

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 April 28, 2018

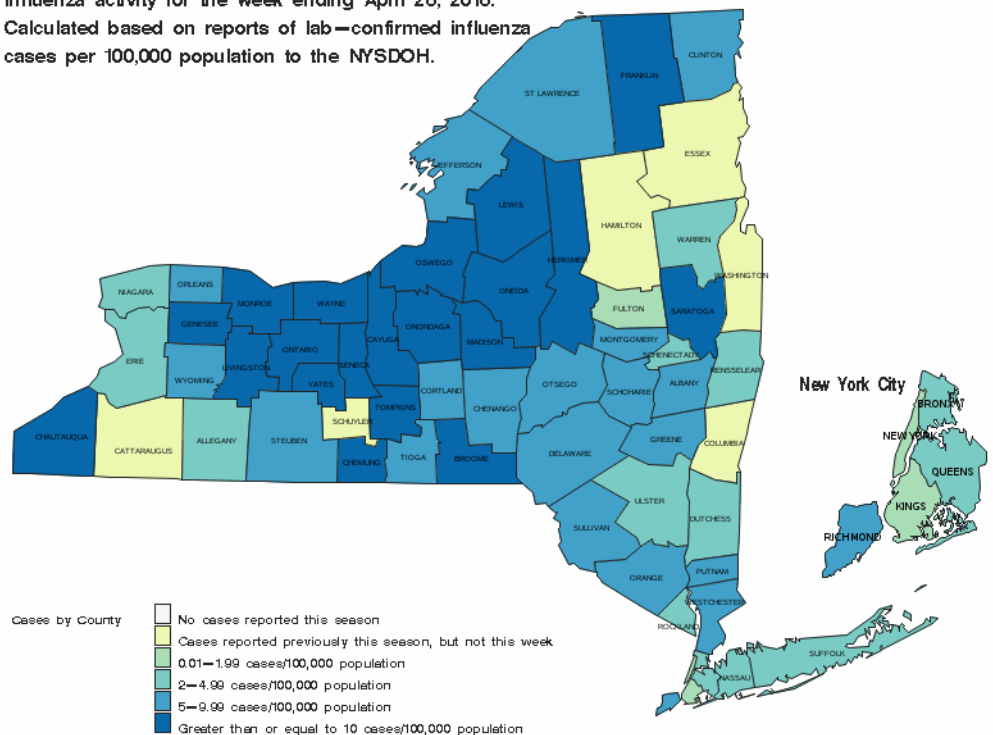
- Influenza activity level was categorized as geographically **widespread**². This is the 21st consecutive week that widespread activity has been reported.
- There were **1,052** laboratory-confirmed influenza reports, a **24% decrease** over last week.
- Of the **1,902** specimens submitted to WHO/NREVSS laboratories, **180 (9.46%)** were positive for influenza.
- Of the **57** specimens tested at Wadsworth Center, **16** were positive for influenza. **2** were **influenza A(H1)**, **11** were **influenza A(H3)**, and **3** were **influenza B(Yamagata)**.
- Reports of percent of patient visits for influenza-like illness (ILI)³ from ILINet providers was **1.90%**, which is below the regional baseline of 3.10%.
- The number of patients hospitalized with laboratory-confirmed influenza was **243**, an **8% decrease** over last week.
- There were **no** influenza-associated pediatric deaths reported this week. There have been **six** influenza-associated pediatric deaths reported this season.
- Preliminary results for **influenza vaccine effectiveness (VE)** are published on CDC's website at https://www.cdc.gov/mmwr/volumes/67/wr/mm6706a2.htm?s_cid=mm6706a2_w.

Laboratory Reports of Influenza (including NYC)

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

- 56 counties reported cases this week.
- Incidence ranged from 0-27.53 cases/100,000 population.

Influenza activity for the week ending April 28, 2018.
Calculated based on reports of lab-confirmed influenza cases per 100,000 population to the NYSDOH.



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.

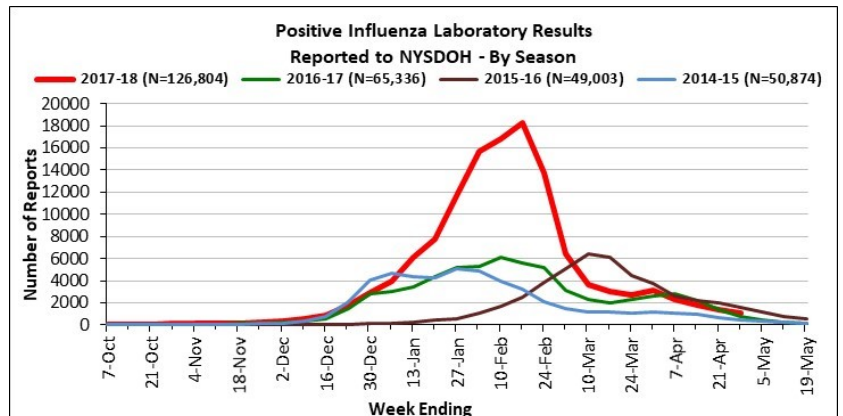
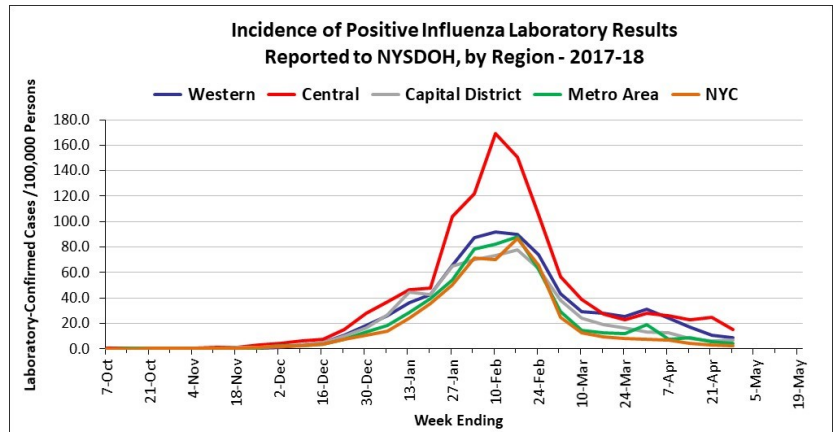
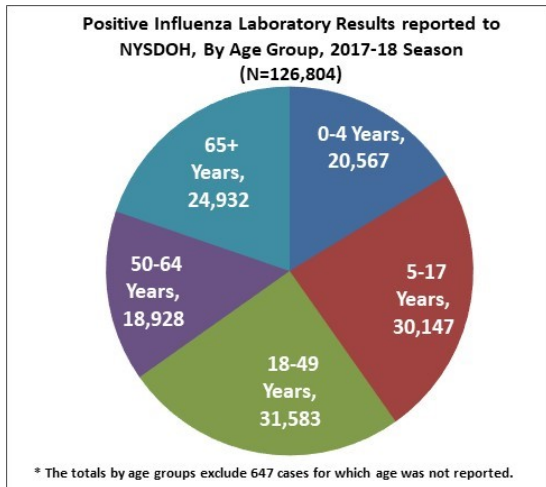
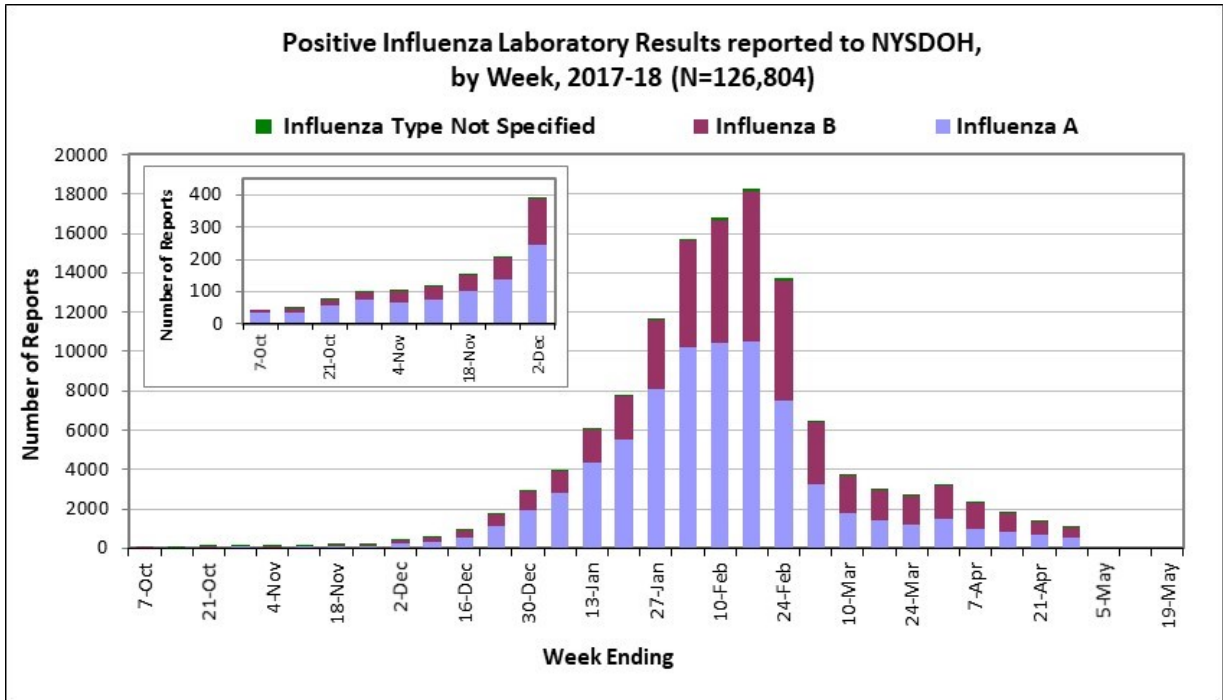
Widespread: Increased or sustained numbers of lab-confirmed cases of influenza reported in greater than 31 of the 62 counties.

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).



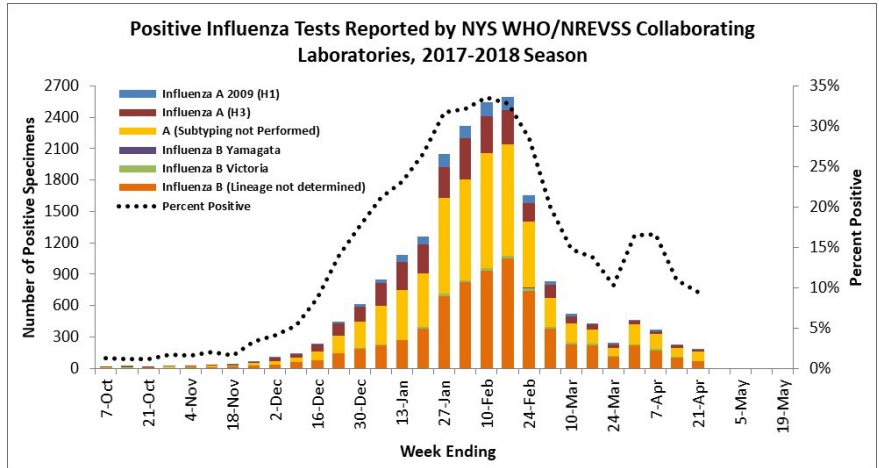
Laboratory Reports of Influenza (including NYC)

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
	14-Apr	21-Apr	28-Apr	
Albany	33	16	25	1674
Allegany	8	5	2	203
Broome	25	35	27	2193
Cattaraugus	13	3	0	486
Cayuga	41	31	21	1154
Chautauqua	13	12	23	1368
Chemung	7	9	13	472
Chenango	4	3	3	562
Clinton	6	5	8	623
Columbia	1	2	0	330
Cortland	14	13	4	590
Delaware	5	1	3	311
Dutchess	17	16	7	1575
Erie	68	33	27	5146
Essex	1	3	0	166
Franklin	2	6	10	232
Fulton	8	5	1	340
Genesee	13	8	6	720
Greene	0	0	3	226
Hamilton	0	1	0	27
Herkimer	23	28	7	781
Jefferson	21	16	10	1293
Lewis	1	2	6	387
Livingston	16	9	11	682
Madison	24	15	9	631
Monroe	218	155	103	7226
Montgomery	5	2	3	461
Nassau	145	88	46	7807
Niagara	9	3	9	869
Oneida	73	131	57	3653
Onondaga	82	77	70	3216
Ontario	30	16	14	1347
Orange	26	23	22	2397
Orleans	20	5	4	399
Oswego	27	38	19	1300
Otsego	3	3	5	401
Putnam	9	5	5	644
Rensselaer	5	8	7	774
Rockland	17	8	7	1396
Saratoga	30	30	30	2125
Schenectady	24	9	5	1925
Schoharie	1	2	2	165
Schuyler	1	1	0	51
Seneca	8	5	5	295
St. Lawrence	20	6	6	1032
Steuben	20	12	6	601
Suffolk	96	76	61	7555
Sullivan	6	6	4	550
Tioga	9	12	4	605
Tompkins	16	6	14	1122
Ulster	7	8	4	672
Warren	1	3	3	226
Washington	1	2	0	276
Wayne	24	28	25	1377
Westchester	123	72	59	8566
Wyoming	5	1	3	282
Yates	5	6	3	211
Upstate Total	1430	1124	831	81698
Bronx	71	71	47	11664
Kings	91	45	50	11550
New York	54	49	27	6205
Queens	128	57	71	13440
Richmond	25	46	26	2247
NYC Total	369	268	221	45106
Total	1799	1392	1052	126804

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

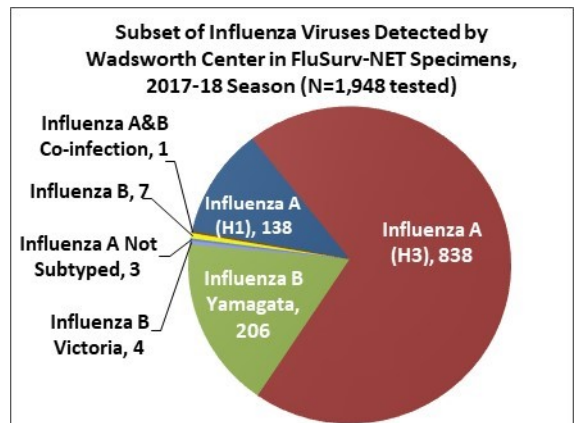
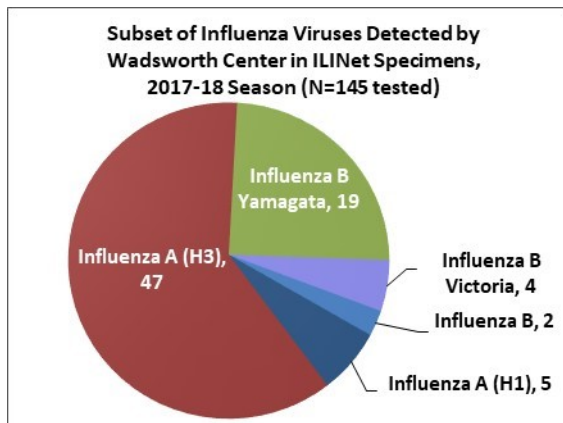
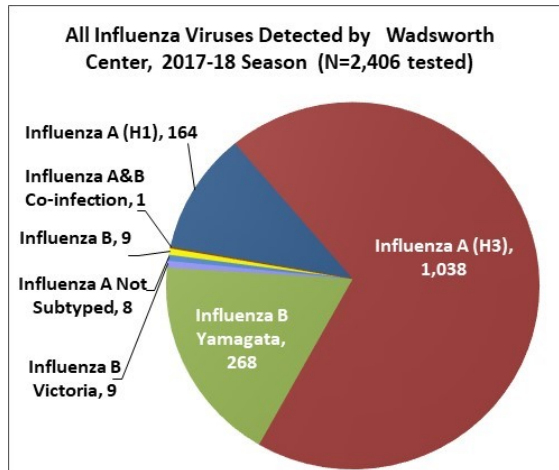
Clinical virology laboratories, including the Wadsworth Center, that are WHO and/or NREVSS collaborating laboratories for influenza surveillance report weekly the number of respiratory specimens tested and the number positive for influenza types A and B to CDC. Some labs also report the influenza A subtype (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.



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	136	0 (0.0)	0 (0.0)
Influenza A (H3N2) ⁱⁱ	262	1 (0.4)	1 (0.4)
Influenza B ⁱⁱⁱ	21	1 (4.7)	0 (0.0)

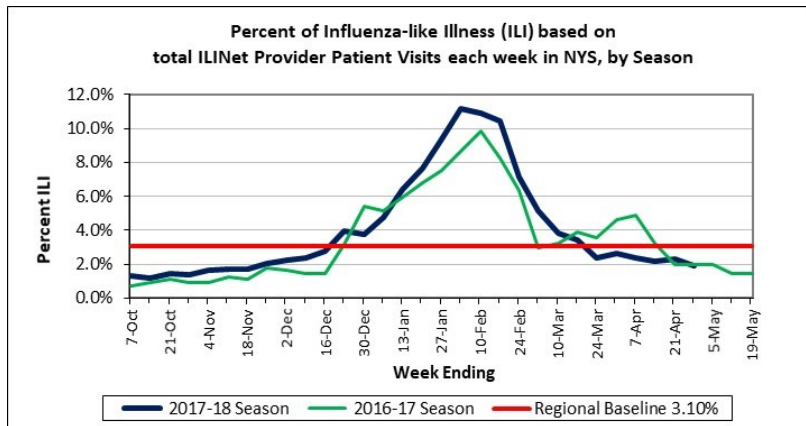
- i. All samples tested by pyrosequencing for the H275Y variant in the neuraminidase gene which confers resistance to oseltamivir, and a subset tested by NA dideoxy sequencing for other variations known to cause, or suspected of causing, resistance to neuraminidase inhibitor drugs including zanamivir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

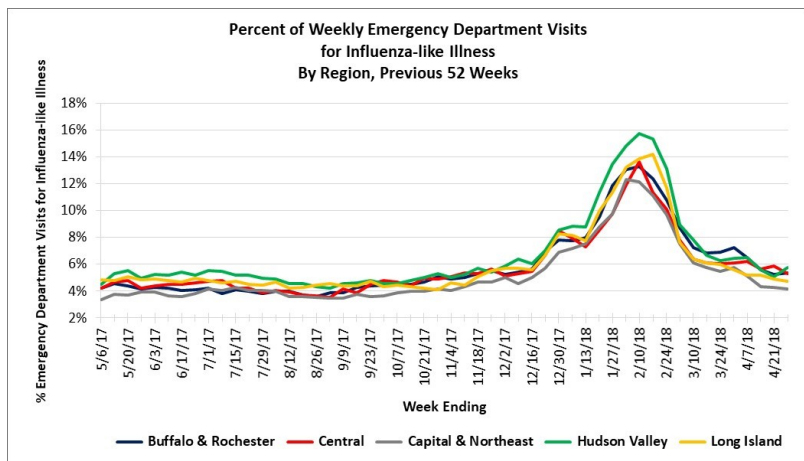


Emergency Department Visits for ILI-Syndromic Surveillance (excluding NYC)

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.

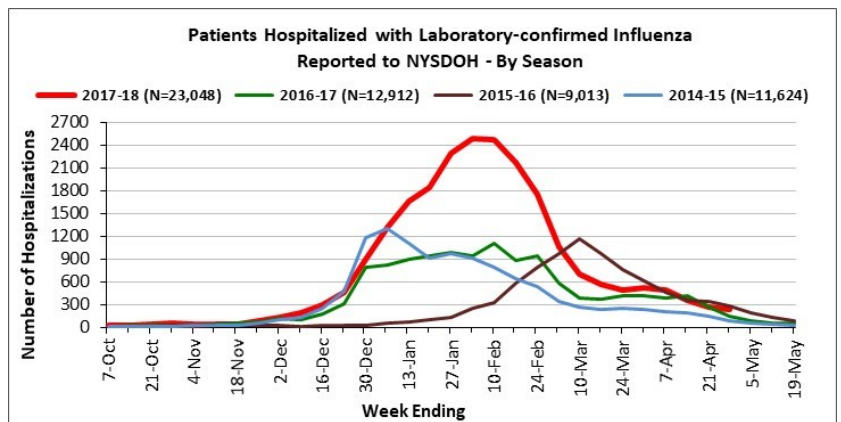
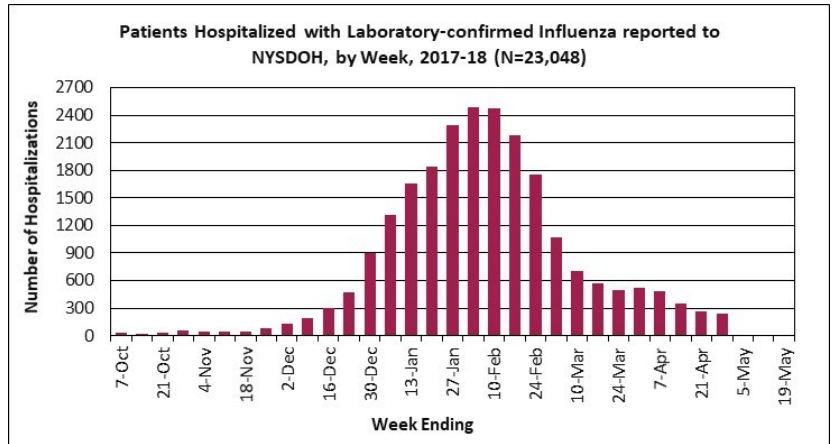
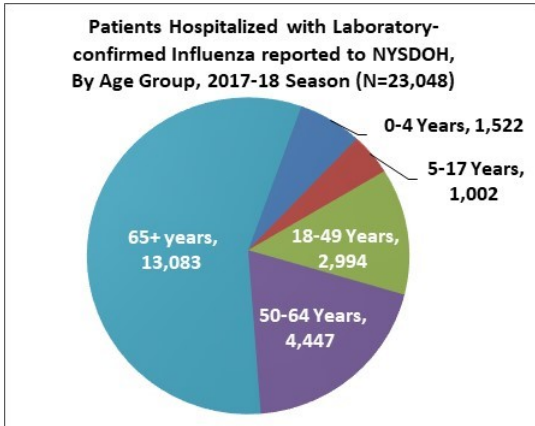
Syndromic surveillance does not reveal the actual cause of illness, but is thought to correlate with emergency department visits for influenza.



⁴Additional 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/>.

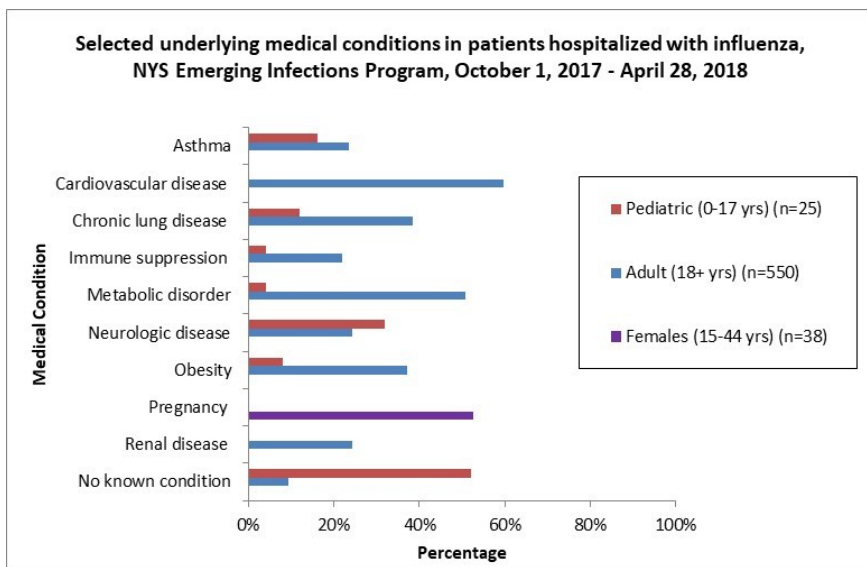
Patients Hospitalized with Laboratory-Confirmed Influenza (including NYC)

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 Underlying health conditions are assessed through medical chart reviews for cases identified during the season.⁶



⁵Counties 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
⁶Data are based on medical record reviews for 613 of 3266 hospitalized cases currently under investigation and should be considered preliminary.

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.⁷

Week-to-Date (CDC week - 17) 4/22/18 through 4/28/18	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)			0		5	5		3	3	1	1	2	1	9	10
# Outbreaks* viral respiratory illness**			0			0			0			0	0	0	0
Total # Outbreaks	0	0	0	0	5	5	0	3	3	1	1	2	1	9	10

Season-to-Date (CDC week - 17) 9/29/17 through 4/28/18	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)	36	80	116	32	124	156	419	401	820	39	153	192	526	758	1284
# Outbreaks* viral respiratory illness**		7	7		15	15		22	22		6	6	0	50	50
Total # Outbreaks	36	87	123	32	139	171	419	423	842	39	159	198	526	808	1334

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

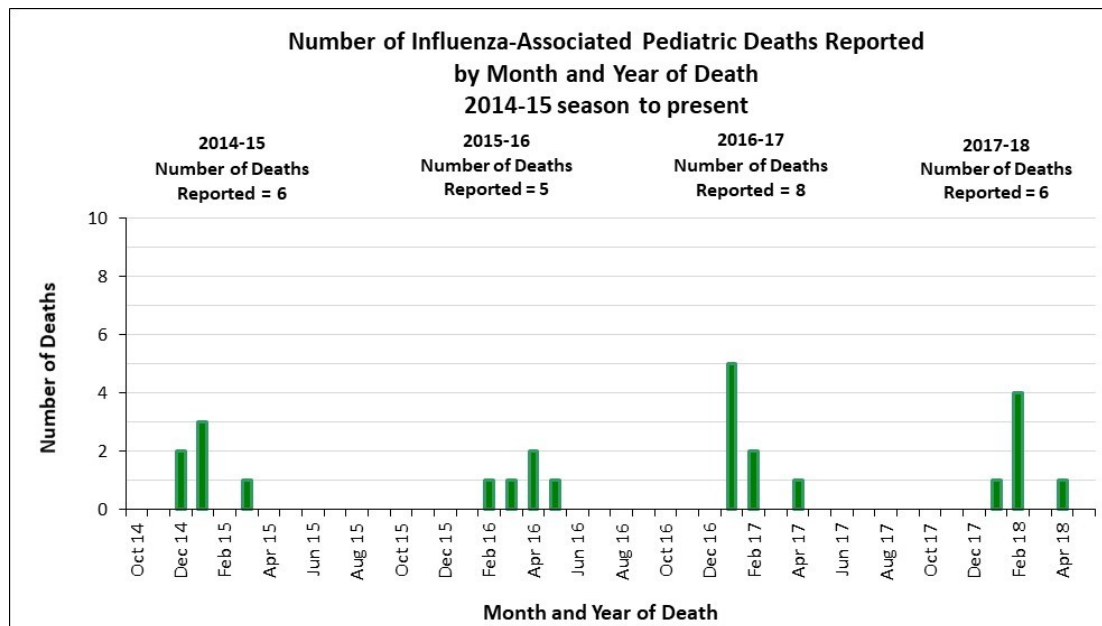
For information about the flu mask regulation and the current status of the Commissioner's declaration, please visit www.health.ny.gov/FluMaskReg

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.

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



⁷For more information on reporting of healthcare-associated influenza, visit http://www.health.ny.gov/diseases/communicable/control/respiratory_disease_checklist.htm