Public Health Authorities understand that providing clinicians with feedback about infectious disease activity in the community encourages them to report diseases, especially if the data they report is translated into information that is clinically relevant. We are pleased to present this second in a series of annual infectious disease summaries in which we characterize disease reports for the year, offer commentary on some emerging pathogens and diseases of ongoing concern to the community, and provide current requirements and guidance for disease reporting and handling of disease isolates for typing by the State laboratory.

**Food-borne illnesses**

Food-related diseases are still the second most commonly reported communicable diseases after sexually-transmitted diseases. In 1999, 27 cases caused by *Salmonella* species, *Listeria monocytogenes*, *Campylobacter jejuni*, and *E. coli* O157H7 were reported in Mahoning County. *Salmonella enteriditis* and *S. typhimurium* were the most frequently implicated food-borne pathogens. In August 1999, the District Board of Health and Ohio Department of Health investigated five pediatric cases of salmonellosis reported within a two-week period but could find no common source of infection for this cluster of cases. Laboratory analysis of isolates by pulsed field gel electrophoresis from these cases revealed that the *Salmonella* serotypes involved were dissimilar, suggesting that no outbreak had occurred and that the cases were randomly clustered in time.

With the exception of listeriosis, food-borne disease incidence locally remains well below national objectives (Figure 1). Listeriosis incidence increased for the third successive year, following a state-wide outbreak of the disease in 1998. Although overall disease incidence is low, invasive disease is particularly serious for immunocompromised individuals, pregnant women and their fetuses and neonates, and the elderly. The death of one Mahoning County elderly resident was attributed to *Listeria* infection during the 1998 outbreak.

**Figure 1: Listeriosis in Mahoning Co.**

*Hepatitis A* transmission is sometimes attributed to poor food-handling by infected persons, but food-borne transmission was not apparent in any of the increased number (11) reported in 1999. Four cases in one Poland family may have been linked to consumption of contaminated well water on a farm in Columbiana County. No common source of infection was suspected for the other seven cases; one of 1
these persons was diagnosed subsequent to vacationing on a cruise ship.

Physicians and clinical laboratories have responded positively to our request for isolates to help public health authorities identify the source of food-borne illnesses. Isolates were received for 100 percent of reported cases of listeriosis in Ohio in 1999; 66 percent of salmonellosis cases; and 92 percent of E. coli O157H7 cases. As illustrated by the suspected outbreak of salmonellosis in Mahoning County in 1999, access to disease isolates and new laboratory techniques have enabled disease investigators to identify strains of pathogenic organisms and determine if an apparent outbreak of disease has a common source.

The Ohio Department of Health requests that you continue to send the following isolates:

* All *Salmonella* spp., *Shigella* spp., *Listeria* spp., and *Bordetella pertussis*
* All E. coli O157 (suspected or confirmed) and non-O157 E. coli strains associated with cases of hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP)
* Neisseria meningitidis from normally sterile sites, or cases of pneumonia or other serious, invasive respiratory disease (do not submit routine throat cultures)
* Haemophilus influenzae from normally sterile sites in persons < 5 years of age.

The Ohio Department of Health laboratory is no longer requesting *Streptococcus pyogenes or Streptococcus pneumoniae* isolates for surveillance purposes, although it will continue to accept *Streptococcus* isolates involving suspected vaccine failure or disease outbreaks. More information about laboratory testing and infectious disease in Ohio is available by calling 614-644-4659.

**Rabies**

The number of animal rabies cases declined from a high of 48 in 1997 to one in 1999, demonstrating the effectiveness of the twice-yearly oral vaccine baiting of the raccoon population to control epizootic rabies. The one rabid animal was a bat in Youngstown reported in October 1999.

Animal bites are reportable in Ohio and must be reported to the local board of health in order to ascertain the risk of rabies transmission and recommend post-exposure prophylaxis. The rate of animal bites and exposures in Youngstown and Mahoning County increased slightly subsequent to the 1997 raccoon rabies epizootic (Figure 2). Managing bat encounters and rabies risk is a particular challenge. Most of the human deaths from rabies in the United States in recent years have been due to infection with bat variants of the rabies virus. Consequently, the Centers for Disease Control and Prevention recommend an aggressive approach to managing potential human exposures to bats. Rabies treatment is recommended for the these exposures after contact with a rabid or untestable bat:

- bites
- scratches
- saliva or nervous tissue in contact with a mucous membrane or an open break in the skin

Because persons can develop rabies without an apparent exposure, rabies treatment is also recommended when there is a reasonable probability of exposure under these circumstances:

- a bat found in a room with a sleeping person
- a bat found in a room with an unattended child
- in some circumstances, a bat found in close proximity to an unattended child outdoors
• a bat found in a room with an individual under the influence of alcohol or drugs or with other sensory or mental impairment

The District Board of Health and Youngstown Board of Health recommended post-exposure prophylaxis for four persons in Mahoning County in 1999. The District Board of Health provides vaccine and rabies immune globulin for medically indigent persons.

Figure 2: Animal Bites in Mahoning Co.

Vaccine-preventable diseases

One case of pertussis in a two-week-old Boardman boy was reported in 1999. The infant was too young to have begun his initial series of the diphteria-pertussis-tetanus vaccine.

Tuberculosis

Tuberculosis incidence declined in 1999 to 2.6 cases per 100,000 population. The District Board of Health has established an objective of reducing the incidence of disease to no more than 1.5 cases per 100,000 in 2000 (Figure 3). Of the 2,800 county residents screened for tuberculosis by Mantoux test in 1999, 1.0 percent were infected with the tubercle bacillus.

Figure 3: Tuberculosis in Mahoning Co.

Electronic disease reporting

The Ohio Department of Health has just received a grant to develop an electronic disease reporting system for Ohio. ODH intends to create an on-going database at a central location that provides up-to-date information through continuous, high-speed Internet access to local boards of health. Electronic reporting has great potential for improving the “user-friendliness” of disease reporting for the private sector - especially hospitals and laboratories. By submitting electronic reports directly to ODH, the need to determine which health district in which a case resides is eliminated. With instantaneous, automatic forwarding of these reports to the health district of jurisdiction, the electronic disease reporting system should also enable local boards of health to respond more promptly to disease outbreaks and provide more frequent updates on disease activity to physicians and health care facilities in the community.
### “Class A” Reportable Diseases in Mahoning County, 1999

<table>
<thead>
<tr>
<th>Disease</th>
<th>MCGHD</th>
<th>Youngstown</th>
<th>Campbell</th>
<th>Struthers</th>
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<th>Total</th>
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<td>674</td>
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MCGHD – Mahoning County General Health District

Included in this report is a one-page guide to disease reporting requirements in Mahoning County. More information about infectious disease activity in Ohio is available on the ODH website at [www.odh.state.oh.us](http://www.odh.state.oh.us).

Matthew A. Stefanak, M.P.H  
Mahoning County Health Commissioner

We wish to acknowledge the assistance of Russ Henshaw and the Ohio Department of Health Infectious Disease Surveillance staff in compiling disease reports for 1999.
Know your ABCs: a quick guide to Reportable Infectious Diseases in Ohio
From the Ohio Administrative Code 3701-3-02, 3701-3-05 and 3701-3-12

Diseases by class, with reporting requirements

Class A Diseases
(1) diseases of major public health concern because of the severity of disease or potential for epidemic spread - report to the board of health of the health district in which the case resides by telephone immediately upon recognition that a case, a suspected case, or a positive laboratory result exists.

Anthrax                                Diphtheria                   Meningococcal disease                   Rabies, human
Botulism, foodborne                     Measles                      Plague                                          Rubella (not congenital) Cholera

(2) diseases of public health concern needing timely response because of potential for epidemic spread -- report to the board of health by the end of the next business day after the existence of a case, a suspected case, or a positive laboratory result is known.

Chancroid                    Haemophilus influenzae               Meningitis, aseptic, including lymphocytic & Psittacosis
Cyclosporiasis              (invasive disease)                          Choriomeningitis & Rubella, congenital
Dengue                    Hantavirus                                     Meningococcal invasive meningococcal plague
E. coli 0157:H7             Hemolytic uremic syndrome                    Mumps                                          Salmonellosis
Encephalitis, including    Hepatitis A                                  Mycobacterial disease, including tuberculosis Shigelliosis
arthropod-borne outbreaks   Legionnaires’ disease                      Pertussis                                         Tetanus
Granuloma inguinale       Listeriosis                                  Poliomyelitis (including vaccine-associated cases) Typhoid fever

(3) diseases of significant public health concern -- report to the board of health by the end of the work week after the existence of a case, a suspected case, or a positive laboratory result is known.

Amebiasis                        Cryptosporidiosis                   Meningitis, including other bacterial infections Botulism, wound
Encephalitis, other viral       Cytomegalovirus                              Meningitis, including other bacterial infections Botulism, infant
post-Kawasaki disease          (congenital)                          Mucocutaneous lymph                          Streptococcal toxic shock Botulism, syndrome (STSS)
Pelvic inflammatory disease    Giardiasis                                     Mucocutaneous lymph                          Streptococcal toxic shock Botulism, syndrome (STSS)
(“nonspecific urethritis, gonococcal” cervitis, salpingitis,
neonatal conjunctivitis, Hepatitis B, C, non-A, non-B
pneumonia & Rocky mountain spotted
lymphgranuloma                  Herpes (congenital only)                      Reye syndrome                                  Vancomycin-resistant
venerereum)                    Gonococcal infections                         Rheumatic fever                                 anterococcus
Creutzfeldt-Jakob disease    Leptospirosis (congenital)                    Rocky mountain spotted fever
Histoplasmosis                 Lyme disease                                   Rocky mountain spotted fever
(“nonspecific urethritis, gonococcal”

Class B Diseases - the number of cases is to be reported by the close of each working week.

Chickenpox                    Herpes-genital
Influenza

Class C Diseases - report an outbreak, unusual incidence, or epidemic by the end of the next working day.

Blastomycosis                 Nosocomial infections
Conjunctivitis, acute of any type
Histoplasmosis                 Pediculosis
Sporotrichosis
Toxoplasmosis

Phone numbers for reporting in Mahoning County:
All other cases 330-270-2855