

Influenza Surveillance

Lyn Finelli, DrPH, MS

Lead, Influenza Surveillance and Outbreak Response Team

Epidemiology and Prevention Branch

Influenza Division

NCIRD

ACIP October 25, 2012

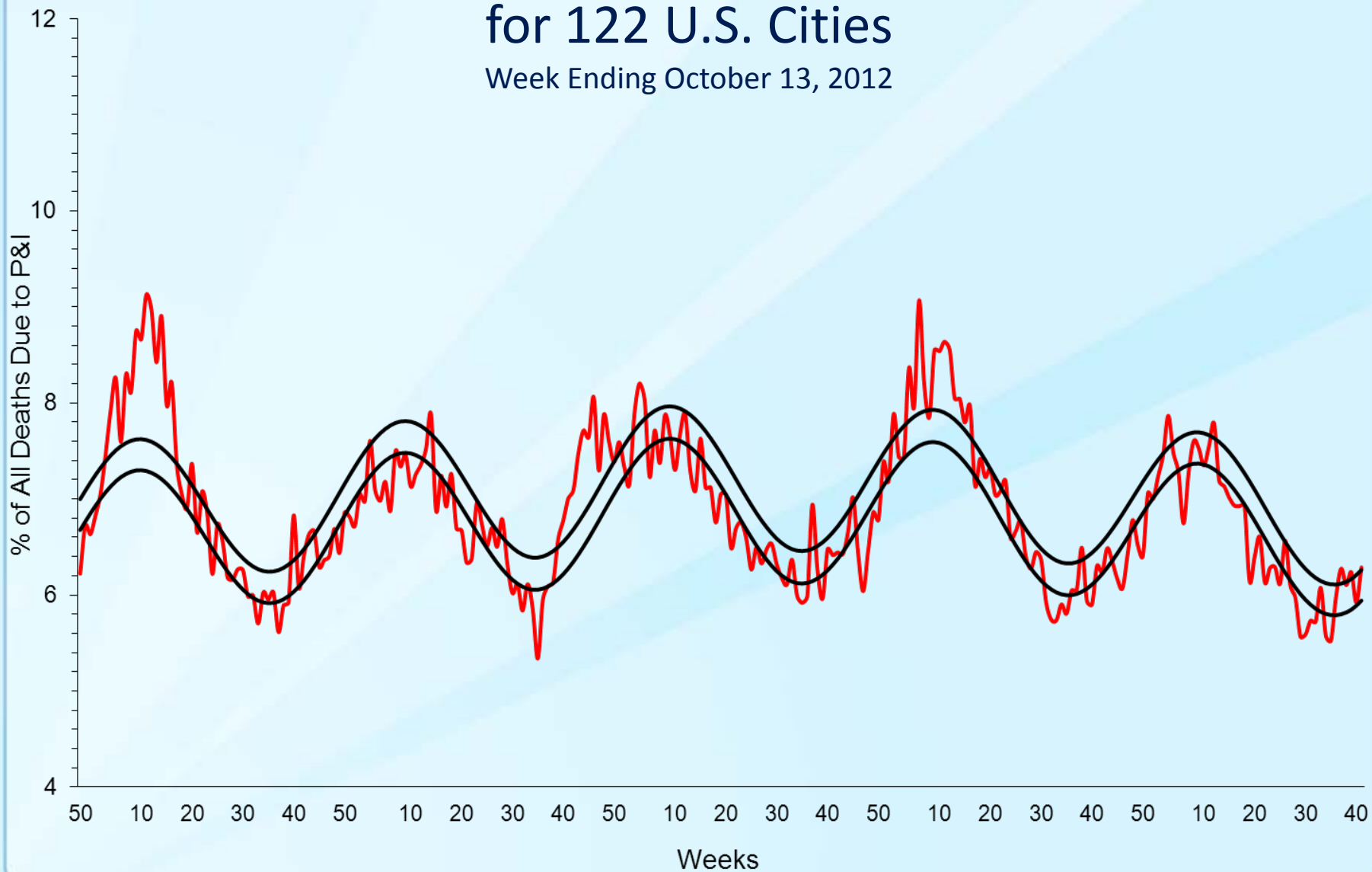
Influenza Division, National Center for Immunization and Respiratory Diseases



Pneumonia and Influenza Mortality

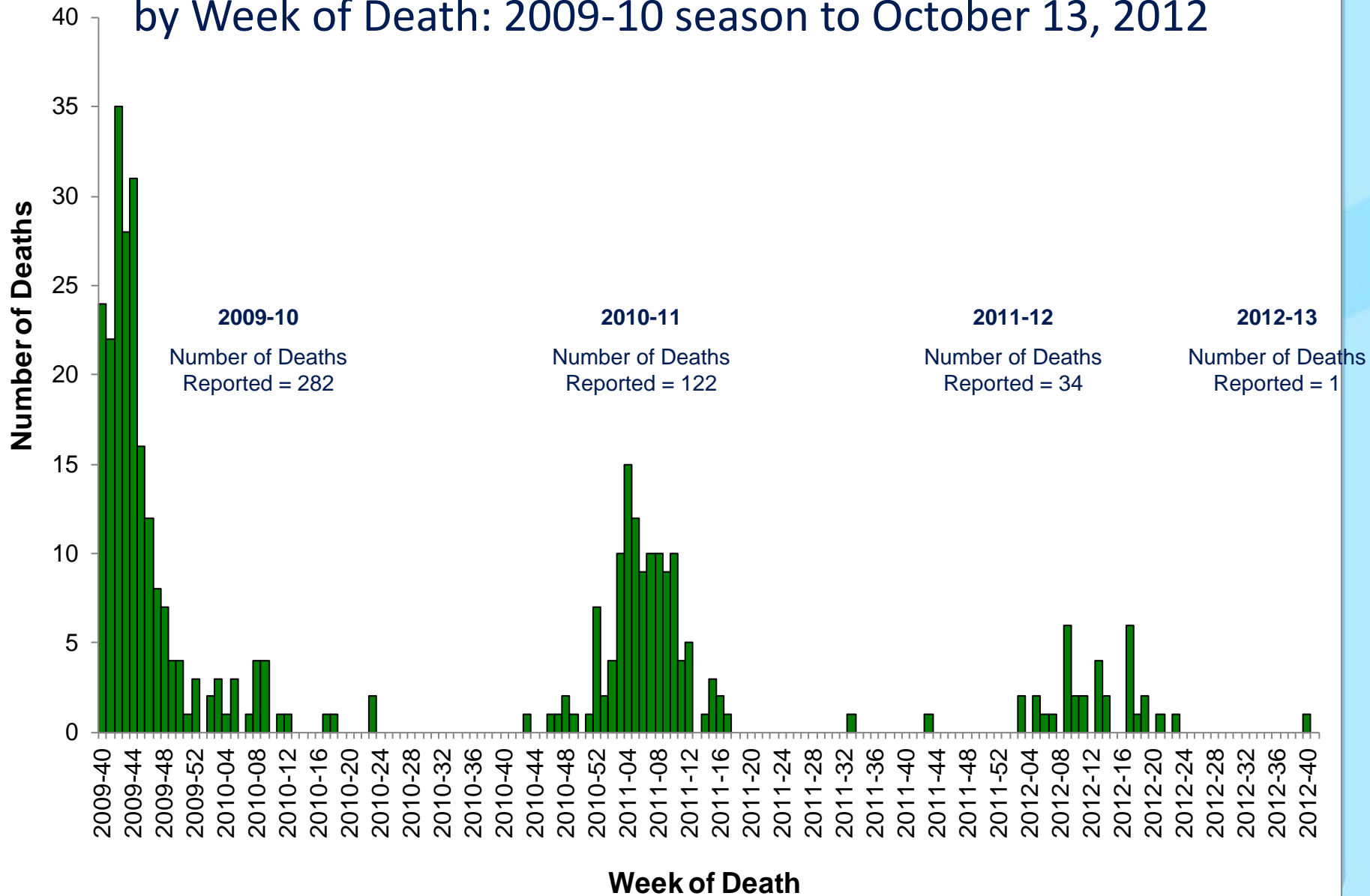
for 122 U.S. Cities

Week Ending October 13, 2012

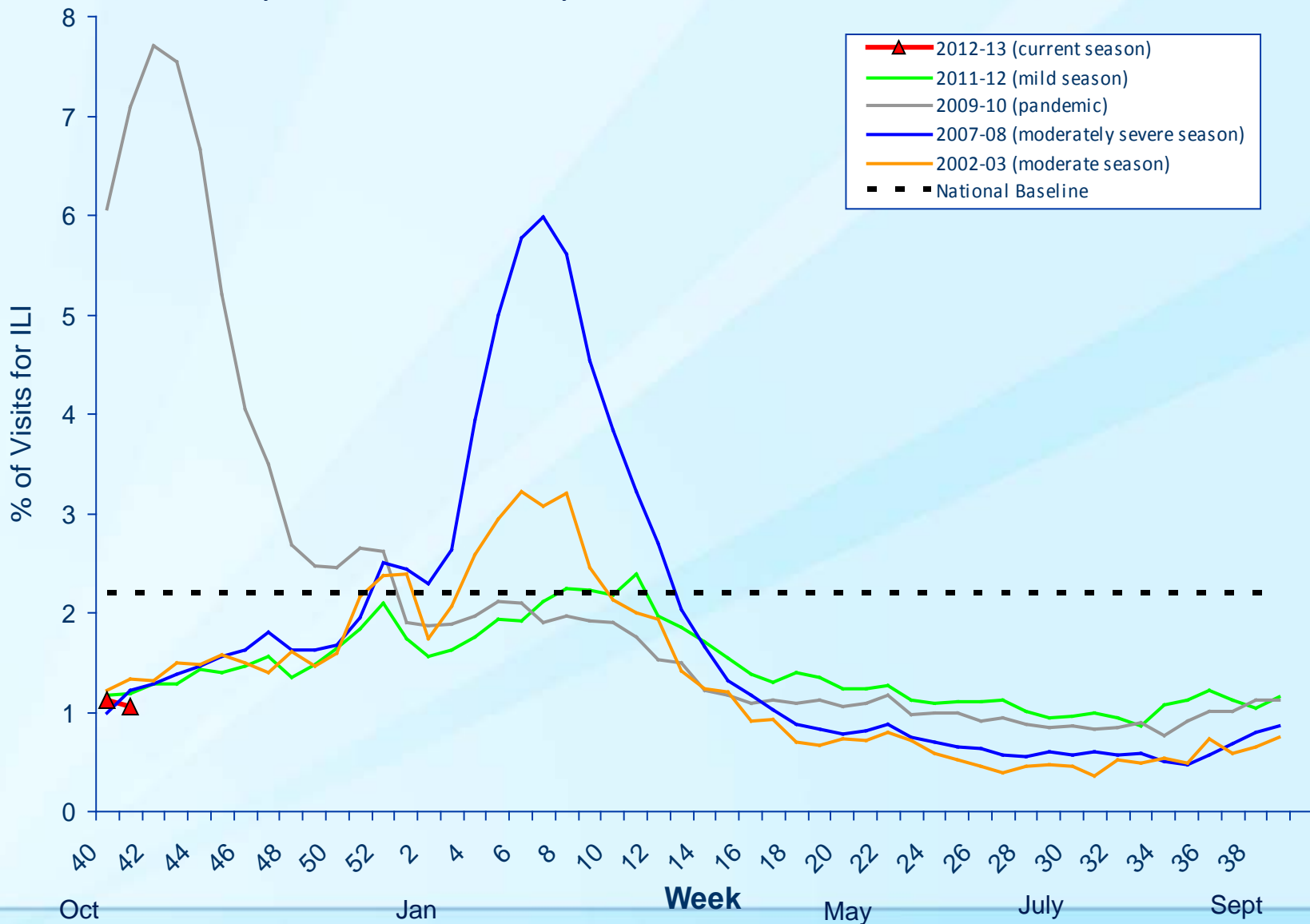


Number of Influenza-Associated Pediatric Deaths

by Week of Death: 2009-10 season to October 13, 2012

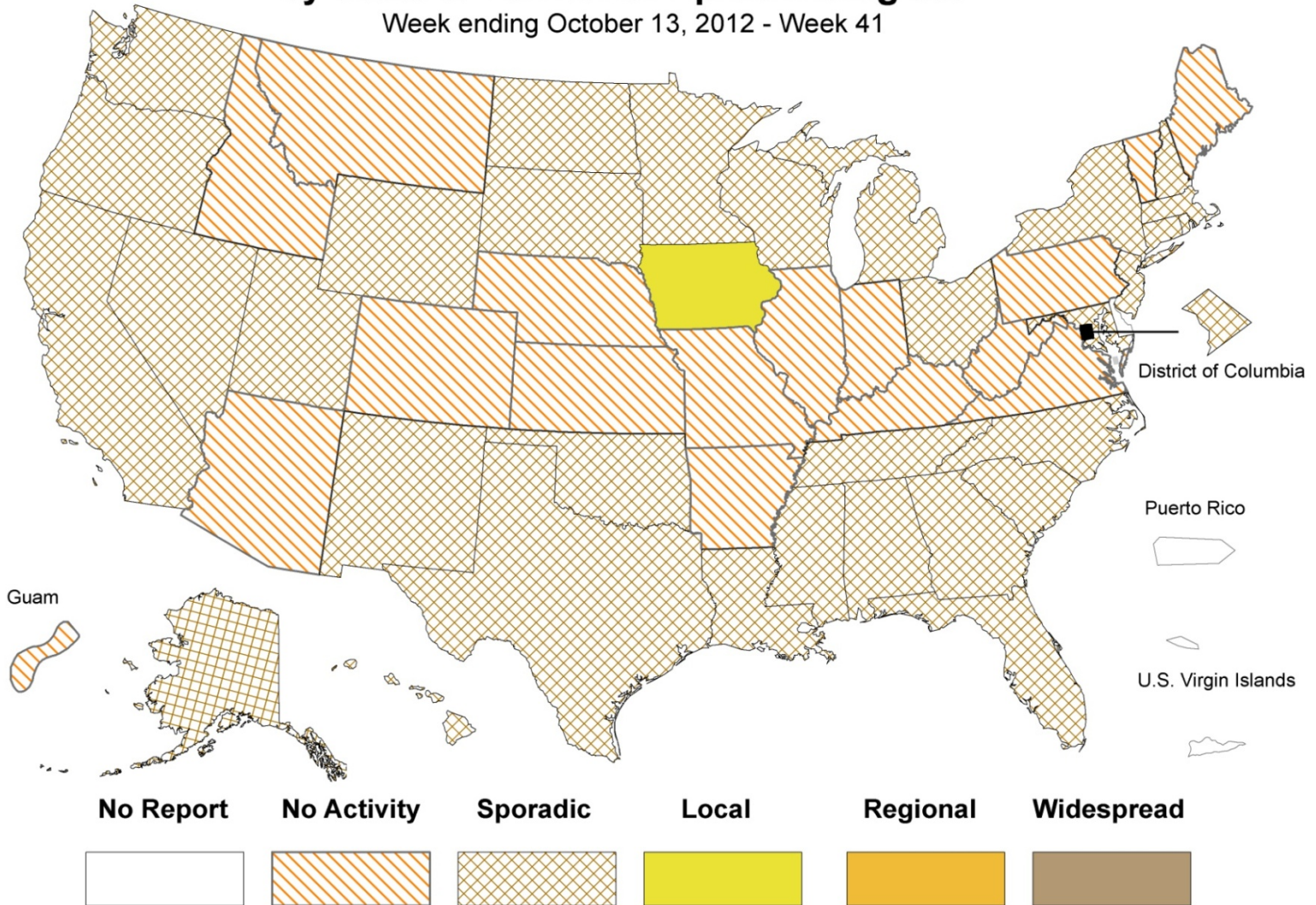


Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2012-13 and Selected Previous Seasons



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*

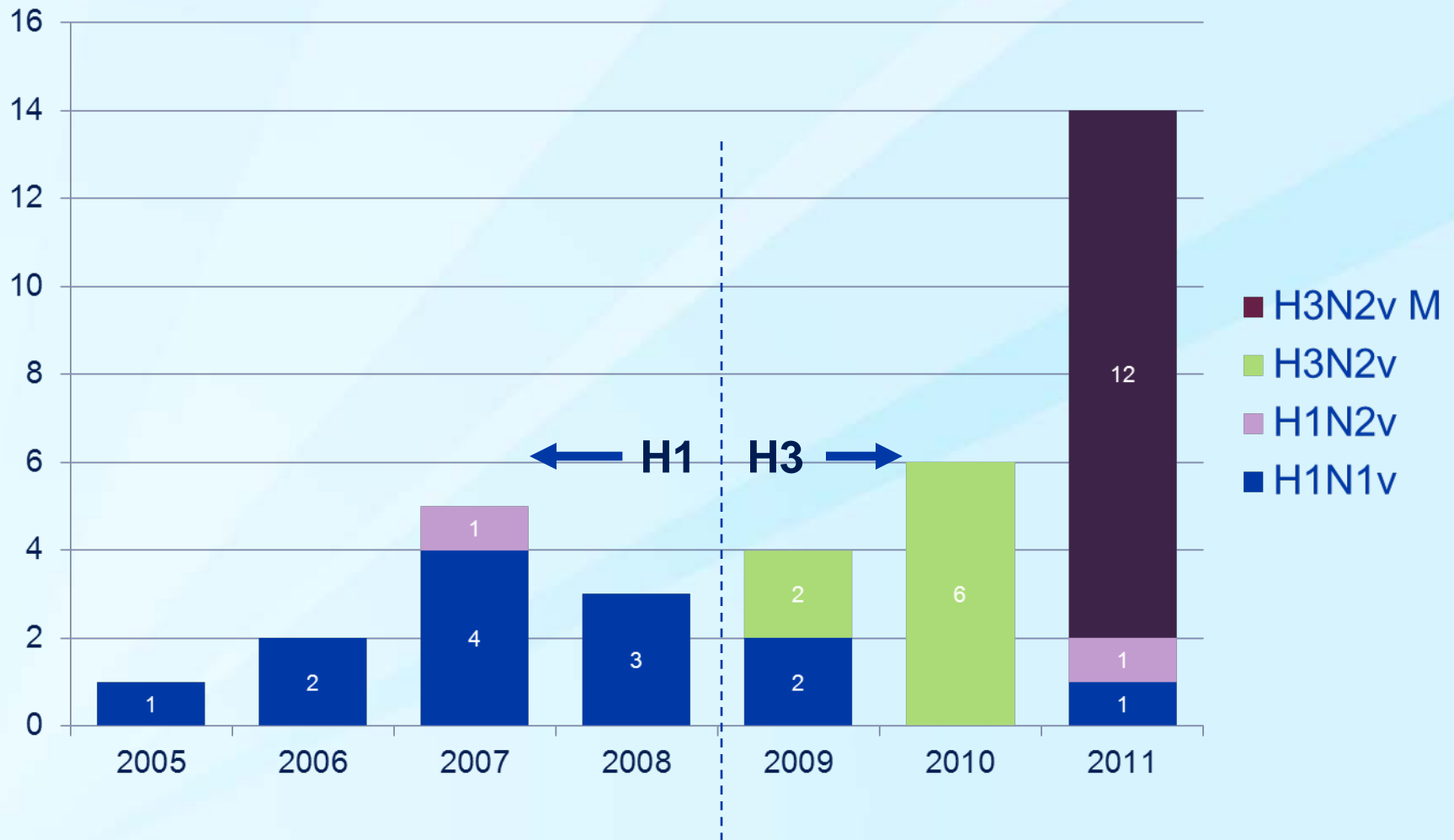
Week ending October 13, 2012 - Week 41



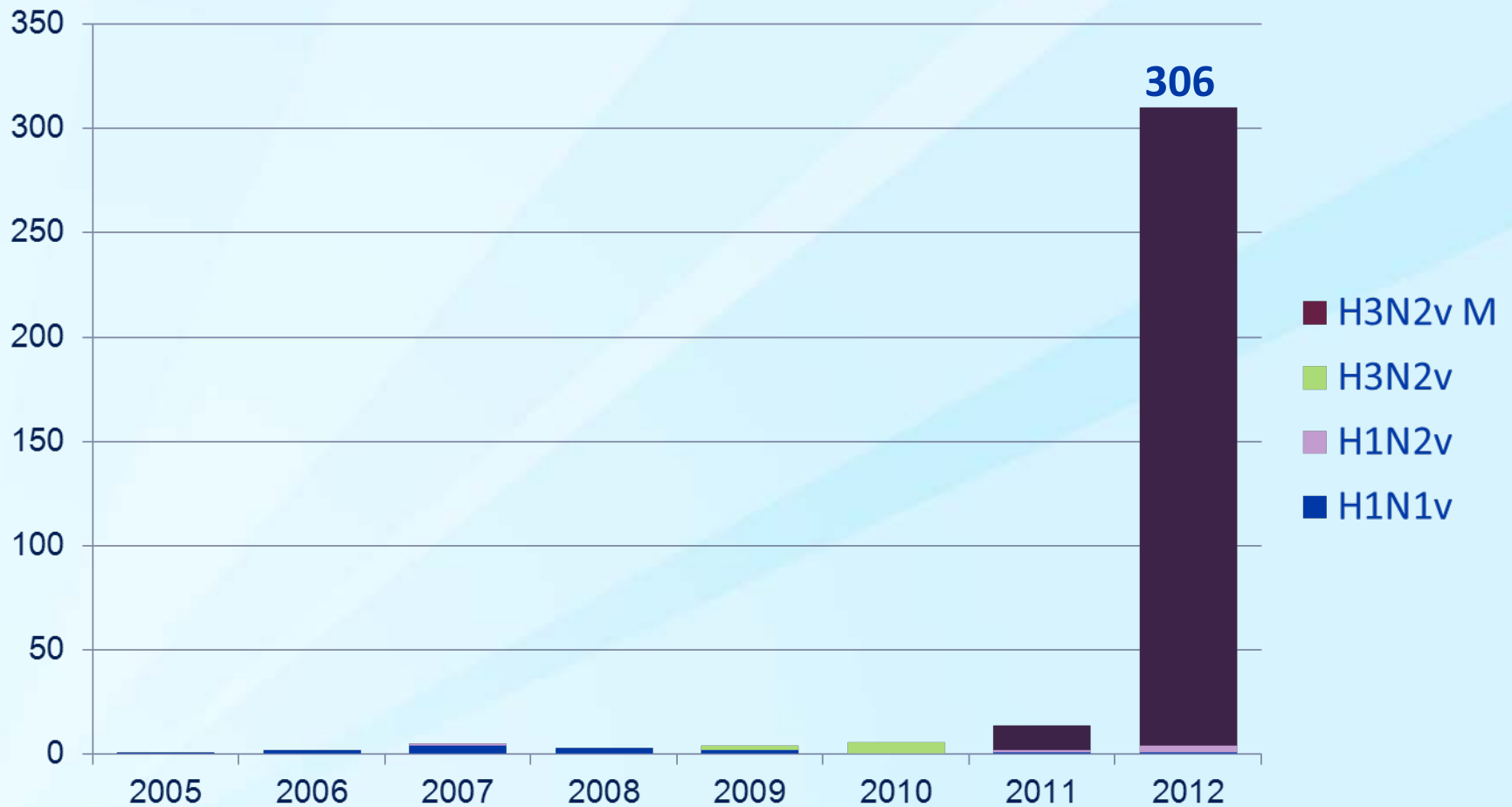
* This map indicates geographic spread & does not measure the severity of influenza activity

Human Infections with Influenza A H3N2v

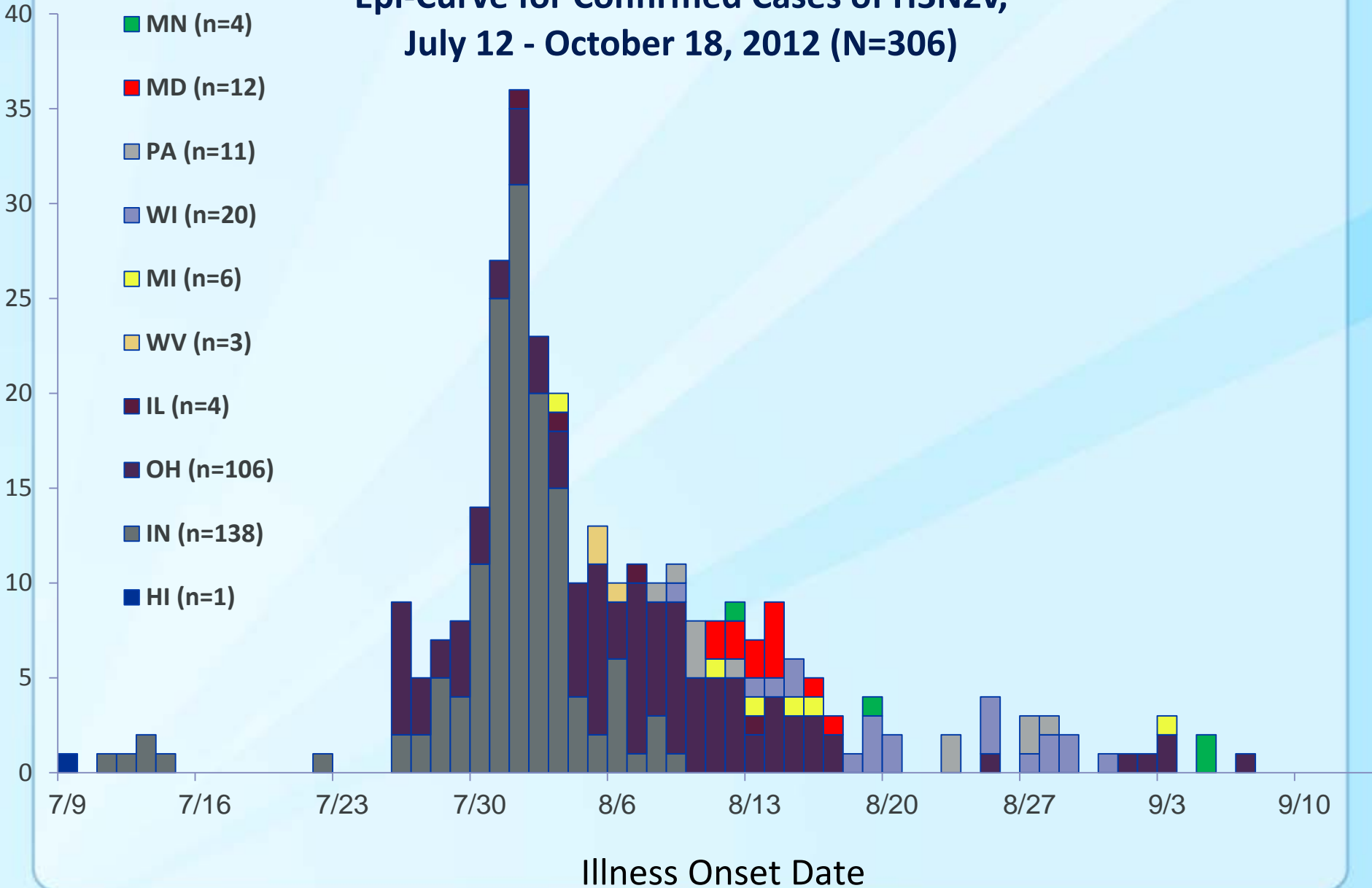
Subtypes of Variant Influenza A Cases, US, 2005 – 2011



Subtypes of Variant Influenza A Cases, US, 2005 – 2012



Epi-Curve for Confirmed Cases of H3N2v, July 12 - October 18, 2012 (N=306)

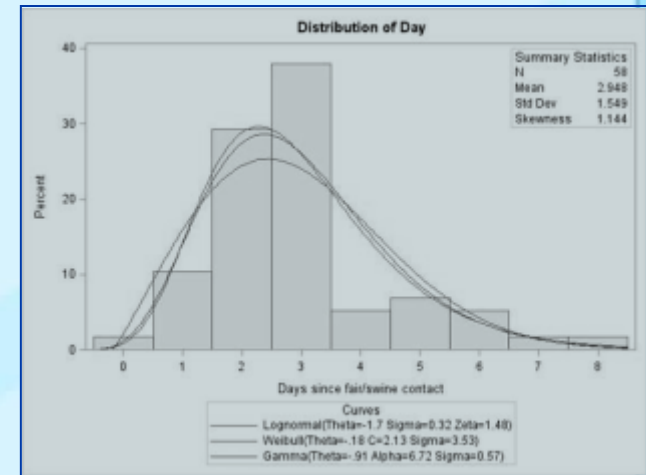


H3N2v Preliminary Case Count July – October 18, 2012

Cumulative counts since July 12, 2012	
Number of states with confirmed cases	10
Number of confirmed cases	306
Number of confirmed cases hospitalized	16
Number of fatal confirmed cases	1

Epidemiologic Parameters

- ❑ Mean age of cases 8 years – range 4 months to 74 years
- ❑ Incubation period 2-3 days
- ❑ Secondary attack rate
 - Low
- ❑ Symptoms – influenza-like
- ❑ Duration of illness 3-4 days
- ❑ Period of infectiousness
 - Unknown



What Do We Know About Exposures?

- ❑ Exposure data for 203/260 cases
 - Most cases (98%) had either direct swine contact, indirect swine contact, or attended a fair
 - >50% had multiple days of exposure
 - Many cases were swine exhibitors or their families/friends

- ❑ Context
 - Approximately 200,000 of children and adolescents exhibit swine each year at state and county fairs each year in the US.

What is the Risk to Fairgoers?

- ❑ Unknown but assumed to be low
- ❑ International Association of Fairs and Expos data indicate that thru October 2011 >80 million persons attended state or county fairs
- ❑ 2011 PA prospective fair survey -- approximately 33% of fair visitors visit the swine barn¹
- ❑ Thus many swine barn visitors potentially exposed briefly and indirectly
 - At least some of these exposures would have been to infected pigs
 - However, few cases have reported brief, transient exposure

¹Wong K, et al. Outbreak of Novel Influenza A (H3N2) Variant Virus Infection Among Attendees of an Agricultural Fair, Pennsylvania, 2011. *Emerg Infect Dis.* 2012 <http://dx.doi.org/10.3201/eid1812.121097>.

Conclusions

- ❑ Fairs are places that pigs come together and if one are more pigs are infected there is transmission among pigs and sometimes to people
- ❑ People with direct and prolonged exposure have been those at risk of H3N2v infection to date
- ❑ Risk of H3N2v infection is low in exhibitors
- ❑ Risk of H3N2v infection is very low in casual visitors
- ❑ No H3N2v cases arising from general population without exposure to pigs or to sick people
- ❑ No significant person to person transmission
- ❑ No community transmission
- ❑ In most people illness is short and self limited , few are hospitalized and there was one death

Acknowledgements

Lynnette Brammer

Scott Epperson

Lenee Blanton

Krista Kniss

Rosaline Dhara

Desiree Mustaquim

Tiffany D'Mello

Alejandro Perez

Andrea Giorgi

Craig Steffans

Ashley Fowlkes

Joe Gregg

Michael Jung

Carrie Reed

Alicia Fry

Seema Jain

Anna Bramley

Victoria Jiang

Karen Wong

Adena Greenbaum

Sandra Dos Santos Chaves

Nancy Cox

Daniel Jernigan

Joseph Bresee



Thank you

LFinelli@cdc.gov

