



Infectious Disease Epidemiology Report

Voluntary Reporting of Influenza Testing - Maine, 2015-2016



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 virus is spread from person to person primarily by coughing and sneezing. The 2015-2016 influenza season ran from October 4, 2015 through October 1, 2016. Maine CDC released weekly reports from October 13, 2015 to May 24, 2016, which is when the majority of activity occurred. The 2015-2016 influenza season was less severe than the 2014-2015 season.

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. These tests have varying sensitivity and specificity depending on the prevalence of influenza in the area and which test is used. Serology results (titers) are not included in this report because it is impossible to differentiate between disease and vaccine response without clinical information. Every positive test is entered into Maine's surveillance system to identify trends and characterize influenza burden.

Results

During the 2015-16 season, a total of 2,401 individuals with a positive influenza test were reported to Maine CDC. This includes rapid antigen, polymerase chain reaction (PCR), and culture results. These results are de-duplicated so each patient is counted only once, even if they had both a rapid and PCR test.

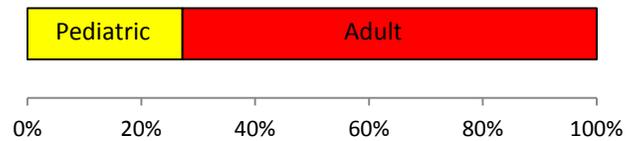
Gender

For the 2015-16 influenza season, gender data were available for all patients; 1,272 (53%) of the patients with positive tests were female, and 1,129 (47%) of the patients with positive tests were male.

Pediatric Burden of Disease

All positive influenza reports included the patient's date of birth which was used to calculate age. Patients were categorized as pediatric (under 18 years) or adult (18 years or older). For the 2015-16 influenza season, 654 (27.2%) of the patients were pediatric, and 1,747 (72.8%) patients were adults.

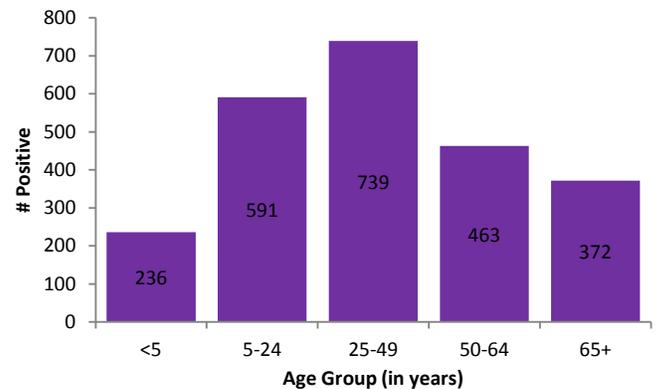
Positive Influenza Tests by Age Category – Maine, 2015-16



Age Distribution

Using the age calculated from the date of birth, the data were categorized into age groups. The youngest person reported with influenza during the 2015-16 season was 1 month old and the oldest was 101 years old. The mean age among reported patients positive for influenza was 38 years.

Positive Influenza Tests by Age – Maine, 2015-16



Influenza Type

PCR positive tests were classified as A/H1, A/H3, A/unsubtyped, B/Victoria, B/Yamagata, or B/no lineage. For the 2015-16 season, 1,258 individuals tested positive by PCR: 415 for influenza A/H1, 37 for influenza A/H3, 426 for influenza A/unsubtyped, 24 for influenza B/Victoria, 74 for influenza B/Yamagata, and 282 for influenza B/no lineage.

Rapid positive tests were classified as type A, type B, or not typed. For the 2015-16 season, 1,204 individuals tested positive by rapid test: 812 for influenza A, 335 for influenza B, and 57 for influenza untyped.

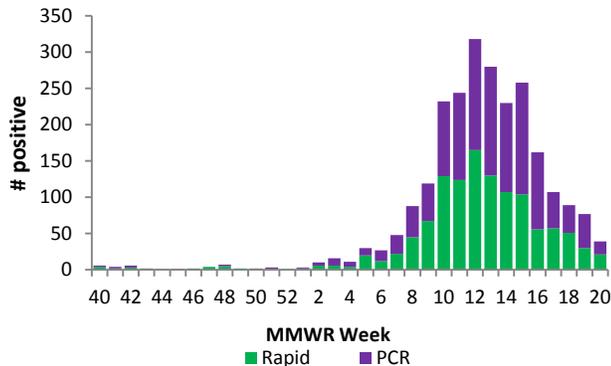
Patients may have tested positive by both methods. The typing results are not de-duplicated.

Voluntary Reporting of Influenza Testing – Maine, 2015-2016

Time Frame

Positive tests were first reported to Maine CDC in October 2015. The positive tests reported to Maine CDC peaked in the second week of January 2016. Seven positive tests were reported during the off season months (June – September): six rapid positives and 1 PCR positive.

Positive Influenza Tests by Test type – Maine, 2015-16



Discussion

In this sample of positive lab tests from the 2015-16 influenza season in Maine, influenza A was reported more than influenza B, with influenza A/pH1N1 as the predominant strain in those samples that were typed.

Overall, influenza was reported in more adults than pediatric patients. The most commonly reported age group was 25-49 years.

Although influenza itself is not reportable, this voluntary data provides valuable information on the burden and severity of the influenza season including providing information about influenza type, age group, gender, geographical location, and time of year.

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. Influenza was reported in all 16 counties.

Positive Influenza Tests by County and Type – Maine, 2015-16

County	Rapid				PCR							
	A	B	U	Total	A/H1	A/H1	A/H3	A/U	B	B/V	B/Y	Total
Androscoggin	26	3	2	31	0	94	3	11	26	6	13	153
Aroostook	101	30	0	131	0	25	3	19	7	1	4	59
Cumberland	102	110	4	216	0	90	16	49	39	4	5	203
Franklin	74	13	6	93	0	20	2	6	1	2	3	34
Hancock	1	0	0	1	0	2	1	32	15	0	1	51
Kennebec	63	46	3	112	0	13	3	4	5	2	4	31
Knox	23	9	4	36	0	8	0	21	18	2	1	50
Lincoln	25	9	1	35	0	9	0	2	5	0	0	16
Oxford	6	4	5	15	0	18	1	2	5	2	4	32
Penobscot	62	26	0	88	0	34	3	189	88	3	22	339
Piscataquis	2	1	0	3	0	0	0	6	6	0	0	12
Sagadahoc	7	1	0	8	0	22	2	3	6	0	0	33
Somerset	22	18	1	41	0	14	1	34	19	1	11	80
Waldo	12	4	0	16	0	4	0	10	20	0	0	34
Washington	5	3	0	8	0	50	1	18	6	0	4	79
York	281	58	31	370	0	12	1	20	16	1	2	52
Total	812	335	57	1204	0	415	37	426	282	24	74	1258