



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

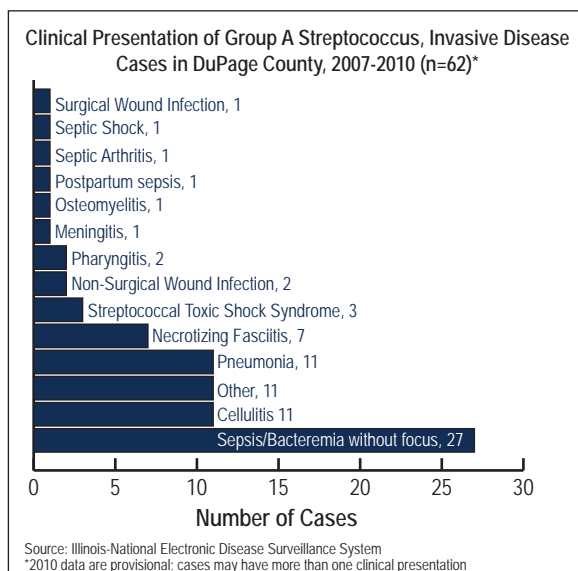
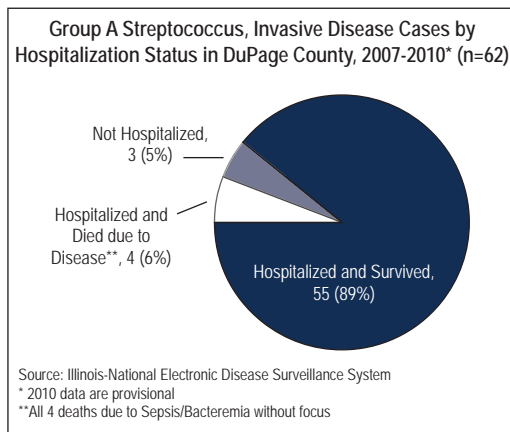
For questions or to report suspect or known cases of group A *Streptococcus* (GAS), invasive disease, please call the DuPage County Health Department at (630) 682-7979, ext. 7553.

### Group A *Streptococcus* (GAS), Invasive Disease

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).<sup>1</sup>

**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 (i.e., puerperal fever), neonatal sepsis, and nonfocal bacteremia.<sup>2</sup> 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).<sup>2</sup>

**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.<sup>1</sup> Mortality in all invasive cases is 10%-15%; over 35% in STSS cases, and approximately 25% in NF cases. Organ system failure (STSS) and amputation (NF) also may result.<sup>1</sup>



**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.<sup>3</sup> In Illinois, the rules governing the reporting of communicable diseases require that cases of invasive streptococcal disease be specifically reported to public health officials.<sup>4</sup>

**Transmission** occurs by person-to-person contact with infectious secretions (e.g., throat mucus, nasal discharge, and saliva). Asymptomatic pharyngeal carriage occurs among all age groups, but is most common among children.<sup>1</sup>

**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 doctor 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.<sup>3</sup>

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.<sup>3</sup> In the hospital setting, appropriate type and duration of infection control precautions are advised to prevent transmission in healthcare settings.<sup>5</sup>

References:

1. [www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal\\_t.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_t.htm)
2. [www.cdc.gov/ncphi/diss/nndss/casedef/streptococcuscurrent.htm](http://www.cdc.gov/ncphi/diss/nndss/casedef/streptococcuscurrent.htm)
3. [www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm)
4. [www.idph.state.il.us/public/hb/hbstrepa.htm](http://www.idph.state.il.us/public/hb/hbstrepa.htm)
5. [www.cdc.gov/hicpac/2007IP/2007I7isolationPrecautions.html](http://www.cdc.gov/hicpac/2007IP/2007I7isolationPrecautions.html)



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#### General Information

Communicable Disease and Epidemiology  
(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) 682-7979, ext. 7553

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 Communicable Disease and Epidemiology 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

Vaccine Preventable Diseases	Report Within	2010		2009	2008	2007	2006	Median
		Dec	Total	Total	Total	Total	Total	Total ('06-'09)
Chickenpox (varicella)	24 hrs	8	96	146	236	177	252	206.5
Diphtheria	24 hrs	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	0	6	11	6	5	7	6.5
Hepatitis A	24 hrs	0	6	14	16	26	12	15
Hepatitis B	7 days	0	3	8	4	9	4	6
Hepatitis B (carriers)	7 days	4	96	129	128	168	159	144
Influenza, deaths in < 18 yrs old	7 days	0	0	1	0	NR	NR	0.5
Measles (rubeola)	24 hrs	0	0	1	15	0	0	0.5
Mumps	24 hrs	0	1	2	2	13	130	7.5
Neisseria meningitidis, invasive	24 hrs	0	1	6	4	1	2	2
Pertussis (whooping cough)	24 hrs	9	77	26	13	9	26	28
Poliomyelitis	24 hrs	0	0	0	0	0	0	0
Rubella	24 hrs	0	0	0	0	0	0	0
Streptococcus pneumoniae, invasive disease, in those < 5 yrs old	7 days	1	8	8	6	10	8	8
Tetanus	7 days	0	0	0	0	0	0	0
<b>Other Communicable Diseases</b>								
Anaplasmosis <sup>2</sup>	7 days	0	0	0	0	NR	NR	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	1	0	0
Brucellosis	3 hrs	0	0	0	0	0	0	0
California encephalitis <sup>3</sup>	7 days	0	0	0	0	NR	NR	0
Cholera	24 hrs	0	0	0	1	0	0	0
Creutzfeldt-Jakob disease	7 days	0	0	0	0	NR	1	0
Cryptosporidiosis	7 days	0	5	5	2	5	9	5
Cyclosporiasis	7 days	0	0	1	0	0	0	0
Dengue fever <sup>3</sup>	7 days	0	4	4	0	1	2	1.5
Ehrlichiosis <sup>2</sup>	7 days	0	0	0	0	1	2	0.5
Enteric E. coli infections <sup>4</sup>	24 hrs	0	20	12	21	7	8	10
Giardiasis	7 days	4	50	42	57	68	47	52
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	0	0	1	0	0	0
Hepatitis C (cases & carriers)	7 days	1	182	238	261	301	272	266.5
Hepatitis D	7 days	0	0	0	0	NR	NR	0
Histoplasmosis	7 days	0	2	2	6	6	1	4
Influenza A, novel virus	3 hrs	0	11	181	0	NR	NR	90.5
Legionellosis	7 days	0	11	13	5	13	9	11
Leprosy	7 days	0	0	1	0	0	1	0.5
Leptospirosis	7 days	0	0	0	0	1	0	0
Listeriosis	7 days	0	6	3	1	1	6	2
Lyme disease <sup>2</sup>	7 days	0	18	18	17	16	10	16.5
Malaria	7 days	0	4	4	5	7	6	5.5
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	54	15	46	52	28	37
Reye syndrome	7 days	0	0	0	0	0	0	0
Rheumatic fever <sup>7</sup>	24 hrs	0	0	0	0	0	1	0
Rocky Mountain spotted fever <sup>2</sup>	7 days	0	0	0	0	0	1	0
Salmonellosis	7 days	5	139	90	108	140	103	105.5
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	NR	NR	0
Shigellosis	7 days	7	277	13	28	18	27	22.5
Smallpox	3 hrs	0	0	0	0	0	0	0
Smallpox vaccination, complications	24 hrs	0	0	0	0	NR	NR	0
St. Louis encephalitis <sup>3</sup>	7 days	0	0	0	0	NR	NR	0
Staphylococcus aureus, methicillin resistant (MRSA), in those < 61 days old	24 hrs	0	6	6	3	NR	NR	4.5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster <sup>7</sup>	24 hrs	0	1	1	4	NR	NR	2.5
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	1	0	0	1	0	0
Streptococcal infections, group A invasive disease <sup>8</sup>	24 hrs	4	21	14	16	11	18	15
Toxic shock syndrome <sup>9</sup>	7 days	0	0	0	1	2	1	1
Trichinosis	7 days	0	0	0	0	0	0	0
Tuberculosis (Category III)	7 days	2	24	29	43	27	44	36
Tularemia	3 hrs	0	0	0	0	0	0	0
Typhoid fever	24 hrs	0	3	5	3	7	2	4
Typhus	24 hrs	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	1	2	0	1	2	1.5
West Nile disease <sup>3</sup>	7 days	0	17	0	1	10	43	5.5
Yersiniosis	7 days	0	0	5	1	1	0	1
<b>STDs, HIV and AIDS</b>								
AIDS <sup>10</sup> (October-December)	7 days	**	26	19	22	20	32	21
Chancroid	7 days	0	0	0	0	0	0	0
Chlamydia	7 days	43	1326	1555	1587	1522	1346	1434
Gonorrhea	7 days	8	199	225	268	251	192	259.5
HIV infection <sup>10</sup> (October-December)	7 days	**	27	40	23	22	25	24
Syphilis	7 days	1	23	33	18	18	24	21

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

**Tuberculosis**

(630) 682-7979, ext. 7522

**STDs**

(630) 682-7979, ext. 7553

**HIV/AIDS:**

(630) 682-7979, ext. 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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