

**Communicable Disease Epidemiology
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INFLUENZA SITUATION REPORT for CDC Week 42 (ending 10/24/09)

Snapshot (updated 10/29/09):

Several indicators continue to show rising influenza activity in King County. Emergency department visits for influenza-like illness have been increasing since the beginning of September and now exceed levels observed during the spring H1N1 outbreak. Hospital admits for 2009 H1N1 flu also currently exceed levels seen at the height of the spring outbreak. One death was reported this week in an adult male with predisposing conditions who died prior to arrival at a hospital; preliminary tests were positive for influenza A and confirmatory tests are pending to determine if the strain was 2009 H1N1.

Clinics that are part of Public Health's outpatient surveillance system show an increase in both the number of specimens and the percentage of positive tests for influenza; levels of both are unusually high for this time of year. Local hospital laboratories have reported increased requests for rapid flu testing, and an increased proportion testing positive for flu. School absenteeism has been increasing in recent weeks across all age groups. However, information from past school years is not yet available for most school districts, so it usually cannot be determined whether the observed absenteeism is abnormal for this time of year.

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 10/29/09).

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

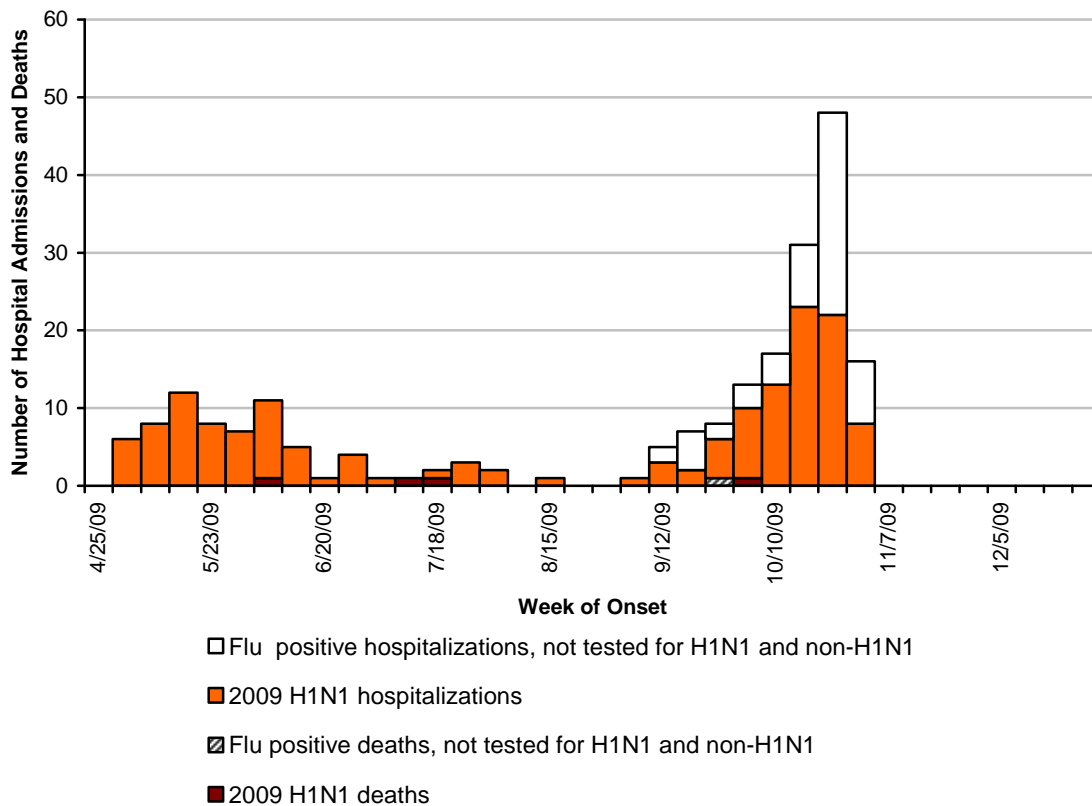
2009 H1N1 Hospitalizations:	77	Hospitalizations, non-H1N1 or not tested:	47
2009 H1N1 Deaths:	1	Deaths, non-H1N1 or not tested:	1

2008-2009 Influenza Season:

2009 H1N1 Hospitalizations:	82	Hospitalizations, non-H1N1 or not tested:	12
2009 H1N1 Deaths:	3	Deaths, non-H1N1 or not tested:	1

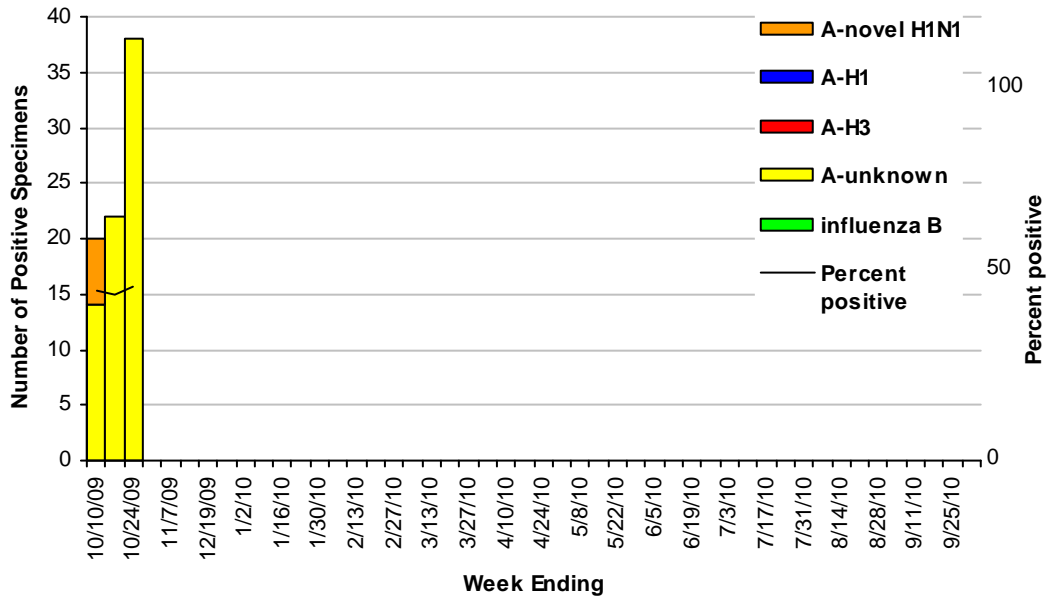
Note: Prior to 9/16/09 only confirmed H1N1 hospitalizations were notifiable; after 9/16/09 all lab confirmed hospitalizations became notifiable.

**Public Health - Seattle and King County
Hospital admissions and deaths due to laboratory-confirmed influenza**

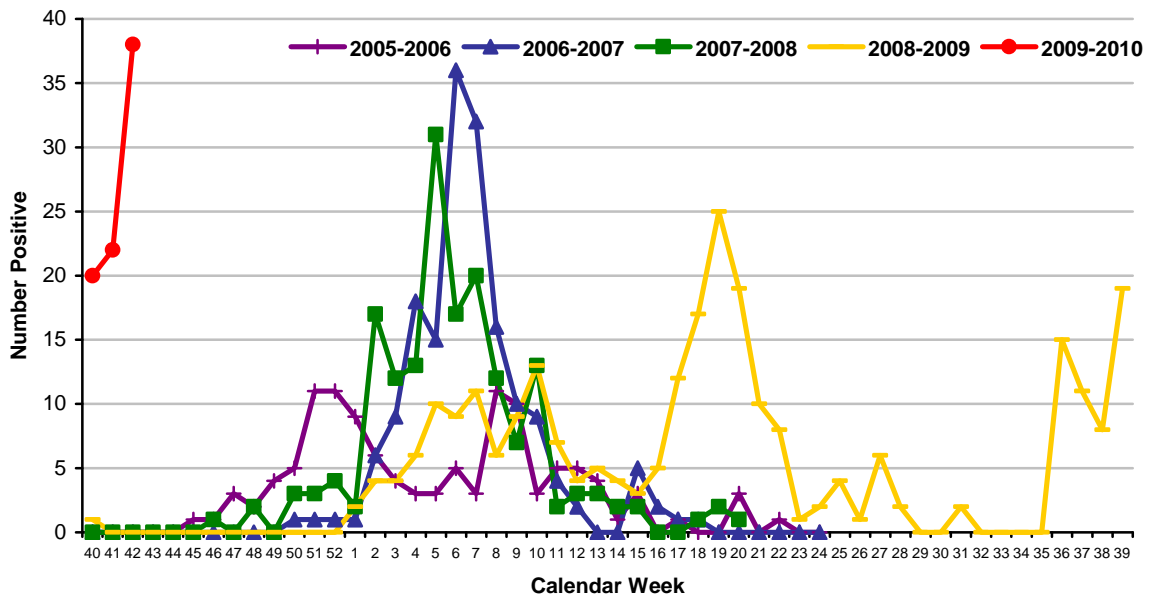


Sentinel Provider Surveillance through the Public Health Laboratory (updated 10/29/09): During week 42, 73 specimens were submitted by sentinel providers for flu testing, 38 of which were positive for influenza (subtyping not yet performed). To compare the current flu season with previous years, see graphs below.

**Public Health - Seattle and King County
Sentinel Provider Influenza Surveillance
Laboratory Confirmed Isolates**

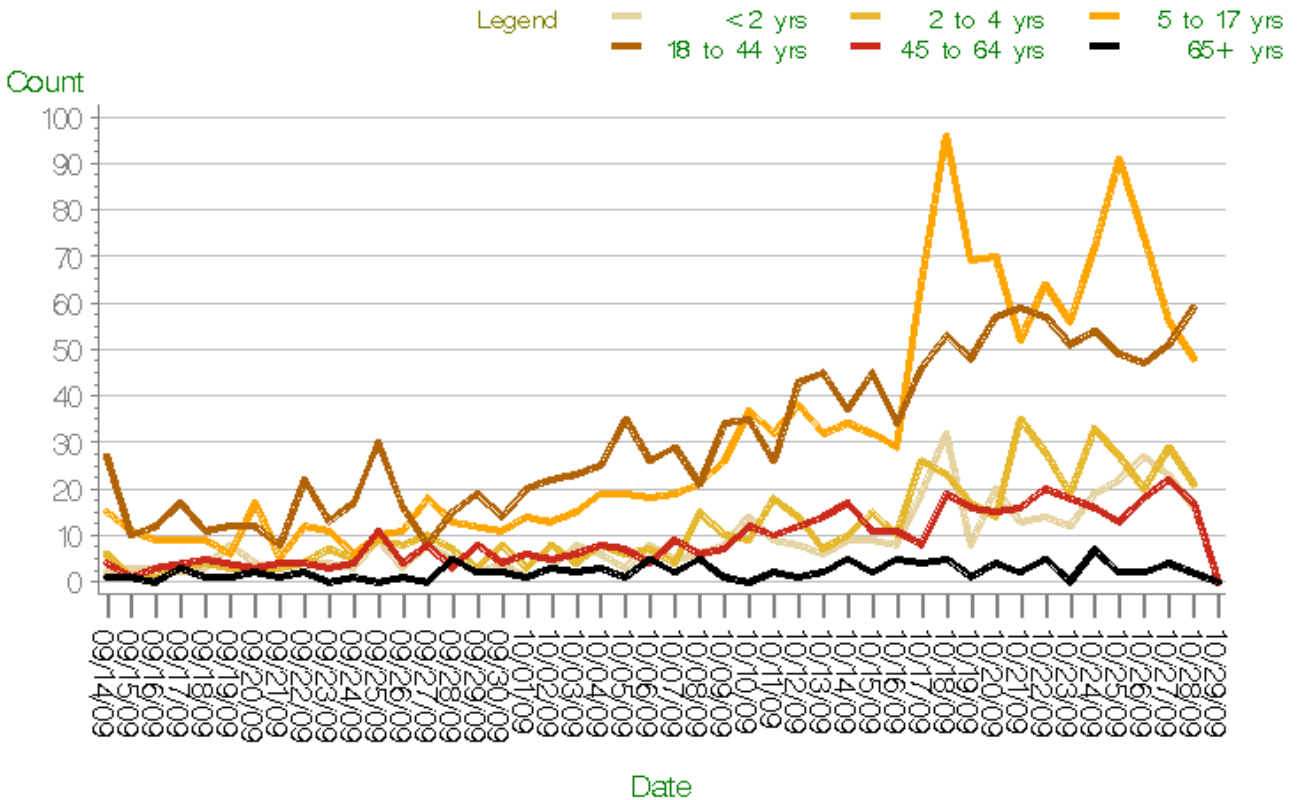


**Public Health - Seattle and King County
Sentinel Provider Influenza Surveillance
Influenza A by Season**

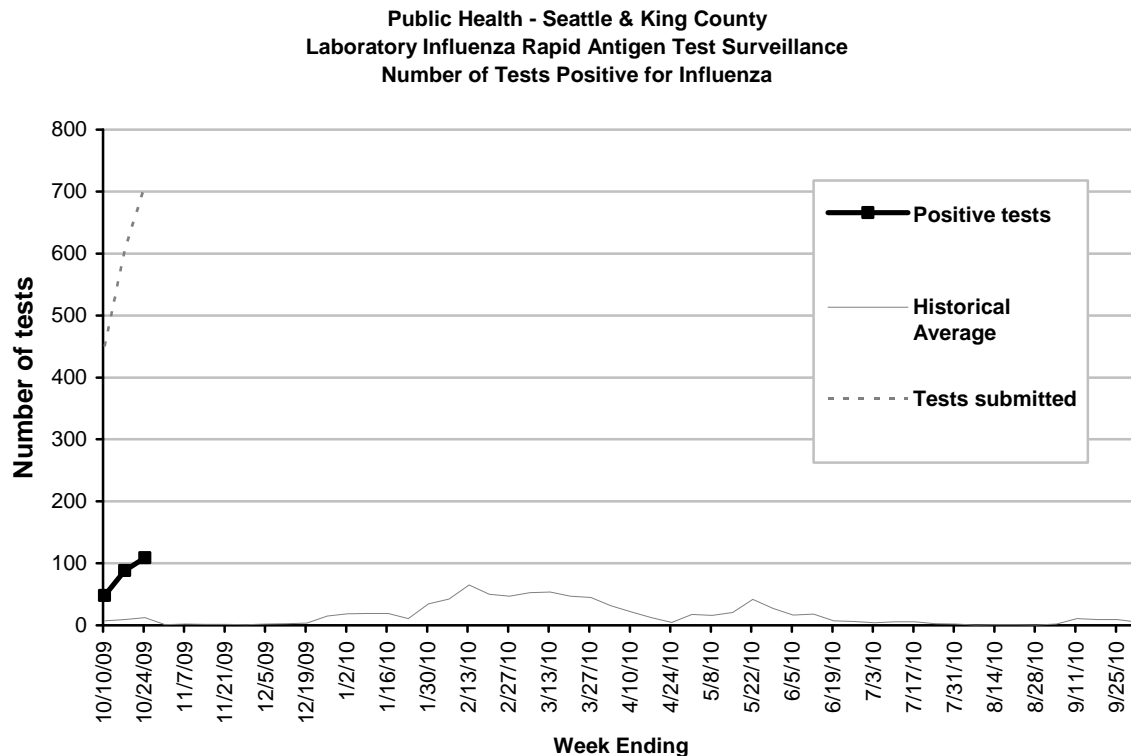


Syndromic Surveillance (updated 10/29/09): During week 42, the weekly count of emergency department (ED) ILI visits was eight-fold higher compared with the week ending August 29th, and 2.5-fold higher compared to the peak count observed during the 08-09 seasonal flu period (before the H1N1 outbreak). The count of ED ILI visits for all age groups, except those 65 years and older, was elevated compared with the peak observed during the 08-09 seasonal influenza period. Furthermore, among every age group except adults 65 years and older, the volume of ED ILI visits during week 42 was greater than the peak count observed during the novel influenza A H1N1 outbreak. The weekly volume of ED ILI visits is currently highest among children ages 5-17 and adults ages 18-44 years. The weekly count of ED admissions for ILI has been increasing during the past month, and is currently higher than the peaks observed during the 2008-09 influenza season, and during the 2009 H1N1 outbreak. Overall, the weekly count of ED admissions for pneumonia was on a downward trend from the peak in March 2009 through the end of September 2009, but began to increase in early October 2009. The most notable increase in ED pneumonia admissions during the last month has been among children 5-17 years of age, but for week 42, the weekly volume was low relative to the peak count observed at the end of March 2009.

Daily Count of ED Visits for Influenza—Like Illness
By Age Group



Rapid Antigen Surveillance (updated 10/29/09): During week 42, 15.4% of rapid antigen tests reported by hospital laboratories were positive for influenza, which is more than five times normal for this time of year. Rapid test result levels have been elevated since the end of August, when 2-5% of tests were positive for flu. 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>

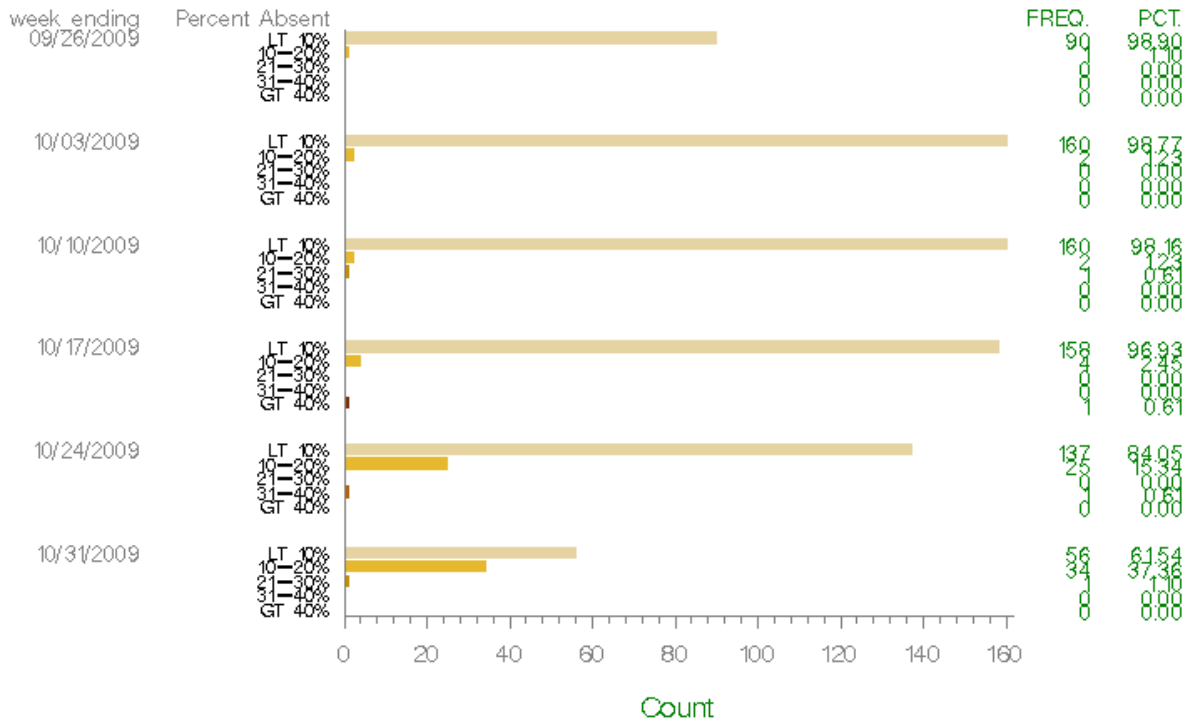


P & I (Pneumonia and Influenza) Deaths (updated 10/27/09): 5.9% of deaths were attributed to pneumonia and influenza during week 42 (national threshold not yet available). During the peak of flu season, the national epidemic threshold typically ranges from 7.5 – 8.0%. The last week the national threshold was exceeded was in mid-September (6.4% vs. 6.3%).

Long-term Care Facilities (updated 10/29/09): Public Health is currently working with three long-term care facilities reporting influenza-like activity. In recent weeks, one long-term care facility reported a resident with a rapid flu test positive for influenza B; viral cultures were subsequently negative for influenza.

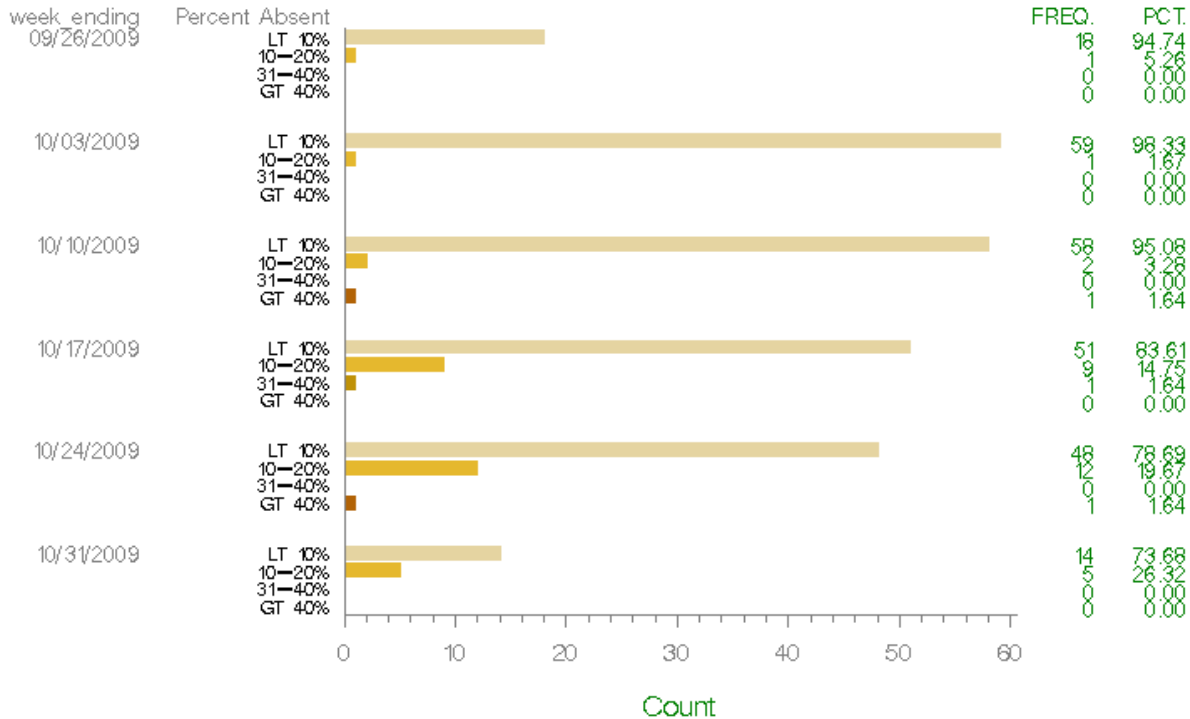
School Absenteeism (updated 10/27/09): Seventeen of 19 King County school districts are reporting absenteeism through our automated system. Schools for all age-groups reported increased absenteeism during week 42 (see graphs). Historical data are currently only available for 2 of the 17 reporting school districts. There has been an increase in absenteeism in one of these school districts over the past several weeks compared with the same time period the last two years. Few severe illnesses are being reported.

Distribution of Absenteeism by Grade Level
Elementary Schools



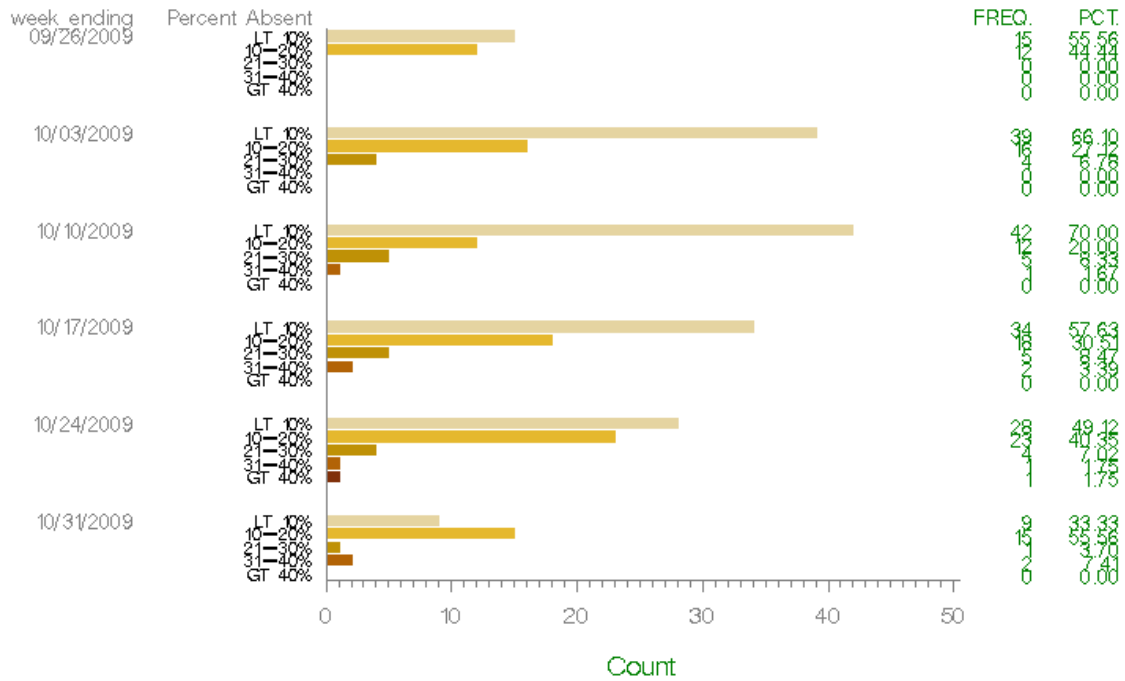
ALL Last Updated Oct 27, 2009

Distribution of Absenteeism by Grade Level
Middle Schools



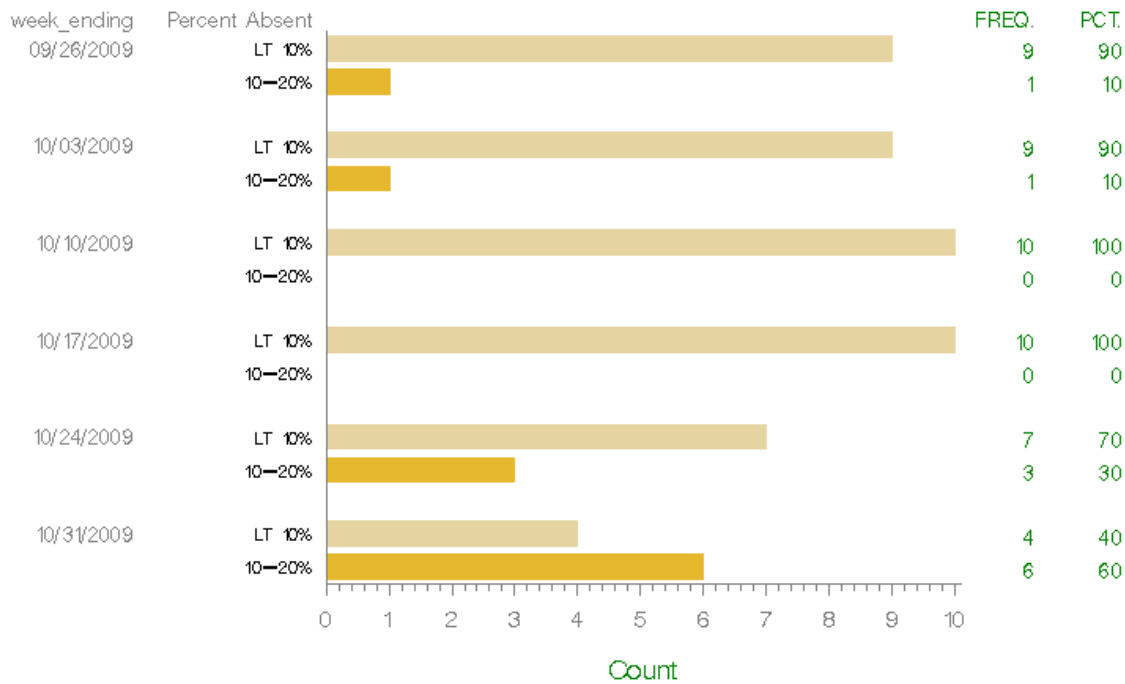
ALL Last Updated Oct 27, 2009

Distribution of Absenteeism by Grade Level
High Schools



ALL Last Updated Oct 27, 2009

Distribution of Absenteeism by Grade Level
K-8 Schools



ALL Last Updated Oct 27, 2009

Beyond King County

United States (updated 10/27/09): During week 41 (October 11-17, 2009), influenza activity increased in the U.S.

- 4,855 (37.5%) 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 subtyped influenza A viruses being reported to CDC were 2009 influenza A (H1N1) viruses.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.
- Eleven influenza-associated pediatric deaths were reported. Nine of these deaths were associated with 2009 influenza A (H1N1) virus infection and two were associated with an influenza A virus for which subtype is undetermined.
- The proportion of outpatient visits for influenza-like illness (ILI) was above the national baseline. All 10 regions reported ILI above region-specific baseline levels.
- Forty-six states reported geographically widespread influenza activity, Guam and three states reported regional influenza activity, one state, the District of Columbia, and Puerto Rico reported local influenza activity, and the U.S. Virgin Islands did not report.

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

Washington State (updated 10/27/09):

- During October 18–24 (week 42), the number of severe influenza cases reported to the Department of Health (DOH) increased from 176 in week 41 to 214 in week 42. Of the 214 severe cases reported during week 42, 90 reside east and 124 reside west of the Cascade Mountains.
- From September 19–October 24, DOH received reports of 540 hospitalized and 13 fatal cases of laboratory-confirmed influenza.
- Almost all circulating influenza viruses in Washington are 2009 H1N1 viruses. Infections with influenza B are being reported sporadically.
- Influenza activity is currently high in both western and eastern Washington. Influenza activity is increasing in western Washington. Emergency room data suggest activity may be leveling off in eastern Washington.
- The geographic distribution of influenza activity in Washington was classified as widespread which means influenza activity is elevated in over half of the regions in the state.

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