



BOSTON PUBLIC HEALTH COMMISSION (BPHC)

Communicable Disease Control Division
 1010 Massachusetts Ave - Boston, MA 02118
 Phone: (617) 534-5611 - Fax: (617) 534-5905

Influenza Report - For the Week Ending 4/28/2018 (Final Report of 2017-18 Season)

Historical Data (YTD, Weeks 40 to 17): Current Season and Previous Influenza Season (2016-2018)

10/1/2017-4/28/2018 (Week 17)	
Reported Cases (Boston Residents)	# (% of total)
Influenza A (H3N2 predominant)	2977 (73%)
Influenza B	1071 (27%)
Influenza A and B	7
Influenza (type unspecified)	0
TOTAL (season-to-date)	4055
Boston ED ILI Surveillance*	
This Week ILI% (Week 17)	0.99%
Last Week ILI% (Week 16)	1.03%
State/National ILI Surveillance** (Week 17)	
This Week Massachusetts ILI%	1.30%
This Week National ILI%	1.54%

10/1/2016-4/29/2017 (Week 17)	
Reported Cases (Boston Residents)	# (% of total)
Influenza A (H3N2 predominant)	2364 (72%)
Influenza B	889 (28%)
Influenza A and B	12
Influenza (type unspecified)	2
TOTAL (season-to-date)	3267

*Influenza-like illness (ILI) is defined as "flu" OR "fever AND (cough OR sore throat)" in ED chief complaint captured by BPHC Syndromic Surveillance System
 **Massachusetts and CDC use a different methodology than the City of Boston to calculate ILI%. State and National ILI data are calculated using ILInet outpatient surveillance data from sentinel sites (see: <https://www.cdc.gov/flu/weekly/overview.htm> for more information).

As of 4/28/2018, 4055 cases of laboratory-confirmed influenza among Boston residents have been reported to the Boston Public Health Commission (BPHC), including 734 (18%) hospitalizations and 18 (0.5%) deaths. All deaths occurred in persons of advanced age or with multiple underlying medical conditions. There were no pediatric deaths. Emergency Department visits for influenza-like illness (ILI) comprised 0.99% of all ED visits the week.

Cases of influenza diagnosed in Boston and confirmed by any laboratory test must be reported to BPHC by calling 617-534-5611 or faxing reports to 617-534-5905.

Our 2017-18 influenza season began with significant media attention related to reports from Australia that vaccine effectiveness (VE) against the H3N2 component of their vaccine this season was only 10%. Reports from Canadian subsequently suggested an interim VE versus H3N2 of 17%. Coupled with high rates of illness, these reports fueled concerns within the United States of a severe influenza season. Preliminary results in the United States, however, demonstrated a VE against H3N2 of 25%, consistent with results from recent years. This season's vaccine remained a good match with no antigenic drift. In addition, VE was 67% against H1N1 component, and 42% against influenza B strains.

The number of laboratory-confirmed cases of influenza in Boston residents, and peak ILI% (percent of all visits to Boston emergency departments, irrespective of town of residence, for influenza-like illness) was higher this 2017-18 season compared with the 2016-17 season (both seasons were H3N2 predominant): 4055 versus 3267 cases, and 5.23% versus 2.48%. However, flu-related hospitalization rates and flu-related mortality were not notably increased. Hospitalization rate for both seasons was 18%. The number of flu-related deaths was also comparable; 18 (2017-18), 14 (2016-17). Mortality rates, as a percent of hospitalized influenza cases or all influenza cases, were also similar: 2.5% or 0.5% (2017-18) versus 2.4% or 0.4% (2016-17). This is in comparison to the 2014-15 season (characterized as severe, H3N2 predominant with antigenic drift and vaccine component mismatch): hospitalization rate equaled 25%; 38 flu-related deaths; 6.4% mortality among flu-related hospitalized cases; 1.6% mortality rate among all influenza cases.

Although the 2017-18 season was marked by greater flu activity, severity of illness was not significantly greater compared with previous seasons; and Boston experienced a notably less severe season compared with either the State or the U.S. overall, with lower hospitalization and mortality rates.

It is important to note that over the past several seasons, BPHC has increased the number of facilities reporting influenza cases, particularly non-hospital outpatient settings with point of care (POC) testing, which we anticipate would increase the number of confirmed cases being reported. Therefore, direct year-to-year comparisons of case counts will be difficult to interpret as they are subject to testing and reporting biases as well as level of provider/patient concern and media influences.

Vaccination against influenza is a key strategy to reduce influenza morbidity and mortality for all persons aged 6 months and older, particularly vulnerable populations at risk for severe complications.

BPHC will distribute Flu In Review prior to the beginning of the 2018-19 season, providing a summary of this season as well as specific recommendations for the upcoming season reflecting the most current information from CDC and WHO.

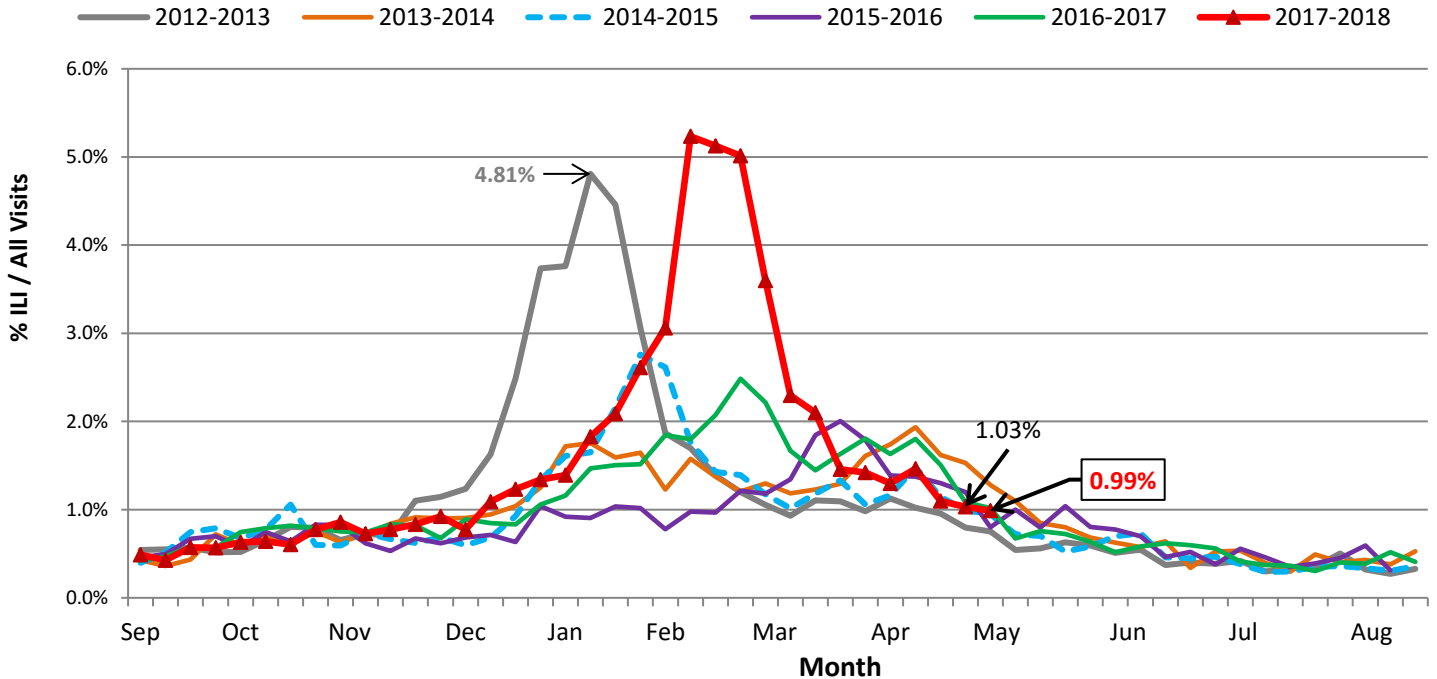


BOSTON PUBLIC HEALTH COMMISSION (BPHC)

Communicable Disease Control Division
1010 Massachusetts Ave - Boston, MA 02118
Phone: (617) 534-5611 - Fax: (617) 534-5905

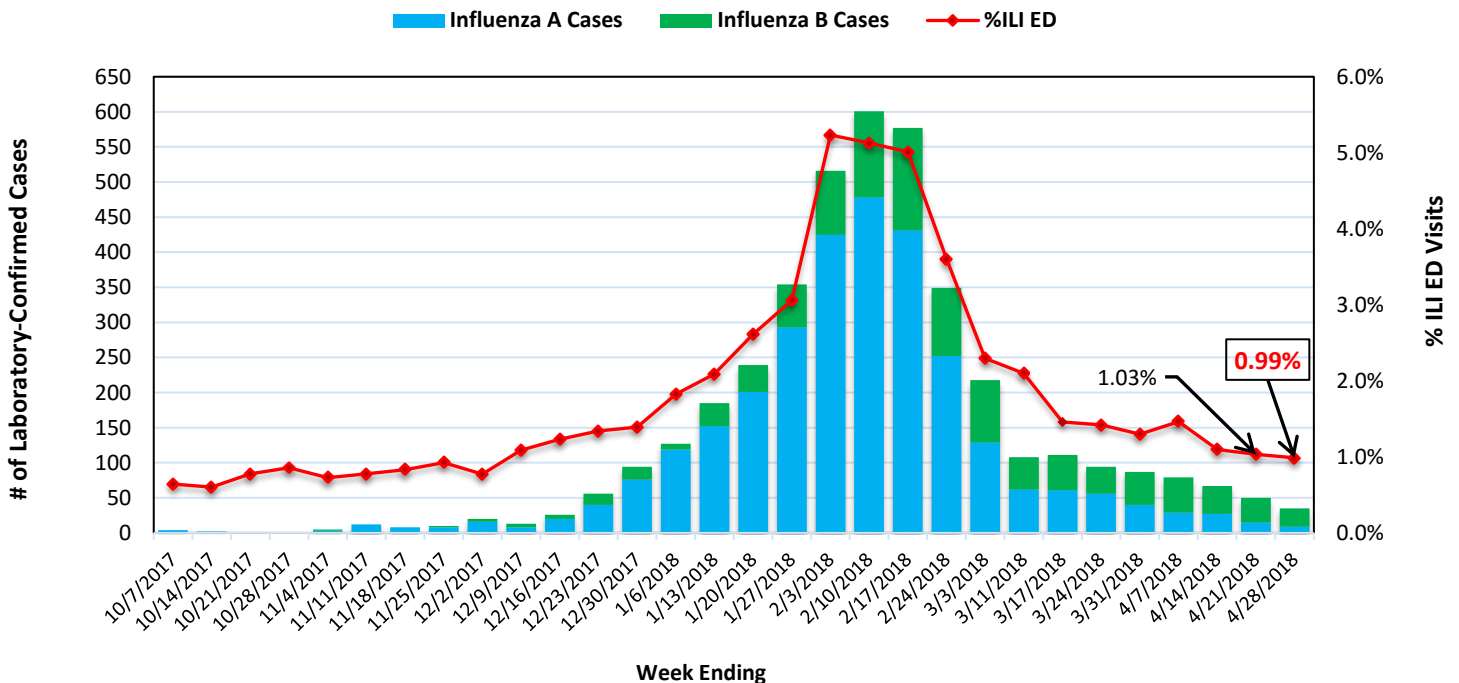
Current Season and Historical Data

Weekly % ILI ED Visits, 2012-2018



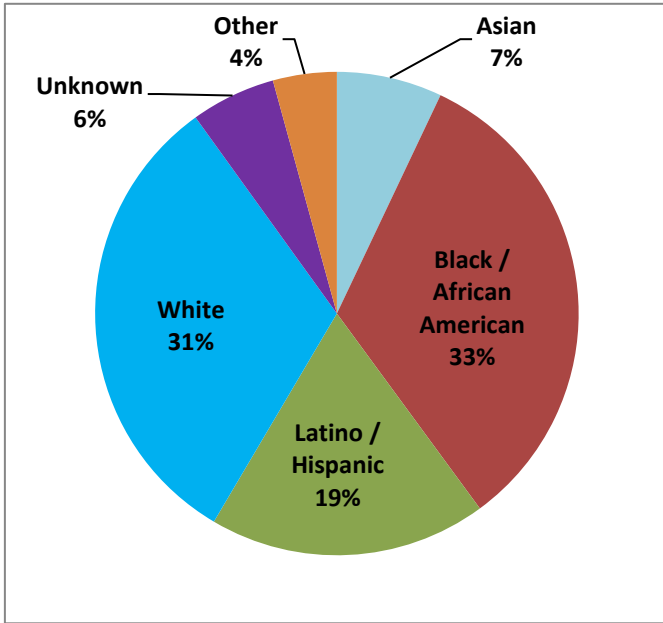
Weekly ILI ED visits are shown from 2012-2013 season to present. Influenza A(H3N2), which has been the predominant influenza strain this season, predominated in 2012-2013, 2014-2015 (with antigenic drift from the vaccine strain), and 2016-2017. The 2012-2013 season had a peak ILI of 4.81%. The 2017-2018 season's peak ILI was 5.23%. **For the week ending 4/28/2018, ILI accounted for 0.99% of ED visits, a decrease of 0.04% from the week prior.**

Weekly Reported Influenza Cases (in Boston Residents) and % ILI ED Visits, 2017-18 Season

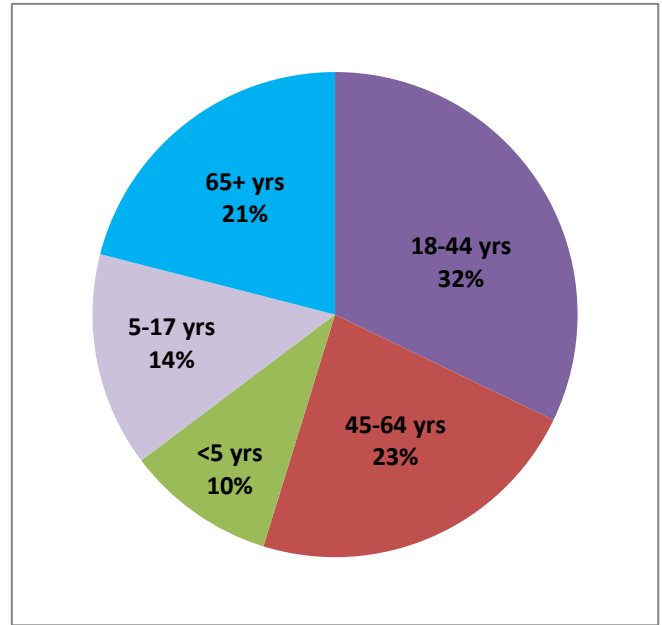


Race/Ethnicity and Age Distribution

**Race/Ethnicity of Confirmed Influenza Cases,
Boston Residents
October 1, 2017 - April 28, 2018**

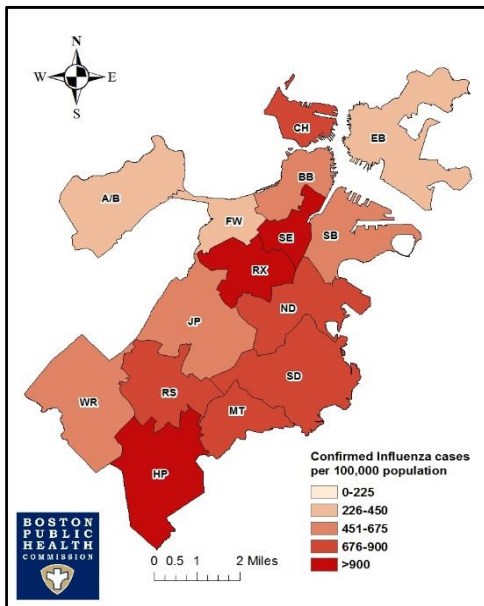


**Age Distribution of Confirmed Influenza Cases,
Boston Residents
October 1, 2017 - April 28, 2018**



Geographic Distribution

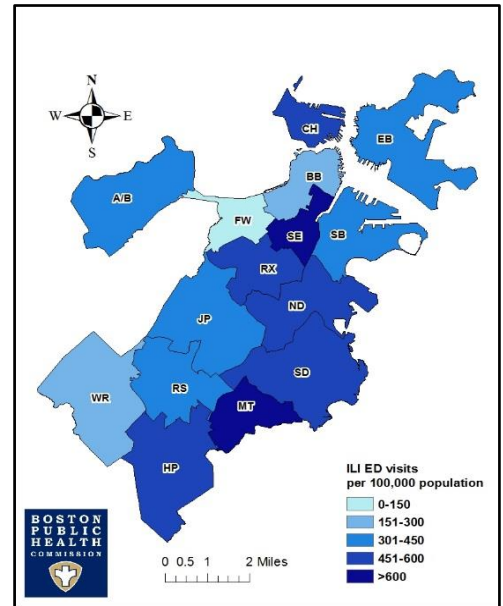
**Rate of Confirmed Influenza Cases
by Neighborhood per 100,000 Population
October 1, 2017 - April 28, 2018**



Neighborhood Legend

A/B=Allston/Brighton
BB=Back Bay
CH=Charlestown
EB=East Boston
FW=Fenway
HP=Hyde Park
JP=Jamaica Plain
MT=Mattapan
ND=North Dorchester
RS=Roslindale

**Rate of ILI Syndrome ED Visits
by Neighborhood per 100,000 Population
October 1, 2017 - April 28, 2018**



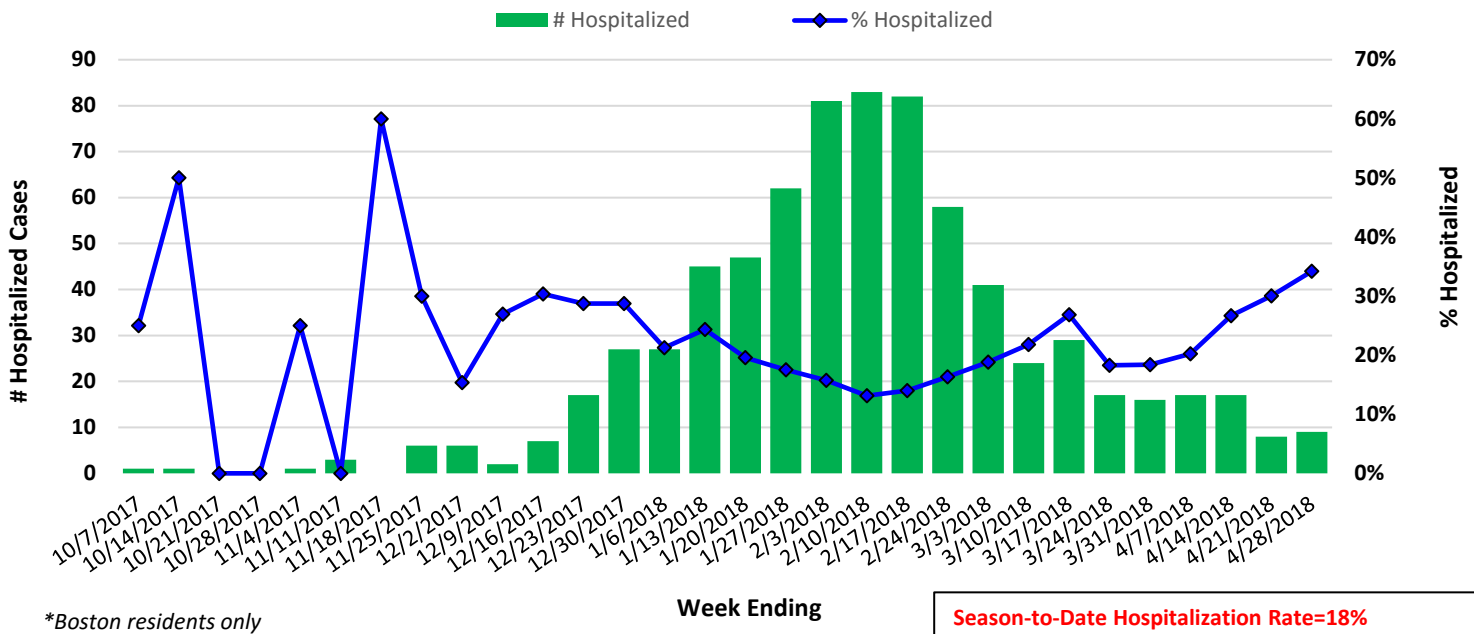


BOSTON PUBLIC HEALTH COMMISSION (BPHC)

Communicable Disease Control Division
1010 Massachusetts Ave - Boston, MA 02118
Phone: (617) 534-5611 - Fax: (617) 534-5905

Weekly Hospitalization Data on Laboratory-Confirmed Influenza in Boston Residents

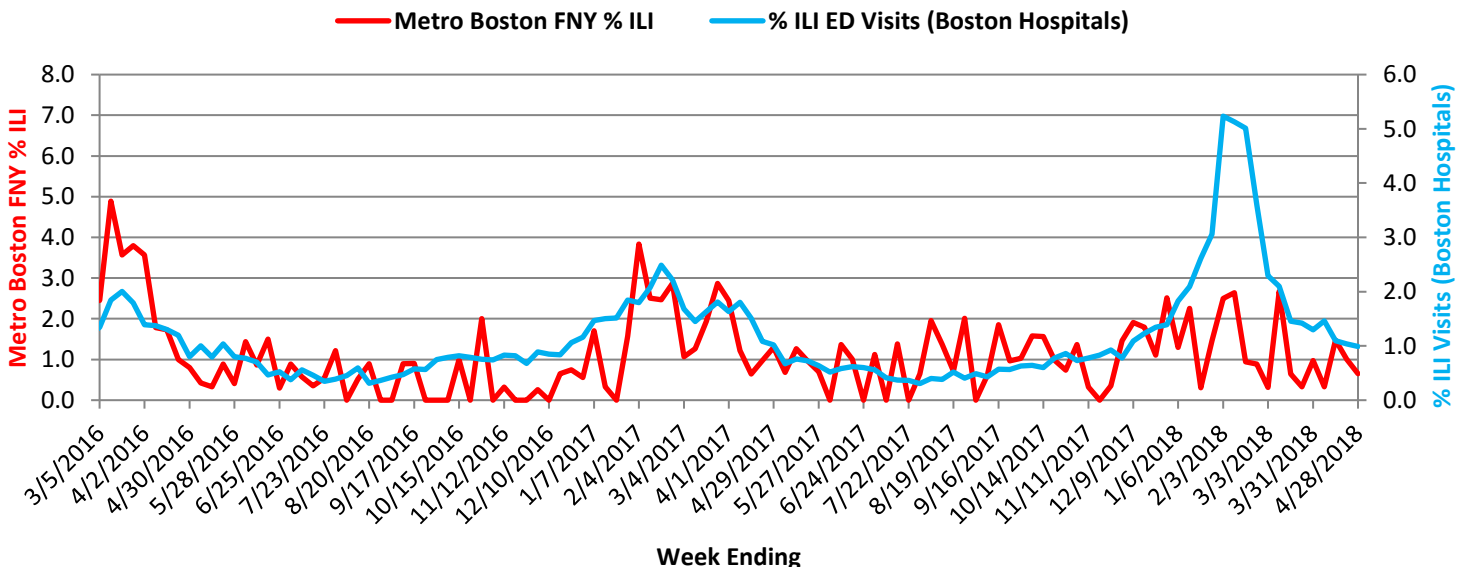
Confirmed Influenza-Related Hospitalizations, Case Count and as Percent of All Influenza Cases, by Week, 10/1/2017 – 4/28/2018



The season-to-date hospitalization rate for laboratory confirmed influenza cases among Boston residents is 18%. This overall hospitalization rate is lower than in previous A(H3N2) predominant years, including the 2014-5 season which was characterized by antigenic drift and severe illness. Although weekly hospitalization rates may vary from the season-to-date hospitalization rate, such week to week variations are expected.

Comparison of ILI Using Flu Near You (FNY)* ILI Data and ED Visits for ILI, 2016-2018

Comparison of Flu Near You (FNY) ILI Data and ED Visits for ILI (2016-2018)



*Flu Near You (FNY) compiles weekly data of ILI activity in the United States. The data come from short, weekly internet-based surveys completed by voluntary participants who indicate whether they are healthy or have experienced any of a short list of symptoms.

The public may participate by enrolling in FNY at: <https://flunearyou.org/>