Influenza Surveillance Season Summary

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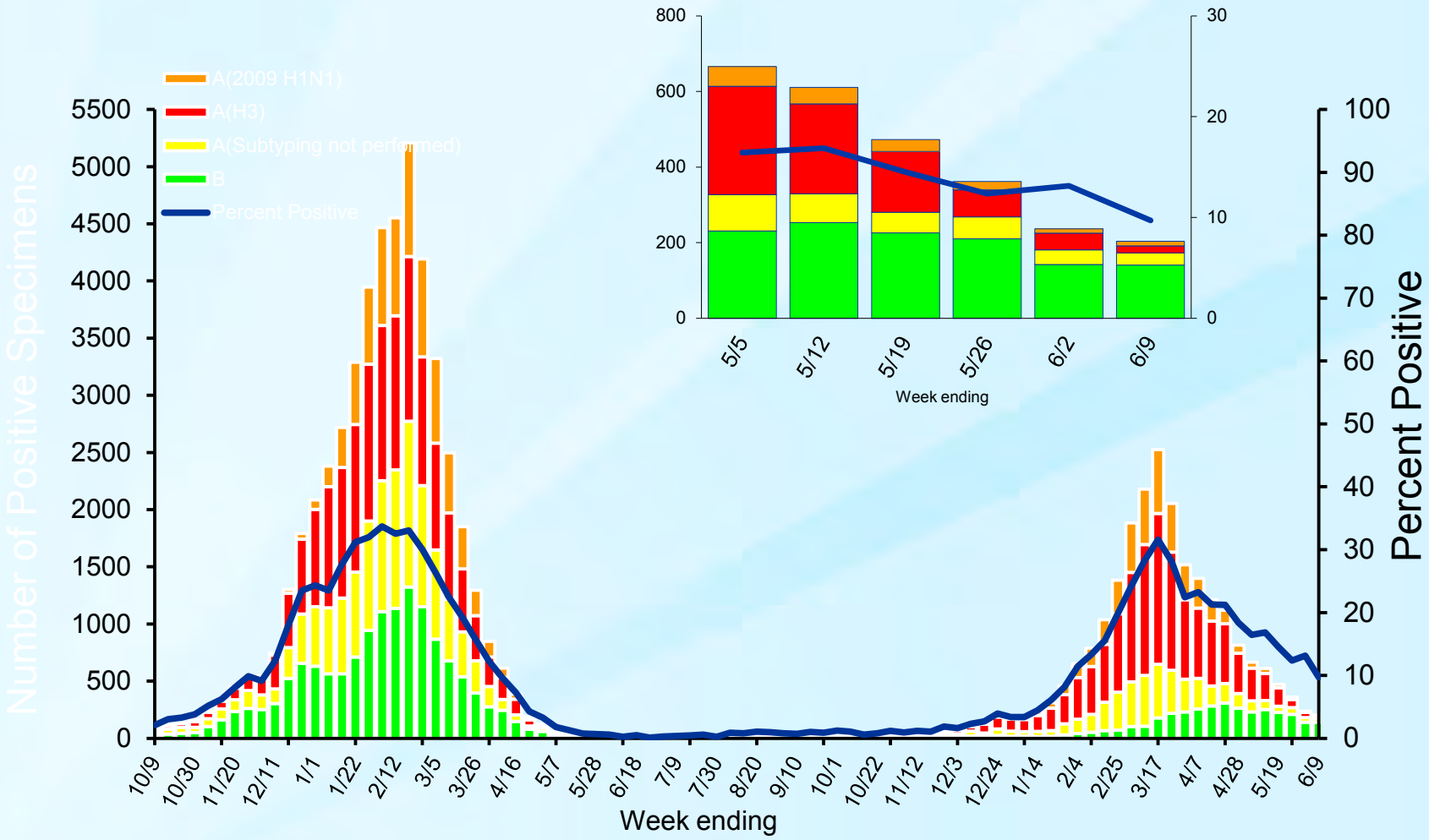
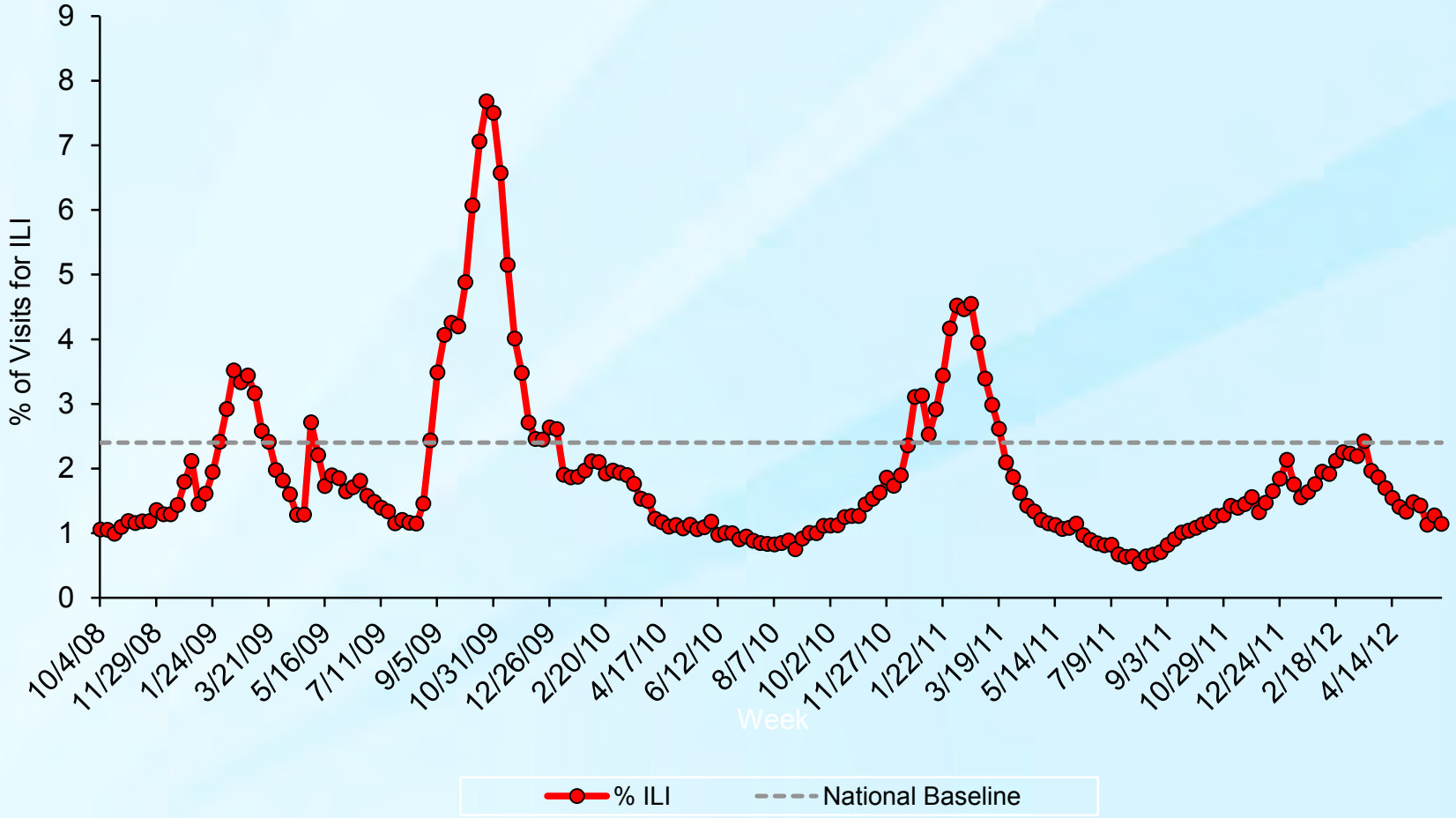
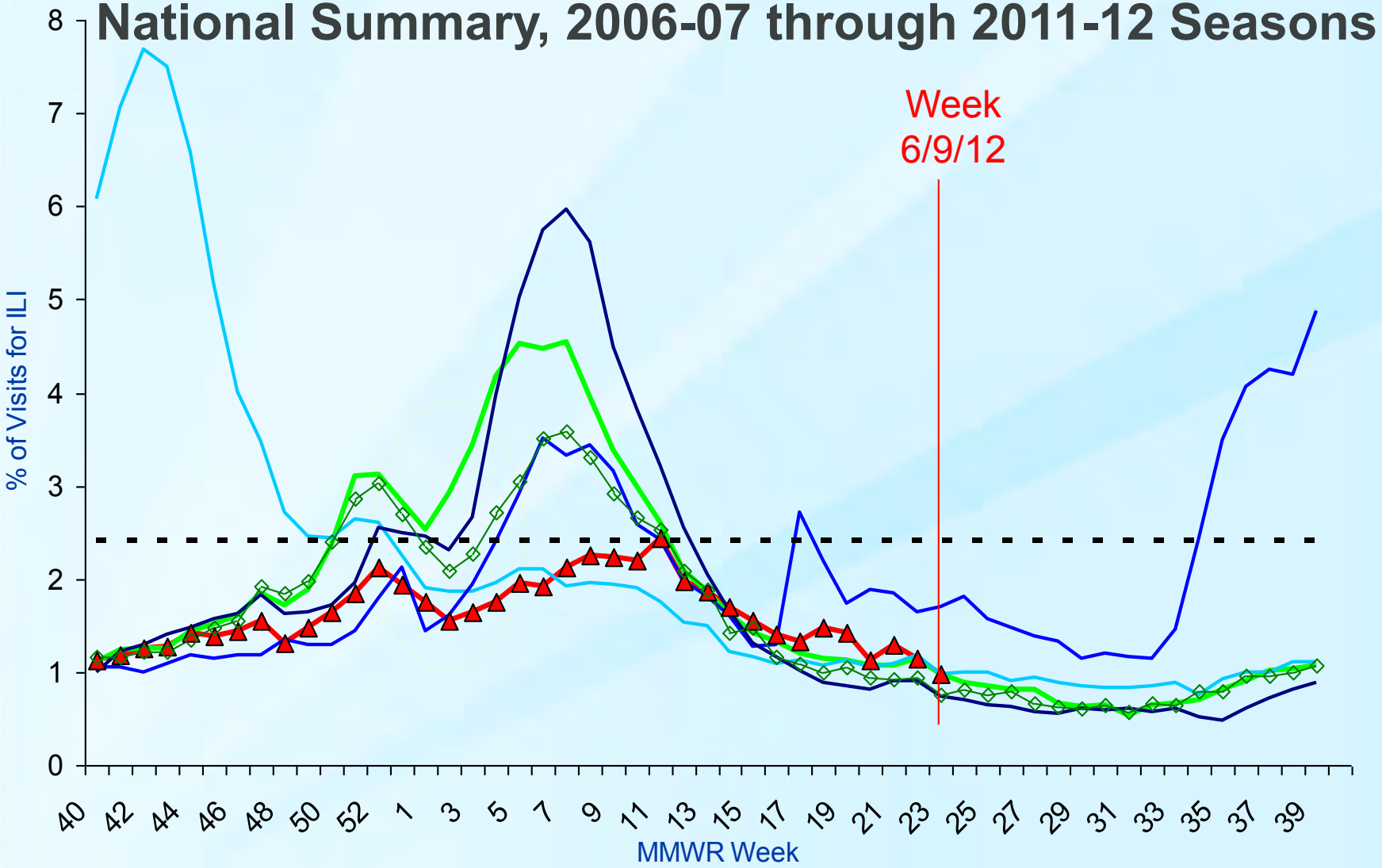
U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2010-12, June 9, 2012



Percentage of Visits for Influenza-like Illness (ILI) Reported by the *U.S. Outpatient ILI Network (ILINet)*, National Summary October 4, 2008 – June 9, 2012



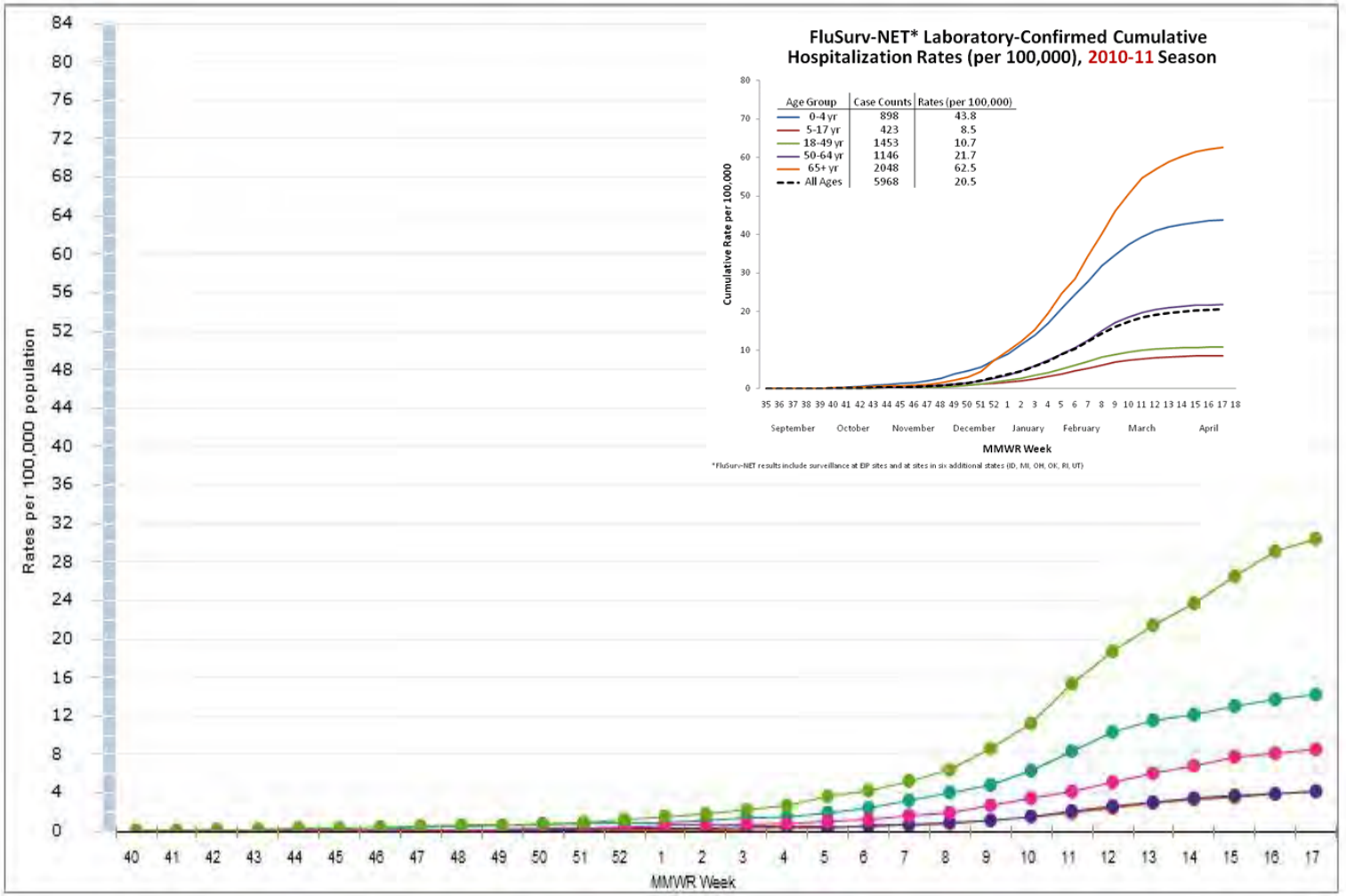
Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient ILI Network (ILINet), National Summary, 2006-07 through 2011-12 Seasons



†There was no week 53 during these seasons, so the week 53 data point is an average of week 52 and week 1.

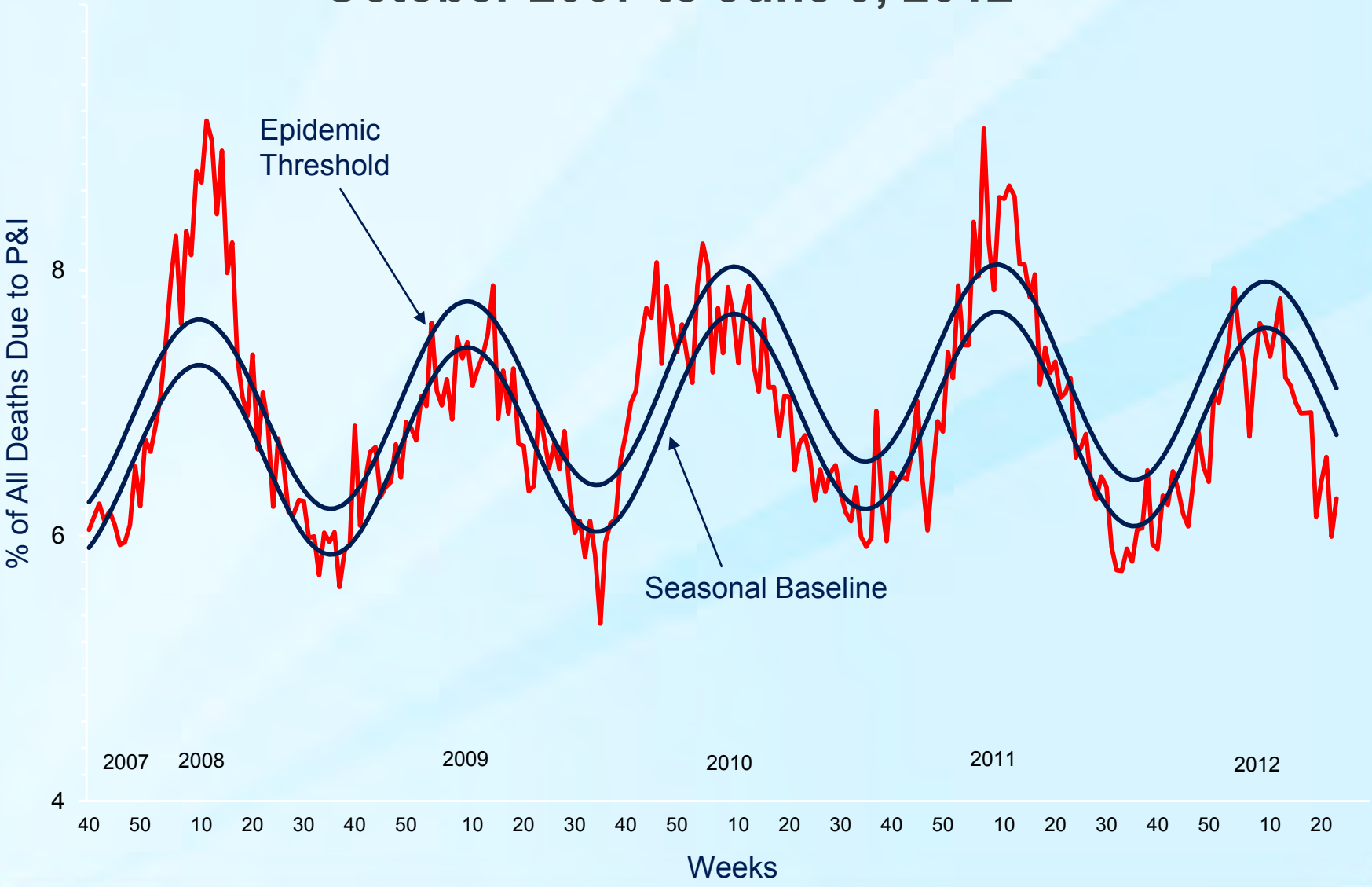
Laboratory-Confirmed Influenza Hospitalizations

Preliminary rates as of May 19, 2012



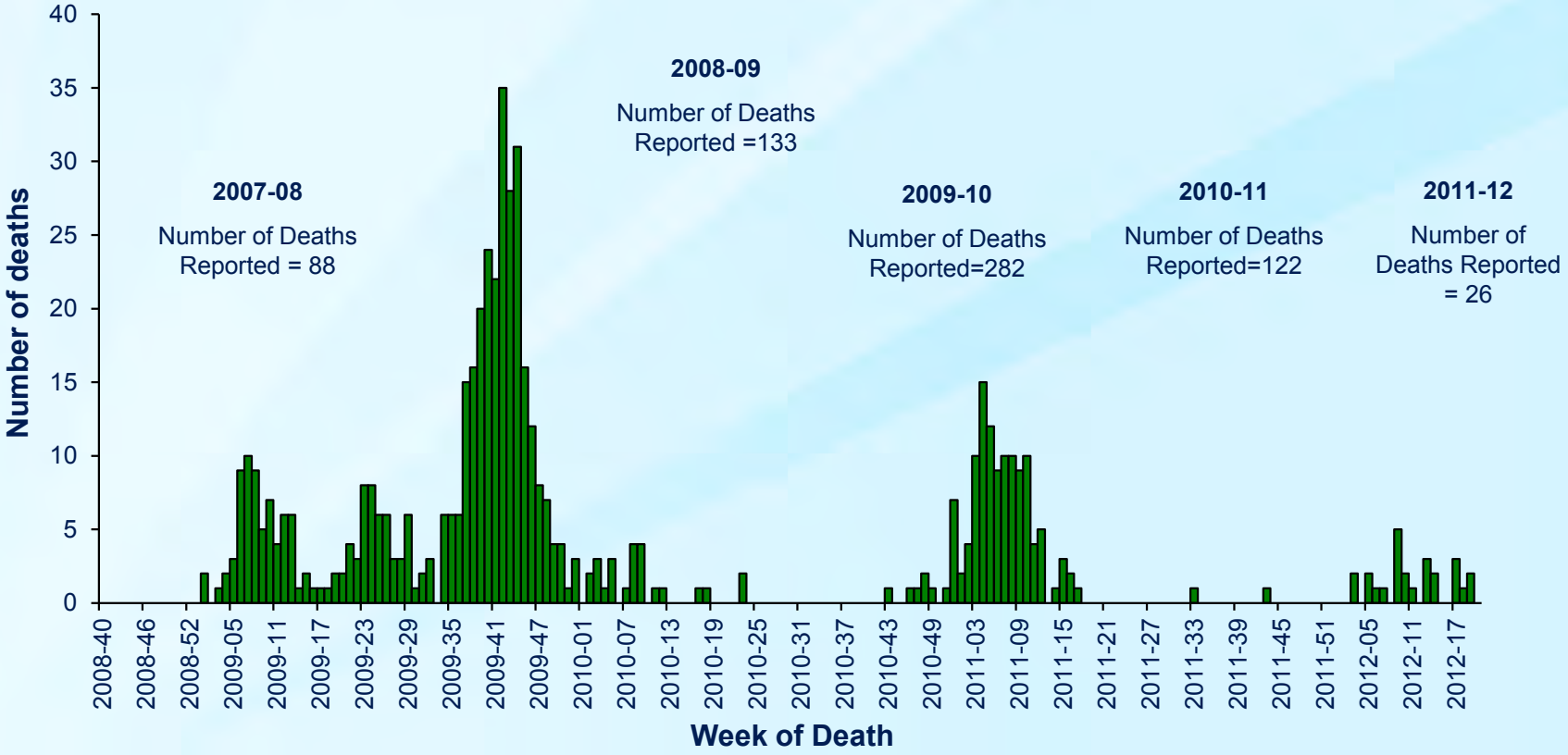
Data from the Influenza Surveillance Network (FluSurv-NET), a population-based surveillance for influenza related hospitalizations in children and adults in 14 US states. Incidence rates are calculated using the National Center for Health Statistics' (NCHS) population estimates for the counties included in the surveillance catchment area.

Pneumonia and Influenza Mortality for 122 U.S. Cities – October 2007 to June 9, 2012



Number of Influenza-Associated Pediatric Deaths by Week of Death: 2007-08 Season to June 9, 2102

Date	Influenza A (2009 H1N1)	Influenza A (H3N2)	Influenza A (Subtype Unknown)	Influenza B	Type not determined	Total
# Deaths Since October 2, 2011	6	5	8	6	1	26



Novel Influenza A Viruses

- **H3N2v**
  - 13 cases of human infection with a novel swine-origin influenza A (H3N2) variant (H3N2v) virus have been reported since August 2011
  - These H3N2v viruses had the M gene from the pH1N1 virus.
  - 1/13 cases occurred in an adult, and 12/13 occurred in children.
  - 6/13 cases were in persons who reported no recent exposure to swine

- **1 H1N1v virus and 1 H1N2v virus were identified during the 2011–12 season**

Influenza Virus Antigenic Characterization October 2011- May 2012

- Antigenic characterization of 1,887 influenza viruses submitted by U.S. laboratories
- 503/527 (95%) pH1N1 viruses tested were characterized as A/California/7/2009-like, the pH1N1 component of the 2011–12 influenza vaccine.
- 864/1,058 (82%) influenza A (H3N2) viruses tested were characterized as A/Perth/16/2009-like, the influenza A (H3N2) component of the 2011–12 influenza vaccine for the Northern Hemisphere.
- 147/302 (49%) influenza B viruses tested belonged to the B/Victoria lineage and 95% of these were characterized as B/Brisbane/60/2008-like, the influenza B component for the 2011–12 Northern Hemisphere influenza vaccine.

Antiviral Resistance
October 2011- May 2012

- **Total of 2,756 influenza virus specimens tested for antiviral resistance.**
  - 0/317 influenza B viruses tested were resistant either oseltamivir and zanamivir
  - 0/1,275 influenza A (H3N2) were resistant either oseltamivir and zanamivir
  - Among the pH1N1 viruses tested
    - 16/1,164 (1.4%) were resistant to oseltamivir
    - 0/518 viruses resistant to zanamivir
- **High levels of resistance to the adamantanes (amantadine and rimantadine) persist among pH1N1 and influenza A (H3N2) viruses currently circulating globally.**

Summary

- **Influenza activity in the US during the 2011–12 season occurred at low levels overall**
  - Activity increased in January and February and peaked in mid-March
- **Influenza A (H3N2) viruses predominated overall, but influenza A (H1N1)pdm09 (pH1N1) and influenza B viruses also circulated widely**
- **This influenza season was mild compared with recent years, with a lower percentage of outpatient visits for influenza-like illness (ILI),† lower rates of hospitalizations, and fewer deaths attributed to pneumonia and influenza.**

Why Has the 2011-12 Influenza Season Been Mild?

- 3rd consecutive season of H1N1 A/California/7/2009-like virus circulation
- 2nd consecutive season of H3N2 A/Perth/16/2009-like virus circulation
- 2nd consecutive season of B/Brisbane/60/2008-like virus circulation
- Good vaccine/virus match over all years
- Estimated vaccine coverage 27% 2009-10 (2009 H1N1 monovalent) , 43% in 2010-11 and 46%* in 2011-12 with higher coverage in children
- Vaccination coverage combined with immunity from natural infection have resulted in high levels of immunity in the population

* Preliminary estimate

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Thank you

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