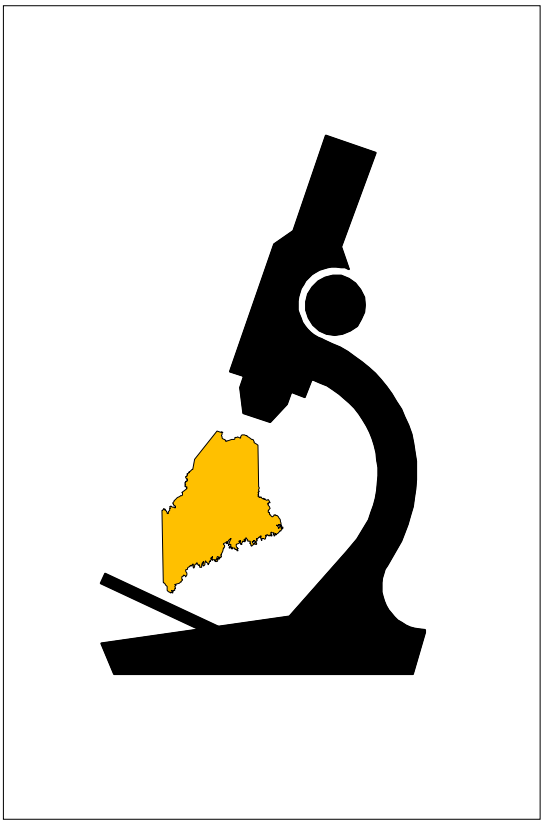
Reportable Infectious Diseases in Maine



2012 Summary

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Paul R. LePage, Governor
Mary C. Mayhew, Commissioner

Reportable Infectious Diseases in Maine

2012 Summary

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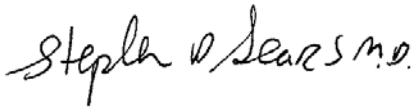
Maine Center for Disease Control and Prevention (Maine CDC) has published an annual report on infectious diseases in Maine for the last 19 years. This report is prepared by the Division of Infectious Disease and is intended to provide an overview of notifiable infectious diseases of public health importance in Maine.

We could not produce this report without the continued support of our healthcare and public health partners throughout the state. We greatly appreciate all of the laboratories, healthcare providers, childcare centers, school nurses, veterinarians and others who provide disease surveillance information. Considerable time is spent assisting Maine CDC with infectious disease investigations and disease control measures that affect Maine residents. Public health partners' active and critical role in the infectious disease surveillance cycle informs statewide policies and programs that protect our residents from infectious disease through health promotion, disease prevention, and early detection, containment, and treatment.

We appreciate and encourage your vigilance in the effort to protect the people of Maine through timely, complete, and accurate notifiable infectious disease reporting. It is through these collaborative efforts that we are able to respond to emerging infectious disease threats and prevent outbreaks.

We hope you find this report useful as we all work to protect and promote the health of Maine's residents. As always, we welcome your feedback on how we can provide more useful disease information to you, our partners.

For more information on what, when, and how to report infectious diseases please see *Appendix I (Notifiable Conditions List)* of this report, visit our website at www.mainepublichealth.gov, or call 1-800-821-5821.



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2012 Infectious Disease Surveillance Highlights

- Pertussis cases more than tripled in 2012 due to a statewide outbreak. The highest number of cases were reported in residents from Cumberland, Somerset, and York counties.
- The first case of West Nile Virus encephalitis was diagnosed in 2012 in a Maine resident with no history of travel outside of Maine.
- Active Tuberculosis cases nearly doubled with 17 cases reported in 2012, compared to 9 in 2011. Tuberculosis was identified in both US and foreign born individuals.
- Vibriosis cases doubled in 2012. A collaborative effort among Maine CDC programs, Department of Marine Resources and Department of Agriculture, Conservation and Forestry investigated cases with Maine seafood consumption.
- Gonorrhea cases increased 68% from 2011. Over half of the cases were reported in Androscoggin and Cumberland counties.
- Tickborne diseases continued to increase in 2012, with 1,111 cases of Lyme disease reported. Cases of anaplasmosis doubled from 2011, highlighting the importance of awareness and prevention efforts around tickborne diseases in Maine.
- Sexually transmitted diseases continued to disproportionately affect young people with 41% of gonorrhea and 71% of chlamydia cases reported in the 15-24 year age group. State sponsored testing programs targeted testing for females in this age group.
- In 2012, a school aged unvaccinated child died of influenza A/H3.
- Four cases of invasive group A streptococcus (GAS) were associated with intravenous use of bath salts; two of the four cases developed streptococcus toxic shock syndrome.
- 91 animals tested positive for rabies in 2012 compared to 66 animals in 2011. The positive animals included 45 raccoons, 30 skunks, 5 foxes, 5 bats, 4 cats, 1 woodchuck and 1 dog (first rabid dog identified since 2003). Maine has not had a human case of rabies since 1937.
- Eight cases of confirmed acute hepatitis C were reported to Maine CDC in 2012, compared to 12 cases in 2011. The numbers of newly reported cases of chronic hepatitis C infections increased from 1,184 in 2011 to 1,216 in 2012.
- Despite reported cases of giardiasis decreasing for the past two years, the rate of giardiasis in Maine (12.7 per 100,000 persons) is twice the national rate (5.4 per 100,000 persons).
- Diseases associated with international travel (such as malaria and shigellosis) occurred in Maine residents in 2012. As international travel becomes more common and residents visit areas with endemic infectious diseases, there is a need to emphasize preventive strategies among travelers.
- In the fall of 2012, Maine was involved in a national investigation due to the recall of drug products contaminated with fungus. No contaminated product was received in Maine, though some Maine residents received contaminated product in other states.

The History of Public Health Surveillance

The responsibility of government to control and prevent disease dates back hundreds of years. Government responsibility was exercised during the epidemics of plague, syphilis, and smallpox in the Middle Ages to identify possible sources of disease, isolate infectious cases, and quarantine their contacts to prevent further spread of infection. Illness was monitored, regulations were enacted to prevent pollution of streets and public water supplies, and instructions issued for appropriate methods of burial and food handling.

Infectious disease surveillance in the United States began soon after the colonies were established. In 1741, Rhode Island passed legislation requiring tavern keepers to report contagious disease among their patrons. Two years later, Rhode Island enacted legislation requiring the reporting of smallpox, yellow fever, and cholera. National disease surveillance began in 1850, when mortality statistics were first published by the federal government based on the decennial census. The legal requirement to collect national morbidity data in the United States was initiated in 1878 when Congress authorized the US Public Health Service to collect reports of the occurrence of diseases that require quarantine including cholera, plague, smallpox, and yellow fever.

In 1885, the Maine State Board of Health was created and consisted of six members appointed by the Governor. Disease reporting for a select few diseases was conducted by the Maine Board of Health. In 1917 the Board was replaced by the Maine Department of Health.

Overview of Public Health Surveillance

Seventy-one infectious diseases are reportable in Maine with 55 considered nationally reportable. The list of reportable infectious diseases in Maine changes periodically. The last update was in 2008. Diseases may be added to the list as new pathogens emerge or when a previously recognized pathogen becomes more important. Some diseases may be removed from the list as their incidence or importance declines. While modern advances in sanitation, personal hygiene and immunizations provide greater control and prevention of some diseases, other infectious diseases continue to thrive and still other yet-to-be-identified infectious disease entities are constantly emerging. Vaccine preventable disease are re-emerging in some parts of the world due to decreasing vaccination coverage among children.

The Maine Department of Health and Human Services (DHHS) Center for Disease Control and Prevention (Maine CDC) works with healthcare providers and laboratorians to gather infectious disease information, analyze it, and provide reports in a timely manner. Surveillance data assist us in identifying events that require immediate public health action, such as disease outbreaks and emerging diseases; identifying populations at higher risk of infection; monitoring trends in the burden of disease; guiding the planning, implementation and evaluation of disease prevention and treatment programs; and informing public policy.

The public health "patient" is the community, and information about community health can be useful to the clinician providing care to the individual. Partnership between public health professionals, healthcare providers, and clinical laboratories is critical to assure accurate, representative and timely information for all.

Disease Reporting in Maine

Healthcare providers, medical laboratories, healthcare facilities, administrators, health officers, veterinarians and others are required to report notifiable diseases to the Maine CDC (Appendix I). Diseases that require specific and immediate public health response or are possible indicators of bioterrorism are to be reported immediately by telephone. The remainder of

notifiable conditions are to be reported within 24 or 48 hours of recognition or strong suspicion of disease.

Disease reports may be made by electronic laboratory report (ELR), telephone or fax to the Maine CDC 24 hours a day, 7 days a week. The reporting numbers are toll free: telephone 1-800-821-5821 and fax 1-800-293-7534. An epidemiologist is on call 24 hours a day, 7 days a week to respond to infectious disease emergencies. Disease reports may also be mailed to the Division of Infectious Disease, 286 Water Street, 8th Floor, 11 State House Station, Augusta, Maine 04333-0011. Non-confidential reports or requests for consultation can be sent by email to disease.reporting@maine.gov.

Infectious disease conditions reportable in Maine, the Rules for the Control of Notifiable Conditions and current information regarding infectious disease incidence in Maine are available on the Maine CDC website (http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/disease-reporting/index.shtml).

The Maine Health and Environmental Testing Laboratory (HETL) tests for most reportable conditions. Certain organisms are required to be sent to HETL for confirmatory testing and the rules for isolate submission can be found on the notifiable conditions list. Information on the testing performed at HETL is available at www.mainepublichealth.gov/lab.

Purpose of Report

The Reportable Infectious Diseases in Maine 2012 Summary provides descriptive epidemiology of reportable infectious diseases in Maine and serves as a document of public health surveillance data. The report allows public health officials to comprehend the burden of reportable infectious diseases in Maine. For example, surveillance data has demonstrated the spread of deer ticks and Lyme disease within Maine.

Methods

The data in this report are based on case definitions developed by the Council of State and Territorial Epidemiologists (CSTE) and adopted by federal CDC and the Maine CDC. Case definitions may change from year to year. The case definitions used to classify 2012 data are available at http://www.cdc.gov/osels/ph_surveillance/nndss/PHS/infdis2011.htm. Cases meeting the confirmed or probable case definitions are presented in the annual report.

Tables in the introduction section include all confirmed and probable cases reported to the federal CDC for their publications, unless otherwise noted. Rates are calculated by dividing the number of cases by the appropriate population from the yearly U.S. Census estimates and multiplying by 100,000. Charts and graphs may not include the total number of cases due to missing information on patient characteristics, such as county of residence, symptom onset date, age and gender.

Over time additional information may necessitate review and updates of historical data. The most current published report will have the updated historical counts and trends for all diseases.

More detailed information about each disease condition, including educational materials for healthcare providers and the general public, is available at www.mainepublichealth.gov.

Counts of Selected Reportable Disease by Year, Maine, 2003 – 2012*

Disease	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Anaplasmosis (HGE)	1	1	5	10	9	17	15	17	26	52
Babesiosis	3	5	11	9	11	11	3	5	9	10
Campylobacteriosis	146	141	159	137	149	151	171	148	195	189
Chlamydia	2040	2120	2253	2304	2543	2594	2443	2586	3094	3413
Cryptosporidiosis	20	22	30	52	56	46	67	93	51	58
Dengue Fever	NR	NR	NR	NR	NR	NR	3	6	0	0
Ehrlichia chaffeensis (HME)	0	0	1	4	3	1	1	4	1	3
Giardiasis	184	155	202	192	197	188	223	223	171	169
Gonorrhea	231	214	142	137	118	96	143	162	272	456
Group A Streptococcal Disease (invasive)	28	16	14	19	28	28	21	47	43	37
Group B Streptococcal Disease, Infant (invasive)	2	1	3	1	1	6	2	8	2	5
H. Influenzae (invasive)	6	15	12	21	13	21	21	13	26	23
Hemolytic uremic syndrome	0	2	0	6	1	1	2	1	2	2
Hepatitis A, acute	16	16	9	8	5	18	1	7	6	9
Hepatitis B, acute	7	11	14	26	19	15	15	13	8	9
Hepatitis B, chronic	NA	NA	NA	NA	139	142	126	101	105	105
Hepatitis C, acute	2	0	0	2	1	3	2	2	12	8
HIV Infection	65	46	59	62	64	46	56	59	54	48
Legionellosis	2	1	7	11	9	11	10	12	18	18
Listeriosis	6	8	3	6	5	5	4	1	4	5
Lyme disease	175	224	245	338	530	909	976	751	1012	1111
Malaria	5	6	5	4	8	1	2	6	6	5
Meningococcal disease	10	12	2	9	8	6	4	5	5	3
MRSA, invasive	NR	NR	NR	NR	NR	47	121	90	121	116
Mumps	0	0	2	0	24	5	6	2	2	0
Pertussis	91	195	55	174	83	49	80	53	205	737
Q Fever	2	0	2	4	7	0	0	0	2	0
Rabies, animal	82	69	61	127	86	70	63	67	66	91
Salmonellosis	141	108	163	161	138	159	121	133	134	161
Shiga toxin producing *E. coli*	15	18	29	49	41	26	19	21	28	20
Shigellosis	7	13	15	10	14	20	5	8	32	7
Streptococcus pneumoniae, invasive	NA	NA	NA	NA	NA	NA	NA	151	136	102
Streptococcus pneumoniae (drug resistant invasive)	0	4	8	12	13	18	23	30	32	20
Streptococcal Toxic Shock Syndrome	1	1	0	0	1	0	0	21	12	10
Syphilis (early)	15	2	3	16	14	20	14	39	20	19
Tuberculosis	24	20	17	16	19	9	9	8	9	17
Varicella (Chickenpox)	1012	363	318	238	366	269	235	247	226	258
Vibriosis	3	4	2	5	0	3	4	5	4	10

*Counts may change from year to year.

NR = not reportable; NA = not available

Rates of Selected Reportable Disease by Year, Maine, 2003 – 2012*

Disease	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Anaplasmosis (HGE)	0.1	0.1	0.4	0.8	0.7	1.3	1.1	1.3	2.0	3.9
Babesiosis	0.2	0.4	0.8	0.7	0.8	0.8	0.2	0.4	0.7	0.8
Campylobacteriosis	11.2	10.7	12.1	10.4	11.3	11.5	13.0	11.3	14.7	14.2
Chlamydia	156.1	161.4	170.9	174.3	192.9	197.0	185.3	197.0	233.0	256.8
Cryptosporidiosis	1.5	1.7	2.3	3.9	4.3	3.5	5.1	7.1	3.8	4.4
Dengue Fever	NR	NR	NR	NR	NR	NR	0.2	0.5	0.0	0.0
Ehrlichia chaffeensis (HME)	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.3	0.1	0.2
Giardiasis	14.1	11.8	15.3	14.5	15.0	14.3	16.9	17.0	12.9	12.7
Gonorrhea	17.7	16.3	10.8	10.4	9.0	7.3	10.9	12.3	20.5	34.3
Group A Streptococcal Disease (invasive)	2.1	1.2	1.1	1.4	2.1	2.1	1.6	3.6	3.2	2.8
H. Influenzae (invasive)	0.5	1.1	0.9	1.6	1.0	1.6	1.6	1.0	2.0	1.7
Hemolytic uremic syndrome	0.0	0.2	0.0	0.5	0.1	0.1	0.2	0.1	0.2	0.2
Hepatitis A, acute	1.2	1.2	0.7	0.6	0.4	1.4	0.1	0.5	0.5	0.7
Hepatitis B, acute	0.5	0.8	1.1	2.0	1.4	1.1	1.1	1.0	0.6	0.7
Hepatitis B, chronic	NA	NA	NA	NA	10.6	10.8	9.6	7.7	7.9	7.9
Hepatitis C, acute	0.2	0.0	0.0	0.2	0.1	0.2	0.2	0.2	0.9	0.6
HIV Infection	4.2	3.5	4.4	4.3	3.9	3.5	4.3	4.3	4.1	3.6
Legionellosis	0.2	0.1	0.5	0.8	0.7	0.8	0.8	0.9	1.4	1.4
Listeriosis	0.5	0.6	0.2	0.5	0.4	0.4	0.3	0.1	0.3	0.4
Lyme disease	13.4	17.1	18.6	25.6	40.2	69.1	74.0	57.2	76.2	83.6
Malaria	0.4	0.5	0.4	0.3	0.6	0.1	0.2	0.5	0.5	0.4
Meningococcal disease	0.1	0.9	0.2	0.7	0.6	0.5	0.3	0.4	0.4	0.2
MRSA, invasive	NR	NR	NR	NR	NR	3.6	9.1	6.9	9.1	8.7
Mumps	0.0	0.0	0.2	0.0	1.8	0.4	0.5	0.2	0.2	0.0
Pertussis	7.0	14.8	4.2	13.2	6.3	3.7	6.1	4.0	15.4	55.5
Rabies, animal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Salmonellosis	10.8	8.2	12.4	12.2	10.5	12.1	9.2	10.1	10.1	12.1
Shiga toxin producing *E. coli*	1.2	1.4	2.2	3.7	3.1	2.0	1.4	1.6	2.1	1.5
Shigellosis	0.5	1.0	1.1	0.8	1.1	1.5	0.4	0.6	2.4	0.5
Streptococcus pneumoniae, invasive	NA	NA	NA	NA	NA	NA	NA	9.9	10.2	7.7
Streptococcus pneumoniae (drug resistant invasive)	0.0	0.3	0.6	0.9	1.0	1.4	1.7	2.3	2.4	1.5
Syphilis (early)	1.2	0.2	0.2	1.2	0.7	1.5	1.1	2.9	1.5	1.4
Tuberculosis	1.8	1.5	1.3	1.2	1.4	0.7	0.7	0.6	0.7	1.3
Varicella (Chickenpox)	77.4	27.6	24.1	18.0	27.8	20.4	17.8	18.8	17.0	19.4
Vibriosis	0.2	0.3	0.2	0.4	0.0	0.2	0.3	0.4	0.3	0.8

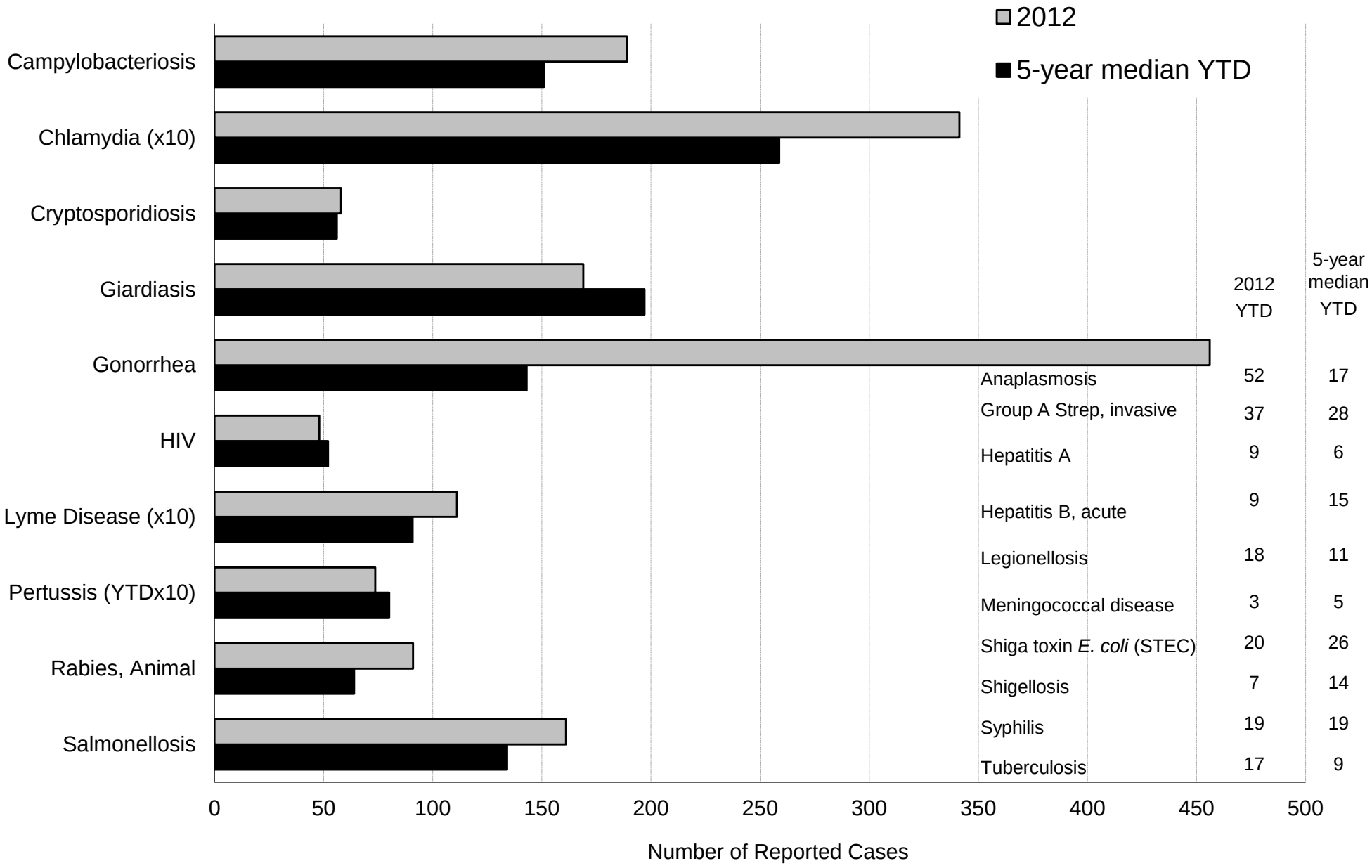
*Counts may change from year to year.
NR = not reportable
NA = not available

Reportable Diseases with Historically Small Numbers of Cases, Maine, 2003 - 2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	**10 year total**
Anthrax	0	0	0	0	0	0	0	0	0	0	**0**
Botulism, foodborne	0	1	0	0	0	0	0	0	0	0	**1**
Brucellosis	0	0	0	0	0	0	0	2	0	0	**2**
Creutzfeld-Jacob disease (<55 yo)	0	0	0	0	0	0	1	0	0	0	**1**
Cyclosporiasis	0	1	0	0	0	0	0	1	0	0	**2**
Diphtheria	0	0	0	0	0	0	0	0	0	0	**0**
Encephalitis, Arboviral	0	1	0	0	0	0	0	0	0	0	**1**
Hantavirus Pulmonary Syndrome	0	0	0	0	0	0	0	0	1	0	**1**
Measles	0	0	0	0	0	0	0	0	0	0	**0**
Plague	0	0	0	0	0	0	0	0	0	0	**0**
Psittacosis	0	1	0	0	0	0	0	0	0	0	**1**
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	**0**
Rubella	0	0	0	0	0	0	0	0	0	0	**0**
Rocky Mountain Spotted Fever^	NR	NR	NR	NR	NR	1	5	2	1	3	**12**
Severe Acute Respiratory Syndrome (SARS)	0	0	0	0	0	0	0	0	0	0	**0**
Smallpox	0	0	0	0	0	0	0	0	0	0	**0**
Tetanus	0	0	0	0	0	0	0	0	0	0	**0**
Toxoplasmosis	0	1	0	0	0	0	0	0	0	0	**1**
Trichinosis	0	0	0	0	0	0	0	1	1	0	**2**
Tularemia	0	0	0	0	0	0	0	0	0	0	**0**
Typhoid Fever	0	0	0	1	0	0	0	2	0	0	**3**
Venezuelan Equine Encephalitis	0	0	0	0	0	0	0	0	0	0	**0**
West Nile Virus	0	0	0	0	0	0	0	0	0	1	**1**
Yellow Fever	NR	0	0	0	0	0	0	0	0	0	**0**

NR=Not reportable, ^Reported cases were probable only in 2012

Selected Reportable Diseases in Maine Year-To-Date (YTD) 2012



	2012 YTD	5-year median YTD
Anaplasmosis	52	17
Group A Strep, invasive	37	28
Hepatitis A	9	6
Hepatitis B, acute	9	15
Legionellosis	18	11
Meningococcal disease	3	5
Shiga toxin *E. coli* (STEC)	20	26
Shigellosis	7	14
Syphilis	19	19
Tuberculosis	17	9

Note: Data are final as of 6/3/13.
Pertussis (YTD only), Lyme Disease and Chlamydia numbers need to be multiplied by 10.

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by County, Maine, 2012

	Anaplasmosis		Babesiosis		Campylobacteriosis		Cryptosporidiosis		*Ehrlichia chaffeensis*		Giardiasis	
County	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Androscoggin	1	0.9	0	0.0	16	14.9	1	0.9	0	0.0	17	15.8
Aroostook	0	0.0	0	0.0	7	9.9	5	7.1	0	0.0	6	8.5
Cumberland	10	3.5	3	1.1	43	15.1	8	2.8	0	0.0	50	17.6
Franklin	0	0.0	0	0.0	1	8.0	0	0.0	0	0.0	3	9.8
Hancock	2	3.7	0	0.0	5	9.2	1	1.8	0	0.0	8	14.7
Kennebec	2	1.6	1	0.8	19	15.6	11	9.0	0	0.0	19	15.6
Knox	9	22.7	2	5.0	1	2.5	0	0.0	0	0.0	3	7.6
Lincoln	9	26.3	0	0.0	8	23.4	2	5.9	1	2.9	7	20.5
Oxford	0	0.0	0	0.0	9	15.7	1	0.0	0	0.0	7	12.2
Penobscot	1	0.7	1	0.7	27	17.6	11	7.2	0	0.0	10	6.5
Piscataquis	0	0.0	0	0.0	4	23.1	4	23.1	0	0.0	4	23.1
Sagadahoc	0	0.0	0	0.0	5	14.2	1	2.8	1	2.8	5	14.2
Somerset	1	1.9	0	0.0	8	15.4	6	11.6	0	0.0	11	21.2
Waldo	0	0.0	0	0.0	4	10.3	3	7.7	0	0.0	3	7.7
Washington	1	3.1	0	0.0	5	15.4	1	0.0	0	0.0	2	6.2
York	16	8.0	3	1.5	27	13.6	3	1.5	1	0.5	14	7.0
Maine Total	52	3.9	10	0.8	189	14.2	58	4.4	3	0.2	169	12.7

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by County, Maine, 2012

	***Haemophilus influenzae*, invasive**		**Hemolytic uremic syndrome**		**Hepatitis A**		**Hepatitis B, acute**		**Hepatitis B, chronic**		**Legionellosis**	
County	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Androscoggin	5	4.6	0	0.0	1	0.9	0	0.0	13	12.1	2	1.9
Aroostook	1	1.4	0	0.0	0	0.0	1	1.4	2	2.8	1	1.4
Cumberland	6	2.1	2	0.7	5	1.8	3	1.1	54	19.0	2	0.7
Franklin	0	0.0	0	0.0	0	0.0	0	0.0	1	3.3	1	3.3
Hancock	1	1.8	0	0.0	0	0.0	1	1.8	5	9.2	2	3.7
Kennebec	2	1.6	0	0.0	1	0.8	0	0.0	4	3.3	2	1.6
Knox	1	2.5	0	0.0	0	0.0	0	0.0	2	5.0	2	5.0
Lincoln	1	2.9	0	0.0	0	0.0	0	0.0	1	2.9	0	0.0
Oxford	0	0.0	0	0.0	1	1.7	0	0.0	0	0.0	1	1.7
Penobscot	1	0.7	0	0.0	0	0.0	1	0.7	7	4.6	2	1.3
Piscataquis	0	0.0	0	0.0	0	0.0	1	5.8	0	0.0	0	0.0
Sagadahoc	1	2.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Somerset	0	0.0	0	0.0	0	0.0	0	0.0	3	5.8	2	3.9
Waldo	0	0.0	0	0.0	0	0.0	1	2.6	1	2.6	0	0.0
Washington	1	3.1	0	0.0	0	0.0	0	0.0	1	3.1	1	3.1
York	3	1.5	0	0.0	1	0.5	1	0.5	11	5.5	0	0.0
Maine Total	23	1.7	2	0.2	9	0.7	9	0.7	105	7.9	18	1.4

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by County, Maine, 2012

	Listeriosis		Lyme Disease		Malaria		Meningococcal invasive disease		MRSA, invasive		Mumps	
County	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Androscoggin	0	0.0	80	74.3	0	0.0	1	0.9	4	3.7	0	0.0
Aroostook	1	1.4	1	1.4	0	0.0	0	0.0	18	25.4	0	0.0
Cumberland	0	0.0	266	93.7	4	1.4	1	0.4	31	10.9	0	0.0
Franklin	0	0.0	6	19.6	0	0.0	0	0.0	2	6.5	0	0.0
Hancock	0	0.0	59	108.1	0	0.0	0	0.0	2	3.7	0	0.0
Kennebec	1	0.8	128	105.0	0	0.0	0	0.0	13	10.7	0	0.0
Knox	0	0.0	109	274.8	0	0.0	0	0.0	2	5.0	0	0.0
Lincoln	0	0.0	65	190.2	0	0.0	0	0.0	3	8.8	0	0.0
Oxford	1	1.7	25	43.5	0	0.0	0	0.0	5	8.7	0	0.0
Penobscot	0	0.0	21	13.7	0	0.0	0	0.0	11	7.2	0	0.0
Piscataquis	0	0.0	2	11.6	0	0.0	0	0.0	3	17.4	0	0.0
Sagadahoc	0	0.0	59	167.7	0	0.0	0	0.0	2	5.7	0	0.0
Somerset	0	0.0	11	21.2	0	0.0	0	0.0	6	11.6	0	0.0
Waldo	0	0.0	55	141.7	1	2.6	0	0.0	4	10.3	0	0.0
Washington	0	0.0	7	21.6	0	0.0	0	0.0	2	6.2	0	0.0
York	2	1.0	217	109.0	0	0.0	1	0.5	8	4.0	0	0.0
Maine Total	5	0.4	1111	83.6	5	0.4	3	0.2	116	8.7	0	0.0

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by County, Maine, 2012

	Pertussis		Rabies, animal		Salmonellosis		Shiga toxin producing *E. coli*		Shigellosis	
County	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	No.
Androscoggin	65	60.4	4		8	7.4	0	0.0	1	0.0
Aroostook	5	7.1	0		4	5.6	0	0.0	0	0.0
Cumberland	225	79.2	10		34	12.0	7	2.5	4	1.4
Franklin	1	3.3	3		9	29.4	0	0.0	0	0.0
Hancock	44	80.6	0		8	14.7	1	1.8	0	0.0
Kennebec	64	52.5	14		25	20.5	4	3.3	0	0.0
Knox	14	35.3	8		3	7.6	0	0.0	0	0.0
Lincoln	2	5.9	4		2	5.9	0	0.0	0	0.0
Oxford	31	53.9	7		5	8.7	0	0.0	0	0.0
Penobscot	67	43.6	13		12	7.8	2	1.3	0	0.0
Piscataquis	24	138.8	2		0	0.0	0	0.0	0	0.0
Sagadahoc	12	34.1	7		2	5.7	0	0.0	0	0.0
Somerset	102	196.5	1		7	13.5	0	0.0	0	0.0
Waldo	9	23.2	7		2	5.2	0	0.0	0	0.0
Washington	2	6.2	0		6	18.5	1	3.1	0	0.0
York	70	35.2	11		34	17.1	5	2.5	2	1.0
Maine Total	737	55.5	91		161	12.1	20	1.5	7	0.5

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by County, Maine, 2012

	Streptococcus, invasive Group A		***Streptococcus pneumoniae*, invasive**		**Tuberculosis**		**Varicella (Chickenpox)**		**Vibriosis**	
County	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Androscoggin	4	3.7	14	13.0	3	2.8	8	7.4	0	0.0
Aroostook	2	2.8	9	12.7	1	1.4	10	14.1	0	0.0
Cumberland	6	2.1	17	6.0	10	3.5	66	23.2	6	2.1
Franklin	2	6.5	1	3.3	0	0.0	5	16.3	0	0.0
Hancock	0	0.0	3	5.5	1	1.8	11	20.2	0	0.0
Kennebec	9	7.4	16	13.1	0	0.0	26	21.3	0	0.0
Knox	1	2.5	1	2.5	0	0.0	9	22.7	0	0.0
Lincoln	1	2.9	5	14.6	0	0.0	7	20.5	0	0.0
Oxford	0	0.0	2	3.5	0	0.0	8	13.9	0	0.0
Penobscot	7	4.6	20	13.0	0	0.0	24	15.6	0	0.0
Piscataquis	0	0.0	1	5.8	0	0.0	7	40.5	0	0.0
Sagadahoc	1	2.8	2	5.7	0	0.0	5	14.2	1	2.8
Somerset	0	0.0	6	11.6	0	0.0	32	61.6	0	0.0
Waldo	2	5.2	1	2.6	0	0.0	3	7.7	0	0.0
Washington	0	0.0	2	6.2	0	0.0	4	12.3	0	0.0
York	2	1.0	2	1.0	2	1.0	33	16.6	3	1.5
Maine Total	37	2.8	102	7.7	17	1.3	258	19.4	10	0.8

Reportable HIV/STDs, Number of Cases and Rate per 100,000 Persons by County, Maine, 2012

	Chlamydia		Gonorrhea		Syphilis, Primary and Secondary*		HIV	
County	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Androscoggin	457	424.7	193	179.4	0	0.0	6	5.6
Aroostook	103	145.3	7	9.9	0	0.0	0	0.0
Cumberland	746	262.7	117	41.2	10	3.5	20	7.0
Franklin	75	244.9	1	3.3	0	0.0	0	0.0
Hancock	108	198.0	9	16.5	2	3.7	3	5.5
Kennebec	367	301.2	31	25.4	5	4.1	8	6.6
Knox	76	191.6	6	15.1	0	0.0	1	2.5
Lincoln	62	181.4	3	8.8	0	0.0	0	0.0
Oxford	114	198.3	1	1.7	0	0.0	0	0.0
Penobscot	432	281.0	22	14.3	0	0.0	2	1.3
Piscataquis	37	214.0	0	0.0	0	0.0	0	0.0
Sagadahoc	85	241.5	10	28.4	0	0.0	0	0.0
Somerset	92	177.2	12	23.1	1	1.9	0	0.0
Waldo	55	141.7	3	7.7	0	0.0	0	0.0
Washington	83	255.7	6	18.5	0	0.0	2	6.2
York	521	261.8	35	17.6	1	0.5	6	3.0
Maine Total	3413	256.8	456	34.3	19	1.4	48	3.6

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by District*, Maine, 2012

Condition	Aroostook		Central		Cumberland		Downeast		Mid Coast	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Anaplasmosis	0	0.0	3	1.7	10	3.5	3	3.4	18	12.2
Babesiosis	0	0.0	1	0.6	3	1.1	0	0.0	2	1.4
Campylobacteriosis	7	9.9	27	15.5	43	15.1	10	11.5	18	12.2
Chlamydia	103	145.3	459	264.2	746	262.7	191	219.5	278	188.0
Cryptosporidiosis	5	7.1	17	9.8	8	2.8	2	2.3	6	4.1
Ehrlichia chaffeensis	0	0.0	0	0.0	0	0.0	0	0.0	2	1.4
Giardiasis	6	8.5	30	17.3	50	17.6	10	11.5	18	12.2
Gonorrhea	7	9.9	43	24.7	117	41.2	15	17.2	22	14.9
Haemophilus influenzae, invasive	1	1.4	2	1.2	6	2.1	2	2.3	3	2.0
Hemolytic uremic syndrome	0	0.0	0	0.0	2	0.7	0	0.0	0	0.0
HIV	0	0.0	8	4.6	20	7.0	5	5.7	1	0.7
Hepatitis A	0	0.0	1	0.6	5	1.8	0	0.0	0	0.0
Hepatitis B, acute	1	1.4	0	0.0	3	1.1	1	1.1	1	0.7
Hepatitis B, chronic	2	2.8	7	4.0	54	19.0	6	6.9	4	2.7
Legionellosis	1	1.4	4	2.3	2	0.7	3	3.4	2	1.4
Listeriosis	1	1.4	1	0.6	0	0.0	0	0.0	0	0.0

*See map in Appendix J for location of districts

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by District*, Maine, 2012

Condition	Penquis		Western		York		State	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Anaplasmosis	1	0.6	1	0.5	16	8.0	52	3.9
Babesiosis	1	0.6	0	0.0	3	1.5	10	0.8
Campylobacteriosis	31	18.1	26	13.3	27	13.6	189	14.2
Chlamydia	469	274.2	646	330.1	521	261.8	3413	256.8
Cryptosporidosis	15	8.8	2	1.0	3	1.5	58	4.4
Ehrlichia chaffeensis	0	0.0	0	0.0	1	0.5	3	0.2
Giardiasis	14	8.2	27	13.8	14	7.0	169	12.7
Gonorrhea	22	12.9	195	99.6	35	17.6	456	34.3
Haemophilus influenzae, invasvie	1	0.6	5	2.6	3	1.5	23	1.7
Hemolytic uremic syndrome	0	0.0	0	0.0	0	0.0	2	0.2
HIV	2	1.2	6	3.1	6	3.0	48	3.6
Hepatitis A	0	0.0	2	1.0	1	0.5	9	0.7
Hepatitis B, acute	2	1.2	0	0.0	1	0.5	9	0.7
Hepatitis B, chronic	7	4.1	14	7.2	11	5.5	105	7.9
Legionellosis	2	1.2	4	2.0	0	0.0	18	1.4
Listeriosis	0	0.0	1	0.5	2	1.0	5	0.4

*See map in Appendix J for location of districts

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by District*, Maine, 2012

Condition	Aroostook		Central		Cumberland		Downeast		Mid Coast	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Lyme Disease	1	1.4	139	80.0	266	93.7	66	75.8	288	194.8
Meningococcal invasive disease	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0
MRSA, invasive	18	25.4	19	10.9	31	10.9	4	4.6	11	7.4
Mumps	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis	5	7.1	166	95.5	225	79.2	46	52.9	37	25.0
Rabies, animal	0		15		10		0		26	
Salmonellosis	4	5.6	32	18.4	34	12.0	14	16.1	9	6.1
Shiga toxin producing E. coli	0	0.0	4	2.3	7	2.5	2	2.3	0	0.0
Shigellosis	0	0.0	0	0.0	4	1.4	0	0.0	0	0.0
Streptococcus, invasive Group A	2	2.8	9	5.2	6	2.1	0	0.0	5	3.4
Streptococcus pneumoniae, invasive	9	12.7	22	12.7	17	6.0	5	5.7	9	6.1
Syphilis	0	0.0	6	3.5	10	3.5	2	2.3	0	0.0
Tuberculosis	1	1.4	0	0.0	10	3.5	1	1.1	0	0.0
Varicella (chickenpox)	10	14.1	58	33.4	66	23.2	15	17.2	24	16.2
Vibriosis	0	0.0	0	0.0	6	2.1	0	0.0	1	0.7

*See map in Appendix J for location of districts

Reportable Conditions, Number of Confirmed and Probable Cases and Rate per 100,000 Persons by District*, Maine, 2012

Condition	Penquis		Western		York		State	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Lyme Disease	23	13.4	111	56.7	217	109.0	1111	83.6
Meningococcal invasive disease	0	0.0	1	0.5	1	0.5	3	0.2
MRSA, invasive	14	8.2	11	5.6	8	4.0	116	8.7
Mumps	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis	91	53.2	97	49.6	70	35.2	737	55.5
Rabies, animal	15		14		11		91	
Salmonellosis	12	7.0	22	11.2	34	17.1	161	12.1
Shiga toxin producing *E. coli*	2	1.2	0	0.0	5	2.5	20	1.5
Shigellosis	0	0.0	1	0.5	2	1.0	7	0.5
Streptococcus, invasive Group A	7	4.1	6	3.1	2	1.0	37	2.8
Streptococcus pneumoniae, invasive	21	12.3	17	8.7	2	1.0	102	7.7
Syphilis	0	0.0	0	0.0	1	0.5	19	1.4
Tuberculosis	0	0.0	3	1.5	2	1.0	17	1.3
Varicella	31	18.1	21	10.7	33	16.6	258	19.4
Vibriosis	0	0.0	0	0.0	3	1.5	10	0.8

*See map in Appendix J for location of districts

Anaplasmosis

2012 Case Total	**52**
Maine Rate	**3.9 per 100,000**
U.S. rate (2011)	**0.8 per 100,000**

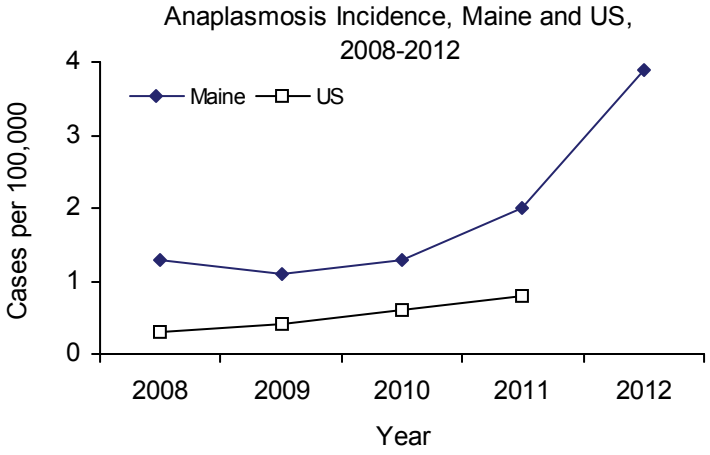
Anaplasmosis is a disease caused by the bacterium *Anaplasma phagocytophilium*. Anaplasmosis was previously known as human granulocytic ehrlichiosis (HGE) or human granulocytic anaplasmosis (HGA).

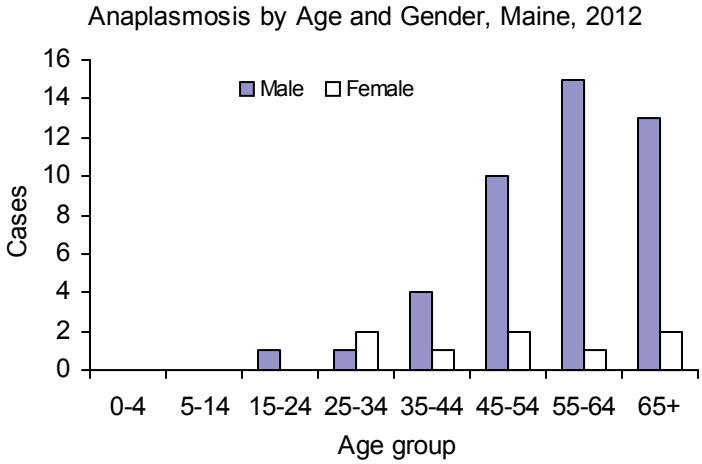
Signs and symptoms of anaplasmosis include: fever, headache, malaise, and body aches. Anaplasmosis is transmitted to a person by the bite of an infected deer tick (*Ixodes scapularis*), one of the most common ticks in Maine.

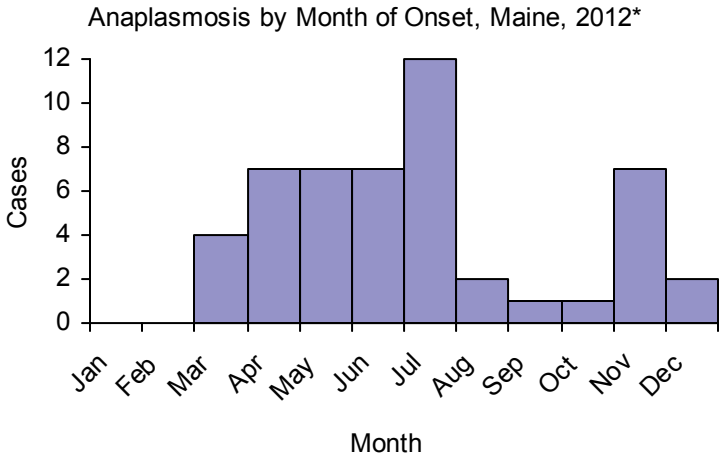
- 52 cases represent an increase from 26 cases in 2011
- The 2007-2011 median number of cases per year was 17
- Median age was 59 years
- Age range was 19 to 86 years
- Cases were 15% female and 85% male
- Greatest number of cases occurred during the spring and summer months

The best way to prevent infection is to take measures to protect against tick bites. Checking for ticks after visiting a tick infested area is an important way to reduce the risk of contracting anaplasmosis. Using EPA approved repellents such as DEET on skin or permethrin on clothing is a good way to protect against tick bites. Always follow the instructions on the label when applying repellent products. If an engorged tick is found, it should be safely removed and saved for identification. Monitor for signs and symptoms for 30 days after the tick bite.

For more information about submitting a tick for identification only (not testing) visit www.mmcri.org/lyme.







*onset date missing for two cases

Babesiosis

2012 Case Total	**10**
Maine Rate	**0.8 per 100,000**
U.S. rate (2011)	**0.4 per 100,000**

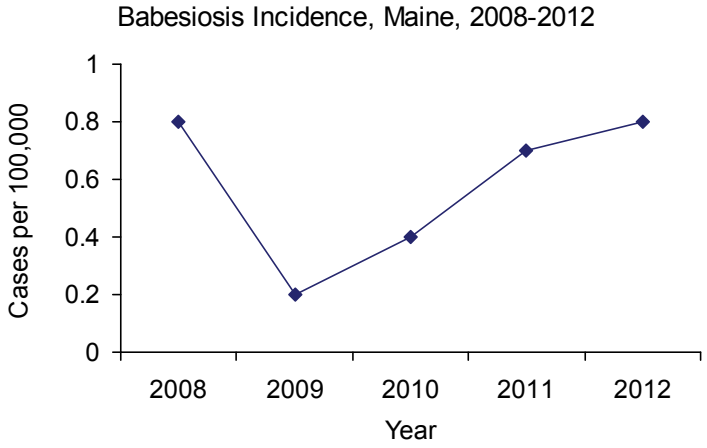
Babesiosis is caused by a parasite that may be carried by ticks. Many individuals that get the disease do not have symptoms. Serious symptoms can occur, especially in persons who are immunosuppressed, those without a spleen, or people who are co-infected with Lyme disease. Babesiosis may also occur after a blood transfusion from an infected donor.

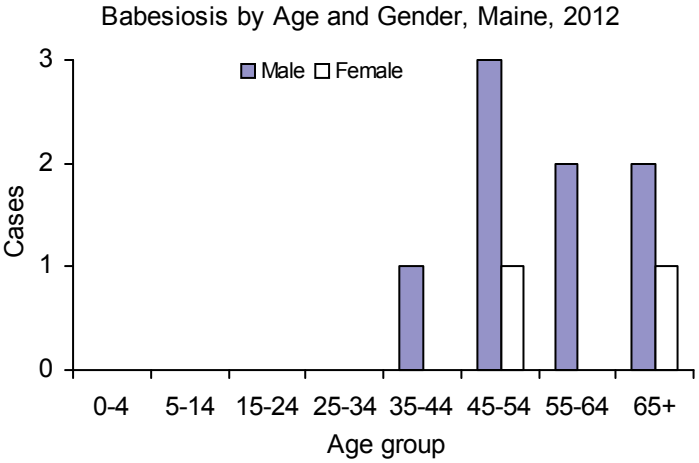
Common symptoms include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia.

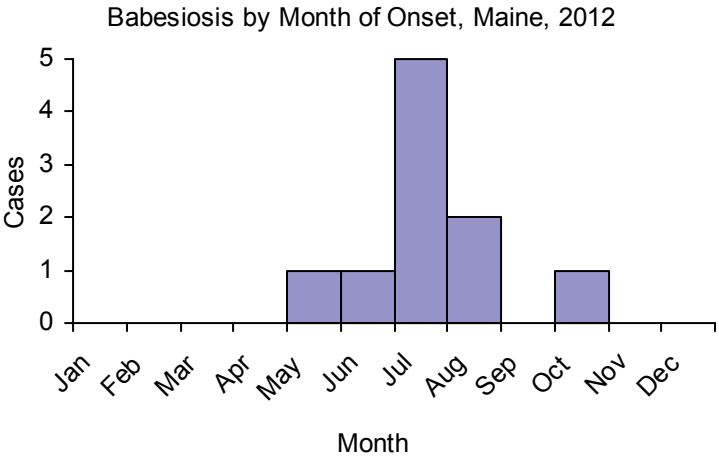
- 10 cases represent an increase from 9 cases in 2011
- The 2007-2011 median number of cases was 9
- Median age was 54 years
- Age range was 41 to 73 years
- Cases were 20% female and 80% male
- Greatest number of cases occurred during the summer months

The best way to prevent infection is to take measures to protect against tick bites. Checking for ticks after visiting a tick infested area is an important way to reduce the risk of contracting babesiosis. Using EPA approved repellents such as DEET on skin or permethrin on clothing is a good way to protect against tick bites. Always follow the instructions on the label when applying repellent products. If an engorged tick is found, it should be safely removed and saved for identification. Monitor for signs and symptoms for 30 days after the tick bite.

For more information about submitting a tick for identification only (not testing) visit www.mmcri.org/lyme.







Campylobacteriosis

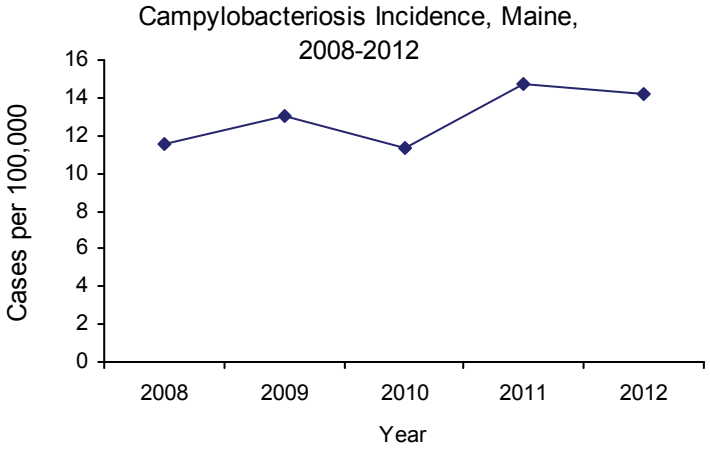
2012 Case Total **189**
Maine Rate **14.2 per 100,000**
U.S. rate (2011) **Not reportable**

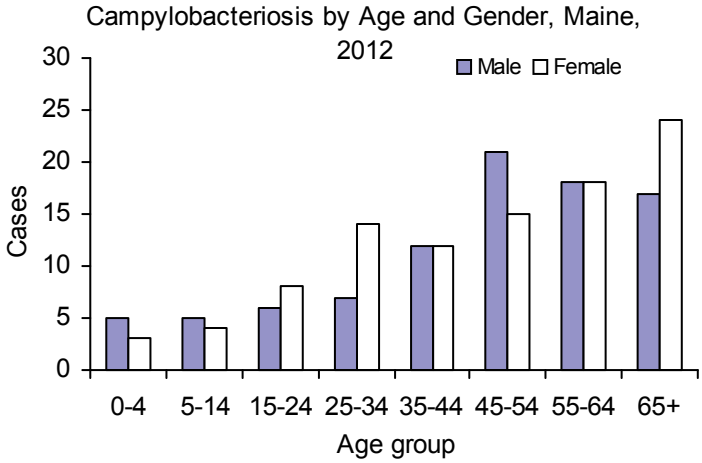
Campylobacteriosis is one of the most common infectious diseases causing diarrhea in the United States. Symptoms include: diarrhea, cramping, abdominal pain and fever. Most people recover within 5 to 10 days.

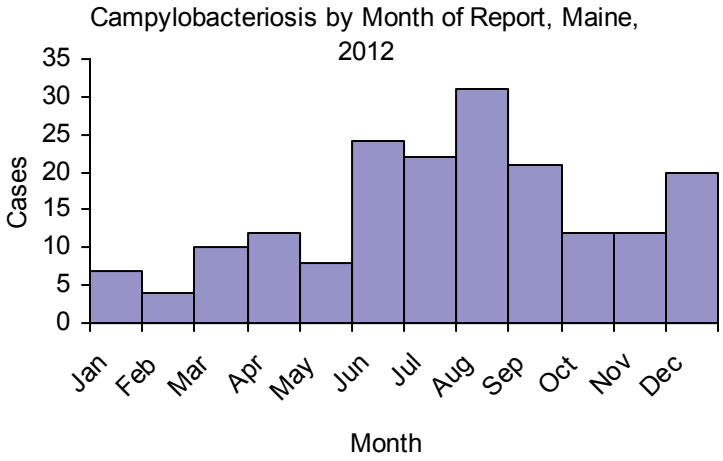
Campylobacteriosis is associated with handling raw poultry or eating undercooked poultry meat, consuming unpasteurized milk and other dairy products and from exposure to contaminated foods. Raw foods, such as vegetables or salad, can be contaminated if the same cutting board or utensils are used for both raw foods and raw poultry items and not cleaned between preparations.

- 189 cases represent a decrease from 195 cases in 2011
- The 2007-2011 median number of cases was 151
- Median age was 50 years
- Age range was 7 months to 90 years
- Cases were 52% female and 48% male
- Highest rates in Cumberland, Penobscot, York, and Kennebec counties
- Greatest number of cases occurred during the summer months

To prevent illness, individuals should cook poultry and other meats properly, avoid consuming untreated water, raw milk and milk products, and unpasteurized juice.







Chlamydia

2012 Case Total	**3,413**
Maine Rate	**256.8 per 100,000**
U.S. rate (2011)	**457.6 per 100,000**

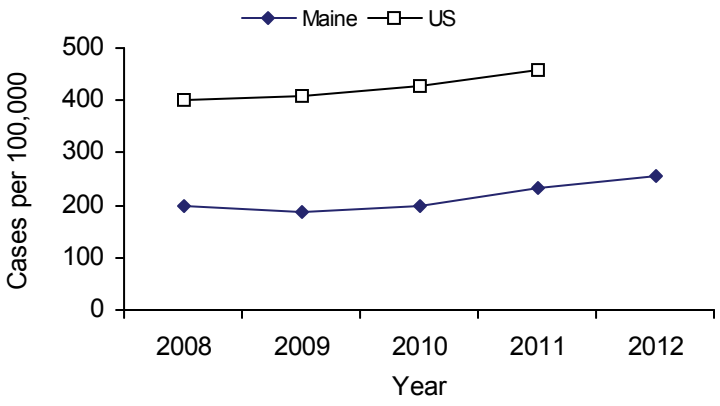
Chlamydia is a sexually transmitted disease (STD) caused by the bacterium *Chlamydia trachomatis.* Chlamydia is known as a "silent" disease, as three quarters (75%) of women and half (50%) of men infected with chlamydia will have no symptoms. Common symptoms for women include vaginal discharge or a burning sensation with urination and for men include penile discharge and burning on urination.

If chlamydia is not treated, the infection may cause serious damage to the reproductive system, including infertility. Chlamydia can be passed to a child during birth. People with chlamydia can more easily contract HIV from someone else or transmit HIV to others if they are infected with both.

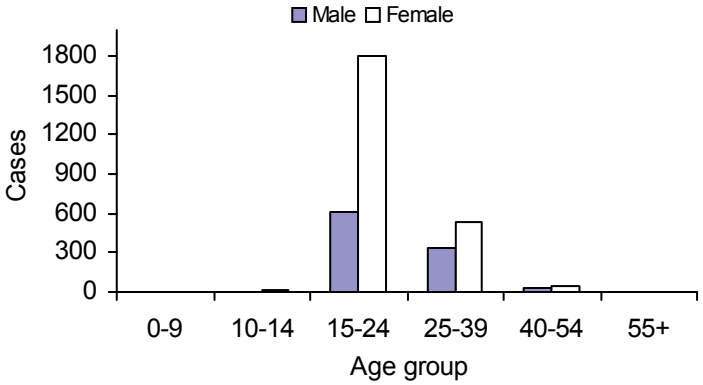
- Chlamydia is the most frequently reported STD in Maine
- 71% of infections were in persons 15-24 years old
- Cases were 71% female and 29% male

Chlamydia can be prevented by the use of latex or polyurethane condoms and dental dams during anal, vaginal, and oral sex. Efforts to prevent the spread of chlamydia include prioritized follow up activities for new diagnoses and the Infertility Prevention Project, a federal CDC sponsored initiative, that targets testing and treatment for females 15-24 years old and their partners. Currently free testing for females 15-24 is available at Family Planning and Planned Parenthood sites, and at the three STD clinics (Bangor, Portland and Lewiston).

Chlamydia Incidence, Maine and US, 2008-2012

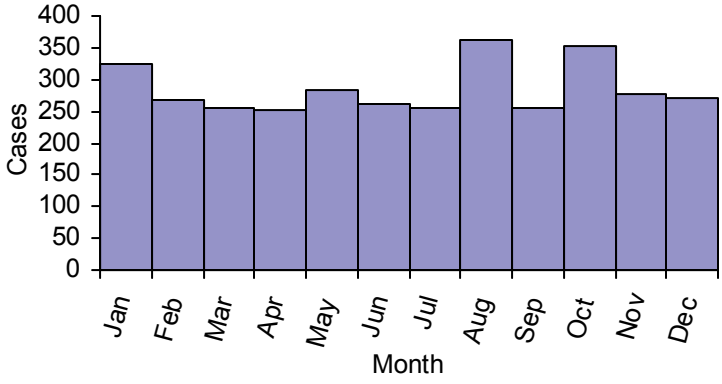


Chlamydia by Age* and Gender, Maine, 2012



*unknown age for 13 cases.

Chlamydia by Month, Maine, 2012



Cryptosporidiosis

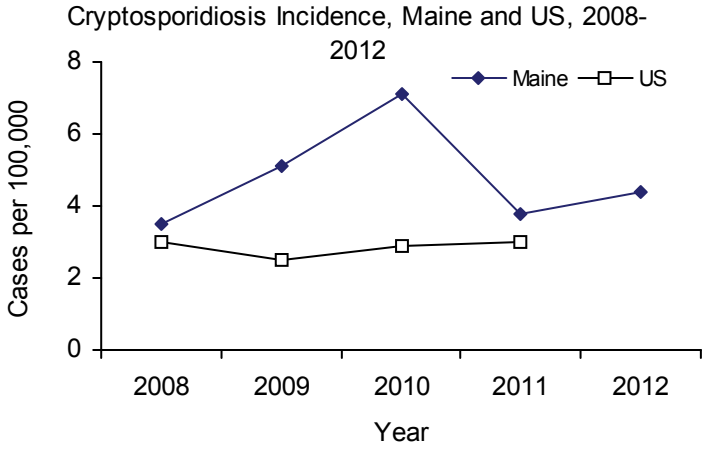
2012 Case Total	**58**
Maine Rate	**4.4 per 100,000**
U.S. rate (2011)	**3.0 per 100,000**

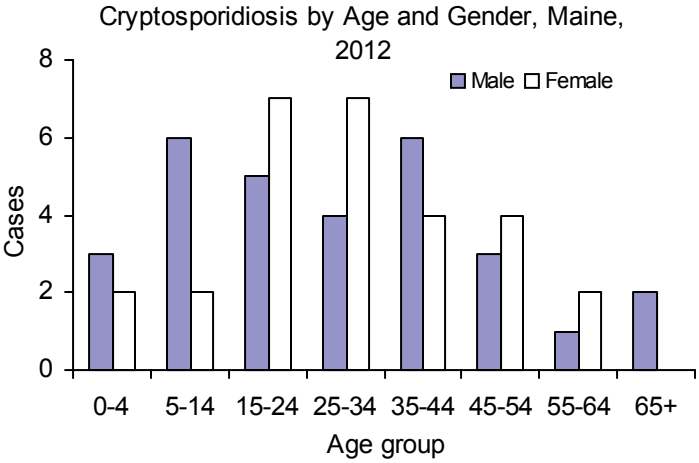
Cryptosporidiosis is an infection most frequently associated with contaminated water or contact with infected animals. The disease is caused by a parasite that lives in the intestines of animals and infected humans. Feces containing the parasite may contaminate the ground or water sources. The parasite may live for long periods of time in the environment due to a protective outer covering. It is resistant to many chlorine-based disinfectants, increasing the risk of transmission in swimming pools and waterparks.

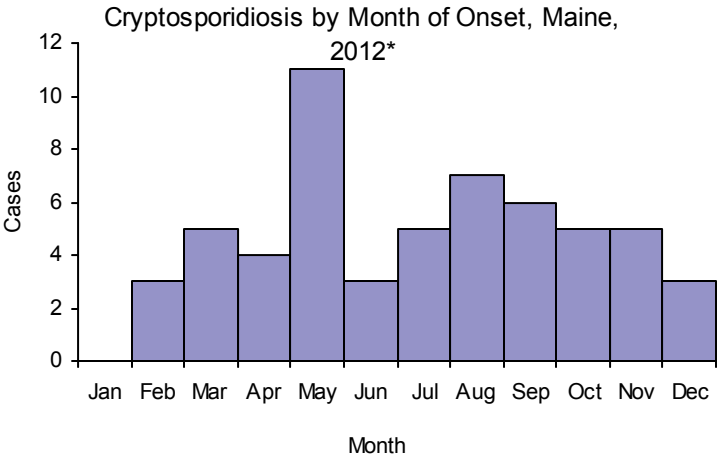
Symptoms include: diarrhea, abdominal cramping, malaise and vomiting.

- 58 cases represent an increase from 51 cases in 2011
- The 2007-2011 median number of cases per year was 56
- Median age was 30 years
- Age range was 1 year to 97 years
- Cases were 48% female and 52% male
- Highest incidence was in Kennebec, Penobscot, Cumberland, and Somerset counties

Preventive measures include consuming pasteurized milk and dairy products, practicing good hand hygiene around farm animals and discouraging persons of all ages from swimming when they have diarrheal illness.







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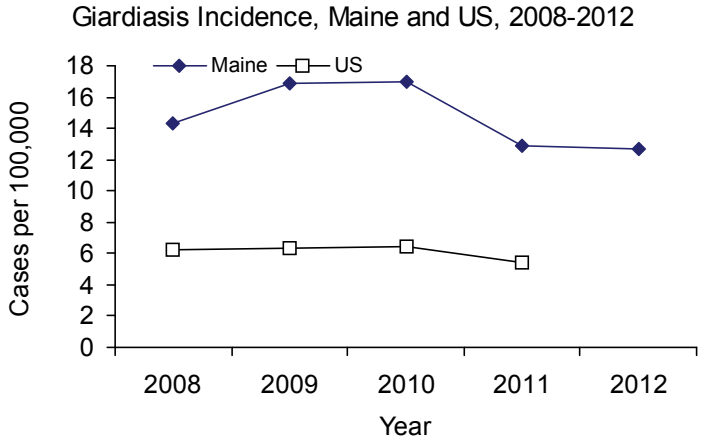
Giardiasis

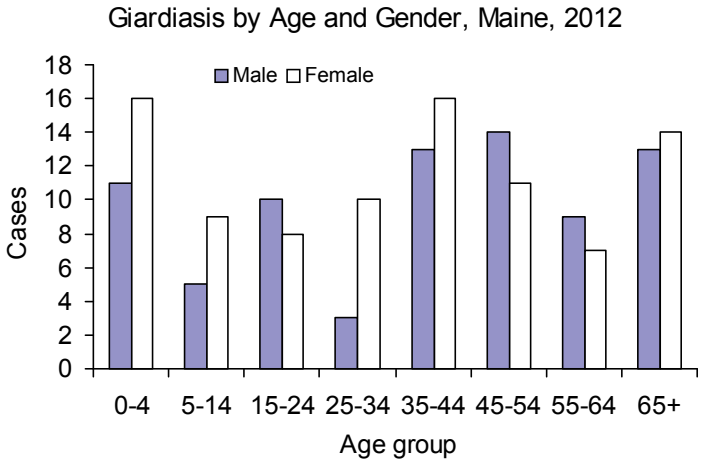
2012 Case Total **169**
Maine Rate **12.7 per 100,000**
U.S. rate (2011) **5.4 per 100,000**

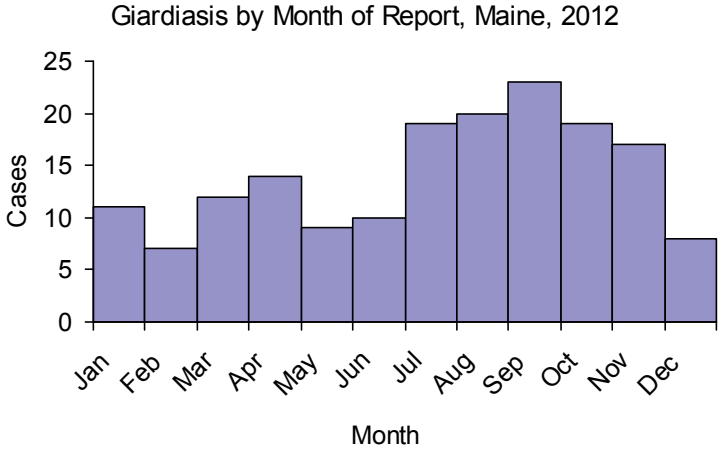
Giardiasis is sometimes known as "beaver fever" because beavers (as well as dogs, cats, horses and cows) are major reservoirs for the parasite (*Giardia lamblia*) that causes the infection. The parasite lives in the intestines of infected humans and animals and when expelled through the feces can contaminate water and surfaces. If hikers or others drink water without proper treatment they may become infected. Young children in child care or pool settings who are prone to sucking on toys or swallowing water are also at higher risk.

- 169 cases represent a decrease from 171 cases in 2011
- The 2007-2011 median number of cases per year was 197
- Median age was 39 years
- Age range was 1 year to 83 years
- Cases were 54% female and 46% male
- Highest incidence was in Cumberland, Kennebec, Androscoggin, and York counties
- Greatest number of cases occurred during the late summer and fall months

Individuals can prevent this illness by not drinking from untreated water sources, such as streams and lakes. Increased attention to proper sanitation and hygiene in public water recreational facilities can help to reduce the transmission of *Giardia*.







Gonorrhea

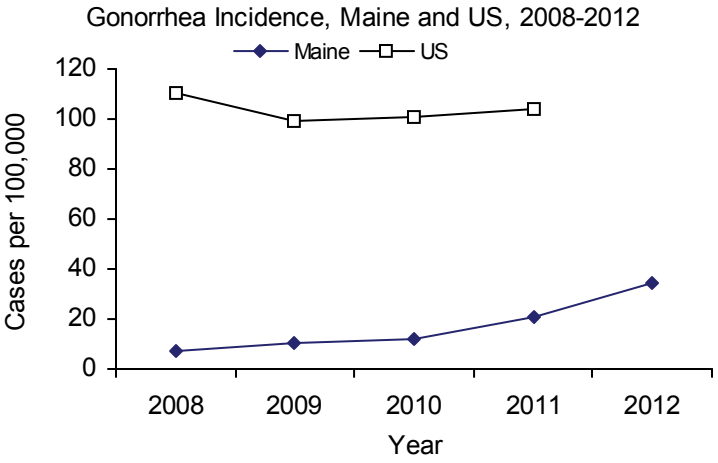
2012 Case Total	**456**
Maine Rate	**34.3 per 100,000**
U.S. rate (2011)	**104.2 per 100,000**

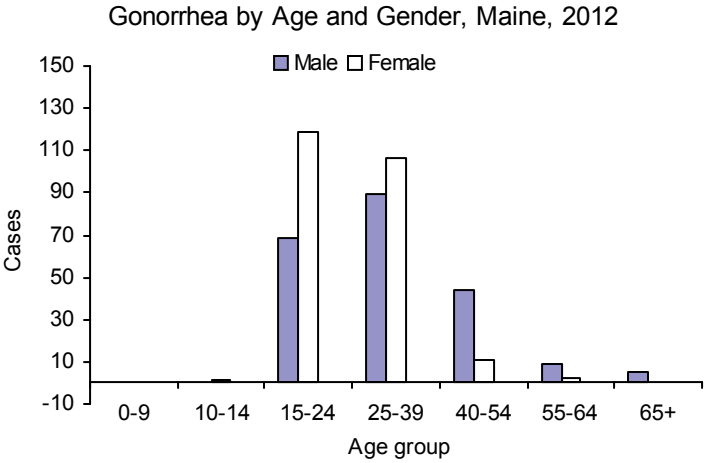
Gonorrhea is a sexually transmitted disease (STD) caused by the bacterium *Neisseria gonorrhoeae* that grows and multiplies in warm, moist areas (mucous membranes). Gonorrhea can be spread through contact with the vagina, penis, mouth or anus. Gonorrhea can also spread from a mother to her baby during childbirth. Gonorrhea does not always cause symptoms. Men may feel a burning sensation while urinating, or have discharge from their penis. Women might feel pain with urination, or notice discharge from their vagina.

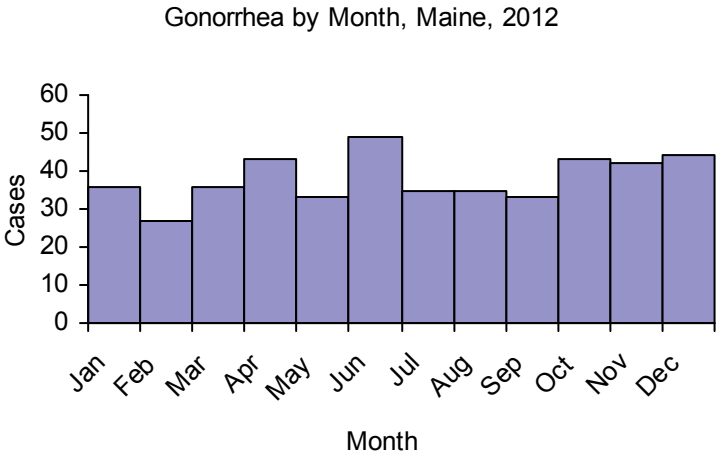
Gonorrhea is dangerous if untreated. In women, gonorrhea is a common cause of pelvic inflammatory disease, which can lead to chronic pain and infertility. In men, gonorrhea can cause epididymitis, causing painful testicles and infertility. People infected with HIV are more likely to contract gonorrhea and to transmit HIV if they are also infected with gonorrhea.

- Case total of 456 represents a 68% increase from 272 cases in 2012
- Highest incidence was among persons 25-39 years, with a total of 43% of cases, followed closely by persons 15-24 years with 41% of cases
- Cases were fairly evenly distributed with 53% female and 47% male

Gonorrhea can be prevented by using latex or polyurethane condoms and dental dams during anal, vaginal, and oral sex. Prevention efforts include treatment verification and case investigation activities, such as partner follow-up for all new infections. State sponsored testing through the Infertility Prevention Project uses a combination gonorrhea and chlamydia test targeting females 15-24 years old.







Group A Streptococcal Disease

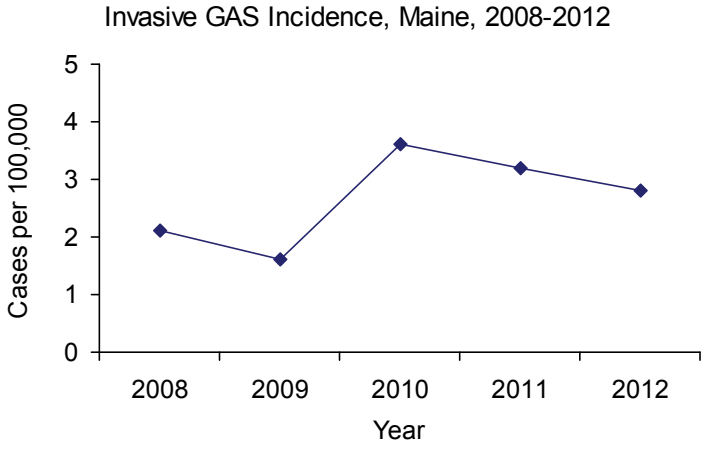
2012 Case Total **37**
Maine Rate **2.8 per 100,000**
U.S. rate (2011) **Not reportable**

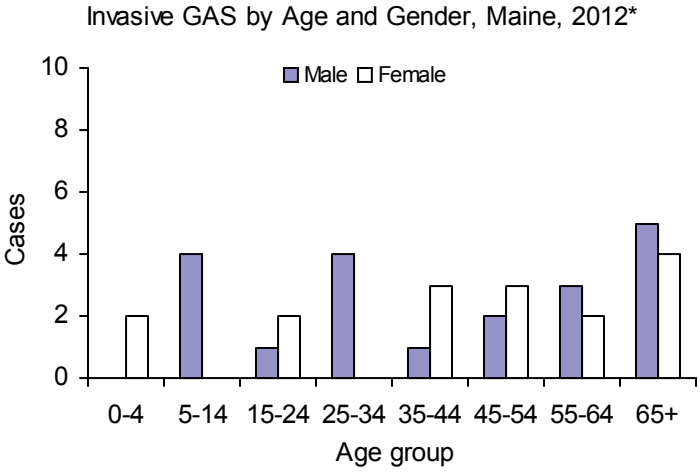
Group A *Streptococcus* (GAS) is a bacterium often found in the throat and on the skin that can cause either no symptoms (colonization) or mild symptoms such as pharyngitis (strep throat), cellulitis (soft tissue infection) or impetigo (skin dermatitis). When the bacteria enters deeper tissues and the blood stream, GAS can cause severe or life-threatening conditions.

GAS may lead to Streptococcal Toxic Shock Syndrome (STSS), a rapid drop in blood pressure that causes organ failure.
Necrotizing fasciitis, a condition that progressively destroys skin, fat and muscles, can be caused by GAS.

- 37 cases represent a decrease from 43 cases in 2011
- The 2007-2011 median number of cases per year was 28
- Median age was 47 years
- Age range was 3 months to 104 years
- Cases were 46% female and 54% male
- 5 GAS cases died
- 10 (27%) cases were also diagnosed with STSS; 4 of these cases died

Control and prevention strategies may include targeted chemoprophylaxis for high risk household contacts of confirmed cases, such as those who are 65 and older or those who have other specified risk factors (HIV infection, diabetes, malignancy, injecting drug use, or cardiac diseases).





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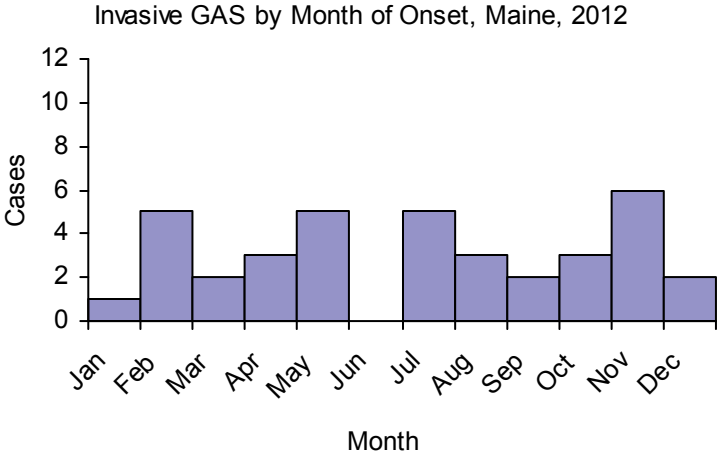


Haemophilus influenzae

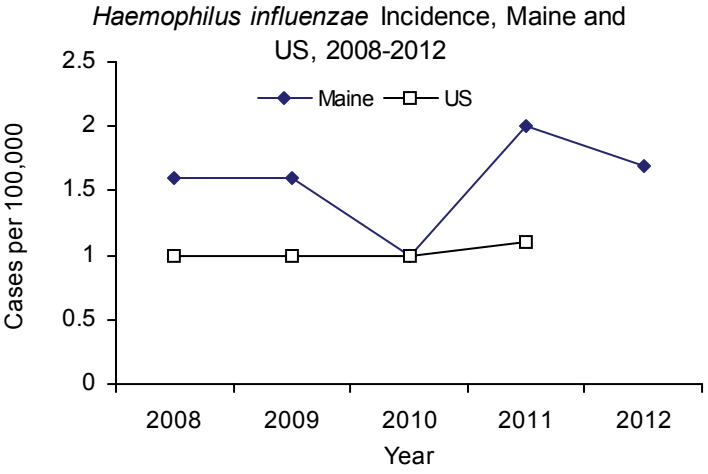
2012 Case Total	**23**
Maine Rate	**1.7 per 100,000**
U.S. rate (2011)	**1.1 per 100,000**

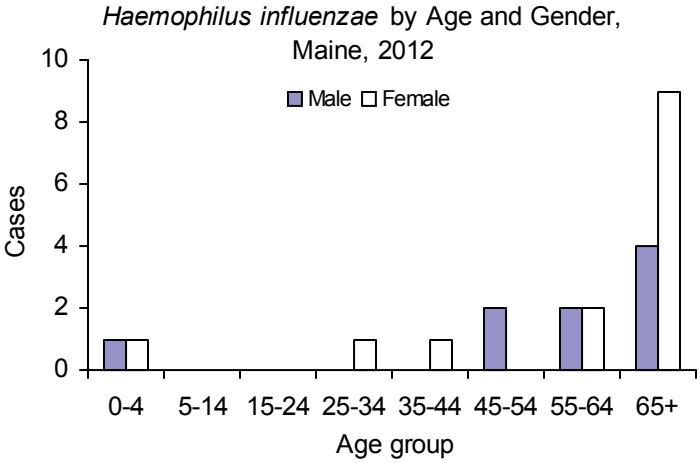
Haemophilus influenzae disease is caused by the *Haemophilus influenzae* bacterium. A specific type called *H. influenzae* serotype B (Hib) was once the most common cause of bacterial meningitis in children. Due to widespread use of Hib vaccine, few or no cases are reported in children less than 5 years old each year.

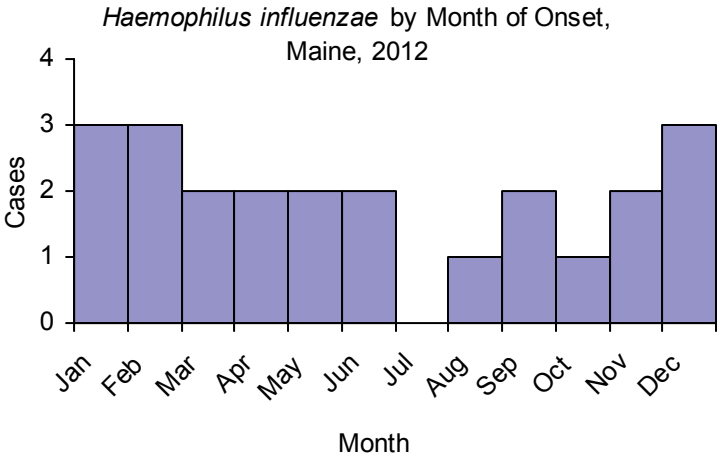
The bacteria are spread from person to person, through airborne droplets when an infected person coughs or sneezes. *H. influenzae* can cause severe illnesses such as meningitis, bacteremia, pneumonia and septic arthritis.

- 23 cases represent a decrease from 26 cases in 2011
- The 2007-2011 median number of cases per year was 21
- Median age was 66 years
- Age range was 6 days to 93 years
- Cases were 61% female and 39% male
- No cases of Hib (type b) in children aged < 5 years were reported

Haemophilus influenzae serotype b (Hib) may be prevented in children through vaccination. Vaccination is recommended for all children at ages 2, 4 and 6 months or at 2 and 4 months depending on the type of vaccine available. An additional booster dose is given at 12-15 months of age with either type of vaccine.







Hepatitis A

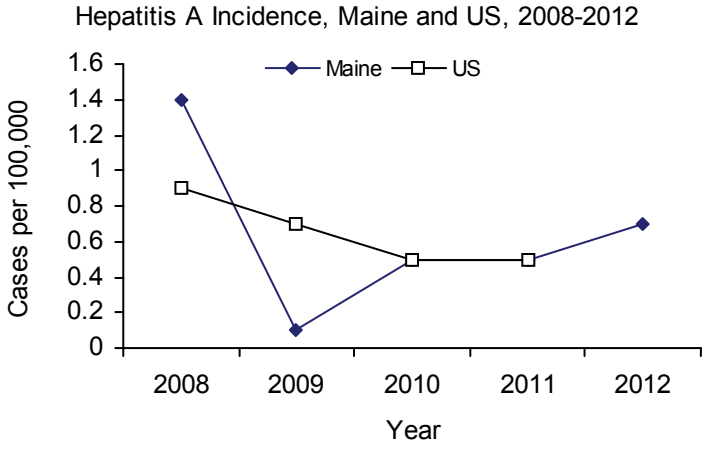
2012 Case Total	**9**
Maine Rate	**0.7 per 100,000**
U.S. rate (2011)	**0.5 per 100,000**

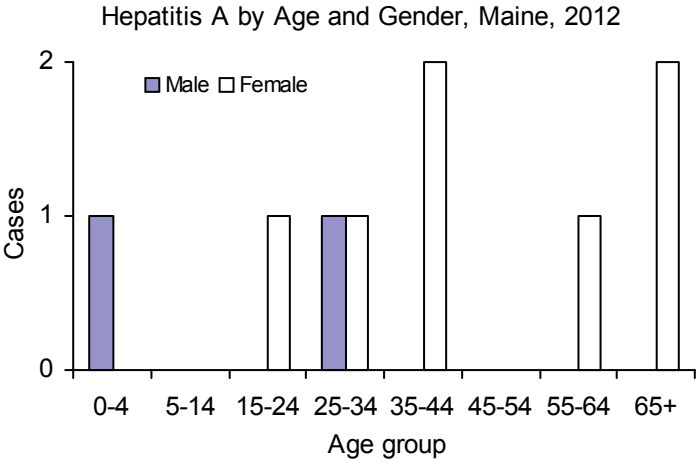
Hepatitis A is a liver disease caused by the hepatitis A virus. The virus is spread from person to person by fecal-oral transmission that involves putting something in the mouth (such as food, hands or water) that has been contaminated by a person infected with hepatitis A. Poor handwashing by persons with hepatitis A increases the risk of transmission. The virus spreads more easily in areas where sanitary conditions and personal hygiene practices are poor. Most infections result from exposure during international travel, or contact with a household member or a sexual partner who has hepatitis A.

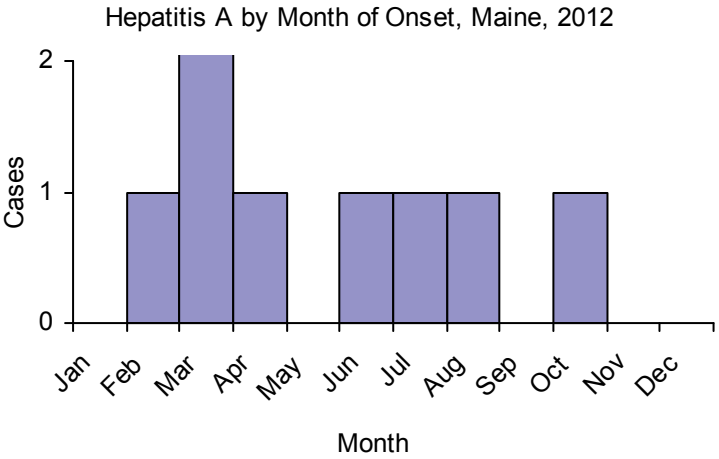
Onset of symptoms is usually abrupt with fever, malaise, anorexia, nausea and abdominal discomfort followed by jaundice a few days later. Children are often asymptomatic. Upon recovery, a person is immune to hepatitis A for life.

- 9 cases represent an increase from 6 cases in 2011
- The 2007-2011 median number of cases per year was 6
- Median age was 41 years
- Age range was 1 year to 87 years
- Cases were 22% female and 78% male

Washing hands after using the bathroom, changing a diaper, or before preparing or eating food can help prevent infection. Hepatitis A can also be prevented through vaccination. The two dose vaccine series is recommended for all children at 12 months of age and for persons who are more likely to be exposed to hepatitis A or become seriously ill if they get hepatitis A. The vaccine is also recommended for some travelers and for close contacts of newly arriving international adoptees.







Hepatitis B, acute

2012 Case Total	**9**
Maine Rate	**0.7 per 100,000**
U.S. rate (2011)	**0.9 per 100,000**

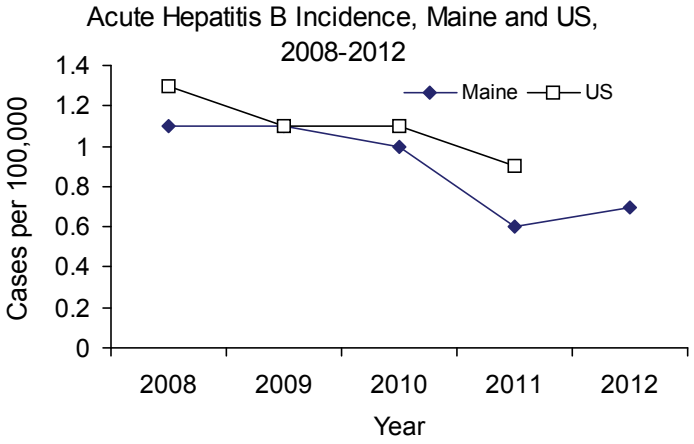
Hepatitis B is a liver disease caused by the hepatitis B virus. Acute hepatitis B infection occurs within the first six months after someone is exposed to the virus. In some cases, acute infection can lead to chronic infection. The younger the age at time of infection, the greater the likelihood of progressing to chronic hepatitis B infection.

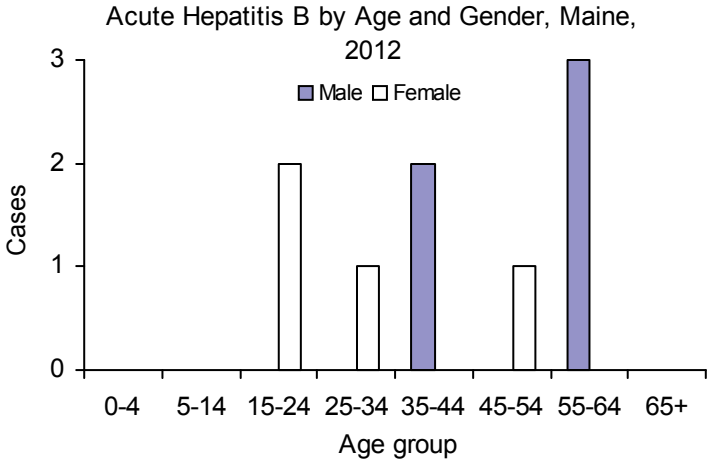
Hepatitis B virus can be transmitted through exposure to blood or body fluids from an infected person (needle sticks and other sharps exposures, sharing hypodermic syringes for drug injection), through sexual contact with an infected person, or from an infected mother to her child during childbirth. Sexual transmission is common among men who have sex with men.

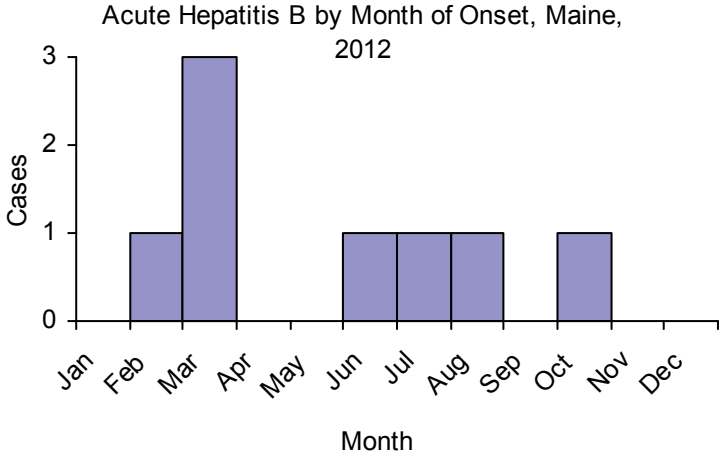
Symptoms include anorexia, abdominal discomfort, nausea and vomiting followed by jaundice. Many young children and immunosuppressed adults do not develop symptoms.

- 9 cases represent an increase from 8 cases in 2011
- The 2007-2011 median number of cases per year was 15
- Median age was 44 years
- Age range was 19 to 64 years
- Cases were 44% female and 56% male

Hepatitis B can be prevented by vaccination as well as by not sharing needles and other drug injecting equipment, using sterile needles and syringes, and using condoms. Hepatitis B can also be prevented by not sharing equipment for blood glucose monitoring and insulin administration.







Hepatitis B, chronic

2012 Case Total	**105**
Maine Rate	**7.9 per 100,000**
U.S. rate (2011)	**Not available**

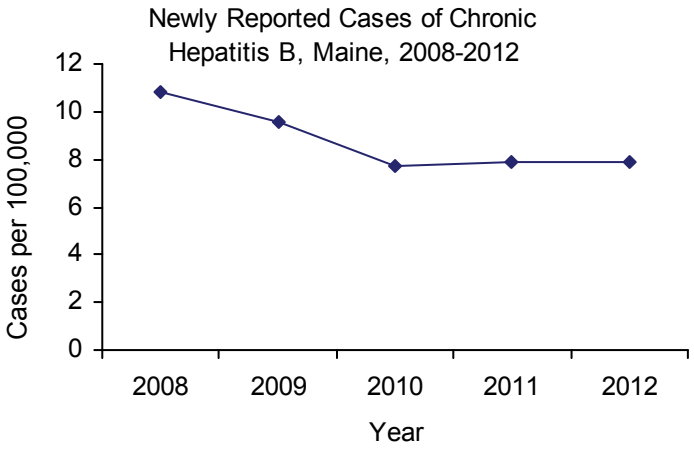
Hepatitis B is a liver disease caused by the hepatitis B virus. Chronic hepatitis B virus infection occurs when a person infected with acute hepatitis B does not clear the virus within the first 6 months of infection.

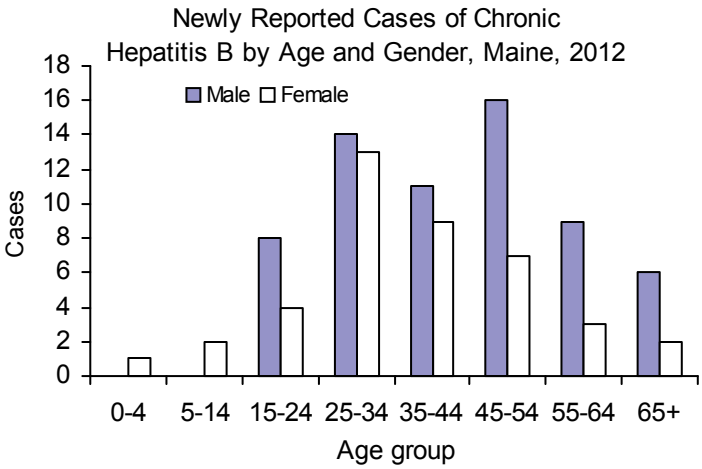
Chronic hepatitis B is a serious disease that can result in long-term health problems, such as cirrhosis (scarring) of the liver, liver cancer, liver failure, and even death. Many people do not have symptoms and may not know they are infected, but they can still spread the disease to others.

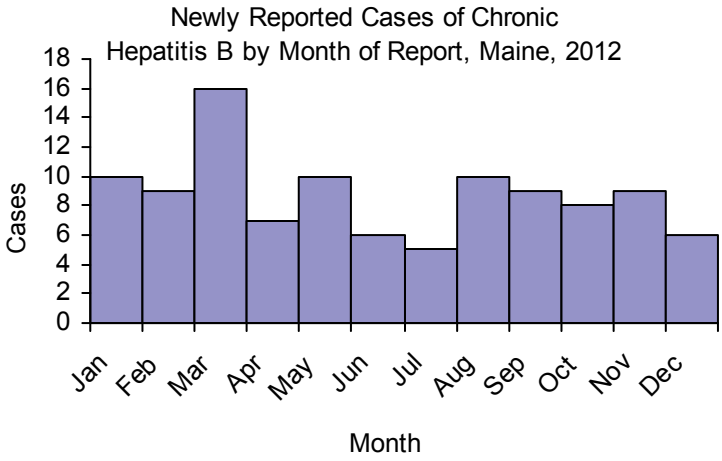
Hepatitis B virus can be transmitted through exposure to blood and or body fluids from an infected person (needle sticks and other sharps exposures, sharing hypodermic syringes for drug injection), through sexual contact with an infected person, or from an infected mother to her child during childbirth. Sexual transmission also occurs among men who have sex with men.

- 105 cases represent no change from 2011
- Median age was 39 years
- Age range was 3 to 75 years
- Cases were 39% female and 61% male

Hepatitis B can be prevented through testing and vaccination of susceptible household and sexual contacts of identified cases. Transmission can be prevented by not sharing needles or other drug injecting equipment, using sterile needles and syringes, and using condoms. Hepatitis B can also be prevented by not sharing equipment for blood glucose monitoring and insulin administration.







Hepatitis C, acute

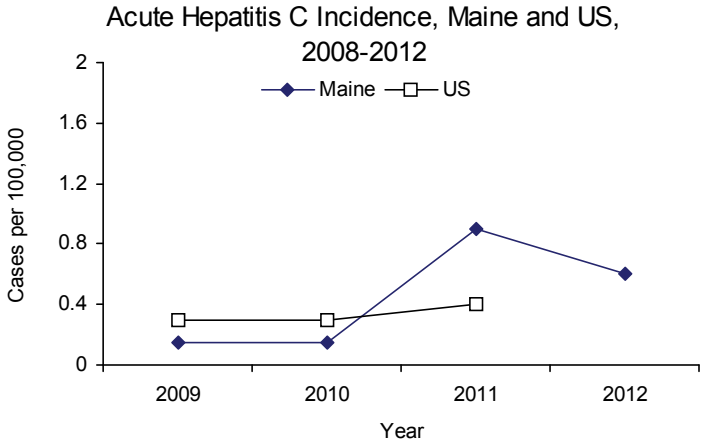
2012 Case Total **8**
Maine Rate **0.6 per 100,000**
U.S. rate (2011) **0.4 per 100,000**

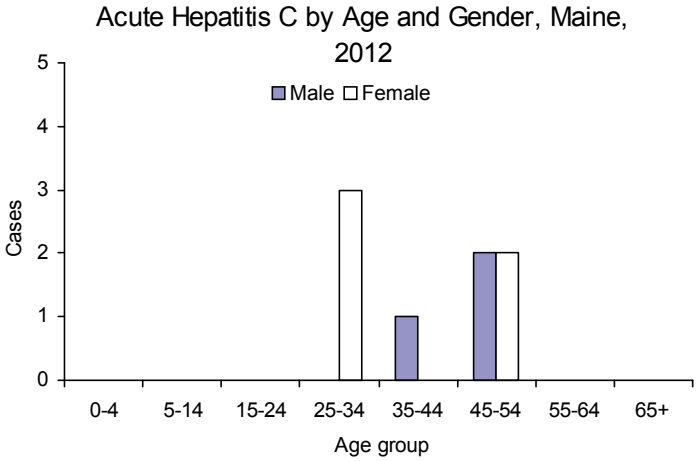
Hepatitis C is a liver disease caused by the hepatitis C virus. Acute hepatitis C is a short term illness that occurs within the first 6 months after someone is exposed. Hepatitis C is spread when blood from a person infected with hepatitis C enters the body of someone who is not infected. Many people become infected by sharing needles or other injection drug equipment.

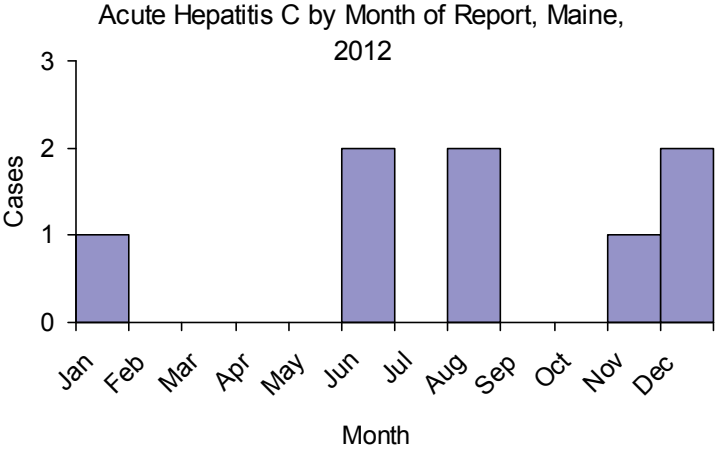
Persons with acute or newly acquired hepatitis C infection are usually asymptomatic or have mild symptoms. Approximately 20–30% of persons with acute infection experience fatigue, abdominal pain, poor appetite, and/or jaundice. The average time period from exposure to symptom onset is 4–12 weeks (range: 2–24 weeks). Other symptoms of acute infection include: fever, dark urine, clay-colored stool, nausea, vomiting, and joint pain.

- 8 cases represent a decrease from 12 cases in 2011
- The 2007-2011 median number of cases per year was 2
- Median age was 44 years
- Age range was 27 to 53 years
- Cases were 62% female and 38% male.

To prevent acute hepatitis C, do not share needles or equipment used to inject drugs. Do not share personal hygiene items. Use licensed tattooists and body piercers. Use condoms to reduce the already low risk of sexual transmission.







Hepatitis C, past or present infection

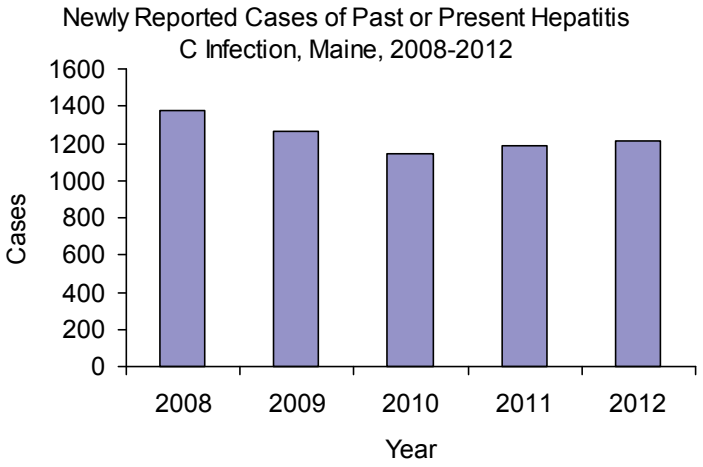
2012 Case Total **1,216**
Maine Rate **91.5 per 100,000**
U.S. rate (2011) **N/A**

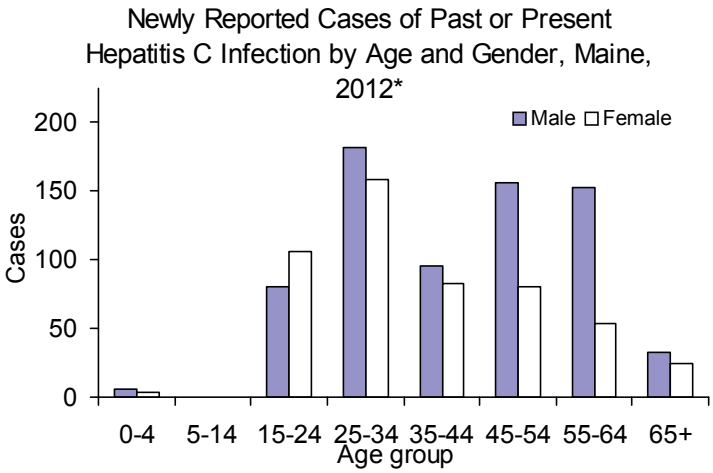
Hepatitis C is a liver disease caused by the hepatitis C virus. Past or present hepatitis C infection is a long-term illness that occurs when hepatitis C virus remains in a person's body. Over time it can lead to serious liver disease. Hepatitis C is spread when blood from a person infected with hepatitis C enters the body of someone who is not infected. Many people become infected by sharing needles or other injection drug equipment.

Most people with hepatitis C infection do not have any symptoms. In many cases, symptoms only appear when liver problems develop. Hepatitis C is often detected during routine blood tests to measure liver function and liver enzyme levels. As of January 1, 2012 Hepatitis C, past or present infection, is reported to U.S. CDC using their case definition.

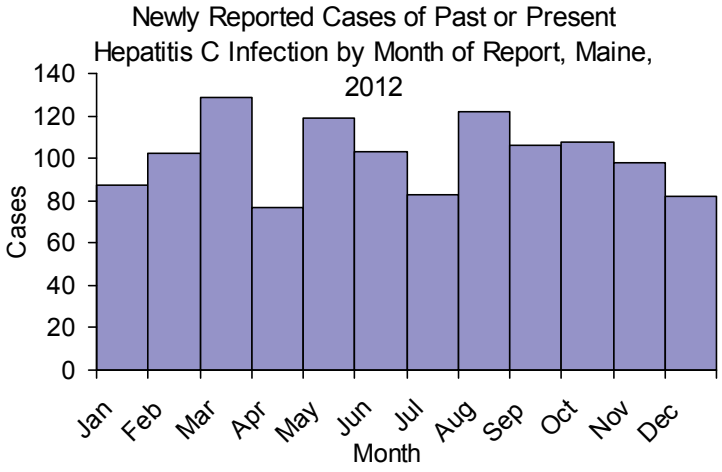
- 1,216 cases represent an increase from 1184 cases in 2011
- Median age was 38 years
- Age range was 4 months to 89 years
- Cases were 42% female and 58% male

People with past or present hepatitis C infection should be monitored regularly by an experienced healthcare provider. They should avoid alcohol and check with a health professional before taking any prescription pills, supplements, or over-the-counter medications, as these can potentially damage the liver. Vaccination against hepatitis A and hepatitis B is also recommended.





*Age missing for one case and gender missing for one case.



HIV*

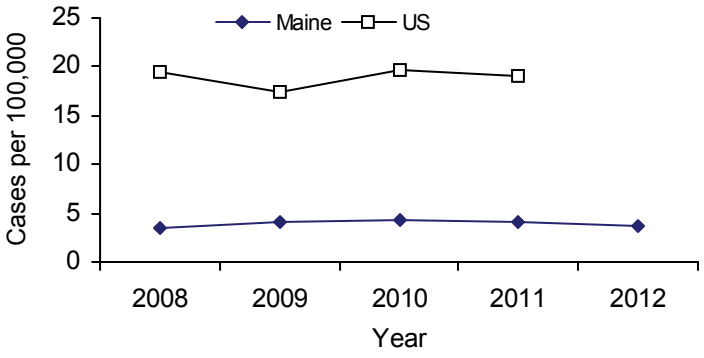
2012 Case Total **48**
Maine Rate **3.6 per 100,000**
U.S. rate (2011) **19.1 per 100,000**

Human immunodeficiency virus (HIV) is a virus that is responsible for HIV disease and acquired immunodeficiency syndrome (AIDS). AIDS typically presents as the late clinical stage of HIV infection. HIV is transmitted from person to person through unprotected penile-vaginal or penile–anal intercourse with an infected person; the use of HIV contaminated needles and syringes; from infected mother to infant during pregnancy, delivery, or breastfeeding; and transfusion of infected blood or its components. In Maine, the most common mode of HIV transmission is through unprotected penile-anal intercourse among men.

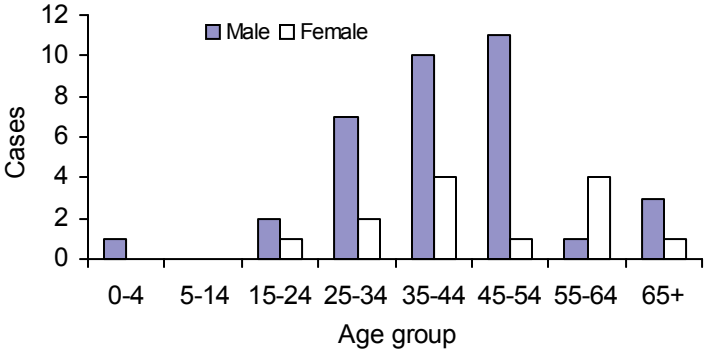
- Case total of 48 represents a decrease from 54 cases in 2011
- The 2007-2011 median number of cases per year was 52
- Age range was 3 years to 75 years
- Majority of cases were male (73%)
- 58% of cases reported risk factor of males who have sex with other males

HIV transmission can be prevented by the use of latex or polyurethane condoms during anal and vaginal sex. It is equally important to always use clean needles and injection equipment when injecting any substance. HIV testing, counseling, and referral services are offered by various agencies and programs dedicated to HIV prevention and treatment in Maine.

Newly Identified HIV Diagnoses, Maine and US, 2008-2012



Newly Identified HIV Diagnoses by Age and Gender, Maine, 2012



Reported Transmission Risk Factors Among Persons Diagnosed with HIV, 2012

Mode of Transmission	New Diagnoses	% of Cases
Men who have sex with men (MSM)	28	58%
Injection drug users (IDU)	0	0%
MSM and IDU	0	0%
Heterosexual contact with at-risk partners	5	11%
Heterosexual, no at-risk partners disclosed	14	29%
Undetermined	0	0%
Received contaminated blood products	0	0%
Child born to mother with HIV	1	2%

*Includes all newly identified HIV infections, including those simultaneously diagnosed as new AIDS cases.

Legionellosis

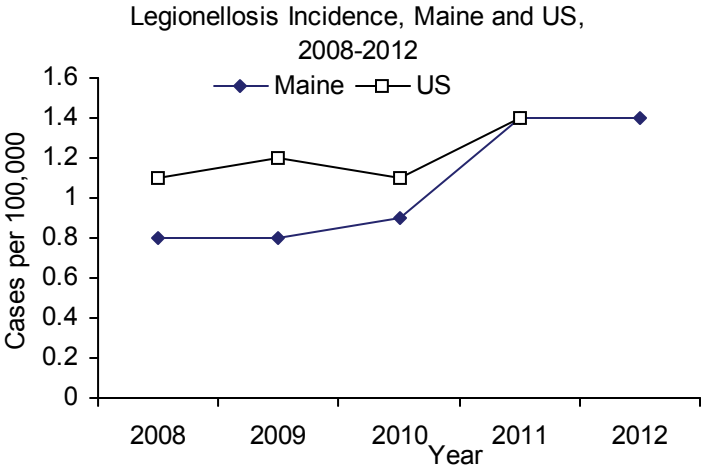
2012 Case Total **18**
Maine Rate **1.4 per 100,000**
U.S. rate (2011) **1.4 per 100,000**

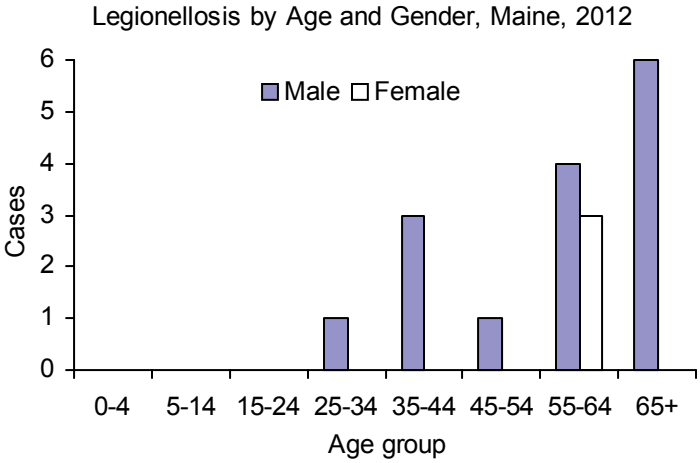
Legionellosis (or Legionnaire's disease) is a serious and sometimes fatal form of pneumonia. *Legionella* bacteria are widespread in natural, industrial and recreational water sources. The bacteria grow best in warm, stagnant water. They can be found in creeks and ponds, hot and cold water taps, hot water tanks, water cooling towers, and condensers of large air-conditioning systems. People get legionellosis when they breathe in a mist or vapor that is contaminated with the bacteria. Persons at high risk of getting legionellosis include those who are middle aged or older, smoke, have chronic lung disease, or weakened immune systems due to cancer, kidney failure, diabetes, or HIV infection.

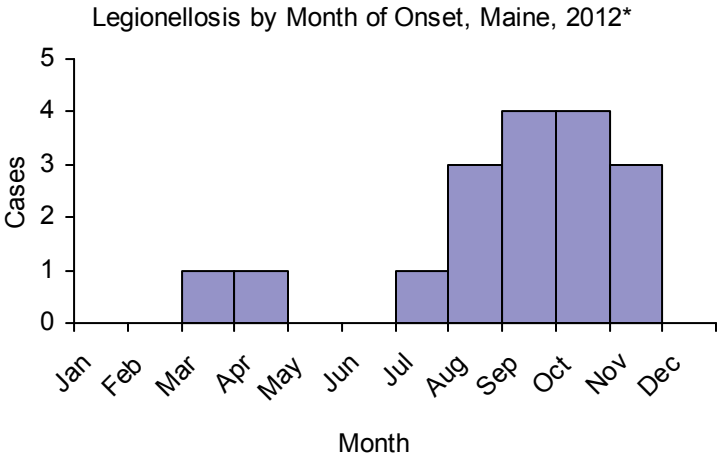
Symptoms include: high fever, chills, muscle aches, headaches, cough, and pneumonia. Legionellosis is treatable with antibiotics.

- 18 cases represent no change from 2011
- The 2007-2011 median number of cases per year was 11
- Median age was 59 years
- Age range was 34 to 85 years
- Cases were 17% female and 83% male

Prevention depends on good maintenance of possible water sources of infection (water tanks, water systems, fountains, etc.). This includes regular cleaning, disinfecting, and applying other physical (temperature) or chemical measures to minimize growth. Applying such controls at hospitals, industrial sites, hotels, and recreation centers will reduce the risk of water contamination.







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Listeriosis

2012 Case Total **5**
Maine Rate **0.4 per 100,000**
U.S. rate (2011) **0.3 per 100,000**

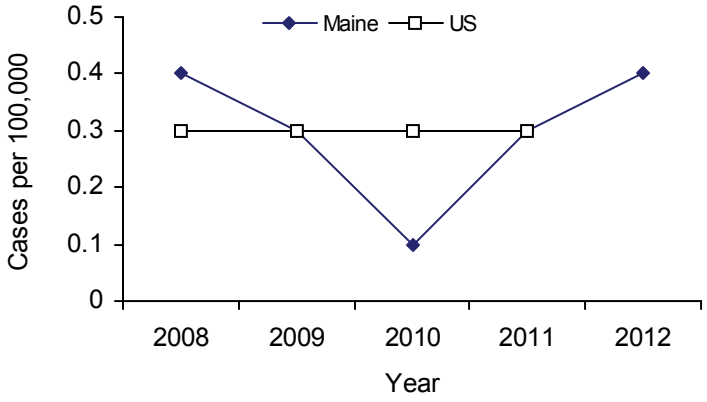
Listeriosis is a bacterial illness, caused by *Listeria monocytogenes*. Infection may cause sepsis and meningitis. Listeriosis is frequently linked to ready-to-eat meats (such as paté and refrigerated smoked seafood), deli meats, soft cheeses and raw milk. Pregnant women are at highest risk for severe outcomes as an infection acquired during pregnancy can be transmitted to the fetus. Also at risk are the elderly and individuals with significant health conditions like cancer, diabetes, liver disease, immune system problems, or multiple medical conditions.

Symptoms include: fever, headache, nausea, fatigue and disorientation. Listeriosis may cause spontaneous abortion.

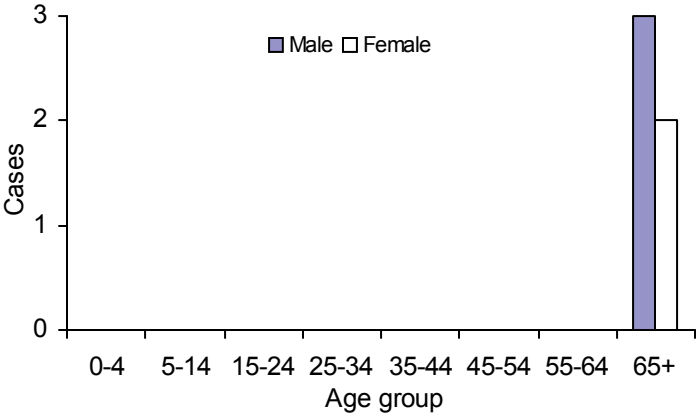
- 5 cases represent an increase from 4 cases in 2011
- The 2007-2011 median number of cases per year was 4
- Median age was 81 years
- Age range was 70 to 83 years
- All 5 cases were hospitalized

Listeria bacteria are able to multiply in contaminated foods even during refrigeration. Poultry or meat (including hot dogs) should not be consumed without following proper cooking instructions. Raw milk or foods made from raw milk should be avoided. Pregnant women and people with weakened immune systems should avoid eating such foods as ready-to-eat meats, hot dogs, soft cheeses, and refrigerated smoked seafood.

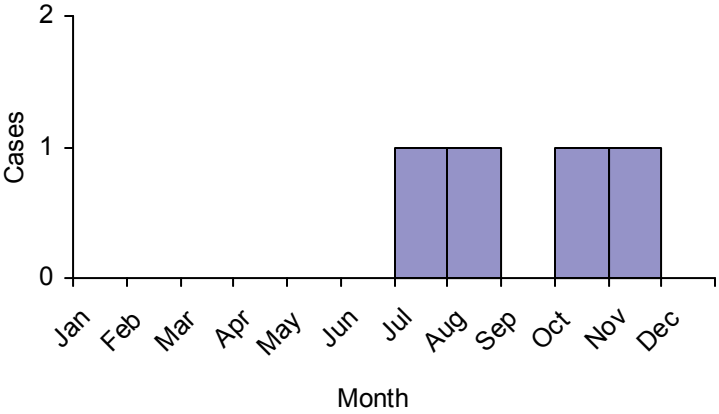
Listeriosis Incidence, Maine and US, 2008-2012



Listeriosis by Age and Gender, Maine, 2012



Listeriosis by Month of Onset, Maine, 2012*



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Lyme Disease

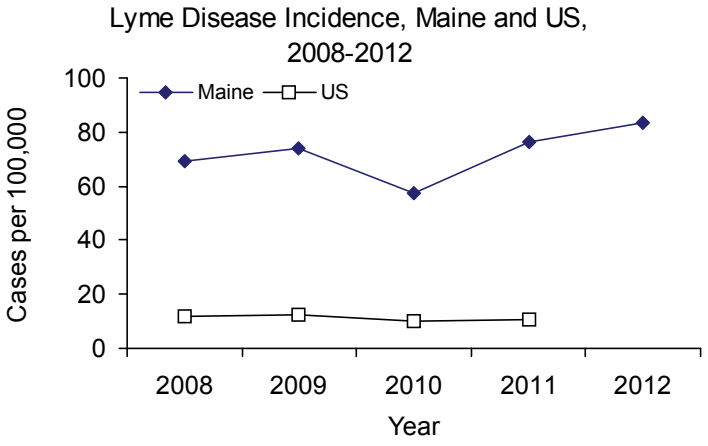
2012 Case Total	**1,111**
Maine Rate	**83.6 per 100,000**
U.S. Rate (2011)	**10.6 per 100,000**

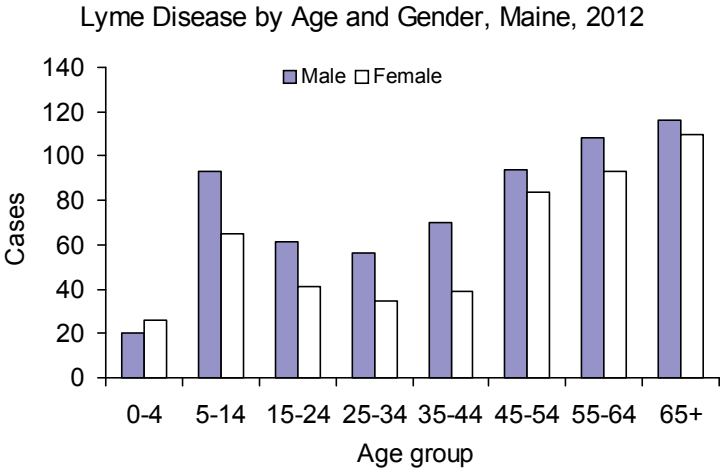
Lyme disease, Maine's most common vectorborne disease in humans, is caused by the bacterium *Borrelia burgdorferi*. The disease is transmitted via the bite of an infected deer tick (*Ixodes scapularis)* and symptoms are generally visible between 3 and 30 days after the initial bite. Early symptoms include: a characteristic "bulls eye" rash, fever, headache, joint and muscle pain, fatigue. Later symptoms include: arthritis, Bell's palsy and other cranial nerve palsies, meningitis, and carditis.

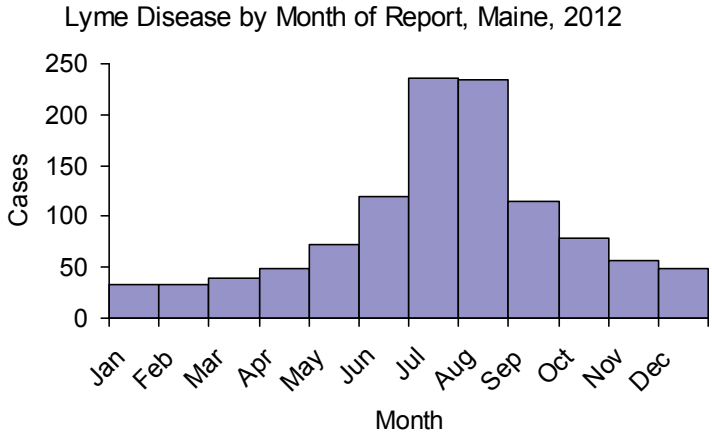
- 1,111 cases represent an increase from 1,012 cases in 2011
- The 2007-2011 median number of cases per year was 908
- Median age was 48 years
- Age range was 5 months to 92 years
- Cases were 44% female and 56% male
- Cases were greatest in York (20%) and Cumberland (24%) counties

Although there is no vaccine for Lyme disease, risk can be greatly reduced by avoiding tick habitats, using EPA approved repellents (such as DEET), wearing long sleeves and pants, and checking for ticks after spending time in tick habitat. Landscape management and control of deer herds can also allow communities to better protect residents from Lyme disease.

For more information about submitting a tick for identification (not testing for Lyme disease) visit www.mmcri.org/lyme.







Meningococcal Disease

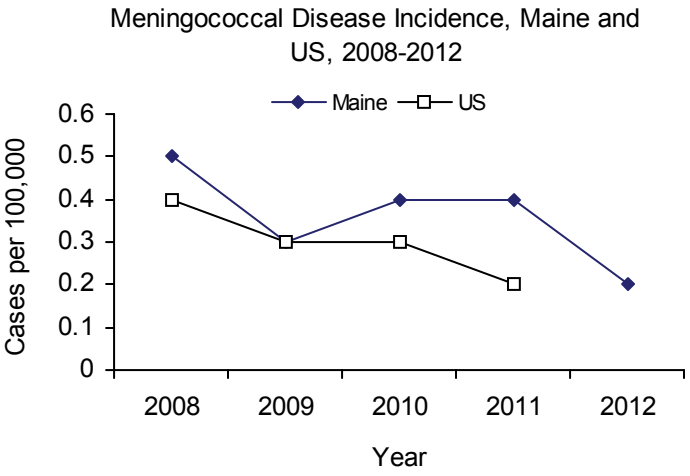
2012 Case Total	**3**
Maine Rate	**0.2 per 100,000**
U.S. rate (2011)	**0.2 per 100,000**

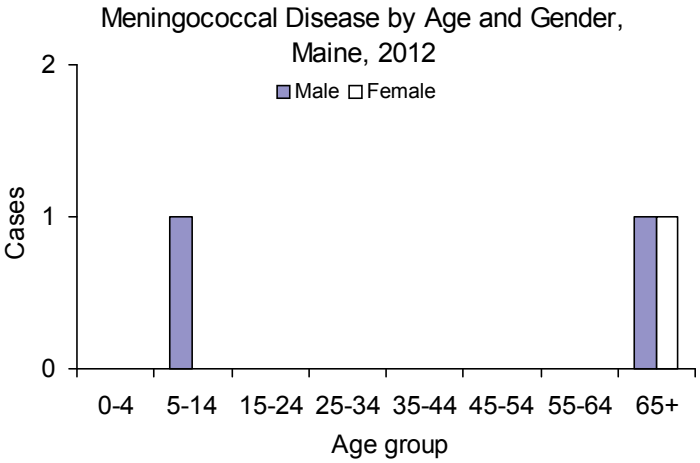
Meningococcal disease is an infection caused by *Neisseria meningitidis,* a gram-negative diplococcus bacterium. Meningococcal disease presents most commonly as meningitis and/or meningococcemia that may progress rapidly to purpura fulminans, shock and death. Transmission of meningococcal disease most often occurs through direct contact with respiratory secretions from the nose or throat of a person with the infection.

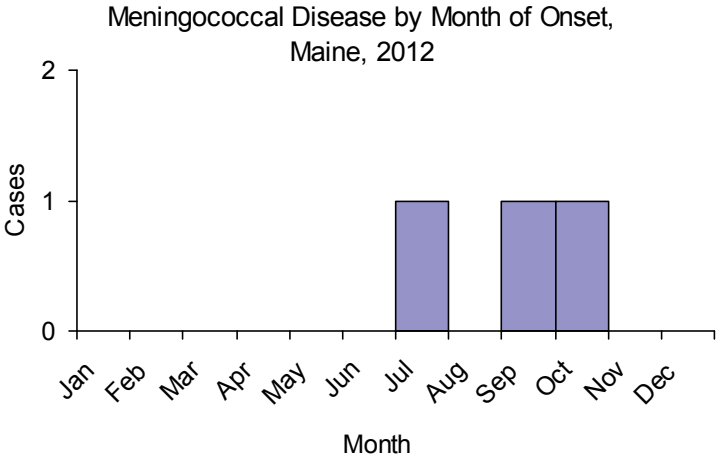
Symptoms include fever, headache, and stiff neck for meningitis and rash and sepsis for meningococcemia. The symptoms are indistinguishable from other pathogens causing meningitis.

- 3 cases represent a decrease from 5 cases in 2011
- The 2007-2011 median number of cases per year was 5
- Median age was 73 years
- Age range was 6 to 82 years
- Cases were 33% female and 67% male
- Serogroups identified include: A (1), Y (1), and unknown (1)

There are at least thirteen known *Neisseria meningitidis* serogroups, and there is currently a vaccine available for the four serogroups that cause the majority of infections (serogroups A, C, Y, and W-135). The vaccine is recommended for all adolescents, college students, military recruits, overseas travelers, and any other persons at increased risk of infection. To prevent the spread of disease, chemoprophylaxis is available for persons who have close and direct with a person with the infection.







MRSA, invasive

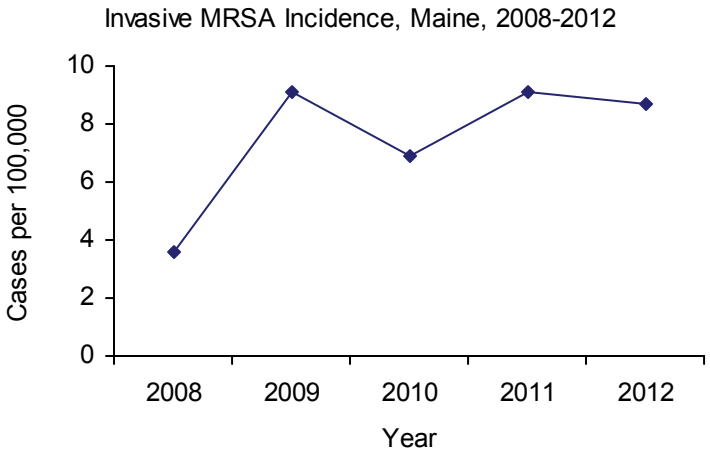
2012 Case Total **116**
Maine Rate **8.7 per 100,000**
U.S. rate (2011) **Not reportable**

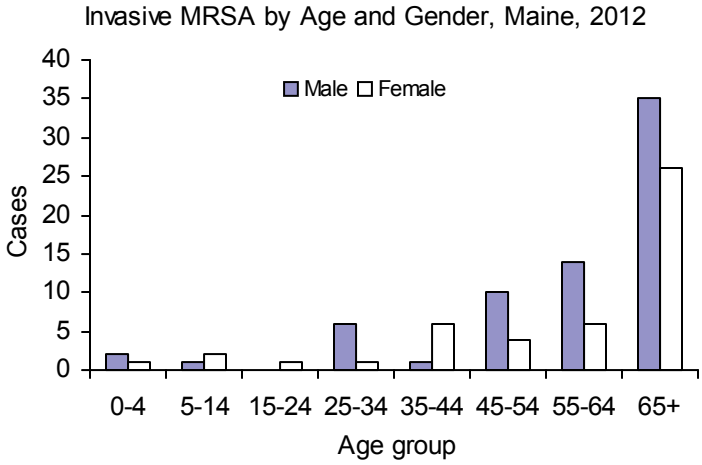
Methicillin-resistant *Staphylococcus aureus* (MRSA) is caused by a strain of bacteria which is resistant to the antibiotic methicillin and many of the antibiotics commonly used to treat staphylococcal infections. MRSA usually presents as a skin or soft tissue infection, considered a non-invasive infection. Invasive MRSA occurs when the bacteria infect internal systems and are isolated from a normally sterile site (such as blood, CSF, pleural fluid or joint fluid)

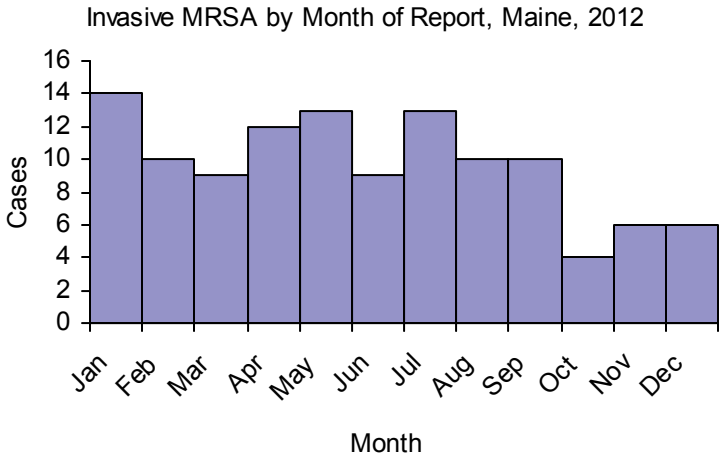
Persons with weakened immune systems, the elderly, and those with invasive medical devices are at increased risk of invasive MRSA infections.

- 116 cases represent a decrease from 121 cases in 2011
- Median age was 66 years
- Age range was 1 month to 93 years
- Cases were 41% female and 59% male

To reduce MRSA transmission cover wounds with clean dry bandages; wash hands frequently with soap and warm water; use disinfectants effective against *S. aureus;* avoid sharing personal items such as towels, washcloths, razors, and clothing; tell your healthcare provider if you had contact with someone with MRSA; and avoid contact sports and other skin-to-skin contact until your infection heals. Seek medical care immediately to identify infection early and receive treatment for invasive MRSA infection.







Mosquito Borne Infections

Mosquitoes are blood-feeding insects found around the world. Female mosquitoes need a blood meal to reproduce, making them an important disease vector. There are 45 species of mosquitoes in Maine; however less than half are capable of spreading diseases including EEE and WNV.

Eastern Equine Encephalitis (EEE)
EEE is a mosquito-borne viral disease that occurs in the eastern half of the United States where it can cause disease in humans, horses, and some birds. Most persons infected with EEE will have no obvious symptoms. In those persons who do develop illness, symptoms of EEE range from mild-flu like illness to inflammation of the brain, coma, and death. EEE is one of the most serious mosquito-borne diseases in the United States because of its high mortality rate.

In 2012, one pheasant tested positive for EEE in Maine. Two songbirds tested positive for EEE by serology, indicating previous exposure to the virus, not necessarily active infection. There were no human cases and no mosquito pools tested positive for EEE.

West Nile Virus (WNV)
WNV occurs throughout the United States and can cause disease in humans, birds, and other mammals. Many persons infected with WNV will have no obvious symptoms. In those persons who do develop illness, symptoms of WNV include: headache, high fever, altered mental state, tremors, convulsions, and rarely paralysis. WNV can also cause meningitis and/or encephalitis and can be fatal.

Maine experienced its first human case of WNV in 2012. The case was in a resident of Cumberland County with no travel history outside of Maine. The individual infected presented with neruoinvasive illness, and has since recovered.

In 2012, 7 mosquito pools from York and Cumberland Counties tested positive for WNV in Maine.

Malaria
Malaria is a serious and sometime fatal disease caused by a parasite that commonly infects a certain type of mosquito. Symptoms may include high fevers, shaking chills, flu-like illness, headache, muscle aches, tiredness, nausea, vomiting and diarrhea. Malaria is uncommon in the United States, but very common in developing countries.

In 2012, there were five cases of malaria reported in Maine individuals who had a history of travel outside the US (Burundi, Ethiopia, Sudan, and Uganda).

Dengue Fever
In 2012, there were no cases of Dengue fever reported to the state. Dengue is a disease caused by a virus transmitted by the bite of an infected mosquito. Symptoms of dengue fever include high fever, severe headache, backache, joint pain, nausea and vomiting, eye pain and rash.

Prevention
To decrease risk of contracting a mosquito-borne disease, measures should be taken to prevent mosquito bites:

- Use an EPA approved repellent. Products containing DEET, IR3535, picaridin or oil of lemon eucalyptus can be applied to exposed skin, and permethrin containing products can be applied to clothing. Make sure to follow the instructions on the product's label when using repellents or other pesticides
- Wear long sleeve shirts and long pants when possible or when mosquitoes are abundant
- Protect babies with mosquito netting
- When mosquitoes are abundant, stay indoors
- Mosquito proof your house by fixing or installing window screens and screen doors
- Control mosquito populations around your home by cleaning gutters and removing or emptying objects that contain still water where mosquitoes can lay eggs such as old tires, old cans, and plastic tarps
- Empty water from flower pots, pet dishes, birdbaths, rain barrels, and buckets at least weekly
- Prior to international travel, consult a travel clinic to determine if malaria prophylaxis is recommended for the country of visitation.

Pertussis

2012 Case Total	**737**
Maine Rate	**55.5 per 100,000**
U.S. rate (2011)	**6.0 per 100,000**

Pertussis (whooping cough) is a bacterial infection of the respiratory tract caused by *Bordetella pertussis*. Prior to vaccine licensure pertussis was a common childhood disease associated with a high mortality rate. High pertussis vaccination rates are associated with lower numbers of pertussis cases.

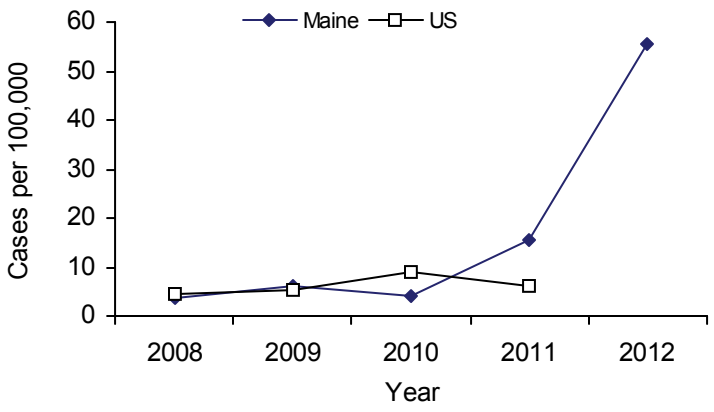
Symptoms include an irritating cough lasting at least 2 weeks with paroxysm, whoop, and post-tussive vomiting.

- 737 cases represent an increase from 205 cases in 2011
- The 2007-2011 median number of cases per year was 80
- Median age was 10 years
- Age range was 1 month to 83 years
- Cases were 60% female and 40% male
- Cumberland, Somerset and York counties had the highest incidence

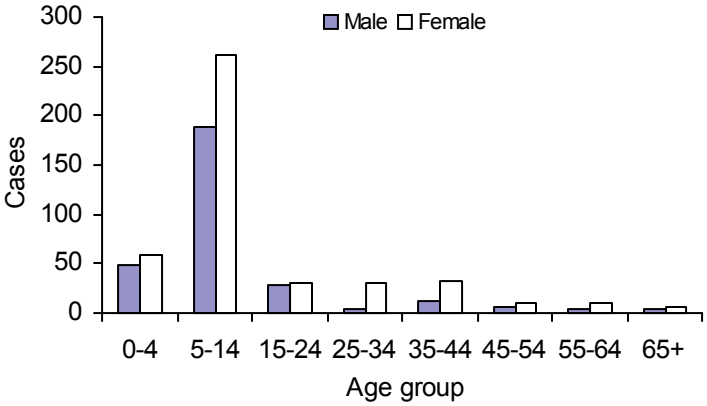
In 2012, clusters of illness occurred in schools, camps, sport teams and workplaces throughout the state.

Vaccination is available and part of routine childhood immunizations. There are two pertussis vaccines (DTaP and Tdap). The ACIP recommends all persons 11 years and older receive Tdap in place of one tetanus booster.

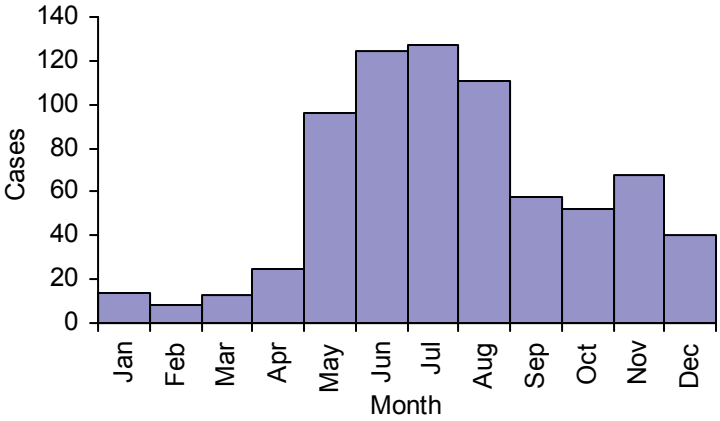
Pertussis Incidence, Maine and US, 2008-2012



Pertussis by Age and Gender, Maine, 2012



Pertussis by Month of Onset*, Maine, 2012



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Rabies, Animal

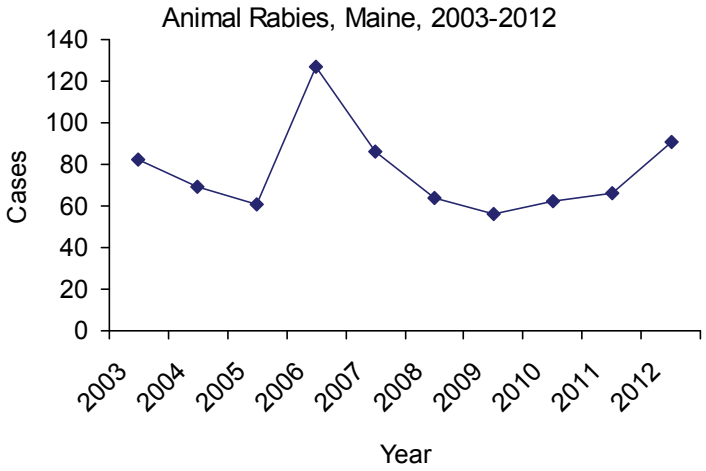
2012 Case Total **91**
Maine Rate **N/A**
U.S. Count (2011) **6,037**

Rabies is a zoonotic viral disease that affects the central nervous system. All mammals are susceptible to rabies. Rabies in humans is rare in the United States. The majority of rabies infections occur in wild animals, including raccoons, skunks, foxes, and bats. Unvaccinated domestic animals are also at risk for getting rabies.

The rabies virus is found in the saliva and neural tissue of infected animals. Rabies is transmitted from the bite of a rabid animal. Rabies can also be spread if infectious material from a rabid animal gets into an open wound or mucous membrane (eyes, nose, or mouth) of a susceptible person or animal. Bat bites can be difficult to detect. Since bats are implicated in most human rabies cases, whether or not a bite was reported, any contact with a bat should be evaluated by a healthcare provider.

Rabies infection causes acute progressive encephalopathy. Early symptoms include fever and general discomfort. As the disease progresses, symptoms may include difficulty sleeping, anxiety, confusion, hallucinations, excessive drooling, difficulty swallowing, and hydrophobia. Rabies is almost always fatal a few days after symptom onset.

- 91 animal rabies cases represent an increase from 66 cases in 2011
- 85 were tested at HETL and six were tested at USDA as part of supplemental surveillance in Northern Maine
- The 2007-2011 median number of cases per year was 64
- The last reported case of human rabies in Maine was in 1937
- 130 persons were recommended to receive PEP; 25 were exposed to a laboratory-confirmed rabid animal



Positive Rabies Results by Species, Maine, 2012

Animal	Number Positive
Raccoon	45
Skunk	30
Fox	5
Bat	5
Cat	4
Dog	1
Woodchuck	1

Rabies testing requires central nervous system or brain tissue, obtained postmortem. The state public health laboratory uses direct fluorescent antibody testing to determine if wild or domestic animals that expose people or domestic animals are rabid.

Maine CDC works with Animal Control Officers, Game Wardens, veterinarians, and healthcare providers to recommend control measures for people and domestic animals after an exposure. Persons who are exposed to a confirmed or suspect rabid animal should receive rabies post-exposure prophylaxis (PEP), which is a combination of rabies vaccine and immune globulin. Rabies PEP is very effective in preventing disease after an exposure.

Increased public awareness about rabies may reduce the number of exposures. Prevention measures include keeping pets up-to-date on rabies vaccine and avoiding wildlife.

Salmonellosis

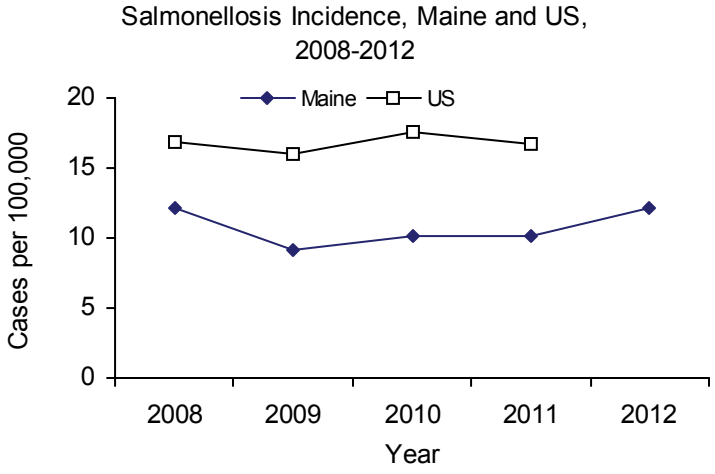
2012 Case Total	**161**
Maine Rate	**12.1 per 100,000**
U.S. rate (2011)	**16.7 per 100,000**

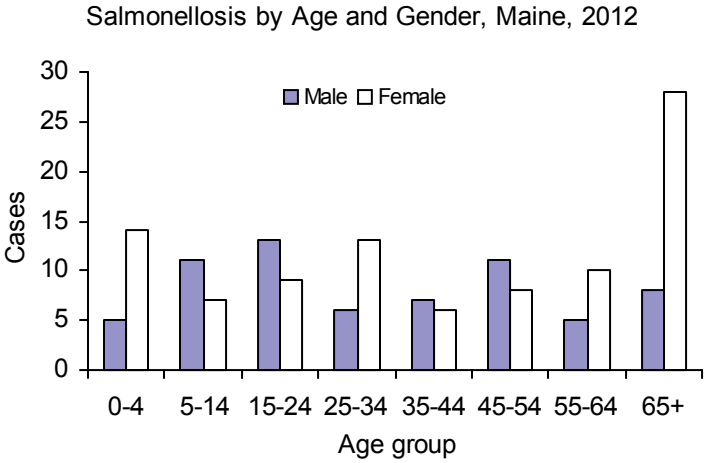
Salmonellosis is a gastrointestinal illness of varying severity caused by *Salmonella* bacteria. Severity of symptoms depends on the age and overall health of the person infected, serotype of *Salmonella* and the site of infection. *Salmonella* is transmitted through the ingestion of contaminated meat, poultry, eggs, unpasteurized dairy, and fresh produce. Handling of reptiles, chicks, domestic birds, and pets can also lead to transmission.

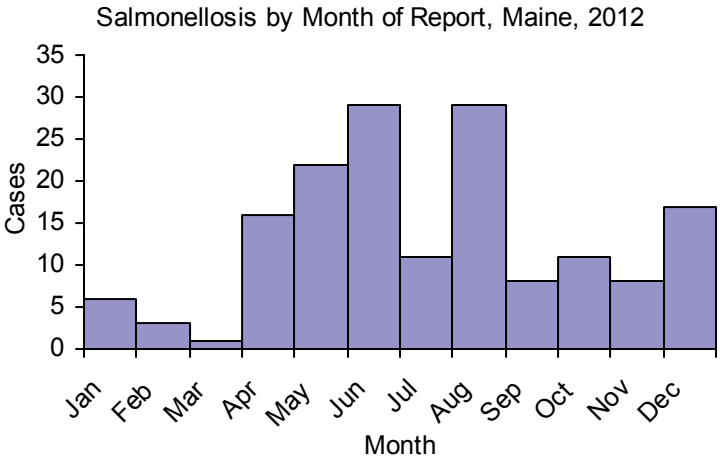
The symptoms can include: fever, cramping, diarrhea, nausea, and vomiting.

- 161 cases represent an increase from 134 cases in 2011
- The 2007-2011 median number of cases per year was 134
- Median age was 36 years
- Age range was 1 month to 93 years
- Cases were 59% female and 41% male
- 131 of 161 (81%) cases were laboratory confirmed
- The most commonly seen types of *Salmonella* were Enteritidis, Newport and Typhimurium

The best way to reduce the risk of salmonellosis is to wash produce, avoid consuming unpasteurized dairy products, and follow proper cooking instructions. Individuals having contact with reptiles (such as snakes, lizards, turtles, frogs, iguanas, etc.), birds, and farm animals should wash their hands immediately after handling these animals.







Shiga toxin-producing *E. coli (STEC)*

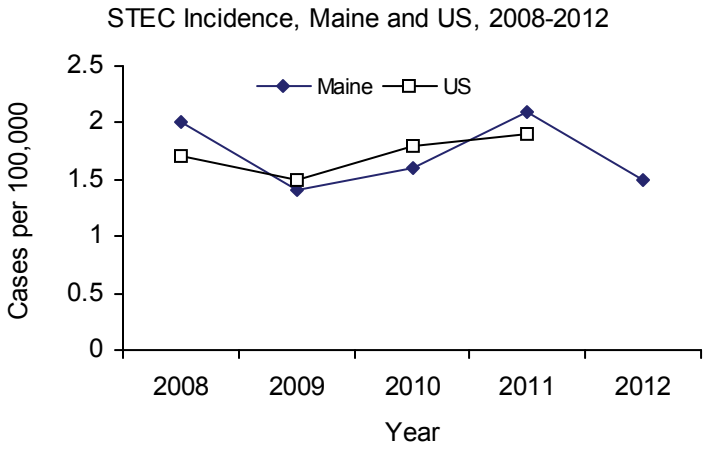
2012 Case Total	**20**
Maine Rate	**1.5 per 100,000**
U.S. rate (2011)	**1.9 per 100,000**

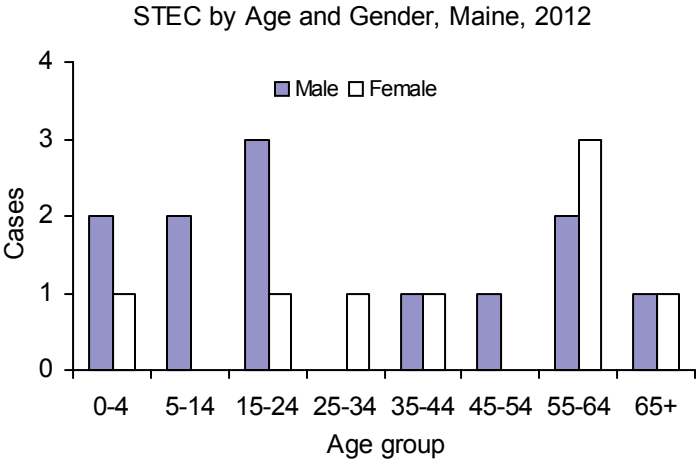
Escherichia coli (E. coli) are common bacteria that live in the digestive tract, some cause serious infection and some do not. Transmission of shiga toxin-producing *E. coli* (STEC) is through consumption of food or water contaminated with fecal matter or through contact with farm animals. Commonly implicated food items include undercooked meats, raw vegetables, and unpasteurized products.

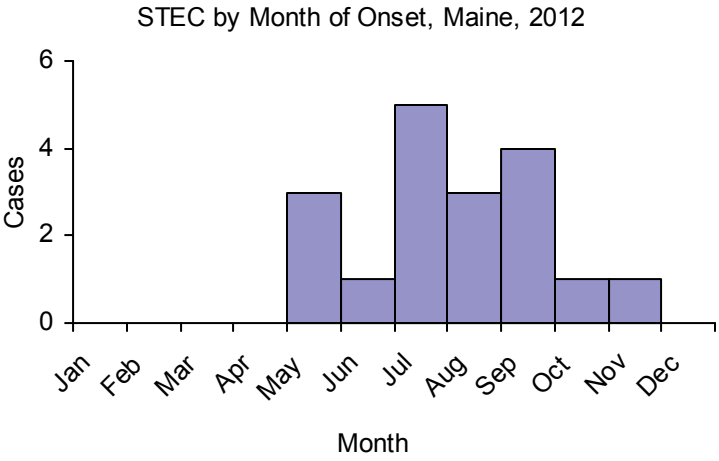
STEC may cause severe illness. Symptoms include: abdominal cramping, bloody diarrhea and a rare complication, hemolytic uremic syndrome (HUS), which can damage red blood cells and the kidneys.

- 20 cases represent a decrease from 28 cases in 2011
- The 2007-2011 median number of cases per year was 26
- Median age was 35 years
- Age range was 9 months to 78 years
- Cases were 40% female and 60% male
- 19 of 20 (95%) cases were laboratory confirmed
- 42% of laboratory confirmed cases were O157:H7
- 2 cases of hemolytic uremic syndrome (HUS) with symptoms of diarrhea were reported, both cases were O157:H7

STEC prevention measures include: handwashing, particularly before and after cooking and after contact with animals; thoroughly cooking meats; washing fresh fruits and vegetables; avoiding raw dairy products and unpasteurized juices; avoiding consumption of untreated water; and avoiding cross-contamination of food items.







Shigellosis

2012 Case Total **7**
Maine Rate **0.5 per 100,000**
U.S. rate (2011) **4.3 per 100,000**

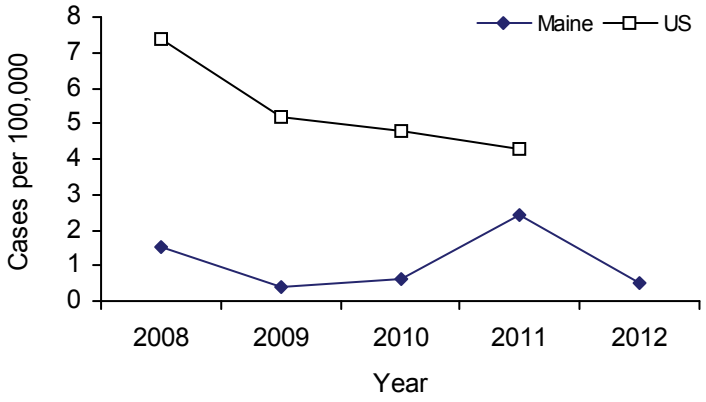
Shigellosis is a gastrointestinal illness caused by *Shigella* bacteria. *Shigella* is highly infectious and can easily be passed from one person to another through the fecal-oral route. Shigellosis can be transmitted by eating contaminated food, and drinking, swimming in or playing with contaminated water. Outbreaks of *Shigella* have also occurred among men who have sex with men.

Symptoms include: fever, stomach cramping and severe diarrhea which may be bloody. Children, especially toddlers aged 2 to 4 years, are most likely to get shigellosis.

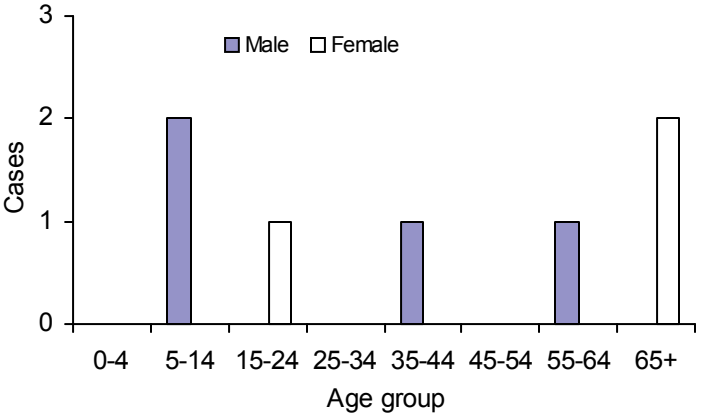
- 8 cases represent a decrease from 32 cases in 2011
- The 2007-2011 median number of cases per year was 14
- Median age was 44 years
- Age range was 11 to 79 years
- Cases were 43% female and 57% male
- 5 of 7 (71%) cases were laboratory confirmed
- *Shigella flexneri* and *sonnei* were identified
- 6/8 (75%) cases had travel to a foreign country during exposure period

To prevent shigellosis, practice good hand hygiene, avoid consuming unpasteurized milk products, use filtered, clean water, and store foods properly. Infected persons who are employed in childcare, healthcare, or food handling are restricted from work until infection clears and there is no evidence of *Shigella* in stool specimens. Shigellosis is more common in the developing world and travelers should take extra precautions.

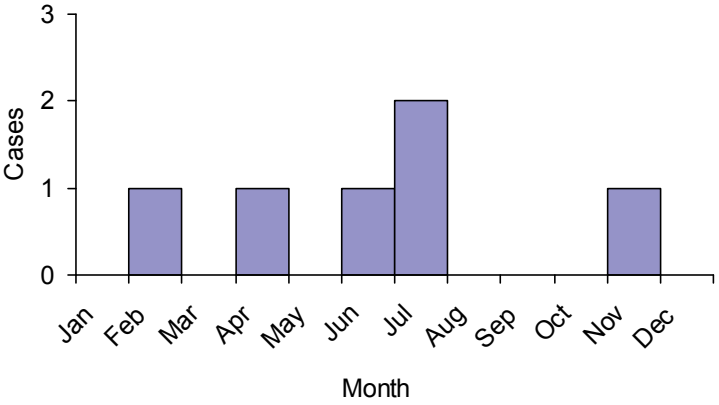
Shigellosis Incidence, Maine and US, 2008-2012



Shigellosis by Age and Gender, Maine, 2012



Shigellosis by Month of Onset*, Maine, 2012



*Onset date missing for one case

Streptococcus pneumoniae, invasive

2012 Case Total	**102**
Maine Rate	**7.7 per 100,000**
U.S. rate (2011)	**5.5 per 100,000**

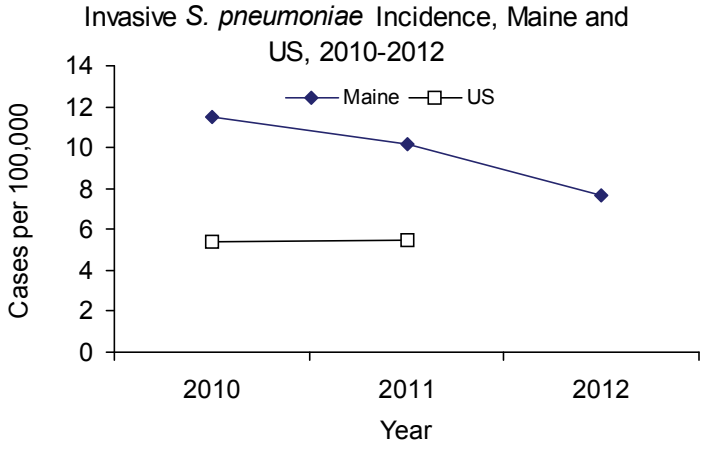
Starting in 2010, all cases of invasive disease were investigated and reported. Prior to 2010 only drug resistant cases and illness in children under 5 years were reported to federal CDC.

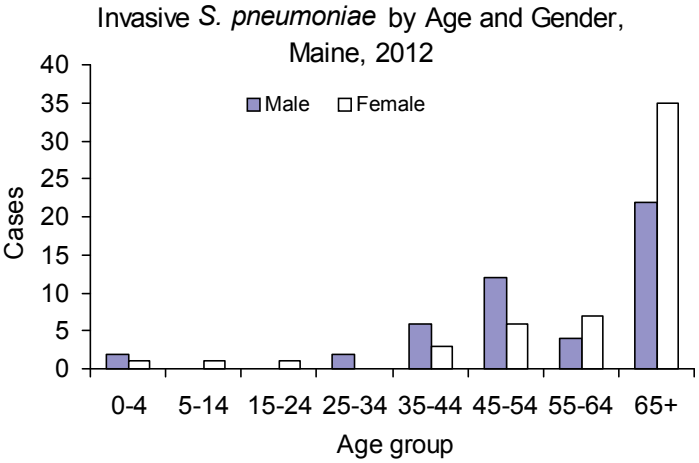
Invasive pneumococcal disease occurs when the *Streptococcus pneumoniae* bacterium infects the blood, lungs, or brain. Disease is transmitted from person to person through droplets when an infected person coughs or sneezes. Types of illness include bacteremia, meningitis, and pneumonia. There are over 90 different serotypes of *S. pneumoniae*, but the majority of pneumococcal disease is caused by a few common serotypes.

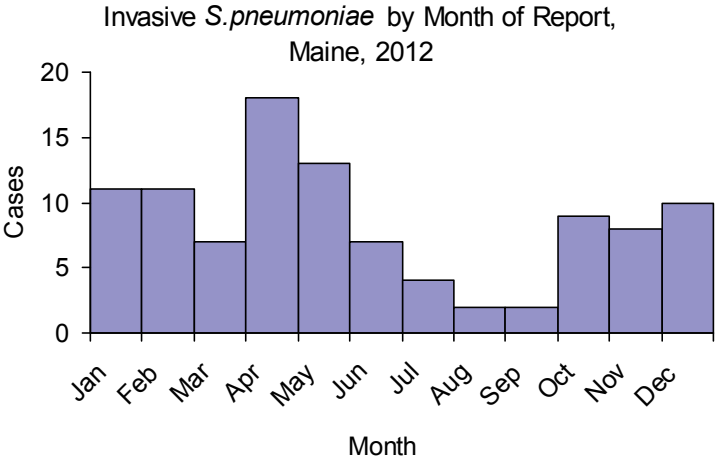
Persons at risk of pneumococcal disease include young children, adults 65 years of age or older, persons with certain underlying medical conditions, persons with weakened immune systems, and those in congregate settings such as daycare and long-term care facilities.

- 102 cases represent a decrease from 136 cases in 2011
- Median age was 67 years
- Age range was 6 months to 100 years
- Cases were 53% female and 47% male
- 20 (10%) cases were drug resistant
- 3 cases were in children under the age of five (none were drug resistant)

Pneumococcal disease can be prevented through routine vaccination of infants and children under five years with the pneumococcal conjugate vaccine (PCV13) and vaccination of adults and children over the age of two who are at high risk of infection with the pneumococcal polysaccharide vaccine (PPSV23).







Early Syphilis

2012 Case Total	**19**
Maine Rate	**1.4 per 100,000**
U.S. rate (2011)	**8.8 per 100,000**

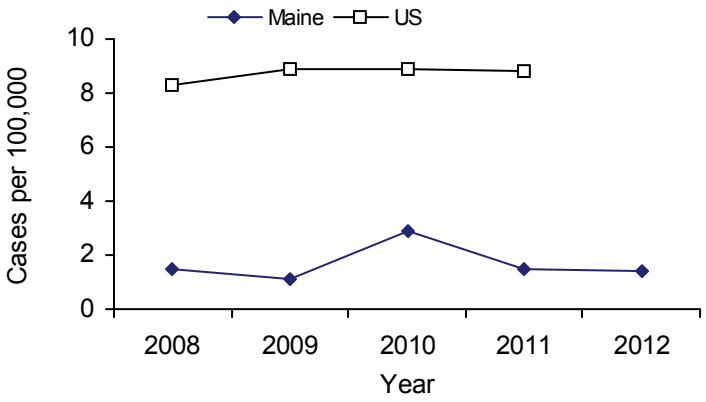
Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. It has often been called "the great imitator" because so many of the signs and symptoms of syphilis are like those of other diseases.

Early syphilis is defined as disease that occurs within the first year of infection. This is inclusive of the primary, secondary, and early latent stages of the disease.

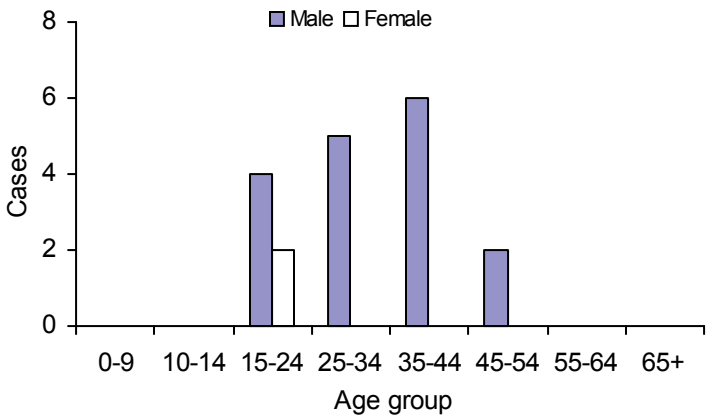
Syphilis is primarily spread through direct contact with a primary syphilis lesion. Lesions typically occur on the external genitals, vagina, and around the anus, but are also seen on the lips and in the mouth. Transmission primarily occurs during vaginal, anal, or oral sex. Disease transmission can also occur during the infectious period of the secondary stage, via the condylomata lata (raised moist papules) on the genital area or mucous patches in the mouth. Pregnant women with syphilis can pass it to their baby. Genital lesions caused by syphilis make it easier to transmit and acquire HIV infection.

- 19 cases represents a decrease from 20 cases in 2011
- The 2007-2011 median number of cases per year was 19
- 17 (89%) of cases were male, with only two female cases (11%) reported

Early Syphilis Incidence, Maine and US, 2008-2012



Early Syphilis by Age and Gender, Maine, 2012



Many individuals infected with syphilis reach a latent stage and have no symptoms for years, but they are still at risk for later complications (damage to internal organs, nerve damage, blindness and dementia) and death if not treated.

Syphilis transmission can be prevented by the use of latex or polyurethane condoms and dental dams during anal, vaginal, and oral sex. Prevention and control efforts include targeted awareness messaging (including the internet) and disease intervention activities for all early syphilis cases. Disease intervention activities include ensuring adequate treatment and notifying partners of potential exposure.

Tuberculosis

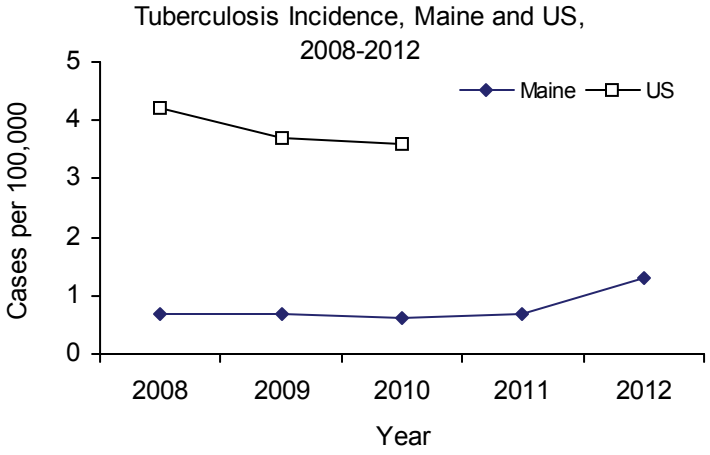
2012 Case Total	**17**
Maine Rate	**1.3 per 100,000**
U.S. rate (2011)	**3.4 per 100,000**

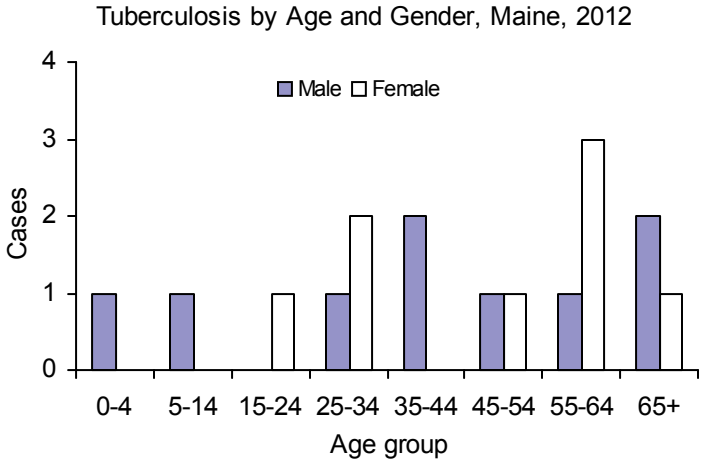
Tuberculosis (TB) is a communicable disease caused by the bacterium, *Mycobacterium tuberculosis*. It is spread through the air by airborne particles called droplet nuclei that are expelled from the lungs when a person who has infectious TB coughs, sings or sneezes. TB occurs when the mycobacterium is inhaled into the lung and begins to multiply. Not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist: latent TB infection (LTBI) and active TB disease.

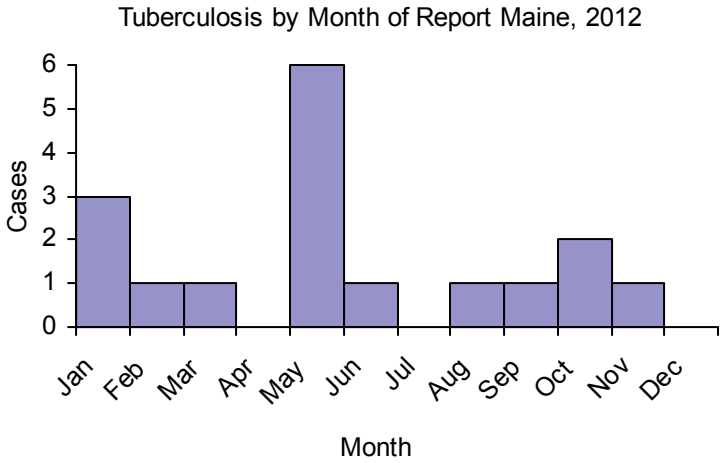
TB disease can cause infection in the lung (pulmonary), which is considered infectious to others. TB disease can also occur outside of the lung (extrapulmonary), which is not infectious.

- 17 cases represent an increase from 9 cases in 2011
- The 2007-2011 median number of cases per year was 9
- Median age was 48 years
- Age range was 3 to 88 years
- Cases were 47% female and 53% male
- 10 (59%) were foreign born
- In 9 contact investigations, 87% of identified contacts were evaluated
- Of 398 LTBI reports, 84% were foreign born

All active TB cases are evaluated by a TB consultant physician and are monitored by the state TB Control Program and Public Health Nurses.







Varicella

2012 Case Total **258**
Maine Rate **19.4 per 100,000**
U.S. rate (2011) **4.7 per 100,000**

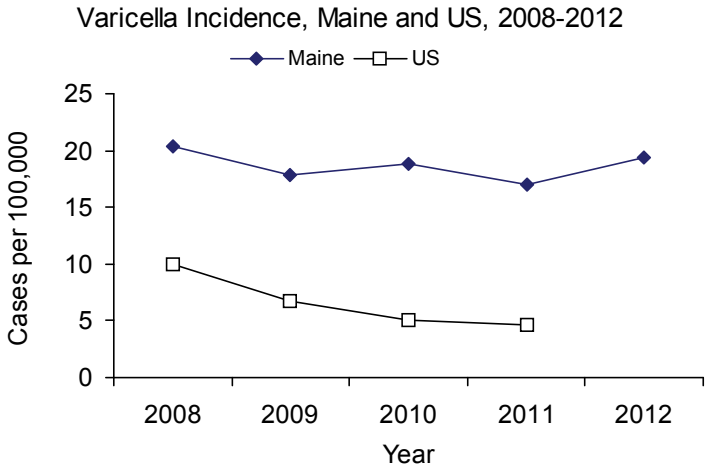
Varicella (chickenpox) is a highly contagious viral disease of which humans are the only source of infection. In most illness includes an itchy skin rash that looks like blisters, covering the body but more evident on the face, scalp, and abdomen. The majority of infected individuals develop a fever just before or when the rash appears.

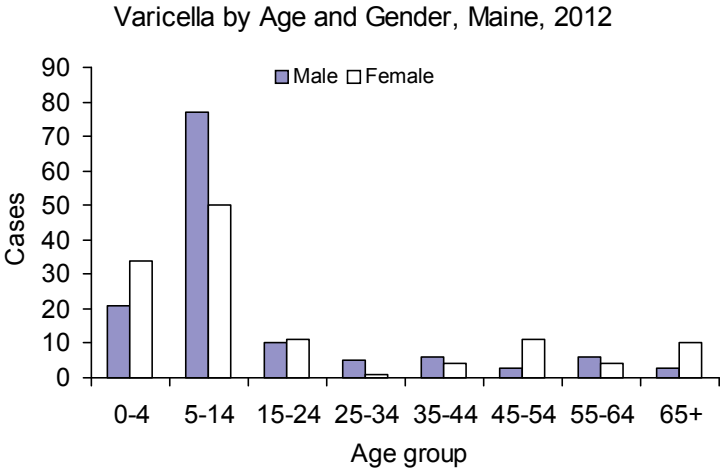
Person-to-person transmission occurs primarily through direct contact with respiratory tract secretions of infected individuals. Adolescents and adults are at higher risk for severe disease which could include pneumonia, bacterial infection of the skin and swelling of the brain.

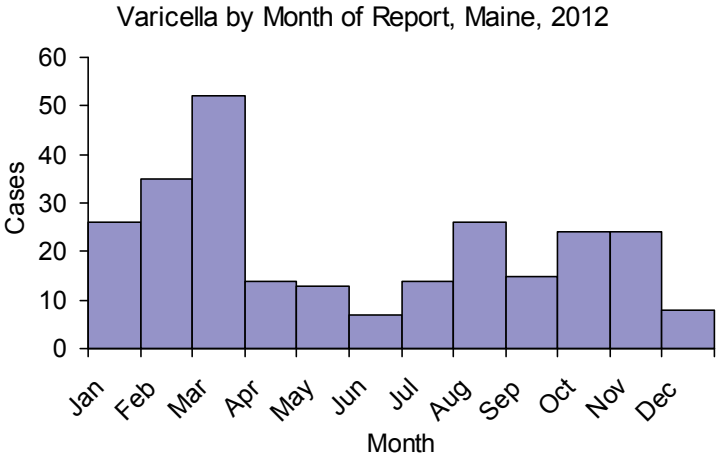
- 258 cases represent an increase from 226 cases in 2011
- Overall the greatest incidence was during the fall and spring months while schools are in session
- Nationally varicella incidence is reported to be an underestimate of true incidence

Varicella vaccine is a live attenuated viral vaccine. A two-dose series is estimated to be more than 90% effective in preventing infection. Federal CDC and ACIP recommend that all children receive 2 doses of varicella vaccine. Breakthrough infection has been reported in vaccinated individuals.

Mandatory vaccination for varicella (one dose) began in 2003 and is a requirement for school admission.







Vibriosis

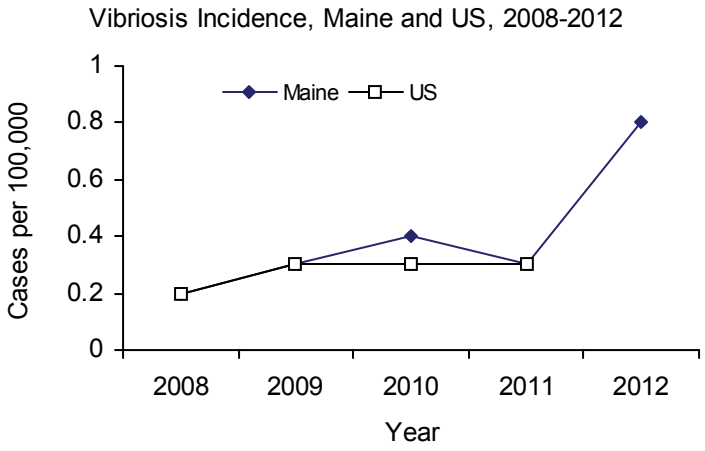
2012 Case Total	**10**
Maine Rate	**0.8 per 100,000**
U.S. rate (2011)	**0.3 per 100,000**

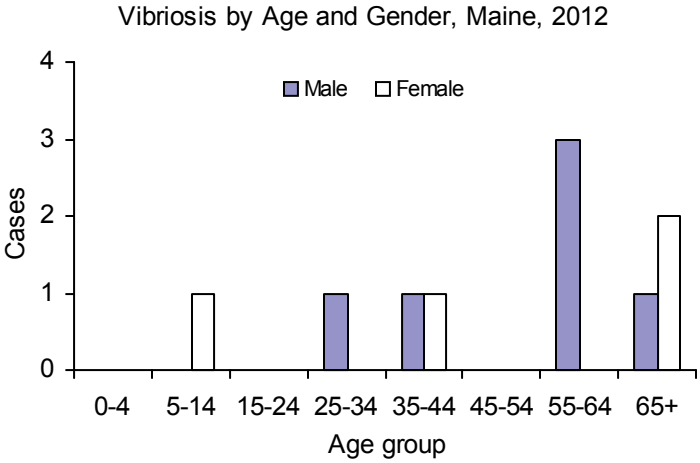
Vibriosis is an infection of variable severity characterized by diarrhea and vomiting, primary septicemia, or wound infections. *Vibrio parahaemolyticus*, associated with ingestion of raw or undercooked seafood, and *Vibrio alginolyticus,* associated with wounds and water contact, are the primary causes of vibriosis in Maine.

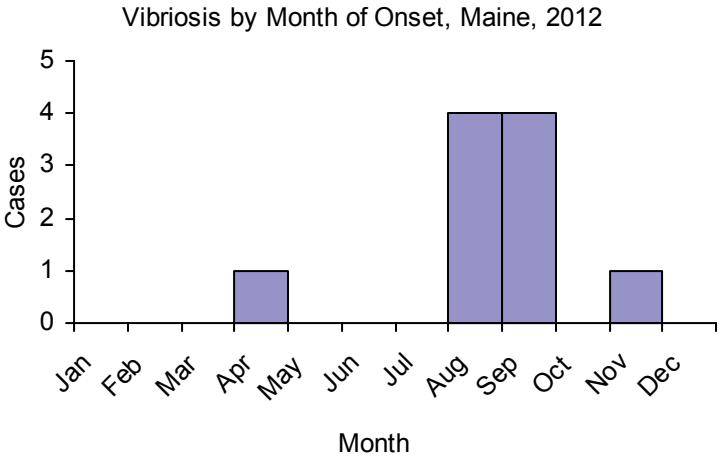
- 10 cases represent an increase from 4 cases in 2011
- The 2007-2011 median number of cases was 4
- Median age was 59 years
- Age range was 8 to 75 years
- Cases were 40% female and 60% male
- *Vibrio alginolyticus, parahaemolyticus*, and *fluvialis* were isolated.

Due to the increase of cases in 2012, a collaborative team from Maine CDC, Department of Agriculture, Conservation and Forestry and the Department of Marine Resources inspected over 20 establishments involved in processing, selling and preparing seafood.

Vibrio infections caused by *V. parahaemolyticus* can be prevented by thoroughly cooking seafood, especially oysters. Wound infections can be prevented by avoiding exposure of open wounds to seawater. Maine CDC works closely with the Maine Department of Marine Resources when persons with vibriosis report having exposures to shellfish or other marine sources of illness.







Influenza Season 2012—2013

Influenza

Influenza is a viral illness that typically occurs during the winter months. It is characterized by the abrupt onset of constitutional and respiratory signs and symptoms such as fever, headache, non-productive cough, sore throat, and runny nose. Influenza is spread from person to person primarily through coughing and sneezing of infected persons. Influenza can be diagnosed through laboratory testing. Influenza-like illness (ILI) is defined as fever greater than or equal to 100°F (37.8°C) AND cough and/or sore throat in the absence of a known cause.

The purpose of influenza surveillance is to inform influenza prevention and control policy. Maine CDC conducted influenza surveillance in collaboration with thirty six health care providers, four hospitals, three laboratories, Maine's Electronic Death Registry System (EDRS), and twenty six hospital emergency departments during the reporting period from September 30, 2012 to May 18, 2013. This report summarizes 2012-13 influenza surveillance by key indicators.

Influenza Surveillance in Maine

Outbreaks

Outbreaks of influenza or influenza-like illness are reportable by law in Maine. The definition used to recognize outbreaks of influenza-like illness varies by setting. For example, a single lab confirmed case (by any testing method) is an outbreak in long term care facilities. During the 2012-13 season, a total of 167 outbreaks of influenza were reported in Maine. This is an increase from the 2011 -12 season when 10 outbreaks were reported. Of the 167 outbreaks, 124 were in long-term care facilities, 2 in acute care facilities, 33 in K-12 schools, 1 in a university or residential school setting, 1 among health care workers, 5 in institutions, and 1 at a camp. The number of outbreaks peaked in Januray (MMWR week 3) and outbreaks occurred in all 16 counties.

Death Certificates

Maine's EDRS was used to determine the number of death certificates in which pneumonia and/or influenza were mentioned as a cause of death. Data represents deaths statewide. During the 2012 -13 season, a total of 8,091 death certificates were filed. Of these 567 (7.0%) were attributed to pneumonia or influenza.

Pediatric Fatalities

Health care providers and the Office of the Medical Examiner report deaths in persons aged 18 years or younger associated with laboratory-confirmed influenza to Maine CDC. One influenza-associated pediatric death was reported during the 2012-13 influenza season. A school aged child from central Maine died with confirmed influenza A/H3. The child had not received the current year influenza vaccine.

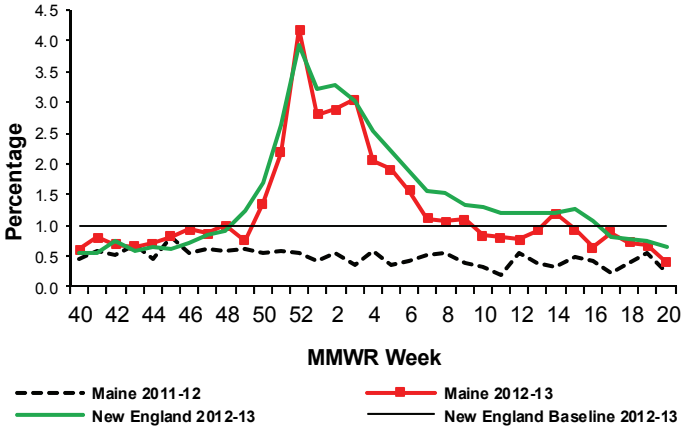
Influenza Season 2012-2013: Inpatient and Outpatient Surveillance

Outpatient influenza-like illness (ILI)
Data on outpatient visits for ILI was collected through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), a collaborative effort between federal CDC, Maine CDC, and local health care providers. During the 2012-13 season, 36 health care providers reported the total number of patients seen in their practices and the number of those patients seen for ILI by age group on a weekly basis. Outpatient ILI visits in Maine peaked in December (MMWR week 52) The New England region also peaked in December.

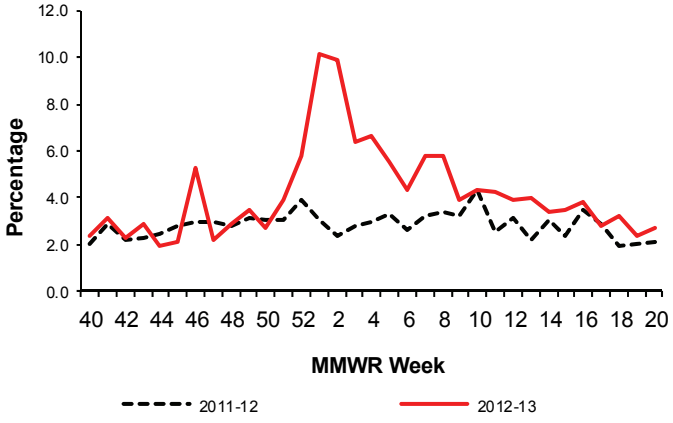
Hospital Inpatients
Inpatient surveillance for respiratory illness admissions in Maine was conducted in collaboration with four hospitals. During the 2012-13 season, four hospitals reported the number of patients admitted to the hospital and the number of those patients admitted for influenza or pneumonia using admitting diagnoses. Hospital admissions for influenza, pneumonia, or respiratory illness were highest in the first week of January (MMWR week 1).

Emergency Room Visits
Syndromic surveillance was conducted in the Emergency Departments of 26 hospitals and analyzed using the Early Aberration Reporting System (EARS). These visits are grouped by chief complaint. The percentage of ED visits that had a chief complaint consistent with ILI peaked in early January (MMWR week 2)

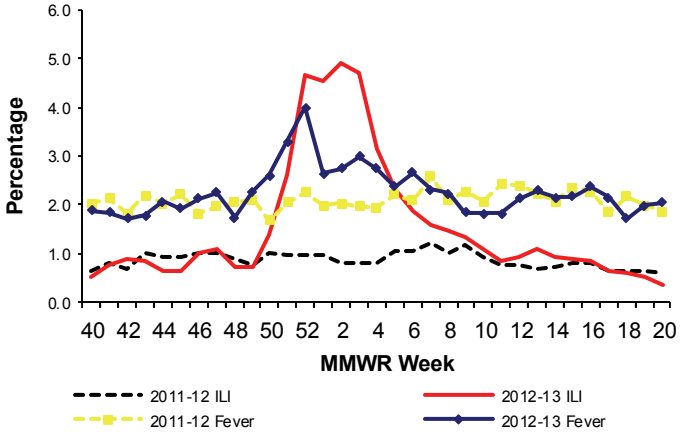
Outpatient Visits for Influenza-like Illness, Maine, 2011-13



Hospital Admissions Due to Pneumonia or Influenza, Maine, 2011-13



Emergency Department Visits for ILI at 26 Hospitals, Maine, 2011-13



Influenza Season 2012—2013: Laboratory Surveillance

HETL

Maine CDC's Health and Environmental Testing Laboratory (HETL) worked collaboratively with hospitals and private laboratories to collect specimens for respiratory virus testing and influenza positive isolate subtyping. HETL reported the number of specimens received for respiratory virus testing and the number positive for influenza A (pH1N1), A (H3), A (unable to subtype), and influenza B by specimen collection date. During the 2012-13 season, 1,186 respiratory specimens were tested by HETL for influenza. Of those 498 (41.8%) were positive for influenza (18 for influenza A/pH1N1, 435 for influenza A/H3, 3 for influenza A unable to subtype, and 42 for influenza B).

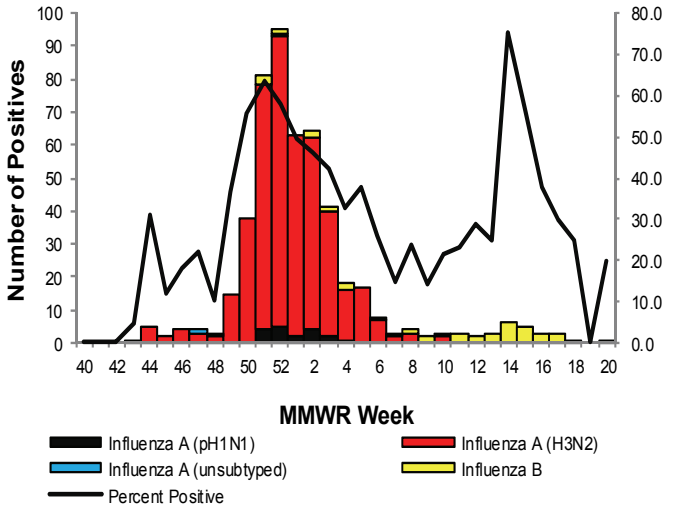
Reference Labs

Two Maine reference laboratories, and many national reference laboratories submitted reports of laboratory-confirmed influenza by culture or reverse-transcriptase polymerase chain reaction (RT-PCR). During the 2012-13 season, 1,346 specimens were positive for influenza (17 for influenza A/pH1N1, 420 for influenza A/H3, 830 for influenza A without subtype, and 79 for influenza B).

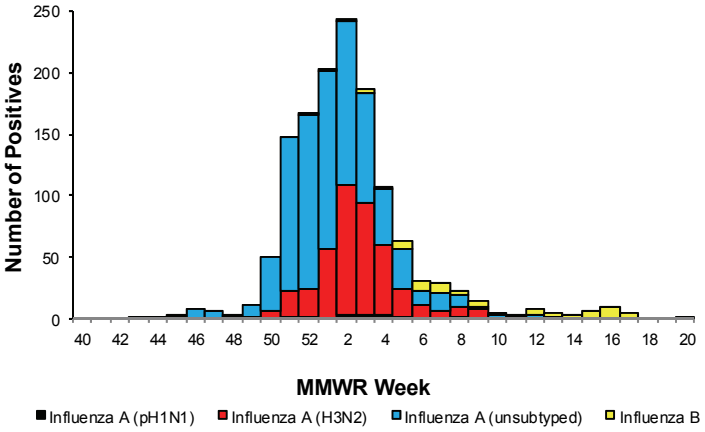
Rapid testing

Many hospitals, labs, and physician offices voluntarily report positive rapid antigen tests to the state. During the 2012-13 season 754 positive tests were reported, 691 for influenza A, 37 for influenza B, and 26 for influenza, unsubtyped.

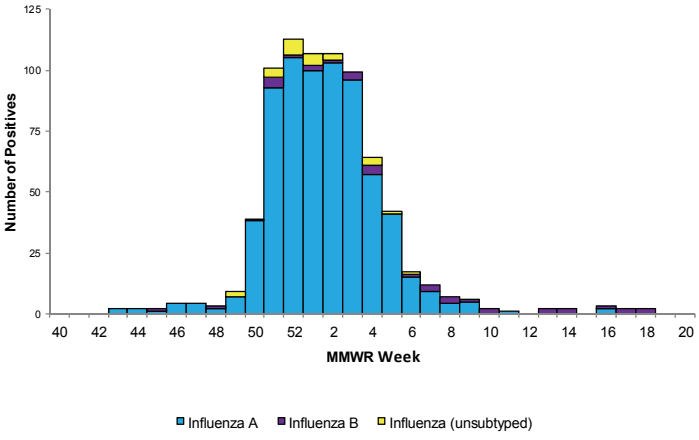
Positive PCR Samples for Influenza, HETL—Maine, 2012-13



Positive PCR Samples for Influenza, Maine and National Reference Labs Maine, 2012-13



Rapid Positive Influenza Tests—Maine, 2012-13



Human Exposures to Marine *Brucella* Isolated from a Harbor Porpoise – Maine, 2012

Brucellosis is a zoonotic infection caused by *Brucella* bacteria. *Brucella* primarily affects cattle, swine, goats, and sheep, though many other species, including marine mammals, are susceptible to infection. Transmission of *Brucella* from animals to humans occurs through direct contact with infected animal tissue, secretions (blood, urine, vaginal discharge), and products of birth; ingestion of raw milk or other dairy products, or inhalation of contaminated aerosols. Symptoms of brucellosis can include fever, sweats, headache, back pain, and fatigue. Infection can lead to complications involving the brain, bones/joints, heart, liver, or spleen. Brucellosis cases in the U.S. were previously associated with occupational exposures in the laboratory, veterinary, and slaughter house settings; consumption of raw milk; or hunting. Globally, four human cases of brucellosis associated with marine *Brucella* spp. have been documented since 2001. Because *Brucella* is highly infectious when aerosolized, it is considered a bioterrorism agent, and all cases of brucellosis are immediately reportable. *Brucella* isolates in the laboratory must be handled with extreme caution at biosafety level 3 (BSL-3).

In February 2012, Maine CDC was notified of a positive culture for *Brucella* spp. isolated from a harbor porpoise carcass found on the coast of southern Maine. The specimen was collected on January 29, 2012 from the uterus of the porpoise during a routine necropsy. A sea mammal rescue team affiliated with a Maine university conducted the necropsy. Two laboratories, including one out-of-state laboratory, processed the specimen before the isolate was confirmed as marine *Brucella* at the U.S. CDC laboratory. In consultation with the U.S. CDC, Maine CDC initiated an investigation to determine potential exposures and provide recommendations for the testing, prophylaxis, and monitoring of exposed persons.

A total of four persons were identified as high risk for potential exposure to aerosolized *Brucella* while performing the porpoise necropsy. Both laboratories used appropriate precautions when processing the specimen and were not at risk of exposure. Recommendations for the four exposed persons included baseline and serologic testing at 6 week intervals, a prophylactic three week course of doxycycline and rifampin, and fever/symptom monitoring for 24 weeks following the exposure. None of the four exposed persons had positive test results or developed symptoms consistent with brucellosis.

Based on findings from an environmental assessment of the sea mammal facility where the necropsy was performed, the facility implemented the following recommendations to prevent additional exposures: 1) use of personal protective equipment when performing sea mammal exams and necropsies, including respiratory protection when performing aerosol-generating procedures, 2) training for staff and volunteers regarding disease transmission and precautions, 3) updating policies and procedures to guide response in the event of occupational exposures, and 4) use of appropriate laboratory equipment and facility engineering updates to ensure proper air flow and filtration in the necropsy room.

Rabies in a Dog – Maine, 2012

Rabies is fatal in mammals, including humans, and is prevalent in the wild animal population in Maine. Rabies is not prevalent in domestic animals but the number of identified rabid domestic animals increased over the past few years. In 2012, a rabid dog was identified in Maine, the first rabid dog since 2003.

On July 30, 2012, Maine CDC was notified of a 62 year old Maine resident who was bitten by a dog three days prior. The dog died suddenly after exhibiting neurological symptoms that included an inability to walk and see and difficulty swallowing. Given the symptoms and unknown vaccination status, it was recommended that the dog be submitted for rabies testing. The town's Animal Control Officer (ACO) assisted in preparing the animal for rabies testing and transported the specimen to the state Health and Environmental Testing Laboratory (HETL) in Augusta. The dog tested positive for rabies virus on Aug 1, 2012, 5 days after the bite occurred.

The man recalled that the dog was potentially bitten by a raccoon about 3 weeks prior to the dog biting the human, when a raccoon emerged from the woods to eat out of the dog's outdoor food bowl. The dog wandered into the man's yard 3 months prior to the bite incident and seemed friendly so the man decided to keep the dog. The dog was not in contact with any other family members.

Following the results of the positive rabies test, a thorough investigation of those who came into contact with the dog was conducted so that post exposure prophylaxis (PEP) could be recommended. PEP was only recommended for the man who cared for the dog since no other family members had contact with the dog. The family cared for many other stray animals that had no contact with the dog; however, it was recommended that those animals be brought to a veterinarian for rabies vaccination. The ACO wore proper personal protective equipment while preparing the animal for testing and did not need PEP.

Domestic dogs are tested for rabies if they exhibit neurological symptoms suggestive of rabies and exposure humans or other domestic animals. Dogs exposed to rabid or suspect rabid animals are recommended to receive a booster dose of vaccine and 45 day observation period for vaccinated animals. Unvaccinated dogs are recommended to be euthanized or receive a booster dose of vaccine and 6 month isolation. In 2012, 96 dogs were tested for rabies and 1 dog tested positive. In 2011, 64 dogs were tested for rabies and none were positive.

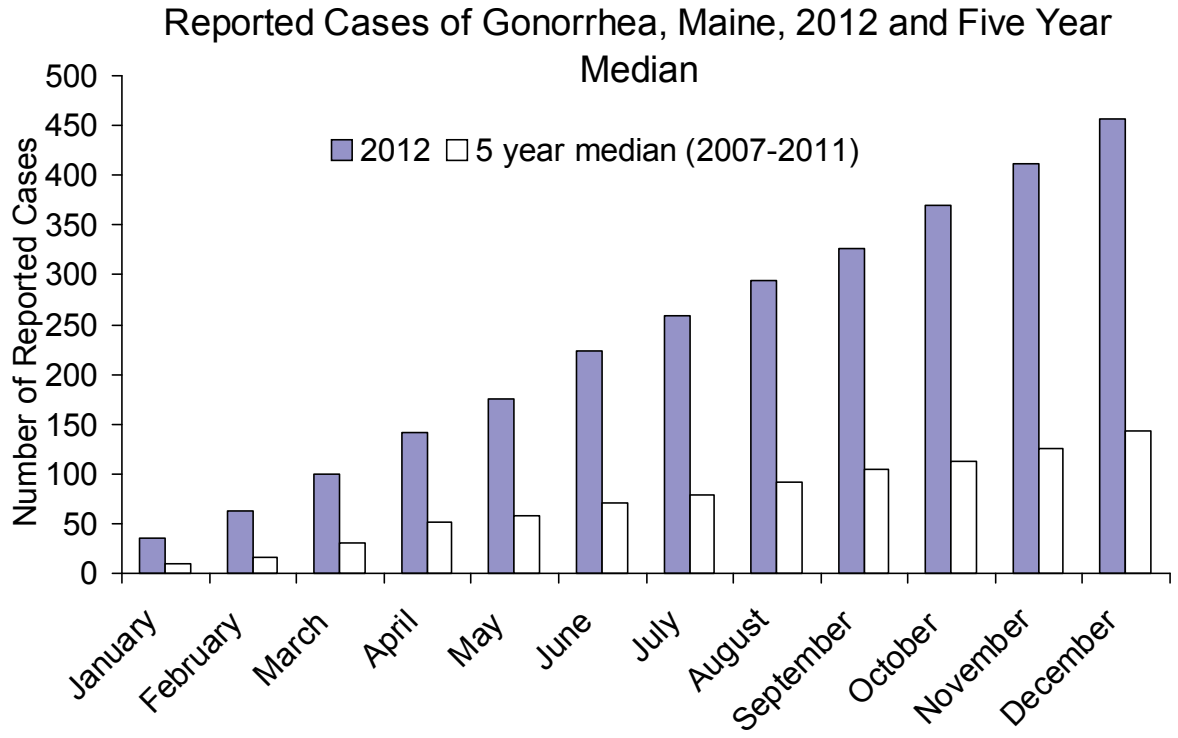
Reports of rabies in domestic animals indicates a lapse in public health because there is an effective vaccine against rabies for domestic animals. The re-emergence of rabies in a dog is a concern because dogs cohabitate and are often in very close contact with humans.

Increase in Gonorrhea – Maine, 2012

Gonorrhea is a sexually transmitted disease caused by the bacterium *Neisseria gonorrhea* and is reportable to Maine CDC. Reported gonorrhea cases increased 68% from 2011 to 2012 with notable geographic disparities. In the most recent five year period, gonorrhea cases increased from 96 cases in 2008 to 272 cases in 2011. In 2012, case reports increased substantially to 456. In 2012, the statewide rate is 34.3/100,000 population. Androscoggin and Cumberland counties both exceeded this with rates of 179.4/100,000 and 41.2/100,000 population respectively. In 2011, the U.S. average rate was 104.2/100,000 population.

Regional patterns vary throughout the state with highest case reporting in southern and central Maine. Androscoggin (N=193) and Cumberland (N=117) counties account for 68% (N=310) of the cases in Maine in 2012. In Androscoggin, 124 (64%) cases were females and 69 (36%) were males. In Cumberland, 40 (34%) cases were females and 77 (66%) were males. This suggests mainly heterosexual transmission patterns in Androscoggin county and primarily transmission among men who have sex with men in Cumberland county. In Androscoggin county females, 65% of cases (N=81) are between ages 20-29 and 83% of cases (N=103) are among whites. Among males, 55% of cases (N=38) are between ages 20-29 and 51% of cases (N=35) are among Black/African Americans.

Federal CDC's treatment guidelines for gonorrhea were updated in August 2012 due to increasing drug resistance. The new treatment guidance was disseminated to healthcare providers. Maine CDC responded to the increased incidence with press and public health promotion campaigns, especially targeting populations at risk in Androscoggin and Cumberland counties. These efforts include conducting public health partner education forums, disseminating updated treatment guidance (MMWR 61(31); 590-594) to healthcare providers and outreach efforts in bars, salons, healthcare clinics and social media sites.



Norovirus Outbreak at a Summer Camp – Maine, 2012

Norovirus is one of the most common causes of gastrointestinal illness in people. Primary symptoms are acute onset of vomiting and diarrhea that start 24 to 48 hours after swallowing the virus. Norovirus is highly contagious and is commonly spread in the following ways:

- Eating food or drinking liquids that are contaminated with norovirus
- Touching surfaces or objects contaminated with norovirus, and then placing hand in mouth
- Having close contact with another person who has symptoms

In July 2012, Maine CDC received a report of a cluster of gastrointestinal illness at a summer camp. The camp director reported a combination of nausea, vomiting, and diarrhea lasting about 24 hours affecting both campers and staff. The weeklong camp session ended early due to the amount of illness the camp was experiencing; campers and most staff were sent home. An outbreak team was formed which included Infectious Disease Epidemiology and Health Inspections staff to investigate possible sources of exposure and gather epidemiologic data related to the reported increase in gastrointestinal illness.

Given the number of reported illness at the camp, the outbreak team decided to interview all staff members to characterize illness and determine if a food item was the cause of illness. Maine CDC epidemiologists interviewed 41 staff. Twenty-eight (68%) reported illness. Of those 28 ill staff members, symptoms reported were vomiting (83%), diarrhea (54%), headache (43%), abdominal cramps (39%) and fever (32%). The symptoms lasted about 24 hours. None of the staff members reported seeing a healthcare provider.

The camp inspection revealed 3 critical and 9 non-critical violations. The violations included equipment and food contact surface and utensils not being clean, food being served and re-served, and inadequate food temperature. Records indicated that the previous years' inspections had violations that were not addressed. The camp swimming pool inspection also revealed violations including poor records of sanitizer residual and pH testing results and low water turnover rates.

One staff member and her partner submitted stool specimens that tested positive for norovirus genogroup II. No foods were considered to be statistically significant or the cause of illness. The illness was likely spread from person to person. No index source was identified as the cause of illness. Interviews with staff and illness logs showed that both staff and campers had gastrointestinal illness in the previous weeks that camp was in session. Limitations of the investigation included difficulty reaching all staff members after they were sent home, lack of information from campers, and varying camp illness logs due to a different person keeping records each week. The entire camp was cleaned and some of the violations were addressed. The Health Inspector allowed the camp to re-open for the remaining sessions.

Key recommendations for the camp:

- Address all violations from inspection reports
- Fix identified issues with the pool including water circulation
- Use proper environmental cleaning throughout the facility to stop the spread of illness
- Keep standard, detailed, and complete nurse log information.

Increase in Pertussis – Maine, 2012

In 2012, Maine experienced a statewide outbreak of pertussis. Cases of reported pertussis in Maine tripled compared to 2011 cases.

A total of 737 confirmed and probable pertussis cases were reported statewide in 2012 , compared to 205 reported cases in 2011. The 2012 rate of pertussis in Maine was 55.5 cases per 100,000 persons, a significant increase from 2011 rate of 15.4 per 100,000 persons.

Of the 737 cases of pertussis reported, the majority of cases (62.8%) occurred among children and adolescents aged 7-19 years. Twenty-one (3%) cases were identified in children less than 6 months (Table 1).

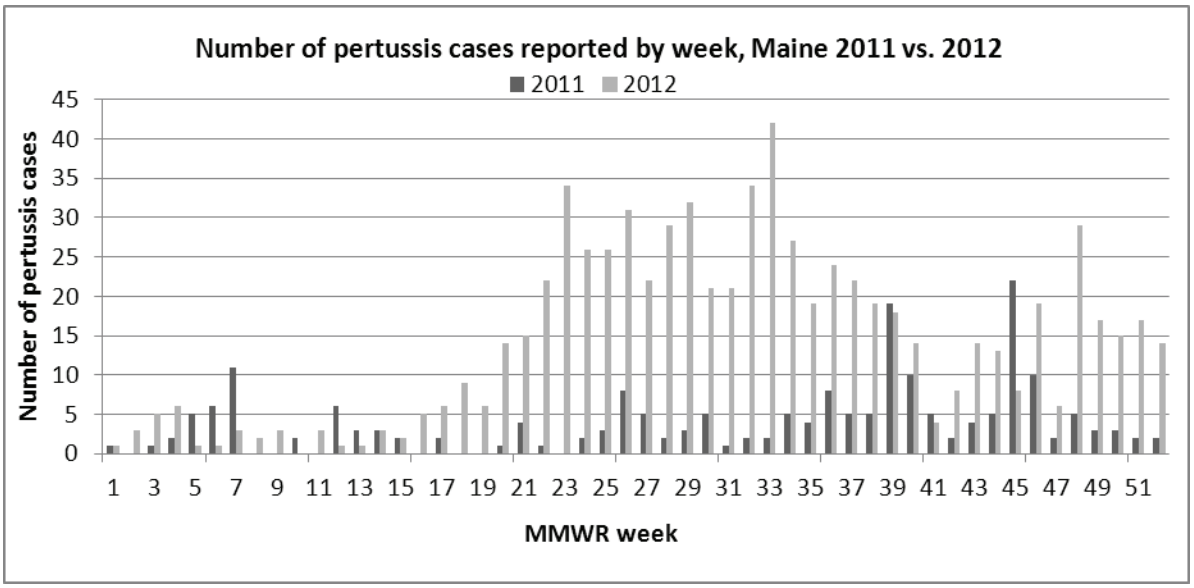


Table 1. Pertussis cases by age group -- Maine, 2012

Age group	# of cases	Rate per 100,000
< 6 mos	21	163.11
6-11 mos	14	108.74
1-6 yrs	108	128.49
7-10 yrs	231	390.41
11-19 yrs	232	155.65
20-29 yrs	25	16.28
30-39 yrs	41	27.63
40-49 yrs	36	18.61
50-59 yrs	12	5.55
≥ 60 yrs	17	5.46
All	**737**	**55.49**

Pertussis cases were identified among residents of all 16 counties (Table 2). Somerset county had the highest incidence with 196.1 cases per 100,000 persons compared to the state rate of 55.5 cases per 100,000.

Table 2. Pertussis cases by county -- Maine, 2012

County	Count	Rate per 100,000
Androscoggin	65	60.52
Aroostook	5	6.99
Cumberland	225	79.67
Franklin	1	3.25
Hancock	44	80.62
Kennebec	64	52.49
Knox	14	35.26
Lincoln	2	5.84
Oxford	31	53.73
Penobscot	67	43.57
Piscataquis	24	137.78
Sagadahoc	12	34.08
Somerset	102	196.05
Waldo	9	23.23
Washington	2	6.13
York	70	35.32
Maine	**737**	**55.49**

Outbreaks of pertussis occurred in schools, daycares and child care activities. A weekly pertussis report was created to inform public health partners of the ongoing outbreak. The report was available on the Maine CDC website.

Pertussis can be a serious illness for infants. Disease in young infants can be atypical and can progress rapidly to become severe and even fatal. Clinicians who care for infants should have a high index of suspicion for pertussis. Infants with illness compatible with pertussis should be tested, admitted to the hospital, and treated immediately. Maine distributed infant clinical treatment guidance based on guidance developed by the California Department of Public Health. This guidance is available online at www.mainepublichealth.gov.

Maine CDC developed two pertussis outreach campaigns, one directed to providers to encourage recognition of symptoms, proper testing and treatment. A second campaign was developed to target pregnant women and new mothers to encourage admission of vaccine for the mothers and other family members with close contact with a new baby. These materials can be ordered directly from the Maine CDC website.

Early treatment of pertussis is very important. If treatment for pertussis is started early in the course of illness, symptoms may be lessened. Whenever possible, a nasopharyngeal (NP) swab or aspirate should be obtained from all persons with suspected pertussis.

Healthcare providers are encouraged to promote the use of pertussis vaccines. There are two pertussis vaccines: DTaP for children and Tdap for adolescents and adults. Both vaccines contain pertussis antigen in combination with tetanus and diphtheria. Tdap is recommended only for a single dose across all age groups.

Meaningful Use and Electronic Reporting Initiatives – Maine, 2012

Electronic laboratory reporting (ELR) has been promoted as a public health priority for the past several years and it's inclusion as a Meaningful Use objective for public health serves as a catalyst to accelerate its adoption. The Meaningful Use objectives and measures for reportable laboratory results are as follows:

Objective:

Stage 1: Capability to submit electronic data on reportable (as required by state or local law) laboratory results to public health agencies and actual submission in accordance with applicable law and practice.

Stage 2: Same as Stage 1.

Measure:

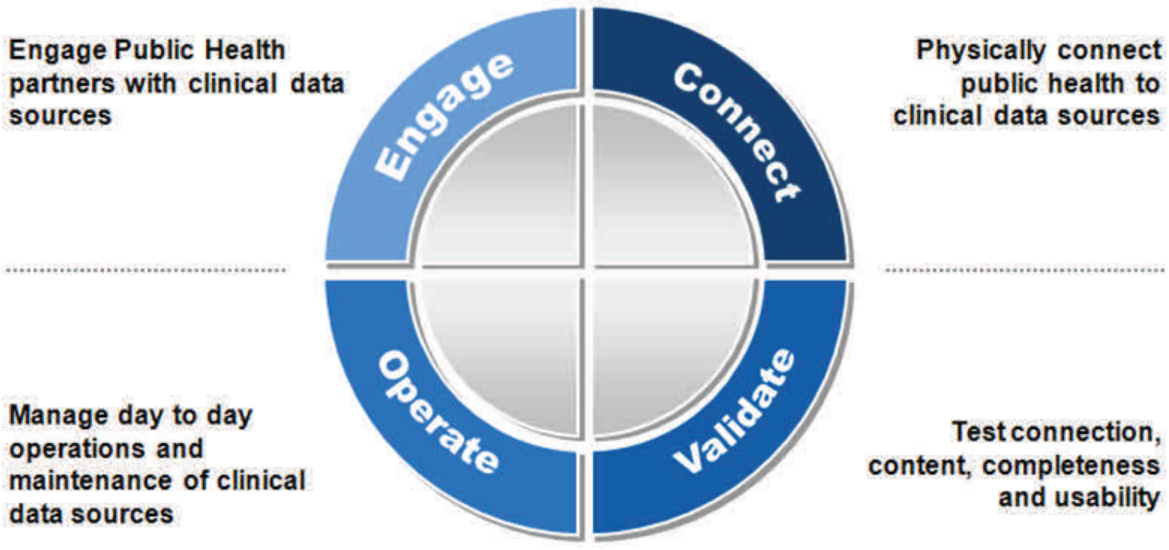
Stage 1: Performed at least one test of EHR technology's capacity to provide electronic submission of reportable laboratory results to public health agencies and follow–up submission if the test is successful.

Stage 2: Successful ongoing submission of electronic reportable laboratory results from Certified EHR Technology to public health agencies for the entire EHR reporting period as authorized.

Note: ELR is a menu item (optional) for Stage 1 but is a core item (required) for Stage 2.

The Maine Center for Disease Control and Prevention (Maine CDC) is partnering with HealthInfoNet (HIN), the State of Maine's designated Health Information Exchange (HIE). A HIE is the transmission of healthcare-related data among hospitals, laboratories and public health agencies according to national standards. To meet requirements, HIN enables reliable and secure transfer of data among diverse systems and also facilitates access to and retrieval of data. Maine CDC dedicates resources to support implementation of electronic laboratory reporting and works with clinical laboratories and HIN on the process.

There is a four-stage process for ELR implementation. Laboratories partnering with HIN to implement ELR will move through this process collaborating with HIN and Maine CDC:



2012 Tick Data Collected by the Maine Medical Center Research Institute Vector-Borne Disease Laboratory

The Maine Medical Center Research Institute (MMCRI) Vector-Borne Disease Laboratory operates a free tick identification service as part of a program to establish the distribution of deer ticks (*Ixodes scapularis*) in the state. Ticks found on people and pets are submitted with information on where the tick(s) may have been acquired. Ticks are not tested for the presence of Lyme bacteria and MMCRI only accepts ticks from the state of Maine.

It is important to note that this passive sampling could be influenced by a variety of extraneous factors (e.g. proximity to the laboratory, level of citizen concern about Lyme disease in an area, or whether or not a particular area is already widely known to have a deer tick presence).

Number of Ticks Identified by County and Type, Maine, 2012

County	*Ixodes scapularis* **(Deer tick)**	*Dermacentor variabilis* **(American dog tick)**	*Ixodes cookei* **(Woodchuck tick)**	*A. americanum* **(Lonestar tick)**
Androscoggin	25	5	0	0
Aroostook	6	1	1	0
Cumberland	159	53	1	1
Franklin	8	10	0	0
Hancock	133	10	4	1
Kennebec	40	12	1	0
Knox	14	6	0	0
Lincoln	18	6	0	0
Oxford	20	6	1	0
Penobscot	114	7	1	0
Piscataquis	8	0	1	0
Sagadahoc	19	3	1	1
Somerset	39	10	0	0
Waldo	55	7	1	0
Washington	7	1	0	0
York	59	20	0	0
Totals	724	157	12	3

Why is it important to submit ticks for identification?
It is important for a physician (or a pet's veterinarian) to know what species of tick was involved in a bite. It is also important for surveillance purposes to know the type of tick and where ticks are found.

What diseases are carried by which ticks?
Ixodes scapularis (Deer tick) – Lyme disease, Anaplasmosis and Babesiosis
Dermacentor variabilis (American dog tick) – Rocky Mountain Spotted Fever
Ixodes cookei (Woodchuck tick) - Powassan
Amblyoma americanum (Lonestar tick) - Ehrlichiosis

How are ticks removed?
Remove ticks by grasping them with fine tweezers as near to the skin as possible and pull up gently but firmly. A tick spoon is also effective. The barbed mouth parts may not let go easily. It may take several minutes or more. Do not handle ticks with bare hands.

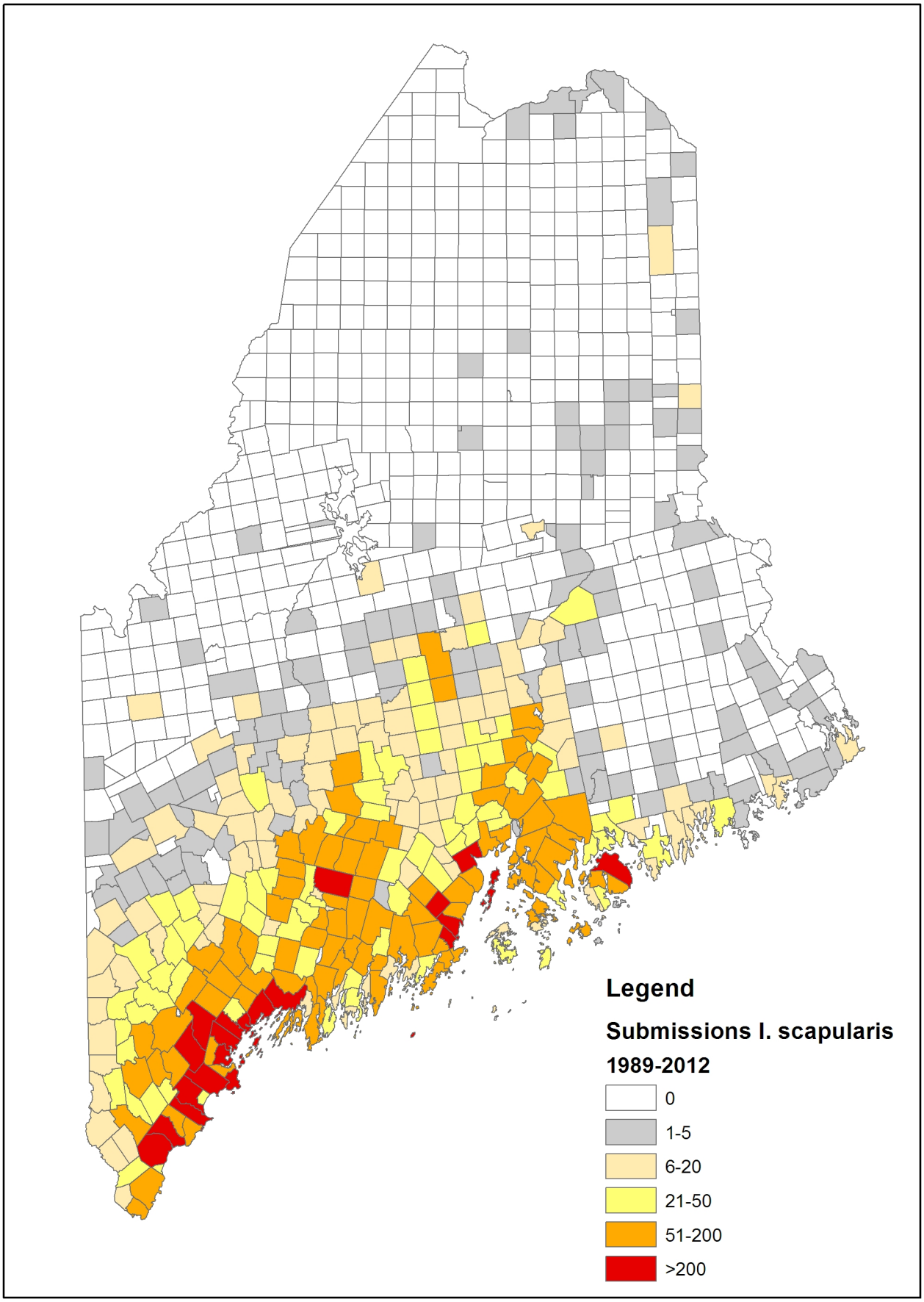
How are ticks submitted?
Ticks should be sealed in a small, crushproof vial of 70% alcohol. The vial should be padded with absorbent paper towel and sealed in a plastic bag, and mailed along with a completed submission form to:

Vector-borne Disease Laboratory
Maine Medical Center Research Institute
75 John Roberts Rd., Suite 9B
South Portland, ME 04106

Print out the submission form from http://www.mmcri.org/lyme/, complete it, and mail it in with the specimen. A report of the tick's identification will be sent to the submitter as soon as possible, usually within five days. A map may also be sent to assist in the identification of the site where tick exposure occurred. The public may address questions to the laboratory's email address: ticklab@mmc.org or by calling 207-662-7142.

Map Caption

A map summarizing the number of *Ixodes scapularis* (deer tick) submitted per Minor Civil Division, 1989 through 2012.


Legend
Submissions I. scapularis
1989-2012
0
1-5
6-20
21-50
51-200
>200

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

Paul R. LePage, Governor — Mary C. Mayhew, Commissioner

NOTIFIABLE CONDITIONS LIST

Maine Department of Health and Human Services
Center for Disease Control and Prevention

Conditions in **BOLD** must be reported *immediately* All others must be reported in 48 hours

Reportable Disease or Condition		Laboratory Specimen Submission
Acquired Immunodeficiency Syndrome (AIDS) **Anthrax** Arboviral Infection Babesiosis **Botulism** **Brucellosis** Campylobacteriosis Carbon Monoxide Poisoning, including - Clinical signs, symptoms or known exposure consistent with diagnosis of carbon monoxide poisoning and/or: a carboxyhemoglobin (COHb) level ≥5% Chancroid Chlamydia Chickenpox (Varicella) Creutzfeldt-Jakob disease, <55 years of age Cryptosporidiosis Dengue **Diphtheria** E. coli, Shiga toxin-producing (STEC) disease including E. coli: 0157:H7 Ehrlichiosis Giardiasis Gonorrhea Haemophilus influenzae disease, invasive, include all serotypes Hantavirus, pulmonary syndrome Hemolytic-uremic syndrome (post-diarrheal) **Hepatitis A, B, C, D, E (acute)** Hepatitis B (chronic, and/or perinatal) Hepatitis C (chronic) **Hepatitis, acute (etiologic tests pending or etiology unknown)** Human Immunodeficiency Virus (HIV), including: - Confirmed, positive antibody tests - Viral load tests, all results - CD4 lymphocyte counts, all results Influenza-associated pediatric death Influenza-like illness outbreaks **Influenza A, Novel** Legionellosis Leptospirosis Listeriosis Lyme Disease	Malaria **Measles** Meningitis (bacterial) **Meningococcal Invasive Disease** **Mumps** Paralytic Shellfish Poisoning **Pertussis** **Plague** **Poliomyelitis** Psittacosis **Q Fever** **Rabies (human and animal)** Rabies Post-Exposure Prophylaxis **Ricin Poisoning** Rocky Mountain Spotted Fever **Rubella (including congenital)** Salmonellosis **Severe Acute Respiratory Syndrome (SARS)** Shigellosis **Smallpox** Staphylococcus aureus, Methicillin-Resistant (MRSA) invasive, **Staphylococcus aureus with resistance (VRSA) or intermediate resistance (VISA) to Vancomycin isolated from any site** **Staphylococcal enterotoxin B** Streptococcal invasive disease, Group A Streptococcal invasive disease, Group B Streptococcus pneumoniae, invasive disease Syphilis **Tetanus** Toxoplasmosis Trichinosis **Tuberculosis (active and presumptive cases)** **Tularemia** **Unusual or increased case incidence, critical illness, unexplained death(s) of any suspect infectious disease** Vibrio species, including Cholera **Viral Hemorrhagic Fever** **Venezuelan equine encephalitis** Yellow Fever Yersiniosis	Directors of laboratories are to submit cultures or clinical specimens for the following to the *Maine Health and Environmental Testing Laboratory* for confirmation, typing and/or antibiotic sensitivity: Acid-Fast Bacillus ***Bacillus anthracis*** ***Bordetella pertussis*** ***Brucella* species** ***Clostridium tetani*** ***Clostridium botulinum*** ***Corynebacterium diphtheriae*** ***Coxiella burnetii*** *Escherichia coli, Shiga toxin-producing* *Haemophilus influenzae* *Human Immunodeficiency* Virus ***Influenza* virus, Novel** *Listeria monocytogenes* ***Mumps* virus** ***Mycobacterium tuberculosis*** ***Neisseria meningitidis*** ***Rabies* virus** **Ricin Poisoning** ***Rubella* virus** ***Rubeola* virus** *Salmonella* species ***SARS Coronavirus*** *Shigella* species *Toxoplasma gondii* ***Variola* virus** *Vibrio* species ***Yersinia pestis***

Who must report: Health Care Providers, Medical Laboratories, Health Care Facilities, Administrators, Health Officers, Veterinarians

When to report:

- Conditions in **BOLD** are reportable immediately by telephone on recognition or strong suspicion of disease
- All others are reportable by telephone, fax, or mail within 48 hours of recognition or strong suspicion of disease

What to report:

Disease reports must include as much of the following as is known:

- Disease or condition diagnosed or suspected
- Patient's name, date of birth, address, phone number, occupation and race
- Diagnostic laboratory findings and dates of test relevant to the notifiable condition
- Health care provider name, address and phone number
- Name and phone number of person making the report

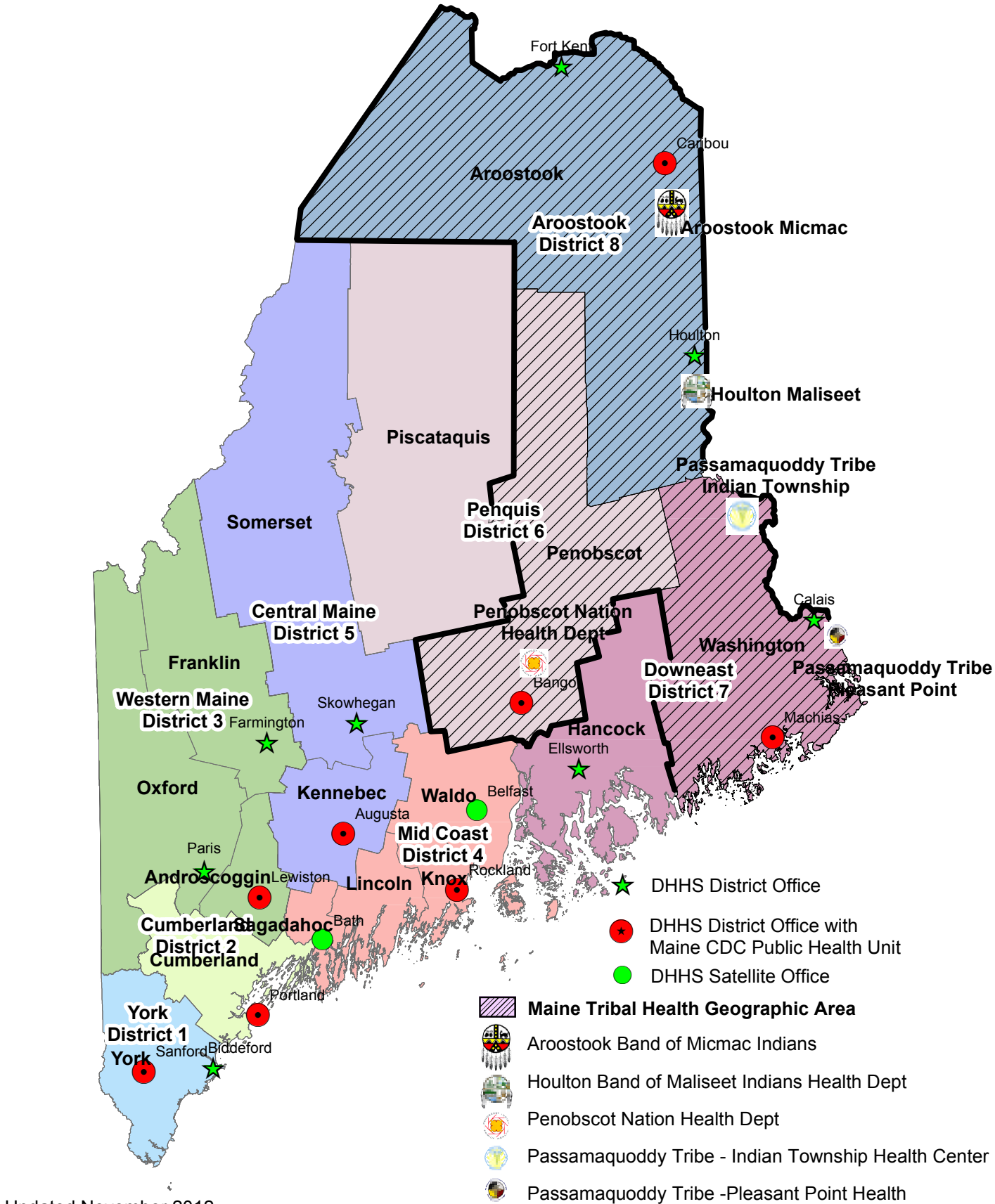
Complete Rules for the Control of Notifiable Conditions at:
http://www.maine.gov/dhhs/boh/ddc/epi/disease-reporting/index.shtml

Disease Reporting
24 Hours A Day
7 Days A Week

Telephone
1-800-821-5821

Fax
1-800-293-7534

Maine Department of Health & Human Services District Offices and Maine Tribal Health Geographic Area



Updated November 2012

Map created by the Office of Public Health Emergency Preparedness

Department of Health and Human Services
Maine Center for Disease Control and Prevention
State House Station #11
Augusta, ME 04333-0011

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Governor

Mary Mayhew
Commissioner

Dr. Sheila Pinette, DO
Director, Maine Center for Disease Control and Prevention

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