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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
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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

Group A *Streptococcus* (GAS), Invasive Disease

For questions or to report suspect or known cases of group A *Streptococcus* (GAS), invasive disease, please call the DuPage County Health Department at (630) 221-7553

Group A *Streptococcus* (GAS), also known as *Streptococcus pyogenes*, may cause a wide range of infections, including **noninvasive** disease (e.g., strep throat, impetigo), **invasive** disease (which may manifest as necrotizing fasciitis [NF], cellulitis, bacteremia, pneumonia), **streptococcal toxic shock syndrome** (STSS), and **nonsuppurative sequelae** (e.g., rheumatic fever, post-streptococcal glomerulonephritis).¹

Invasive GAS infections may initially manifest as any of several clinical syndromes, including pneumonia, bacteremia in association with cutaneous infection (e.g., cellulitis, erysipelas, or infection of a surgical or nonsurgical wound), deep soft-tissue infection (e.g., myositis or necrotizing fasciitis), meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis, neonatal sepsis, and nonfocal bacteremia.² In order to meet the case definition (established in 1995), group A *Streptococcus* must be **isolated by culture from a normally sterile site** (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid).²

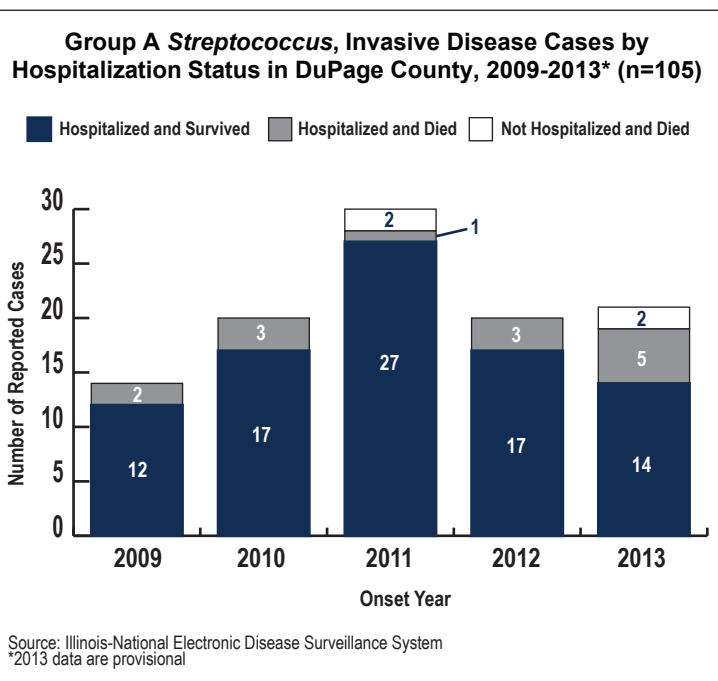
Incidence: Approximately 9,000-11,500 cases of invasive disease (3.2 to 3.9/100,000 population) occur in the U.S. annually; STSS and NF each accounted for approximately 6 to 7% of cases. In contrast, over 10 million noninvasive GAS infections (primarily throat and skin infections) occur each year.¹ Mortality in all invasive cases is 10 to 15%; over 35% in STSS cases, and approximately 25% in NF cases. Organ system failure (STSS) and amputation (NF) also may result.¹

Early recognition and treatment with appropriate antibiotics may reduce the risk of death from invasive group A streptococcal disease. However, even the best medical care does not prevent death in every case. For those with very severe illness, supportive care in an intensive care unit may be needed. For persons with NF, surgery often is needed to remove damaged tissue.³

Transmission occurs by person-to-person contact with infectious secretions (e.g., throat mucus, nasal discharge, and saliva) or by contact with infected skin lesions. Asymptomatic pharyngeal carriage occurs among all age groups, but is most common among children.¹

Prevention: The spread of all types of GAS infection can be reduced by good **hand washing**, especially after coughing and sneezing and before preparing foods or eating. Persons with sore throats should be seen by a physician who can perform tests to find out whether the illness is strep throat. If the test result shows strep throat, the person should **stay home from work, school, or day care until 24 hours after initiating an appropriate antibiotic course.**³

All **wounds should be kept clean and watched for possible signs of infection** such as redness, swelling, drainage, and pain at the wound site. A person with signs of an infected wound, especially if fever occurs, should **seek medical attention** as soon as possible.³ In the hospital setting, appropriate type and duration of **infection control precautions** (e.g., standard, droplet, and/or contact precautions as specified, until 24 hours after initiation of effective therapy) are advised to prevent transmission in healthcare settings.⁴



References:

1. www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_t.htm
2. www.cdc.gov/NNDSS/script/casedef.aspx?CondYrID=855&DatePub=1/1/1995 12:00:00 AM
3. www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm
4. www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html

DUPAGE COUNTY HEALTH DEPARTMENT

CASES¹ OF REPORTABLE DISEASES*

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

Vaccine Preventable Diseases	Report Within	2013		2012	2011	2010	2009	Median
		Dec	Total	Total	Total	Total	Total	Total ('09-'12)
Chickenpox (varicella)	24 hrs	7	79	93	82	95	146	94
Diphtheria	24 hrs	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> , invasive	24 hrs	1	10	11	15	7	11	11
Hepatitis A	24 hrs	0	4	8	8	3	6	7
Hepatitis B	7 days	0	3	5	0	4	8	4.5
Hepatitis B (carriers)	7 days	2	103	97	113	108	127	110.5
Influenza, deaths in < 18 yrs old	7 days	0	1	0	0	0	1	0
Influenza, ICU admissions	24 hrs	19	76	59	24	3	NR	24
Measles (rubeola)	24 hrs	0	0	0	0	0	1	0
Mumps	24 hrs	0	0	1	3	2	2	2
<i>Neisseria meningitidis</i> , invasive	24 hrs	0	0	0	2	1	6	1.5
Pertussis (whooping cough)	24 hrs	1	41	195	268	92	26	143.5
Poliomyelitis	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	4	5	13	8	8	8
Tetanus	7 days	0	0	0	0	0	0	0
Other Communicable Diseases								
Anaplasmosis ²	7 days	0	0	2	3	0	0	1
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 ³	7 days	0	0	0	0	0	0	0
Cholera	24 hrs	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	1	3	1	0	1
Cryptosporidiosis	7 days	1	7	2	5	5	5	5
Cyclosporiasis	7 days	0	4	0	0	0	1	0
Dengue fever ³	7 days	0	2	1	1	4	4	2.5
Ehrlichiosis ²	7 days	0	0	0	0	0	0	0
Enteric <i>E. coli</i> infections ⁴	24 hrs	0	53	18	22	18	12	18
Giardiasis	7 days	1	32	34	44	49	40	42
Glomerulonephritis ⁵	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	0	1	1	0	0	0.5
Hepatitis C (cases & carriers)	7 days	15	175	171	189	187	213	188
Hepatitis D	7 days	0	0	0	1	0	0	0
Histoplasmosis	7 days	1	1	2	1	2	2	2
Influenza A, novel virus	3 hrs	0	0	0	0	11	181	5.5
Legionellosis	7 days	1	39	25	14	11	13	13.5
Leprosy	7 days	0	0	0	0	0	0	0
Leptospirosis	7 days	0	0	0	0	0	0	0
Listeriosis	7 days	0	2	2	2	6	3	2.5
Lyme disease ²	7 days	0	39	27	32	19	18	23
Malaria	7 days	0	7	2	7	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	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	44	43	30	54	15	36.5
Reye syndrome	7 days	0	0	0	0	0	0	0
Rheumatic fever ⁵	24 hrs	0	0	0	0	0	0	0
Rocky Mountain spotted fever ⁴	7 days	0	0	1	0	0	0	0
Salmonellosis	7 days	5	128	123	95	136	89	109
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0
Shigellosis	7 days	0	18	20	22	277	12	21
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 ³	7 days	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	3	7	3	6	6	6
<i>Staphylococcus aureus</i> , methicillin resistant (MRSA), community cluster ⁶	24 hrs	0	0	1	0	1	1	1
<i>Staphylococcus aureus</i> (vancomycin-resistant)	24 hrs	0	0	0	1	1	0	0.5
Streptococcal infections, group A invasive disease ⁷	24 hrs	0	21	20	30	20	14	20
Toxic shock syndrome ⁸	7 days	0	1	0	1	0	0	0
Trichinosis	7 days	0	0	0	0	0	0	0
Tuberculosis	7 days	5	35	26	18	26	29	26
Tularemia	3 hrs	0	0	1	0	0	0	0
Typhoid fever	24 hrs	0	2	2	3	3	5	3
Typhus	24 hrs	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	2	4	3	1	2	2.5
West Nile disease ³	7 days	0	6	56	2	17	0	9.5
Yersiniosis	7 days	0	2	3	3	0	5	3
STDs, HIV and AIDS								
AIDS ⁹ (October - December)	7 days	**	19	17	16	26	19	18
Chancroid	7 days	0	0	0	0	0	0	0
Chlamydia	7 days	97	1670	1861	1599	1542	1555	1577
Gonorrhea	7 days	12	221	239	241	223	225	232
HIV infection ⁹ (October - December)	7 days	7	24	20	24	27	40	25.5
Syphilis ¹⁰	7 days	1	23	19	24	25	33	24.5

CD REVIEW

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

⁷ Includes streptococcal toxic shock syndrome and necrotizing fasciitis

⁸ Due to *Staphylococcus aureus*

⁹ HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.

¹⁰ 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