

POTUS Report

Influenza Week 2 – 22 JAN 2010

- This report is composed of data from multiple CDC surveillance systems:
 - (1) Aggregate Hospitalizations and Deaths Reporting Activity (AHDRA)
 - (2) ILINet sentinel surveillance of outpatient visits for influenza-like-illness
 - (3) Virologic surveillance to identify influenza type and describe resistance patterns
 - (4) Influenza-associated pediatric mortality surveillance
 - (5) Emerging Infections Program (EIP) surveillance of hospitalizations for influenza
- CDC is conducting surveillance for all influenza-associated hospitalizations and deaths; 2009 influenza A (H1N1) cases are no longer being tracked separately.
- Public health surveillance provides an overall picture of influenza activity in the United States. Small changes in values from week to week should be interpreted with caution.
- The influenza activity reported by state and territorial epidemiologists indicates geographic spread of both seasonal influenza and 2009 influenza A (H1N1) viruses and does not measure the severity of influenza activity (slides 11 & 12).
- ILINet syndromic surveillance data do not provide an indication of severity; they show how much influenza is circulating at any given time and provide a basis for interpreting trends in hospitalization and death
- More information on influenza surveillance at CDC see can be found at the FluView website <http://www.cdc.gov/flu/weekly/>.



Key Points

Influenza Week 2 – 22 JAN 2010

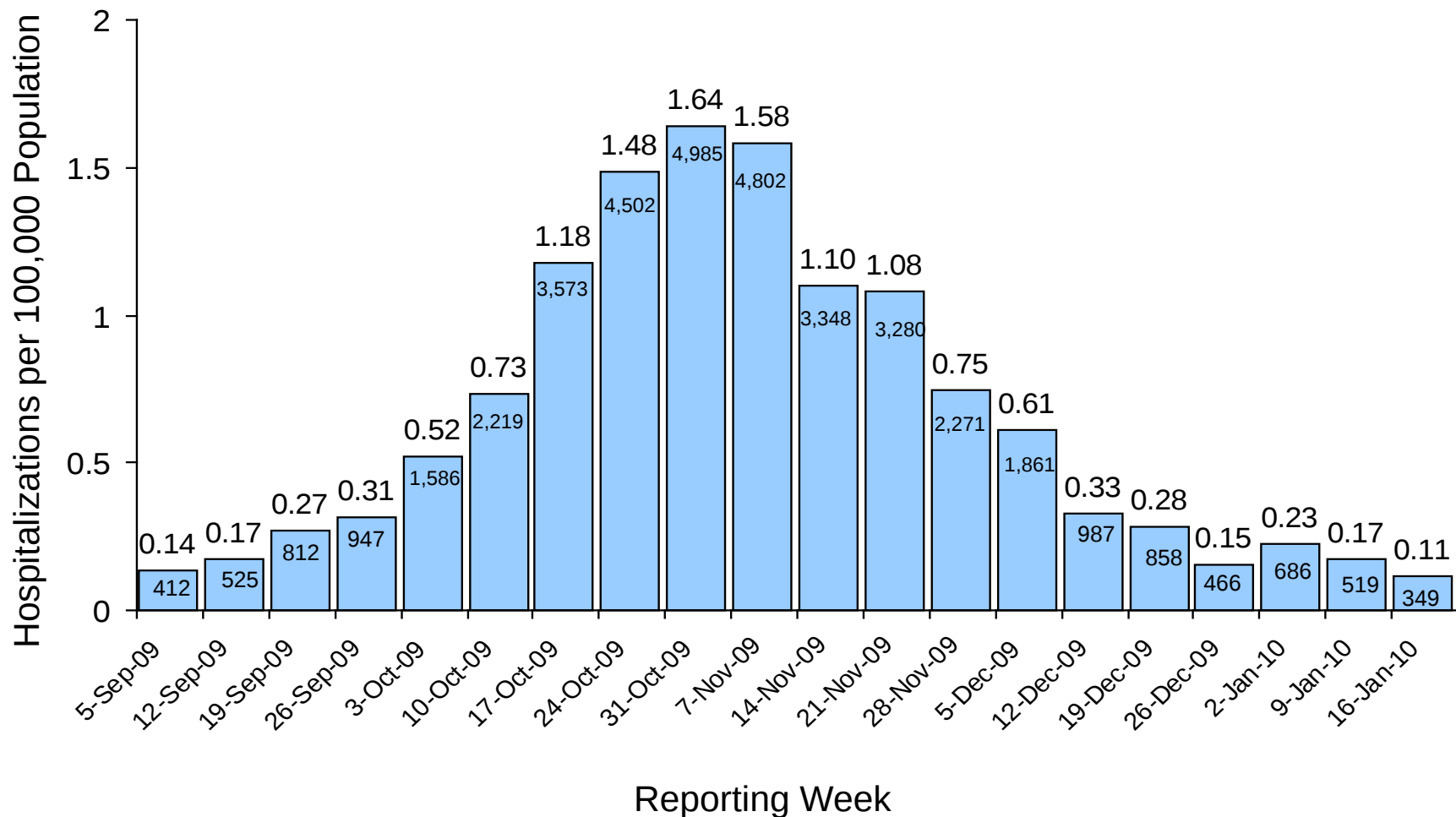
- All influenza A viruses reported to CDC this week are 2009 influenza A (H1N1) viruses.
- These 2009 influenza A (H1N1) viruses are similar to the virus chosen for the H1N1 vaccine and remain susceptible to the antiviral drugs oseltamivir and zanamivir with rare exception
- Of the **54** cases of oseltamivir resistant 2009 influenza A (H1N1) viruses identified by CDC in the United States since April 2009:
 - All retain their sensitivity to the neuraminidase inhibitor zanamivir
 - 42 patients had documented exposure to oseltamivir
 - 8 patients are under investigation to determine exposure to oseltamivir
 - 3 patients had no documented oseltamivir exposure
 - Oseltamivir exposure for 1 patient cannot be determined
- CDC routinely tests for antiviral resistance in patients more likely to be infected with an oseltamivir resistant strain (e.g., immunocompromised patients, patients on lengthy chemoprophylaxis). The case count of oseltamivir resistant 2009 influenza A (H1N1) is partly due to this practice.
- No states are currently reporting widespread influenza activity. Compared to last week, this number has declined (slides 11 & 12).
- Nationally, outpatient visits for ILI decreased to **1.8%**; this is below baseline. 9 HHS regions are below baseline ILI activity level.
- Note that the increase in the percentage of outpatient visits for ILI during weeks 51 and 52 in some regions is likely influenced by a reduction in routine health-care visits during the holiday season, as has occurred during previous seasons.



Lab-Confirmed Influenza-Associated Hospitalization Rate

Aggregate Hospitalizations and Deaths Reporting Activity

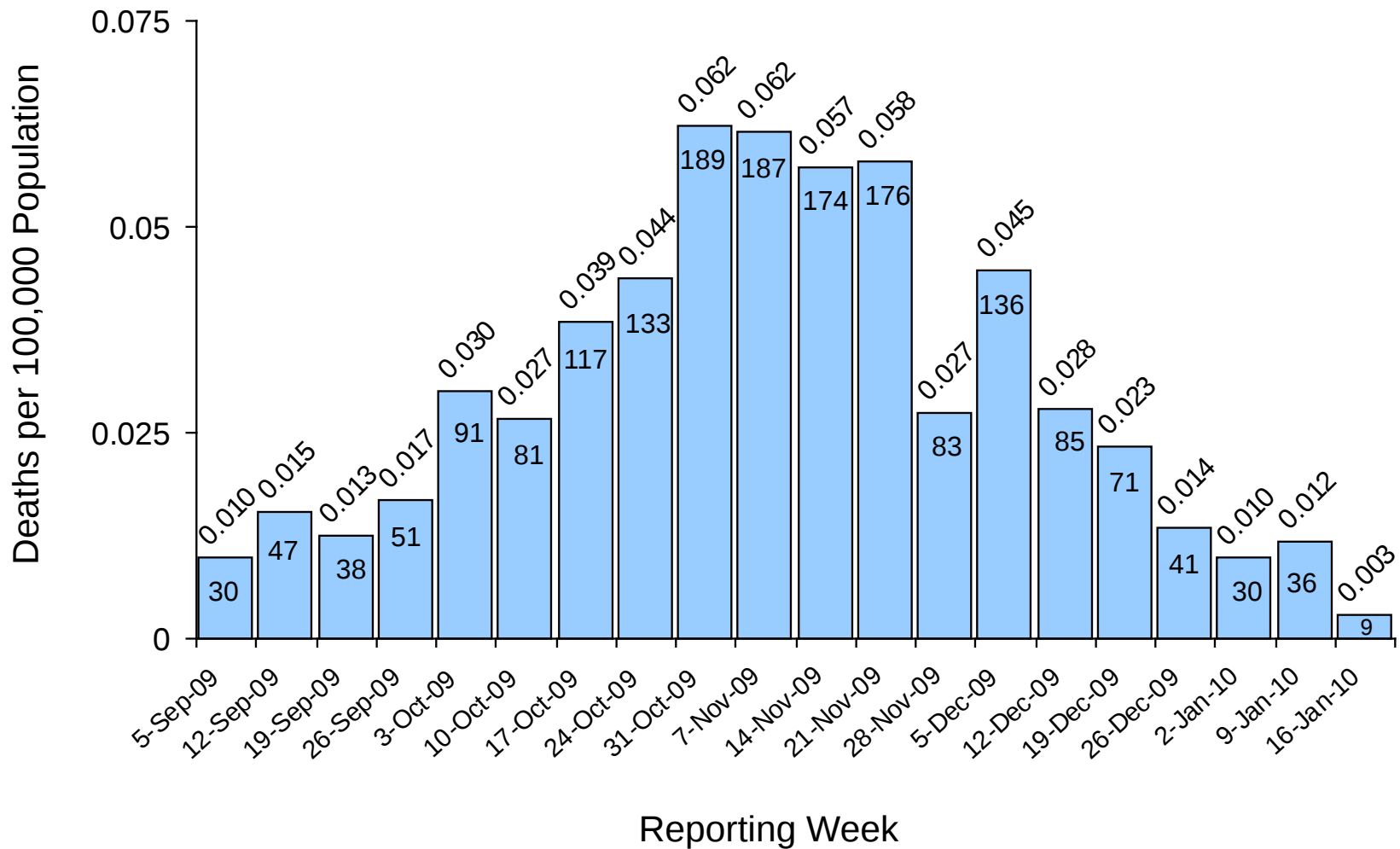
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Lab-Confirmed Influenza-Associated Death Rate

Aggregate Hospitalizations and Deaths Reporting Activity

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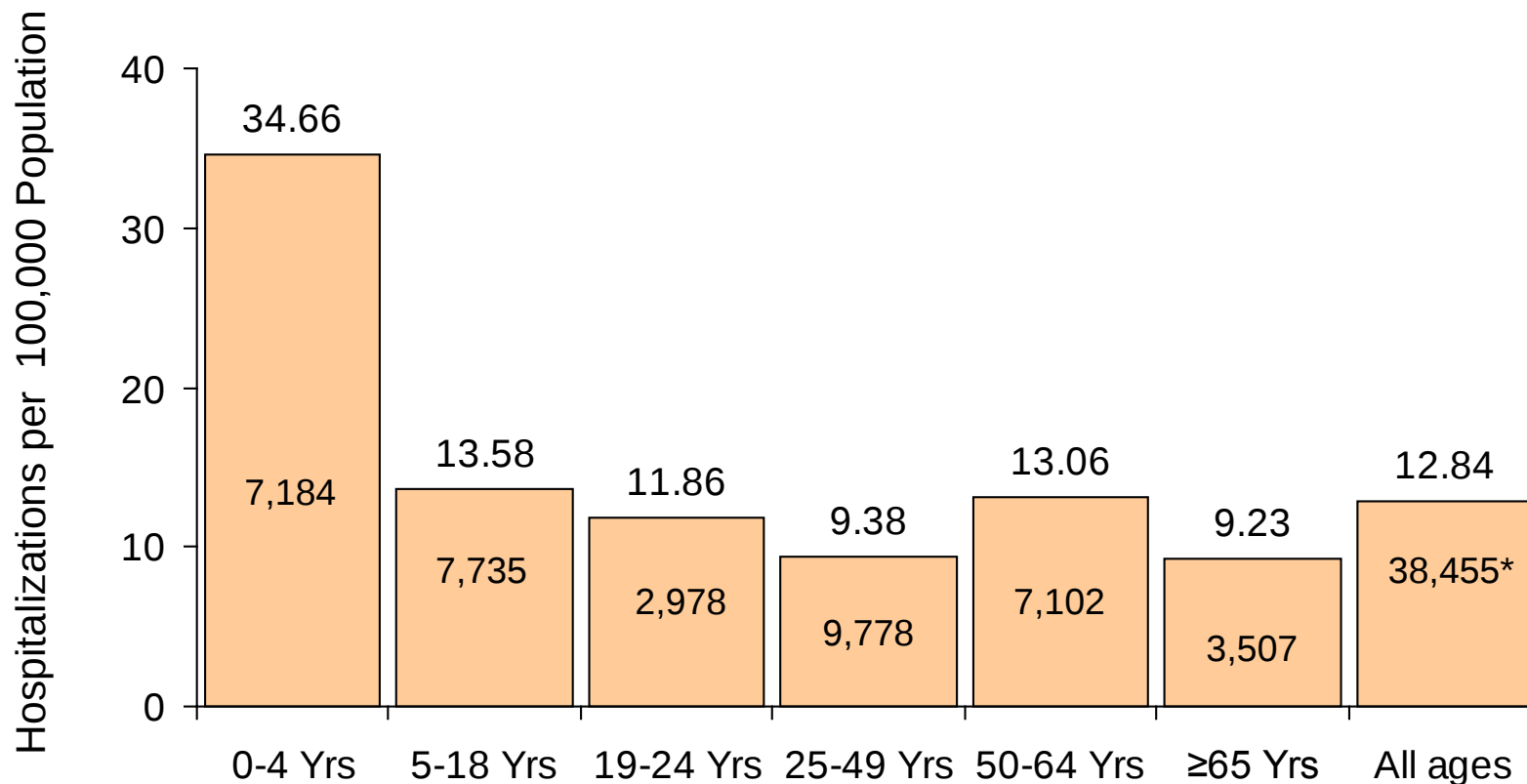




Cumulative Lab-Confirmed Influenza-Associated Hospitalization Rate

Aggregate Hospitalizations and Deaths Reporting Activity

Aug 30 – Jan 16, 2010 (n=38,989*)
Influenza Week 2 – 22 JAN 2010



*Hospitalizations with unknown ages included (n=182) in All Age rate. Excludes jurisdictions for which age distribution information not available.
Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at:
<http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv>



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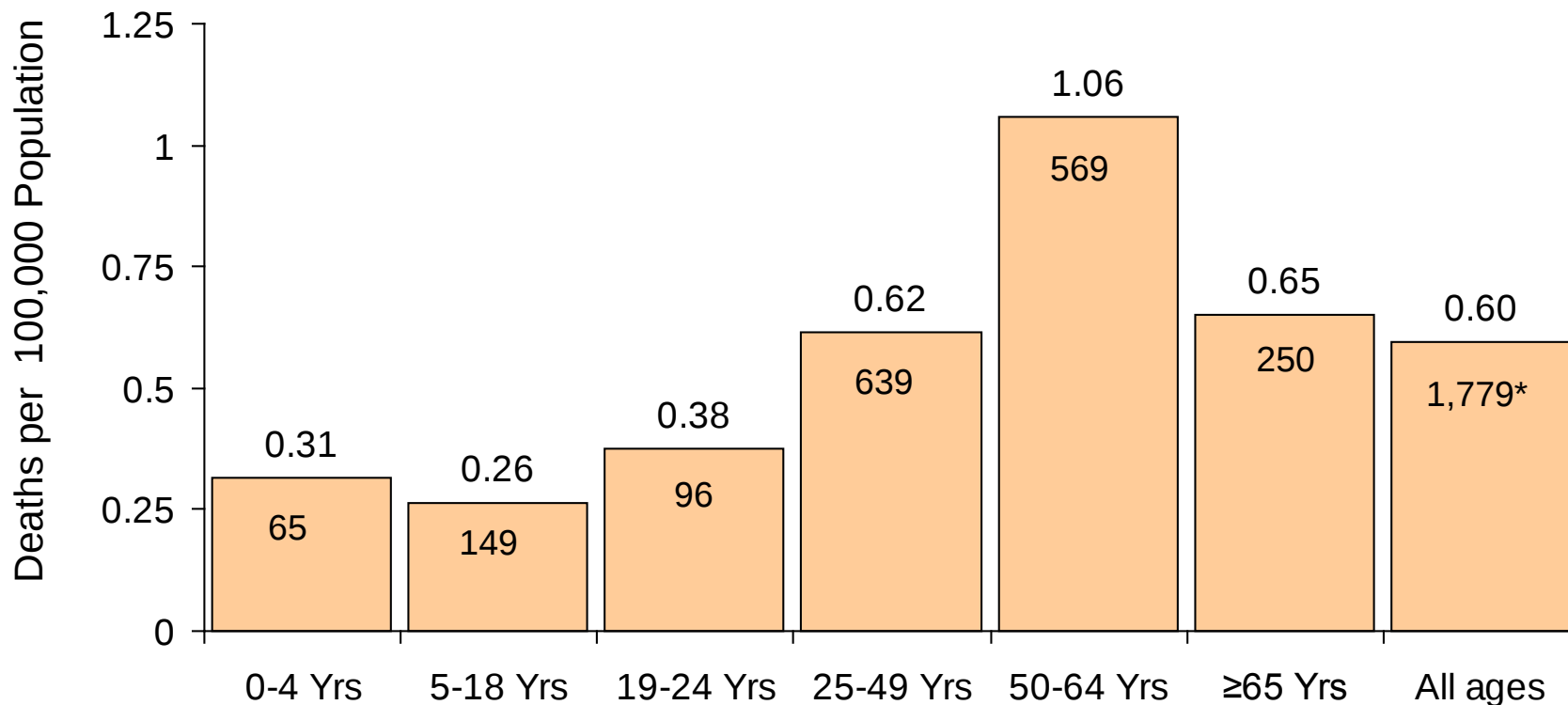
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Cumulative Lab-Confirmed Influenza-Associated Death Rate

Aggregate Hospitalizations and Deaths Reporting Activity

Aug 30 – Jan 16, 2010 (n=1,812*)
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*Deaths with unknown ages are included (n=11) in All Ages rate. Excludes jurisdictions for which age distribution information is not available.
Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at:
<http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv>



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Aggregate Hospitalizations and Deaths Reporting Activity

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Reported Cumulative National Hospitalization and Death Estimates Based on
AHDRA Data

	Lab-Confirmed HOSPITALIZATIONS	Lab-Confirmed DEATHS
Cases through 1-02-10	38,989	1,812

Data are current as of the reporting deadline – 0900 Wednesday of each week. Reports submitted to CDC after this deadline will be included in next week's report and will correspond to the week that hospitalizations and deaths were identified. State and local health departments may also edit previously entered data. Either of these actions can cause previous cumulative numbers to change. CDC will continue to include information that reflects the most current data available in each POTUS report.

AHDRA identifies hospitalized and fatal cases of **all** influenza, not only 2009 influenza A (H1N1). Lab-confirmed cases represent patients who tested positive for **any type** of influenza.

Please note that current reporting methods recently changed, and that the case counts presented here are cumulative from September 1, 2009 to the present MMWR week.



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National Estimates of Influenza Hospitalizations and Deaths

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Adjusted Cumulative National Case, Hospitalization, and Death Estimates Based on Emerging Infections Program (EIP) Network and AHDRA Data

	2009 H1N1 Cases*	2009 H1N1 Hospitalizations*	2009 H1N1 Deaths*
Adjusted Estimate [†]	55 million	246,000	11,160

The number of lab-confirmed influenza-associated hospitalizations and deaths reported to AHDRA is likely a substantial underestimate of the true national burden. Persons with influenza may not be included in reported counts for a variety of reasons, including the following: not all ill persons seek medical care and have a specimen collected, not all specimens are sent to a public health laboratory for confirmatory testing, and not all specimens will give positive results because of the timing of collection or the quality of the specimen. To better estimate the prevalence of 2009 (H1N1) influenza A in the United States, CDC will report numbers every month that are based on a multiplier model that adjusts for these sources of under-ascertainment. For more information on how CDC is estimating 2009 H1N1 hospitalizations and deaths, see http://www.cdc.gov/h1n1flu/estimates_2009_h1n1.htm.

*Approximate values; from April 2009 to December 12, 2009

[†]Based on a multiplier of 2.7 to correct for under-reporting (Reed, et al EID, 2009)



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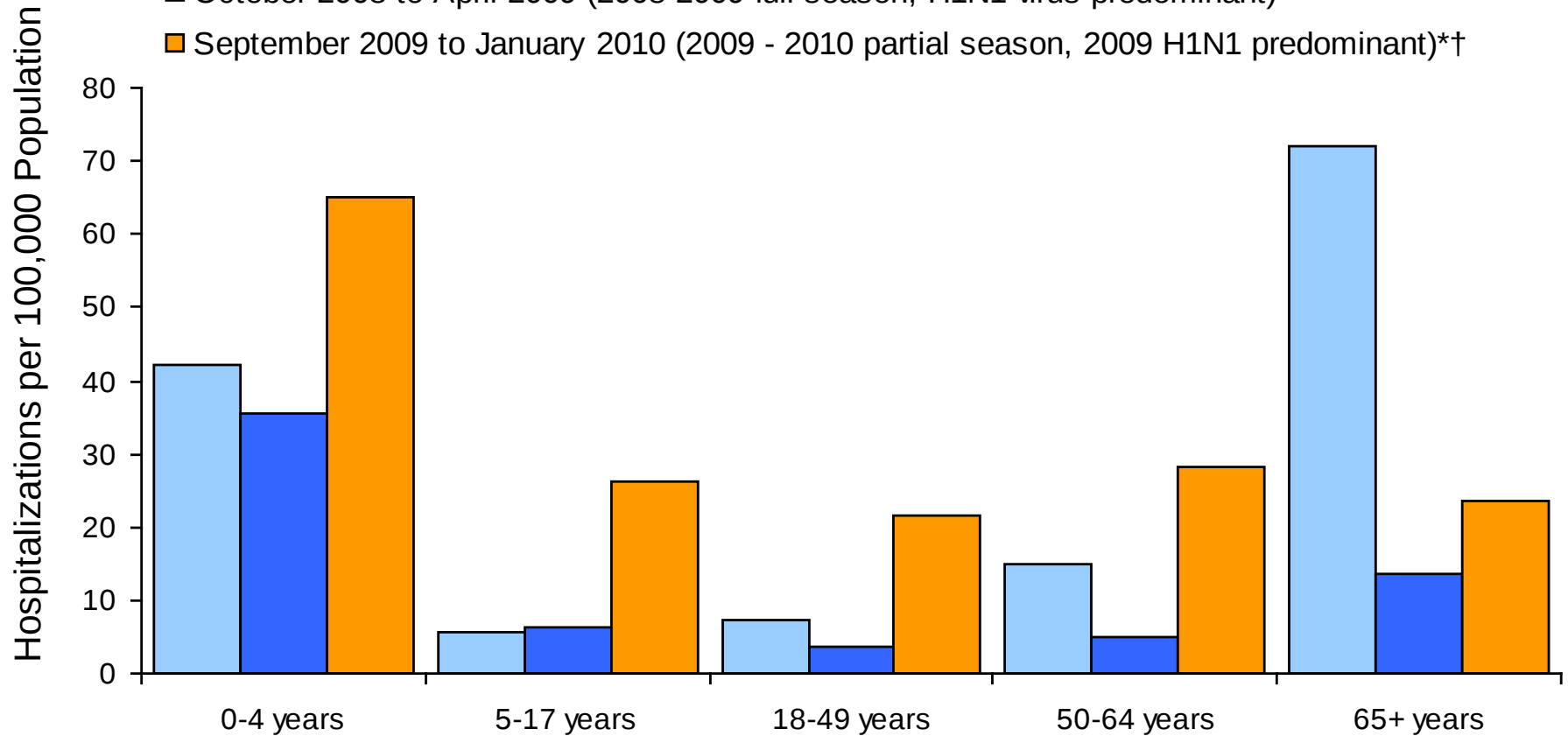
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Cumulative Influenza Hospitalization Rates by Age Group

Emerging Infections Program (EIP) Network

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- October 2007 to April 2008 (2007-2008 full season, H3N2 virus predominant)*
- October 2008 to April 2009 (2008-2009 full season, H1N1 virus predominant)*
- September 2009 to January 2010 (2009 - 2010 partial season, 2009 H1N1 predominant)*†



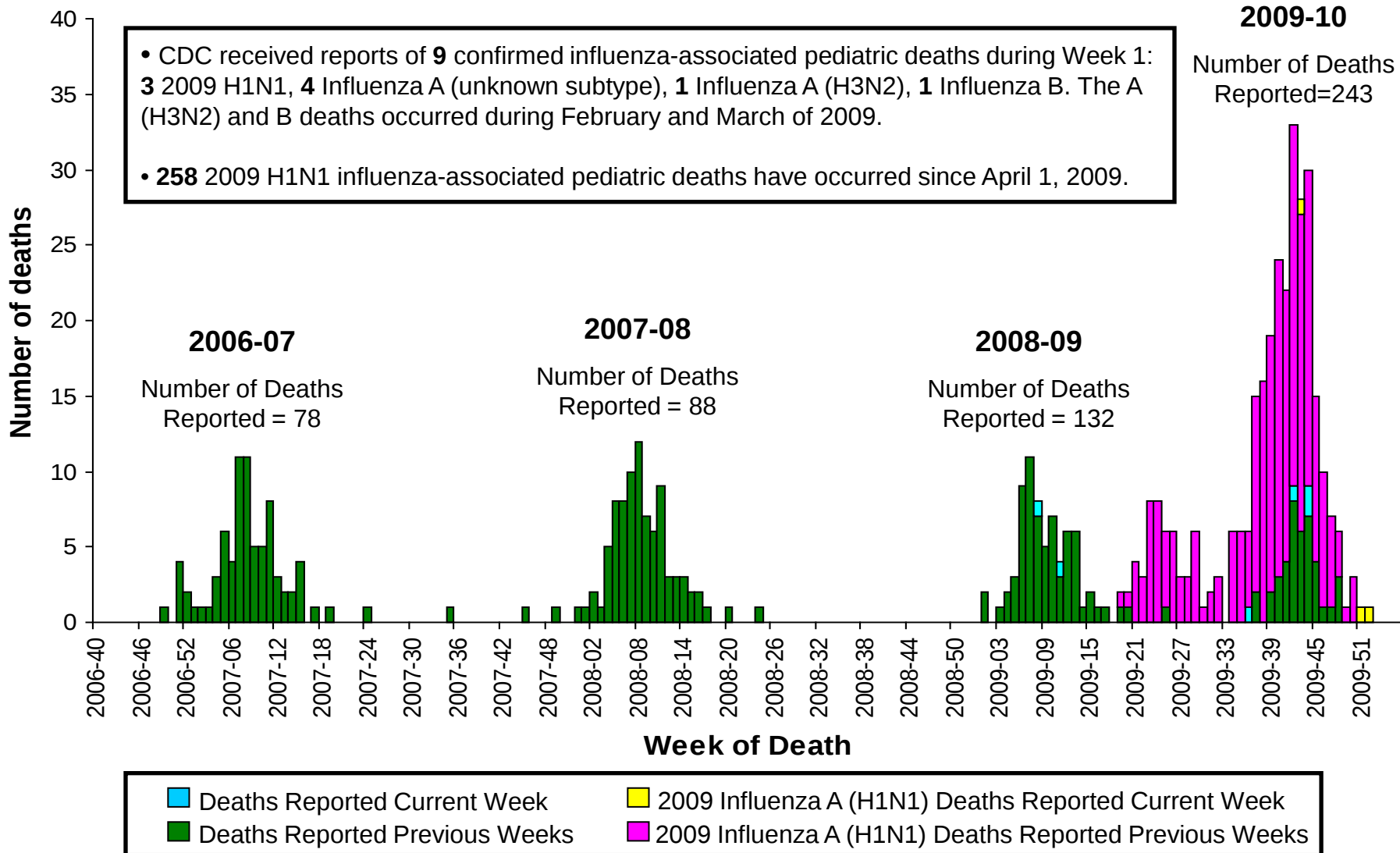
Laboratory-confirmed influenza-associated hospitalizations are monitored using a population-based surveillance network that includes 10 EIP sites* in CA, CO, CT, GA, MD, MN, NM, NY, OR and TN, and 6 new sites† in IA, ID, MI, ND, OK and SD.



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Number of Influenza-Associated Pediatric Deaths by Week of Death 2006-2007 Season to Present Influenza Week 2 – 22 JAN 2010



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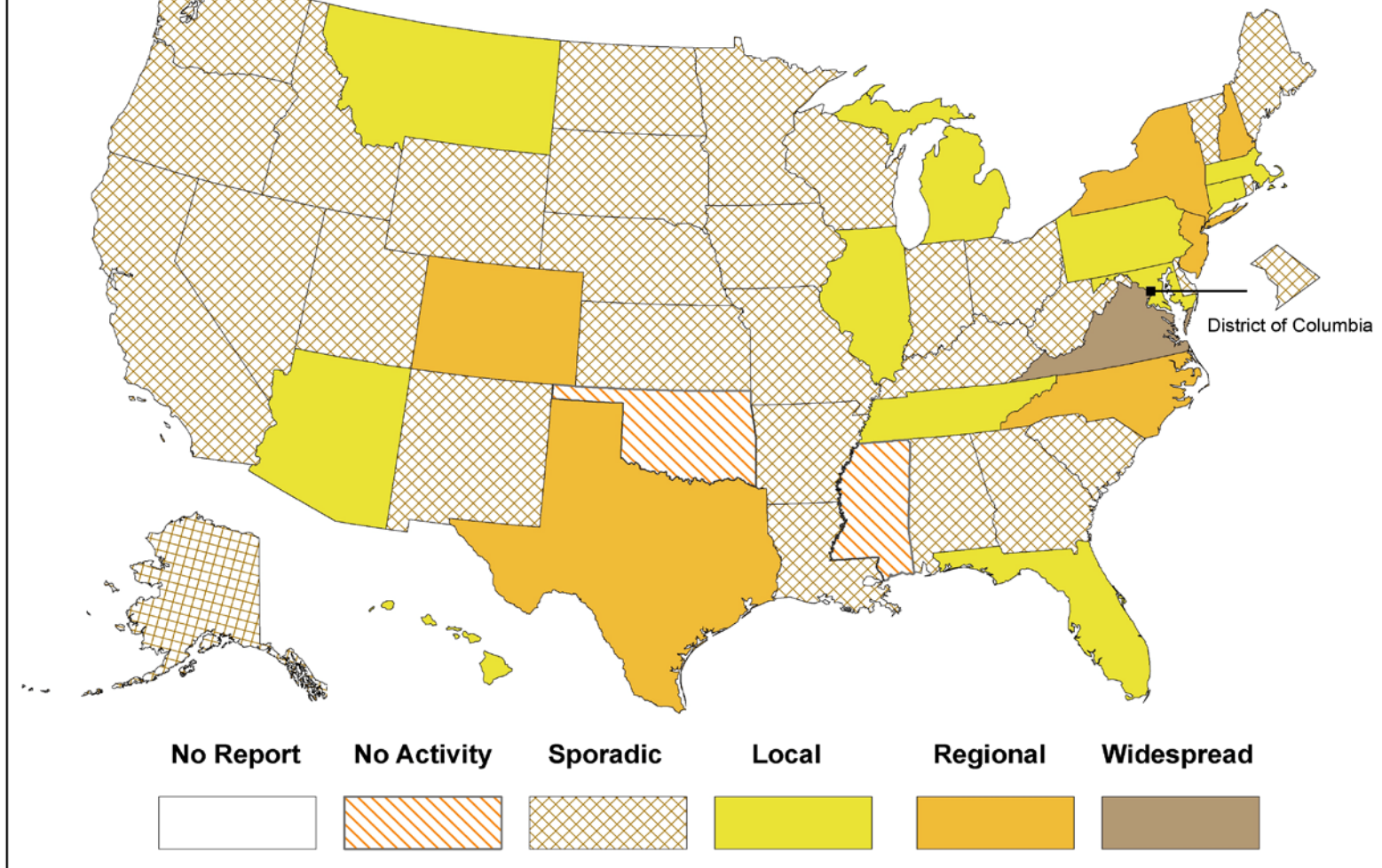
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Influenza Activity During Week 2 2009

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*

Week ending January 17, 2009 - Week 2



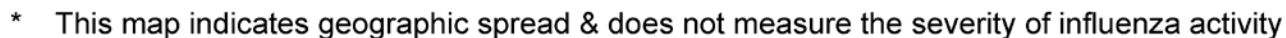
* This map indicates geographic spread & does not measure the severity of influenza activity



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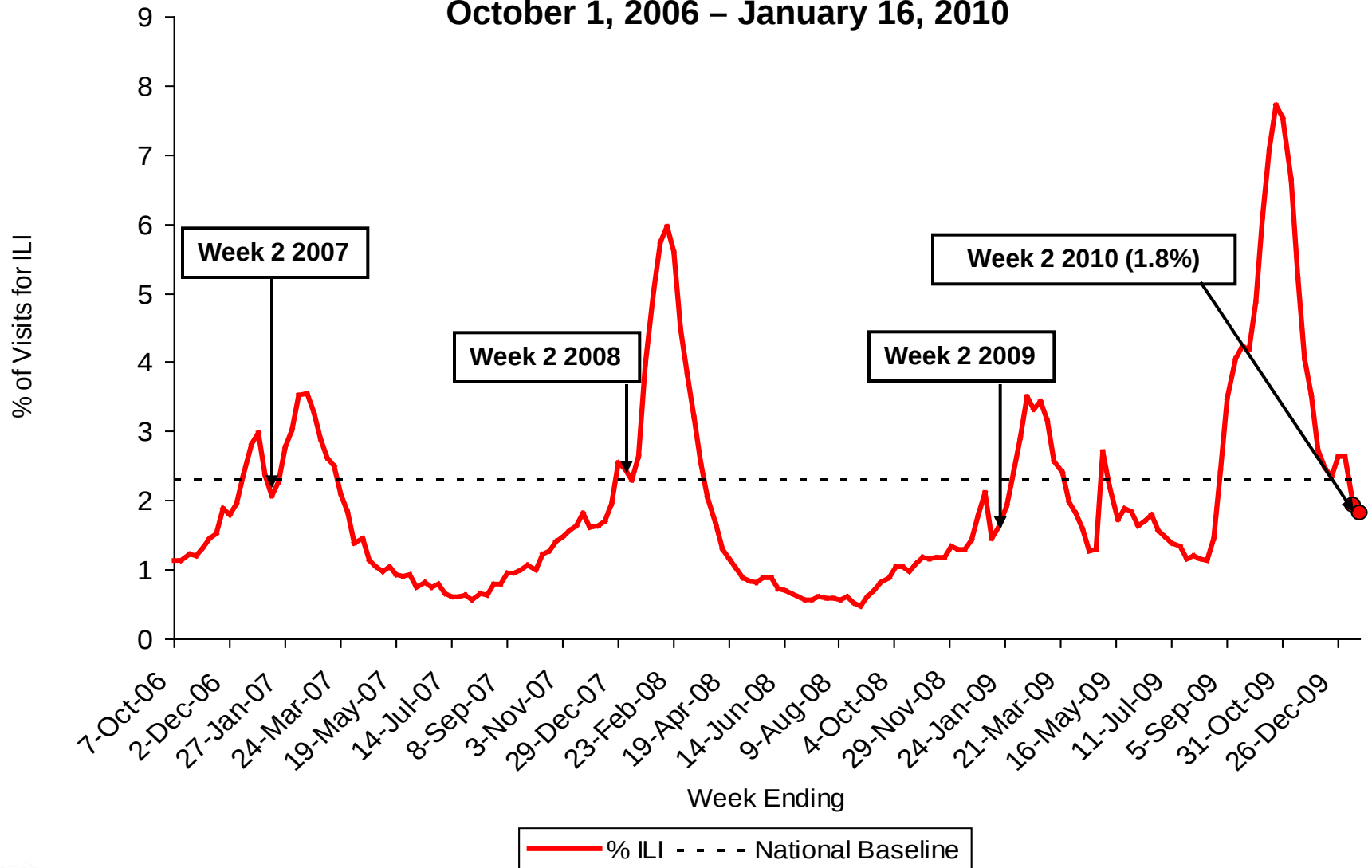
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Week ending January 16, 2010 - Week 2



National Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010



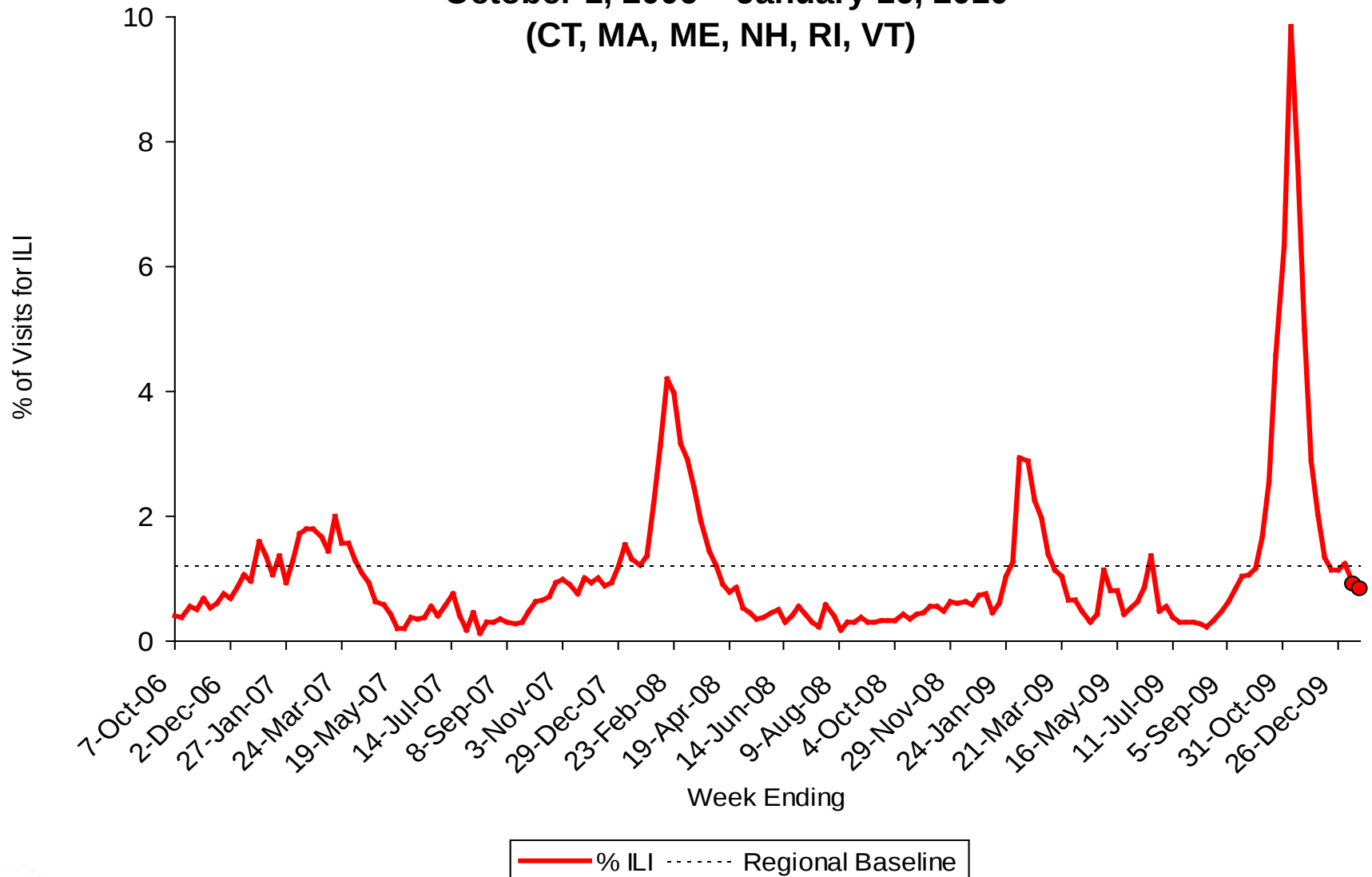
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Region 1 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(CT, MA, ME, NH, RI, VT)



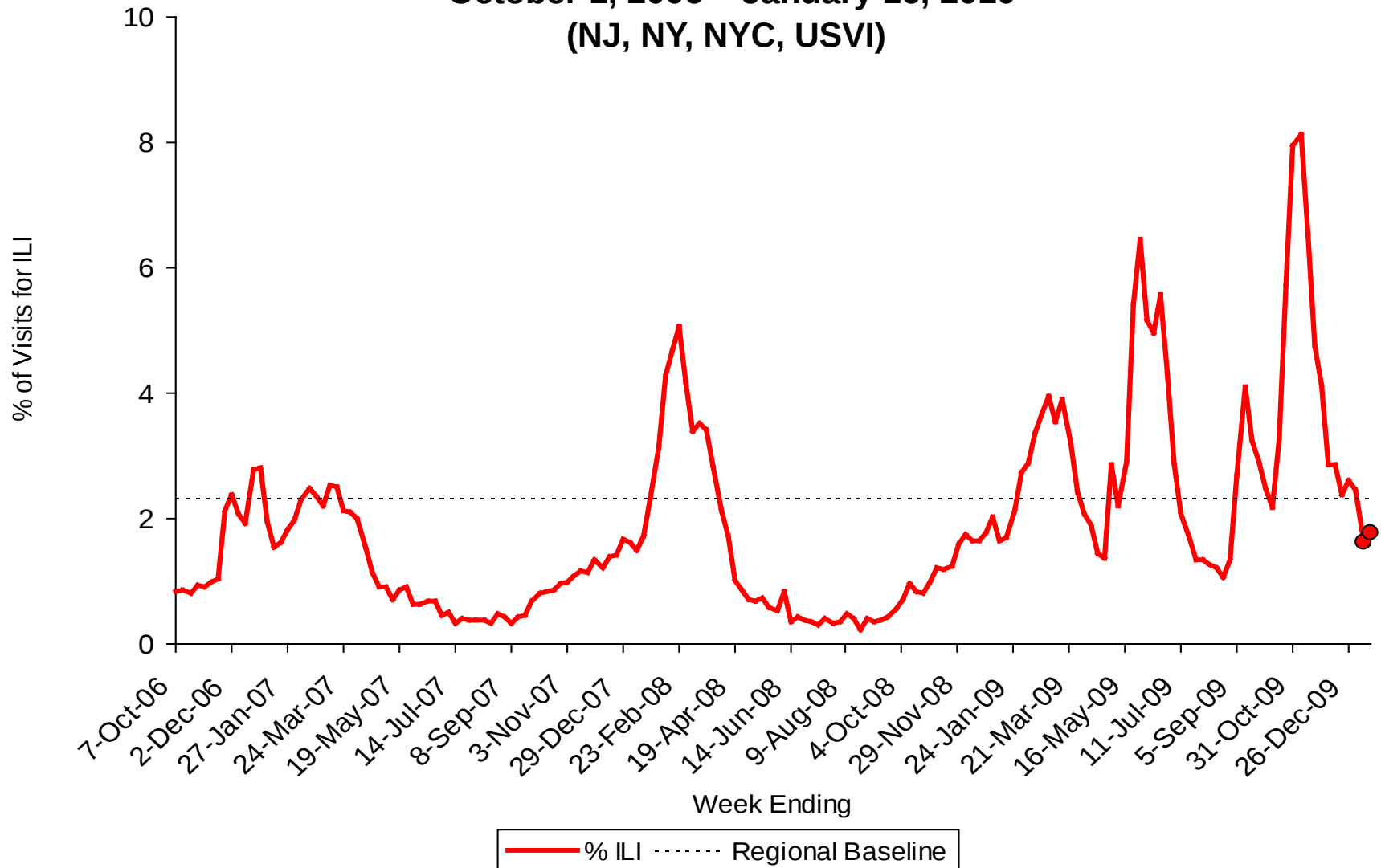
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Region 2 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(NJ, NY, NYC, USVI)



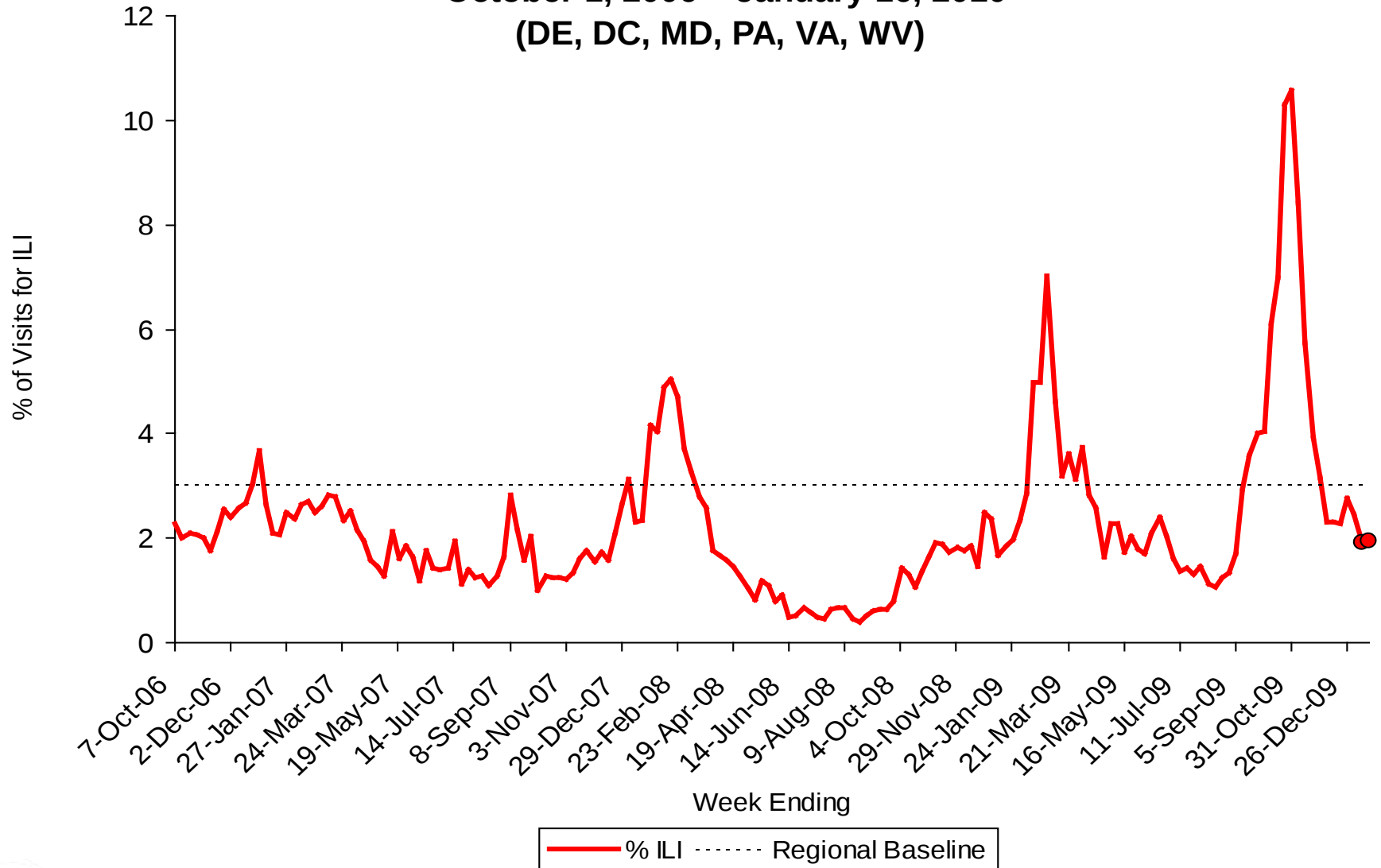
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Region 3 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(DE, DC, MD, PA, VA, WV)

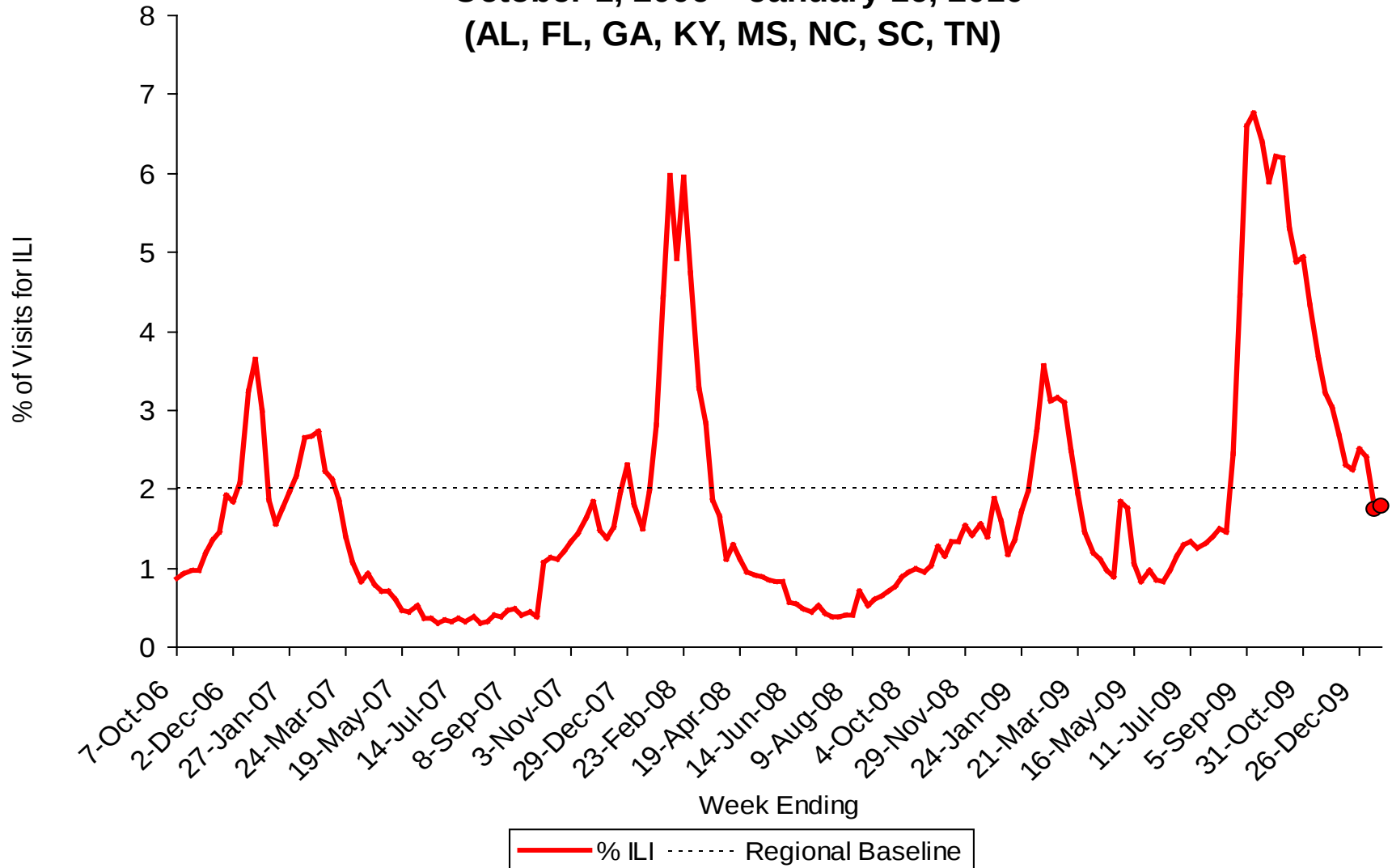


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Region 4 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(AL, FL, GA, KY, MS, NC, SC, TN)

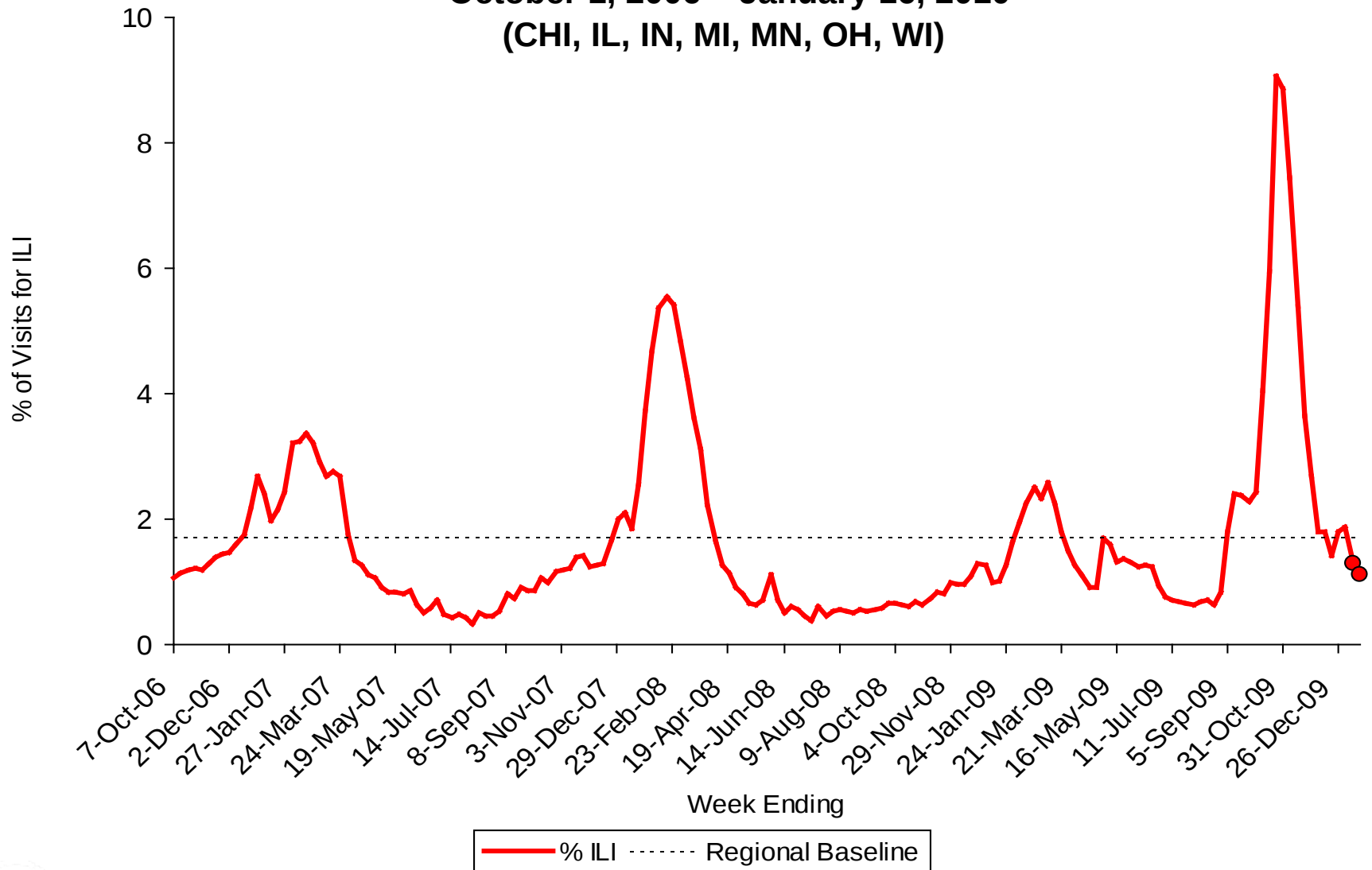


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Region 5 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(CHI, IL, IN, MI, MN, OH, WI)



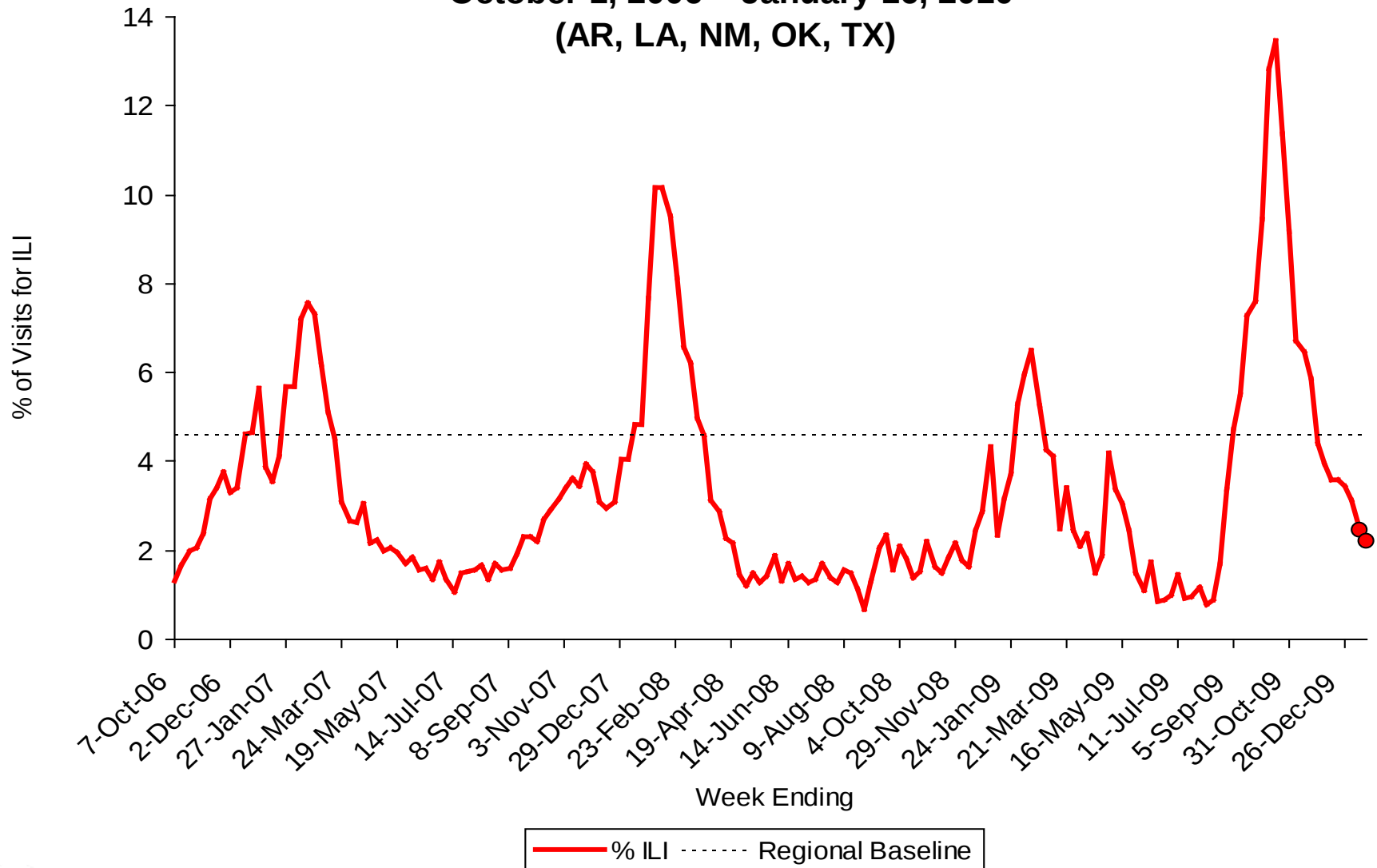
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Region 6 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(AR, LA, NM, OK, TX)

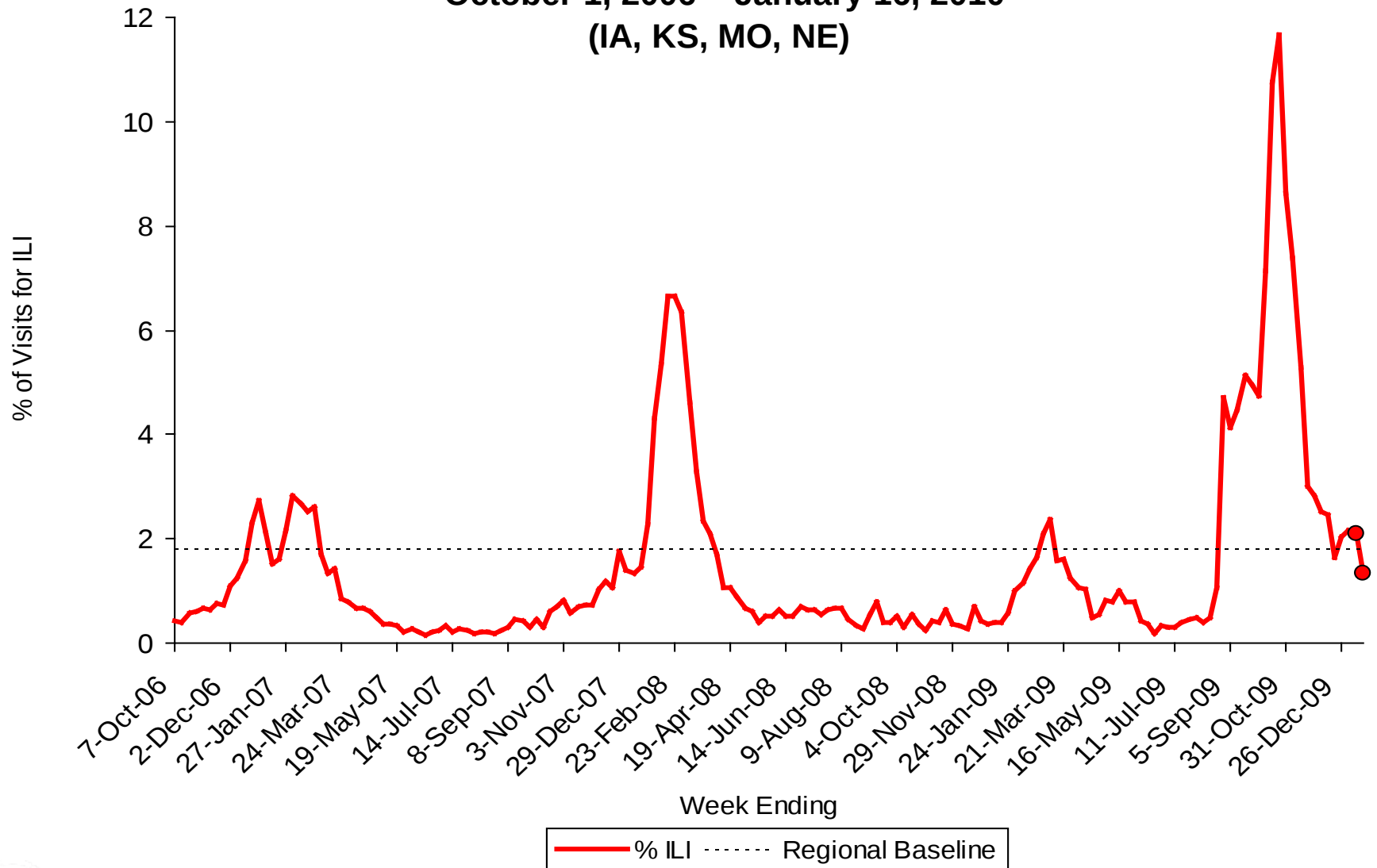


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Region 7 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(IA, KS, MO, NE)



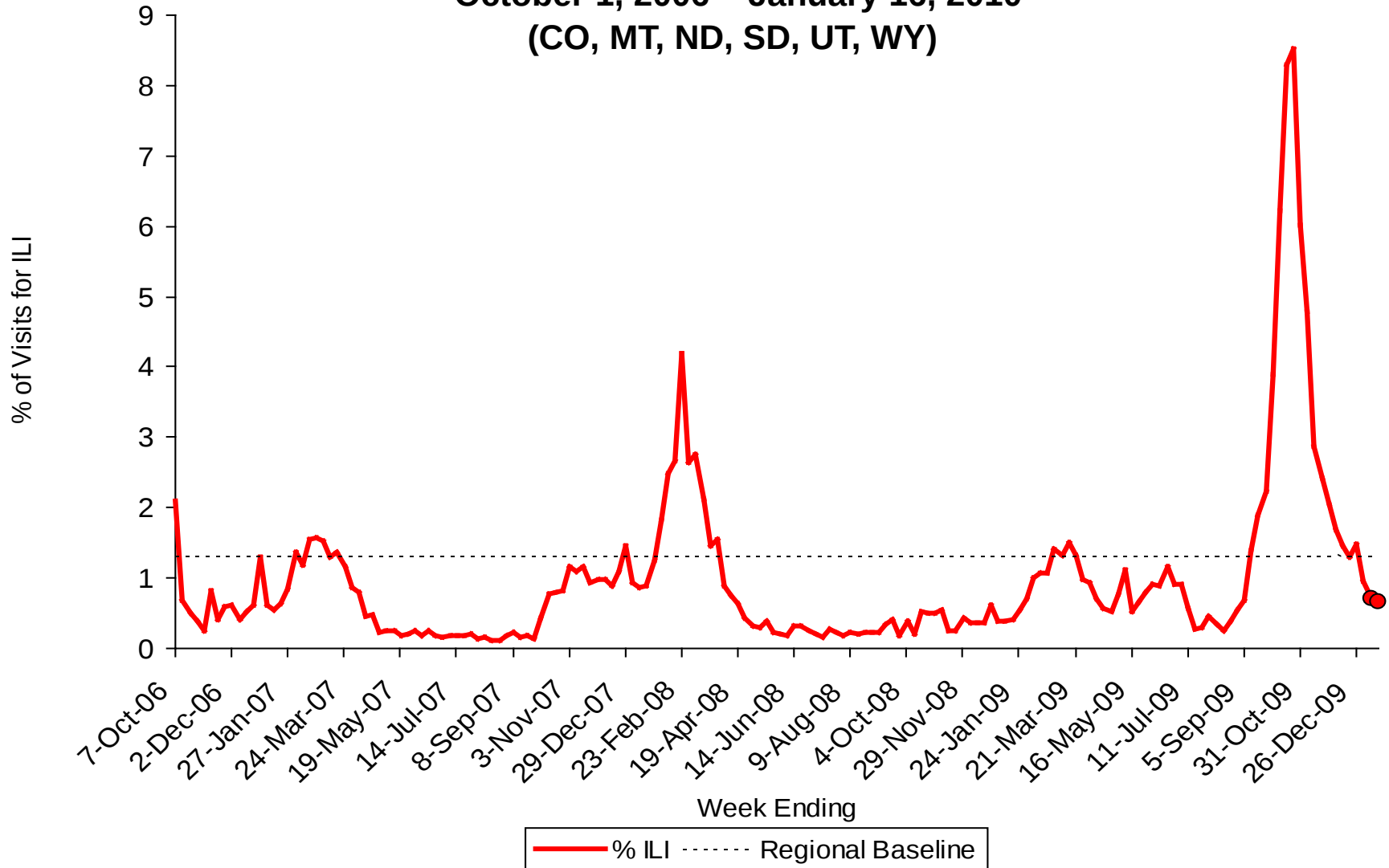
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Region 8 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(CO, MT, ND, SD, UT, WY)

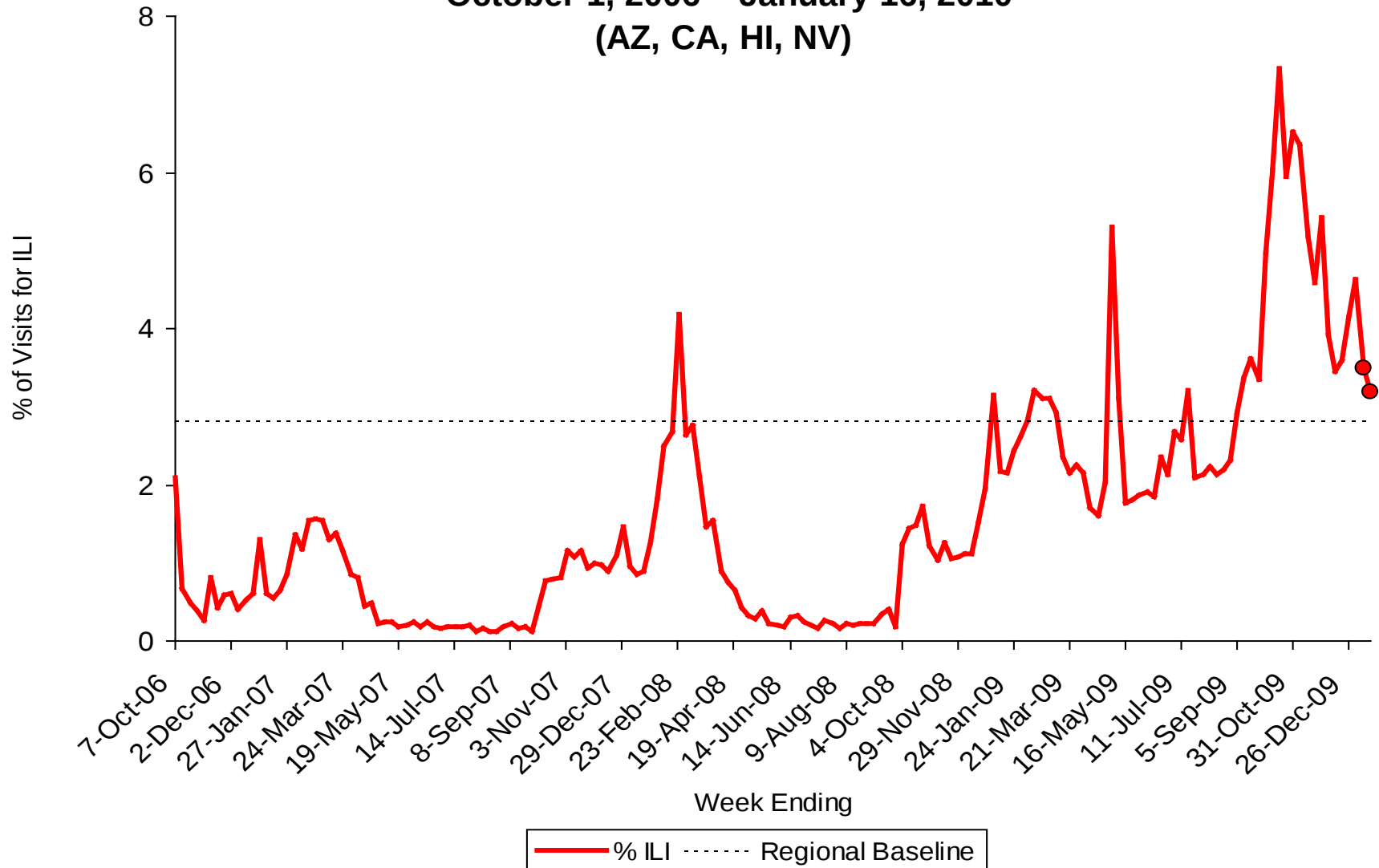


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Region 9 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(AZ, CA, HI, NV)



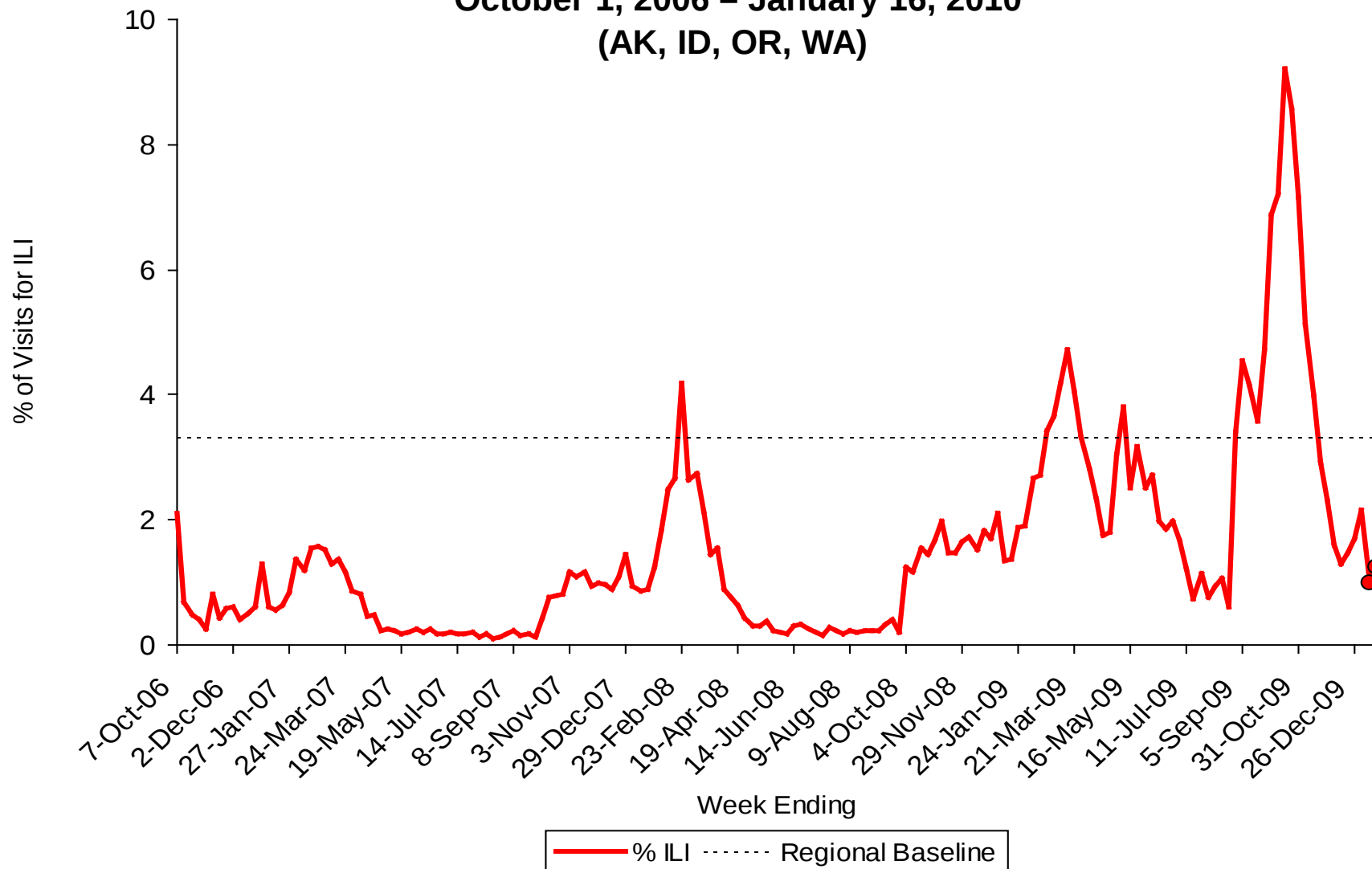
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Region 10 Summary Percentage of Visits for Influenza-like Illness (ILI) Reported by *ILINet*

October 1, 2006 – January 16, 2010
(AK, ID, OR, WA)



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