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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  
with 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 *Neisseria meningitidis*

For questions or to report a suspect or known case of meningococcal disease, please call the DuPage County Health Department at (630) 221-7553.

**Background:** Meningococcal disease is an acute, potentially severe illness caused by the bacterium *Neisseria meningitidis*, which is a leading cause of **bacterial meningitis** and **sepsis** in the U.S. It can also cause focal disease, such as pneumonia and arthritis.<sup>1</sup>

Meningococcal disease **develops rapidly, typically among previously healthy children and adolescents, and results in high morbidity and mortality.** Approximately 800–1,200 cases are reported annually in the U.S.<sup>1</sup> Humans are the only natural reservoir of meningococcus. Meningococci are **transmitted by droplet aerosol or secretions from the nasopharynx of colonized persons.** As many as 10% of adolescents and adults are asymptomatic transient carriers of *N. meningitidis*, most strains of which are not pathogenic.<sup>2</sup>

Almost all invasive disease is caused by one of five serogroups: A, B, C, W, and Y. **Serogroups B, C, and Y are the major causes of meningococcal disease in the U.S., each being responsible for approximately one third of cases.** The proportion of cases caused by each serogroup varies by age group. Approximately 60% of disease among children aged 0 through 59 months is caused by serogroup B. Serogroups C, W, or Y, which are included in vaccines available in the U.S., cause 73% of all cases of meningococcal disease among persons 11 years of age or older.<sup>2</sup>

The incubation period of meningococcal disease is 3 to 4 days, with a range of 2 to 10 days. The **case-fatality ratio of meningococcal disease is 10% to 15%**, even with appropriate antibiotic therapy. The case-fatality ratio of meningococemia is up to 40%. As many as 20% of survivors have permanent sequelae, such as hearing loss, neurologic damage, or loss of a limb. In the U.S., meningococcal outbreaks account for less than 2% of reported cases (**98% of cases are sporadic**).<sup>2</sup>

**Control and Prevention:** In addition to prompt initiation of appropriate antimicrobial therapy after obtaining necessary cultures, **all healthcare workers should report any case of invasive meningococcal disease to the local health department** of the jurisdiction in which the patient resides.<sup>2</sup> Case investigation by health department staff may expedite identification of close contacts of infected persons, since **antimicrobial chemoprophylaxis should be administered as soon as possible, ideally less than 24 hours after identification of the index patient.**<sup>2</sup>

Risk of transmission of meningococcal infection can be reduced by practicing **good hygiene**, including frequent handwashing and covering one's nose and mouth when sneezing or coughing and discarding used tissues promptly. To avoid exposure, persons should not share cups, glasses, straws, eating utensils, or cigarettes.<sup>3</sup>

**Vaccination:** Vaccines are now available that help protect against all three serogroups (B, C, and Y) of meningococcal disease that are commonly seen in the U.S. There are three kinds of meningococcal vaccines available in the U.S.:

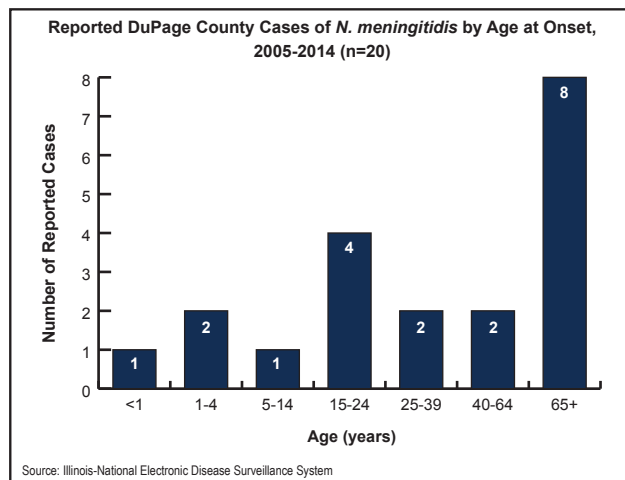
- Meningococcal conjugate vaccines (Menactra<sup>®</sup>, MenHibrix<sup>®</sup> and Menveo<sup>®</sup>)
- Meningococcal polysaccharide vaccine (Menomune<sup>®</sup>)
- Serogroup B meningococcal vaccines (Bexsero<sup>®</sup> and Trumenba<sup>®</sup>)<sup>4</sup>

Centers for Disease Control and Prevention (CDC) recommends **routine vaccination** with a quadrivalent (protects against serogroups A, C, W, and Y) meningococcal conjugate vaccine (Menactra<sup>®</sup> or Menveo<sup>®</sup>) **at 11 or 12 years of age, with a booster dose at 16 years of age.**<sup>4</sup>

Teens and young adults (16 through 23 year olds) **may** also be vaccinated with a serogroup B meningococcal vaccine (Bexsero<sup>®</sup> or Trumenba<sup>®</sup>), preferably at 16 through 18 years old. Two or three doses are needed depending on the brand. Preteens, teens, and young adults **should** be vaccinated with a serogroup B meningococcal vaccine if they are identified as being at increased risk of meningococcal disease. CDC also recommends meningococcal vaccination for children and adults with specific risk factors (e.g., complement deficiency, asplenia, travel, occupational exposure).<sup>4</sup>

### References:

1. [www.cdc.gov/vaccines/pubs/pinkbook/downloads/mening.pdf](http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/mening.pdf)
2. [www.cdc.gov/mmwr/pdf/rr/r6202.pdf](http://www.cdc.gov/mmwr/pdf/rr/r6202.pdf)
3. [www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/meningococcal-disease](http://www.dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/meningococcal-disease)
4. [www.cdc.gov/vaccines/vpd-vac/mening/default.htm](http://www.cdc.gov/vaccines/vpd-vac/mening/default.htm)



DUPAGE COUNTY HEALTH DEPARTMENT

CASES<sup>1</sup> OF REPORTABLE DISEASES\*

\* Last updated by the Illinois Department of Public Health in February 2014

CD REVIEW

Volume 11, No. 10 October 2015

Vaccine Preventable Diseases	Report Within	2015		2014		2013		2012		2011		Median	
		Sep	Jan-Sep	Jan-Sep	Total	Jan-Sep	Total	Jan-Sep	Total	Jan-Sep	Total	Jan-Sep	Total ('11-'14)
Chickenpox (varicella)	24 hrs	2	26	56	76	52	78	71	93	48	82	52	80
Diphtheria	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae, invasive	24 hrs	1	10	3	5	6	10	9	11	9	15	9	10.5
Hepatitis A	24 hrs	0	4	8	8	4	4	7	8	5	8	5	8
Hepatitis B	7 days	0	1	3	5	2	3	4	5	1	1	2	4
Hepatitis B (carriers)	7 days	5	89	73	112	92	110	73	101	80	113	80	111
Influenza, deaths in < 18 yrs old	7 days	0	0	0	0	1	1	0	0	0	0	0	0
Influenza, ICU admissions	24 hrs	0	36	46	152	52	78	10	64	24	24	36	71
Measles (rubeola)	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Mumps	24 hrs	1	7	2	2	0	0	1	1	2	3	2	1.5
Neisseria meningitidis, invasive	24 hrs	0	1	0	0	0	0	0	0	1	2	0	0
Pertussis (whooping cough)	24 hrs	2	20	13	22	32	43	170	195	164	268	32	119
Poliomyelitis	3 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	0	2	2	4	4	4	5	11	13	4	4.5
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	1	1	3	0	0	1	2	3	3	1	2.5
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 <sup>3</sup>	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chikungunya fever <sup>3</sup>	7 days	0	2	0	0	NR	NR	NR	NR	NR	NR	1	0
Cholera	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	7 days	0	1	2	2	0	0	1	1	1	3	1	1.5
Cryptosporidiosis	7 days	0	3	2	2	5	7	2	2	5	5	3	3.5
Cyclosporiasis	7 days	0	1	0	1	4	4	0	0	0	0	0	0.5
Dengue fever <sup>3</sup>	7 days	0	3	1	1	1	3	1	1	1	1	1	1
Ehrlichiosis <sup>2</sup>	7 days	0	1	0	0	0	0	0	0	0	0	0	0
Enteric E. coli infections <sup>4</sup>	24 hrs	1	10	17	18	50	54	16	19	19	22	17	20.5
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	2	2	0	0	1	1	1	1	1	1
Hepatitis C (cases & carriers)	7 days	18	184	177	242	133	182	141	171	136	189	141	185.5
Hepatitis D	7 days	0	0	0	0	0	0	0	0	1	1	0	0
Histoplasmosis	7 days	0	3	5	7	0	1	2	2	0	1	2	1.5
Influenza A, novel virus	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	7 days	7	14	23	26	31	39	20	25	8	14	20	25.5
Leprosy	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	1	2	1	2	1	2	1	2	2	2	1	2
Lyme disease <sup>2</sup>	7 days	1	25	20	22	37	39	26	27	30	32	26	29.5
Malaria	7 days	0	2	1	2	7	7	2	2	5	7	2	4.5
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	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, animal case	24 hrs	5	16	6	6	NR	NR	NR	NR	NR	NR	11	6
Rabies, human case	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Rabies, potential exposure	24 hrs	14	69	50	51	44	44	42	43	28	30	44	43.5
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	0	0	0	0
Rocky Mountain spotted fever <sup>2</sup>	7 days	0	0	0	0	0	0	1	1	0	0	0	0
Salmonellosis	7 days	17	104	76	115	101	128	94	123	73	95	94	119
Severe Acute Respiratory Syndrome	3 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	7 days	2	17	15	18	16	18	17	20	15	22	16	19
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 <sup>3</sup>	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	5	6	9	2	3	4	7	3	3	4	5
Staphylococcus aureus, methicillin resistant (MRSA), community cluster <sup>6</sup>	24 hrs	0	1	0	0	0	0	1	1	0	0	0	0
Staphylococcus aureus (vancomycin-resistant)	24 hrs	0	0	0	0	0	0	0	0	1	1	0	0
Streptococcal infections, group A invasive disease <sup>7</sup>	24 hrs	1	18	25	29	18	21	17	20	24	30	18	25
Toxic shock syndrome <sup>8</sup>	7 days	0	0	0	0	1	1	0	0	1	1	0	0.5
Trichinosis	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	7 days	6	18	20	34	23	35	17	26	16	23	18	30
Tularemia	3 hrs	0	0	0	0	0	0	1	1	0	0	0	0
Typhoid fever	24 hrs	0	2	4	5	0	2	1	2	3	3	2	2.5
Typhus	24 hrs	0	0	0	0	0	0	0	0	0	0	0	0
Vibriosis (non-cholera)	7 days	0	4	3	3	2	2	4	4	3	3	3	3
West Nile virus disease <sup>3</sup>	7 days	5	8	5	5	6	6	55	56	2	2	6	5.5
Yersiniosis	7 days	0	1	2	3	2	2	3	3	2	3	2	3
<b>STDs, HIV and AIDS</b>													
AIDS <sup>9</sup> (July-September)	7 days	**	9	14	15	21	25	12	17	13	16	13	16.5
Chancroid	7 days	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydia	7 days	137	1579	1455	2056	1411	1883	1402	1861	1197	1599	1411	1872
Gonorrhea	7 days	18	203	144	242	199	258	180	239	190	241	190	241.5
HIV infection <sup>9</sup> (July-September)	7 days	**	11	24	29	21	28	15	20	19	24	19	26
Syphilis <sup>10</sup>	7 days	0	24	31	41	23	34	13	19	22	24	23	29

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

- <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> Two or more laboratory-confirmed cases of community onset MRSA infection during a 14 day period
  - <sup>7</sup> Includes streptococcal toxic shock syndrome and necrotizing fasciitis
  - <sup>8</sup> Due to *Staphylococcus aureus*
  - <sup>9</sup> HIV/AIDS data are provided quarterly by IDPH and are provisional, based on date of diagnosis.
  - <sup>10</sup> 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](http://www.cdc.gov)

**IDPH:**  
[www.dph.illinois.gov](http://www.dph.illinois.gov)

**DuPage:**  
[www.dupagehealth.org](http://www.dupagehealth.org)

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