



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.



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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
ebarajas@dupagehealth.org
to send suggestions
or to be added to the
distribution list.



Under the Microscope *Streptococcus pneumoniae*

For questions or to report suspect and known cases of invasive pneumococcal disease (e.g., bacteremia, meningitis, or infection of a normally sterile site) in children < 5 years of age, please call the DuPage County Health Department at (630) 221-7553.

Streptococcus pneumoniae (pneumococcus), a gram-positive bacterium, is a leading cause of illness and death worldwide for young children, persons with underlying medical conditions, and the elderly.¹

Each year in the U.S., pneumococcal disease accounts for a substantial number of cases of **invasive (e.g., meningitis, bacteremia) and non-invasive (e.g., pneumonia, acute otitis media [AOM]) disease**.¹ Pneumococcal disease is preceded by asymptomatic colonization of the nasopharynx which tends to be especially common in children. Acute otitis media (AOM) is the most common clinical manifestation of pneumococcal infection among children and the most common outpatient diagnosis resulting in antibiotic prescriptions in that group.¹ **Approximately 10% of all patients with invasive pneumococcal disease die of their illness**, but case-fatality rates are higher for the elderly and patients with certain underlying illnesses.¹

Pneumococcal pneumonia is the most common clinical presentation of pneumococcal disease among adults, although pneumonia alone is not considered to be "invasive" disease. Pneumonia is a common bacterial complication of influenza and measles. **Bacteremia occurs in about 25%–30% of patients with pneumococcal pneumonia**. The overall case-fatality rate for bacteremia is about 20% but may be as high as 60% among elderly patients. Patients with asplenia who develop bacteremia may experience a fulminant clinical course.²

Pneumococci cause **13%–19% of all cases of bacterial meningitis in the U.S.** One-fourth of patients with pneumococcal meningitis also have pneumonia. The case-fatality rate of pneumococcal meningitis is about 30% but may be as high as 80% among elderly persons. Neurologic sequelae are common among survivors. **Persons with a cochlear implant appear to be at increased risk of pneumococcal meningitis.**²

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. **With the decline of invasive *Haemophilus influenzae* type b disease, *S. pneumoniae* has become the leading cause of bacterial meningitis among children younger than 5 years of age in the U.S.**²

Prevention: As published by CDC in December 2010, the Advisory Committee on Immunization Practices (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.³ **PCV13 has replaced 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.^{4,5}

In addition, ACIP recommends that **adults 19 years of age or older with immunocompromising conditions, functional or anatomic asplenia, CSF leaks, or cochlear implants, and who have not previously received PCV13 or PPSV23, should receive a dose of PCV13 first followed by a dose of PPSV23 at least 8 weeks later**. Subsequent doses of PPSV23 should follow current PPSV23 recommendations for high risk adults.⁶

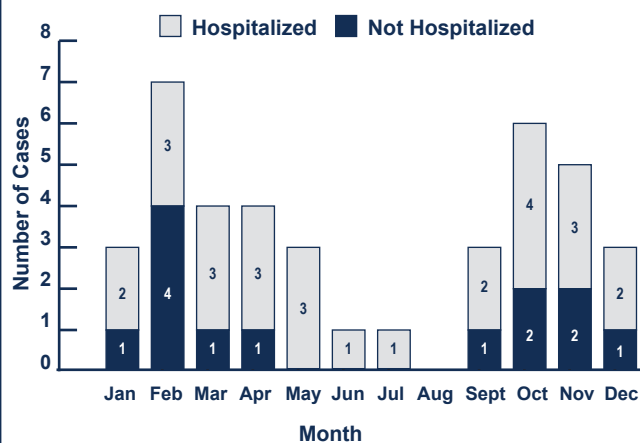
ACIP recommends a **single dose of 23-valent pneumococcal polysaccharide vaccine (PPSV23) for all people 65 years of age and older and for persons 2 through 64 years of age with certain high-risk conditions**. It is also recommended for use in **adults 19 through 64 years of age who smoke cigarettes or who have asthma**.^{5,7}

Among those with high-risk conditions for pneumococcal disease, most are also at high risk for severe complications from influenza. **Pneumococcal vaccine may be given at the same time as influenza vaccine, or at any time during the year**. **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.^{7,8}

References:

1. www.cdc.gov/vaccines/pubs/surv-manual/chpt11-pneumo.pdf
2. www.cdc.gov/vaccines/pubs/pinkbook/downloads/pneumo.pdf
3. www.cdc.gov/mmwr/pdf/rr/rr5911.pdf
4. www.cdc.gov/vaccines/vpd-vac/pneumo/vac-PCV13-hcp-faqs.htm
5. www.cdc.gov/vaccines/vpd-vac/pneumo/default.htm
6. www.cdc.gov/vaccines/vpd-vac/pneumo/vac-PCV13-adults.htm
7. www.cdc.gov/mmwr/pdf/wk/mm5934.pdf
8. www.cdc.gov/mmwr/PDF/rr/rr4608.pdf

Reported Cases of Invasive *S. pneumoniae* in Children <5 years by Month of Illness Onset in DuPage County, 2008-2012* (n=40)



Source: Illinois-National Electronic Disease Surveillance System

*2012 data include Jan-Oct

DUPAGE COUNTY HEALTH DEPARTMENT
CASES¹ OF REPORTABLE DISEASES*

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

CD REVIEW

Volume 8, No. 11 November 2012

Vaccine Preventable Diseases	Report Within	2012		2011		2010		2009		2008		Median	
		Oct	Jan - Oct	Jan - Oct	Total	Jan - Oct	Total	Jan - Oct	Total	Jan - Oct	Total	Jan - Oct	Overall ('08-'11)
Chickenpox (varicella)	24 hrs	12	83	55	82	82	95	128	146	178	236	83	120.5
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	0	9	11	15	6	7	8	11	4	6	8	9
Hepatitis A	24 hrs	0	7	5	8	3	3	4	6	10	11	5	7
Hepatitis B	7 days	0	4	0	0	2	4	5	8	3	3	3	3.5
Hepatitis B (carriers)	7 days	6	79	91	113	93	108	100	127	106	128	93	120
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Influenza ICU admissions	24 hrs	1	11	24	24	0	3	0	NR	0	NR	0	13.5
Measles (rubeola)	24 hrs	0	0	0	0	0	0	1	1	14	14	0	0.5
Mumps	24 hrs	0	1	2	4	0	2	2	2	2	2	2	2
Neisseria meningitidis, invasive	24 hrs	0	0	1	2	1	1	4	6	3	4	1	3
Pertussis (whooping cough)	24 hrs	7	175	197	268	50	92	21	26	6	13	50	59
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	1	5	11	13	6	8	7	8	3	6	6	8
Tetanus	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Other Communicable Diseases													
Anaplasmosis ²	7 days	0	1	3	3	0	0	0	0	0	0	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	0	0	0	0	0	0
Brucellosis	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
California encephalitis ³	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Cholera	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	3	1	1	0	0	0	1	0	1
Cryptosporidiosis	7 days	0	2	5	5	5	5	4	5	1	1	4	5
Cyclosporiasis	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Dengue fever ³	7 days	0	1	1	1	4	4	3	4	0	0	1	2.5
Ehrlichiosis ²	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Enteric E. coli infections ⁴	24 hrs	0	15	19	22	15	18	10	12	21	21	15	19.5
Giardiasis	7 days	3	30	38	44	41	49	30	40	51	53	38	46.5
Glomerulonephritis ⁵	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	1	1	1	0	0	0	0	1	1	1	0.5
Hepatitis C (cases & carriers)	7 days	7	136	160	189	163	187	165	213	215	246	163	201
Hepatitis D	7 days	0	0	1	1	0	0	0	0	0	0	0	0
Histoplasmosis	7 days	0	2	0	1	2	2	2	2	5	6	2	2
Influenza A, novel virus	3 hrs	0	0	0	0	11	11	54	181	0	0	0	5.5
Legionellosis	7 days	4	24	10	14	10	11	13	13	5	5	10	12
Leprosy	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	7 days	1	2	2	2	5	6	2	3	1	1	2	2.5
Lyme disease ²	7 days	0	26	32	32	19	19	16	17	15	16	19	18
Malaria	7 days	0	2	7	7	4	4	4	4	4	4	4	4
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 ⁶	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	0	42	28	30	54	54	13	15	45	45	42	37.5
Reye syndrome	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ⁵	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever ²	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	7 days	7	101	83	95	121	136	70	89	91	105	91	100
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	0	17	17	22	269	277	10	12	23	24	17	23
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	0	0	0	0	0	0
St. Louis encephalitis ³	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Staphylococcus aureus, methicillin resistant (MRSA), in those < 61 days old	24 hrs	2	6	3	3	6	6	5	6	0	3	5	4.5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster ⁷	24 hrs	0	1	0	0	1	1	1	1	2	4	1	1
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	1	1	1	1	0	0	0	0	0	0.5
Streptococcal infections, group A invasive disease ⁸	24 hrs	0	17	26	30	14	20	10	14	11	16	14	18
Toxic shock syndrome ⁹	7 days	0	0	1	1	0	0	0	0	1	1	0	0.5
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis ¹⁰	7 days	2	18	15	23	21	26	21	29	38	43	21	27.5
Tularemia	3 hrs	0	1	0	0	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	1	3	3	3	3	5	5	3	3	3	3
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	4	3	3	1	1	2	2	0	0	2	1.5
West Nile disease ³	7 days	0	54	2	2	17	17	0	0	1	1	2	1.5
Yersiniosis	7 days	0	3	2	3	0	0	4	5	1	1	2	2
STDs, HIV and AIDS													
AIDS ¹¹ (October - December)	7 days	--	12	13	16	24	26	12	19	14	22	13	20.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia ¹²	7 days	81	1367	1353	1599	1301	1539	1313	1555	1352	1587	1352	1571
Gonorrhea ¹²	7 days	7	161	200	241	184	223	190	225	225	268	190	233
HIV infection ¹¹ (October - December)	7 days	--	15	19	24	24	27	28	40	16	23	19	25.5
Syphilis	7 days	0	10	23	24	22	25	26	33	14	18	22	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

¹ Provisional cases, based on date of onset

² Listed in CD Rules and Regulations under "Tickborne Disease"

³ Listed in CD Rules and Regulations under "Arboviral Infections"

⁴ O157:H7, STEC, EIEC, ETEC, EPEC

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

⁶ Q fever case in 2004 not related to any suspected bioterrorism threat or event

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

⁸ Includes streptococcal toxic shock syndrome and necrotizing fasciitis

⁹ Due to *Staphylococcus aureus*

¹⁰ Provisional cases, based on count date per IDPH

¹¹ HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis

¹² Provisional cases, based on date of test

NR = Not reported

** = Count of less than 5 cases

Websites

CDC:
www.cdc.gov

IDPH:
www.idph.state.il.us

DuPage:
www.dupagehealth.org

Archived issues of CD Review are available at:

www.dupagehealth.org/publications