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Public Health
Seattle & King County

May 24, 2010

INFLUENZA SITUATION SUMMARY REPORT

The Emergency Order requiring the report of all hospitalized and fatal laboratory-confirmed influenza cases to Public Health expired on May 15, 2010. Given this, and also given that influenza activity has been very low for the past several weeks, this will be the last influenza report published for the 2009-2010 season. Surveillance activities will continue, however. This report summarizes surveillance surrounding the influenza outbreaks that occurred in spring 2009 and fall 2009.

Snapshot (updated 5/24/10):

- Emergency department (ED) visits for influenza like illness (ILI) peaked unexpectedly in May 2009, then fell over the summer months and began to rise again in September 2009, reaching a peak in November 2009. Currently, ED visits for ILI are at levels comparable to those observed in the beginning of September 2009, just prior to the surge in influenza-related ED visits during the fall outbreak.
- Public Health first received reports of King County residents hospitalized with laboratory-confirmed 2009 H1N1 influenza in April 2009. Reports of laboratory-confirmed influenza hospitalizations were bimodal, with a local peak in May 2009, and a second peak in November 2009. Public Health has not received any reports of laboratory-confirmed influenza hospitalizations with onset after the week ending 4/17/10.
- A total of 25 influenza deaths have occurred among King County residents since the beginning of the 2009 H1N1 outbreak. Twenty two of these deaths were associated with 2009 H1N1, one was associated with an influenza A virus that was not subtyped, and one was associated with an influenza B virus. No laboratory-confirmed influenza deaths have occurred in King County residents since mid-February.
- The percentage of specimens testing positive for influenza from our outpatient surveillance system was higher than typical in spring and fall 2009, and is currently in the same range as the average proportion observed at this time of year.
- The percentage of rapid antigen tests positive for influenza was higher than typical in spring and fall 2009, and is currently in the same range as the average proportion observed this time of year.
- Since mid-October, 14 long-term care facilities have reported cases of influenza like illness in their facilities. No reports of influenza like illness have been received from long-term care facilities since March 2010.
- School absenteeism has overall been low and stable over the course of the 2009-2010 school year. Surrounding school breaks, there were transient increases in absenteeism. Currently, school absenteeism is low and stable, with the majority of schools reporting <10% of students absent.

For information on current surveillance and testing guidelines for 2009 H1N1 influenza, see: http://www.kingcounty.gov/healthservices/health/preparedness/pandemicflu/swineflu/providers.aspx.

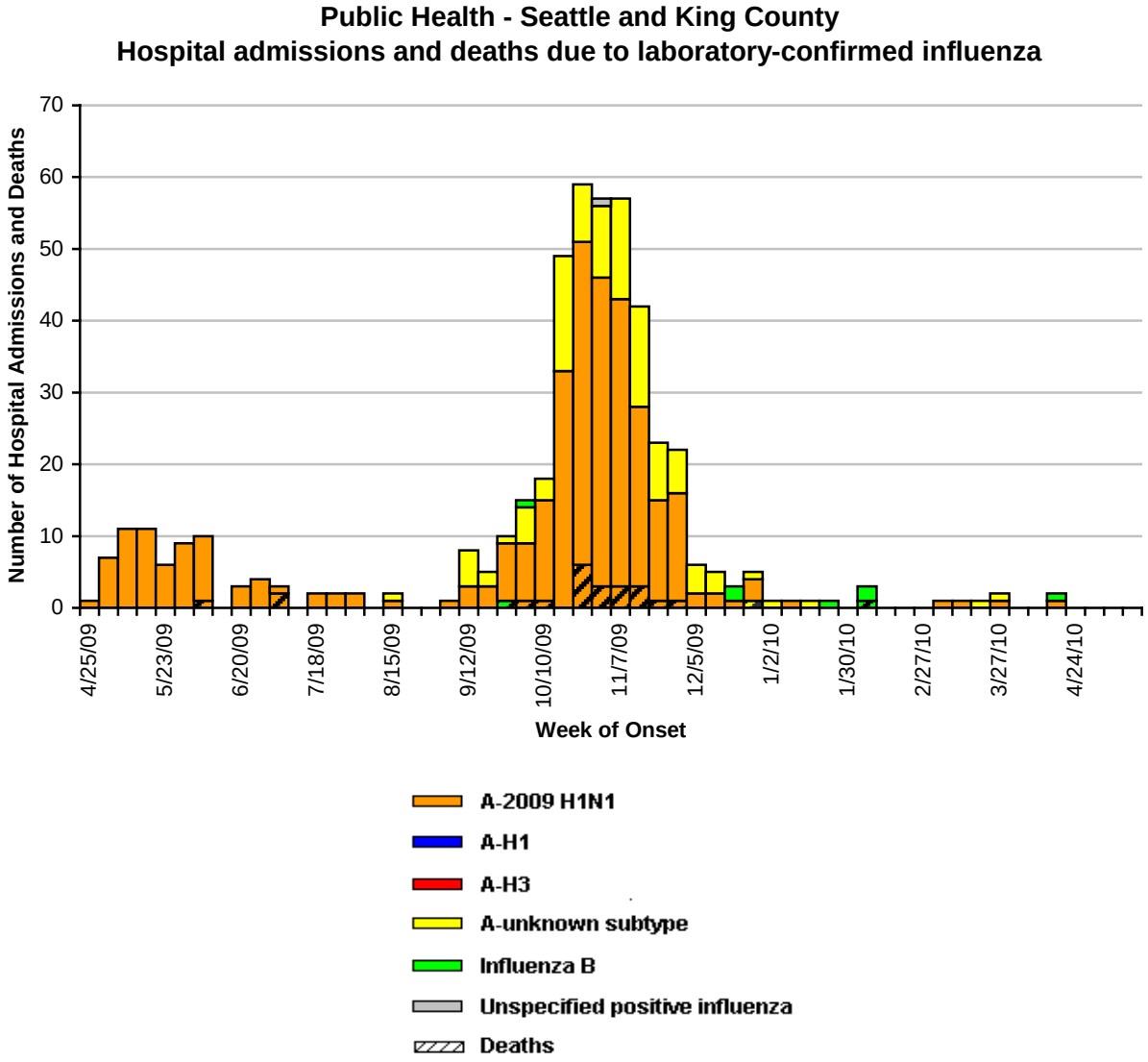
Case counts, 2009-2010 flu season (updated 5/24/10).

2009-2010 Influenza Season (starting October 5th):

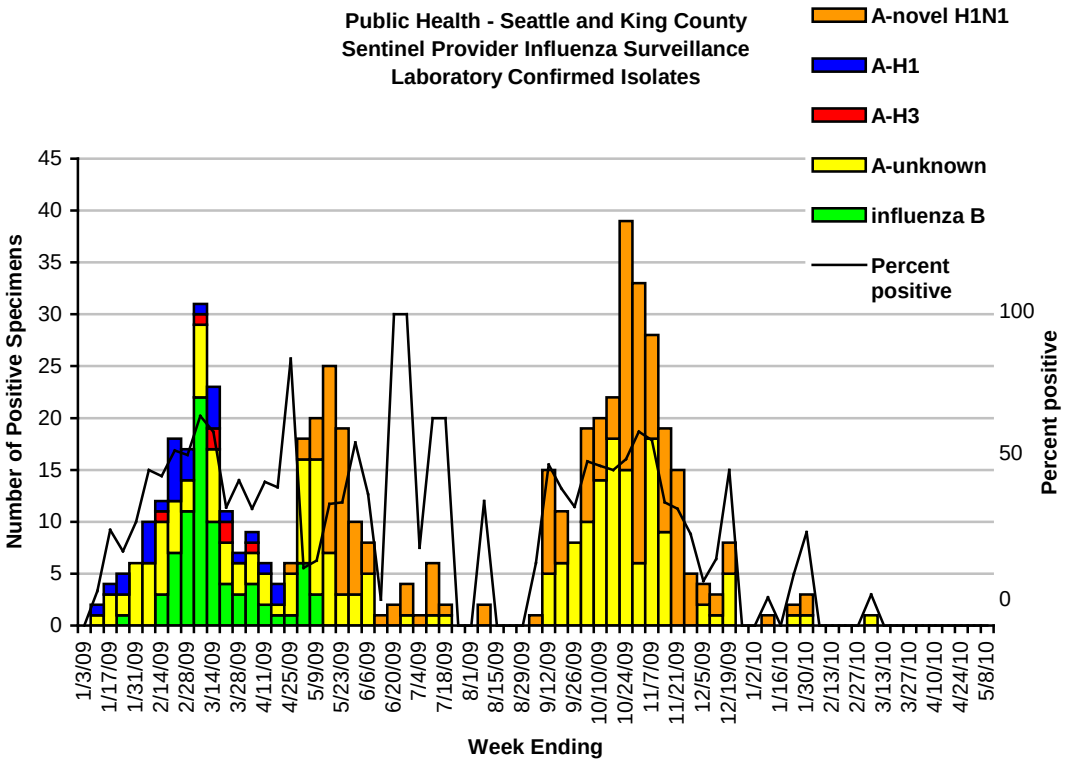
Lab-confirmed 2009 Influenza A H1N1 Hospitalizations:	277
Lab-confirmed 2009 Influenza A H1N1 Deaths:	19
Lab-confirmed Influenza Hospitalizations, not H1N1 or not tested for H1N1:	104
Lab-confirmed Influenza Deaths, not H1N1 or not tested for H1N1:	2

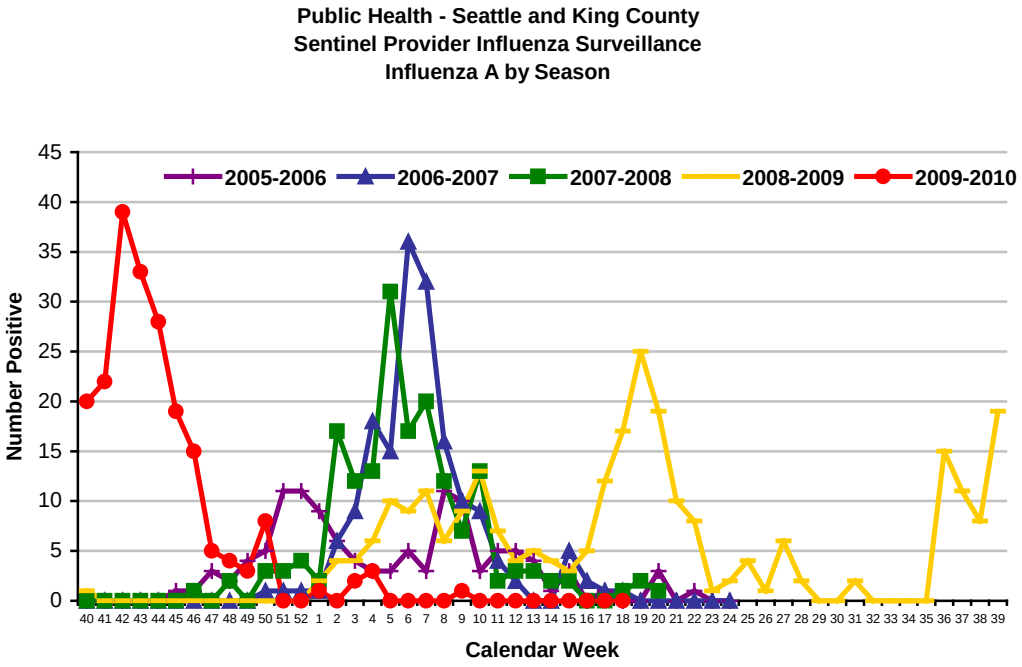
2008-2009 Influenza Season (through October 4th):

Lab-confirmed 2009 Influenza A H1N1 Hospitalizations:	82
Lab-confirmed 2009 Influenza A H1N1 Deaths:	3
Lab-confirmed Influenza Hospitalizations, not H1N1 or not tested for H1N1:	12
Lab-confirmed Influenza Deaths, not H1N1 or not tested for H1N1:	1

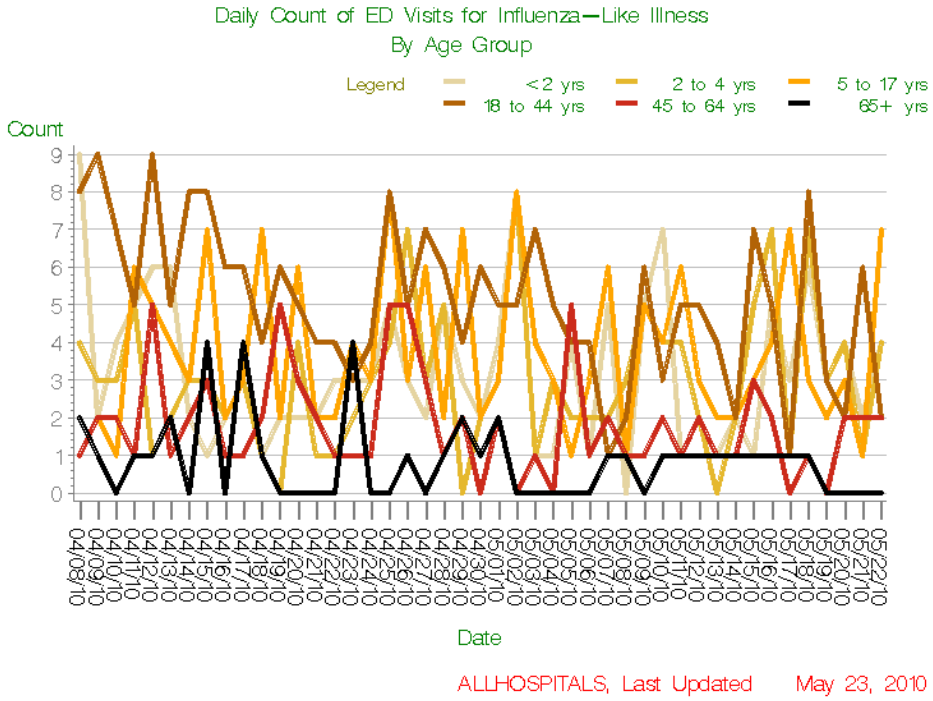


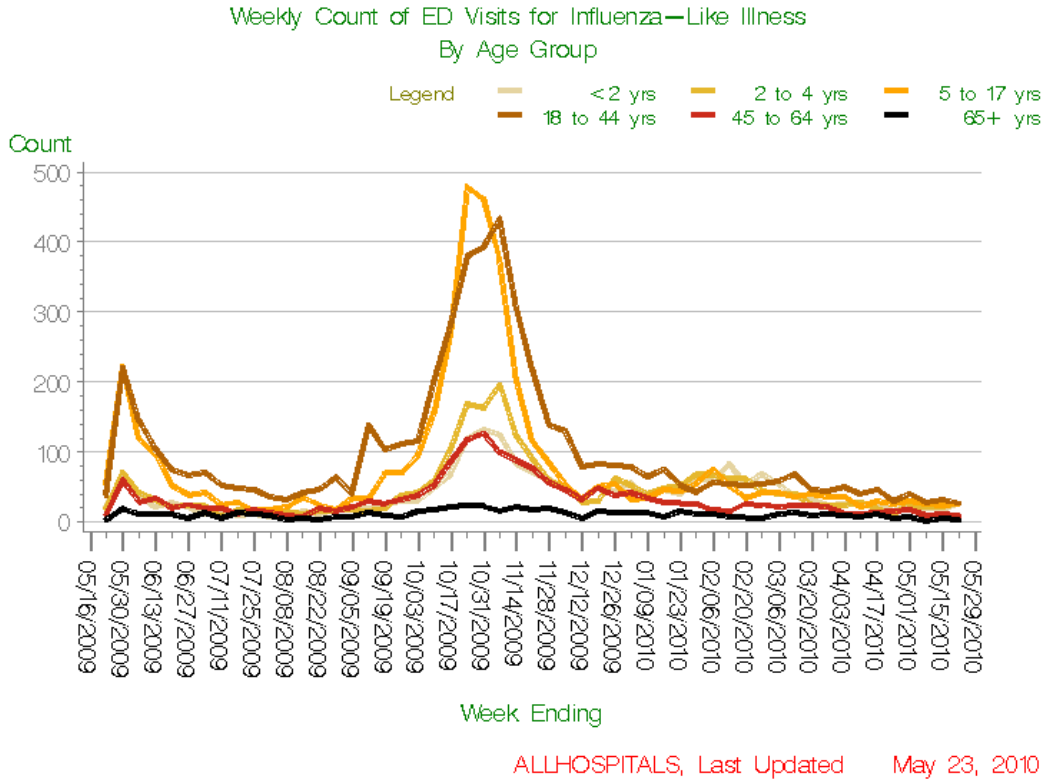
Sentinel Provider Surveillance through the Public Health Laboratory (updated 5/24/10): Since mid-May 2009, all subtyped flu isolates reported through the sentinel provider surveillance system have been 2009 H1N1. The number of specimens submitted through the sentinel provider surveillance system climbed in spring 2009 and again in fall 2009, as did the percentage of specimens that tested positive for influenza. Since the beginning of 2010, the number and percent of specimens testing positive for influenza has been within or below typical ranges.



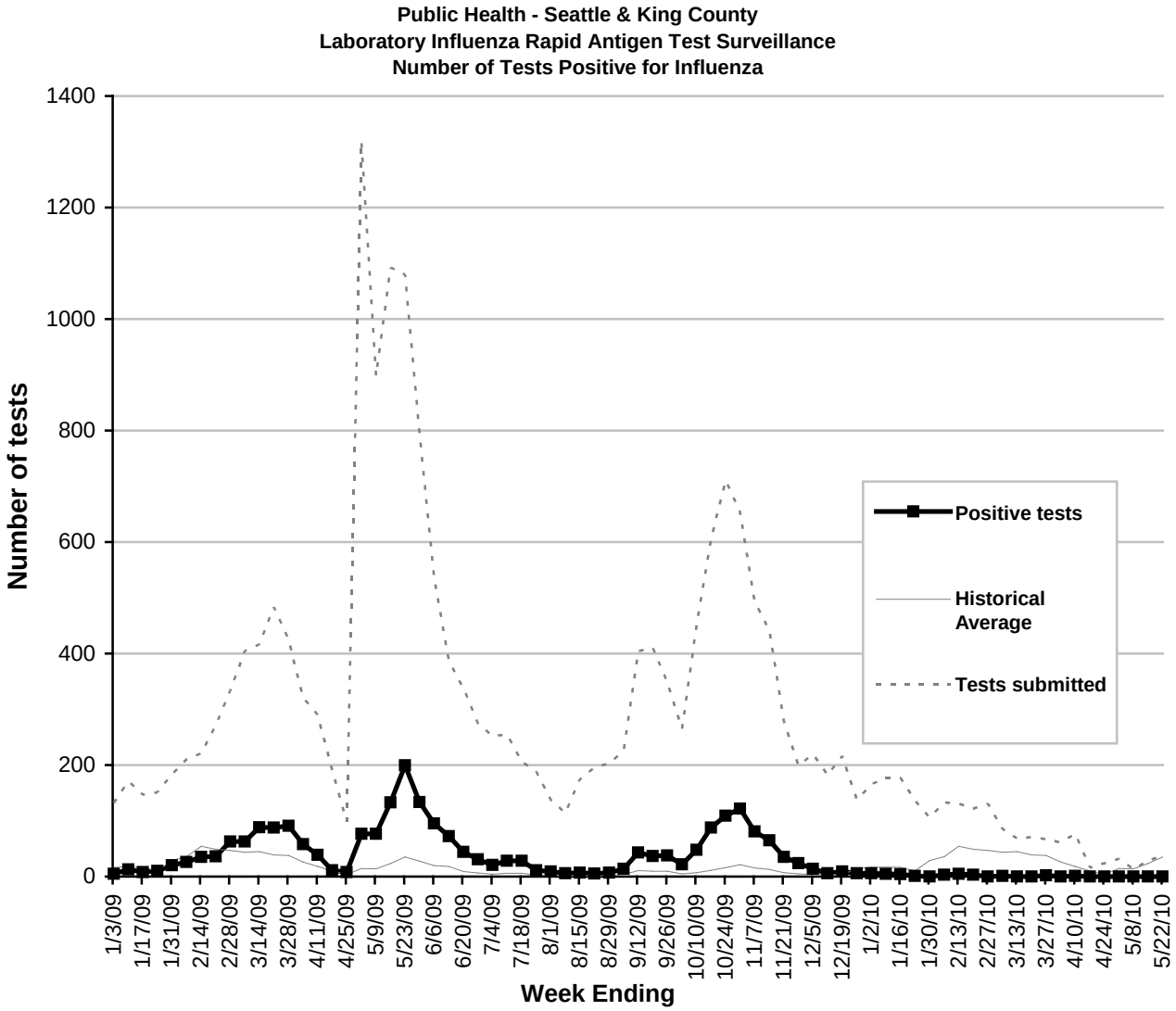


Syndromic Surveillance (updated 5/24/10):
The daily count of Emergency Department (ED) visits for influenza like illness (ILI) rose unexpectedly in spring 2009, fell during the summer months, and peaked in fall 2009. Currently, the overall count and proportion of ED visits for ILI is comparable to levels observed at the beginning of September 2009, just prior to the surge in influenza-related ED visits during the fall outbreak. The overall proportion of pneumonia admissions is stable and comparable to levels at the beginning of September 2009. The proportion of pneumonia admissions among children under 2 years of age, which had been on an increasing trend since November, has been stable since the month of March and remains elevated compared with the beginning of September 2009.

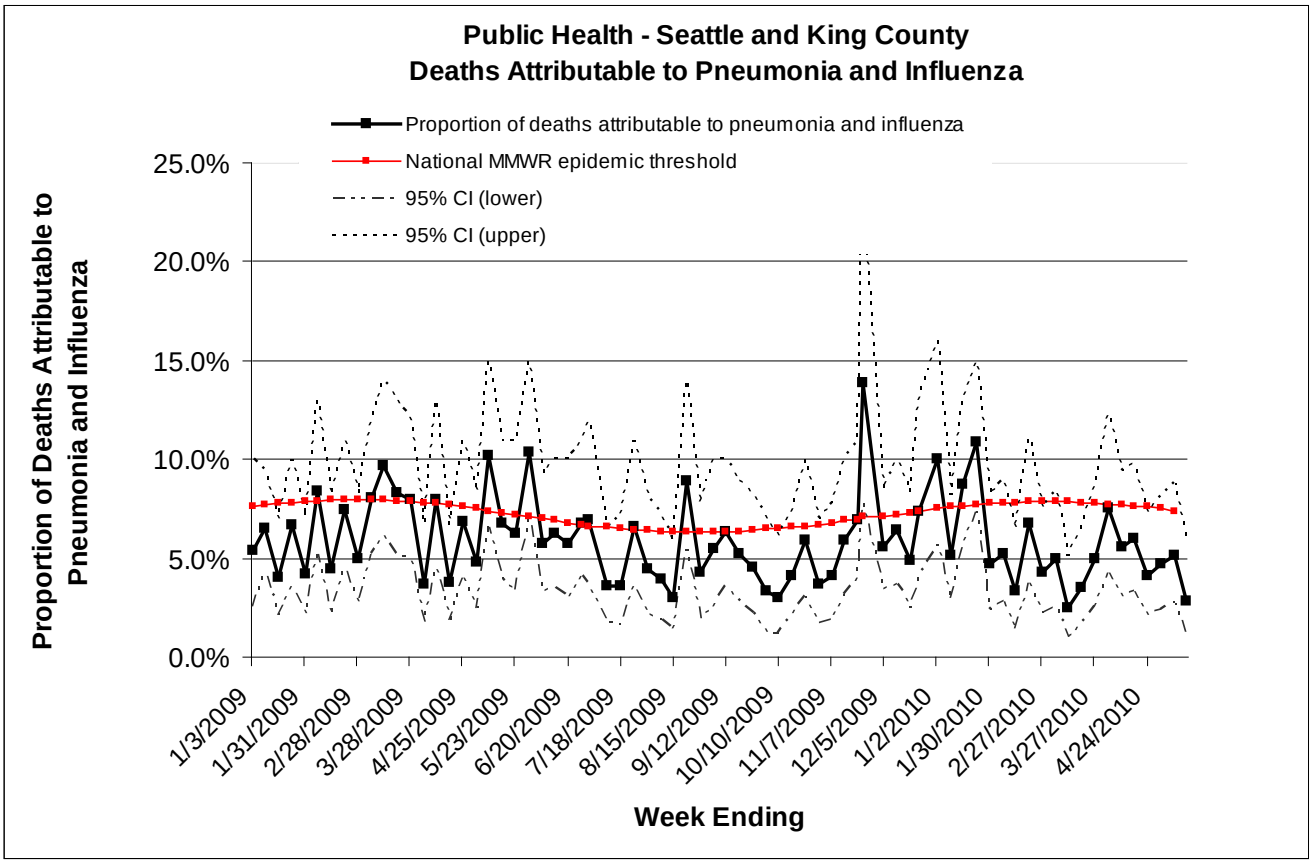




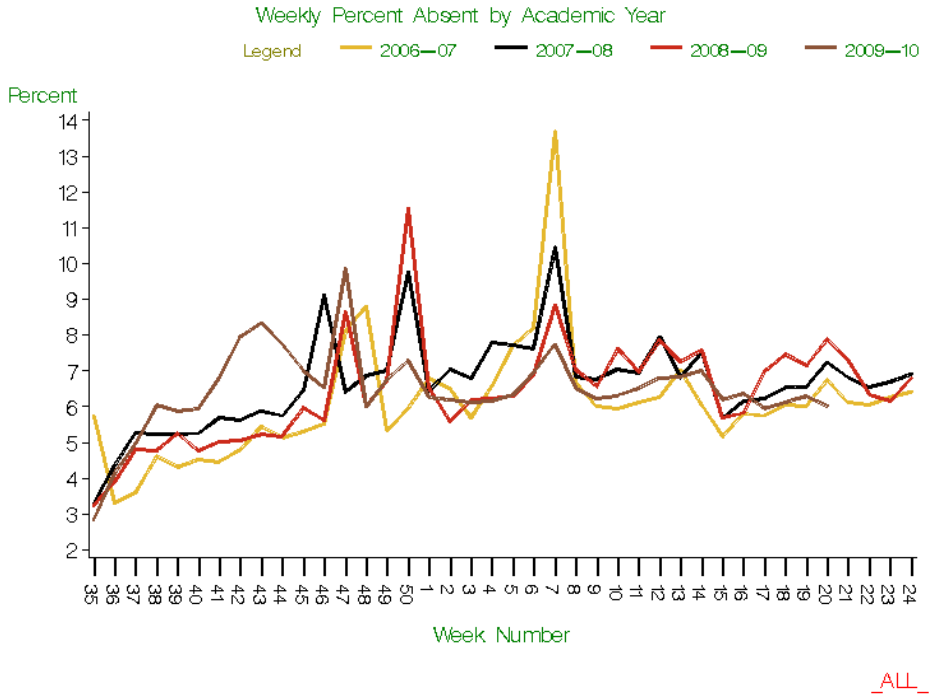
Rapid Antigen Surveillance (updated 5/24/10): In spring 2009 and again in fall 2009, there was a sudden increase in the total number of rapid antigen tests reported by hospital laboratories, and a concomitant increase in the number of positive tests. Since a local peak in November 2009, there has been a decrease in both the total number of rapid antigen tests reported by hospital laboratories and also the number of those tests that are positive for influenza. There have been no rapid antigen tests positive for influenza reported since the week ending 4/10/2010. Note that rapid antigen tests are only 10-70% sensitive in detecting 2009 H1N1 influenza. For information on respiratory virus detections conducted at University of Washington's Clinical Virology Lab, see http://depts.washington.edu/rspvirus.

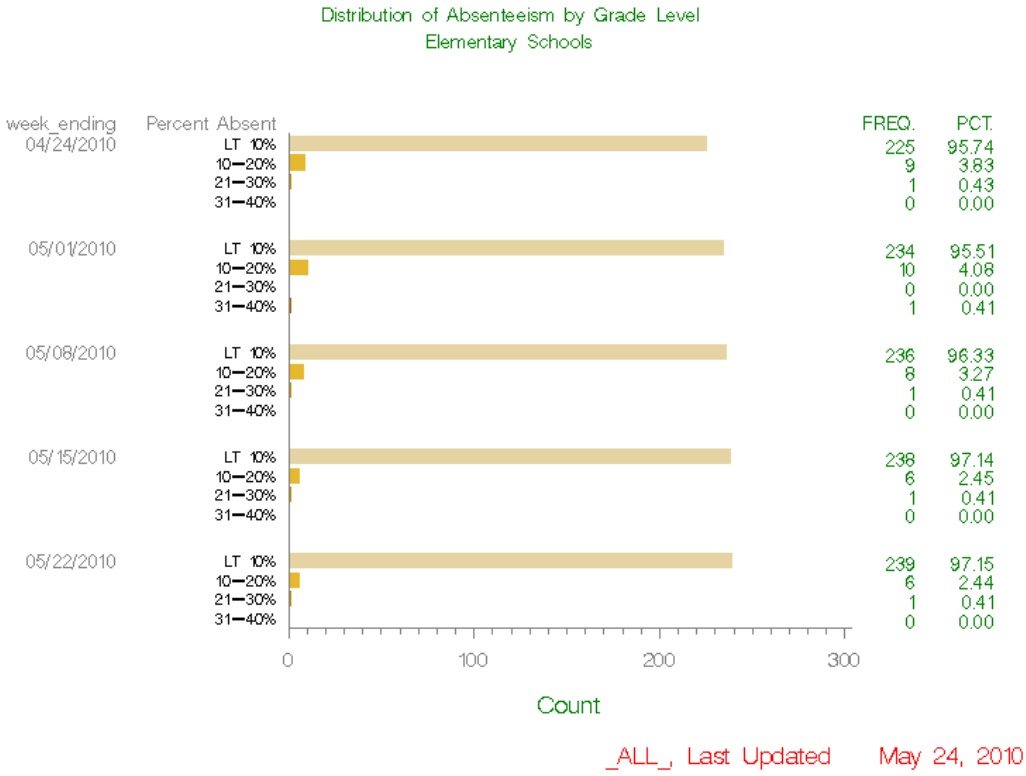


P & I (Pneumonia and Influenza) Deaths (updated 5/24/10): The figure below shows the national epidemic threshold and the proportion of King County deaths attributed to pneumonia and influenza each week, along with the 95% confidence interval. Note that the pneumonia and influenza death count captures cases in which the death certificate has attributed the death, in whole or part, to influenza or pneumonia; laboratory testing may or may not have been done to confirm. At the peak of flu season, the national epidemic threshold typically ranges from 7.5 – 8.0%. The proportion of deaths attributed to pneumonia and influenza typically varies slightly from week to week. In some weeks, higher or lower than typical proportions of deaths attributed to pneumonia and influenza were associated with variation in the reporting timeframe, as occurred during weeks when the Office of Vital Statistics was opened for a shortened week because of holiday or furlough closures. 2.8% of deaths reported during week 19 were attributed to pneumonia and influenza (national epidemic threshold not yet available). 5.1% of deaths reported during week 18 were attributed to pneumonia and influenza, below the national epidemic threshold of 7.4%.

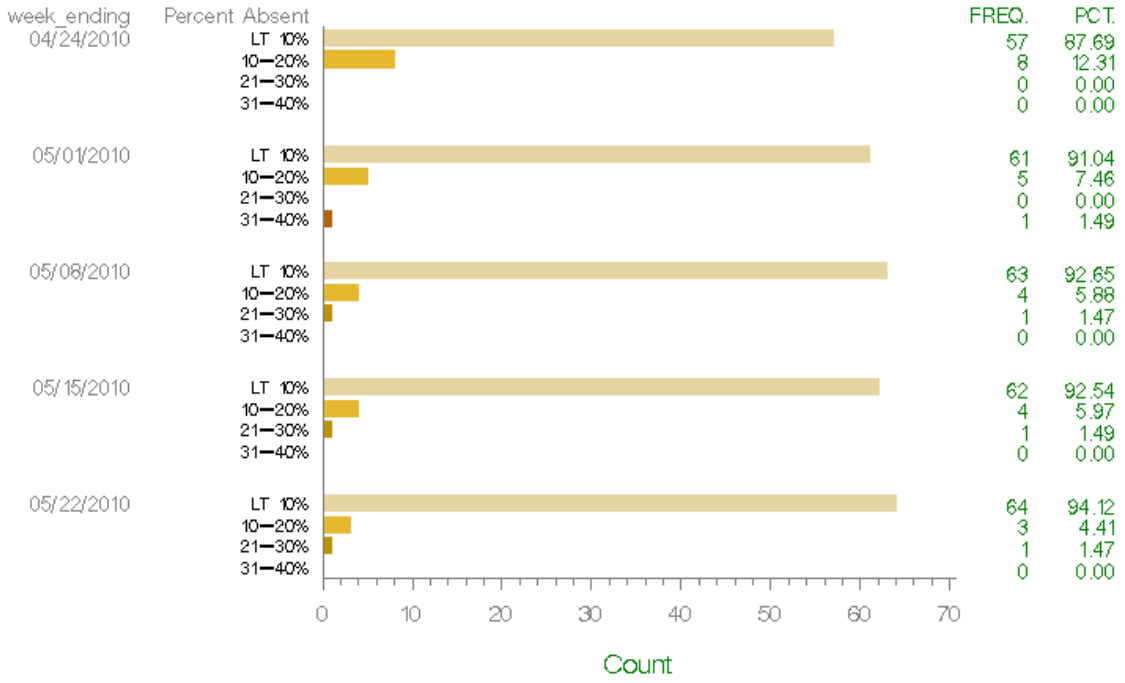


School Absenteeism (updated 5/24/10): Eighteen of 19 King County school districts are reporting absenteeism through our automated system. Historical data allowing examination of trends over time are now available for the majority of districts. Over the course of the 2009-2010 school year, absenteeism has been fairly low and stable, with a transient increase in absenteeism observed just before and after school holidays. Overall, the majority of schools have reported <10% of students absent. High schools tend to report higher levels of absenteeism than do elementary and middle schools. Comparing the absenteeism reported during the 2009-2010 school year with previous school years, in fall 2009 absenteeism was slightly higher than typical. However, because reason for absenteeism is not available, it is not possible to ascertain whether this transient increase in absenteeism was attributable to influenza like illness.



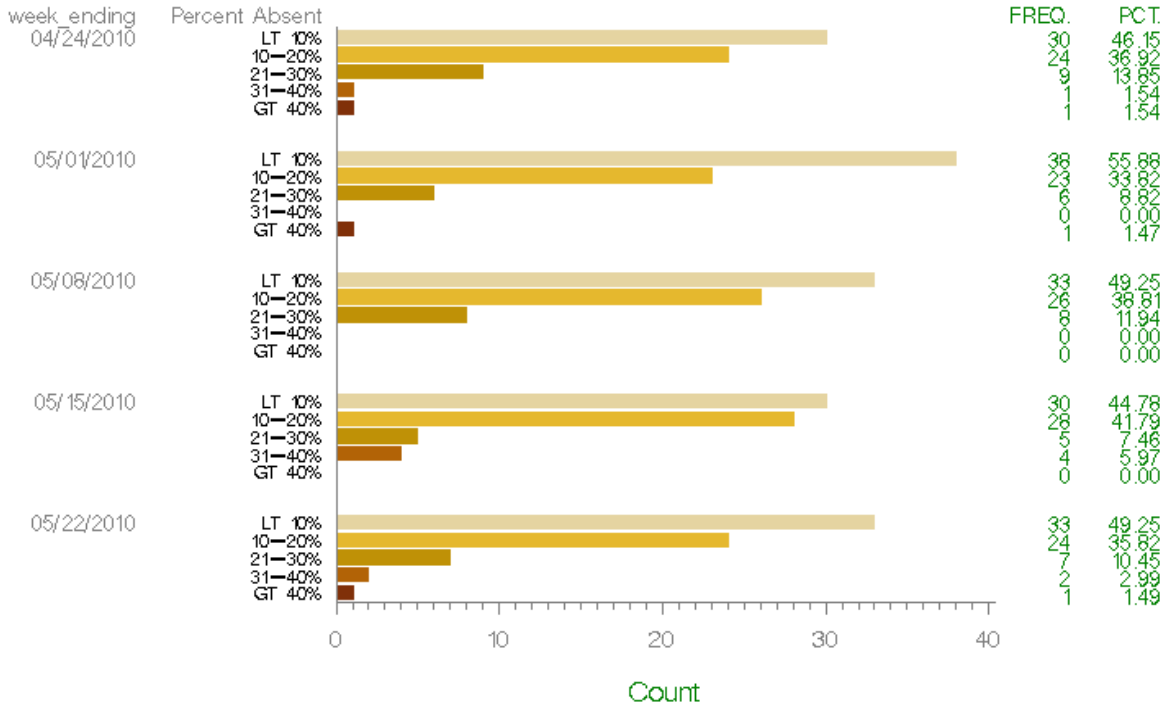


Distribution of Absenteeism by Grade Level
Middle Schools



ALL, Last Updated May 24, 2010

Distribution of Absenteeism by Grade Level
High Schools



ALL, Last Updated May 24, 2010

Beyond King County

Global (updated 5/24/10): The World Health Organization (WHO) prepares a weekly synopsis of global influenza activity, drawn from more than 214 countries and overseas territories or communities that have reported laboratory-confirmed cases of pandemic influenza 2009 H1N1. The WHO synopsis excerpted below utilized data collected through 5/16/10.

- The most active areas of 2009 H1N1 influenza virus transmission currently are in parts of the Caribbean and Southeast Asia.
- In the temperate zone of the northern and southern hemisphere, 2009 H1N1 influenza activity remains low to sporadic.
- In central Africa, there has been increased transmission of seasonal influenza type B viruses; influenza B viruses account for 85% of all typed influenza isolates in central Africa.
- Influenza B also continues to be detected at low levels across parts of Asia and Europe, and has also been reported in Central America.

For more information on global influenza activity, visit the following site:

http://www.who.int/csr/don/2010_05_21/en/index.html

United States (updated 5/24/10): Nationally, the dynamics of influenza over the course of 2009-2010 were similar to the influenza dynamics observed in King County. There was a spike in influenza activity in spring 2009 and a second spike in fall 2009. Flu activity is currently very low.

During week 19 (May 9-May 15, 2010), influenza activity decreased as compared with the previous week. The synopsis for week 20 is not yet available. The synopsis below reflects data from week 19.

- 14 (0.9%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division were positive for influenza.
- All 4 subtyped influenza A viruses were 2009 H1N1 influenza.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- No influenza-associated pediatric deaths were reported.
- The proportion of outpatient visits for influenza-like illness (ILI) was 0.8%, below the national baseline of 2.3%. All 10 regions reported ILI below region-specific baseline levels.
- No states reported geographically widespread or regional influenza activity, one state reported local influenza activity, Puerto Rico and 19 states reported sporadic influenza activity, the District of Columbia, Guam and 30 states (including Washington state) reported no influenza activity, and the U.S. Virgin Islands did not report.

For more information on nationwide flu activity, visit the following site: http://www.cdc.gov/flu/weekly/

Washington State (updated 5/24/10): In Washington state, the dynamics of influenza activity over the course of 2009 and 2010 were similar to the influenza dynamics observed in King County. There was a spike in influenza activity in spring 2009 and a second spike in fall 2009. According to the Washington state Department of Health, there is currently no reported flu activity in the state.

During week 19 (May 9-May 15, 2010), Washington state reported no influenza activity. The synopsis for week 20 is not yet available. The synopsis below reflects data from week 19.

- The Washington state Department of Health (DOH) reported no influenza activity in Washington during week 18
- The Department of Health has received reports of two hospitalized patients with lab-confirmed influenza who became ill in the past 4 weeks.
- From September 19, 2009 to May 15, 2010, the DOH received reports of 1,406 hospitalized and 83 fatal cases of laboratory-confirmed influenza.
- The proportion of outpatient visits for influenza like illness (ILI) is very low.

For more information on statewide flu activity, visit the following site:
http://www.doh.wa.gov/EHSPHL/Epidemiology/CD/fluupdate.pdf.