NEW YORK STATE OF OPPORTUNITY. Department of Health

# Weekly Influenza Surveillance Report

*The New York State Department of Health (NYSDOH) collects, compiles, and analyzes information on influenza activity year round in New York State (NYS) and produces this weekly report during the influenza season (October through the following May).*[1]

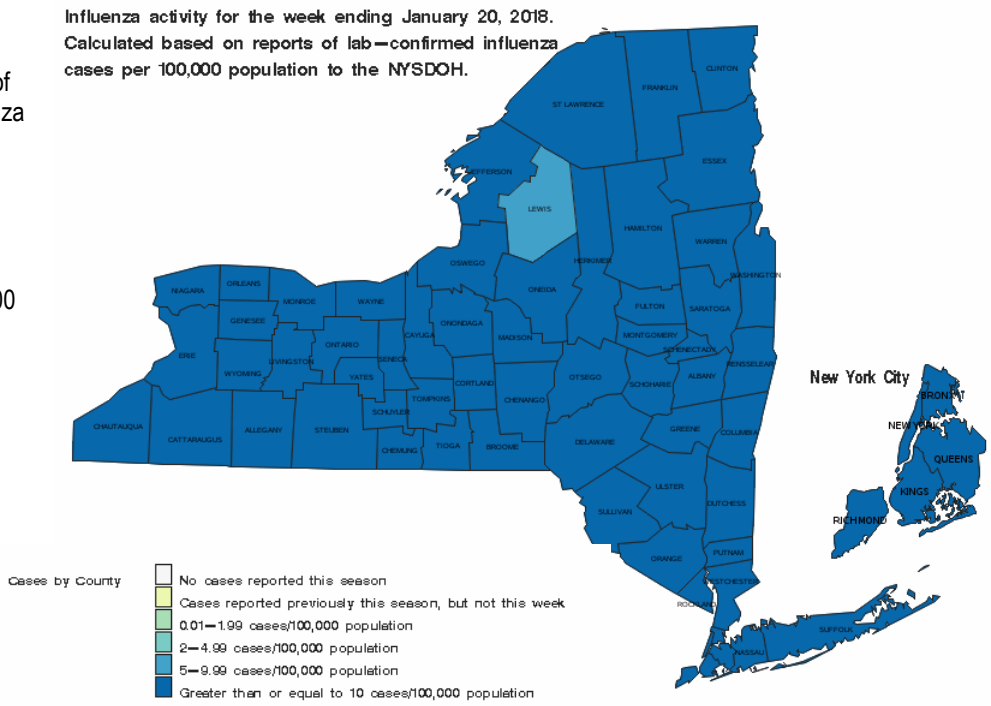
## During the week ending January 20, 2018

- Influenza activity level was categorized as geographically **widespread**[2]. This is the seventh week that widespread activity has been reported.
- There were **7,779** laboratory-confirmed influenza reports, a **28% increase** over last week.
- Of the **3,581** specimens submitted to WHO/NREVSS laboratories, **813 (22.70%)** were positive for influenza.
- Of the **132** specimens tested at Wadsworth Center, **80** were positive for influenza. **12** were **Influenza A (H1), 62** were **influenza A (H3), 5** were **influenza B (Yamagata)**, and **1** was **influenza B (Victoria).**
- Reports of percent of patient visits for influenza-like illness (ILI[3]) from ILINet providers was **8.58%**, which is above the regional baseline of 3.10%.
- The number of patients hospitalized with laboratory-confirmed influenza was **1,759** a **5% increase** over last week.
- There were **no** influenza-associated pediatric deaths reported this week. There has been **one** influenza-associated pediatric death reported this season.
- Preliminary results for **influenza vaccine effectiveness** (VE) in the US have not been released for the current season, but according to the CDC, data suggests that the influenza vaccine continues to offer protection against all influenza viruses, and can reduce the severity of illness for those who do get the flu. Additional information about VE, including information addressing news reports of reduced VE in Australia, can be found on the CDC website at https://www.cdc.gov/flu/about/season/flu-season-2017-2018.htm#effectiveness.

## Laboratory Reports of Influenza (including NYC)

All clinical laboratories that perform testing on residents of NYS report all positive influenza test results to NYSDOH.

- All 62 counties reported cases this week.
- Incidence ranged from 7.44-93.61 cases/100,000 population.

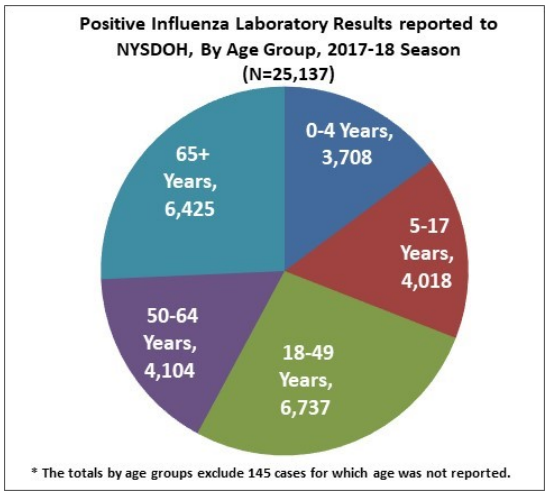



[1] Information about influenza monitoring in New York City (NYC) is available from the NYC Department of Health and Mental Hygiene website at: http://www.nyc.gov/html/doh/. National influenza surveillance data is available on CDC's FluView website at http://www.cdc.gov/flu/weekly/.

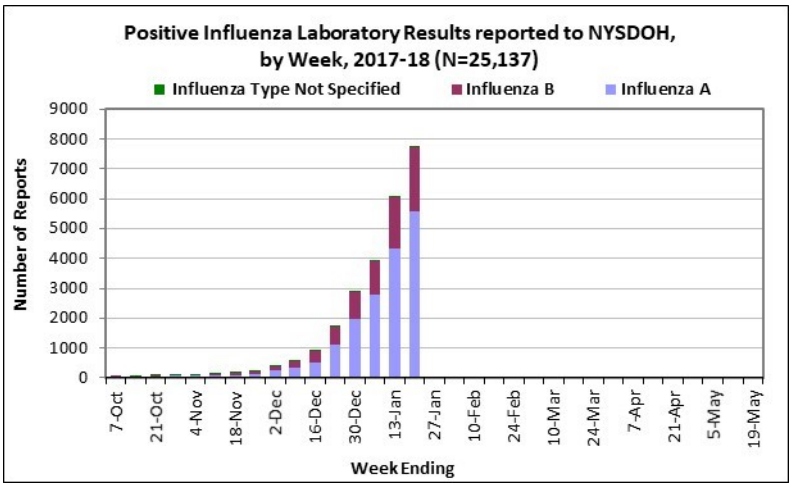
[2] **No Activity:** No laboratory-confirmed cases of influenza reported to the NYSDOH.
**Sporadic:** Small numbers of lab-confirmed cases of influenza reported.
**Local:** Increased or sustained numbers of lab-confirmed cases of influenza reported in a single region of New York State; sporadic in rest of state.
**Regional:** Increased or sustained numbers of lab-confirmed cases of influenza reported in at least two regions but in fewer than 31 of 62 counties.
**Widespread:** Increased or sustained numbers of lab-confirmed cases of influenza reported in greater than 31 of the 62 counties.
Increased or sustained is defined as 2 or more cases of laboratory-confirmed influenza per 100,000 population.

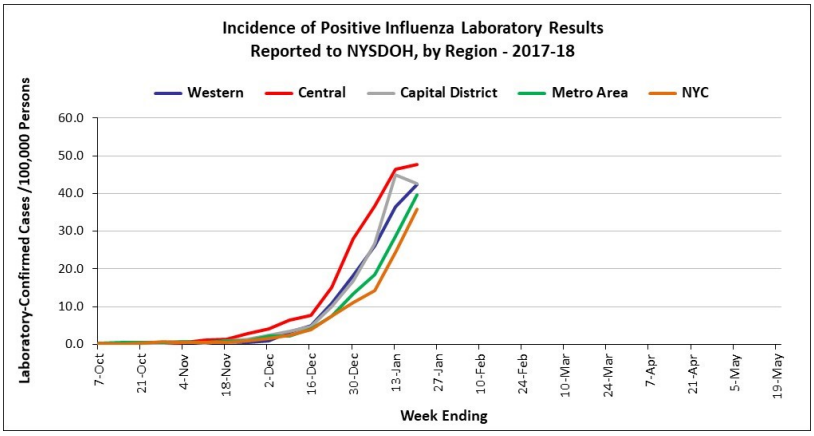
[3] ILI = influenza-like illness, defined as temperature 100° F with cough and/or sore throat in the absence of a known cause other than influenza

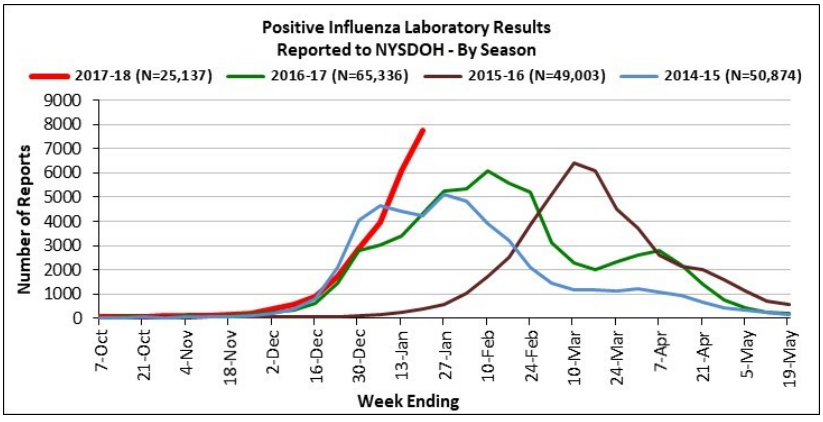
# Laboratory Reports of Influenza (including NYC)




Test results may identify influenza Type A, influenza Type B, or influenza without specifying Type A or B. Some tests only give a positive or negative result and cannot identify influenza type (not specified).

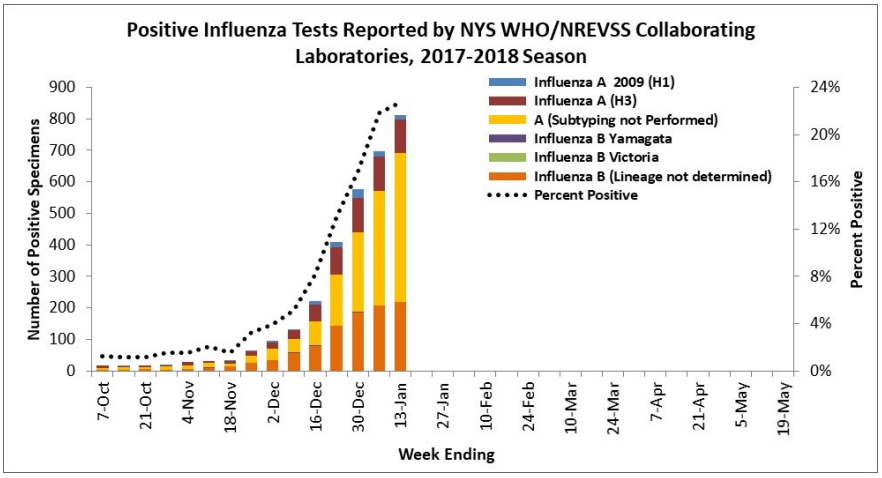


# World Health Organization (WHO) and National Respiratory & Enteric Virus Surveillance System (NREVSS) Collaborating Laboratories

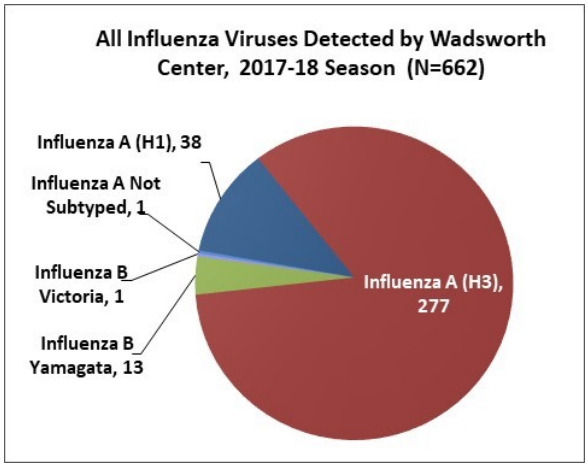
Clinical virology laboratories, including the Wadsworth Center, that are WHO and/or NREVSS collaborating laboratories for influenza surveillance report weekly the number of respiratory specimens tested and the number positive for influenza types A and B to CDC. Some labs also report the influenza A subtype (H1 or H3) and influenza B lineage (Victoria or Yamagata). Because denominator data is provided, the weekly percentage of specimens testing positive for influenza is calculated.

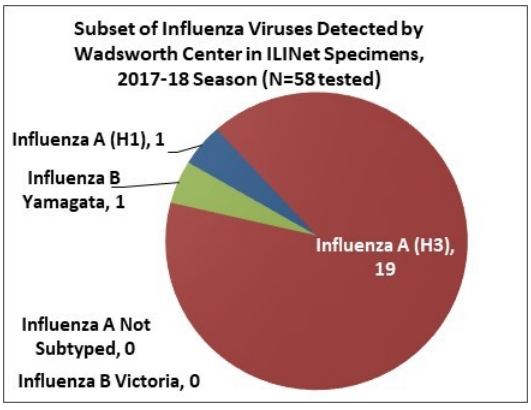


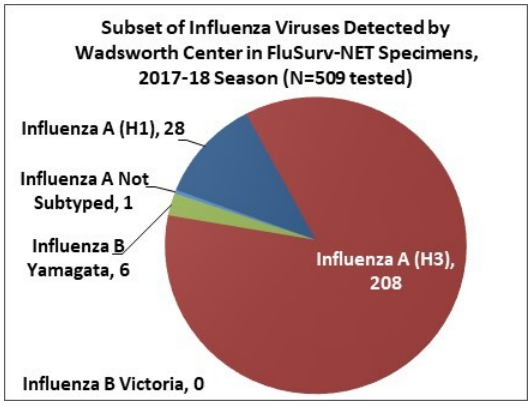

# Influenza Virus Types and Subtypes Identified at Wadsworth Center (excluding NYC)

Wadsworth Center, the NYSDOH public health laboratory, tests specimens from sources including, outpatient healthcare providers (ILINet) and hospitals (FluSurv-NET).

There are 2 common subtypes of influenza A viruses – H1 and H3. Each subtype has a slightly different genetic makeup. Wadsworth also identifies the lineage of influenza B specimens –Yamagata or Victoria. Rarely, an influenza virus is unable to have it's subtype or lineage identified by the laboratory.



# Influenza Antiviral Resistance Testing

The Wadsworth Center Virology Laboratory performs surveillance testing for antiviral drug resistance. [4]

**NYS Antiviral Resistance Testing Results on Samples Collected Season to date, 2017-18**

| | Samples tested | Oseltamivir Resistant Viruses, Number (%) | Zanamivir Resistant Viruses, Number (%) |
|---|---|---|---|
| Influenza A (H1N1pdm09) [i] | 21 | 0 (0.0) | 0 (0.0) |
| Influenza A (H3N2) [ii] | 67 | 0 (0.0) | 0 (0.0) |
| Influenza B [iii] | 0 | 0 (0.0) | 0 (0.0) |

I. All samples tested by pyrosequencing for the H275Y variant in the neuraminidase gene which confers resistance to oseltamivir, and a subset tested by NA dideoxy sequencing for other variations known to cause, or suspected of causing, resistance to neuraminidase inhibitor drugs including zanamivir and oseltamivir.

II. All samples tested for oseltamivir resistance by pyrosequencing for E119V, R292K, and N294S in the neuraminidase gene (NA), and a subset tested by NA dideoxy sequencing for other variations known to cause, or suspected of causing, resistance to neuraminidase inhibitor drugs including zanamivir and oseltamivir.

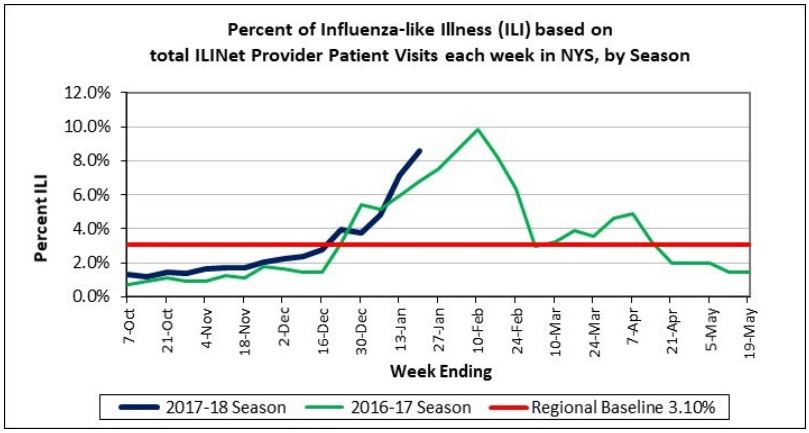
III. Samples tested by whole gene dideoxysequencing of the neuraminidase gene. Sequence data reviewed for variations known to cause, or suspected of causing, resistance to

# Outpatient Influenza-like Illness Surveillance Network (ILINet) (excluding NYC)

The NYSDOH works with ILINet healthcare providers who report the total number of patients seen and the total number of those with complaints of influenza-like illness (ILI) every week in an outpatient setting.

The CDC uses trends from past years to determine a regional baseline rate of doctors' office visits for ILI. For NYS, the regional baseline is currently 3%. Numbers above this regional baseline suggest high levels of illness consistent with influenza in the state.

Note that surrounding holiday weeks, it is not uncommon to notice a fluctuation in the ILI rate. This is a result of the different pattern of patient visits for non-urgent needs.

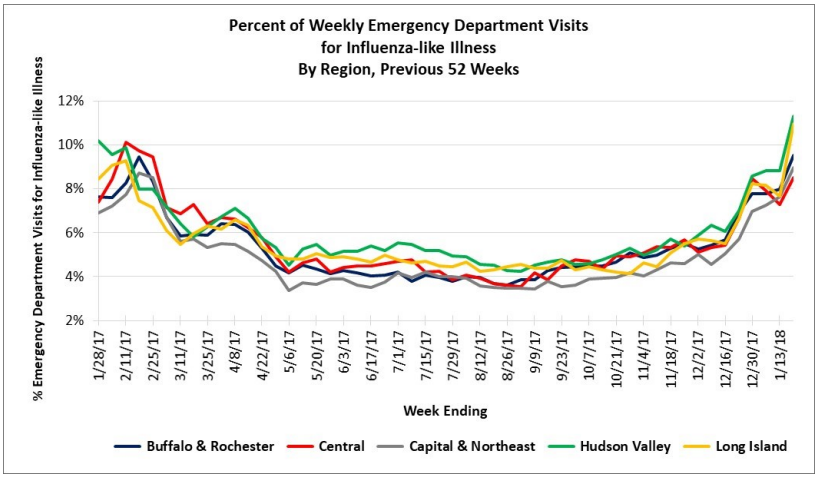



# Emergency Department Visits for ILI-Syndromic Surveillance (excluding NYC)

Hospitals around NYS report the number of patients seen in their emergency departments with complaints of ILI. This is called syndromic surveillance.

An increase in visits to hospital emergency departments for ILI can be one sign that influenza has arrived in that part of NYS.

Syndromic surveillance does not reveal the actual cause of illness, but is thought to correlate with emergency department visits for influenza.

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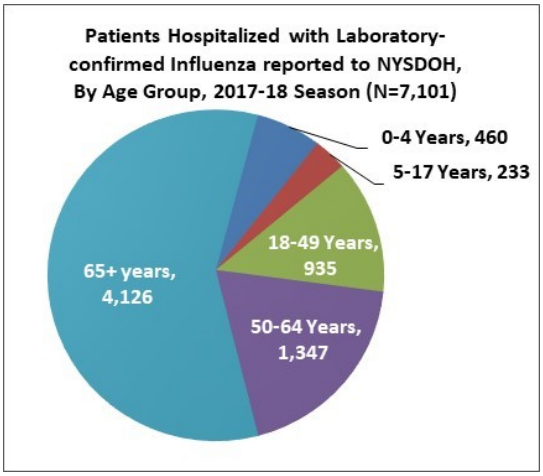
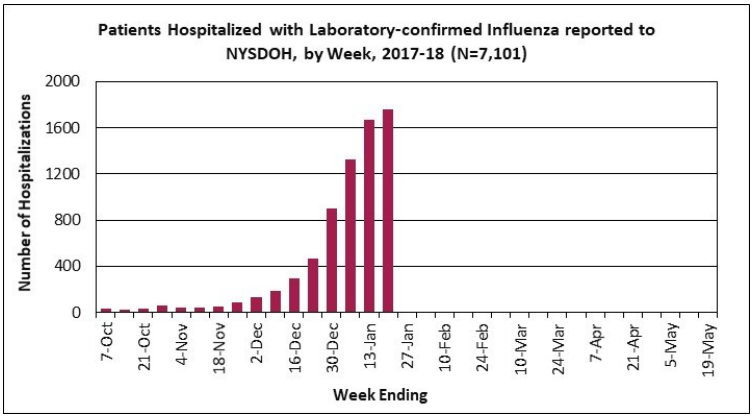
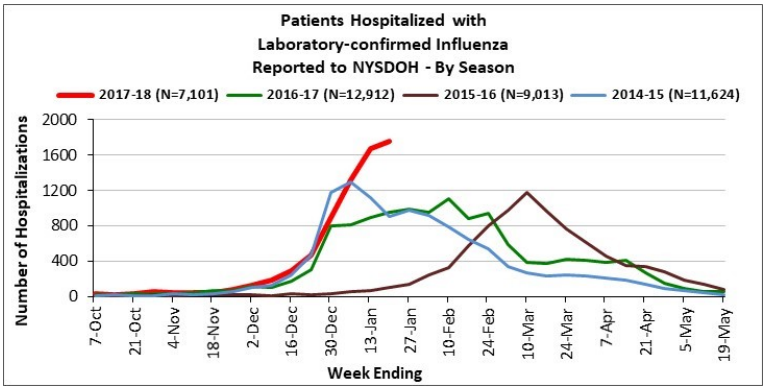
[4] Additional information regarding national antiviral resistance testing, as well as recommendations for antiviral treatment and chemoprophylaxis of influenza virus infection, can be found at http://www.cdc.gov/flu/weekly/.

# Patients Hospitalized with Laboratory-Confirmed Influenza (including NYC)

Hospitals in NYS and NYC report the number of hospitalized patients with laboratory-confirmed Influenza to NYSDOH. 176 (96%) of 183 hospitals reported this week.




# Influenza Hospitalization Surveillance Network (FluSurv-NET)

As part of the CDC's FluSurv-Net, the NYS Emerging Infections Program (EIP) conducts enhanced surveillance for hospitalized cases of laboratory-confirmed influenza among residents of 15 counties.[5] Medical chart reviews are completed, and underlying health conditions noted on all identified cases from October 1 through April 30 of the following year.

FluSurv-Net estimated hospitalization rates will be updated weekly starting later this season.

[5]Counties include, in the Capital District: Albany, Columbia, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, and Schoharie; in the Western Region: Genesee, Livingston, Monroe, Ontario, Orleans, Wayne, and Yates

## Healthcare-associated Influenza Activity (including NYC)

Hospitals and nursing homes in NYS report outbreaks of influenza to the State. An outbreak in these settings is defined as one or more healthcare facility-associated case(s) of confirmed influenza in a patient or resident or two or more cases of influenza-like illness among healthcare workers and patients/residents of a facility on the same unit within 7 days. Outbreaks are considered confirmed only with positive laboratory testing.[6]

| Week-to-Date (CDC week - 3) | Capital Region | | | Central Region | | | Metro Region | | | Western Region | | | Statewide (Total) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/14/18 through 1/20/18 | ACF | LTCF | Total | ACF | LTCF | Total | ACF | LTCF | Total | ACF | LTCF | Total | ACF | LTCF | Total |
| # Outbreaks* Lab-confirmed Influenza (any type) | 2 | 8 | 10 | 2 | 3 | 5 | 25 | 26 | 51 | 2 | 8 | 10 | 31 | 45 | 76 |
| # Outbreaks* viral respiratory illness** | | | 0 | | | 0 | | 1 | 1 | | | 0 | 0 | 1 | 1 |
| Total # Outbreaks | 2 | 8 | 10 | 2 | 3 | 5 | 25 | 27 | 52 | 2 | 8 | 10 | 31 | 46 | 77 |

| Season-to-Date (CDC week - 3) | Capital Region | | | Central Region | | | Metro Region | | | Western Region | | | Statewide (Total) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9/29/17/16 through 1/20/18 | ACF | LTCF | Total | ACF | LTCF | Total | ACF | LTCF | Total | ACF | LTCF | Total | ACF | LTCF | Total |
| # Outbreaks* Lab-confirmed Influenza (any type) | 11 | 34 | 45 | 9 | 36 | 45 | 115 | 137 | 252 | 10 | 59 | 69 | 145 | 266 | 411 |
| # Outbreaks* viral respiratory illness** | | 6 | 6 | | 10 | 10 | | 17 | 17 | | 5 | 5 | 0 | 38 | 38 |
| Total # Outbreaks | 11 | 40 | 51 | 9 | 46 | 55 | 115 | 154 | 269 | 10 | 64 | 74 | 145 | 304 | 449 |

ACF - Article 28 Acute Care Facility

LTCF - Article 28 Long Term Care Facility

*Outbreaks are reported based on the onset date of symptoms in the first case

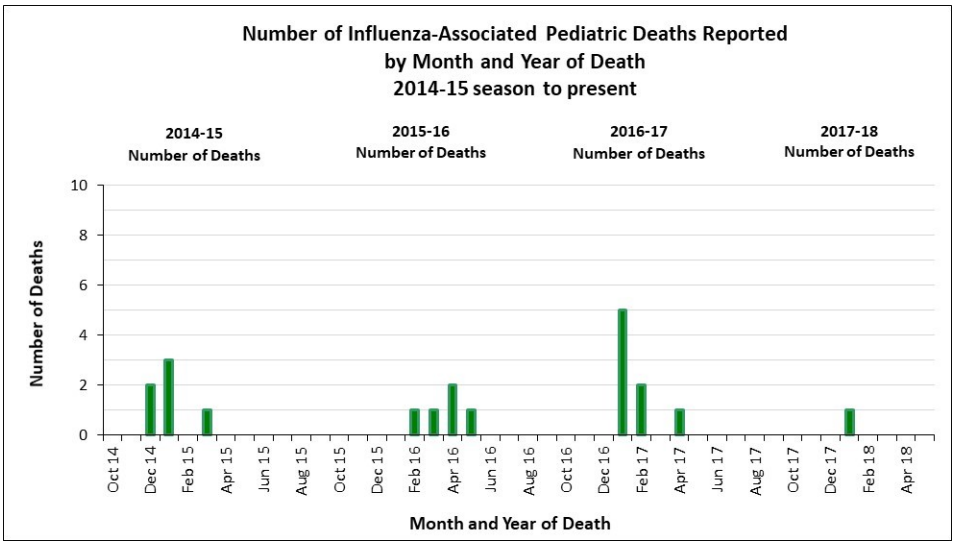
** Includes outbreaks of suspect influenza and/or other viral upper respiratory pathogens

For information about the flu mask regulation and the current status of the Commissioner's declaration, please visit www.health.ny.gov/FluMaskReg

## Pediatric influenza-associated deaths reported (including NYC)

Local health departments report pediatric influenza-associated deaths to NYSDOH.

Flu-associated deaths in children younger than 18 years old are nationally notifiable. Influenza-associated deaths in persons 18 years and older are not notifiable.




[6]For more information on reporting of healthcare-associated influenza, visit http://www.health.ny.gov/diseases/communicable/control/respiratory_disease_checklist.htm