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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

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Communicable Disease
and Epidemiology at
(630) 221-7553 or
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to send suggestions
or to be added to the
distribution list.

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 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

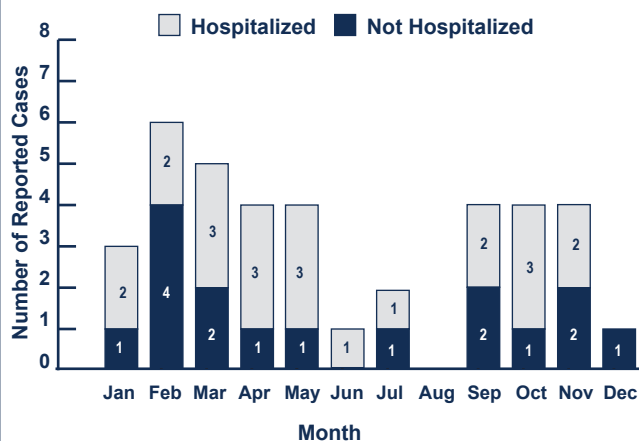
Prevention: Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP) recommend **routine vaccination with 13-valent pneumococcal conjugate vaccine (PCV13) for all children aged 2-59 months** and for **children aged 16-18 years with immunocompromising conditions, functional or anatomic asplenia, cerebrospinal fluid (CSF) leaks, or cochlear implants who have not previously received PCV13.**^{3,4}

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.^{5,6}

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}

Reported Cases of Invasive *S. pneumoniae* in Children <5 Years by Month of Illness Onset in DuPage County, 2009-2013* (n=38)



Source: Illinois-National Electronic Disease Surveillance System *2013 data include Jan-Oct

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/mmwr/preview/mmwrhtml/mm6225a3.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/preview/mmwrhtml/mm5934a3.htm
8. www.cdc.gov/mmwr/PDF/rr/rr4608.pdf

**DUPAGE COUNTY HEALTH DEPARTMENT
CASES¹ OF REPORTABLE DISEASES***

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

CD REVIEW
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Vaccine Preventable Diseases	Report Within	2013		2012		2011		2010		2009		Median	
		Oct	Jan-Oct	Jan-Oct	Total	Jan-Oct	Total	Jan-Oct	Total	Jan-Oct	Total	Jan-Oct	Total ('09-'12)
Chickenpox (varicella)	24 hrs	9	61	83	93	55	82	82	95	128	146	82	94
Diphtheria	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	2	8	9	11	11	15	6	7	8	11	8	11
Hepatitis A	24 hrs	0	4	7	8	5	8	3	3	4	6	4	7
Hepatitis B	7 days	1	3	4	5	0	0	2	4	5	8	3	4.5
Hepatitis B (carriers)	7 days	5	92	80	97	91	113	93	108	100	127	92	110.5
Influenza, deaths in < 18 yrs old	7 days	0	1	0	0	0	0	0	0	1	1	0	0
Influenza ICU admissions	24 hrs	5	57	11	59	24	24	0	3	NR	NR	17.5	24
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Mumps	24 hrs	0	0	1	1	2	3	0	2	2	2	1	2
Neisseria meningitidis, invasive	24 hrs	0	0	0	0	1	2	1	1	4	6	1	1.5
Pertussis (whooping cough)	24 hrs	3	35	181	195	197	268	50	92	21	26	50	143.5
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	0	4	5	5	11	13	6	8	7	8	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	0	1	2	3	3	0	0	0	0	0	1
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	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	1	1	3	1	1	0	0	1	1
Cryptosporidiosis	7 days	0	5	2	2	5	5	5	5	4	5	5	5
Cyclosporiasis	7 days	0	4	0	0	0	0	0	0	1	1	0	0
Dengue fever ³	7 days	1	2	1	1	1	1	4	4	4	4	2	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	2	52	16	18	19	22	15	18	11	12	16	18
Giardiasis	7 days	4	29	32	34	38	44	41	49	34	40	34	42
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	0	1	1	1	1	0	0	0	0	0	0.5
Hepatitis C (cases & carriers)	7 days	16	149	156	171	160	189	163	187	183	213	160	188
Hepatitis D	7 days	0	0	0	0	1	1	0	0	0	0	0	0
Histoplasmosis	7 days	0	0	2	2	0	1	2	2	2	2	2	2
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	11	11	126	181	0	5.5
Legionellosis	7 days	5	36	24	25	10	14	10	11	13	13	13	13.5
Leptospirosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis	7 days	0	1	2	2	2	2	5	6	3	3	2	2.5
Lyme disease ²	7 days	1	38	26	27	32	32	19	19	18	18	26	23
Malaria	7 days	0	7	2	2	7	7	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	44	42	43	28	30	54	54	13	15	42	36.5
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	1	1	0	0	0	0	0	0	0	0
Salmonellosis	7 days	16	116	102	123	83	95	121	136	76	89	102	109
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	0	16	18	20	17	22	269	277	11	12	17	21
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	0	2	6	7	3	3	6	6	6	6	6	6
Staphylococcus aureus, methicillin resistant (MRSA), community cluster ⁷	24 hrs	0	0	1	1	0	0	1	1	1	1	1	1
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	0	1	1	1	1	0	0	0	0.5
Streptococcal infections, group A invasive disease ⁸	24 hrs	1	19	17	20	26	30	14	20	12	14	17	20
Toxic shock syndrome ⁹	7 days	0	1	0	0	1	1	0	0	0	0	0	0
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	2	25	19	26	15	18	21	26	22	29	21	26
Tularemia	3 hrs	0	0	1	1	0	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	0	1	2	3	3	3	3	5	5	3	3
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	2	4	4	3	3	1	1	2	2	2	2.5
West Nile disease ³	7 days	0	6	55	56	2	2	17	17	0	0	6	9.5
Yersiniosis	7 days	0	2	3	3	2	3	0	0	5	5	2	3
STDs, HIV and AIDS													
AIDS ¹⁰ (October - December)	7 days	--	15	12	17	13	16	24	26	12	19	13	18
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	113	1377	1567	1861	1353	1599	1301	1542	1313	1555	1353	1577
Gonorrhea	7 days	13	187	197	239	200	241	184	223	190	225	190	232
HIV infection ¹⁰ (October - December)	7 days	--	17	15	20	19	24	24	27	28	40	19	25.5
Syphilis ¹¹	7 days	3	20	15	19	23	24	22	25	26	33	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 HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis
 - ¹¹ Cases are provisional based on test date per local health department investigation.
- NR = Not reported
** = Count of 5 cases or less

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