



Infectious Disease Epidemiology Report

Voluntary Reporting of Influenza Testing - Maine, 2011-2012



Synopsis

Influenza is a viral illness that typically occurs during the winter months. Illness is 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 by coughing and sneezing. The 2011-2012 influenza season ran from October 2, 2011 to September 29, 2012.

Methods

Maine does not require seasonal influenza infection to be reported (novel influenza is considered a reportable disease). However, many outpatient offices, laboratories, and hospitals report positive tests including Enzyme ImmunoAssay (EIA), Direct Fluorescent Antibody (DFA) and titer results. These tests have varying sensitivity and specificity depending on the prevalence of influenza in the area. Therefore, rapid tests are positive but not classified as "Lab Confirmed." This convenience sample was entered into a database to identify trends and characterize influenza burden.

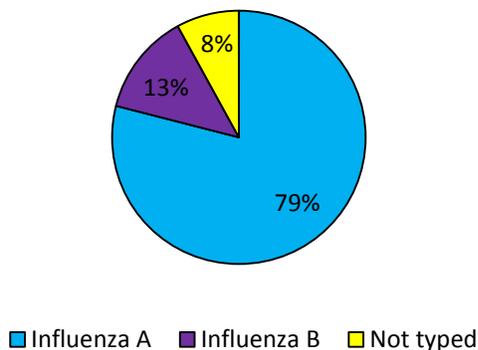
Results

During the 2011-12 season, a total of 53 positive influenza tests were reported to Maine CDC.

Influenza Type

Serology and many rapid tests are able to distinguish between influenza types A and B. Influenza was classified as type A, type B, or not typed. For the 2011-12 season, 42 (79%) patients tested positive for type A, 7 (13%) patients tested positive for type B, and 4 (8%) patient tests did not differentiate between types.

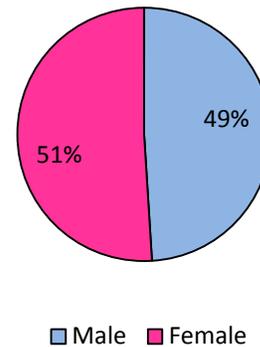
Positive Influenza Tests by Type – Maine, 2011-12



Gender

For the 2011-12 influenza season gender data was available for all patients; 27 (51%) of the patients with positive tests were female, and 26 (49%) of the patients with positive tests were male.

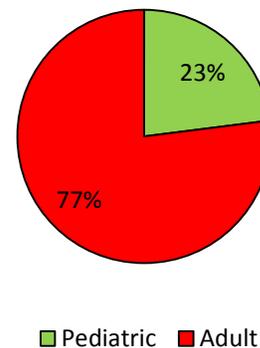
Positive Influenza Tests by Gender – Maine, 2011-12



Pediatric Burden of Disease

All positive influenza reports included the patient's date of birth. The date of birth was subtracted from the date of testing and then divided by 365.25 to determine the patient's age in years at the time of the test. Patients were categorized as pediatric (under the age of 18) or adult (18 years or older). For the 2011-12 influenza season, 12 (23%) of the patients were pediatric, and 41 (77%) patients were adult.

Positive Influenza Tests by Age Group – Maine, 2011-12



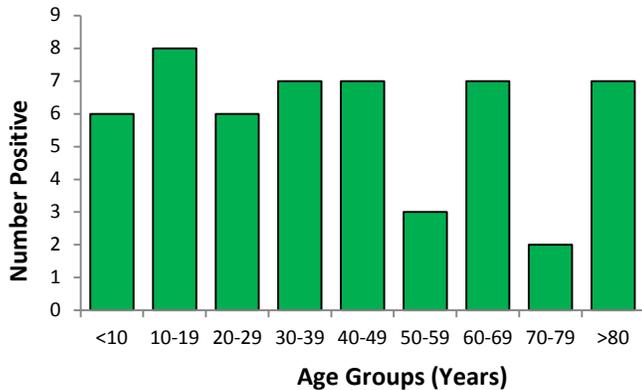
Age Distribution

Using the age calculated from the date of birth, the data were categorized into age groups by decade, starting with less than 10 years and increasing to greater than 80 years. The youngest person reported with influenza during the 2011-12 season was 5 months old and the oldest was 97

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years. The mean age among reported patients positive for influenza was 43 years.

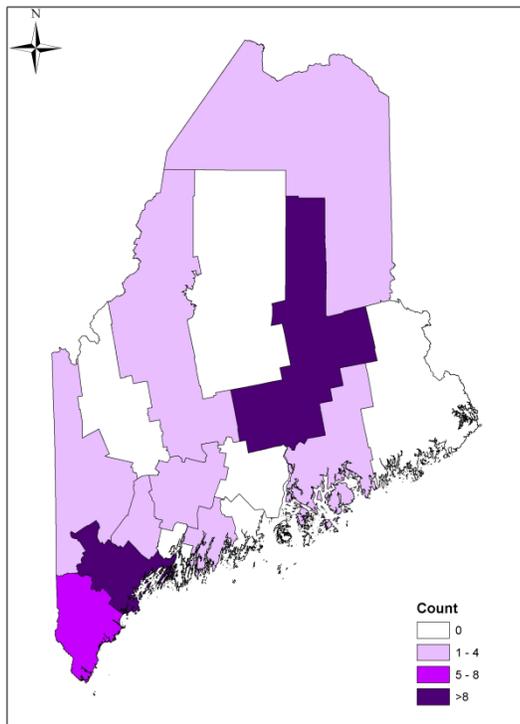
Positive Influenza Tests by Age – Maine, 2011-12



Geographic Distribution

Most of the influenza reports included the city of patient’s residence. For those that did not have a city listed, the city from the reporting source was used. Using this method, city and county data were available for all patients.

Positive Influenza Tests by County - Maine, 2011-12

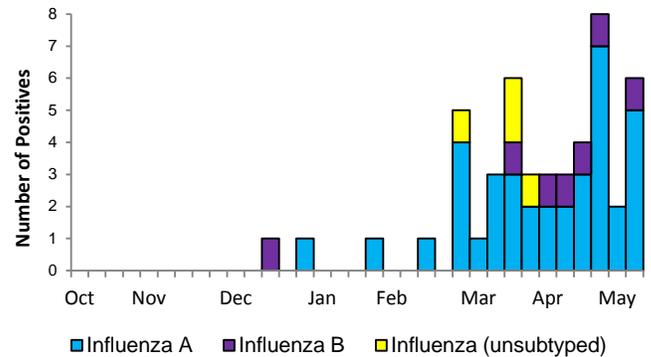


Time Frame

Positive rapid tests were first reported to Maine CDC in December 2011. The positive tests reported to Maine CDC

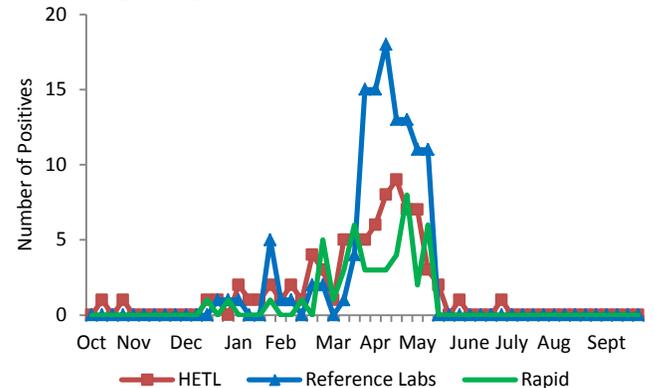
peaked in May (18 tests reported). There were no positive tests reported from June through September 2012

Positive Influenza Tests by Type– Maine, 2011-12



The findings of voluntary test surveillance matched well to the trends identified through other laboratory surveillance methods (reference labs, HETL)

Three Reporting Methods for Influenza – Maine, 2011-12



Discussion

In this sample of positive lab tests from the 2011-12 influenza season in Maine, influenza A was reported more than influenza B. Overall, influenza was reported in more adults than pediatric patients. The most commonly reported age group was 10 – 19 years, which is consistent from previous years. Cumberland and Penobscot counties reported the most cases of influenza with 15 and 19 respectively, while six counties reported no cases. Influenza laboratory activity during the 2011-12 season peaked in April and May.

Although these rapid test results have limitations, they demonstrate the burden of disease by age group, gender, geographical location, and time of year. Even though seasonal influenza reporting is not required by the state, the reports received offer insights into the distribution and range of the influenza virus during the 2011-12 influenza season.