

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 March 31, 2018

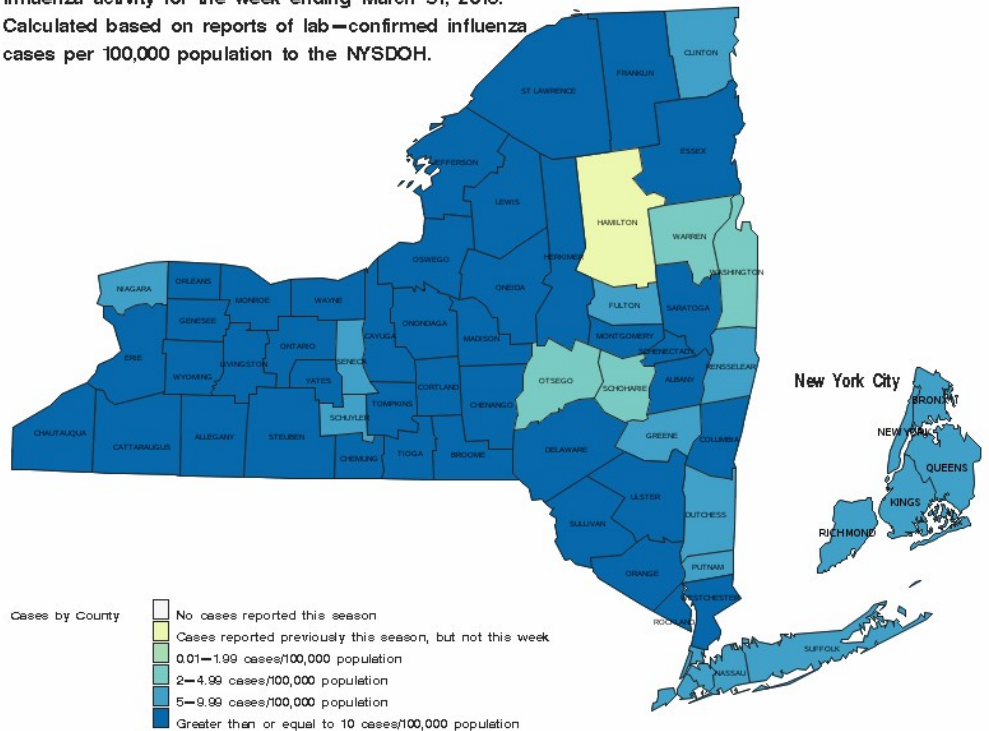
- Influenza activity level was categorized as geographically **widespread**². This is the 17h consecutive week that widespread activity has been reported.
- There were **3,170** laboratory-confirmed influenza reports, a **17% increase** over last week.
- Of the **1,425** specimens submitted to WHO/NREVSS laboratories, **127 (8.9%)** were positive for influenza.
- **21** specimens tested at Wadsworth Center were positive for influenza. **5** were **influenza A (H1)**, **8** were **influenza A (H3)**, **8** were **influenza B (Yamagata)**, and **0** were **influenza B (Victoria)**.
- Reports of percent of patient visits for influenza-like illness (ILI)³ from ILINet providers was **1.49%**, which is below the regional baseline of 3.10%.
- The number of patients hospitalized with laboratory-confirmed influenza was **479**, a **1% decrease** over last week.
- There were **no** influenza-associated pediatric deaths reported this week. There have been **five** 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.

- 61 of 62 counties reported cases this week.
- Incidence ranged from 0-81.7 cases/100,000 population.

Influenza activity for the week ending March 31, 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.

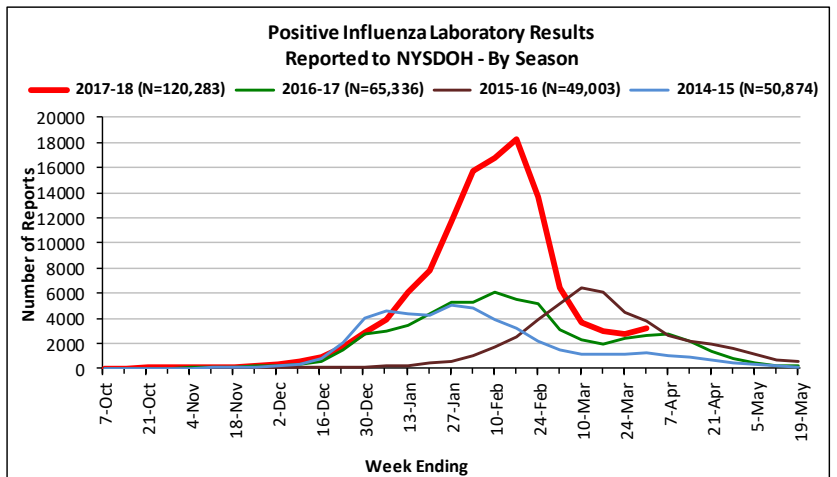
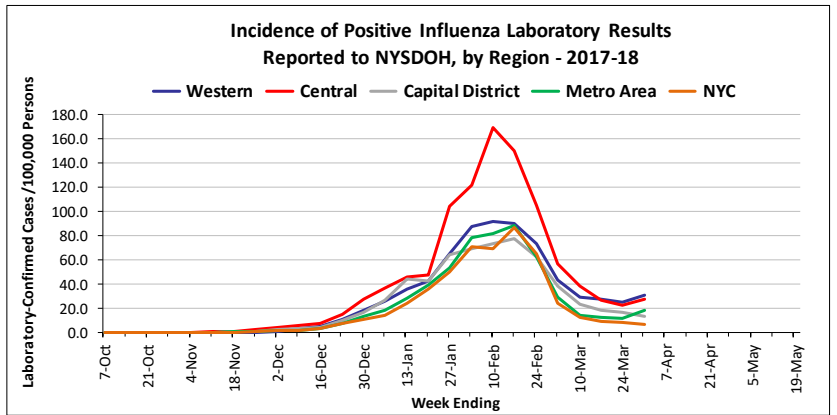
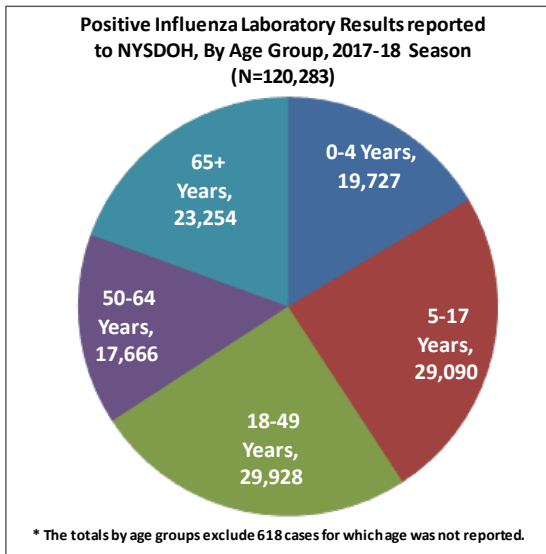
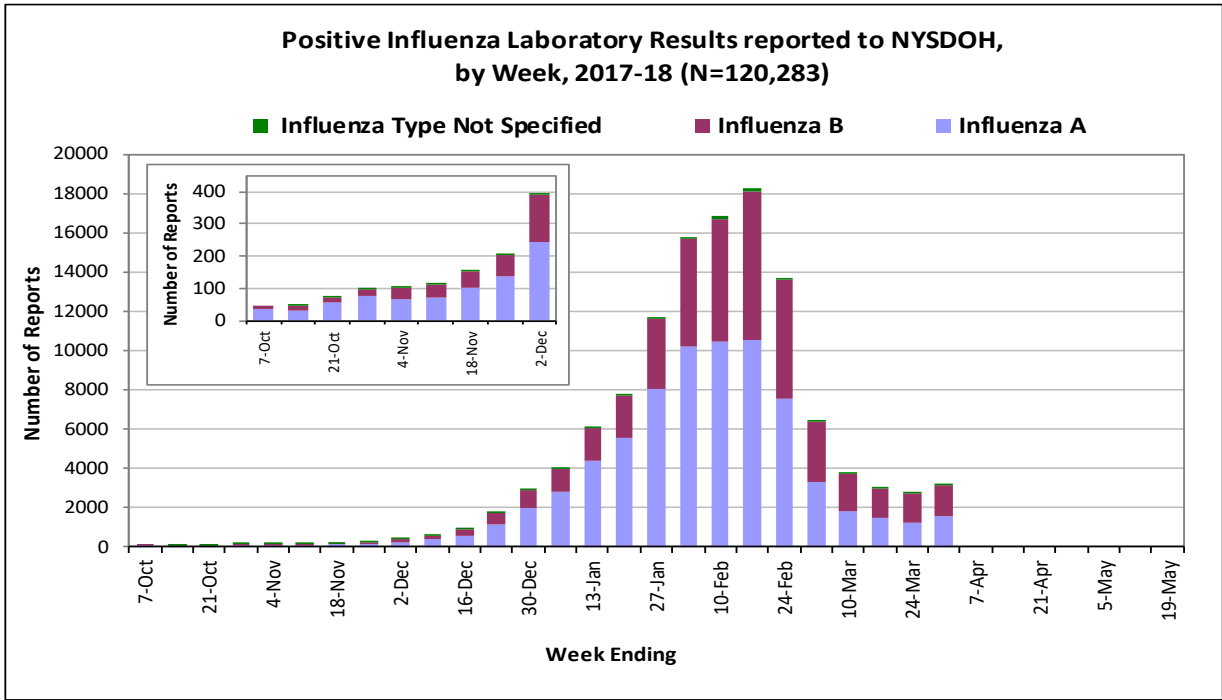
Widespread: Increased or sustained numbers of lab-confirmed cases of influenza reported in greater than 31 of the 62 counties.

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).



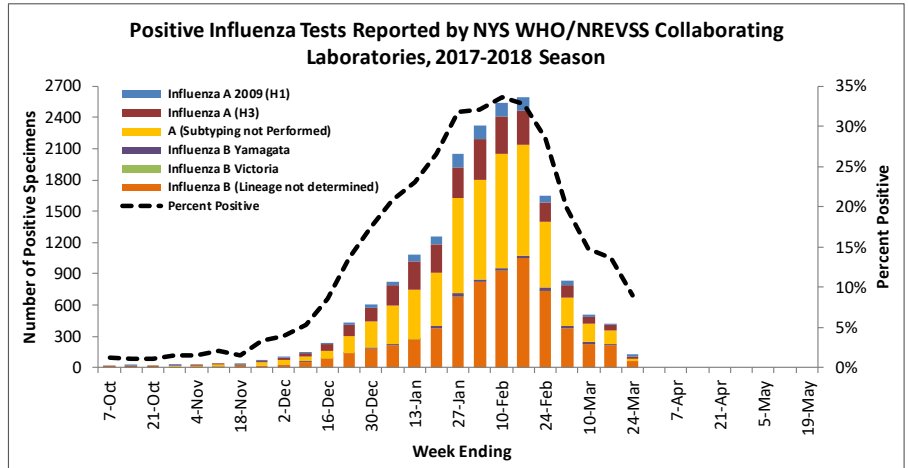
Laboratory Reports of Influenza (including NYC)

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
	17-Mar	24-Mar	31-Mar	
Albany	46	35	39	1563
Allegany	10	4	11	179
Broome	58	35	42	2061
Cattaraugus	14	13	8	461
Cayuga	24	19	45	1008
Chautauqua	58	43	48	1281
Chemung	11	19	20	433
Chenango	14	14	10	545
Clinton	28	14	7	591
Columbia	6	9	10	327
Cortland	10	11	12	553
Delaware	11	8	11	292
Dutchess	22	30	16	1506
Erie	176	190	160	4883
Essex	11	4	4	161
Franklin	4	3	9	206
Fulton	16	7	5	314
Genesee	15	13	23	683
Greene	8	7	3	215
Hamilton	3	1	0	25
Herkimer	16	16	17	714
Jefferson	54	40	41	1212
Lewis	13	5	4	374
Livingston	38	30	37	623
Madison	24	12	16	563
Monroe	295	267	402	6435
Montgomery	21	19	10	445
Nassau	159	151	103	7424
Niagara	36	24	15	833
Oneida	77	82	100	3291
Onondaga	42	47	84	2895
Ontario	25	14	23	1260
Orange	40	83	277	2282
Orleans	18	13	13	363
Oswego	35	21	20	1196
Otsego	9	12	3	384
Putnam	12	8	6	619
Rensselaer	11	11	9	744
Rockland	21	34	267	1350
Saratoga	67	65	50	1996
Schenectady	43	53	44	1848
Schoharie	3	8	1	156
Schuyler	3	2	1	48
Seneca	10	1	3	276
St. Lawrence	48	29	28	979
Steuben	25	33	45	533
Suffolk	165	122	135	7242
Sullivan	20	12	29	525
Tioga	10	17	25	572
Tompkins	29	35	21	1072
Ulster	17	15	19	646
Warren	5	1	3	217
Washington	9	6	3	270
Wayne	36	41	62	1265
Westchester	194	178	136	8205
Wyoming	13	8	10	268
Yates	6	1	4	192
Upstate Total	2194	1995	2549	76604
Bronx	186	190	125	11357
Kings	198	160	179	11224
New York	117	117	92	5951
Queens	276	227	196	13049
Richmond	33	20	29	2098
NYC Total	810	714	621	43679
Total	3004	2709	3170	120283

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

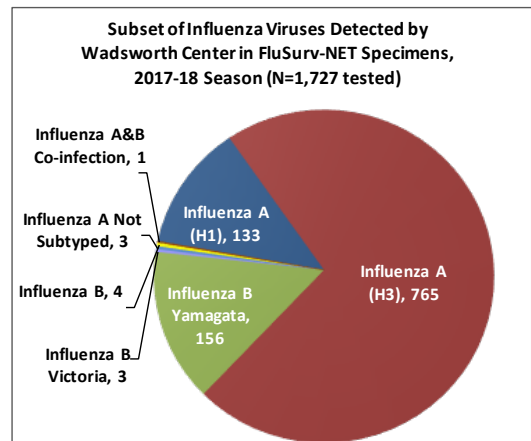
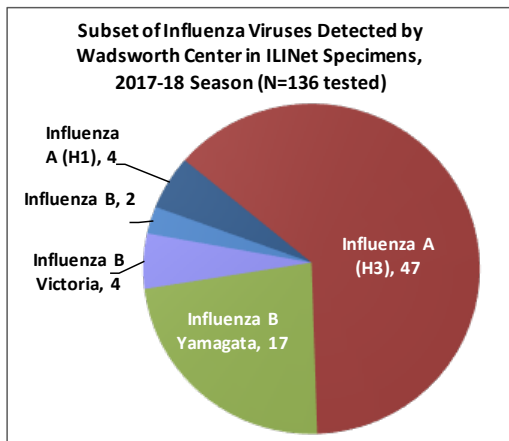
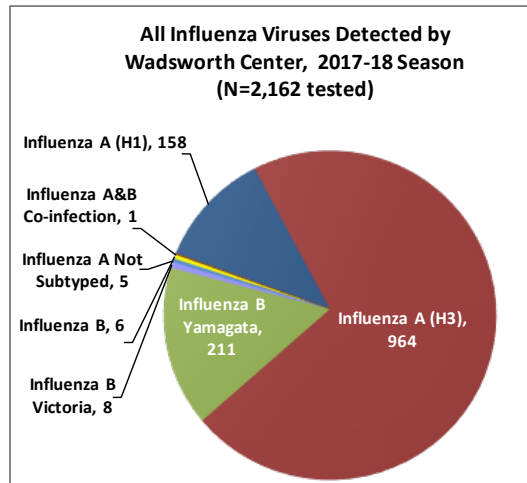
Clinical virology laboratories, including the Wadsworth Center, that are WHO and/or NREVSS collaborating laboratories for influenza surveillance report weekly the number of respiratory specimens tested and the number positive for influenza types A and B to CDC. Some labs also report the influenza A subtype (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,	Zanamivir Resistant Viruses,
Influenza A (H1N1pdm09) ⁱ	110	0 (0.0)	0 (0.0)
Influenza A (H3N2) ⁱⁱ	199	1 (0.5)	1 (0.5)
Influenza B ⁱⁱⁱ	0	0 (0.0)	0 (0.0)

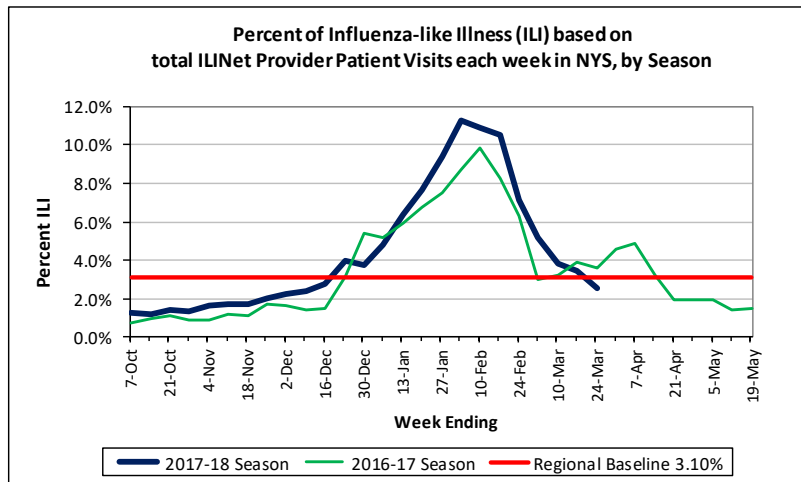
- i. All samples tested by pyrosequencing for the H275Y variant in the neuraminidase gene which confers resistance to oseltamivir, and a subset tested by NA dideoxy sequencing for other variations known to cause, or suspected of causing, resistance to neuraminidase inhibitor drugs including zanamivir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

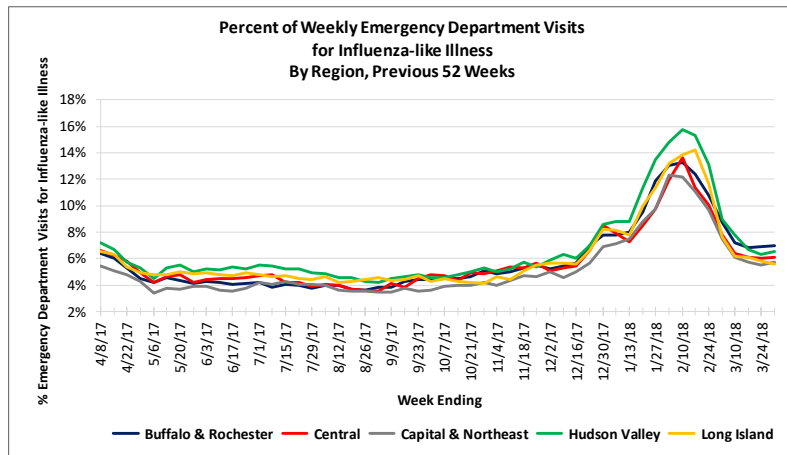


Emergency Department Visits for ILI-Syndromic Surveillance (excluding NYC)

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.

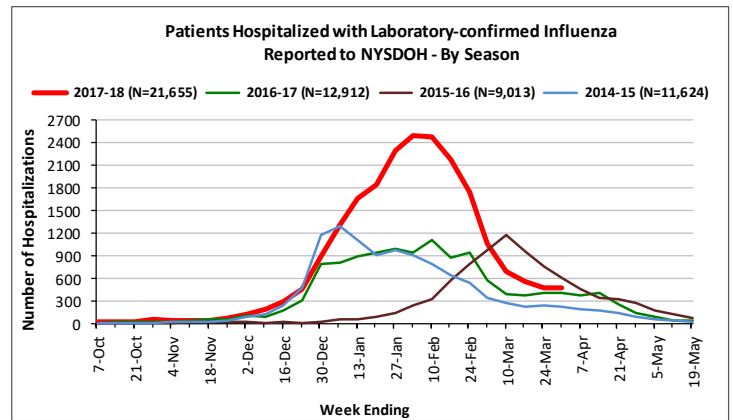
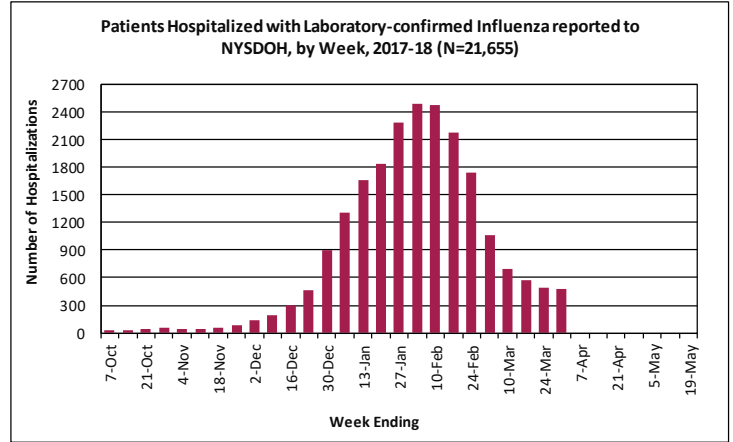
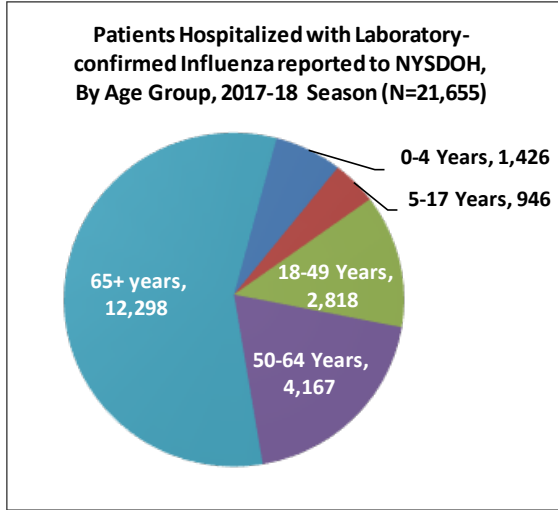
Syndromic surveillance does not reveal the actual cause of illness, but is thought to correlate with emergency department visits for influenza.



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/>.

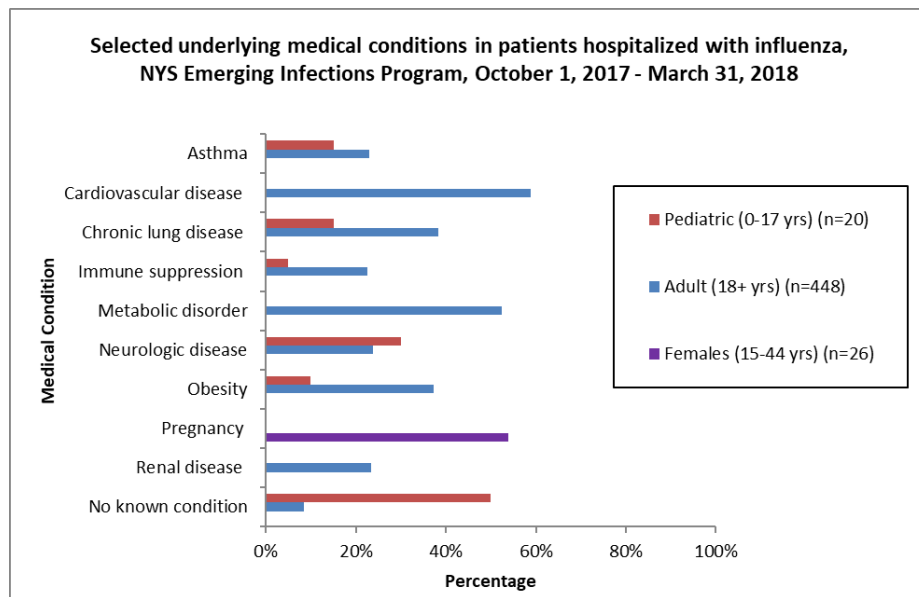
Patients Hospitalized with Laboratory-Confirmed Influenza (including NYC)

Hospitals in NYS and NYC report the number of hospitalized patients with laboratory-confirmed Influenza to NYSDOH. 155 (85%) 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 completed medical chart reviews for 494 of 2,980 hospitalized cases 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 - 13) 3/25/18 through 3/31/18	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)		1	1	3	5	8	2	2	4		4	4	5	12	17
# Outbreaks* viral respiratory illness**			0			0			0			0	0	0	0
Total # Outbreaks	0	1	1	3	5	8	2	2	4	0	4	4	5	12	17

Season-to-Date (CDC week - 13) 9/29/17 through 3/31/18	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)	32	76	108	28	111	139	394	371	765	37	143	180	491	701	1192
# Outbreaks* viral respiratory illness**		8	8		12	12		23	23		6	6	0	49	49
Total # Outbreaks	32	84	116	28	123	151	394	394	788	37	149	186	491	750	1241

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

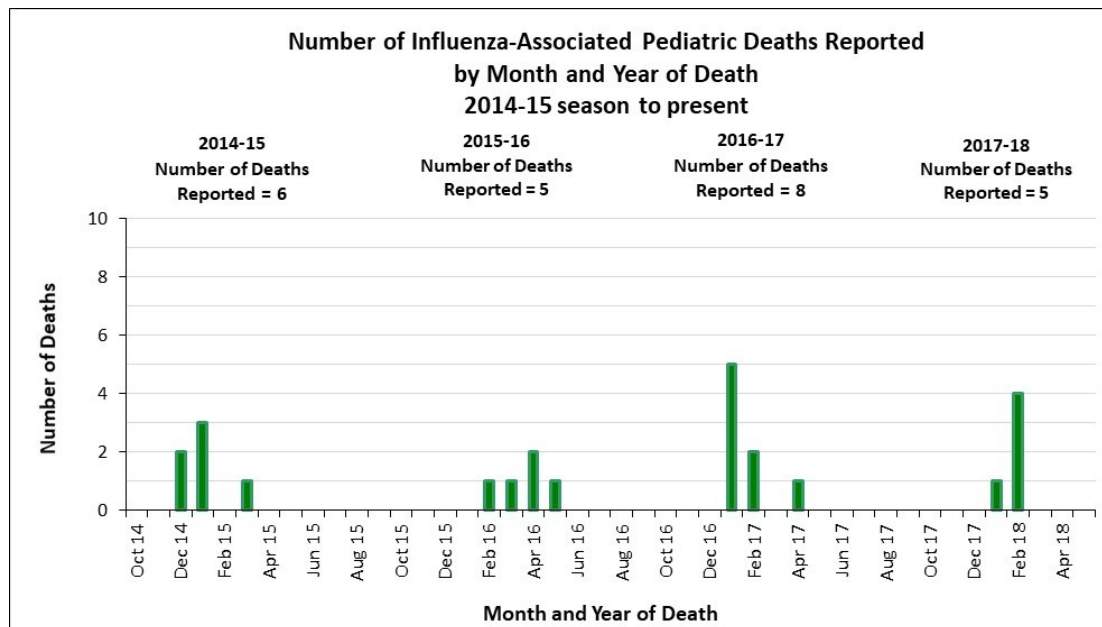
For information about the flu mask regulation and the current status of the Commissioner's declaration, please visit www.health.ny.gov/FluMaskReg

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