Influenza Surveillance Season Summary, 2013-14

The timing of the 2013-2014 influenza season was similar to that of 2012-2013, increasing in early December, peaking in January and returning to baseline in March. The influenza A (H1N1) strain predominated locally, in contrast to the 2012-2013 season, when influenza A (H3N2) was the main circulating strain.

- **Syndromic surveillance**: The percent of emergency department (ED) visits for influenza-like illness (ILI) increased above baseline during the first week of December, reached peak activity in mid- to late January, and returned to baseline in mid-March. The peak volume of ED visits for ILI (approximately 4.0%) was similar to levels observed last year. As is typical, volume was highest among pediatric age groups, where peak levels were approximately 14% among children under 5 years, and 7.5% among children aged 5-17 years. In the past five influenza seasons, peak volume of ED visits for ILI for all ages have ranged from 3.1% (2010-11) to 9.9% (2009-2010).

- **Lab-confirmed flu deaths**: During the 2013-14 influenza season, Public Health identified 22 laboratory-confirmed influenza deaths in King County residents (dates of death: 12/15/2013 – 06/19/2014) compared with 24 deaths last season. Of these, 20 were influenza A (7 H1N1, 13 untyped), and two were influenza B. Fifteen (68%) deaths occurred in persons aged 65 and over (median 79 years); no pediatric deaths were reported. Among the deaths, only one third were known to have received the 2013-2014 influenza vaccine. One half of reported influenza deaths occurred in women. Many additional flu deaths are likely to occur in King County residents each year that go unreported to Public Health. Based on CDC national mortality estimates, influenza causes closer to 200 deaths in King County in an average season.

- **Pneumonia and influenza deaths**: The proportion of deaths due to pneumonia and influenza exceeded the national epidemic threshold twice during the 2013-14 season, both times decreasing below the threshold the subsequent week. This is similar to observations in previous years.

- **Long-term care facility (LTCF) influenza-like illness (ILI) outbreaks**: Public Health investigated thirteen reports of ILI outbreaks in LTCF during the 2013-2014 season; of these, ten were laboratory-confirmed. Of the laboratory-confirmed outbreaks, eight were influenza A (1 H1N1, 1 H3N2, 6 untyped), one was influenza B, and in one facility both A and B viruses were detected. During the past five flu seasons, Public Health received between one and sixty reports of ILI outbreaks at LTCFs (mean, 21).

- **Sentinel surveillance**: Outpatient sentinel provider respiratory tract specimen submissions for influenza testing and the number that tested positive peaked during mid-January. Influenza A (H1N1) accounted for the vast majority of positive flu specimens (92%). Influenza B was detected intermittently and at low levels beginning in early January.

- **Rapid antigen test (RAT) surveillance**: The number of specimens submitted for influenza RAT at clinical laboratories peaked during mid-January, when 954 specimens were submitted. Positive RAT results indicated highest flu activity showed peaks in mid-late December and mid-February. This timing mirrored that of the 2012-13 influenza season but was earlier than the peaks observed in 2011-12 (mid-April) and 2010-11 (late February).

- **UW Virology Laboratory**: The UW Virology Laboratory reported peak influenza activity from early- to mid-January. Heightened respiratory syncytial virus (RSV) activity was observed from late December through late February.

- **National influenza activity**: Nationally, flu activity peaked during early January, though there was some regional variation. Among all isolates submitted to the national laboratories as of
early May, 86% were identified as influenza A and 14% were influenza B; of influenza A specimens, 82% were H1N1, 65% were H3N2, and 32% were not subtyped.

- **Globally**: Europe experienced a slightly later flu season in 2013-14, peaking in late February; although A(H1N1) predominated also in Europe, a greater proportion of positive specimens typed out as A(H3).

- **Vaccine effectiveness**: Data from CDC on mid-season flu vaccine effectiveness found that influenza vaccine reduced the risk of having to go to the doctor for confirmed influenza by 61% across all ages. The estimates varied only modestly by age-group: children 6 months to 17 years, 67% (95% CI, 51%-78%); adults 18 to 49, 60% (95% CI, 44%-71%); adults 50 to 64, 60% (95% CI, 39%-73%); and those 65 and older, 52% (95% CI, 2%-77%). Effectiveness against the predominant influenza A (pH1N1) virus was 62% and was similar across age groups. The 61% vaccine effectiveness estimate compares with a final estimate of 52% for the 2012-13 season dominated by H3N2 viruses.

- Although working-age adults accounted for 61% of flu-related hospitalizations and 62% of deaths at the mid-season estimate, flu vaccine coverage in the 18- to 64-year-old group in November 2013 was estimated at about 34%, compared with about 41% in children and 62% in those 65 and older.