



## BUREAU OF COMMUNICABLE DISEASE CONTROL STATEWIDE INFLUENZA SURVEILLANCE REPORT FOR WEEK ENDING May 4, 2013

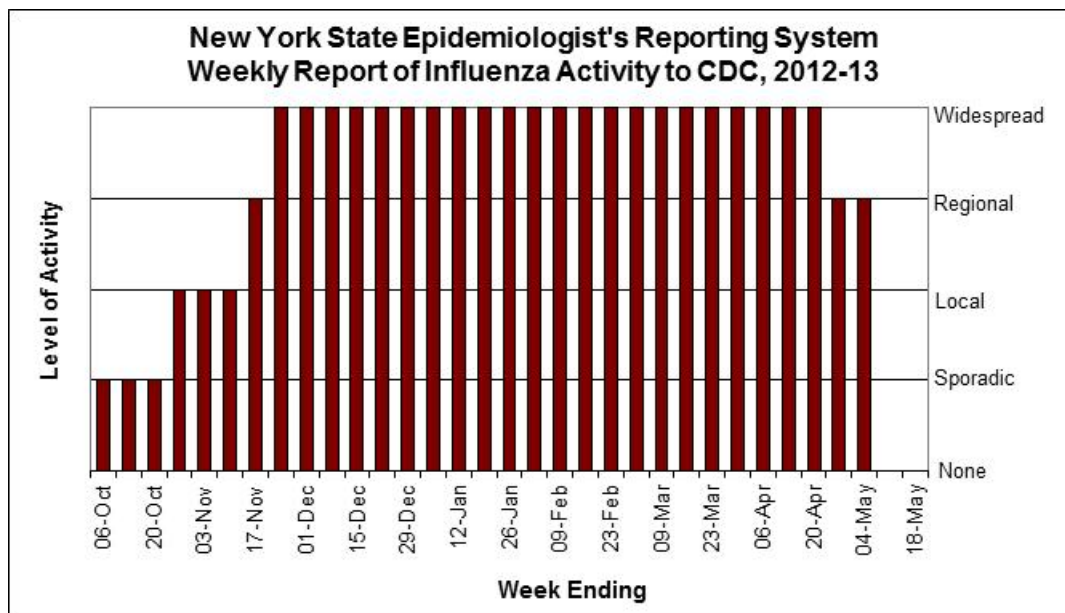
The New York State Department of Health (NYSDOH) collects, compiles, and analyzes information on influenza activity year round in New York State (NYS) and produces this weekly report during the influenza season (October through the following May).<sup>1</sup>

### During the week ending May 4, 2013:

- Influenza activity level was categorized as geographically **regional**<sup>2</sup> with laboratory confirmed influenza reported in **31 counties** plus New York City.
- There were **162** laboratory-confirmed influenza reports, a **21% decrease** over last week.
- Four of eight specimens submitted to the NYSDOH laboratory were positive for influenza. One was **influenza A (H3)** and three were **influenza B**.
- Reports of percent of patient visits for influenza-like illness (ILI<sup>3</sup>) from ILINet providers was **1.26%**, which is below the regional baseline of 2.0%.
- The number of patients admitted to the hospital with laboratory-confirmed influenza or hospitalized patients newly diagnosed with laboratory-confirmed influenza was **27**, a **55% decrease** over last week.
- There were no influenza-associated pediatric deaths reported this week. There have been **14** influenza-associated pediatric deaths reported this season.

### NYS Epidemiologist’s Report to the Centers for Disease Control and Prevention (CDC)

Geographic spread of influenza activity in NYS (including NYC).



<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/html/home/home.shtml>. 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 three regions but in fewer than 31 of 62 counties.

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

<sup>3</sup> ILI = influenza-like illness, defined as temperature  $\geq 100^\circ$  F with cough and/or sore throat in the absence of a known cause other than influenza.

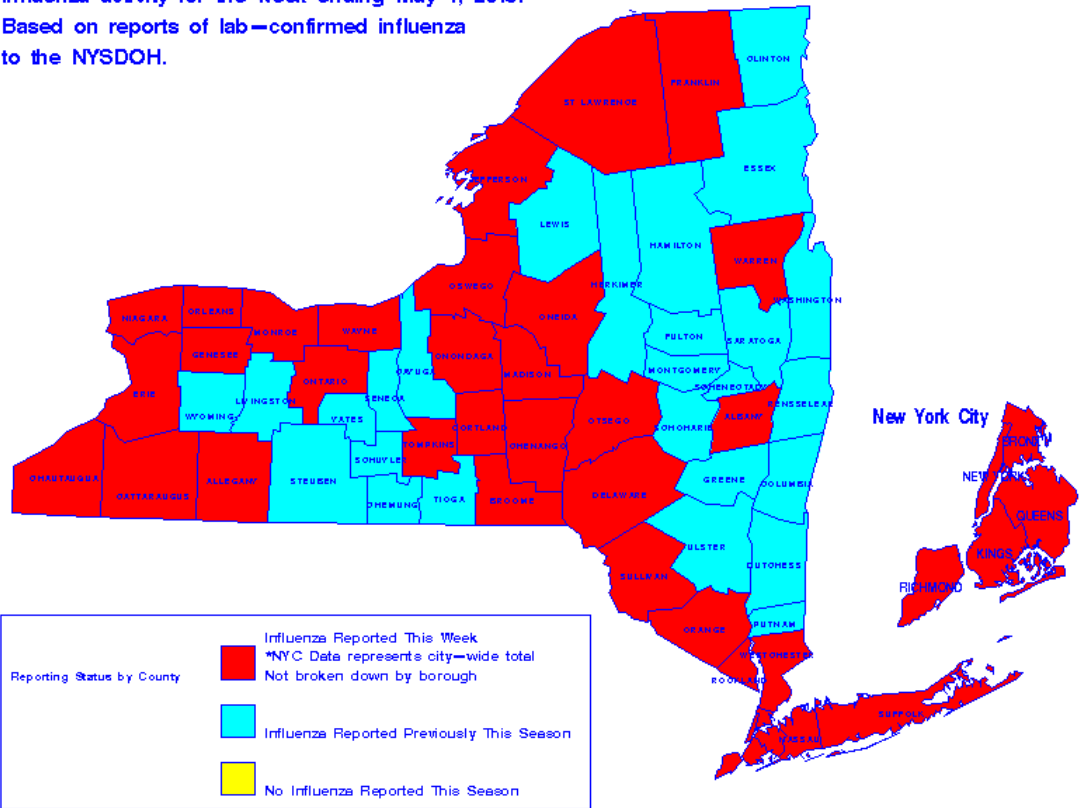
# Laboratory Reports of Influenza (including NYC)

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

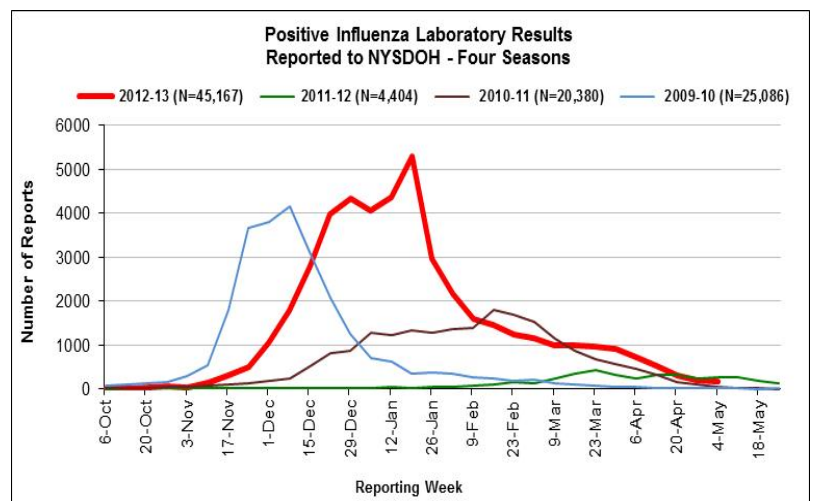
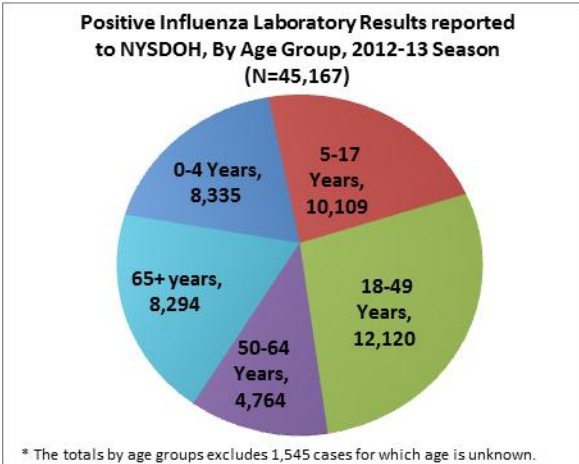
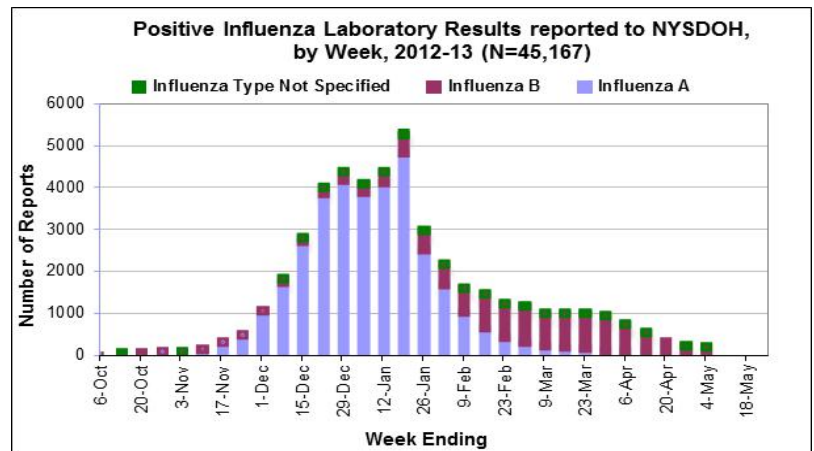
Influenza activity for the week ending May 4, 2013.  
Based on reports of lab-confirmed influenza to the NYSDOH.

Based on laboratory reports to NYSDOH:

- Influenza was reported in 31 counties this week and all 5 boroughs of NYC.
- Influenza was reported in 26 counties previously this season, but not this week.



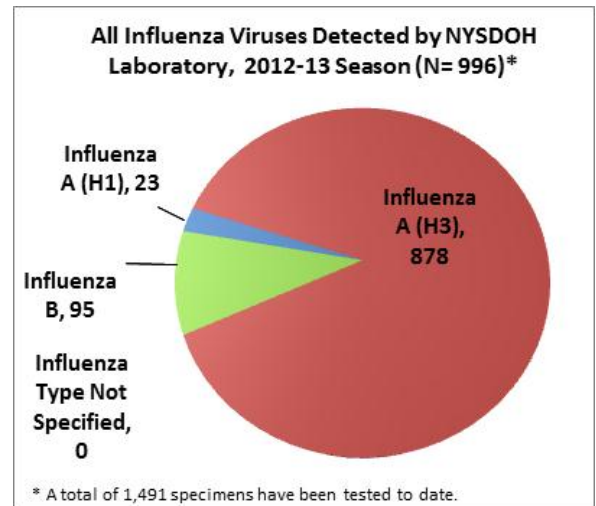
Test results may identify influenza Type A, influenza Type B, or influenza without specifying Type A or B. Some tests only give a positive or negative result and cannot identify influenza type (not specified).



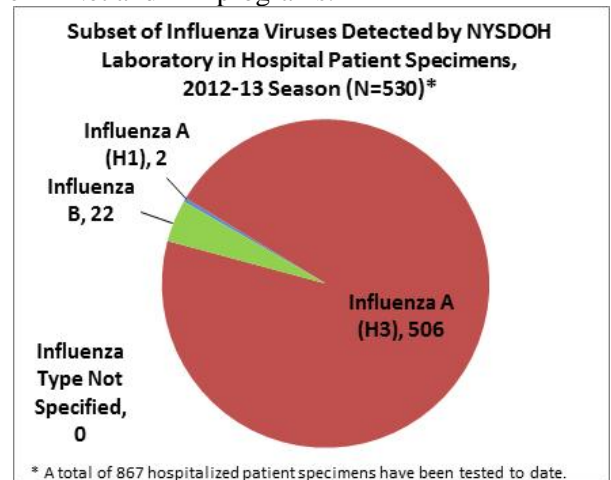
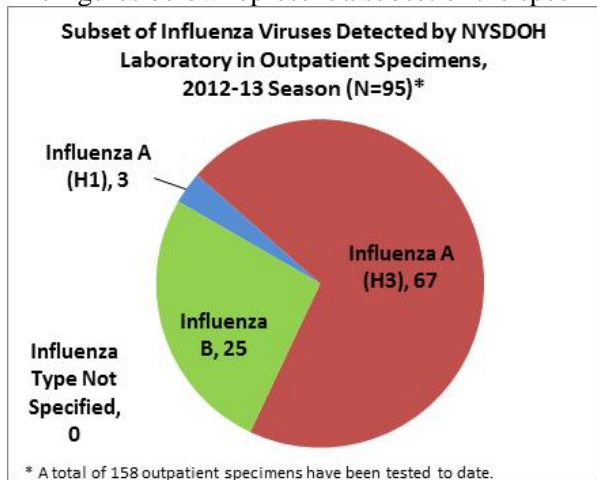
## Influenza Virus Types and Subtypes (excluding NYC)

Wadsworth Center, the NYSDOH public health laboratory, tests specimens from sources including, but not limited to, outpatient healthcare providers (ILINet program) and hospitals (EIP program).

There are 2 common subtypes of Type A influenza viruses – H1 and H3. Each subtype has a slightly different genetic makeup from the other. Rarely, an influenza virus is unable to be typed by the laboratory.



The figures below represent a subset of the specimens tested through the ILINet and EIP programs.



## Influenza Antiviral Resistance Testing

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

### NYS Antiviral Resistance Testing Results on Samples Collected Season to Date, 2012-13

	Oseltamivir		Zanamivir	
	Samples tested	Resistant Viruses, Number (%)	Samples tested	Resistant Viruses, Number (%)
<b>Influenza A (H3N2)<sup>i</sup></b>	202	2 (1.0)*	50	2 (4.0)*
<b>Influenza B<sup>ii</sup></b>	18	0 (0.0)	18	0 (0.0)
<b>2009 Influenza A (H1N1)<sup>iii</sup></b>	19**	0 (0.0)	7**	0 (0.0)

- i. 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.
- ii. 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.
- iii. 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.

Note

\*A R292K variant was found in 1 patient; this variant has been found to confer dual resistance to the neuraminidase inhibitors oseltamivir and zanamivir. An E119V variant was found in 1 patient; this variant has been found to confer resistance to the neuraminidase inhibitor oseltamivir, yet retain susceptibility to zanamivir.

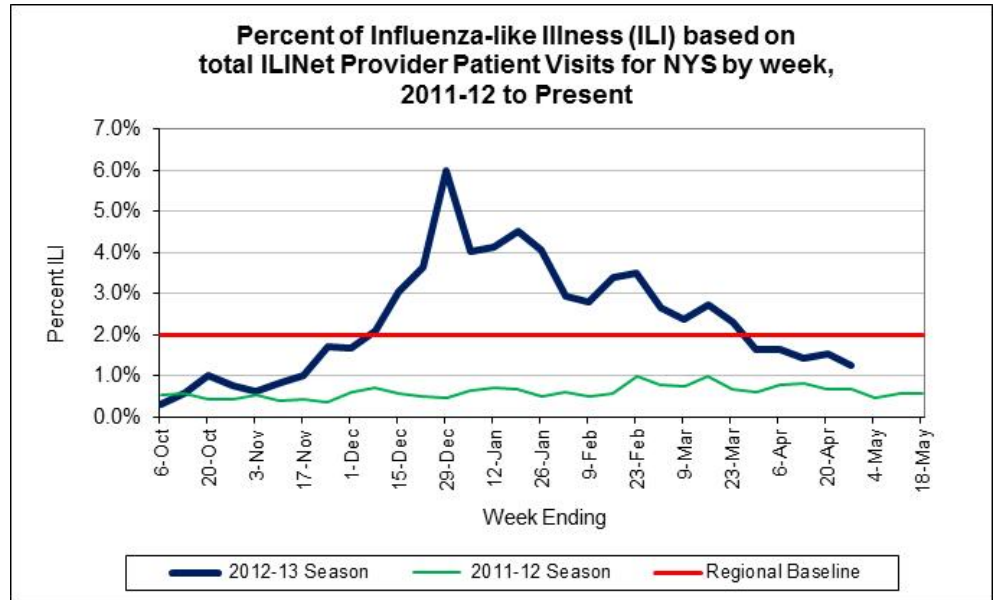
\*\* A S247N variant was found in 1 patient. This variant has been found to confer reduced susceptibility to the neuraminidase inhibitors oseltamivir and zanamivir.

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/>.

## Outpatient Doctors' Office Visits for ILI - ILINet Surveillance Program (excluding NYC)

The NYSDOH works with ILINet healthcare providers who report the total number of patients seen and the total number of those patients with complaints of ILI every week.

The CDC uses trends from past years to determine a regional baseline rate of doctors' office visits for illness consistent with influenza. For NYS, the regional baseline is currently 2.0%. Numbers above this regional baseline suggest high levels of illness consistent with influenza in the state.

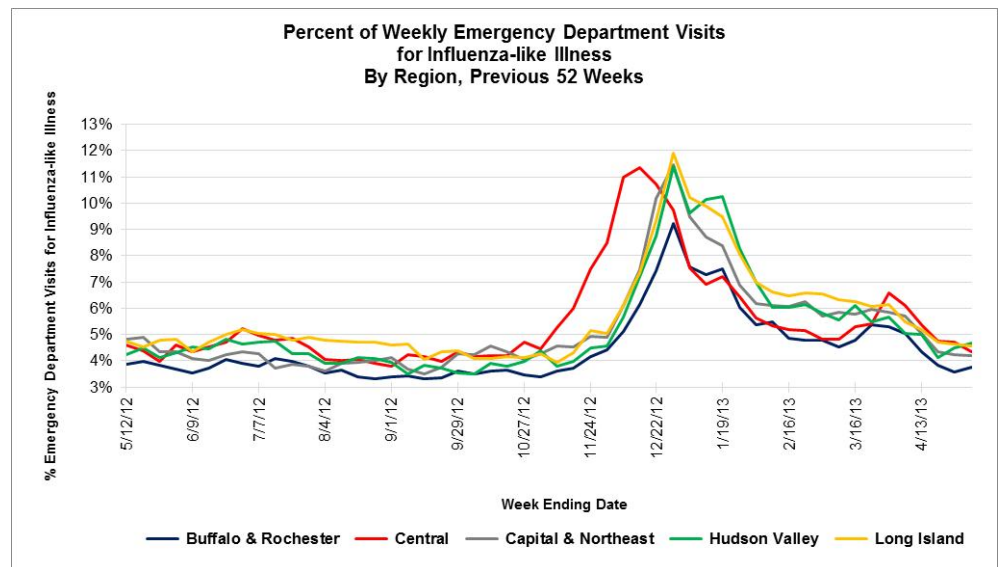


## Emergency Department Visits for ILI - Syndromic Surveillance (excluding NYC)

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

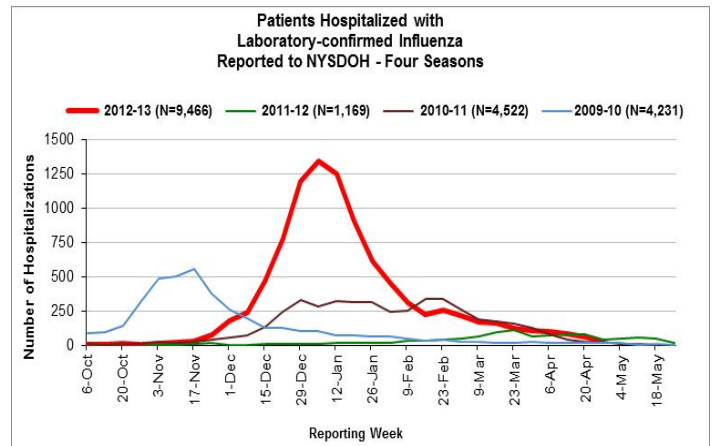
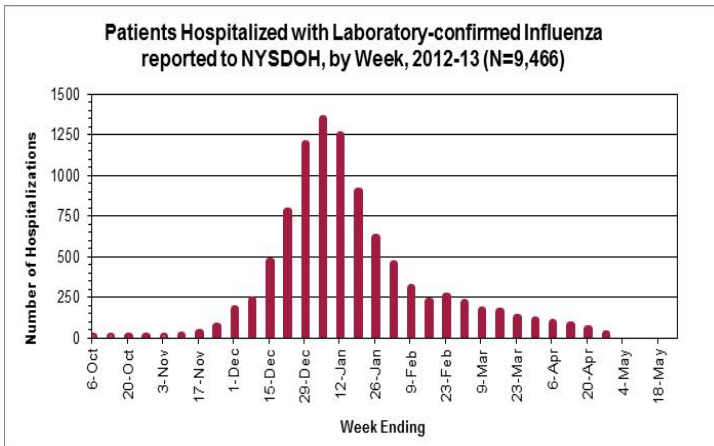
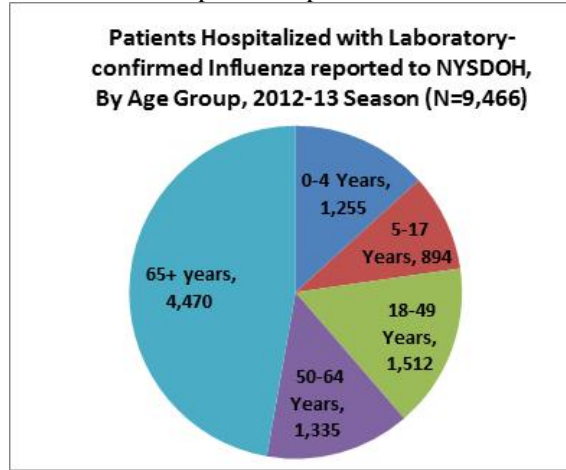
An increase in visits to hospital emergency departments for ILI can be one sign that influenza has arrived in that part of NYS.

Visits for symptoms including fever plus sore throat or cough are counted. Syndromic surveillance does not reveal the actual cause of illness, but is thought to correlate with emergency department visits for influenza.



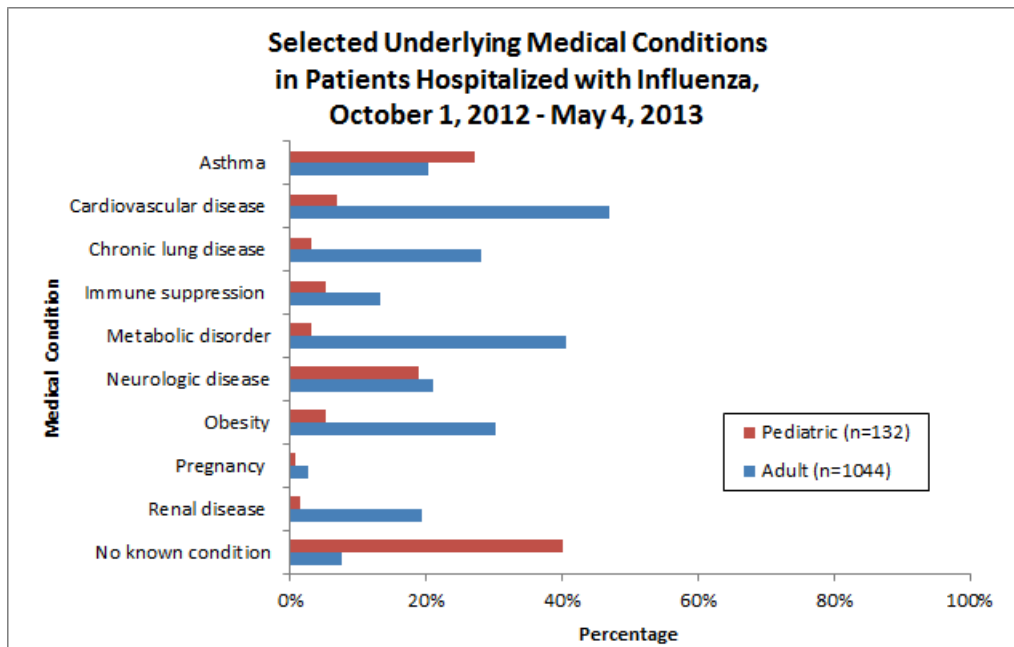
# Patients Hospitalized with Laboratory-Confirmed Influenza (including NYC)

Hospitals in NYS and NYC report the number of hospitalized patients with laboratory-confirmed influenza to NYSDOH.<sup>4</sup>



## Underlying Health Conditions among Hospitalized Patients

As part of the CDC's Influenza Hospitalization Network, 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 on all identified cases from October 1 through April 30 of the following year.



<sup>4</sup> 127 (60%) of 213 hospitals reported this week.

<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 New York State self-report outbreaks of influenza. A healthcare-associated outbreak of influenza is defined as one or more confirmed or two or more suspect cases in persons who were admitted to the facility with no signs or symptoms of influenza infection; that is, influenza infections acquired within the facility. Outbreaks are considered confirmed only with positive laboratory testing. This may include a positive rapid antigen test if no other more advanced testing (polymerase chain reaction, viral culture) is performed. Outbreaks are reported based on the date of onset of symptoms in the first identified case.<sup>6</sup>

NYS Healthcare-Associated Influenza Surveillance, 2012-2013															
Week-to-Date Week Ending 5/4/13 (CDC wk 18)	Capital Region			Central Region			Metropolitan Region			Western Region			Statewide		
	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total
# Outbreaks Confirmed Influenza A			0			0			0			0	0	0	0
# Outbreaks Confirmed Influenza B			0		1	1			0			0	0	1	1
# Outbreaks Confirmed Mixed Influenza A & B			0			0			0			0	0	0	0
<b>Total # Outbreaks Confirmed Influenza</b>	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
<b>Total # Outbreaks Suspect Viral Resp Disease (not including confirmed influenza)</b>		1	1			0			0			0	0	1	1
<b>Grand Total # Outbreaks Viral Resp Disease (including suspect and confirmed influenza)</b>	0	1	1	0	1	1	0	0	0	0	0	0	0	2	2

Season-to-Date Week Ending 5/4/13 (CDC wk 18)	Capital Region			Central Region			Metropolitan Region			Western Region			Statewide (Total)		
	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total	ACF	LTCF	Total
# Outbreaks Confirmed Influenza A	10	63	73	9	80	89	62	160	222	13	92	105	94	395	489
# Outbreaks Confirmed Influenza B		3	3	1	8	9	15	18	33		13	13	16	42	58
# Outbreaks Confirmed Mixed Influenza A & B		1	1		4	4	1	8	9		2	2	1	15	16
<b>Total # Outbreaks Confirmed Influenza</b>	10	67	77	10	92	102	78	186	264	13	107	120	111	452	563
<b>Total # Outbreaks Suspect Viral Resp Disease (not including confirmed influenza)</b>		14	14		18	18		27	27	1	14	15	1	73	74
<b>Grand Total # Outbreaks Viral Resp Disease (including suspect and confirmed influenza)</b>	10	81	91	10	110	120	78	213	291	14	121	135	112	525	637

ACF = Acute Care Facilities  
LTCF = Long Term Care Facilities  
Outbreaks are reported according to the date of onset of symptoms in the first case

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

