



Mahoning County

DISTRICT BOARD OF HEALTH

Annual Summary of Infectious Diseases in Mahoning County, 1999

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.

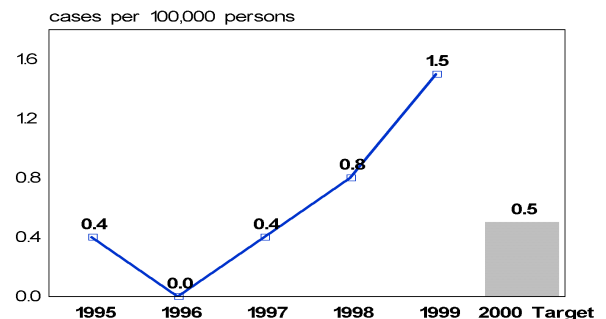
Food-borne illnesses

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 enteritidis* 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

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)

* *Haemophilis 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 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

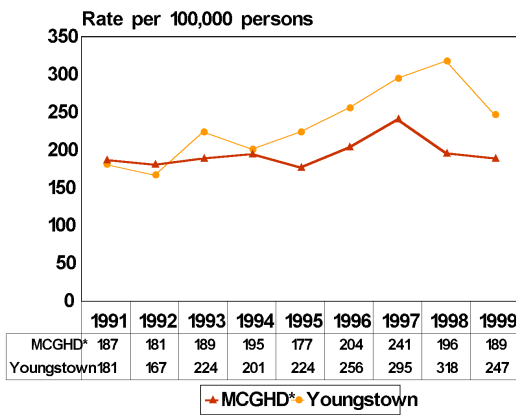
Because persons can develop rabies without an apparent exposure, rabies treatment is also recommended when there is a reasonable probability of exposure under these circumstances:

- 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.



*Mahoning County General Health District excludes Youngstown, Campbell and Struthers

Vaccine-preventable diseases

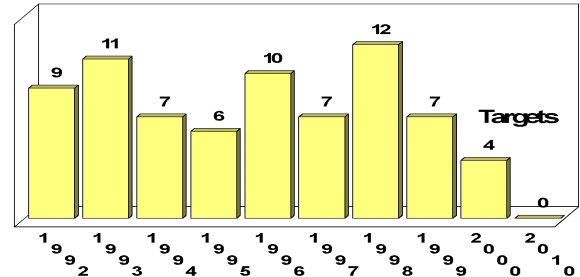
One case of pertussis in a two-week-old Boardman boy was reported in 1999. The infant was too young to have begun his initial series of the diphtheria-pertussis-tetanus vaccine.

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

	MCGHD	Youngstown	Campbell	Struthers	Unknown	Total	Median Age	Age Range	% Male
Chlamydia					527	527	20-24	--	14
Gonorrhea					337	337	20-24	--	40
Salmonellosis	4	3	1	1	6	15	6	5 mos. – 75	40
Hepatitis A	11					11	37	8-58	82
Tuberculosis	4	3				7	72	56-86	71
Campylobacteriosis	3	4				7	53	--	43
AIDS					5	5	38	30-48	60
Giardiasis	3	2				5	52	24-67	40
Hepatitis B	4					4	46	44-56	100
Listeriosis	2	2				4	46	46-74	25
Syphilis					2	2	--	--	--
Infectious meningitis	2					2	40	7-72	50
Invasive Group A Streptococcal disease	2					2	56	42-70	100
Legionnaires' disease	1					1	60	--	100
Pertussis	1					1	13 days	--	100
Yersiniosis		1				1	33	--	0
Aseptic meningitis	1					1	26	--	100
Shigellosis				1		1	--	--	100
Animal rabies		1				1	--	--	--
<i>E. coli</i> 0157H7	1					1	56	--	0
Lyme disease	1					1	42	--	0

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.

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,	Psittacosis
Cyclosporiasis	(invasive disease)	including lymphocytic	Rubella, congenital
Dengue	Hantavirus	choriomeningitis &	Salmonellosis
E. coli 0157:H7	Hemolytic uremic	viral meningoencephalitis	Shigellosis
Encephalitis, including	syndrome	Mumps	Syphilis
arthropod-borne	Hepatitis A	Mycobacterial disease,	Tetanus
Foodborne disease	Legionnaires' disease	including tuberculosis	Typhoid fever
outbreaks	Listeriosis	Pertussis	Waterborne disease
Granuloma inguinale	Malaria	Poliomyelitis	outbreaks
		(including vaccine-associated cases)	Yellow 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	Streptococcal toxic shock
wound	Cytomegalovirus	bacterial	syndrome (STSS)
Botulism, infant	(congenital)	Mucocutaneous lymph	Streptococcus pneumoniae
Encephalitis, other viral	node syndrome	invasive disease	Brucellosis
post-	(Kawasaki disease)	Toxic shock syndrome (TSS)	Encephalitis,
Pelvic inflammatory disease	Toxoplasmosis (congenital)	Chlamydia infections	infection
(nonspecific urethritis,	Giardiasis	gonococcal	Trichinosis
cervicitis, salpingitis,	Gonococcal infections	Rhyme syndrome	Tularemia
neonatal conjunctivitis,	Hepatitis B, C and	Rheumatic fever	Typhus fever
pneumonia &	non-A, non-B	Rocky mountain spotted	Vancomycin-resistant
lymphgranuloma	Herpes (congenital only)	fever	anterococcus
(venereum)	Leprosy	Streptococcal disease	Vibrosis
Creutzfeldt-Jakob	Leptospirosis	group A, invasive	Yersiniosis
disease	Lyme disease	Streptococcal B in newborn	

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

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

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

Phone numbers for reporting in Mahoning County:

Youngstown	330-743-3333	Struthers	330-755-7977	Campbell	330-755-1451
All other cases 330-270-2855					