

Maine Weekly Influenza Surveillance Update

October 2006 – May 2007

Synopsis

The purpose of the Maine Weekly Influenza Surveillance Update is to summarize influenza surveillance information that characterizes the incidence and burden of influenza and influenza-like illness in Maine. Weekly reports are published each Thursday during influenza season on the Maine Center for Disease Control and Prevention (Maine CDC) Influenza website (http://www.maine.gov/dhhs/boh/Influenza_2006-2007.htm).

Influenza is a viral illness that typically occurs during the winter months. Characterized by the abrupt onset of constitutional and respiratory signs and symptoms, such as fever, muscle aches, headache, severe malaise, non-productive cough, sore throat, and runny nose, influenza is spread from person to person primarily through the coughing and sneezing of infected persons. Influenza can be diagnosed through laboratory testing.

Influenza-like illness (ILI) is a term used to describe illness that presents with the typical signs and symptoms of influenza, but that has not been confirmed as influenza by laboratory test. 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 other than influenza. Monitoring the frequency at which Maine residents present for medical care due to ILI may indicate the rate of new infection and burden of disease in a large population.

Sentinel Site Surveillance

Outpatient influenza-like illness (ILI)

Outpatient ILI data are collected through the U.S. Influenza Sentinel Provider Surveillance Network, a collaborative effort between the Centers for Disease Control and Prevention (CDC), Maine CDC, and local health care providers. During the 2006-07 season, 18 providers are enrolled and will report 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. From these data, the percent of patient visits for ILI is calculated.

Severe Disease Surveillance

Hospital inpatients

Inpatient surveillance for respiratory illness admissions is conducted in collaboration with Maine CDC and regional hospitals. During the 2006-07 season, three regional hospitals will report the total number of patients admitted to the hospital from the emergency department (ED) and the total number of those patients admitted for respiratory illness using chief complaint or discharge codes, and one hospital will report total number of

patients admitted to the hospital and the total number of those patients admitted for influenza or pneumonia using admitting diagnosis.

Laboratory Reporting

The Maine CDC's Health and Environmental Testing Laboratory (HETL) works collaboratively with hospitals and private laboratories to collect specimens for respiratory virus testing and influenza positive isolate subtyping. Each week, HETL reports the total number of specimens received for respiratory virus testing and the number of positive isolates for influenza A (H1), A (H3), A (Undetermined), and influenza B by specimen collection date. These data are used to calculate the percent of specimens received that are positive for influenza, and the proportion of isolates positives for each subtype.

Two reference laboratories in Maine are also participating in 2006-07 influenza surveillance activities. Each week, laboratories report the total number of positive isolates for influenza A or influenza B that are laboratory-confirmed by culture, reverse-transcriptase polymerase chain reaction (RT-PCR), or immunofluorescent antibody staining (direct or indirect) and total number of specimens negative by final test result date.

Other respiratory viral infections are also identified through respiratory virus testing, including adenoviruses and respiratory syncytial viruses (RSV). Aggregate totals of these infections are also included in this report to inform the public of the occurrence of other respiratory illnesses.

Outbreaks

Outbreaks of influenza or influenza-like illness are reportable in Maine. The definition used to recognize outbreaks of influenza-like illness varies by setting. Outbreaks of ILI in long-term care facilities, including nursing homes, assisted living facilities, and skilled nursing facilities, are defined as ≥ 1 patient with laboratory-confirmed influenza or ≥ 3 patients with ILI on the same floor or ward during a short period (e.g., 48-72 hours) in any facility statewide. Outbreaks of ILI in an acute care facility are defined as ≥ 1 patient with laboratory-confirmed influenza ≥ 48 hours after facility admission. An outbreak of ILI in schools, including elementary, middle and high schools, is defined as daily student absenteeism $\geq 15\%$ that is attributable to ILI. All health care facility and school nurse partners are asked to report suspected ILI outbreaks to Maine CDC. Once reported, surveillance data are collected on each outbreak and reported in the weekly update.

Human Avian Influenza A (H5N1)

Enhanced surveillance guidelines for detecting suspected cases of human Avian Influenza A (H5N1) were issued by federal partners in 2004. Maine CDC published these guidelines on the Maine influenza web site (see web link: http://www.maine.gov/dhhs/boh/influenza_surveillance_avian-info.htm). Results of these surveillance efforts will be reported in weekly surveillance reports.

Mortality Surveillance

Death Certificates

The vital statistics offices of three Maine cities, Portland, Lewiston and Bangor, report the number of death certificates in which pneumonia and influenza are mentioned as the primary or secondary cause of death. These data are used to calculate the percentage of deaths attributable to influenza and pneumonia. It is important to note that a death record reported to a vital records office in a specific city is indicative of the place of death and not the actual residence of the deceased.

Pediatric Fatalities

Health care providers and the office of the Maine Medical Examiner report deaths in persons aged 18 years or younger associated with laboratory-confirmed influenza to Maine CDC. Each report is investigated to obtain additional demographic and illness-related information. Maine CDC reports influenza-associated pediatric fatalities to the US Centers for Disease Control and Prevention.