



Infectious Disease Epidemiology Report

Surveillance by Field Epidemiologists, Maine -- 2007



Background

The Infectious Disease Epidemiology Program Field Epidemiologists conduct infectious disease investigations and provide active and passive surveillance for the Maine Center for Disease Control and Prevention (MCDC). The Field Epidemiologists gather the information to determine the status of reported diseases and coordinate follow-up with individuals, health care providers and other health professionals. This report summarizes their surveillance and outreach activities for 2007.

Methods

State law delineates and requires certain infectious diseases be reported to the MCDC, in the interest of protecting the public's health. In 2007 there were approximately 55 different infectious diseases listed on the notifiable conditions list for the State of Maine. Disease reports which were assigned to Field Epidemiologists, presentations by Field Epidemiologists and other activities in which Field Epidemiologists have participated are addressed in this document.

Disease Reports Investigated

Comprised of sixteen counties, Maine is divided along county lines into eight Health Districts. In 2007, Field Epidemiologists investigated 1,076 notifiable condition reports.

Discussion

The Field Epidemiologists are responsible for investigating disease reports and collaborating with local and State health partners on a wide variety of public health concerns. The most commonly investigated diseases were chronic hepatitis B virus, pertussis, animal rabies, salmonellosis and giardiasis. In 2007, seven of Maine's eight Health Districts had specific Field Epidemiologists assigned to them. Uniquely, the Penquis Health District is comprised of two counties and each county is assigned to a Field Epidemiologist from a different Health District. In 2007 and until recently, Cumberland and York Counties were grouped together as the "Southern" Health District.

Table 1 Maine Health Districts, 2007

District	Field Epidemiologist	Counties
York	Abdel-Moneim Ali, Lisa Bondeson	York
Cumberland	Abdel-Moneim Ali, Lisa Bondeson	Cumberland
Western	Kate Phillips	Androscoggin, Franklin, Oxford
Midcoast	Megan Kelley	Knox, Lincoln, Sagadahoc, Waldo
Central	Donna Guppy	Kennebec, Somerset
Penquis	Donna Guppy, Vicki Rea	Piscataquis, Penobscot
Downeast	Vicki Rea	Hancock, Washington
Aroostook	Tia Bastian	Aroostook

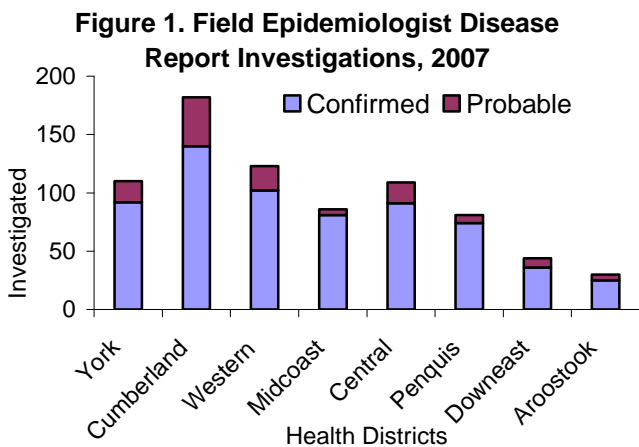


Figure 1 depicts the cases which were investigated by Field Epidemiologists in each Health District and reported to the CDC as "probable" or "confirmed" cases, based upon MCDC protocol.

As can be observed from Figure 1, the combined cases from Cumberland and York Counties were more than twice the number of cases investigated in any other Health District. In March 2008, two additional Field Epidemiologists joined the team. Puja Mehta is the Field Epidemiologist for York and Patty Carson is the Field Epidemiologist in the Aroostook Health District,

Field Epidemiologists frequently have contacts and/or collaboration with community groups such

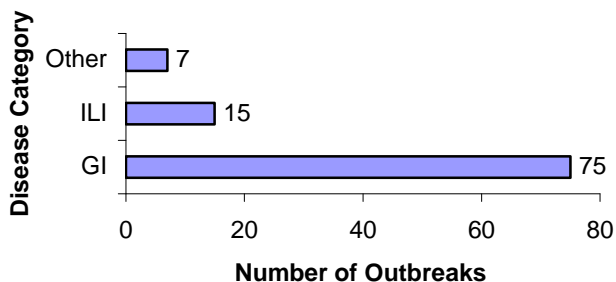
Field Epidemiology – Maine, 2007

as colleges, correctional facilities, daycare providers, occupational sites, schools, and shelters to name a few. Sixty-five such contacts were reported from five Health Districts, with a range of 7 in Aroostook Health District to 23 in the Downeast Health District. Forty-four presentations on a variety of topics were delivered across six Health Districts. Such collaboration also occurs with regional partners including Local Health Officers, Animal Control Officers and Game Wardens.

Consultation occurs with the public and healthcare partners. Physicians, hospital staff, laboratories, state health departments, other state agencies and public health concerns are routed to the Field Epidemiologists for the Health Districts.

Field Epidemiologists are the lead investigators on infectious disease outbreaks and clusters. There were 97 outbreaks investigated in 2007. Gastro-intestinal (GI) outbreaks were the most frequently reported and influenza-like-illness (ILI) outbreaks followed. The "Other" outbreaks involved three outbreaks of methicillin resistant staphylococcus aureus, (MRSA), and one each of mycoplasma pneumoniae, paralytic shellfish poisoning and lice. One outbreak was characterized as multiple symptoms. Several were of particular interest and a mumps outbreak involved all of the Field Epidemiologists

Figure 2. Outbreaks Investigated, 2007



Vaccine Preventable Disease outbreak

Starting in September 2007, Maine experienced an outbreak of mumps with 26 confirmed cases and 74 suspect cases identified.

Enteric outbreaks

Two in-state outbreaks of salmonellosis were identified by case finding and routine epidemiologic investigations. They were confirmed by pulsed-field gel electrophoresis (PFGE) molecular matching. One outbreak involved 10 cases of *salmonella newport*. The outbreak was identified in patrons who consumed poultry products at a restaurant in southern Maine. The second salmonella outbreak involved 13 cases of *salmonella typhimurium*. The cases were identified in customers of a convenience market offering deli and prepared take-out foods in the Penquis Health District.

In 2006 a salmonella outbreak in a vaccine facility was investigated by the Central Health District field epidemiologist and published in the *MMWR* in September, 2007.

A cluster of paralytic shellfish poisoning (PSP) was of particular interest as it had not been reported in Maine for about thirty years. Four family members suffered neurological symptoms after eating mussels. The Downeast Field Epidemiologist worked the case after regular business hours. She interviewed the family and collaborated with the Northern New England Poison Center, Medical Epidemiology, the Director of the MCDC, and the Department of Marine Resources concerning the investigation of the mussels, testing for saxotoxin, and plans for assuring that no other individuals were exposed.

Summary

In summary, the MCDC Infectious Disease Program Field Epidemiologists provide an extensive range of public health investigation and consultation to the public as well as local, statewide and interstate partners. In 2007, MCDC Field Epidemiologists investigated 765 confirmed and probable cases. The CDC is regularly consulted and their recommendations and disease investigation protocols are routinely followed.

For more information see the Maine CDC website, www.maine.gov/dhhs/boh/ddc/