremic pneumonia accounts for 12%–16% of invasive pneumococcal disease among children 2 years of age and younger.<sup>2</sup>

CDC's Advisory Committee on Immunization Practices (ACIP) recommends a **single dose of pneumococcal polysaccharide vaccine (PPSV) for all people 65 years of age and older and for persons 2 through 64 years of age with certain high-risk conditions.** For those **19 through 64 years of age**, these include: having **asthma or smoking cigarettes.**<sup>3</sup>

For those **2 through 64 years of age, high-risk conditions include:** chronic cardiovascular disease (congestive heart failure and cardiomyopathies), chronic pulmonary disease (including chronic obstructive pulmonary disease, emphysema, and asthma), diabetes mellitus, alcoholism, chronic liver disease (including cirrhosis), cerebrosplinal fluid leaks, cochlear implant, functional or anatomic asplenia including sickle cell disease and splenectomy, immunocompromising conditions including HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, nephrotic syndrome; those receiving immunosuppressive chemotherapy (including corticosteroids); and those who have received an organ or bone marrow transplant, and residents of nursing homes or long-term care facilities.<sup>3,4</sup>

Among those with high-risk conditions for pneumococcal disease, most are also at high risk for severe complications from influenza. A **single pneumococcal revaccination at least five years after initial vaccination is recommended for people 65 years and older who were first vaccinated before age 65 years.** A single pneumococcal revaccination is also recommended for people at highest risk of disease, such as those who have functional and anatomical asplenia, immunocompromising conditions, or malignancy and have at least five years elapsed from receipt of first vaccination.<sup>3,4</sup>

As published by CDC in March 2010, ACIP recommends **routine vaccination with 13-valent pneumococcal conjugate vaccine (PCV13) for all children aged 2-59 months.** ACIP also recommends **PCV13 for children aged 60-71 months with underlying medical conditions** that increase their risk for pneumococcal disease or complications.<sup>5</sup> PCV13 will replace PCV7 for prevention of pneumococcal disease in children. PCV13 includes 6 additional serotypes, protecting against more disease than PCV7. In particular, PCV13 vaccine protects against serotype 19A, which has become the most common pneumococcal serotype and is often resistant to antibiotics.<sup>6,7</sup>

**Pneumococcal vaccine may be given at the same time as influenza vaccine**, or at any time during the year. Because the adult groups for whom pneumococcal and seasonal influenza vaccines are recommended are similar, the need for pneumococcal vaccination should be evaluated at the time of annual influenza vaccination.<sup>7</sup>

### References:

1. [www.cdc.gov/vaccines/pubs/pinkbook/downloads/pneumo.pdf](http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/pneumo.pdf)
2. [www.cdc.gov/flu/about/disease/high\\_risk.htm](http://www.cdc.gov/flu/about/disease/high_risk.htm)
3. [www.cdc.gov/mmwr/preview/mmwrhtml/mm5934a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5934a3.htm)
4. [www.cdc.gov/mmwr/PDF/rr/rr4608.pdf](http://www.cdc.gov/mmwr/PDF/rr/rr4608.pdf)
5. [www.cdc.gov/mmwr/preview/mmwrhtml/mm5909a2.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5909a2.htm)
6. [www.cdc.gov/vaccines/vpd-vac/pneumo/vac-PCV13-hcp-faqs.htm](http://www.cdc.gov/vaccines/vpd-vac/pneumo/vac-PCV13-hcp-faqs.htm)
7. [www.cdc.gov/vaccines/vpd-vac/pneumo/default.htm](http://www.cdc.gov/vaccines/vpd-vac/pneumo/default.htm)



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### General Information

Communicable Disease  
(630) 682-7979, ext. 7553

Environmental Health  
(630) 682-7400

Immunizations  
(630) 682-7400

Sexually Transmitted Diseases  
(630) 682-7979, ext. 7553

HIV/AIDS  
(630) 682-7400

Tuberculosis  
(630) 682-7979, ext. 7522

School Health  
(630) 682-7979, ext. 7300

Travel Clinic  
(630) 682-7400

Animal Care & Control  
(630) 407-2800

Please contact  
Disease Control at  
(630) 682-7979, ext. 7553 or  
[ebarajas@dupagehealth.org](mailto:ebarajas@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

Volume 6, No. 11 November 2010

Vaccine Preventable Diseases	Report Within	2010		2009		2008		2007		2006		Median	
		Oct	Jan - Oct	Jan - Oct	Total	Jan - Oct	Total	Jan - Oct	Total	Jan - Oct	Total	Jan - Oct	Total ('06-'09)
Chickenpox (varicella)	24 hrs	4	83	128	146	178	236	139	177	180	252	139	206.5
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	1	5	8	11	4	6	5	5	7	7	5	6.5
Hepatitis A	24 hrs	0	5	10	14	15	16	23	26	10	12	10	15
Hepatitis B	7 days	1	3	5	8	4	4	8	9	3	4	4	6
Hepatitis B (carriers)	7 days	3	80	100	129	106	128	144	168	136	159	106	144
Influenza, deaths in < 18 yrs old	7 days	0	0	1	1	0	0	NR	NR	NR	NR	0	0.5
Measles (rubeola)	24 hrs	0	0	1	1	15	15	0	0	0	0	0	0.5
Mumps	24 hrs	0	0	2	2	2	2	13	13	115	130	2	7.5
Neisseria meningitidis, invasive	24 hrs	0	1	4	6	3	4	1	1	2	2	2	3
Pertussis (whooping cough)	24 hrs	2	38	21	26	6	13	9	9	23	26	21	19.5
Poliomyelitis	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	2	6	7	8	3	6	7	10	6	8	6	8
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other Communicable Diseases</b>													
Anaplasmosis <sup>2</sup>	7 days	0	0	0	0	0	0	NR	NR	NR	NR	0	0
Anthrax	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, foodborne	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Botulism, other	24 hrs	0	0	0	0	0	0	1	1	0	0	0	0
Brucellosis	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
California encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	NR	NR	NR	NR	0	0
Cholera	24 hrs	0	0	0	0	1	1	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	0	0	0	0	NR	NR	1	1	0	0
Cryptosporidiosis	7 days	0	5	4	5	2	2	4	5	9	9	4	5
Cyclosporiasis	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Dengue fever <sup>3</sup>	7 days	0	3	4	4	0	0	1	1	2	2	2	1.5
Ehrlichiosis <sup>2</sup>	7 days	0	0	0	0	0	0	1	1	2	2	0	0.5
Enteric E. coli infections <sup>4</sup>	24 hrs	0	16	11	12	21	21	7	7	8	8	11	10
Giardiasis	7 days	1	41	36	42	55	57	66	68	37	47	41	52
Glomerulonephritis <sup>5</sup>	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Hantavirus pulmonary syndrome	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Hemolytic uremic syndrome	24 hrs	0	0	0	0	1	1	0	0	0	0	0	0
Hepatitis C (cases & carriers)	7 days	5	159	205	238	228	261	264	301	230	272	228	266.5
Hepatitis D	7 days	0	0	0	0	0	0	NR	NR	NR	NR	0	0
Histoplasmosis	7 days	0	2	2	2	5	6	4	6	1	1	2	4
Influenza A, novel virus	3 hrs	0	11	126	181	0	0	NR	NR	NR	NR	11	90.5
Legionellosis	7 days	1	10	13	13	5	5	11	13	8	9	10	11
Leprosy	7 days	0	0	1	1	0	0	0	0	1	1	0	0.5
Leptospirosis	7 days	1	1	0	0	0	0	1	1	0	0	0	0
Listeriosis	7 days	1	4	3	3	1	1	1	1	5	6	3	2
Lyme disease <sup>2</sup>	7 days	1	17	18	18	15	17	16	16	10	10	16	16.5
Malaria	7 days	0	4	4	4	5	5	6	7	3	6	4	5.5
Ophthalmia neonatorum	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Plague	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Psittacosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Q fever <sup>6</sup>	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	5	54	13	15	46	46	50	52	28	28	46	37
Reye syndrome	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever <sup>5</sup>	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Rocky Mountain spotted fever <sup>2</sup>	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Salmonellosis	7 days	11	126	77	90	94	108	127	140	88	103	94	105.5
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	NR	NR	NR	NR	0	0
Shigellosis	7 days	1	269	12	13	27	28	16	18	24	27	24	22.5
Smallpox	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Smallpox vaccination, complications	24 hrs	0	0	0	0	0	0	NR	NR	NR	NR	0	0
St. Louis encephalitis <sup>3</sup>	7 days	0	0	0	0	0	0	NR	NR	NR	NR	0	0
Staphylococcus aureus, methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	6	6	6	0	3	NR	NR	NR	NR	6	4.5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster <sup>7</sup>	24 hrs	0	1	1	1	2	4	NR	NR	NR	NR	1	2.5
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	1	0	0	0	0	1	1	0	0	0	0
Streptococcal infections, group A invasive disease <sup>8</sup>	24 hrs	1	15	12	14	11	16	10	11	16	18	12	15
Toxic shock syndrome <sup>8</sup>	7 days	0	0	0	0	1	1	2	2	1	1	1	1
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	0	21	22	29	38	43	25	27	38	44	25	36
Tularemia	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	3	5	5	3	3	5	7	2	2	3	4
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	1	2	2	0	0	1	1	1	2	1	1.5
West Nile disease <sup>3</sup>	7 days	0	17	0	0	1	1	10	10	43	43	10	5.5
Yersiniosis	7 days	0	0	5	5	1	1	1	1	0	0	1	1
<b>STDs, HIV and AIDS</b>													
AIDS <sup>10</sup> (October - December)	7 days	--	18	17	21	14	22	17	20	24	32	17	21.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	81	1128	1313	1555	1352	1587	1142	1522	1144	1346	1144	1538.5
Gonorrhea	7 days	10	175	190	225	225	268	183	251	159	192	183	238
HIV infection <sup>10</sup> (October - December)	7 days	--	25	25	28	16	23	15	22	20	25	20	24
Syphilis	7 days	0	18	26	33	14	18	14	18	21	24	18	21

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) 682-7979, ext. 7553  
24 hours: (630) 682-7400

**Tuberculosis**  
(630) 682-7979, ext. 7522

**STDs**  
(630) 682-7979, ext. 7553

**HIV/AIDS:**  
(630) 682-7400

- <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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[www.dupagehealth.org/publications](http://www.dupagehealth.org/publications)