## Influenza Activity Update

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ACIP February 26, 2013

# VIROLOGIC SURVEILLANCE



### Antigenic Characterization October 1, 2013 – February 15, 2014

#### Influenza A

- 2009 H1N1
  - 919/920 (99.9%) characterized A/California/7/2009-like, the H1N1 component of the 2013-14 N. Hemisphere vaccine
- H3N2
  - 86/86 (100%) characterized as A/Texas/50/2012-like, the H3N2 component of the 2013-14 N. Hemisphere vaccine

#### Influenza B

- Yamagata lineage
  - 31/50 (62%) are from the Yamagata lineage and characterized as B/Massachusetts/2/2012-like, an influenza B component of the 2013-14 N. Hemisphere vaccine
- Victoria lineage
  - 19/50 (38%) tested have been from the B/Brisbane/60/2008-like, an influenza B component of the 2013-14 N. Hemisphere vaccine

### Antiviral Resistance October 1, 2013 – February 15, 2014

Neuraminidase Inhibitor Resistance Testing Results Samples Collected Since October 1, 2013

	Oseltamivir		Zanamivir	
	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)
Influenza A (H3N2)	186	0 (0.0)	186	0 (0.0)
Influenza B	73	0 (0.0)	73	0 (0.0)
2009 H1N1	3,471	26 (0.7)	1,259	0 (0.0)

 High levels of resistance to the adamantanes (amantadine and rimantadine) persist among pH1N1 and influenza A (H3N2) viruses currently circulating globally.

# ILI SYNDROMIC SURVEILLANCE

## ILI NET COVERAGE



Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2013-14 and Selected Previous Seasons



% of Visits for ILI



\* This map indicates geographic spread & does not measure the severity of influenza activity

## **HOSPITALIZATION SURVEILLANCE**

## Rates of Lab-Confirmed Influenza Hospitalization FluSurvNet, October 1, 2013 – February 15, 2014

Laboratory-Confirmed Influenza Hospitalizations

Preliminary rates as of Feb 15, 2014







# MORTALITY SURVEILLANCE

### Number of Influenza-Associated Pediatric Deaths by Week of Death: 2010-11 to February 15, 2014





#### Influenza Deaths by Age Group 122 Cities Mortality Reporting System, Number of Influenza Deaths by Age Group and Year



\*\*Data as of week 6, 2014

#### Influenza Activity Summary

Influenza activity in the US during the 2013–14 season began approximately 4 weeks earlier than usual, and occurred at moderate levels

- Activity peaked in late December/early January
- Influenza A (H1N1) viruses predominated
- There are higher rates of influenza-associated hospitalization in 2013-14 in persons 18-64 years of age than during the past several seasons
- There were higher numbers of influenza deaths in the 122 Cities Mortality Surveillance System in 2013-14 in persons 25-64 years than during the past several seasons

#### Why Were Young and Middle-Aged Adults at Higher Risk for Severe Outcomes this Season?

- Preliminary vaccination coverage estimates for this season and past seasons indicate this age group has substantially lower vaccination coverage than other younger and older age groups
- This age group may lack the cross protective immunity to pH1N1 seen in adults <u>>65</u> years (likely acquired from past infection with antigenically related viruses)
- This age group had lower attack rates during the pH1N1 pandemic and may have less cross protective immunity
- As adults reach middle aged they start to develop types of underlying conditions such as diabetes, cardiovascular disease and lung disease that increase the risk for complications from influenza and may be at higher risk for serious outcomes if infected

## Acknowledgements

Joseph Bresee Scott Epperson Lenee Blanton Krista Kniss **Rosaline Dhara** Desiree Mustaquim Alejandro Perez Michelle Leon Andrea Giorgi Craig Steffens Ashley Fowlkes Julie Villanueva Sophie Smith

Michael Jhung Carrie Reed Alicia Fry Seema Jain Anna Bramley Victoria Jiang Sandra Dos Santos Chaves Daniel Jernigan Joe Gregg Larissa Gubareva Terri Wallace Xiyan Xu Nancy Cox

# Thank you

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www.cdc.gov/flu

http://www.cdc.gov/flu/weekly/fluviewint eractive.htm

ACIP February 26, 2014



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