

TECHNICAL NOTES

NOTES ON SPECIFIC DISEASES:

Anaplasma phagocytophilum: formerly known as human granulocytic ehrlichiosis (HGE).

Ehrlichia chaffeensis: formerly known as human monocytic ehrlichiosis (HME).

Ehrlichia ewingii: formerly known as other human ehrlichiosis.

Encephalitis, Post Other Infection: includes encephalitis following a non-central nervous system viral illness or after vaccine was administered.

Hepatitis B and C: due to the chronic nature of hepatitis B and C, all conditions associated with hepatitis B and C are shown by date of report to better capture and describe disease incidence. Data in the "Month of Onset" table are by the month the case was reported to the Centers for Disease Control and Prevention (CDC). There is no staff person at the ODH who verifies that cases meet the CDC/Council of State and Territorial Epidemiologists (CSTE) case definitions. Algorithms in the electronic reporting system have been developed for this purpose but it is unknown how accurate they are. In addition, duplicate cases and case completeness are not able to be verified or corrected.

Influenza-Associated Hospitalization: became a reportable condition in Ohio on Jan. 1, 2009.

Influenza-Associated Pediatric Mortality: includes cases for children less than 18 years of age. Data in the "Month of Onset" table are by the month of death.

Influenza A Virus, Novel Human Infection: became a reportable condition in Ohio on Jan. 1, 2009.

LaCrosse Virus Disease: also known as California serogroup virus disease. Case reporting to the CDC is through ArboNet. ArboNet is an electronic-based surveillance system created by the CDC to streamline arboviral disease reporting from state public health departments. Please refer to the ODH Web site for further information on vectorborne diseases at <http://www.odh.ohio.gov/odhPrograms/dis/zoonoses/vbdp/vbdp1.aspx>.

Meningitis, Other Bacterial: includes cases of bacterial meningitis for which the agent was specified, excluding Group A *Streptococcus*, Group B *Streptococcus* (in newborns less than 3 months of age), *Haemophilus influenzae*, *Listeria monocytogenes*, *Mycobacterium tuberculosis*, *Neisseria meningitidis* and *Streptococcus pneumoniae*. Cases of meningitis due to these agents are reported as those specific conditions.

Rabies, Animal: refers only to cases among animal species. The last reported case of human rabies in Ohio occurred in 1971.

St. Louis Encephalitis Virus Disease: case reporting to the CDC is through ArboNet. ArboNet is an electronic-based surveillance system created by the CDC to streamline arboviral disease reporting from state public health departments. Please refer to the ODH Web site for further information on vectorborne diseases at <http://www.odh.ohio.gov/odhPrograms/dis/zoonoses/vbdp/vbdp1.aspx>.

***Streptococcus pneumoniae*, Invasive Disease, Ages <5 Years**: numbers include cases for all children less than 5 years of age, regardless of drug-resistance pattern.

***Streptococcus pneumoniae*, Invasive Disease, Drug Resistant, Ages 5+ Years:** numbers include cases 5 years of age and older with intermediate resistance or resistance to one or more antimicrobial agents.

***Streptococcus pneumoniae*, Invasive Disease, Drug Susceptible, Ages 5+ Years:** numbers include cases 5 years of age and older with invasive *Streptococcus pneumoniae* that are susceptible or of unknown susceptibility to all antimicrobial agents tested.

West Nile Virus Infection: case reporting to the CDC is through ArboNet. ArboNet is an electronic-based surveillance system created by the CDC to streamline arboviral disease reporting from state public health departments. Please refer to the ODH Web site for further information on vectorborne diseases at <http://www.odh.ohio.gov/odhPrograms/dis/zoonoses/vbdp/vbdp1.aspx>.

NOTES ON OUTBREAKS:

Numbers indicate the number of outbreaks reported and do not reflect the number of cases involved in the outbreak. Therefore, outbreak data are not included in the “Age in Years” and “Sex” tables, and rates were not calculated in any table. Outbreak data are by year of report, so “Month” refers to the month of report, except as noted. The source of outbreak data is the ODH Outbreak Response and Bioterrorism Investigation Program and the Ohio Disease Reporting System. ***Three multi-county outbreaks are not included in the “County” table; thus, county totals do not match totals.*** A multi-county outbreak is an outbreak where the exposure occurred in more than one county.

Definitions for the following categories of outbreaks are from the ODH [Infectious Disease Control Manual](#):

Community: became a Class C reportable outbreak on Jan. 1, 2009. A community outbreak is defined as two or more cases of similar illness with a common exposure in the community and not considered a foodborne or waterborne disease outbreak.

Conjunctivitis: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included conjunctivitis outbreaks of bacterial, viral or unknown etiology.

Foodborne: the occurrence of two or more cases of a similar illness resulting in the ingestion of a food in common. This is the definition of a foodborne outbreak, as found in “Surveillance for Foodborne Disease Outbreaks – United States, 2008” in: *Morbidity and Mortality Weekly Report (MMWR)*. Sept. 9, 2011; 60 (35); 1197-1202. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6035a3.htm?s_cid=mm6035a3_w. Agent-specific criteria to confirm foodborne outbreaks can be found at: http://www.cdc.gov/outbreaknet/references_resources/guide_confirming_diagnosis.html.

Healthcare-associated: became a Class C reportable outbreak on Jan. 1, 2009. The definition of a healthcare-associated outbreak is the occurrence of cases of a disease (illness) above the expected or baseline level, usually over a given period of time, as a result of being in a healthcare facility. The number of cases indicating the presence of an outbreak will vary according to the disease agent, size and type of population exposed, previous exposure to the agent and the time and place of occurrence.

Institutional: became a Class C reportable outbreak on Jan. 1, 2009. An institutional outbreak is defined as two or more cases of similar illness with a common exposure at an institution (e.g., correctional facility, day care center, group home, school) and not considered a foodborne or waterborne disease outbreak.

Nosocomial: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included hospital-acquired outbreaks of all etiologies.

Pediculosis: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included louse-associated outbreaks of all origins (head, body and pubic or crab lice).

Scabies: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included scabies outbreaks, both confirmed and suspected.

Staphylococcal Skin Infections: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included staphylococcal outbreaks in which isolates were antibiotic-susceptible as well as outbreaks in which isolates were methicillin-resistant *Staphylococcus aureus* (MRSA).

Unspecified: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included outbreaks of reportable disease agents that were neither foodborne, waterborne nor nosocomial.

Unusual Incidence of Non-Class A, Class B or Class C Disease: outbreaks were no longer reportable as this entity beginning Jan. 1, 2009. Data prior to 2009 included outbreaks in which the causative agent was not a Class A, B or C disease. Most of these were outbreaks of norovirus that were point-source or person-to-person spread.

Waterborne: the definition of a waterborne disease outbreak from drinking water is two or more persons that are epidemiologically linked by location of exposure to water, time and illness (including drinking water and water not intended for drinking, excluding recreational water) and epidemiologic evidence implicating water as the probable source of illness (e.g., beverages contaminated by plumbing failures in drink mix/soda machines). The definition of a waterborne disease outbreak from recreational water is two or more persons that are epidemiologically linked by location of exposure to recreational water (e.g., swimming pools, wading pools, spas, water slides, interactive fountains, wet decks, fresh and marine bodies of water), time and illness and epidemiologic evidence that implicates water or volatilization of water-associated compounds into the air surrounding an aquatic facility as the probable source of the illness. Note that single cases of laboratory-confirmed primary amebic meningoencephalitis (PAM) due to *Naegleria fowleri*, single cases of wound or other *Vibrio* infections and single cases of chemical or toxin poisoning associated with water may in some circumstances be considered waterborne disease outbreaks. This is the definition of a waterborne outbreak, as found in "Surveillance for Waterborne Disease Outbreaks and Other Health Events Associated with Recreational Water – United States, 2007-2008" and "Surveillance for Waterborne Disease Outbreaks Associated with Drinking Water – United States, 2007-2008" in: *Morbidity and Mortality Weekly Reports (MMWR) Surveillance Summaries*. Sep. 23, 2011; 66 (SS-12): 1-75. Available at: <http://www.cdc.gov/mmwr/PDF/ss/ss6012.pdf>.

Zoonotic: became a Class C reportable outbreak on Jan. 1, 2009. The definition of a zoonotic outbreak is the occurrence of two or more cases of a similar illness with a common exposure to an animal source and not considered a foodborne or waterborne disease outbreak.

NOTES ON RATE CALCULATIONS:

Population estimates for rates in the “Age in Years,” “Sex” and “County of Residence” tables come from the 2010 U.S. Census. Population estimates for rates in the “Year of Onset” table come from the U.S. Census midpoint estimates for each year except 2010, which uses the actual count. Rates were only calculated in the “Age in Years” table for the following conditions because they pertain to selected age populations and not the entire population (please refer to the “Age in Years” table for rates by age group, when available):

- Botulism, infant
- Cytomegalovirus (CMV), congenital
- Hepatitis B, perinatal infection
- Influenza-associated pediatric mortality
- Streptococcal disease, group B, in newborn
- *Streptococcus pneumoniae*, invasive disease, ages < 5 years
- *Streptococcus pneumoniae*, invasive disease, drug resistant, ages 5+ years
- *Streptococcus pneumoniae*, invasive disease, drug susceptible, ages 5+ years
- Toxoplasmosis, congenital

DISEASES NOT INCLUDED IN TABLES:

There were no known cases in Ohio of the following reportable diseases during at least the past five years; thus, they are not included in the 2006-2010 disease tables (pp. 6-8):

- Anthrax
- Diphtheria
- Eastern equine encephalitis virus disease
- Ehrlichiosis/anaplasmosis undetermined
- Encephalitis, post mumps
- Encephalitis, post chickenpox
- Hantavirus
- Plague
- Poliomyelitis
- Powassan virus disease
- Rabies, human
- Reye syndrome
- Rubella, congenital and not congenital
- Severe acute respiratory syndrome
- Smallpox
- *Staphylococcus aureus*, resistant to vancomycin
- Trichinosis
- Viral hemorrhagic fever
- Western equine encephalitis virus disease
- Yellow fever

There were no outbreaks of the following reported 2006-2008:

- Blastomycosis
- Histoplasmosis
- Sporotrichosis
- Toxoplasmosis

Reportable diseases not included in the “Age in Years,” “Sex,” “Month of Onset” and “County of Residence” tables (pp. 9-44) had no known cases reported in 2010.

NOTE ON SALMONELLA SEROTYPES AND MENINGOCOCCAL DISEASE SEROGROUPS:

The bacteriology laboratory at ODH performs serotyping of *Salmonella* isolates and serogrouping of *Neisseria meningitidis* isolates. Hospital and other clinical laboratories are encouraged to send *Salmonella* and *Neisseria meningitidis* isolates to the ODH Laboratory for serotyping and serogrouping. The ODH Laboratory also requests Shiga toxin-producing *Escherichia coli*, *Listeria*, *Vibrio*, *Haemophilus influenzae* (in children under 5 years of age) and vancomycin resistant *Staphylococcus aureus* isolates with a minimum inhibitory concentration (MIC) of 8 or greater. For

further information on the submission of isolates, please contact the bacteriology laboratory at (614) 644-4656.

REFERENCES

1. Centers for Disease Control and Prevention. Update: Influenza Activity – United States, 2009-2010 Season. *Morbidity and Mortality Weekly Report (MMWR)*. Jul. 30, 2010; 59 (29): 901-908. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5929a2.htm?s_cid=mm5929a2_w. Accessed Oct. 24, 2011.
2. Centers for Disease Control and Prevention. Questions and Answers: Vaccine Against 2009 H1N1 Influenza Virus. Available at: http://www.cdc.gov/h1n1flu/vaccination/public/vaccination_ga_pub.htm. Accessed Oct. 24, 2011.
3. Centers for Disease Control and Prevention. Update: Influenza Activity – United States, 2010-11 Season, and Composition of the 2011-12 Influenza Vaccine. *Morbidity and Mortality Weekly Report (MMWR)*. Jun. 3, 2011; 60 (21): 705-712. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6021a5.htm?s_cid=mm6021a5_w. Accessed Oct. 24, 2011.
4. Ohio Department of Health. LaCrosse Virus Disease. In: *Infectious Disease Control Manual*. Columbus, OH: Ohio Department of Health; 2011: 1-6. Available at: <http://www.odh.ohio.gov/pdf/IDCM/lac.pdf>. Accessed Aug. 30, 2011.
5. Centers for Disease Control and Prevention. . Update: Mumps Outbreak --- New York and New Jersey, June 2009--2010. *Morbidity and Mortality Weekly Report (MMWR)*. Feb. 12, 2010; 59 (05): 125-129.
6. Ohio Department of Health. Shigellosis. In: *Infectious Disease Control Manual*. Columbus, OH: Ohio Department of Health; 2011: 1-4. Available at: <http://www.odh.ohio.gov/pdf/IDCM/shig.pdf>. Accessed Aug. 31, 2011.
7. American Academy of Pediatrics. *Shigella* Infections. In: Pickering LK, ed. *Red Book: 2009 Report of the Committee on Infectious Diseases*. 28th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009: 593-596.