



Weeks 25-28: June 21, 2015-July 18, 2015

Washington State Department of Health, Communicable Disease Epidemiology

Please note all data are preliminary and may change as data are updated.

State Summary: Flu activity continues at low levels.

- A total of 157 laboratory-confirmed influenza deaths have been reported to date this season in Washington, including one pediatric death. Most deaths have occurred in people with pre-existing health conditions.
- During week 28, 3 out of 110 specimens (2.7%) tested by the World Health Organization/National Respiratory and Enteric Virus Surveillance System (WHO/NREVSS) collaborating laboratories in Washington were positive for influenza, one influenza A(H3) and two influenza B.
- During week 28, the proportion of outpatient visits for influenza-like illness (ILI) was 0.5 percent, below the baseline of 1.1 percent.
- Influenza is characterized as sporadic in Washington, which means that there are isolated lab-confirmed cases and ILI activity is below baseline.

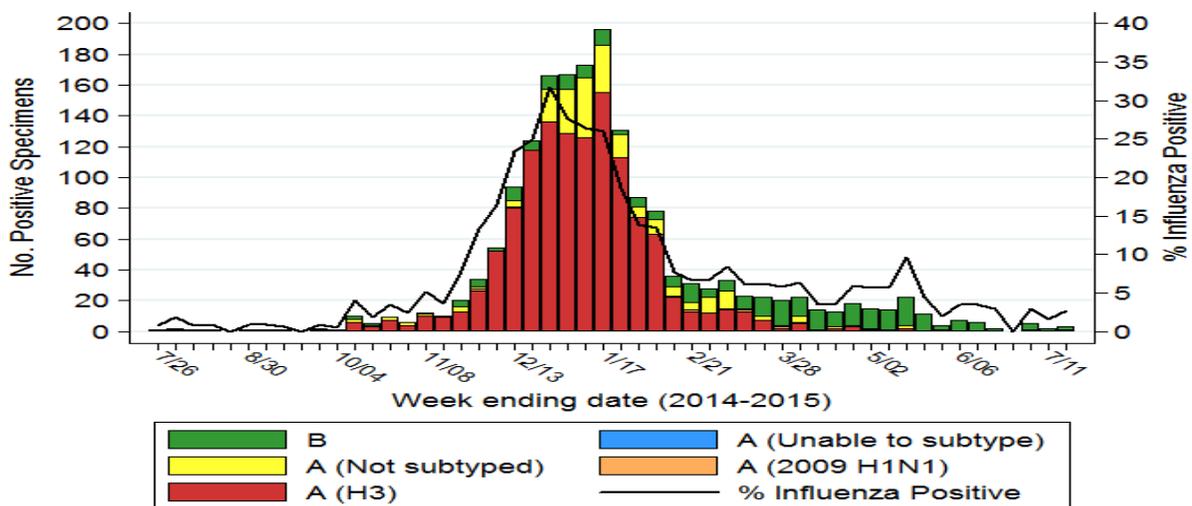
Laboratory Data

World Health Organization (WHO) & National Respiratory and Enteric Virus Surveillance System (NREVSS)
 Four laboratories in Washington participate in the WHO/NREVSS surveillance network: The Washington State Public Health Laboratories, Seattle & King County Public Health Laboratory, University of Washington Virology Laboratory, and Seattle Children’s Hospital Laboratory. WHO/NREVSS laboratory data from Washington are shown in the following table and figure.

Table 1: Washington Influenza Specimens — Weekly & Cumulative

Week Ending	No. Labs Reporting	A(H1)	A (2009 H1N1)	A (H3)	A (Unable to subtype)	A (Subtyping not performed)	B	Total Flu	Total # Tested	% Flu Positive
June 27, 2015	4	0	0	0	0	0	0	0	135	0.0
July 4, 2015	4	0	0	1	0	0	4	5	166	3.0
July 11, 2015	4	0	0	0	0	0	2	2	128	1.6
July 18, 2015	4	0	0	1	0	0	2	3	110	2.7
Cumulative since week ending June 27	4	0	0	2	0	0	8	10	539	1.9

Figure 1: WHO/NREVSS Laboratory Data, Washington, 2014–2015



Antigenic Characterization

Antigenic characterization has been conducted on 33 influenza specimens collected in Washington during the 2014-2015 season.

Six influenza A (H3N2) specimens were characterized as A/Texas/50/2012-like, the influenza A (H3N2) component of the 2014-2015 vaccine. seven influenza A (H3N2) specimens were characterized as A/Switzerland/9715293/2013-like, which is antigenically drifted from the 2014-2015 vaccine strain.

Four influenza A (2009 H1N1) specimens were characterized as A/California/07/2009-like, the influenza A (2009 H1N1) component of the 2014-2015 vaccine.

Fourteen influenza B specimens were characterized as B/Massachusetts/02/2012-like, the influenza B component of the 2014-2015 vaccine. Two influenza B specimens were characterized as B/Brisbane/60/2008-like.

Antiviral Resistance Testing

The Washington State Public Health Laboratories (PHL) has conducted antiviral resistance surveillance on a proportion of all influenza A (H3) specimens received. So far this season, 58 out of 58 (100%) of influenza A (H3) specimens screened by pyrosequencing at PHL have tested as wildtype.

CDC has also performed pyrosequencing on 3 separate influenza A (H3N2) specimens from Washington state. Two were wildtype and one had a mutation that is associated with resistance to oseltamivir.

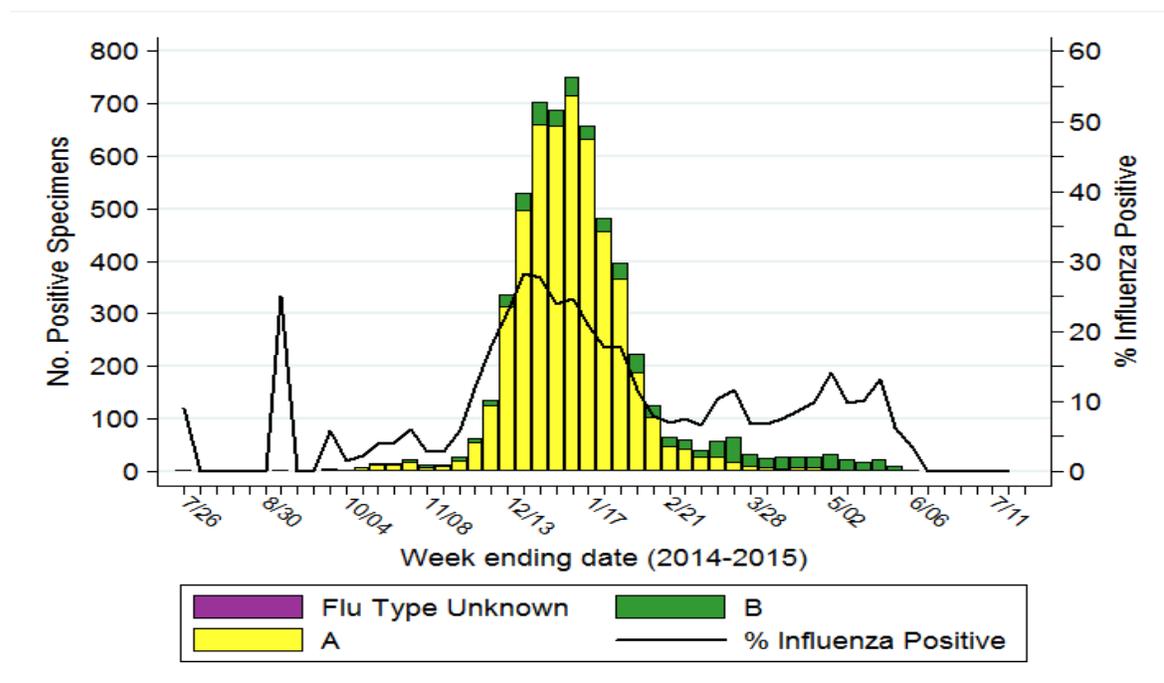
Novel, Avian and Unsubtypable Influenza Viruses

Avian influenza H5N8 was identified in captive falcons and wild birds, avian influenza H5N2 and H5N1 were identified in wild birds, and avian influenza H5N2 was identified in backyard poultry and at a game bird farm in Washington state this season. No human cases have been identified.

Public Health Reporting of Aggregate Influenza Data (PHRAID)

Select commercial laboratories in Washington report the number of influenza tests performed and the number positive for influenza A and B each week through PHRAID. For week 28, 4 flu tests were reported in PHRAID from one commercial laboratory, with none of the tests positive for influenza (Figure 2). No data are available from eastern Washington facilities.

Figure 2. Aggregate Influenza Testing Results, Western Washington, 2014–2015



For additional information on respiratory virus testing in Washington, refer to the following website:
University of Washington Clinical Virology Laboratory: <http://depts.washington.edu/rspvirus/respiratory.htm>

Outpatient Influenza-like Illness Surveillance Network (ILINet) Data

ILI is defined as fever (temp $\geq 100^{\circ}\text{F}/37.8^{\circ}\text{C}$) plus cough and/or sore throat. During week 28, 32 sentinel providers in Washington reported data through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet). Of 2,106 visits reported, 10 (0.5%) were due to ILI, below the baseline of 1.1%.

Figure 4. Percentage of ILI Visits Reported by Sentinel Providers, Washington, 2013–2015

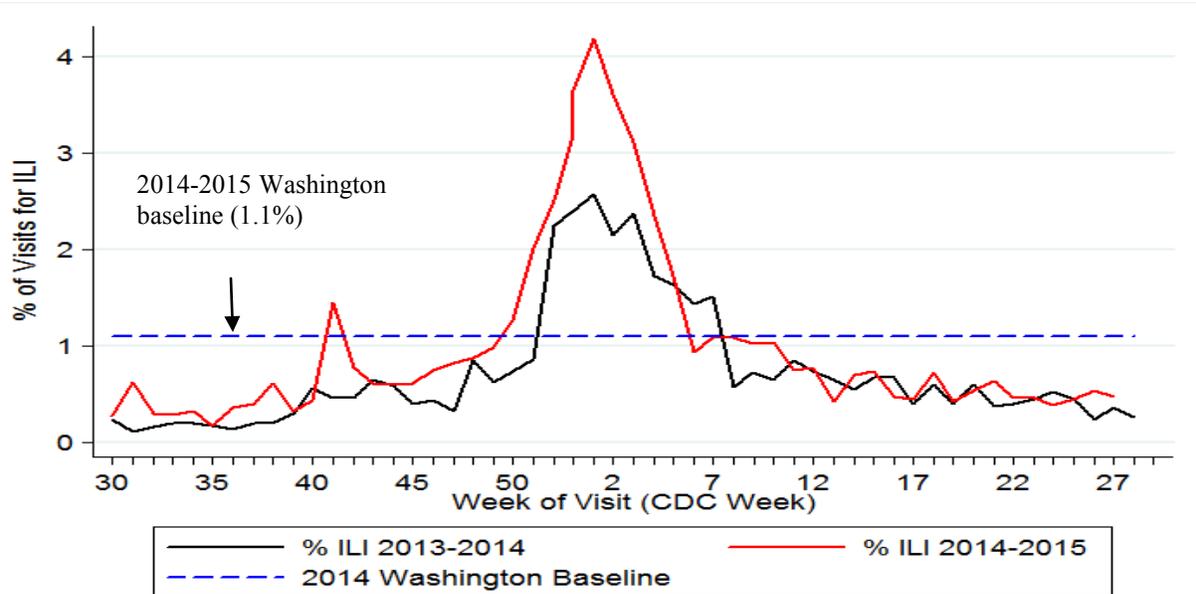


Table 2: Number of ILI Visits Reported by Sentinel Providers by Age Group, Washington, 2014

CDC Week	# Sentinel Providers/ Clinics	Age					Total ILI	Total Patients	% ILI
		0–4	5–24	25–49	50–64	Over 64			
25 (2015)	31	1	4	1	3	1	10	2,585	0.4
26 (2015)	31	2	1	5	1	0	9	1,953	0.5
27 (2015)	32	1	1	6	4	0	12	2,224	0.5
28 (2015)	32	5	3	1	0	1	10	2,106	0.5

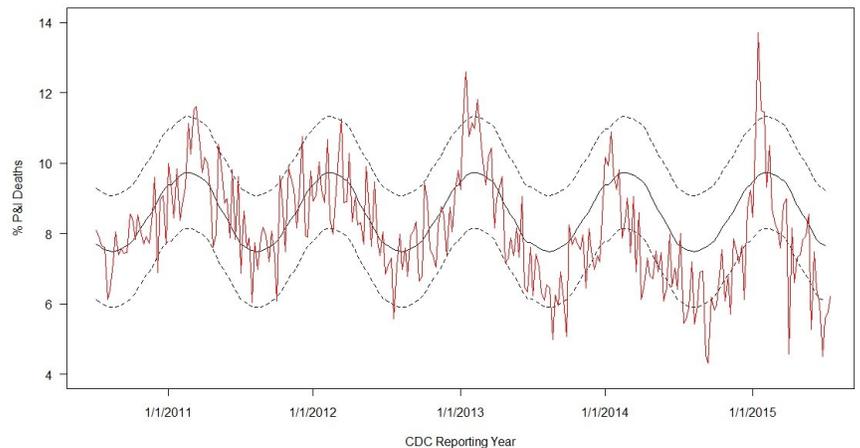
Influenza Mortality Data

Pneumonia and Influenza (P&I) Mortality*

Death records submitted to the Department are analyzed to determine the proportion of weekly deaths due to pneumonia or influenza. Data points for the most recent 8-12 weeks do not yet represent all deaths.

During week 28, 35 (6.2%) of 563 reported deaths were due to P&I.

Figure 5. Percentage of Deaths Due to Pneumonia or Influenza by CDC Week, Washington, 2010-2015



* P&I Mortality Graph: Weekly data is superimposed on a normative curve (based on 2009 - 2012 flu seasons) and 90% confidence intervals.

Influenza Hospitalization Data—Spokane County Only

Reported Laboratory-confirmed Influenza Hospitalizations (Spokane County Only)

Spokane Regional Health District requires hospitals and providers to report laboratory-confirmed influenza-associated hospitalizations. No lab-confirmed influenza hospitalizations have been reported thus far for July 2015.

Figure 6a: Laboratory-Confirmed Flu Hospitalization Rates by Age Group, Spokane County, WA 2014–2015

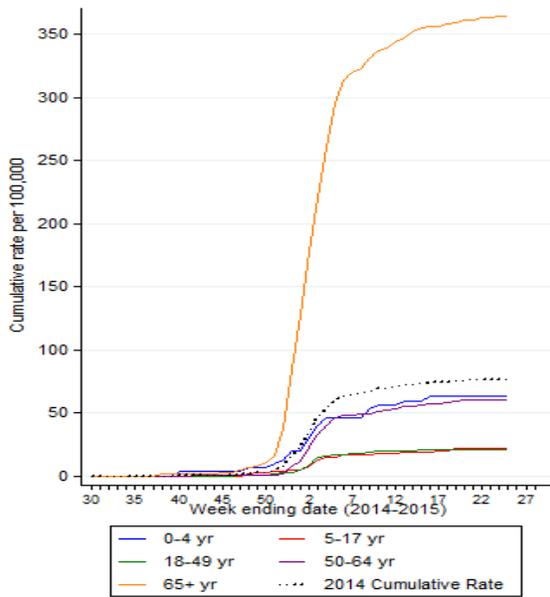
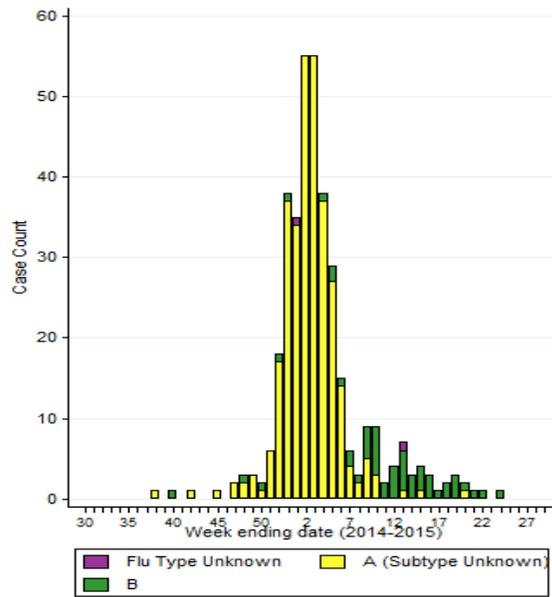


Figure 6b: Laboratory-Confirmed Flu Hospitalizations by Admission Week, Spokane County, WA 2014–2015

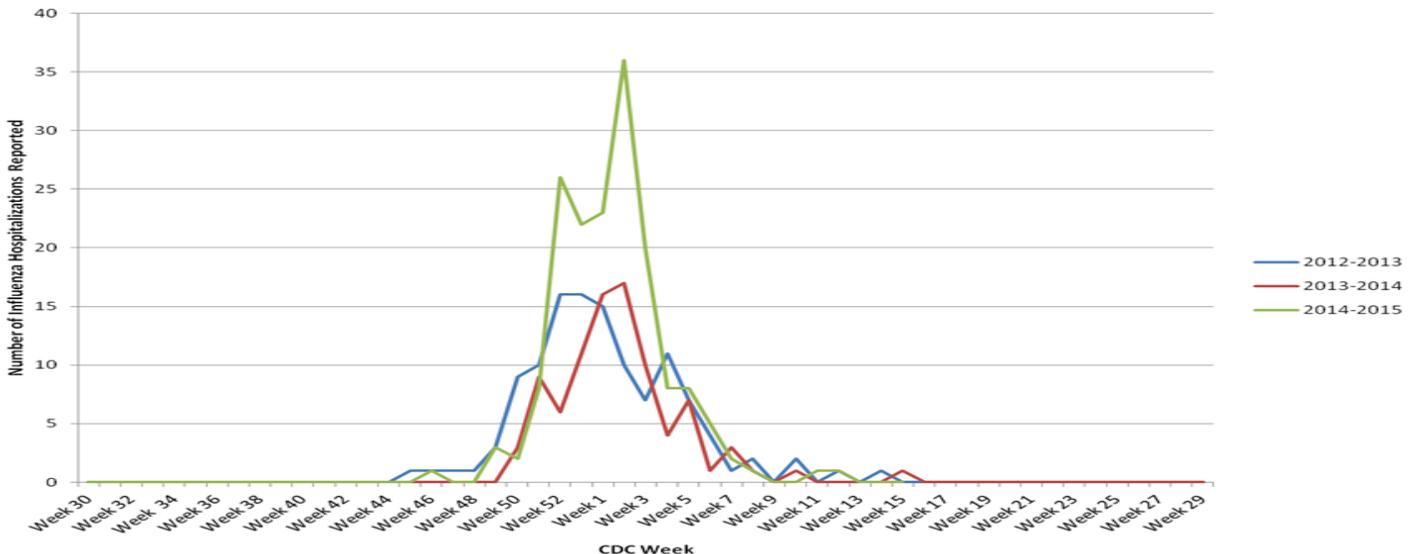


Influenza Hospitalization Data—Snohomish County Only

Reported Laboratory-confirmed Influenza Hospitalizations (Snohomish County Only)

Snohomish Health District requires hospitals in Snohomish County to report laboratory-confirmed influenza-associated hospitalizations to the health district. See figure below, courtesy of Snohomish Health District. Note that Snohomish Health District hospitalization data in this report are displayed through week 15 of 2015, and updates to the hospitalization graph will be made again in fall 2015.

Influenza Hospitalization Surveillance Through CDC Week 15 (ending 04/18/2015)



Reported Laboratory-Confirmed Influenza-Associated Deaths

157 laboratory-confirmed influenza deaths have been reported to date this season in Washington, including one pediatric death in a child under age 10. Most deaths have occurred in people with underlying health conditions, but one death was in a previously healthy child, and two deaths were in previously healthy individuals in the 30-40 year age range. 141 of the deaths have been attributable to influenza A, thirteen to influenza B, and three to influenza type undetermined.

Table 3: Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, Washington, 2014-2015 to date

Age Group (in years)	Number of Deaths	Death Rate (per 100,000 population)
0-4	0	0
5-24	1	0.06
25-49	7	0.30
50-64	15	1.08
65+	134	14.31
Total	157	2.28

Reported Laboratory-Confirmed Influenza-Associated Deaths, Past Seasons

For reference, lab-confirmed influenza death totals reported to the Department of Health for past seasons are presented below in Table 4.

Past season summaries are available:

<http://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/CommunicableDiseaseSurveillanceData/InfluenzaSurveillanceData>

Note that influenza deaths are likely under-reported. The reasons for this under-reporting vary. Influenza may not be listed as a cause of death, influenza testing may not have occurred in a timely fashion to identify the virus, or may not have been performed at all, and lab-confirmed influenza deaths may not have been appropriately reported to public health.

CDC has published information about estimating seasonal influenza-associated deaths:

http://www.cdc.gov/flu/about/disease/us_flu-related_deaths.htm?mobile=nocontent

Table 4: Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, past season totals and current season to date

Season	Number of Deaths, All Ages	Death Rate (per 100,000 population), All Ages
2014-2015 season to date	157	2.28
2013-2014, total	79	1.17
2012-2013, total	54	0.80
2011-2012, total	18	0.27
2010-2011, total	36	0.53

Additional Resources

International Influenza Data: <http://www.who.int/topics/influenza/en/>

National Influenza Surveillance Report: <http://www.cdc.gov/flu/weekly/>

Washington DOH Influenza Information for Public Health and Healthcare Providers:

<http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/PublicHealthSystemResourcesandServices/Immunization/InfluenzaFluInformation#recommendation>

Washington Local Health Department Influenza Surveillance Reports:

Clark County: <http://www.clark.wa.gov/public-health/diseases/flu.html>

King County: <http://www.kingcounty.gov/healthservices/health/communicable/immunization/fluactivity.aspx>

Pierce County: <http://www.tpchd.org/providers-partners/influenza-medical-providers>

Whatcom County: <http://www.co.whatcom.wa.us/967/Influenza>

Yakima County: http://yakimacounty.us/yakimahealthdistrict/rsv_flu_stats.php