

TECHNICAL NOTES

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.

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). The Hepatitis C Surveillance Special Project started in mid-2013, which resulted in most of the 2013 acute hepatitis C records being reported to CDC in the second half of the year. Chronic hepatitis B and past or present hepatitis C data are not published due to insufficient case ascertainment.

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. This infection is listed in the Vaccine-Preventable Diseases tables as it is an influenza A virus infection, even though in all likelihood there will not be a readily available vaccine for a novel virus infection.

LaCrosse Virus Disease: also known as California serogroup virus disease.

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.

***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.

OUTBREAKS

Numbers indicate the number of outbreaks reported and do not reflect the number of cases involved in the outbreak, except as noted. Outbreak data for vaccine-preventable diseases (i.e., influenza, pertussis, varicella-zoster virus) only include confirmed outbreaks. All other outbreaks are confirmed, probable or suspected.

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 Bureau of Infectious Diseases, the Ohio Disease Reporting System and local health jurisdictions. ***Eight multistate and multicounty outbreaks are not included in the “County” table; thus, county totals do not match totals. (There were 6 foodborne and 2 zoonotic that were multistate or multicounty.)*** A multistate outbreak is an outbreak where the exposure occurred in more than one state while a multicounty outbreak is an outbreak where the exposure occurred in more than one county.

Cases in the non-influenza vaccine-preventable outbreaks (i.e., pertussis, varicella-zoster virus) are either confirmed or probable status. Cases in all other outbreaks are confirmed, probable or suspected.

Definitions for the six categories of outbreaks are from the ODH [Infectious Disease Control Manual \(IDCM\)](#); foodborne outbreaks and waterborne outbreaks are also defined on the CDC’s Nationally Notifiable Disease Surveillance System’s [website](#). Outbreak definitions for vaccine-preventable diseases are located in the [disease-specific chapters](#) of the IDCM.

Community: 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.

Foodborne: an incident in which two or more persons experience a similar illness after ingestion of a common food, and epidemiologic analysis implicates the food as the source of the illness. Agent-specific criteria to confirm foodborne outbreaks can be found at: http://www.cdc.gov/foodsafety/outbreaks/investigating-outbreaks/confirming_diagnosis.html.

Healthcare-associated: defined as the occurrence 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: 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.

Waterborne: defined as any outbreak of an infectious disease, chemical poisoning or toxin-mediated illness where water is indicated as the source by an epidemiological investigation.

Zoonotic: defined as 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.

EPICENTER ANOMALY DE-DUPLICATION TO REPORT ON A SINGLE EVENT

Within EpiCenter, anomaly records can be marked “associated” or as a “duplicate” if the time period or the patient line lists are relatively the same. Methodology of selecting “associated” versus “duplicate” is oftentimes a user’s preference. Combining anomalies as associated effectively groups the records together allowing a user to select the same health event outcome for all anomalies. Enumeration of health events when associated would overestimate the true number of health events. A reclassification hierarchy was constructed to resolve these preferences of reporting for a more consistent enumeration of health events. Records that were labeled with the same classifier on the same day were separated and all but one record of the greatest hierarchy was kept to label the health event. The hierarchy used was: “Environmental health event”, “Naturally occurring disease outbreak”, “Seasonal illness health event”, “Severe weather event”, “Other health event”, “Not a health event”, “Data error (facility or EpiCenter)”, “Unknown health event”, “Indeterminate”, “Duplicate”, and “Incomplete assessment”. The remaining records were recoded as duplicate anomalies. Duplicates (N = 1,257) and incomplete assessments (N = 118) were removed from the enumeration of health event totals for the 2013 report.

RATE CALCULATIONS

Population estimates for rates in the “Age in Years,” “Sex” and “County of Residence” tables come from the 2013 U.S. Census estimates. Population data for rates in the “Year of Onset” table come from the U.S. Census estimates for each year except 2010, which uses the actual count. Rates were not calculated for the following conditions because they pertain to selected age populations and not the entire population. Rates were calculated in the “Age in Years” table only for the conditions below containing an asterisk (*) because appropriate population data were available for the denominator:

- 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*

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 2009-2013 disease tables (pp. 6-7):

- Anthrax
- Diphtheria
- Eastern equine encephalitis virus disease
- Hantavirus
- Plague
- Poliomyelitis
- Powassan virus disease
- Rabies, human
- Rubella, congenital
- Severe acute respiratory syndrome
- Smallpox
- St. Louis encephalitis virus disease
- *Staphylococcus aureus*, resistant to Vancomycin (VRSA)
- Viral hemorrhagic fever
- Western equine encephalitis virus disease
- Yellow fever

Reportable diseases not included in the “Age in Years,” “Sex,” “Month of Onset” and “County of Residence” tables (pp. 8-43) had no known cases reported in 2013.

SEROTYPES AND SEROGROUPS

The bacteriology laboratory at ODH performs serogrouping of Shiga toxin-producing *Escherichia coli* isolates, serogrouping of *Neisseria meningitidis* isolates and serotyping of *Salmonella* isolates. Hospital and other clinical laboratories are encouraged to send *Salmonella*, *Neisseria meningitidis* and Shiga toxin-producing *Escherichia coli* isolates to the ODH Laboratory for serotyping and serogrouping. The ODH Laboratory also requests *Listeria* and *Vibrio* isolates. *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 are requested to be sent directly to the Centers for Disease Control and Prevention (CDC) Laboratory. For further information on the submission of isolates, please contact the bacteriology laboratory at (614) 644-4656.

REFERENCES

1. Ohio Department of Health. Lyme Disease. In: *Infectious Disease Control Manual*. Columbus, OH: Ohio Department of Health; 2015: 1-7. Available at: <http://www.odh.ohio.gov/pdf/IDCM/lyme.pdf>. Accessed January 29, 2015.