

# 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).<sup>1</sup>

## During the week ending February 3, 2018

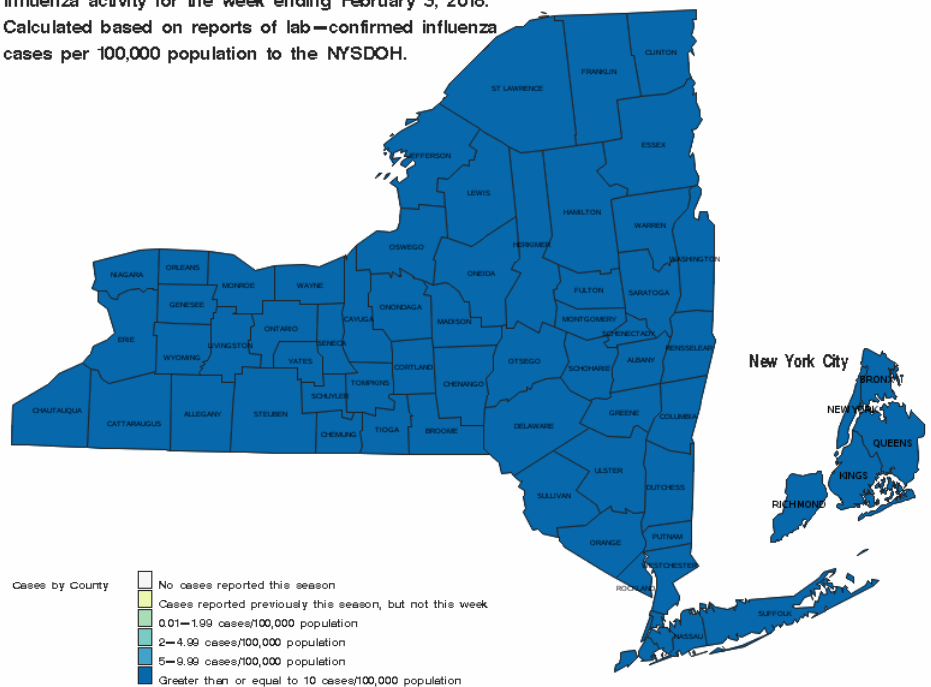
- Influenza activity level was categorized as geographically **widespread**<sup>2</sup>. This is the ninth consecutive week that widespread activity has been reported.
- There were **15,753** laboratory-confirmed influenza reports, a **35% increase** over last week.
- Of the **4,015** specimens submitted to WHO/NREVSS laboratories, **1,044 (26%)** were positive for influenza.
- Of the **290** specimens tested at Wadsworth Center, **195** were positive for influenza. **31** were **Influenza A (H1)**, **142** were **influenza A (H3)**, **21** were **influenza B (Yamagata)** and **1** was **influenza B (Victoria)**
- Reports of percent of patient visits for influenza-like illness (ILI)<sup>3</sup> from ILINet providers was **11.43%**, which is above the regional baseline of 3.10%.
- The number of patients hospitalized with laboratory-confirmed influenza was **2,349** a **2% increase** over last week.
- There were **two** influenza-associated pediatric deaths reported this week. There have been **three** influenza-associated pediatric deaths 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 22.10-251.11 cases/100,000 population.

Influenza activity for the week ending February 3, 2018. Calculated based on reports of lab-confirmed influenza cases per 100,000 population to the NYSDOH.



<sup>1</sup> 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/>.

<sup>2</sup> **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.

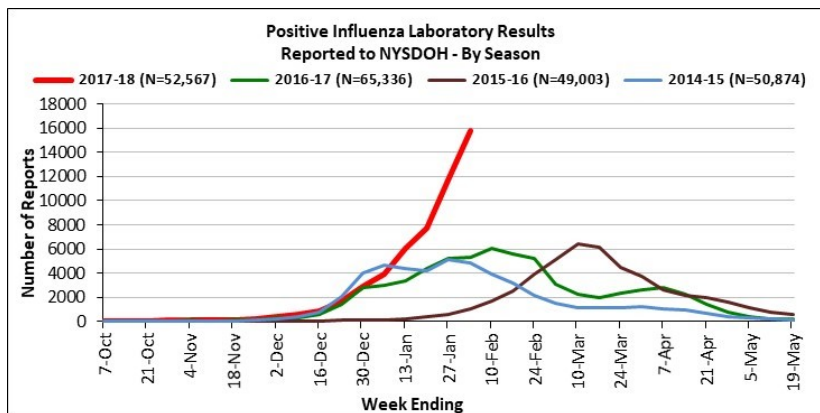
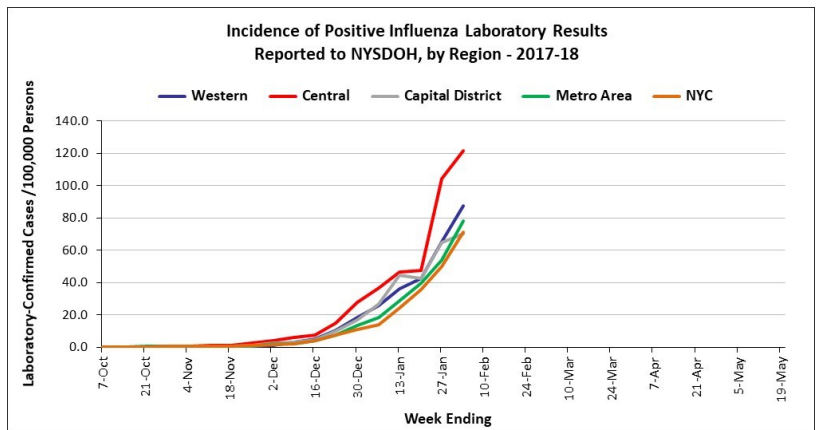
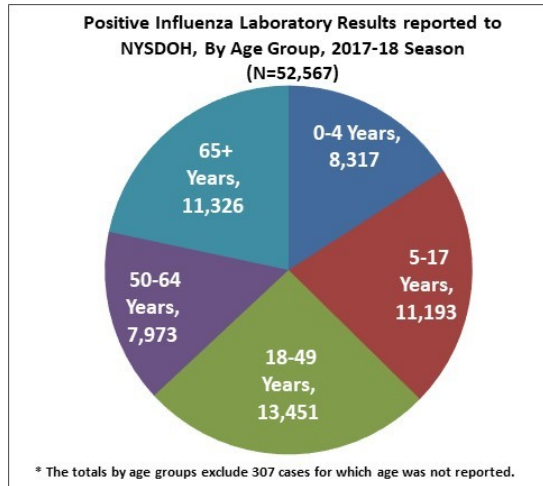
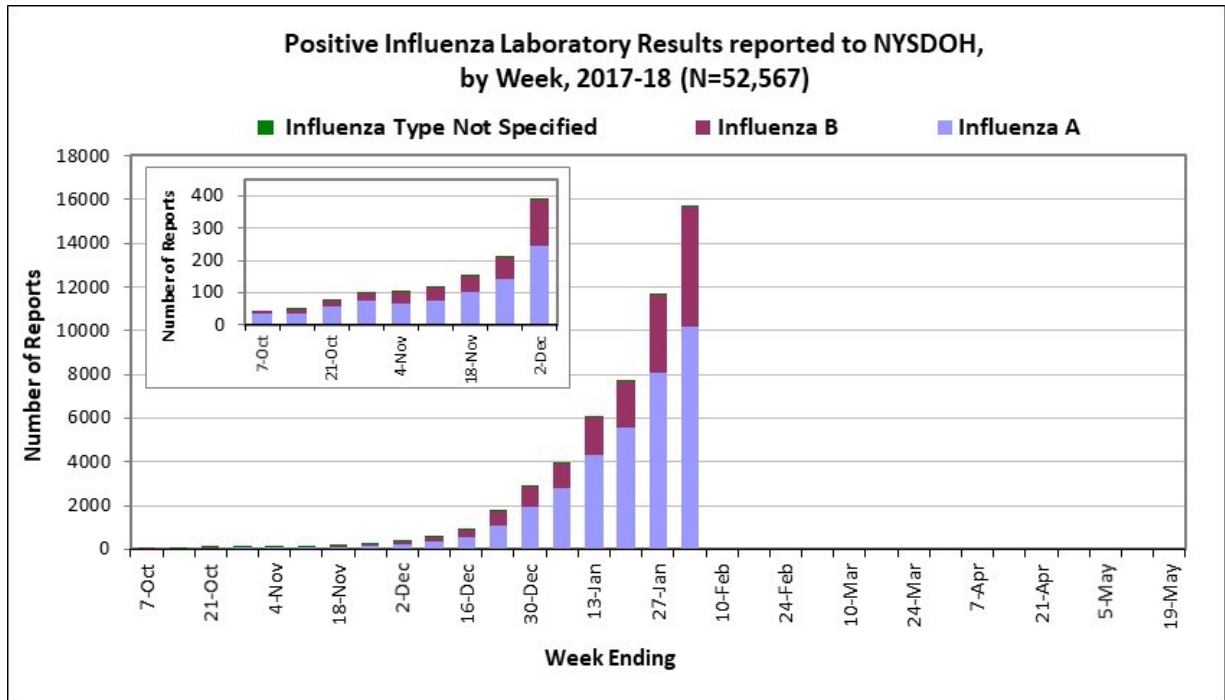
**Widespread:** Increased or sustained numbers of lab-confirmed cases of influenza reported in greater than 31 of the 62 counties.

Increased or sustained is defined as 2 or more cases of laboratory-confirmed influenza per 100,000 population.

<sup>3</sup> 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).



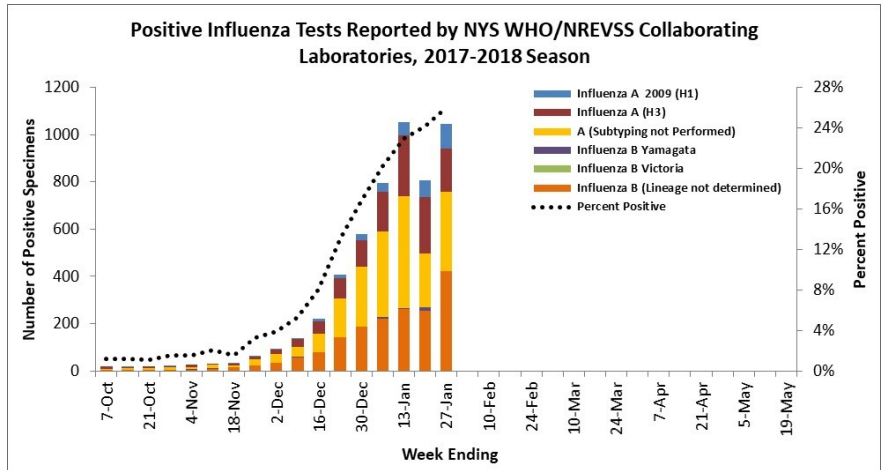
## Laboratory Reports of Influenza (including NYC)

Data shown in the table represents the number of laboratory-confirmed cases by county for the current week, previous two weeks, and season-to-date totals.

County	Week Ending			Season-To-Date
	20-Jan	27-Jan	3-Feb	
Albany	140	158	158	782
Allegany	5	36	18	72
Broome	63	378	325	922
Cattaraugus	37	58	54	212
Cayuga	51	113	139	617
Chautauqua	79	123	117	436
Chemung	42	37	56	208
Chenango	11	72	103	232
Clinton	31	24	35	257
Columbia	16	26	45	153
Cortland	29	41	65	236
Delaware	15	34	35	114
Dutchess	144	149	217	727
Erie	283	471	609	1998
Essex	8	8	13	54
Franklin	24	17	22	91
Fulton	27	29	37	150
Genesee	40	77	98	333
Greene	20	16	19	139
Hamilton	3	7	4	19
Herkimer	24	54	72	239
Jefferson	35	77	137	322
Lewis	2	24	44	88
Livingston	23	57	58	198
Madison	40	57	57	257
Monroe	406	517	665	2795
Montgomery	36	30	44	168
Nassau	388	679	832	3040
Niagara	51	69	112	335
Oneida	151	339	387	1243
Onondaga	176	229	234	1409
Ontario	61	116	212	576
Orange	163	169	282	883
Orleans	12	41	54	144
Oswego	80	103	161	518
Otsego	30	45	59	151
Putnam	36	48	114	258
Rensselaer	54	101	92	419
Rockland	68	121	144	513
Saratoga	121	266	198	979
Schenectady	115	219	284	818
Schoharie	5	15	21	58
Schuyler	2	6	4	16
Seneca	14	34	56	147
St. Lawrence	63	62	79	273
Steuben	26	37	60	185
Suffolk	449	710	1131	3301
Sullivan	41	50	48	181
Tioga	25	76	69	213
Tompkins	43	109	150	497
Ulster	75	67	124	392
Warren	9	19	17	118
Washington	20	14	26	129
Wayne	85	124	228	586
Westchester	692	807	1172	3861
Wyoming	9	19	25	84
Yates	17	17	33	88
<b>Upstate Total</b>	<b>4715</b>	<b>7401</b>	<b>9654</b>	<b>33234</b>
Bronx	689	1170	1610	4899
Kings	751	963	1527	4868
New York	453	518	900	2851
Queens	989	1417	1783	5799
Richmond	178	214	279	916
<b>NYC Total</b>	<b>3060</b>	<b>4282</b>	<b>6099</b>	<b>19333</b>
<b>Total</b>	<b>7775</b>	<b>11683</b>	<b>15753</b>	<b>52567</b>

## 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.

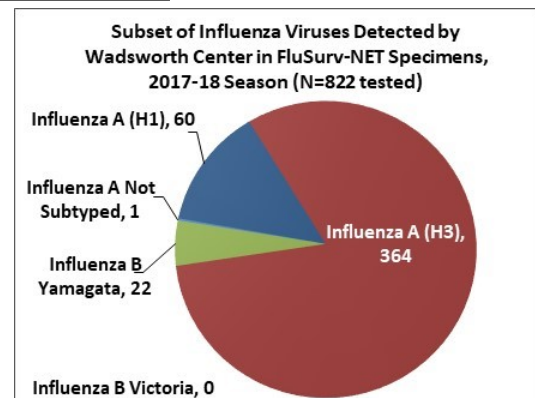
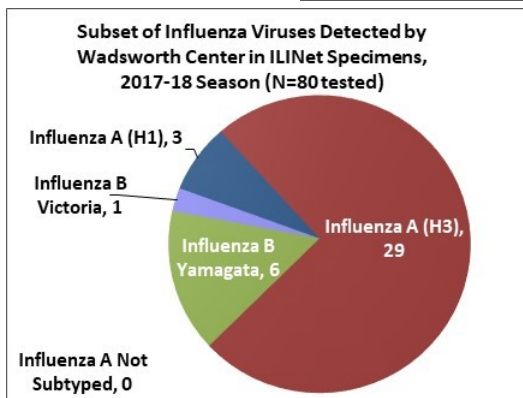
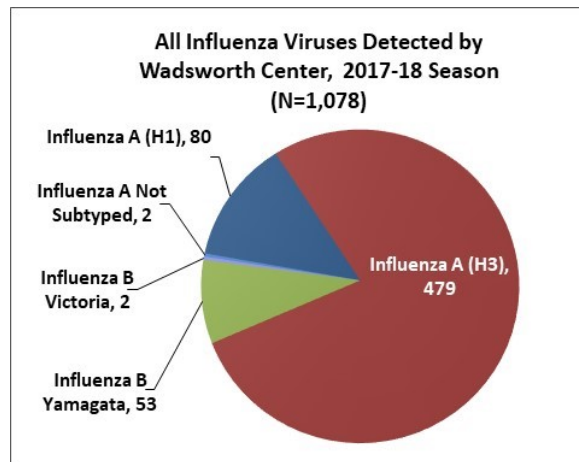


## Influenza Virus Types and Subtypes Identified at Wadsworth Center (excluding NYC)

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 its subtype or lineage identified by the laboratory.

Wadsworth sends a subset of positive influenza specimens to the CDC for further virus testing and characterization.



## Influenza Antiviral Resistance Testing

The Wadsworth Center Virology Laboratory performs surveillance testing for antiviral drug resistance. <sup>4</sup>

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) <sup>i</sup>	34	0 (0.00)	0 (0.00)
Influenza A (H3N2) <sup>ii</sup>	117	1 (0.01)	1 (0.01)
Influenza B <sup>iii</sup>	0	0 (0.00)	0 (0.00)

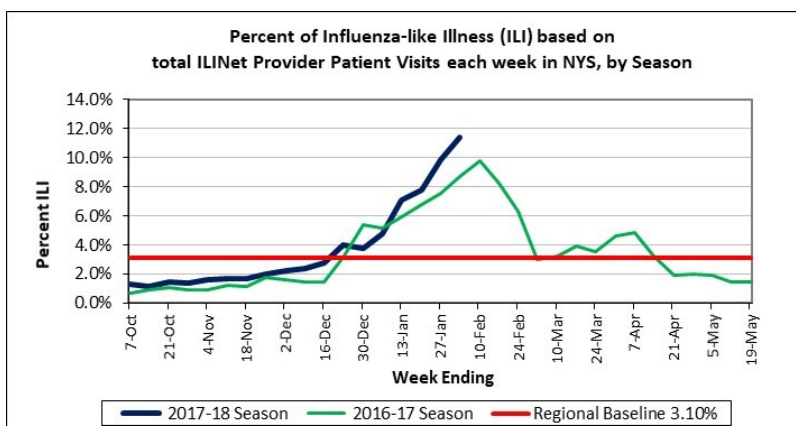
- I. All samples tested by pyrosequencing for the H275Y variant in the neuraminidase gene which confers resistance to oseltamivir, and a subset tested by NA dideoxy sequencing for other variations known to cause, or suspected of causing, resistance to neuraminidase inhibitor drugs including zanamivir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

## 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.

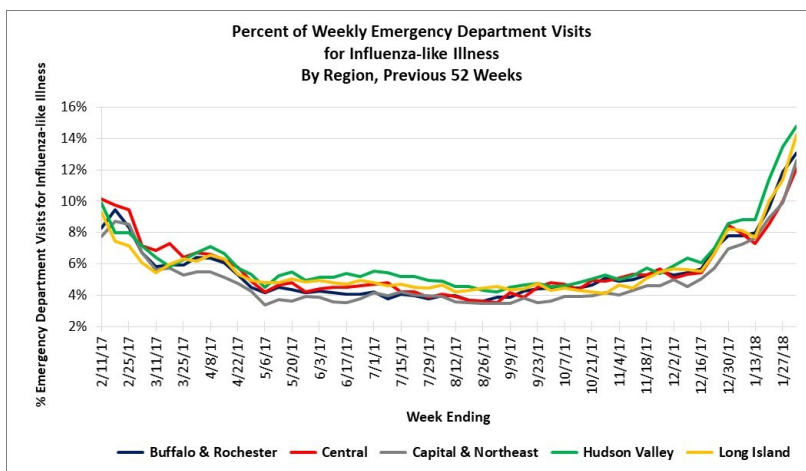


## Emergency Department Visits for ILI-Syndromic Surveillance (excluding NYC)

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.

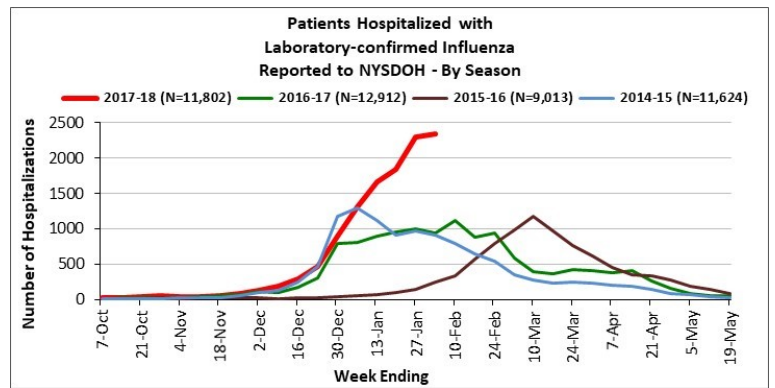
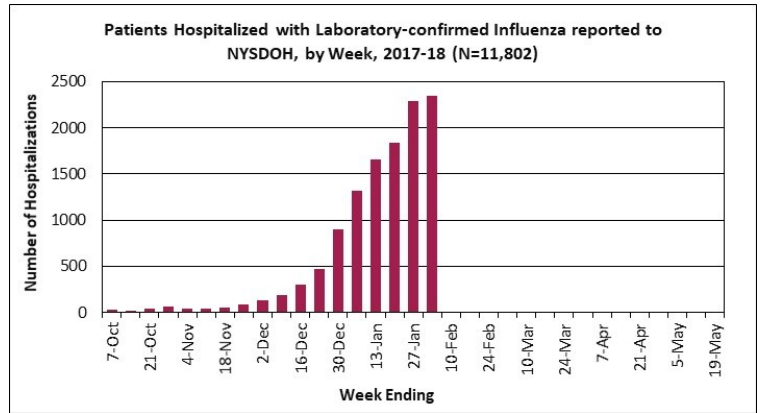
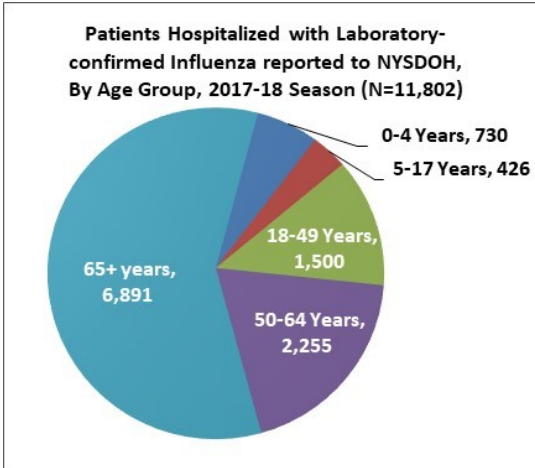
Syndromic surveillance does not reveal the actual cause of illness, but is thought to correlate with emergency department visits for influenza.



<sup>4</sup>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.<sup>5</sup> 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.

<sup>5</sup>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.<sup>6</sup>

Week-to-Date (CDC week - 5) 1/28/18 through 2/3/18	Capital Region			Central Region			Metro Region			Western Region			Statewide (Total)		
	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total
# Outbreaks* Lab-confirmed Influenza (any type)	6	4	10		11	11	52	26	78	2	15	17	60	56	116
# Outbreaks* viral respiratory illness**		1	1			0			0		1	1	0	2	2
<b>Total # Outbreaks</b>	<b>6</b>	<b>5</b>	<b>11</b>	<b>0</b>	<b>11</b>	<b>11</b>	<b>52</b>	<b>26</b>	<b>78</b>	<b>2</b>	<b>16</b>	<b>18</b>	<b>60</b>	<b>58</b>	<b>118</b>

Season-to-Date (CDC week - 5) 9/29/17/16 through 2/3/18	Capital Region			Central Region			Metro Region			Western Region			Statewide (Total)		
	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total
# Outbreaks* Lab-confirmed Influenza (any type)	24	46	70	12	57	69	214	200	414	20	86	106	270	389	659
# Outbreaks* viral respiratory illness**		7	7		11	11		22	22	1	6	7	1	46	47
<b>Total # Outbreaks</b>	<b>24</b>	<b>53</b>	<b>77</b>	<b>12</b>	<b>68</b>	<b>80</b>	<b>214</b>	<b>222</b>	<b>436</b>	<b>21</b>	<b>92</b>	<b>113</b>	<b>271</b>	<b>435</b>	<b>706</b>

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

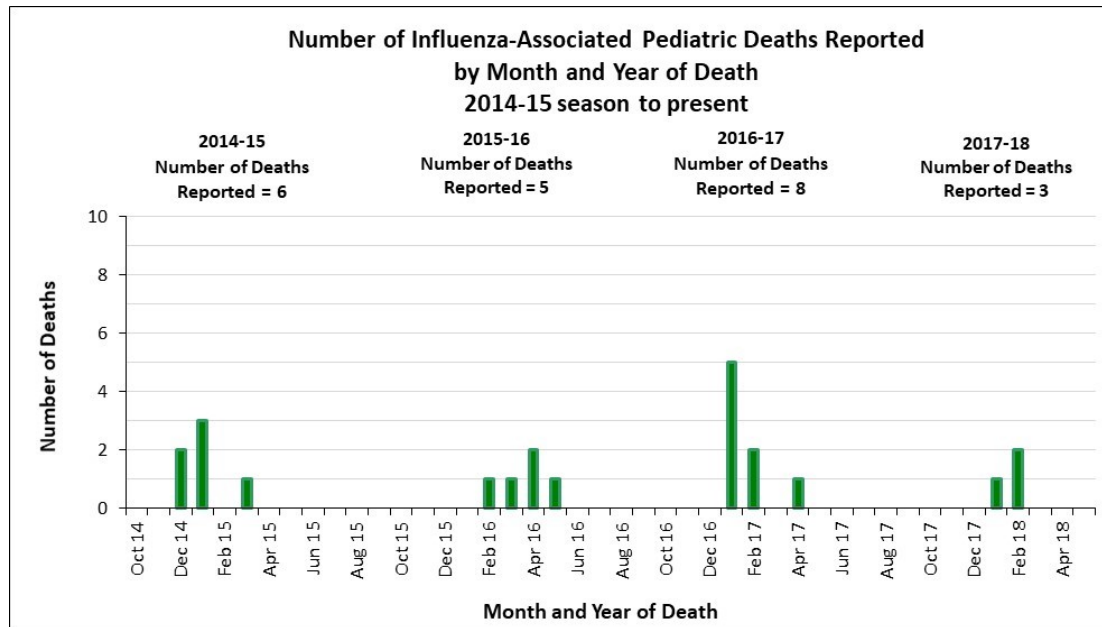
For information about the flu mask regulation and the current status of the Commissioner's declaration, please visit [www.health.ny.gov/FluMaskReg](http://www.health.ny.gov/FluMaskReg)

## 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.

All pediatric flu-associated deaths included in this report are laboratory-confirmed.



<sup>6</sup>For more information on reporting of healthcare-associated influenza, visit [http://www.health.ny.gov/diseases/communicable/control/respiratory\\_disease\\_checklist.htm](http://www.health.ny.gov/diseases/communicable/control/respiratory_disease_checklist.htm)