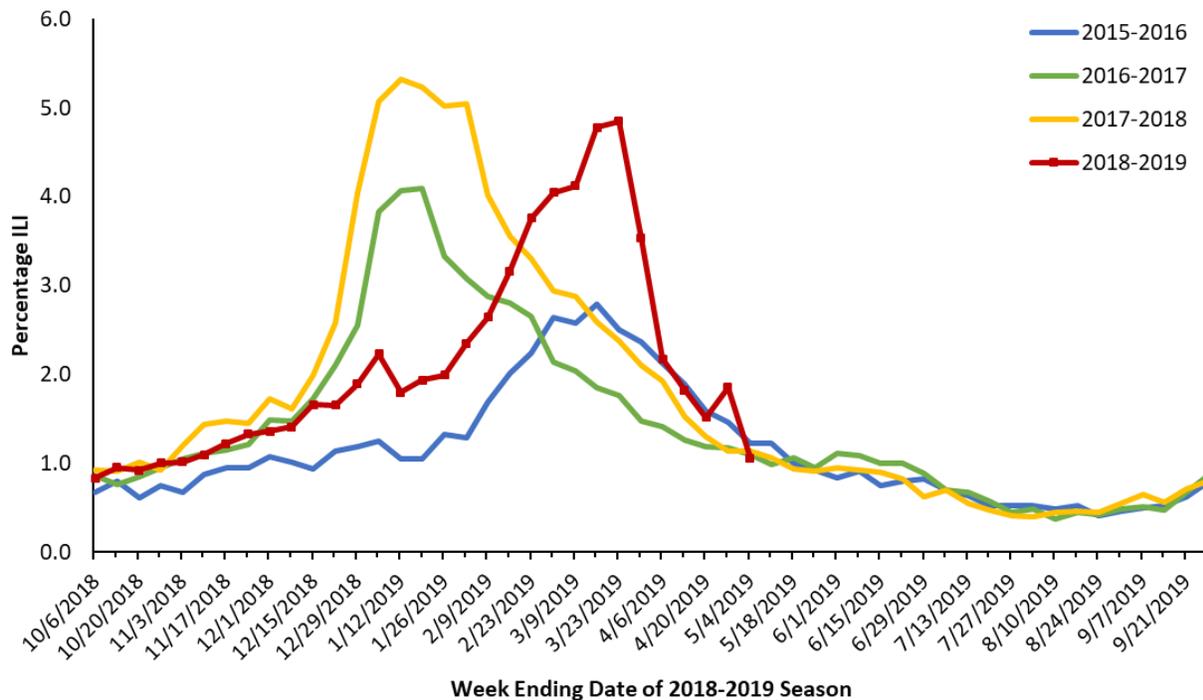


Data at a Glance April 28—May 3, 2019 (Week 18)

	Current Week (18)	Previous Week (17)
Percentage of emergency department visits for ILI¹	1.1%	1.9%
Percentage positive influenza tests²	2.4%	2.5%
Influenza-associated hospitalizations³	0	1
Reported influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity⁴	5.4%	4.4%

¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.
²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)
³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.
⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 1.1% during week 18, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 2.4% of specimens tested at Oregon labs were positive for influenza during week 18, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

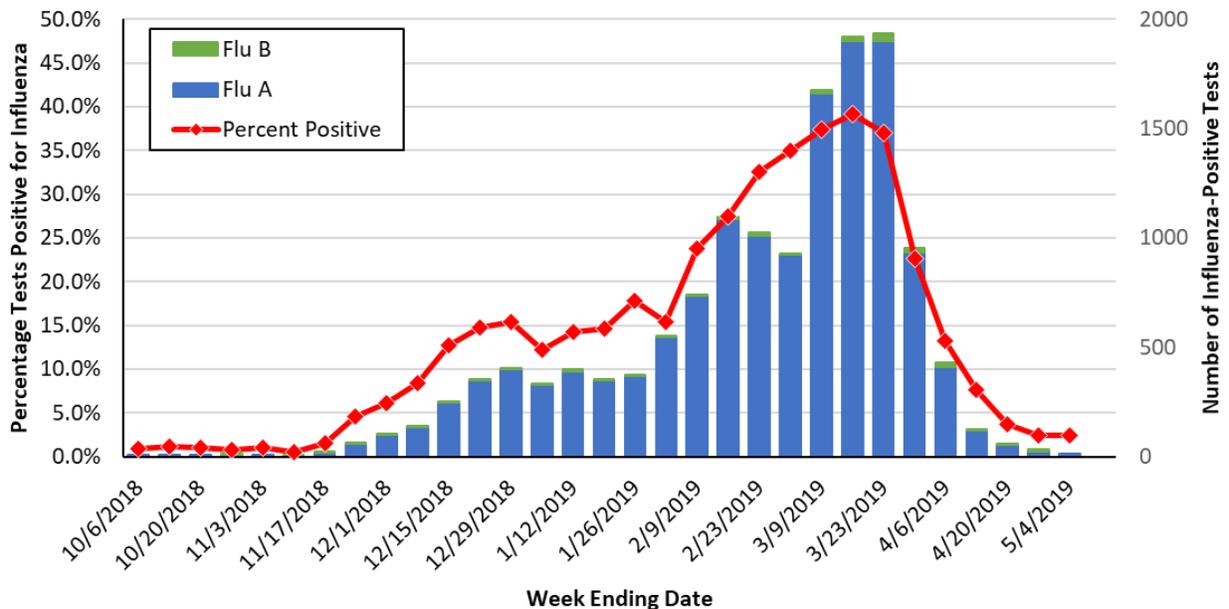
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

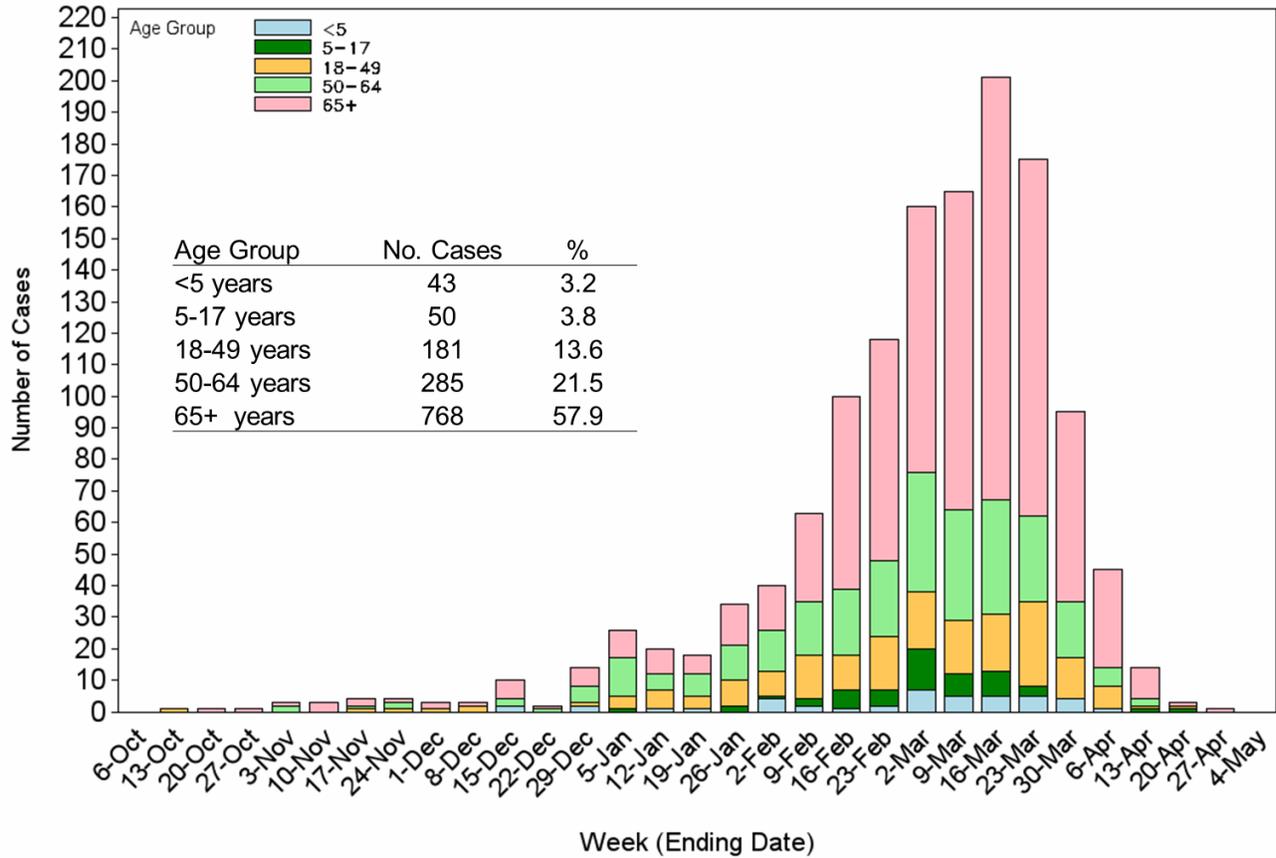
	Current Week	Cumulative
No. of specimens tested	584	72,723
No. of positive specimens (%)	14 (2.4%)	14,344 (19.7%)
Positive specimens by type		
Influenza A	14 (100%)	14,123 (98.5%)
Influenza B	0 (0%)	221 (1.5%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



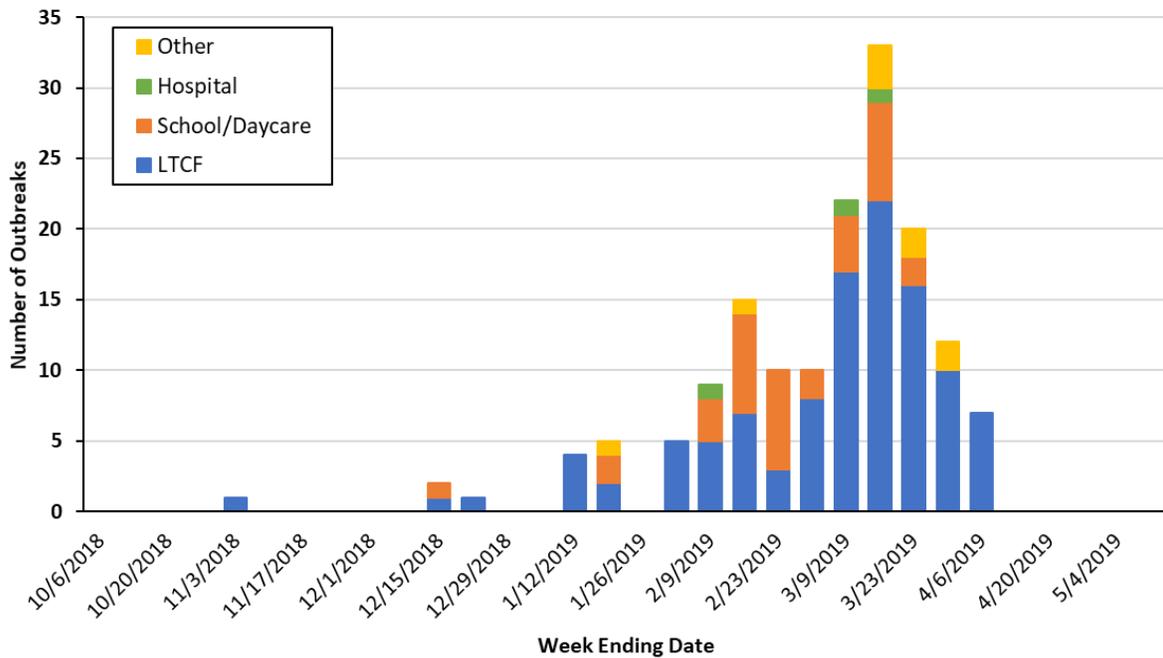
Hospitalizations: In Clackamas, Multnomah, and Washington counties 0 influenza-associated hospitalizations were reported during week 18 of 2019. In total, there have been 1,327 hospitalizations, 1,319 (99.4%) of which have been positive for flu A. Of the 411 tests that have been subtyped, 164 (39.9%) are flu A 2009 H1N1 and 247 (60.1%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



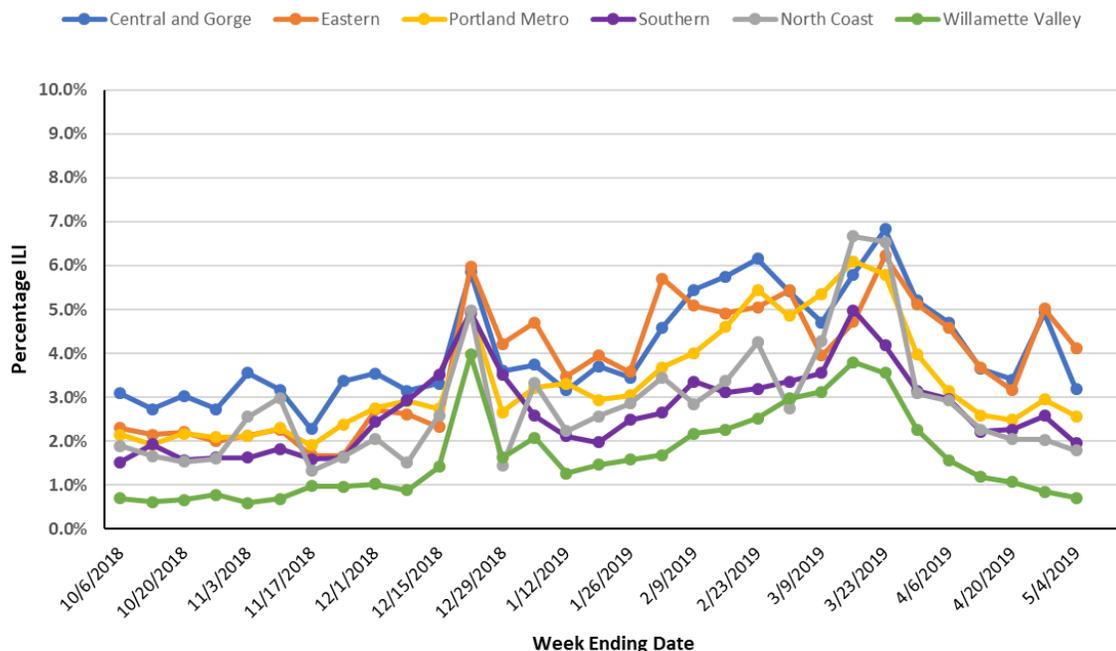
Influenza Outbreaks: There were 0 influenza outbreaks reported during Week 18, 2019. There have been a total of 156 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 109 of which have occurred in long-term care facilities, 35 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 181 OCHIN clinics from across Oregon. The percentage of outpatients seen with ILI across the state during week 18 of 2019 was 2.2%. Regionally, the percentage was highest in the Eastern region (4.1%) and lowest in the Willamette Valley (0.7%).

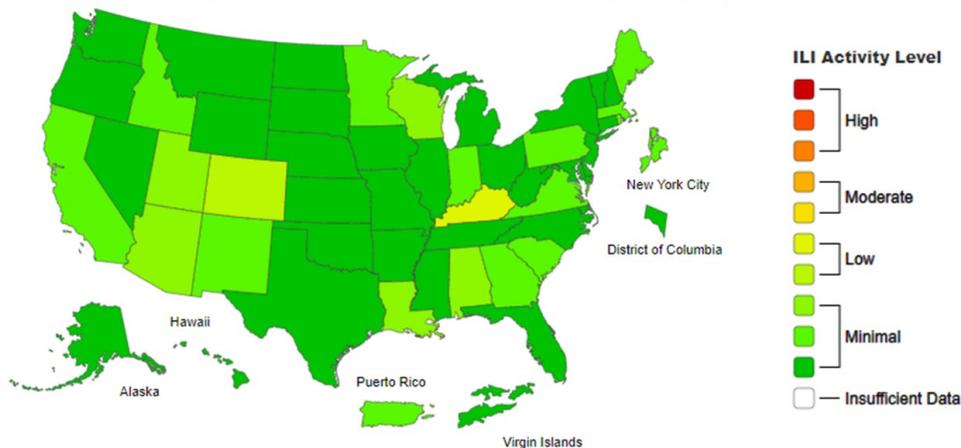
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



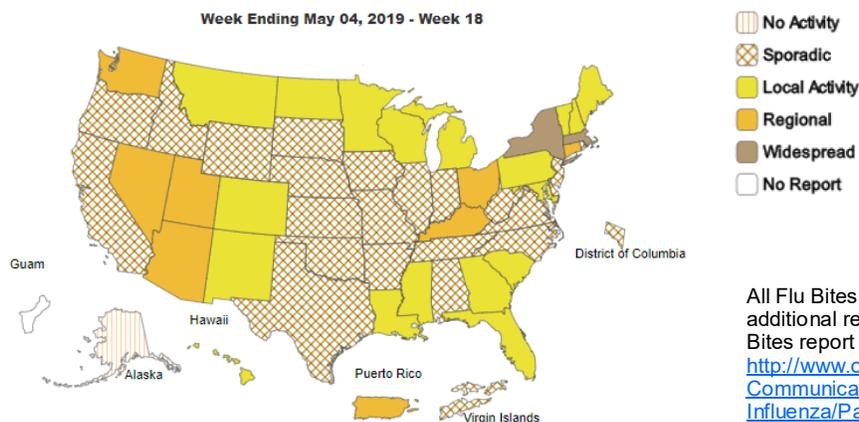
US Data (from CDC FluView): Influenza activity continues to decrease in the United States. While influenza A(H1N1)pdm09 viruses predominated from October to mid-February, influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses also have been reported. Below is a summary of the key influenza indicators for the week ending May 4, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses nationally.
- **Virus Characterization:** The majority of influenza A(H1N1)pdm09 and influenza B viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, the majority of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased to 1.6%, which is below the national baseline of 2.2%. One region reported ILI at their region-specific baseline level.
- **ILI State Activity Indicator Map:** Two states experienced low ILI activity; and New York City, the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 48 states experienced minimal ILI activity.
- **Geographic Spread of Influenza:** The geographic spread of influenza in two states was reported as widespread; Puerto Rico and seven states reported regional activity; 18 states reported local activity; the District of Columbia, the U.S. Virgin Islands and 22 states reported sporadic activity; one state reported no activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 65.7 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (221.5 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Five influenza-associated pediatric deaths were reported to CDC during week 18.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 18 ending May 04, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:

<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance April 21—April 27, 2019 (Week 17)

	Current Week (17)	Previous Week (16)
Percentage of emergency department visits for ILI ¹	1.9%	1.4%
Percentage positive influenza tests ²	2.5%	3.7%
Influenza-associated hospitalizations ³	1	2
Reported influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	4.4%	5.3%

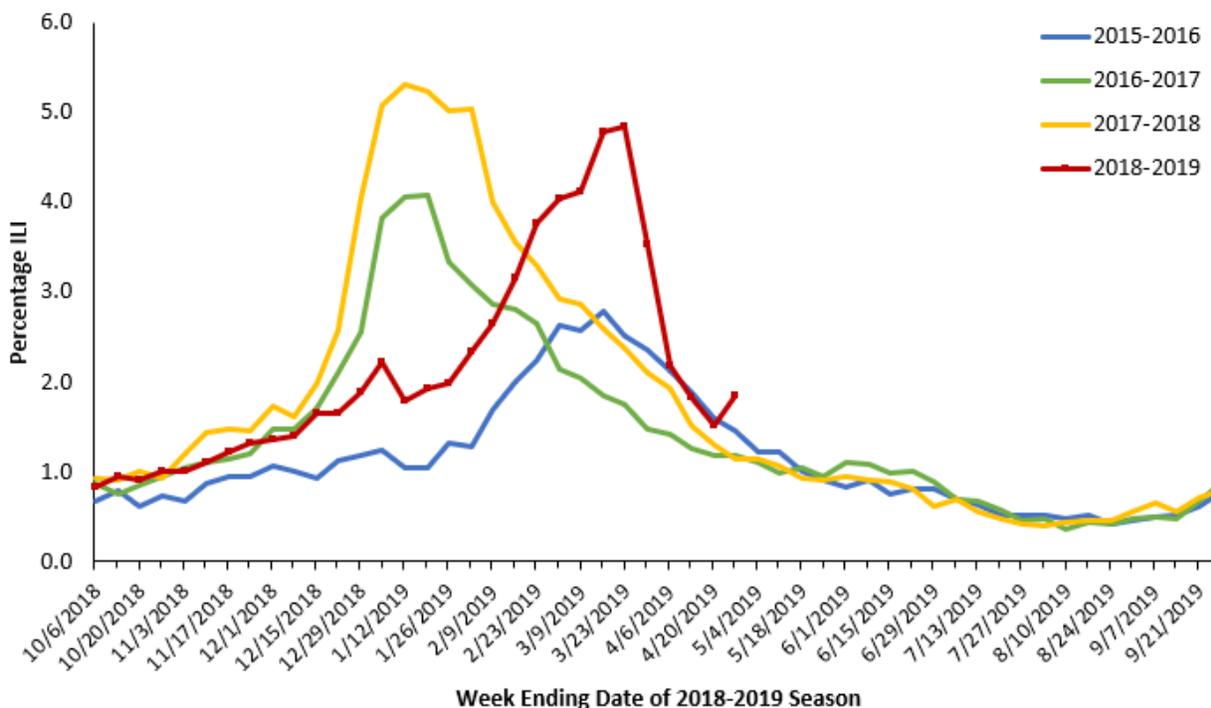
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 1.9% during week 17, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 2.5% of specimens tested at Oregon labs were positive for influenza during week 17, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

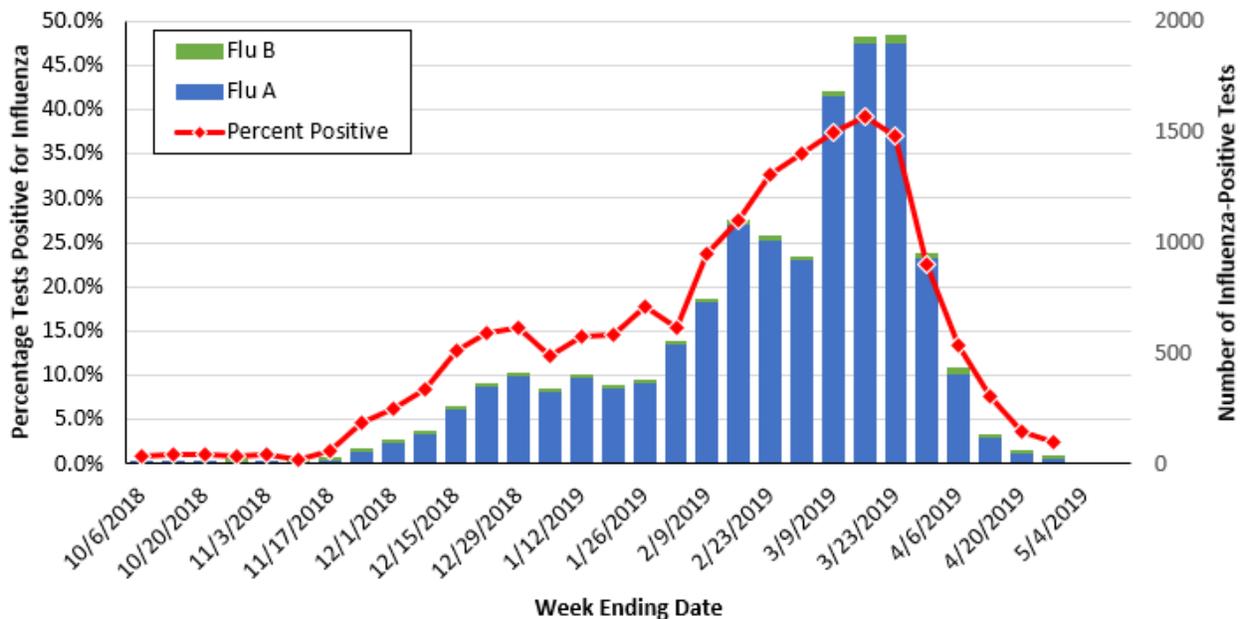
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

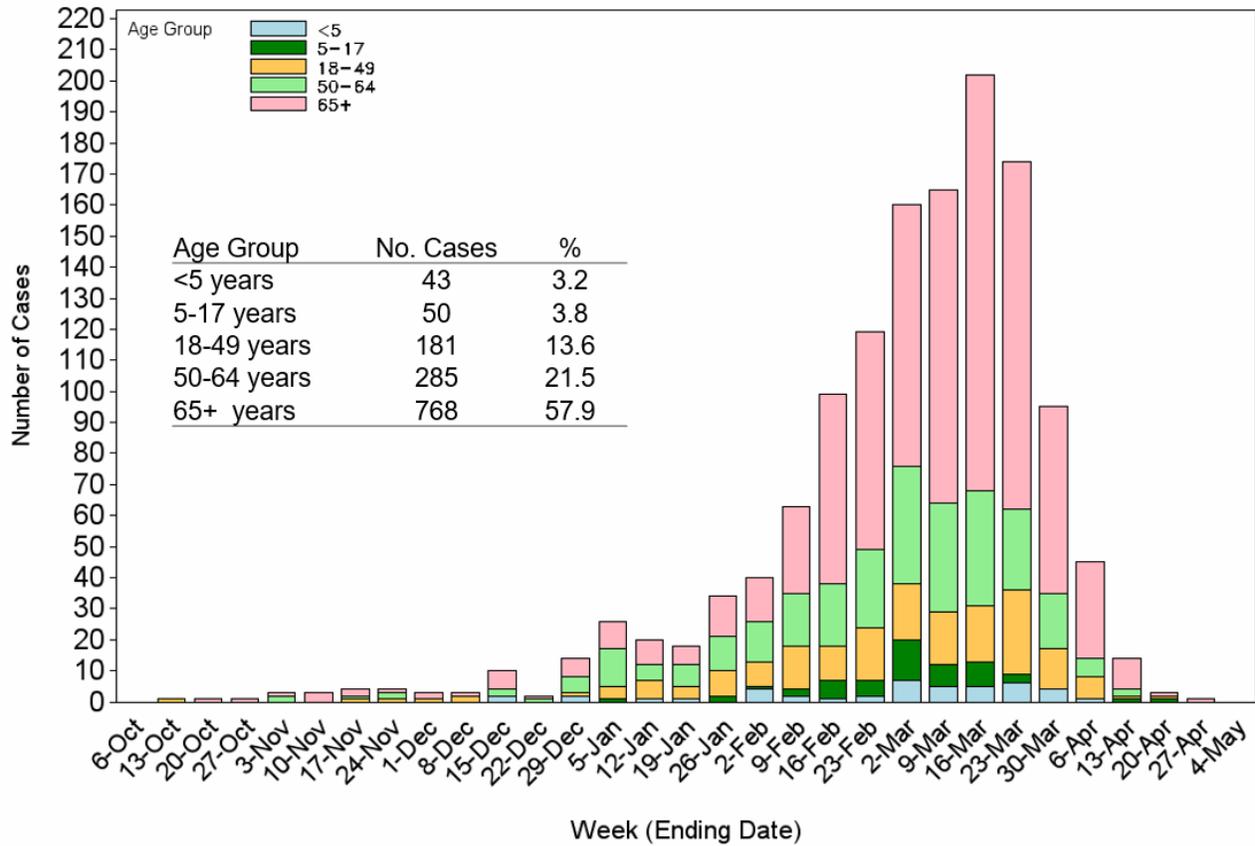
	Current Week	Cumulative
No. of specimens tested	1,428	72,139
No. of positive specimens (%)	35 (2.5%)	14,330 (19.9%)
<i>Positive specimens by type</i>		
Influenza A	26 (74.3%)	14,109 (98.5%)
Influenza B	9 (25.7%)	221 (1.5%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



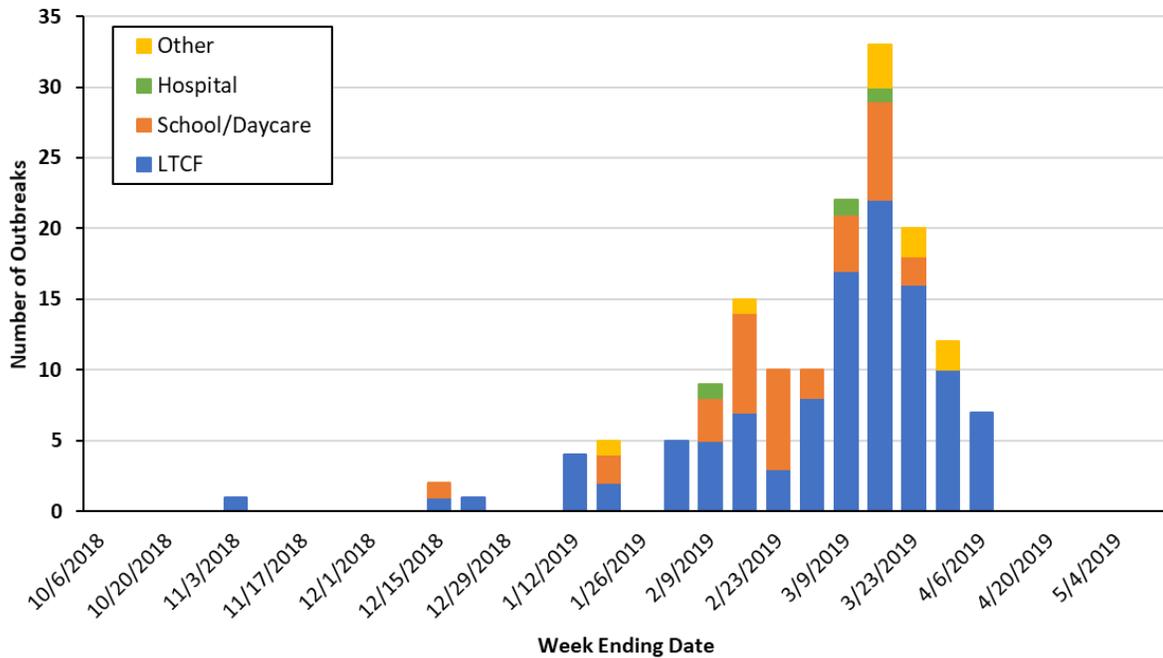
Hospitalizations: In Clackamas, Multnomah, and Washington counties 1 influenza-associated hospitalization was reported during week 17 of 2019. In total, there have been 1,327 hospitalizations, 1,319 (99.4%) of which have been positive for flu A. Of the 411 tests that have been subtyped, 164 (39.9%) are flu A 2009 H1N1 and 247 (60.1%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



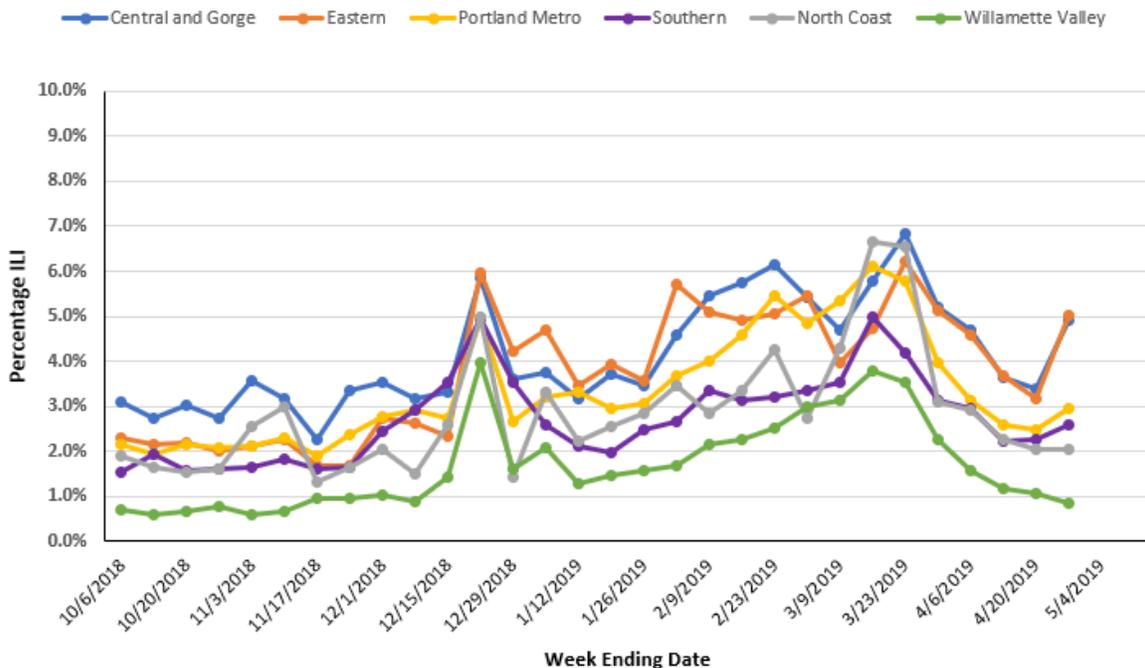
Influenza Outbreaks: There were 0 influenza outbreaks reported during Week 17, 2019. There have been a total of 156 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 109 of which have occurred in long-term care facilities, 35 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 176 OCHIN clinics from across Oregon. The percentage of outpatients seen with ILI across the state during week 17 of 2019 was 2.7%. Regionally, the percentage was highest in the Eastern region (5.0%) and lowest in the Willamette Valley (0.8%).

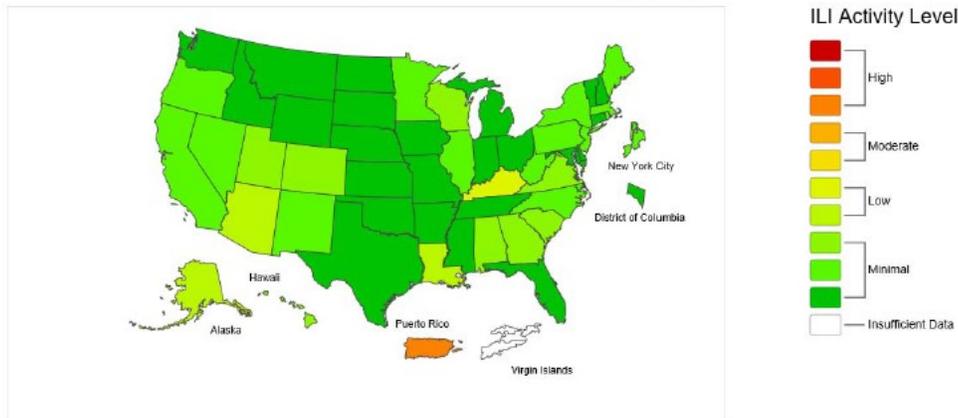
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



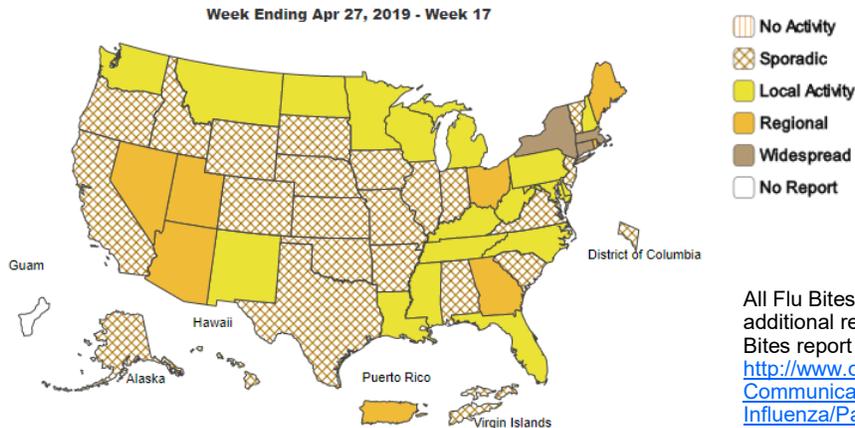
US Data (from CDC FluView): Influenza activity continues to decrease in the United States. While influenza A(H1N1) pdm09 viruses predominated from October to mid-February, influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses also have been reported. Below is a summary of the key influenza indicators for the week ending April 27, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses nationally, and in all 10 HHS Regions.
- **Virus Characterization:** The majority of influenza A(H1N1)pdm09 and influenza B viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, the majority of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased to 1.8%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.
- **ILI State Activity Indicator Map:** Puerto Rico experienced high ILI activity; four states experienced low ILI activity; New York City, the District of Columbia and 46 states experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in three states was reported as widespread; Puerto Rico and seven states reported regional activity; 18 states reported local activity; the District of Columbia, the U.S. Virgin Islands and 22 states reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 64.7 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (216.6 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Five influenza-associated pediatric deaths were reported to CDC during week 17.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 17 ending Apr 27, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance April 14—April 20, 2019 (Week 16)

	Current Week (16)	Previous Week (15)
Percentage of emergency department visits for ILI ¹	1.4%	1.8%
Percentage positive influenza tests ²	3.7%	7.6%
Influenza-associated hospitalizations ³	2	14
Reported influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	5.3%	6.6%

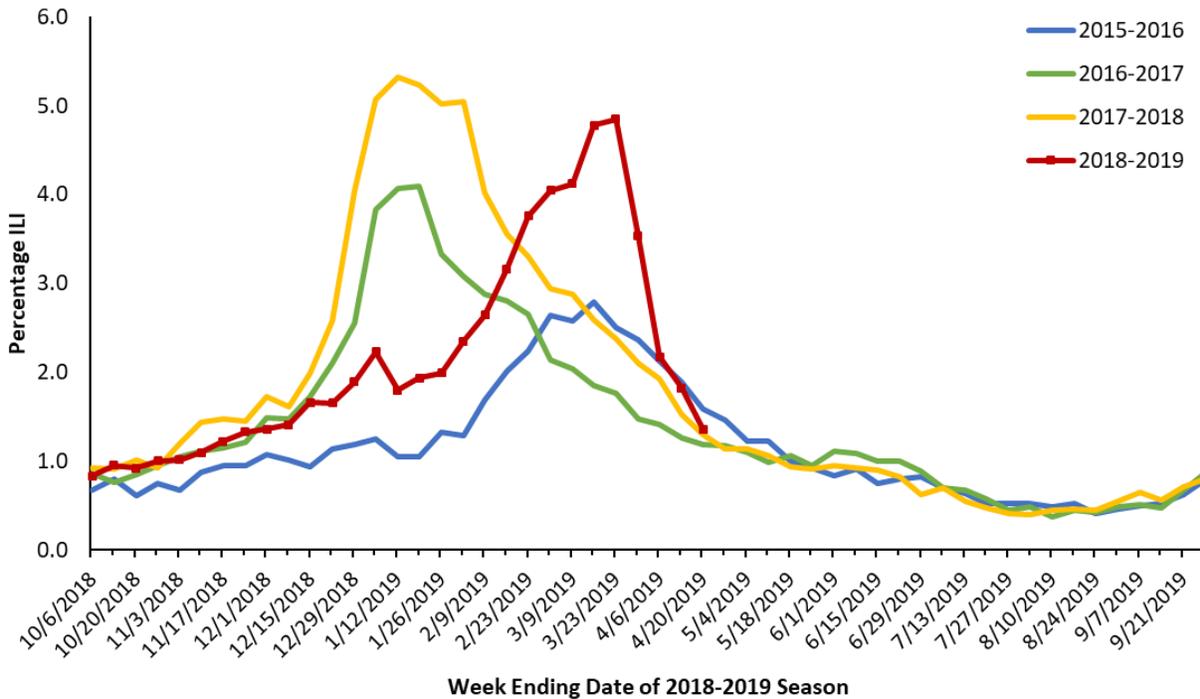
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018–2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 1.4% during week 16, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 3.7% of specimens tested at Oregon labs were positive for influenza during week 16, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

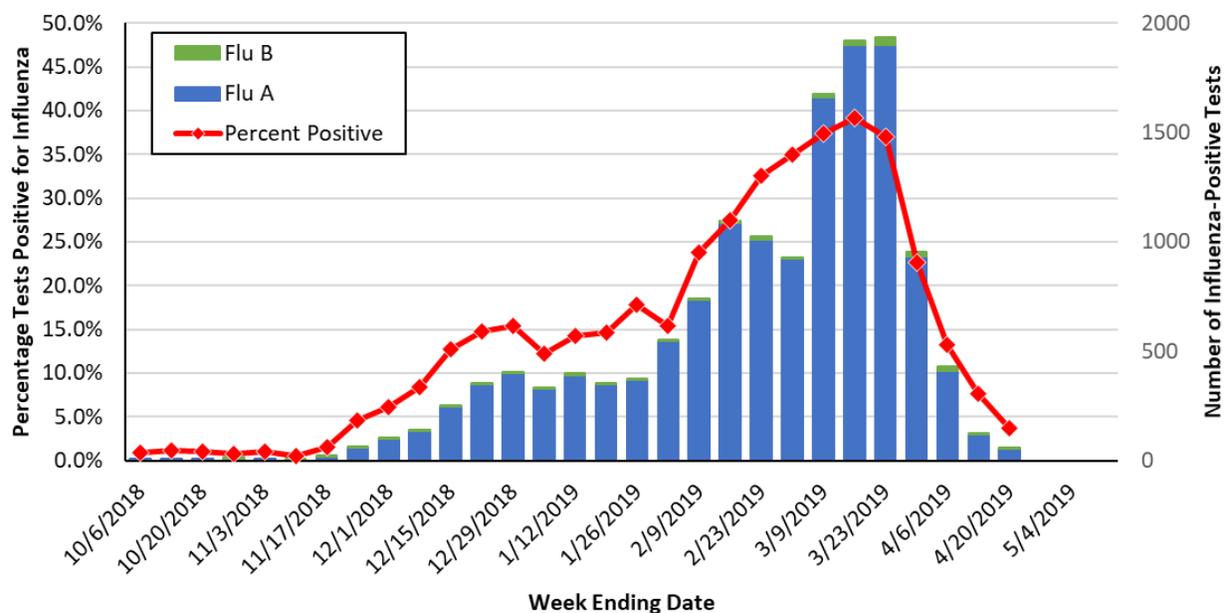
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

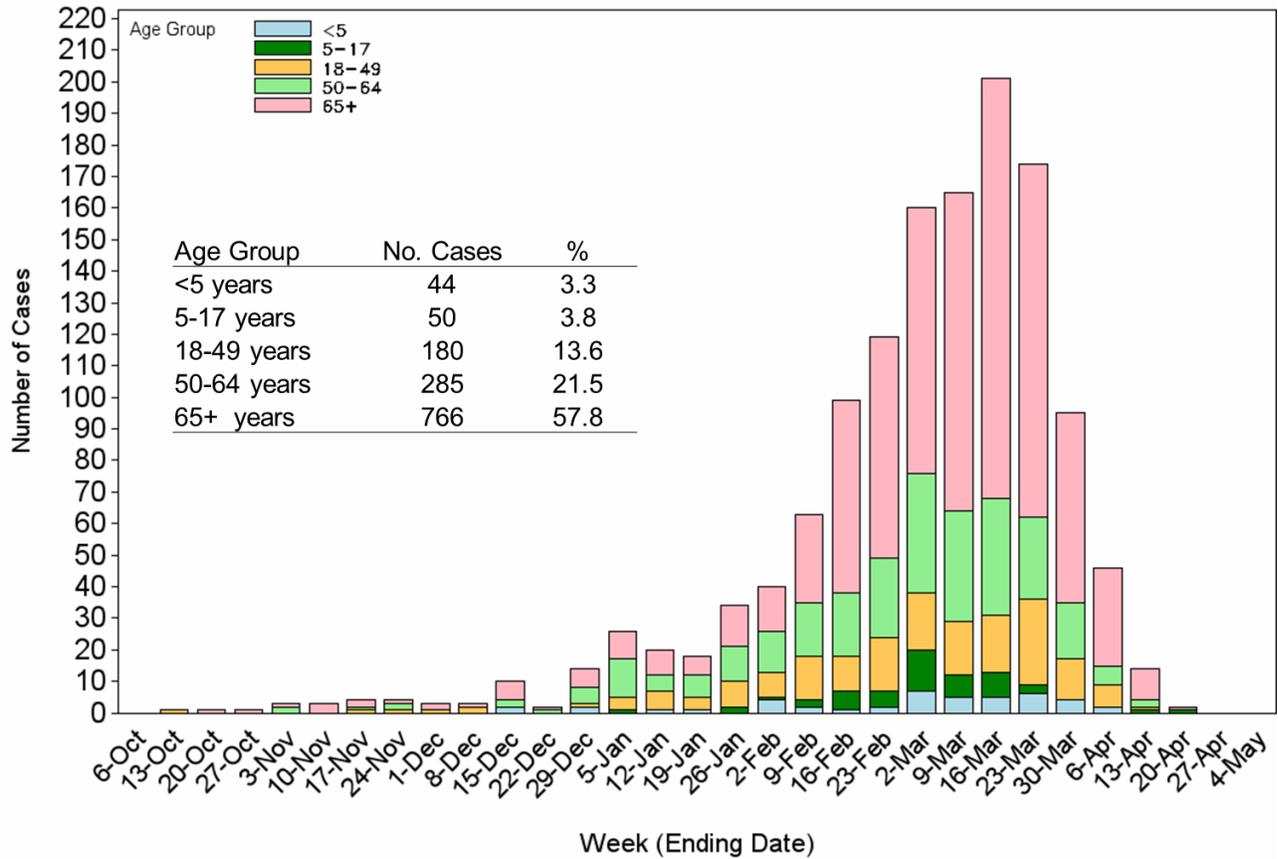
	Current Week	Cumulative
No. of specimens tested	1,627	70,711
No. of positive specimens (%)	61 (3.7%)	14,295 (20.2%)
<i>Positive specimens by type</i>		
Influenza A	53 (86.9%)	14,083 (98.5%)
Influenza B	8 (13.1%)	212 (1.5%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



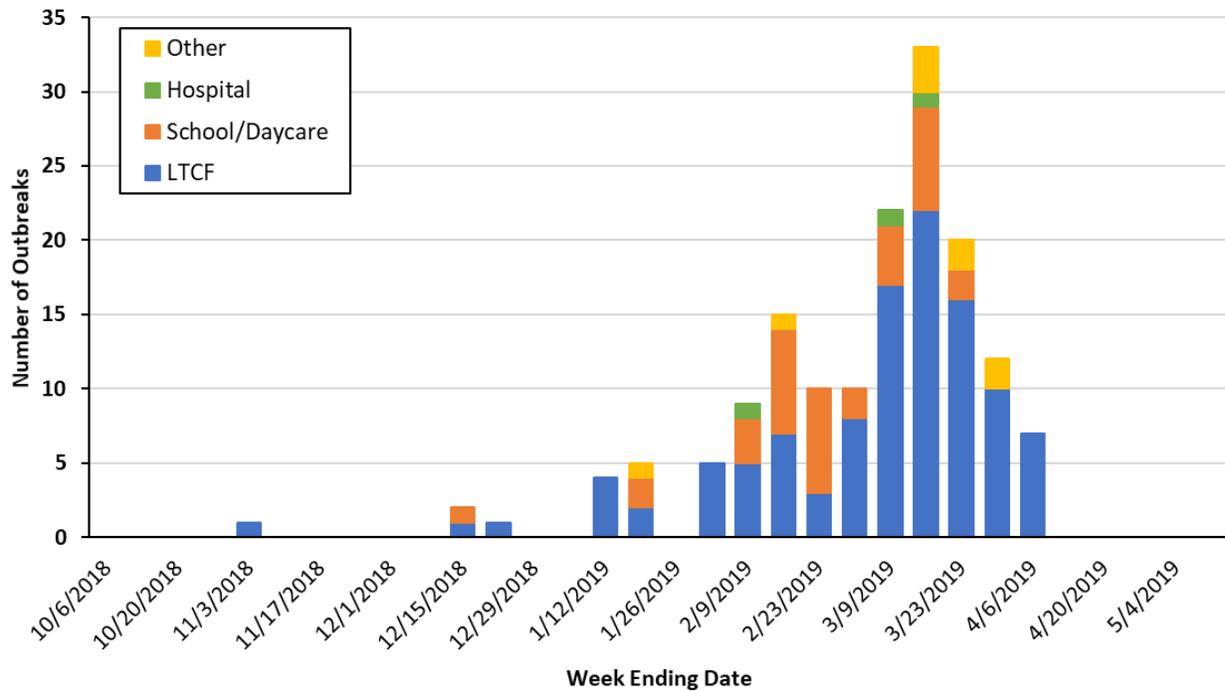
Hospitalizations: In Clackamas, Multnomah, and Washington counties 2 influenza-associated hospitalizations were reported during week 16 of 2019. In total, there have been 1,325 hospitalizations, 1,317 (99.4%) of which have been positive for flu A. Of the 407 tests that have been subtyped, 162 (39.8%) are flu A 2009 H1N1 and 245 (60.2%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



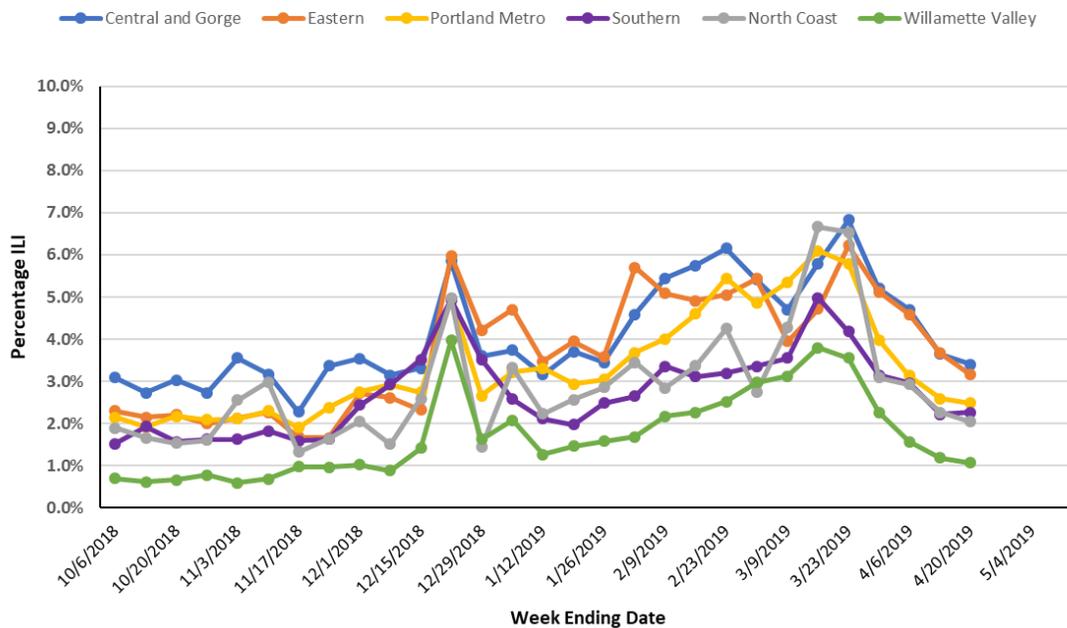
Influenza Outbreaks: There were 0 influenza outbreaks reported during Week 16, 2019. There have been a total of 156 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 109 of which have occurred in long-term care facilities, 35 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 176 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 16 of 2019 was 2.3%. Regionally, the percent was highest in the Central and Gorge region (3.4%) and lowest in the Willamette Valley (1.1%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Data at a Glance April 7—April 13, 2019 (Week 15)

	Current Week (15)	Previous Week (14)
Percentage of emergency department visits for ILI ¹	1.8%	2.2%
Percentage positive influenza tests ²	7.6%	13.3%
Influenza-associated hospitalizations ³	8	45
Reported influenza outbreaks	0	7
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	6.6%	7.1%

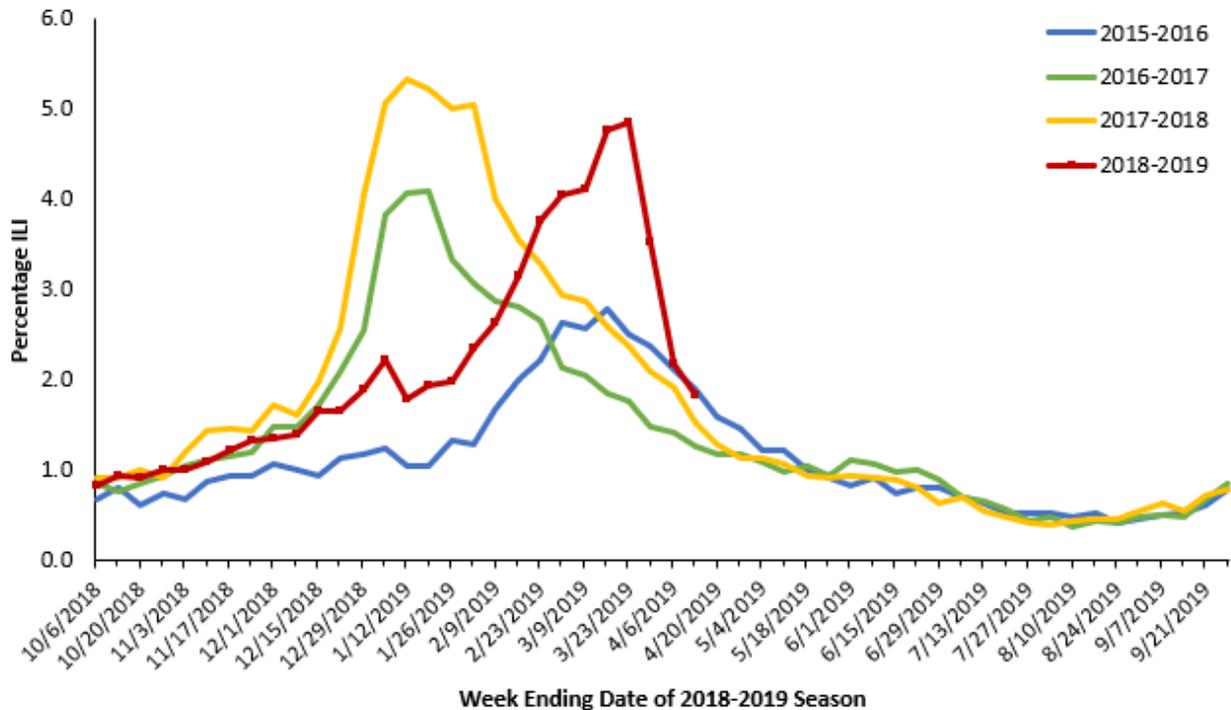
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 1.8% during week 15, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 7.6% of specimens tested at Oregon labs were positive for influenza during week 15, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

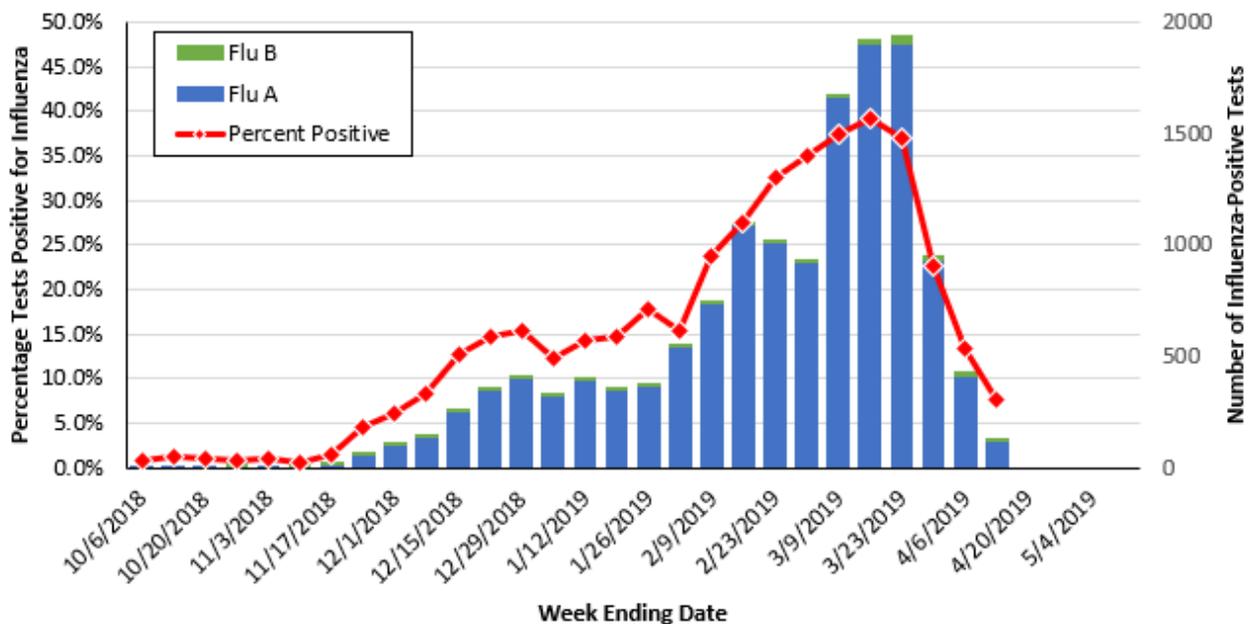
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

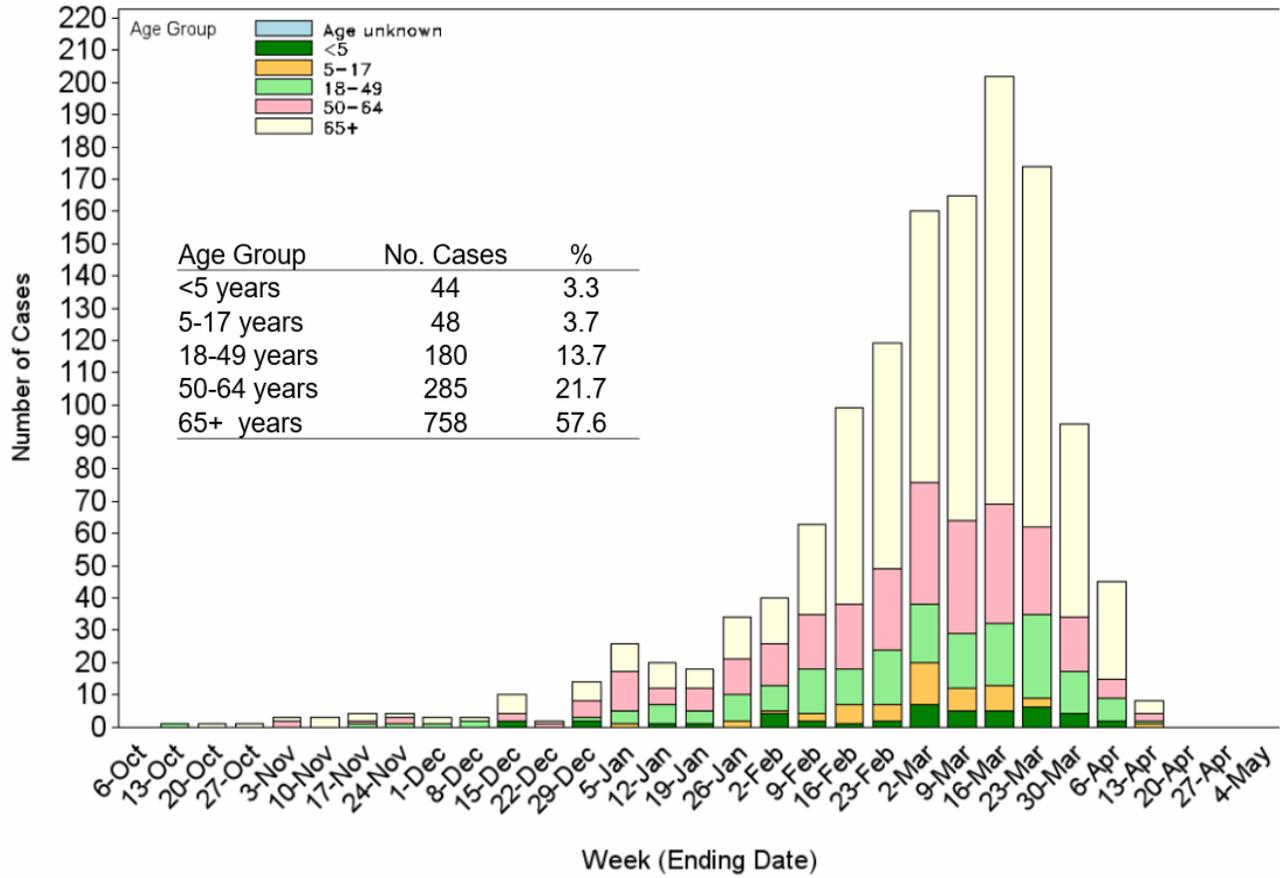
	Current Week	Cumulative
No. of specimens tested	1,629	69,084
No. of positive specimens (%)	124 (7.6%)	14,234 (20.6%)
<i>Positive specimens by type</i>		
Influenza A	119 (96.0%)	14,030 (98.6%)
Influenza B	5 (4.0%)	204 (1.4%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



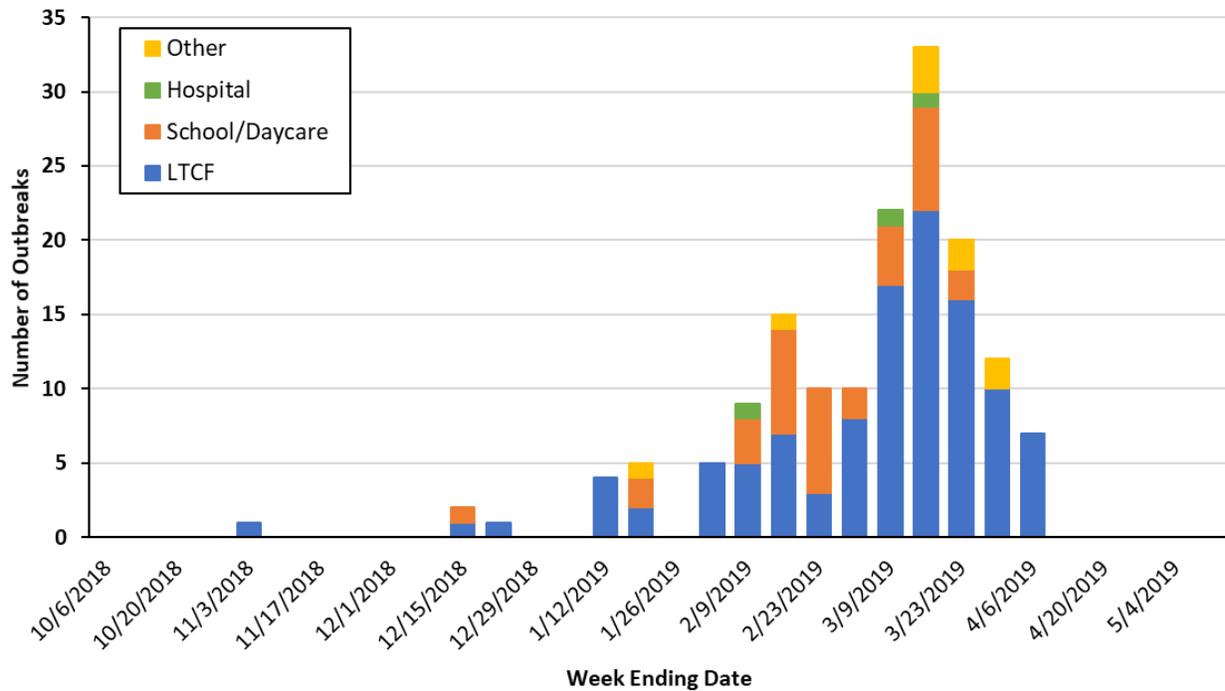
Hospitalizations: In Clackamas, Multnomah, and Washington counties 8 influenza-associated hospitalizations were reported during week 15 of 2019. In total, there have been 1,316 hospitalizations, 1,304 (99.1%) of which have been positive for flu A. Of the 401 tests that have been subtyped, 160 (39.9%) are flu A 2009 H1N1 and 241 (60.1%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



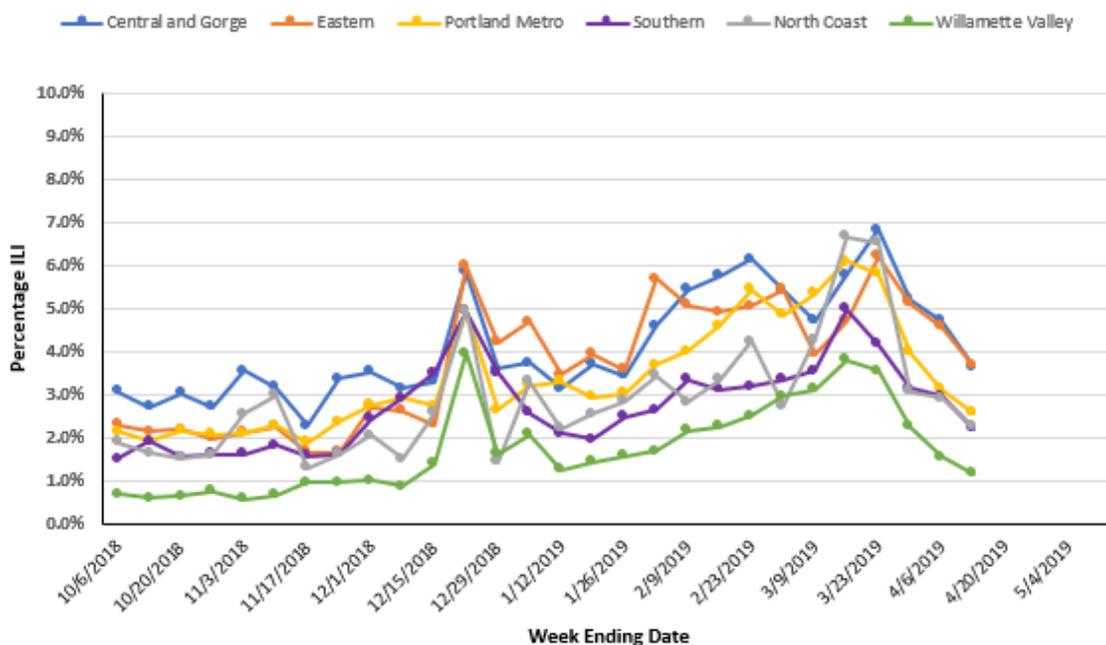
Influenza Outbreaks: There were 0 influenza outbreaks reported during Week 15, 2019. There have been a total of 156 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 109 of which have occurred in long-term care facilities, 35 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 172 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 15 of 2019 was 2.4%. Regionally, the percent was highest in the Eastern region (3.7%) and lowest in the Willamette Valley (1.2%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



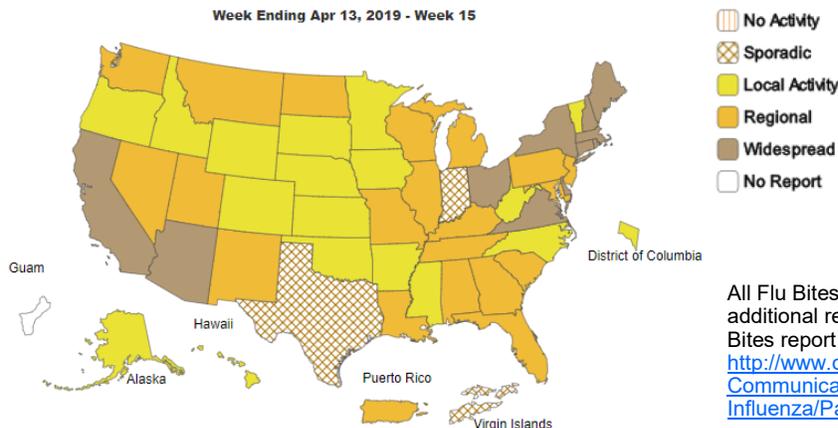
US Data (from CDC FluView): Influenza activity continues to decrease in the United States, but remains elevated. Influenza A(H1N1)pdm09 viruses predominated from October to mid-February, and influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses also have been reported. Below is a summary of the key influenza indicators for the week ending April 13, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses nationally, and in all 10 HHS Regions.
- **Virus Characterization:** The majority of influenza A(H1N1)pdm09 and influenza B viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, the majority of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased to 2.4%, but remains above the national baseline of 2.2%. Seven of 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** One state experienced high ILI activity; five states experienced moderate ILI activity; New York City, Puerto Rico and 14 states experienced low ILI activity; the District of Columbia and 30 states experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 11 states was reported as widespread; Puerto Rico and 20 states reported regional activity; the District of Columbia and 17 states reported local activity; the U.S. Virgin Islands and two states reported sporadic activity; Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 62.3 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (206.5 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Five influenza-associated pediatric deaths were reported to CDC during week 15.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 15 ending Apr 13, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance March 31—April 6, 2019 (Week 14)

	Current Week (14)	Previous Week (13)
Percentage of emergency department visits for ILI¹	2.2%	3.5%
Percentage positive influenza tests²	13.3%	22.7%
Influenza-associated hospitalizations³	45	94
Reported influenza outbreaks	7	12
Influenza-associated pediatric mortality	0	1
Respiratory Syncytial Virus (RSV) activity⁴	7.1%	7.3%

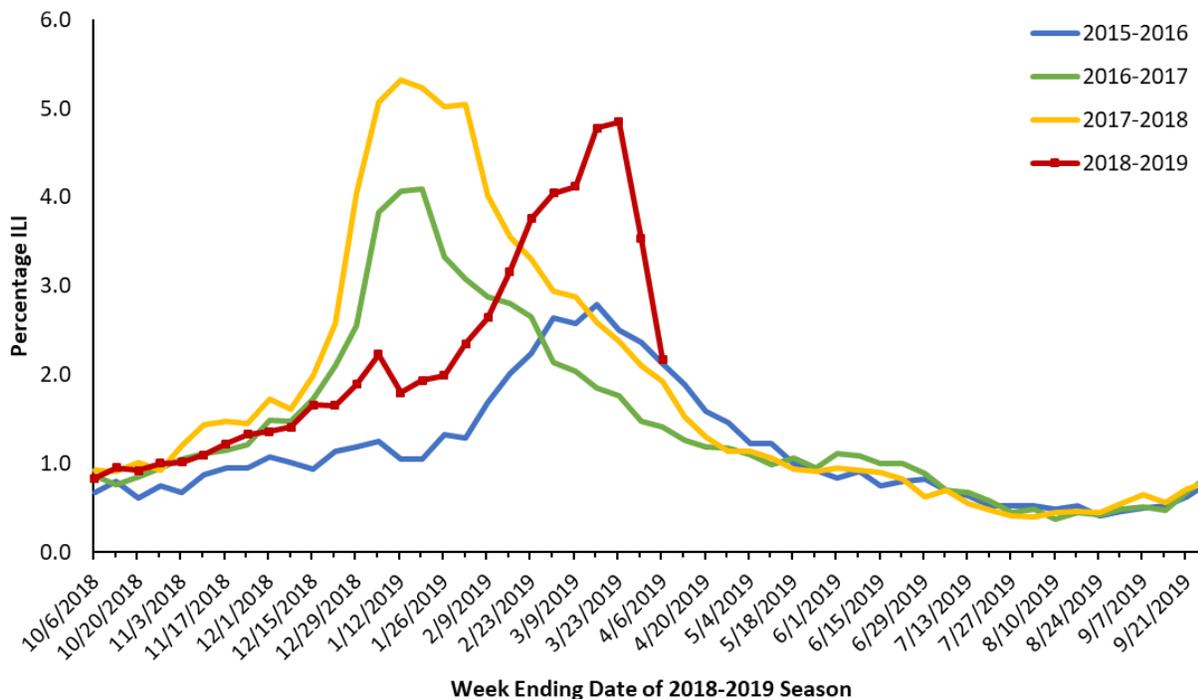
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 2.2% during week 14, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 13.3% of specimens tested at Oregon labs were positive for influenza during week 14, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

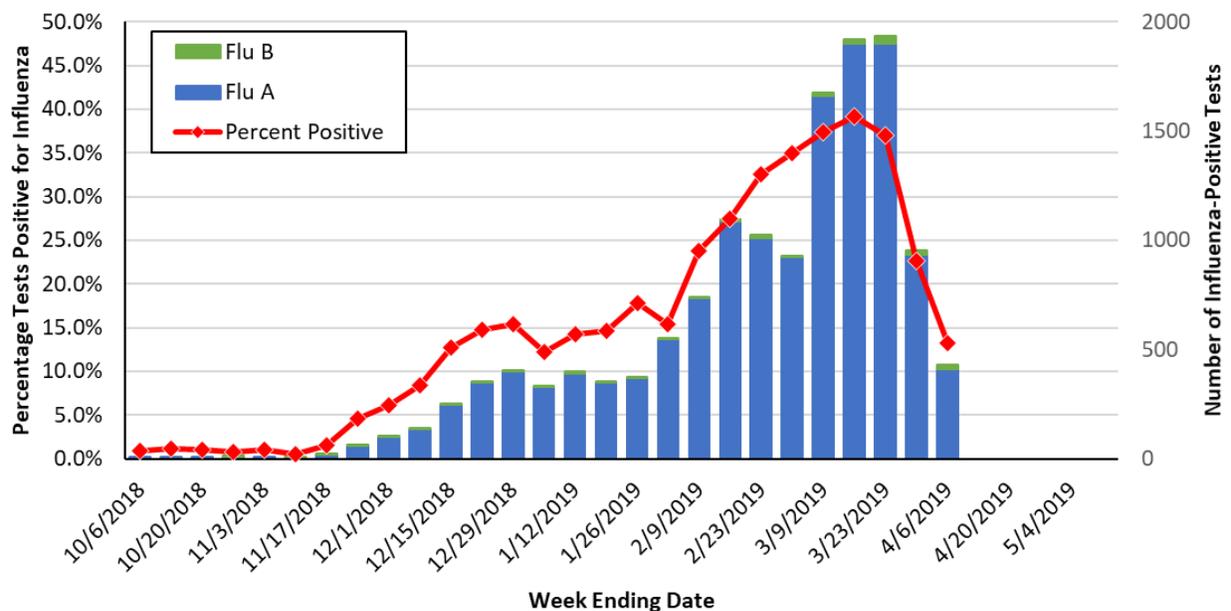
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

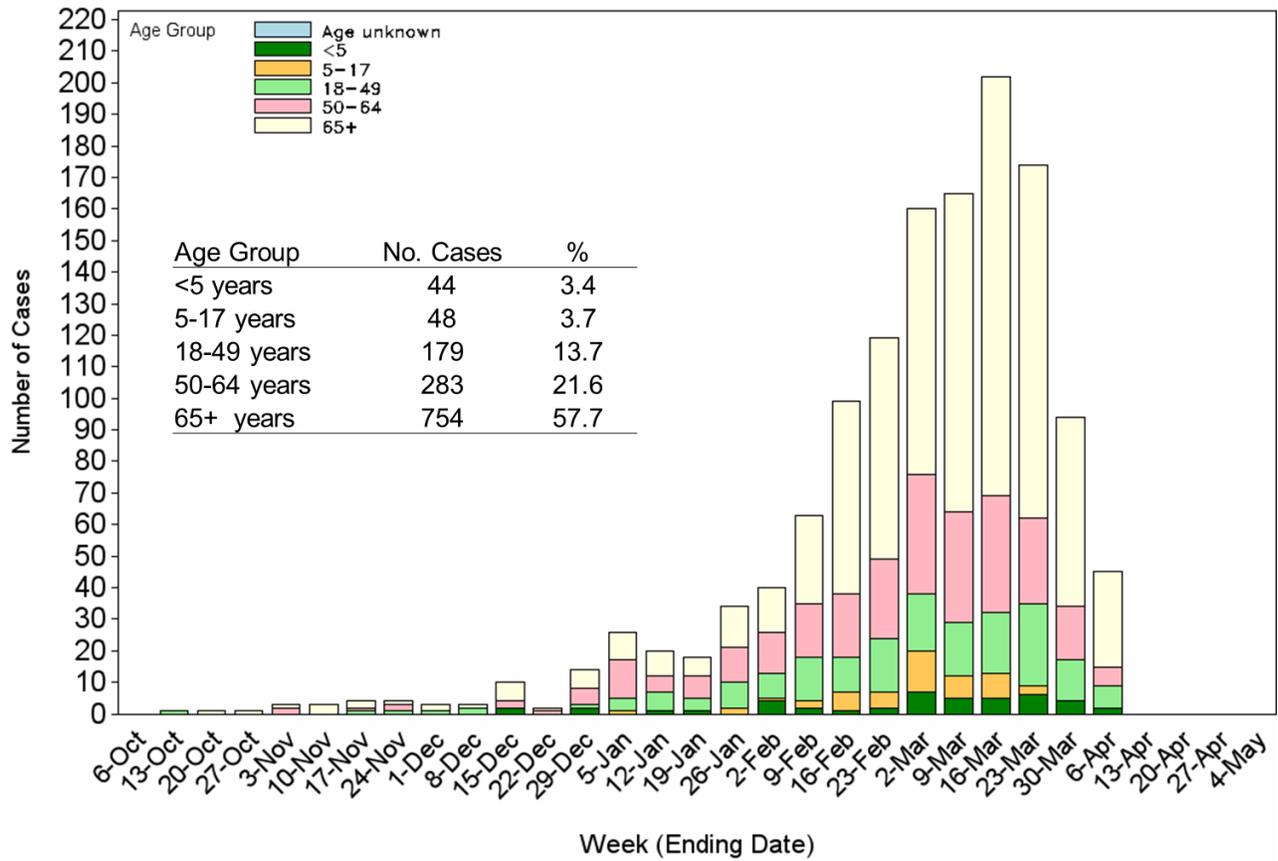
	Current Week	Cumulative
No. of specimens tested	3,249	67,455
No. of positive specimens (%)	432 (13.3%)	14,110 (20.9%)
Positive specimens by type		
Influenza A	409 (94.7%)	13,911 (98.6%)
Influenza B	23 (5.3%)	199 (1.4%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



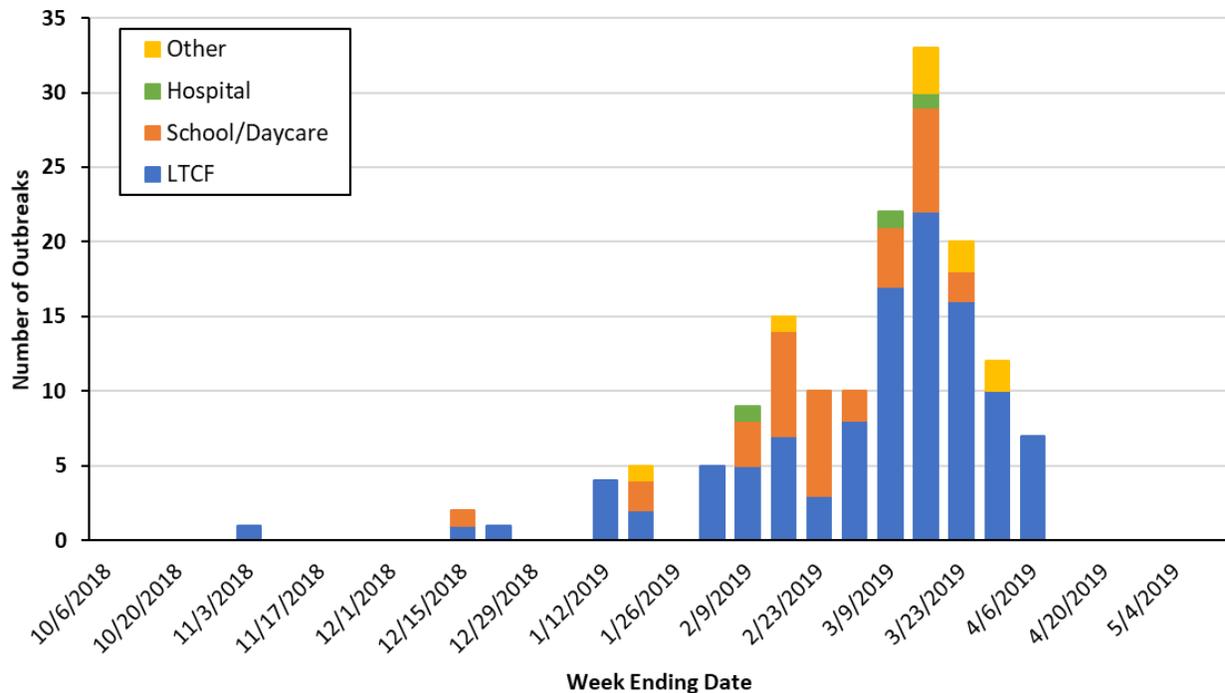
Hospitalizations: In Clackamas, Multnomah, and Washington counties 45 influenza-associated hospitalizations were reported during week 14 of 2019. In total, there have been 1,308 hospitalizations, 1,295 (99.1%) of which have been positive for flu A. Of the 357 tests that have been subtyped, 146 (40.1%) are flu A 2009 H1N1 and 211 (59.1%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



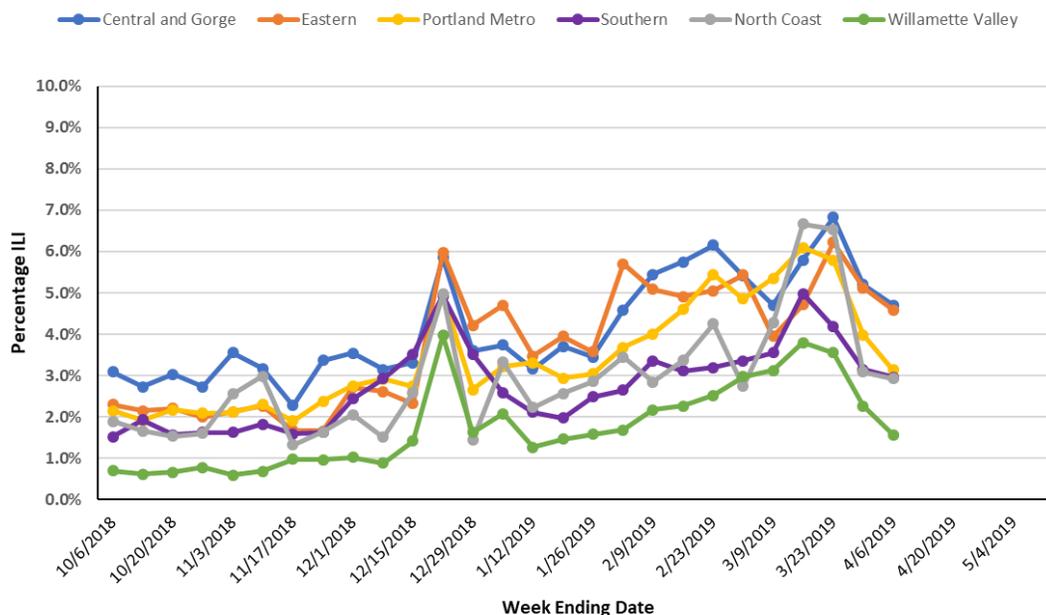
Influenza Outbreaks: There were 7 influenza outbreaks reported during Week 14, 2019. There have been a total of 156 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 109 of which have occurred in long-term care facilities, 35 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 172 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 14 of 2019 was 3.1%. Regionally, the percent was highest in the Central Oregon and Gorge area (4.7%) and lowest in the Willamette Valley (1.6%).

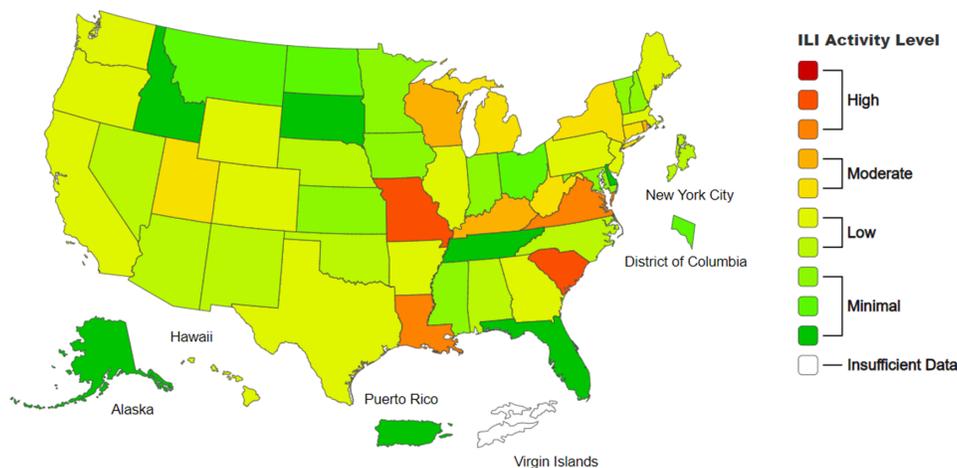
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



US Data (from CDC FluView): Influenza activity continues to decrease but remains elevated in the United States. Influenza A(H1N1)pdm09 viruses predominated from October to mid-February, and influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses have also been reported. Below is a summary of the key influenza indicators for the week ending April 6, 2019:

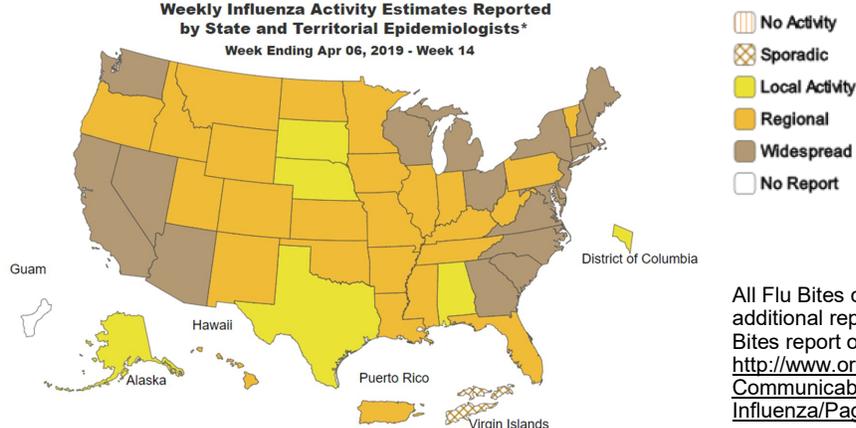
- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased. Nationally, during the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses and in all 10 HHS Regions.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, an increasing proportion of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased to 2.8%, and remains above the national baseline of 2.2%. Nine of 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** Four states experienced high ILI activity; eight states experienced moderate ILI activity; New York City and 21 states experienced low ILI activity; the District of Columbia, Puerto Rico and 17 states experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 20 states was reported as widespread; Puerto Rico and 25 states reported regional activity; the District of Columbia and five states reported local activity; the U.S. Virgin Islands reported sporadic activity; Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 59.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (195.9 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Four influenza-associated pediatric deaths were reported to CDC during week 14.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 14 ending Apr 06, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*
Week Ending Apr 06, 2019 - Week 14



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance March 24 - March 30, 2019 (Week 13)

	Current Week (13)	Previous Week (12)
Percentage of emergency department visits for ILI¹	3.5%	4.8%
Percentage positive influenza tests²	22.7%	37.0%
Influenza-associated hospitalizations³	79	151
Reported influenza outbreaks	12	20
Influenza-associated pediatric mortality	1	0
Respiratory Syncytial Virus (RSV) activity⁴	7.3%	7.4%

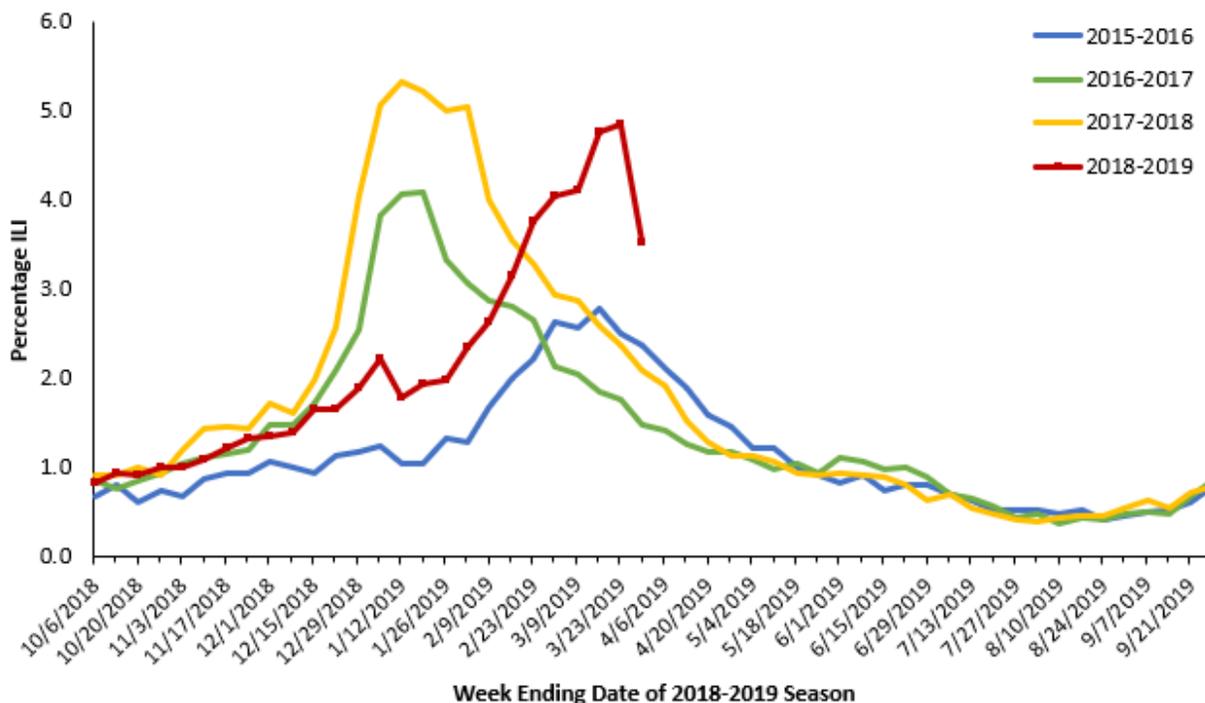
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 3.5% during week 13, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 22.7% of specimens tested at Oregon labs were positive for influenza during week 13, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

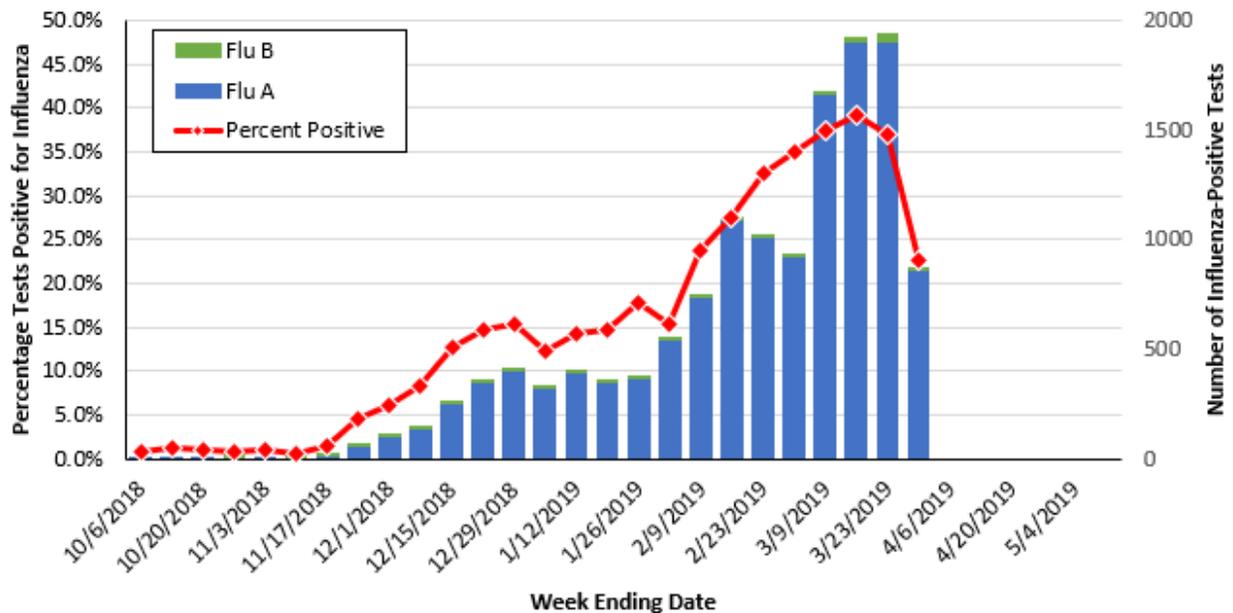
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

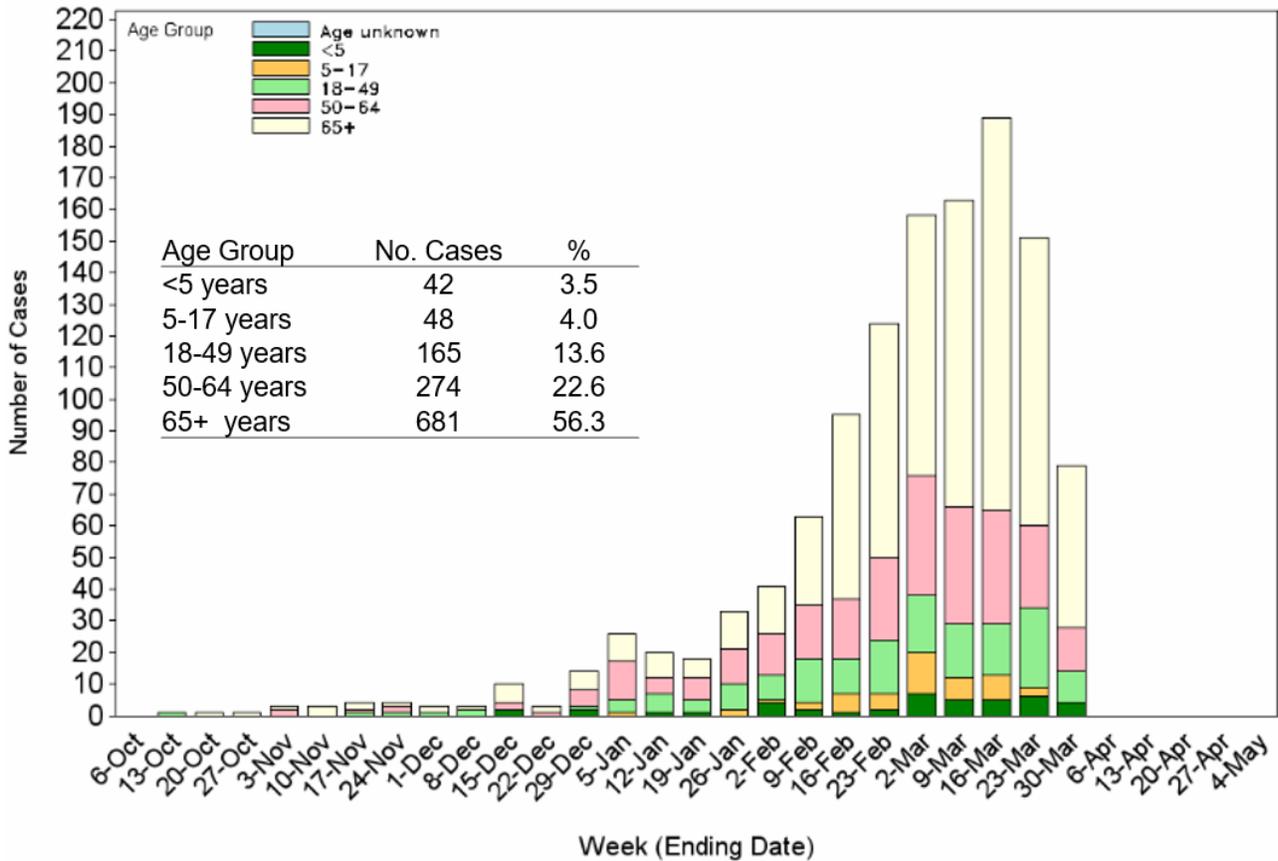
	Current Week	Cumulative
No. of specimens tested	3,843	63,835
No. of positive specimens (%)	874 (22.7%)	13,600 (21.3%)
<i>Positive specimens by type</i>		
Influenza A	859 (98.3%)	13,600 (98.7%)
Influenza B	15 (1.7%)	173 (1.3%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



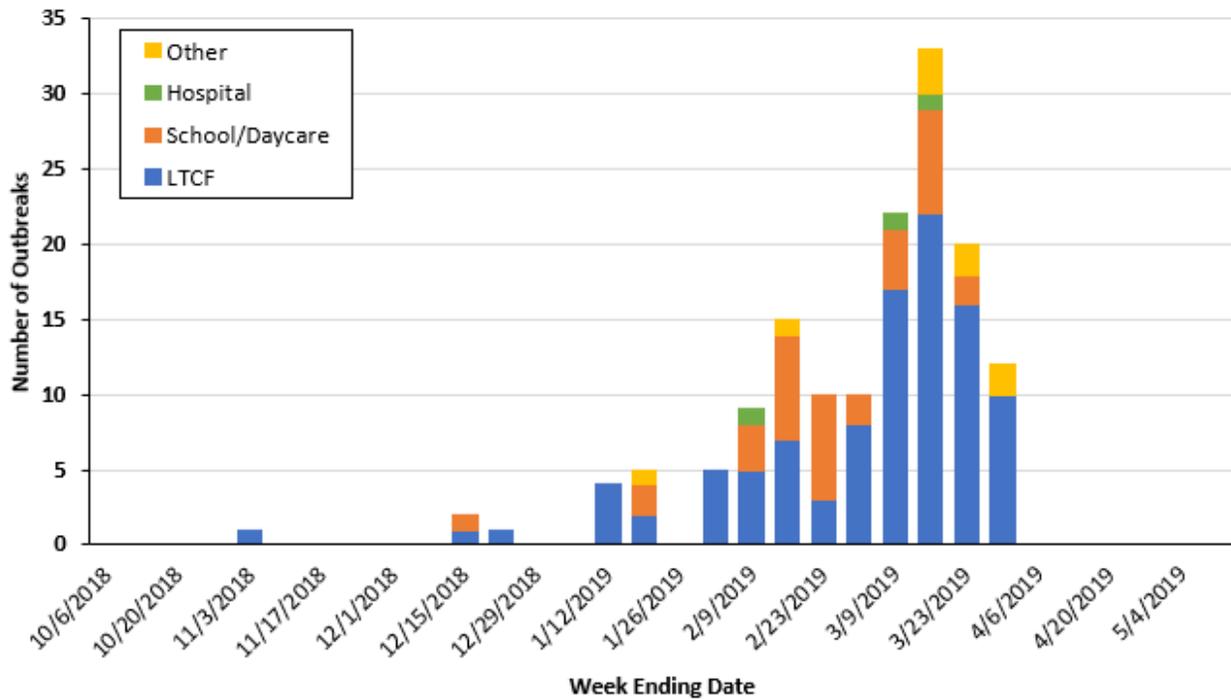
Hospitalizations: In Clackamas, Multnomah, and Washington counties 79 influenza-associated hospitalizations were reported during week 13 of 2019. In total, there have been 1,210 hospitalizations, 1,198 (99.0%) of which have been positive for flu A. Of the 357 tests that have been subtyped, 148 (41.5%) are flu A 2009 H1N1 and 209 (58.5%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



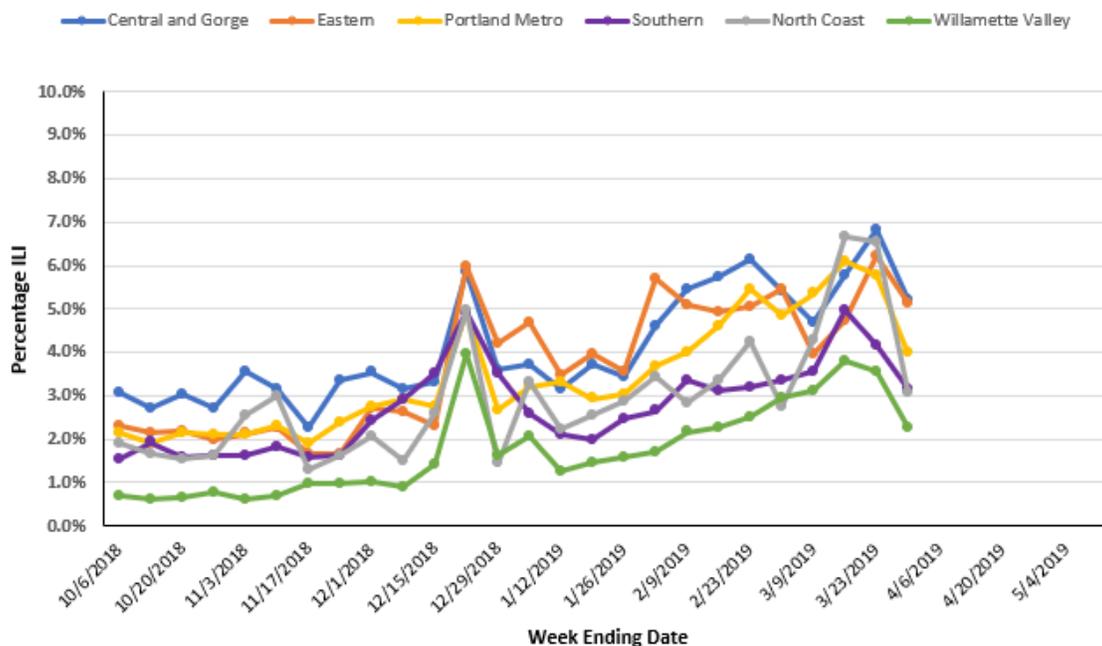
Influenza Outbreaks: There were 12 influenza outbreaks reported during Week 13, 2019. There have been a total of 149 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 102 of which have occurred in long-term care facilities, 35 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 184 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 13 of 2019 was 3.7%. Regionally, the percent was highest in the Central Oregon and Gorge area (5.2%) and lowest in the Willamette Valley (2.3%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Data at a Glance March 17 - March 23, 2019 (Week 12)

	Current Week (12)	Previous Week (11)
Percentage of emergency department visits for ILI¹	4.8%	4.8%
Percentage positive influenza tests²	37.0%	39.1%
Influenza-associated hospitalizations³	144	192
Reported influenza outbreaks	20	29
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity⁴	7.4%	7.3%

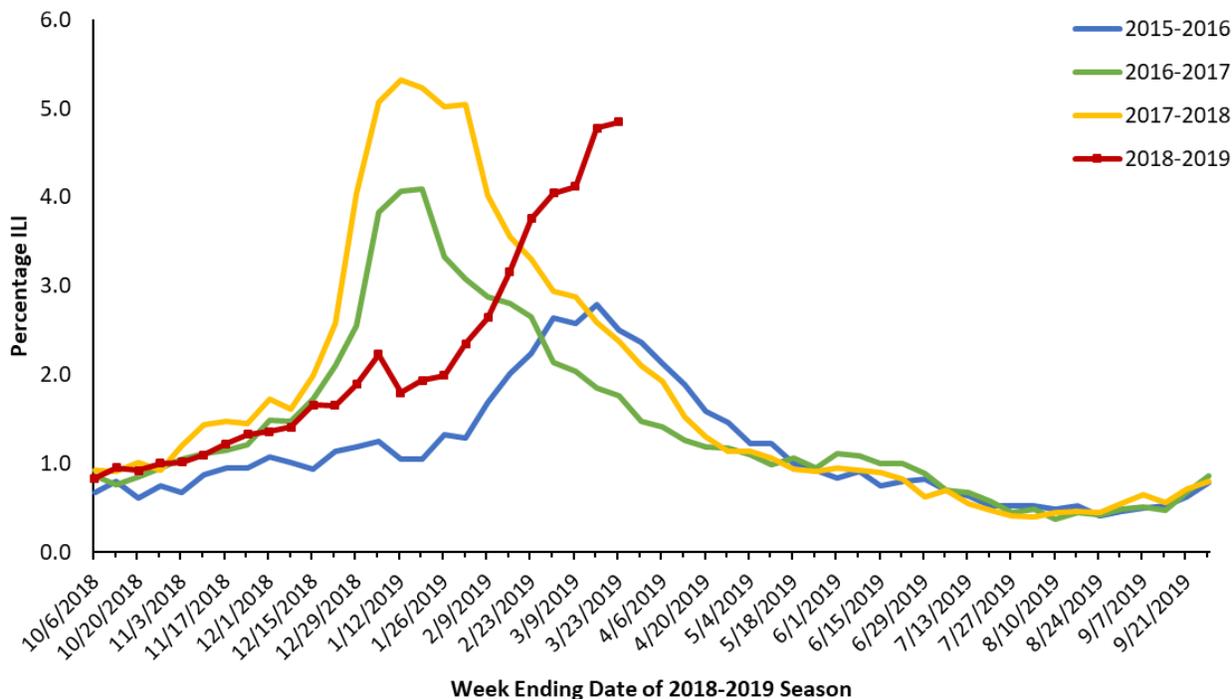
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 4.8% during week 12, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 37.0% of specimens tested at Oregon labs were positive for influenza during week 12, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

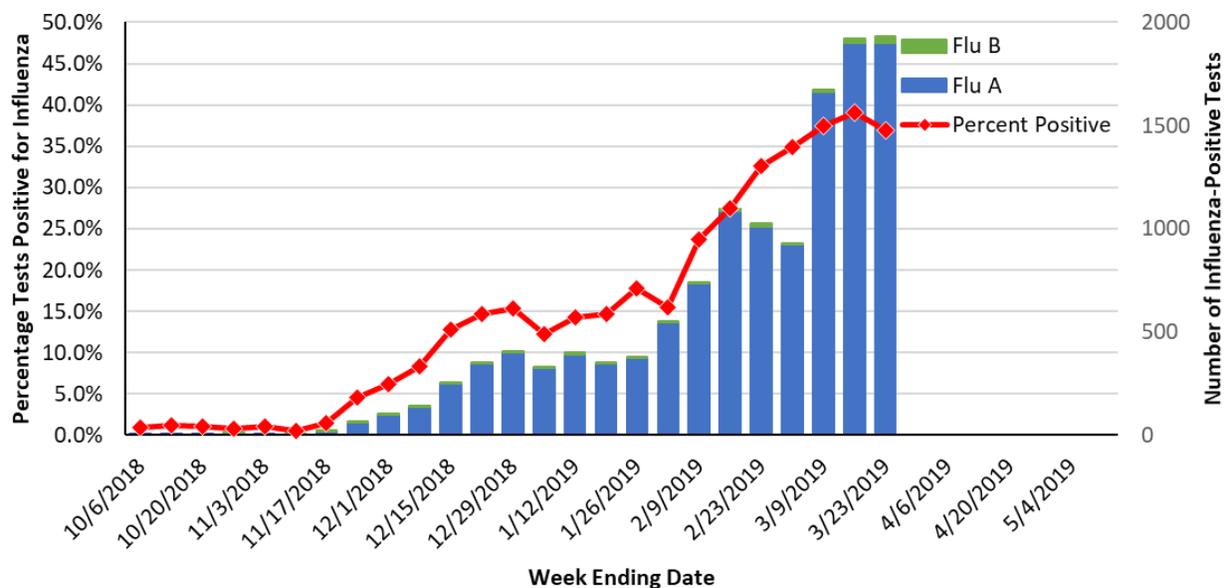
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

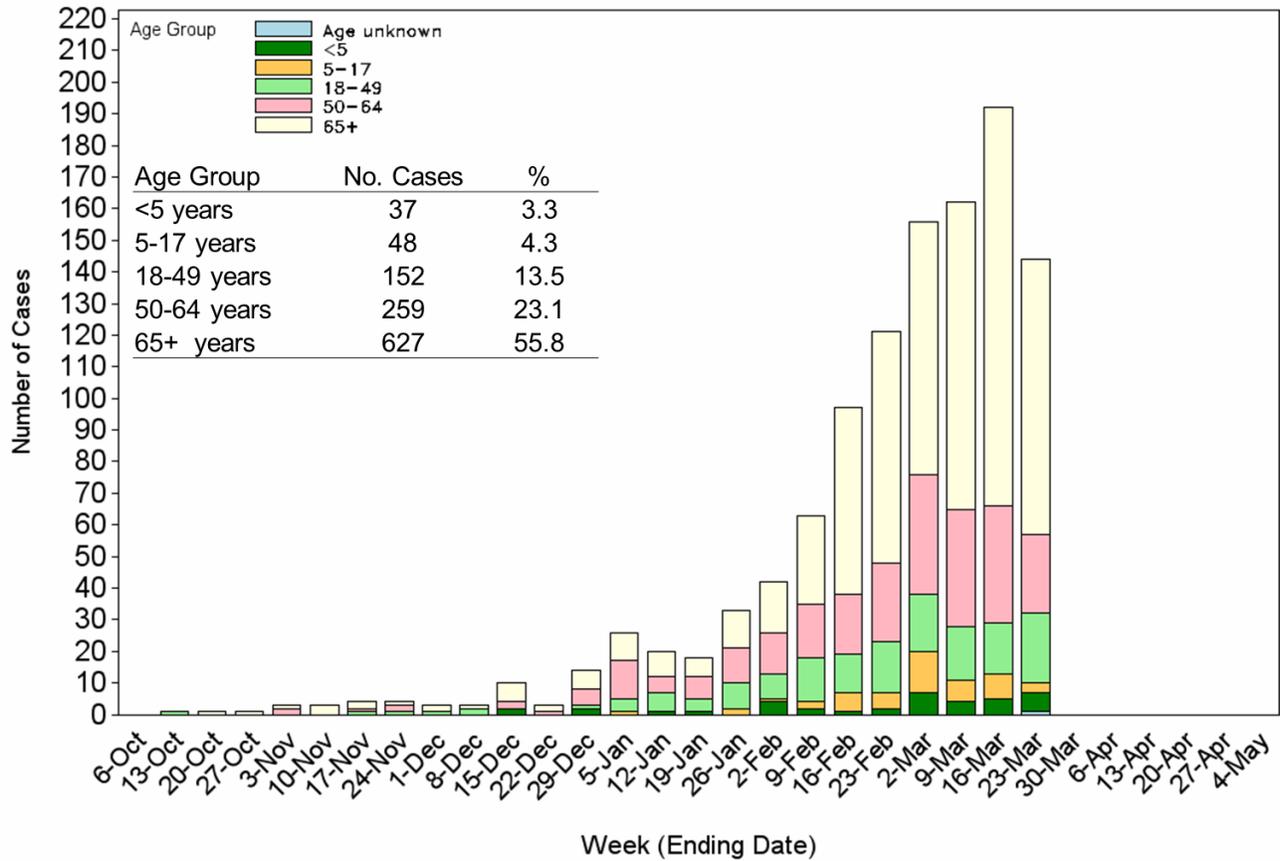
	Current Week	Cumulative
No. of specimens tested	5,232	59,992
No. of positive specimens (%)	1,935 (37.0%)	12,726 (21.2%)
<i>Positive specimens by type</i>		
Influenza A	1,900 (98.2%)	12,568 (98.8%)
Influenza B	35 (1.8%)	158 (1.2%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



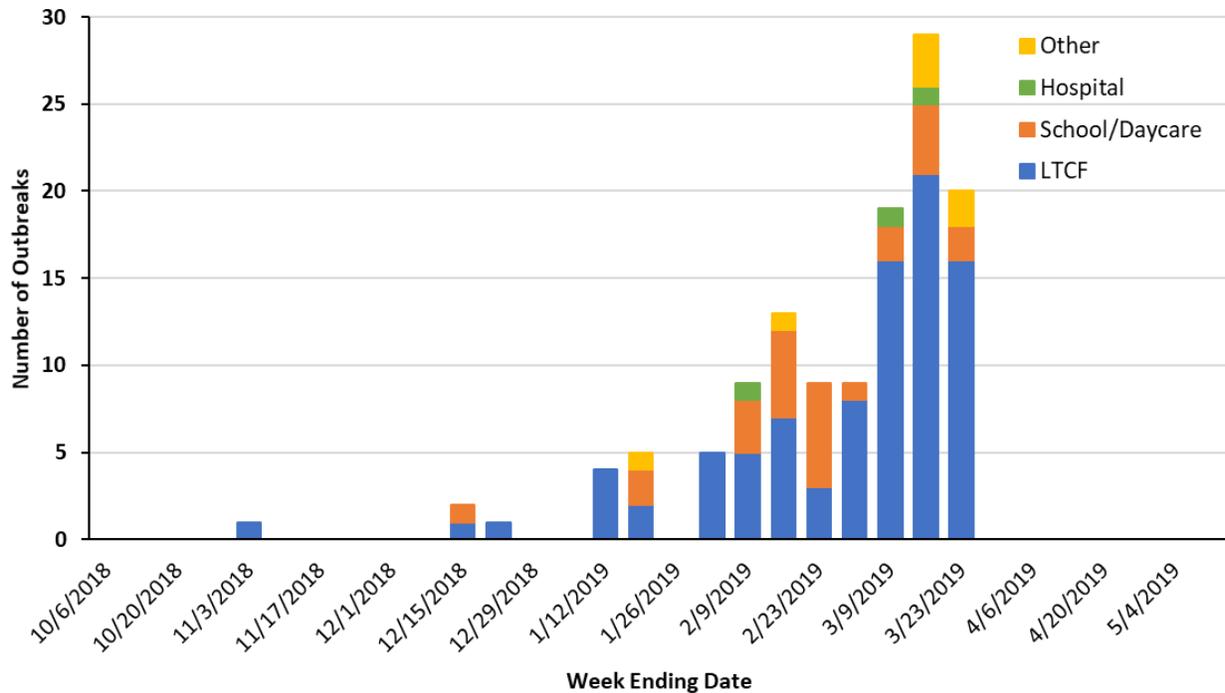
Hospitalizations: In Clackamas, Multnomah, and Washington counties 144 influenza-associated hospitalizations were reported during week 12 of 2019. In total, there have been 1,124 hospitalizations, 1,114 (99.1%) of which have been positive for flu A. Of the 275 tests that have been subtyped, 120 (43.6%) are flu A 2009 H1N1 and 155 (56.4%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



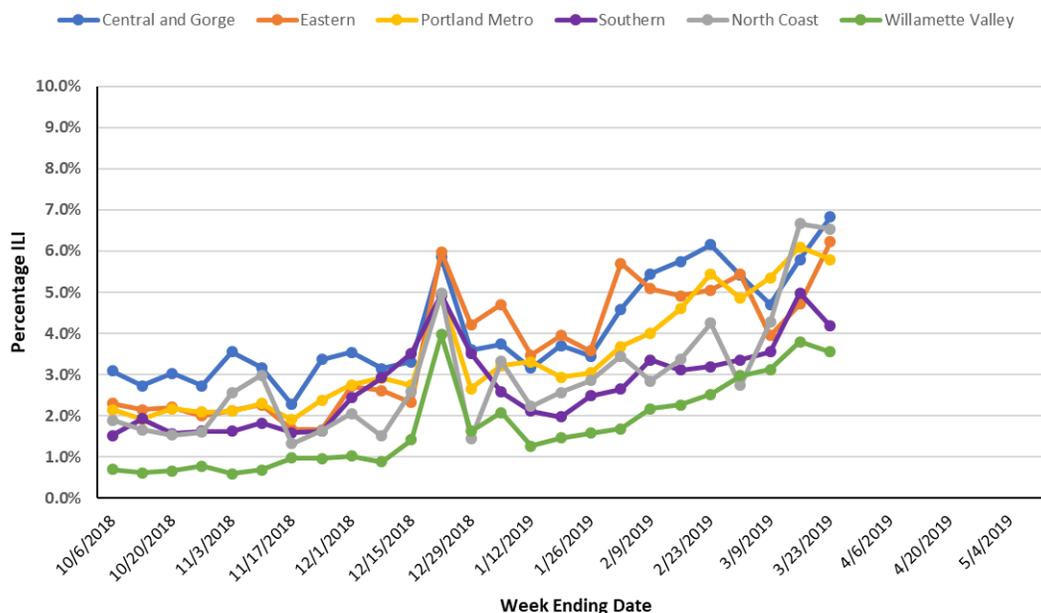
Influenza Outbreaks: There were 20 influenza outbreaks reported during Week 12, 2019. There have been a total of 126 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 90 of which have occurred in long-term care facilities, 26 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 184 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 12 of 2019 was 5.3%. Regionally, the percent was highest in the Central Oregon and Gorge area (6.8%) and lowest in the Willamette Valley (3.5%).

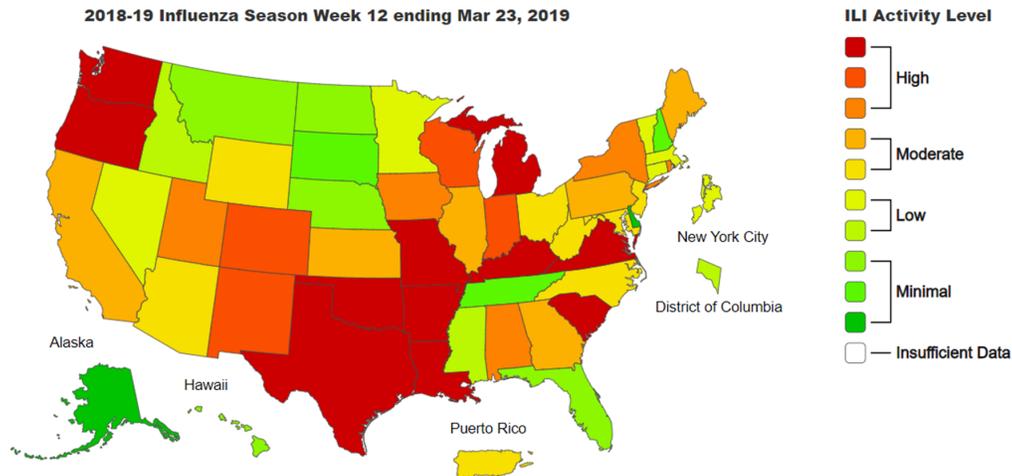
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



US Data (from CDC FluView): Influenza activity decreased but remains elevated in the United States. Influenza A (H1N1)pdm09 viruses predominated from October to mid-February and influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses have also been reported. Below is a summary of the key influenza indicators for the week ending March 23, 2019

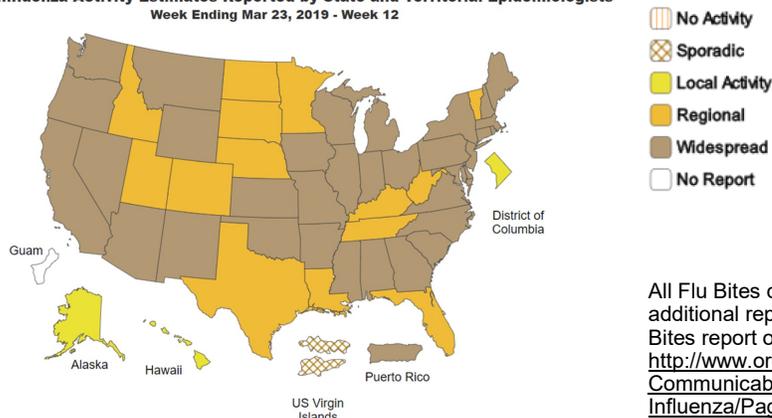
- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased. Nationally, during the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses and in all 10 HHS Regions.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, an increasing proportion of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased to 3.8%, and remains above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** 20 states experienced high ILI activity; Puerto Rico and 13 states experienced moderate ILI activity; New York City, the District of Columbia and seven states experienced low ILI activity; 10 states experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 34 states was reported as widespread; 14 states reported regional activity; the District of Columbia and two states reported local activity; the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 52.5 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (167.0 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death was reported to CDC during week 12.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 12 ending Mar 23, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*
Week Ending Mar 23, 2019 - Week 12



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance March 10 - March 16, 2019 (Week 11)

	Current Week (11)	Previous Week (10)
Percentage of emergency department visits for ILI¹	4.8%	4.1%
Percentage positive influenza tests²	39.1%	37.4%
Influenza-associated hospitalizations³	181	161
Reported influenza outbreaks	29	19
Influenza-associated pediatric mortality	0	1
Respiratory Syncytial Virus (RSV) activity⁴	7.3%	7.5%

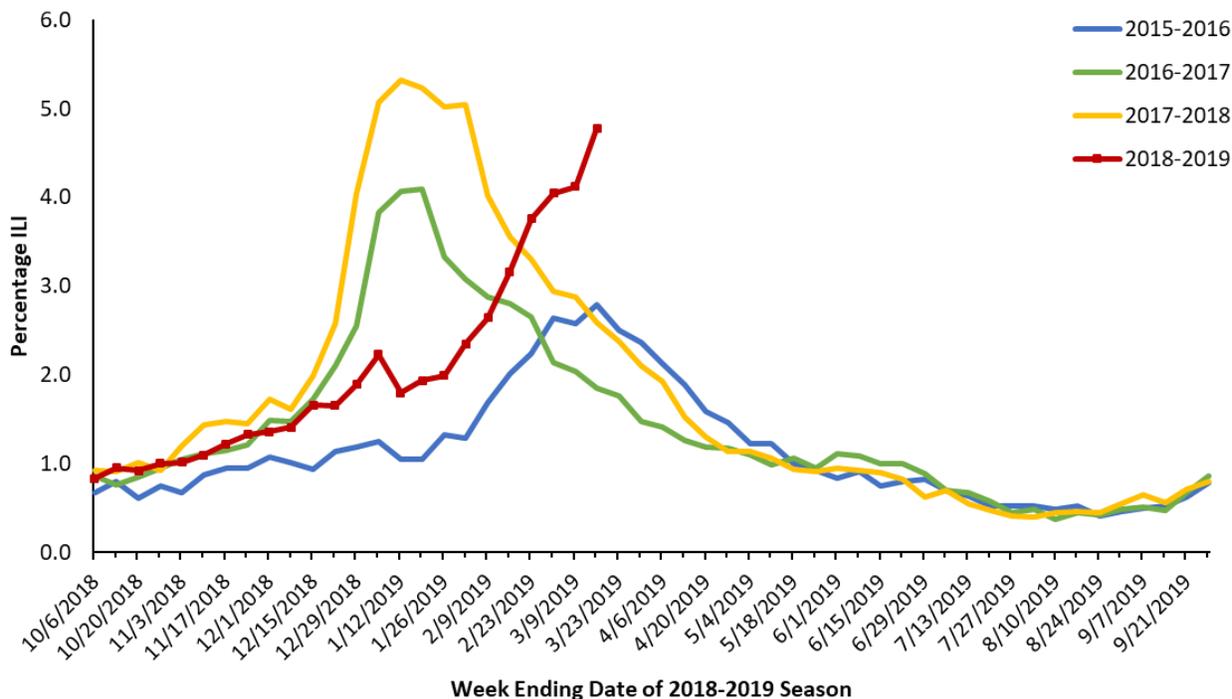
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018–2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 4.8% during week 11, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 39.1% of specimens tested at Oregon labs were positive for influenza during week 11, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

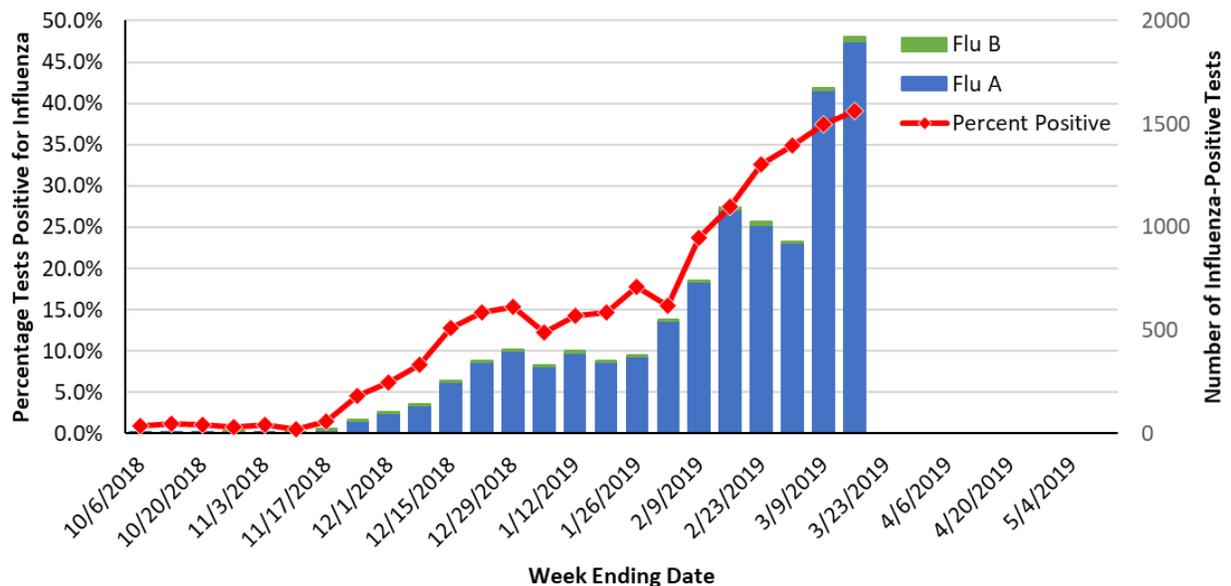
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

	Current Week	Cumulative
No. of specimens tested	4,912	54,760
No. of positive specimens (%)	1,922 (39.1%)	10,791 (19.7%)
<i>Positive specimens by type</i>		
Influenza A	1,901 (98.9%)	10,668 (98.9%)
Influenza B	21 (1.1%)	123 (1.1%)
Type Unavailable	0 (0%)	0 (0%)

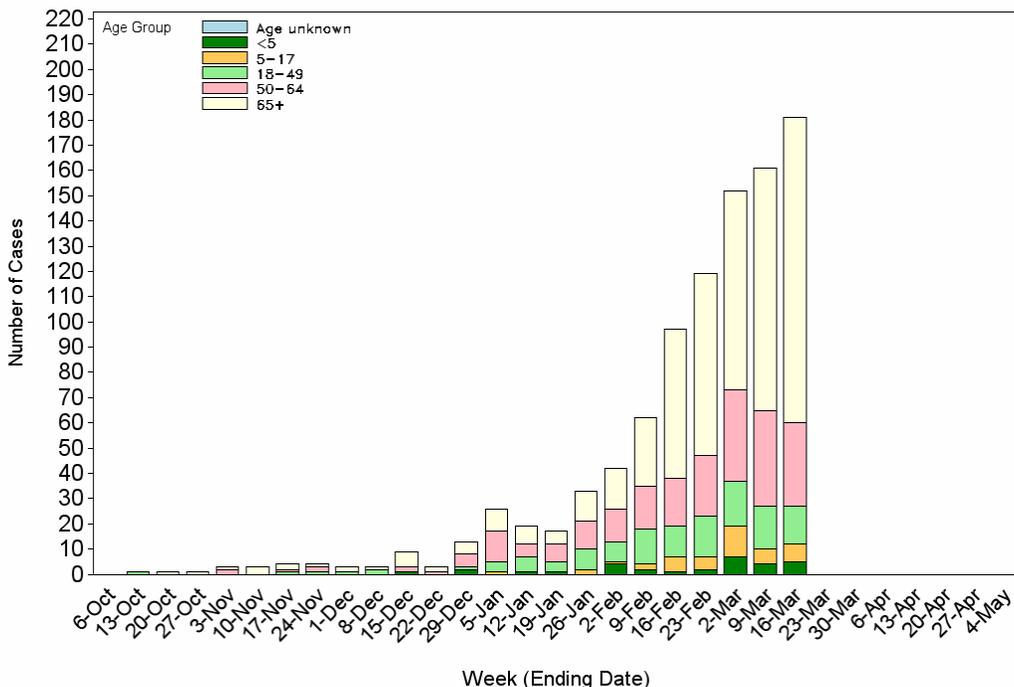
**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



Hospitalizations: In Clackamas, Multnomah, and Washington counties 181 influenza-associated hospitalizations were reported during week 11 of 2019. In total, there have been 957 hospitalizations, 948 (99.1%) of which have been positive for flu A. Of the 225 tests that have been subtyped, 99 (44.0%) are flu A 2009 H1N1 and 126 (56.0%) are flu A H3.

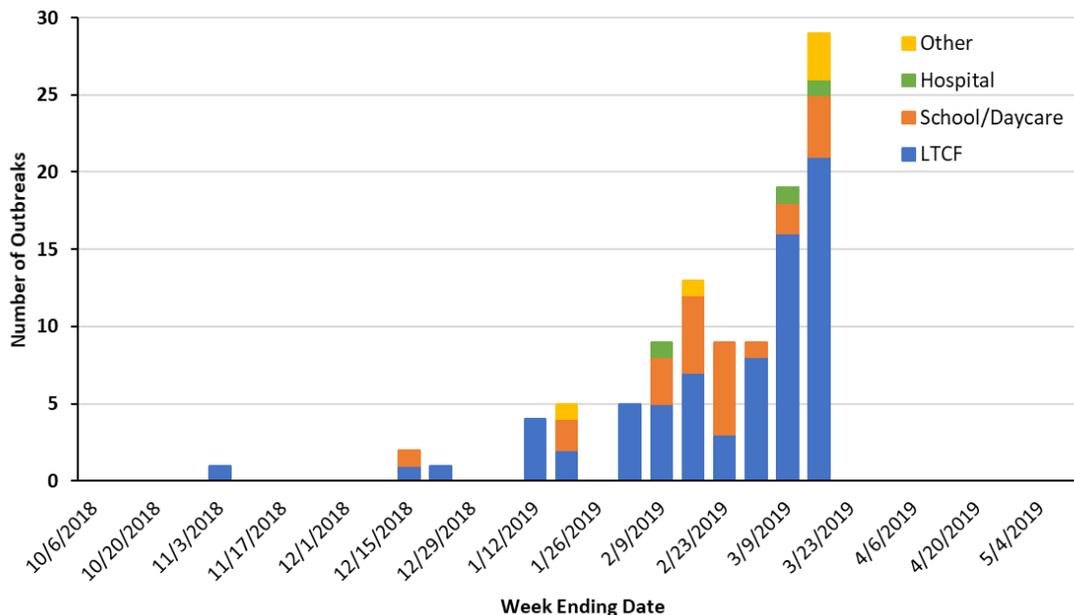
Of note, flu A 2009 H1N1 previously accounted for the majority of the season's subtyped cases, but as of this week flu A H3N2 now accounts for the majority. Both flu A 2009 H1N1 and flu A H3N2 have co-circulated throughout this season and continue to do so.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



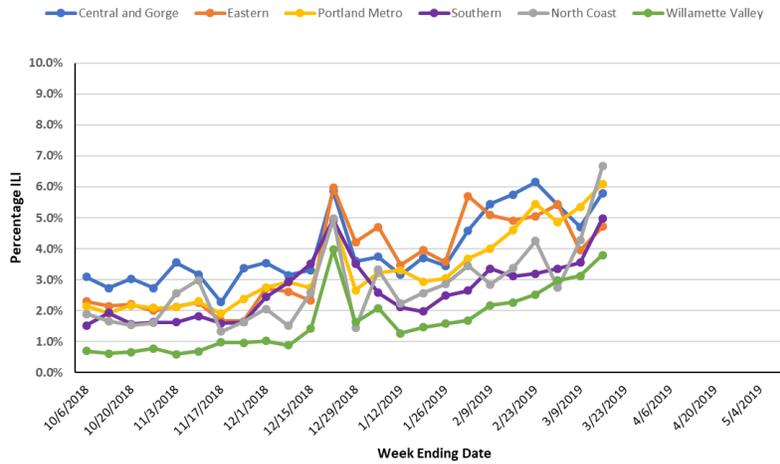
Influenza Outbreaks: There were 29 influenza outbreaks reported during Week 11, 2019. There have been a total of 106 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 74 of which have occurred in long-term care facilities, 24 of which have occurred in schools, and 3 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season

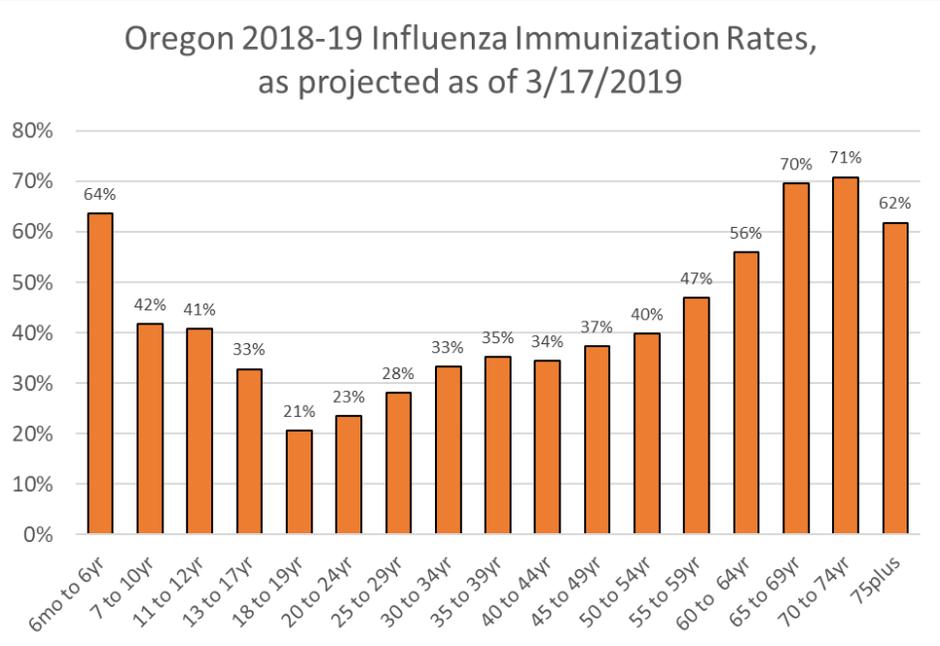
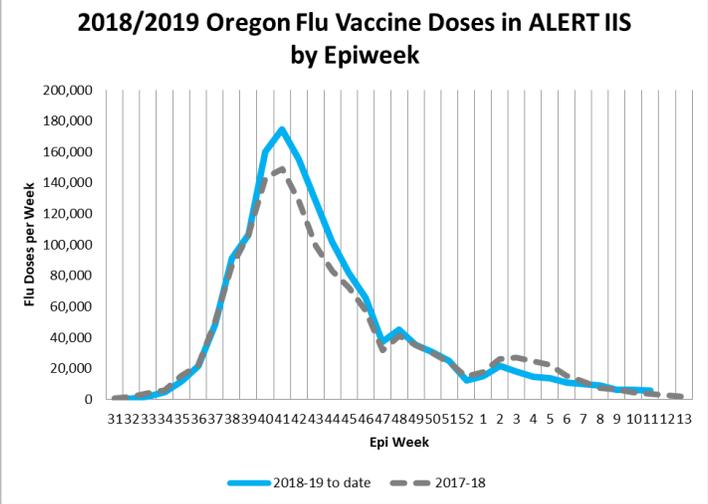


Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 181 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 11 of 2019 was 5.4%. Regionally, the percent was highest in the Portland Metro area (6.1%) and lowest in the Willamette Valley (3.8%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Vaccination Data: This week's reporting is based on ALERT IIS data through Epiweek 11 of 2019 (March 17th). To date, 1.5 million seasonal influenza immunizations for Oregonians this season have been reported to ALERT IIS. While there has been no late season surge of influenza immunizations to match the current surge in influenza disease, new immunizations are continuing to be given at a level above last season at this time. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.



For this week we are including the Immunization Programs estimates of influenza immunization rates by age groups. Overall, we are projecting that 45% of Oregonians have received an influenza immunization to date. The pattern of influenza immunization by age is similar to prior years, with the exception of a bump in immunizations for those in their 30's. This bump is in part due to increased maternal influenza immunization.

Data at a Glance March 3 - March 9, 2019 (Week 10)

	Current Week (10)	Previous Week (9)
Percentage of emergency department visits for ILI¹	4.1%	4.0%
Percentage positive influenza tests²	37.4%	34.9%
Influenza-associated hospitalizations³	137	150
Reported influenza outbreaks	19	9
Influenza-associated pediatric mortality	1	0
Respiratory Syncytial Virus (RSV) activity⁴	7.5%	8.7%

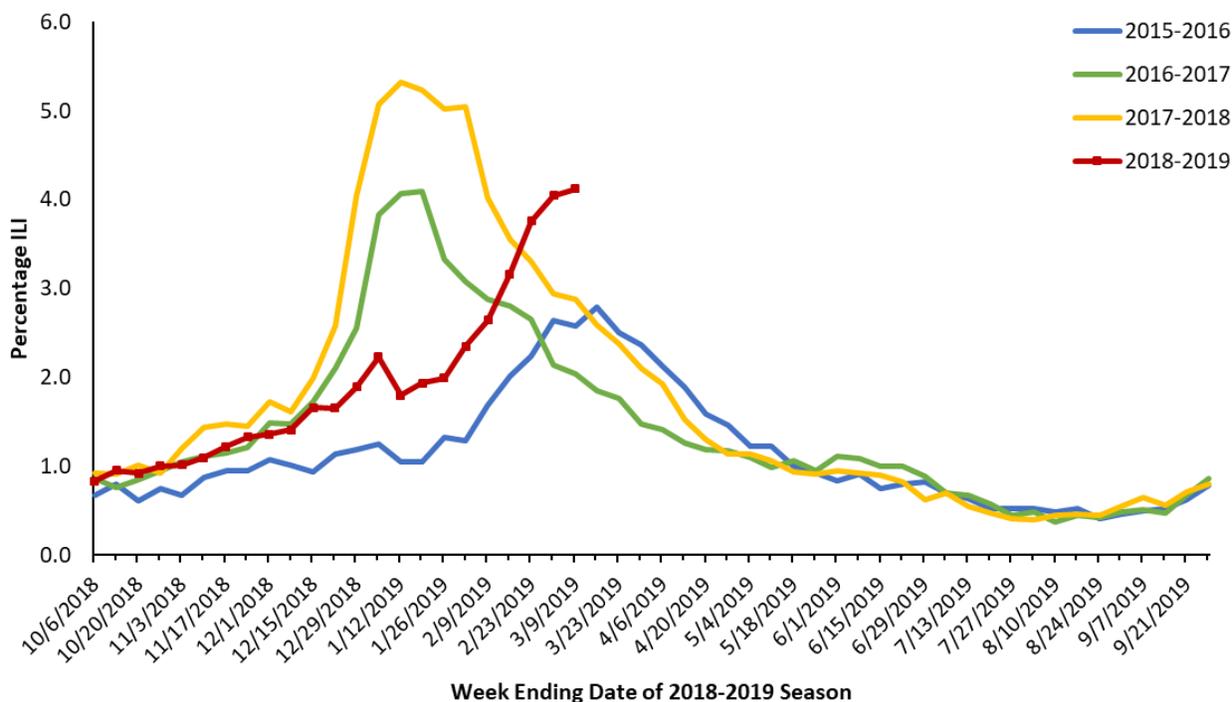
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018–2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 4.1% during week 10, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC’s [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 37.4% of specimens tested at Oregon labs were positive for influenza during week 10, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

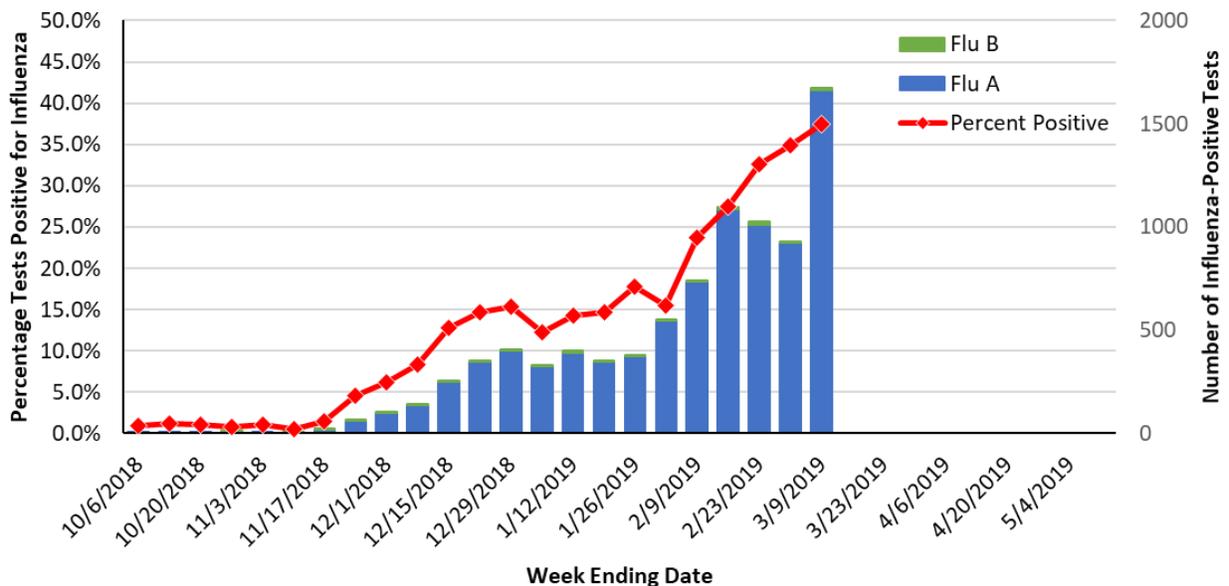
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran’s Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

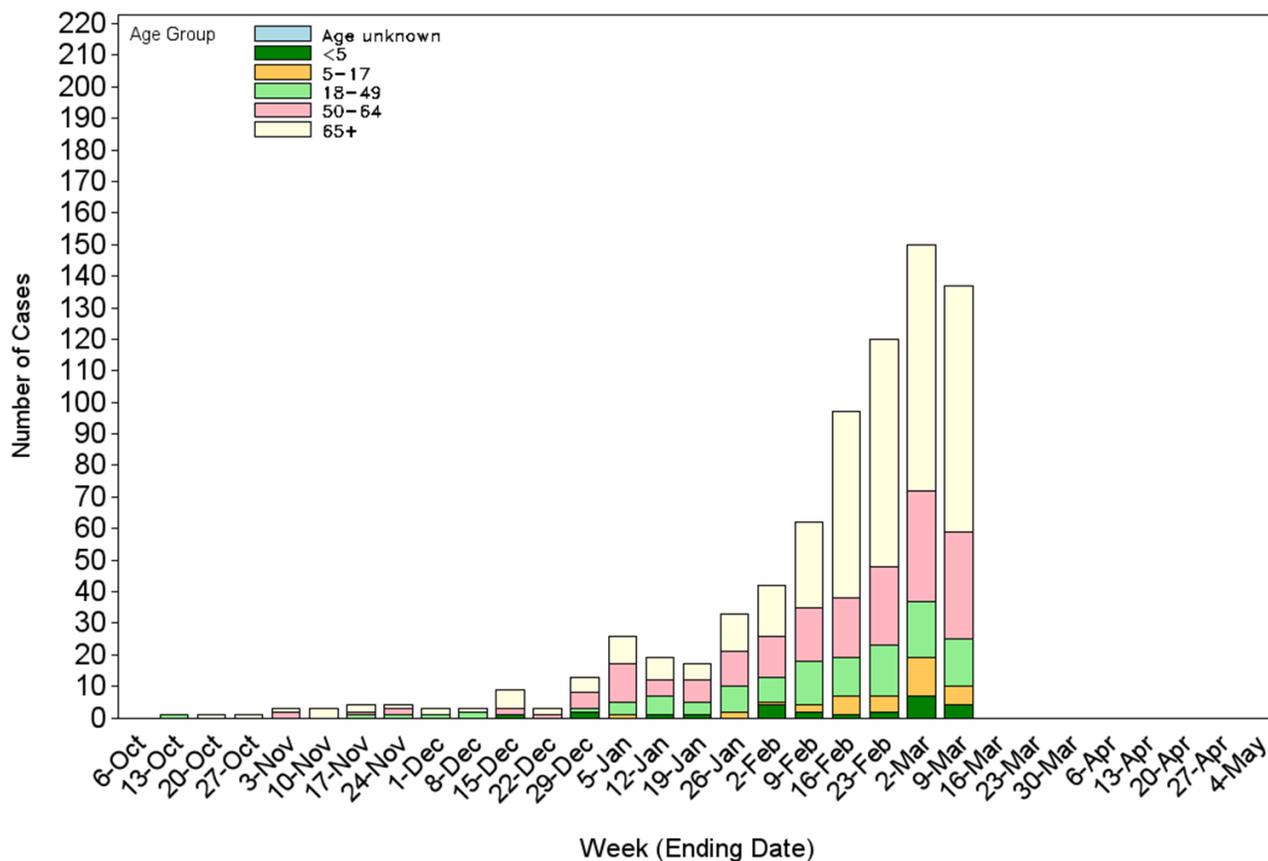
	Current Week	Cumulative
No. of specimens tested	4,480	49,848
No. of positive specimens (%)	1,676 (37.4%)	8,869 (17.8%)
<i>Positive specimens by type</i>		
Influenza A	1,661 (99.1%)	8,767 (98.8%)
Influenza B	15 (0.9%)	102 (1.2%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



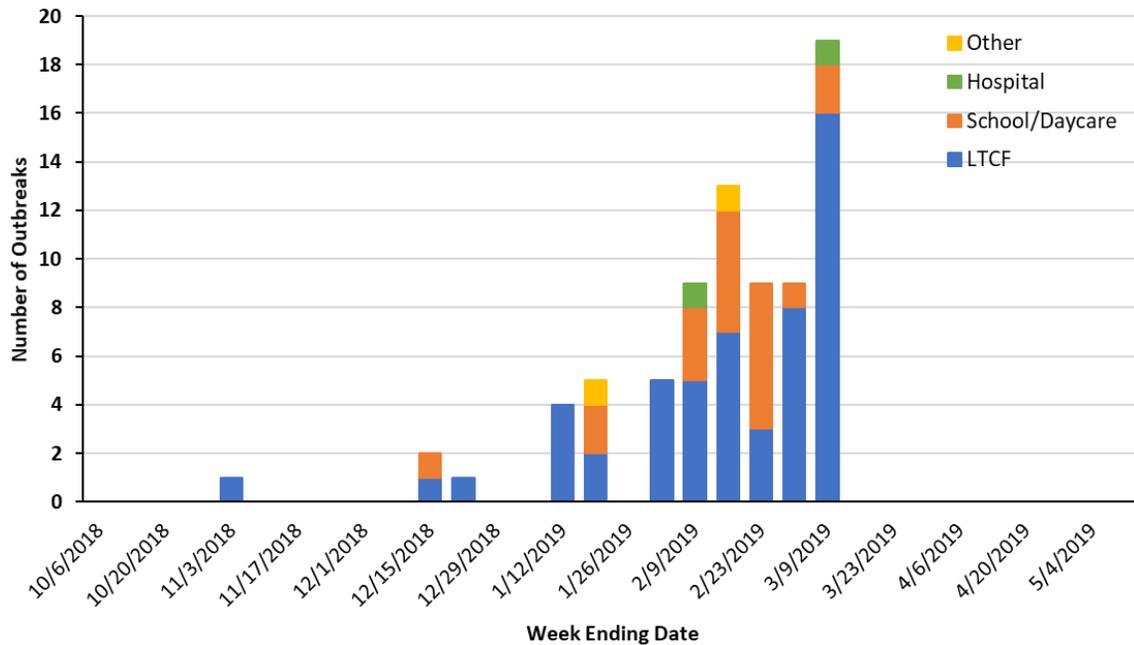
Hospitalizations: In Clackamas, Multnomah, and Washington counties 137 influenza-associated hospitalizations were reported during week 10 of 2019. In total, there have been 751 hospitalizations, 745 (99.2%) of which have been positive for flu A. Of the 147 tests that have been subtyped, 79 (53.7%) are flu A 2009 H1N1 and 68 (46.3%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



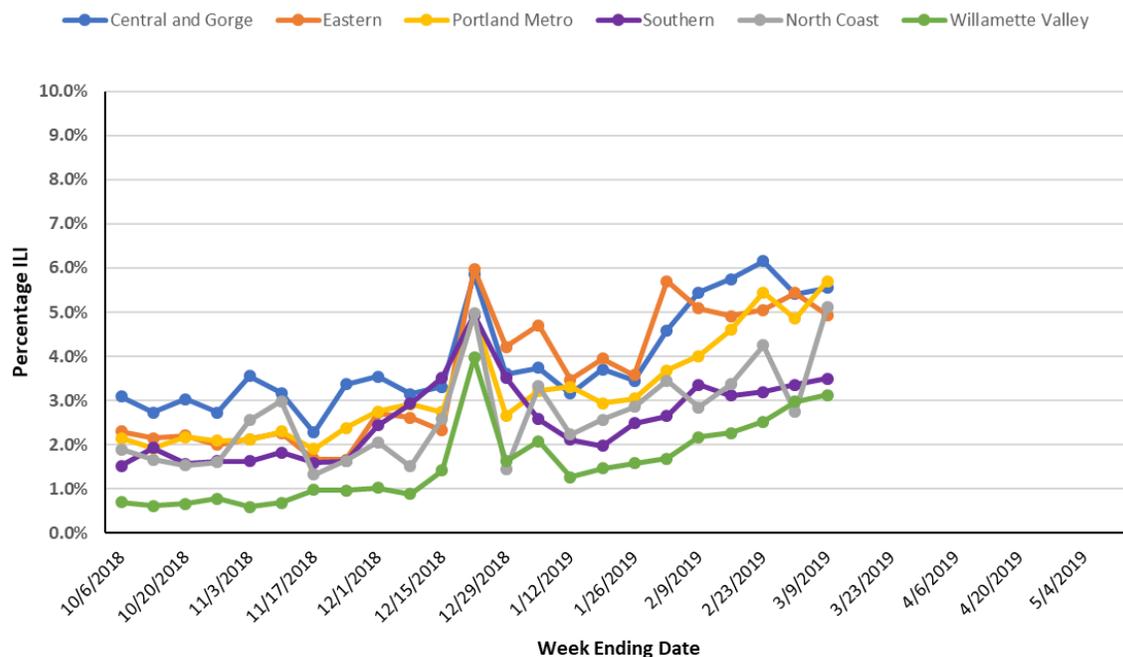
Influenza Outbreaks: There were 19 influenza outbreaks reported during Week 10, 2019. There have been a total of 77 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 53 of which have occurred in long-term care facilities, 20 of which have occurred in schools, and 2 of which occurred in a hospital.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 182 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 10 of 2019 was 4.7%. Regionally, the percent was highest in the Portland Metro area (5.7%) and lowest in the Willamette Valley (3.1%).

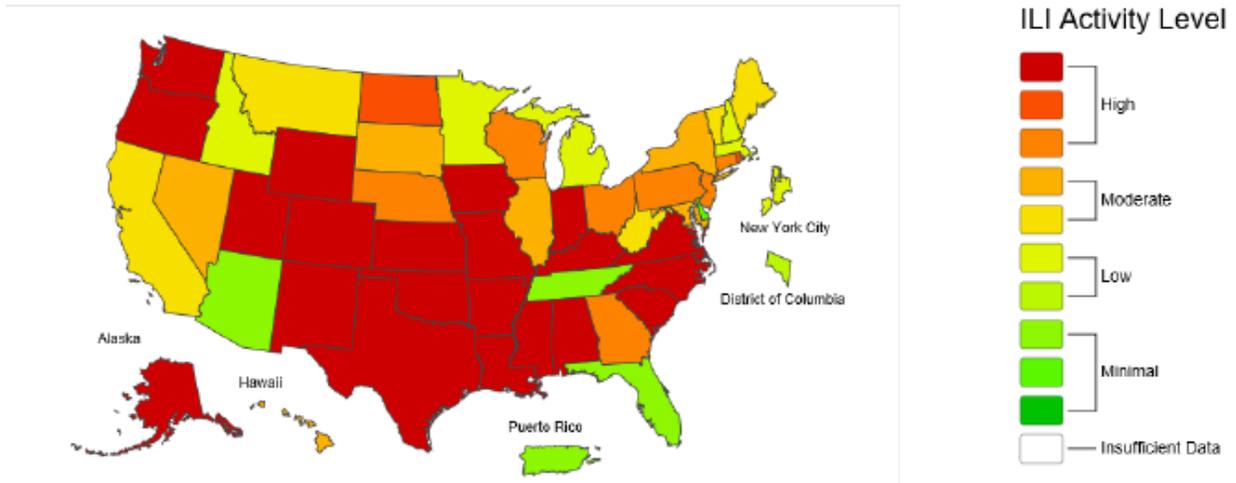
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



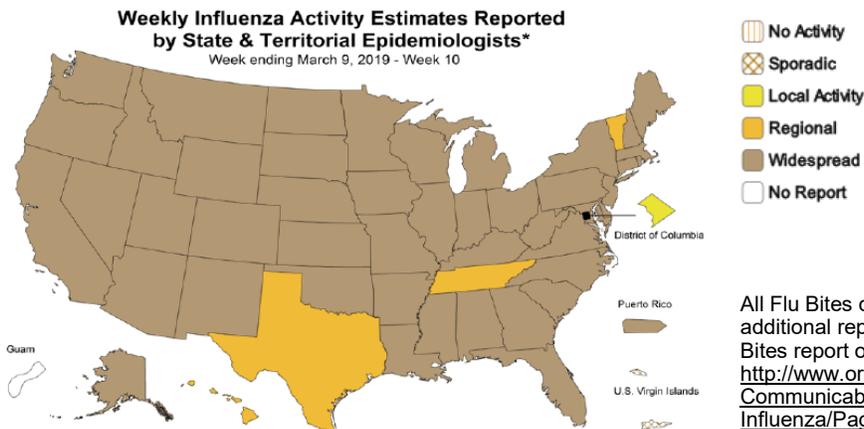
US Data (from CDC FluView): Influenza activity decreased slightly, but remains elevated in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending March 9, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Nationally, during week 10, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses in HHS Regions 2, 4, 5, 6, 7, 8 and 10.
- **Virus Characterization:** Influenza activity decreased slightly, but remains elevated in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending March 9, 2019:
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased slightly to 4.5%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** 30 states experienced high ILI activity; 11 states experienced moderate ILI activity; New York City, the District of Columbia and five states experienced low ILI activity; Puerto Rico and four states experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 46 states was reported as widespread; four states reported regional activity; the District of Columbia reported local activity; the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 41.3 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (123.9 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Four influenza-associated pediatric deaths were reported to CDC during week 10.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 10 ending Mar 09, 2019**



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance February 24 - March 2, 2019 (Week 9)

	Current Week (9)	Previous Week (8)
Percentage of emergency department visits for ILI ¹	4.0%	3.8%
Percentage positive influenza tests ²	34.9%	32.9%
Influenza-associated hospitalizations ³	138	103
Reported influenza outbreaks	9	9
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	8.7%	11.7%

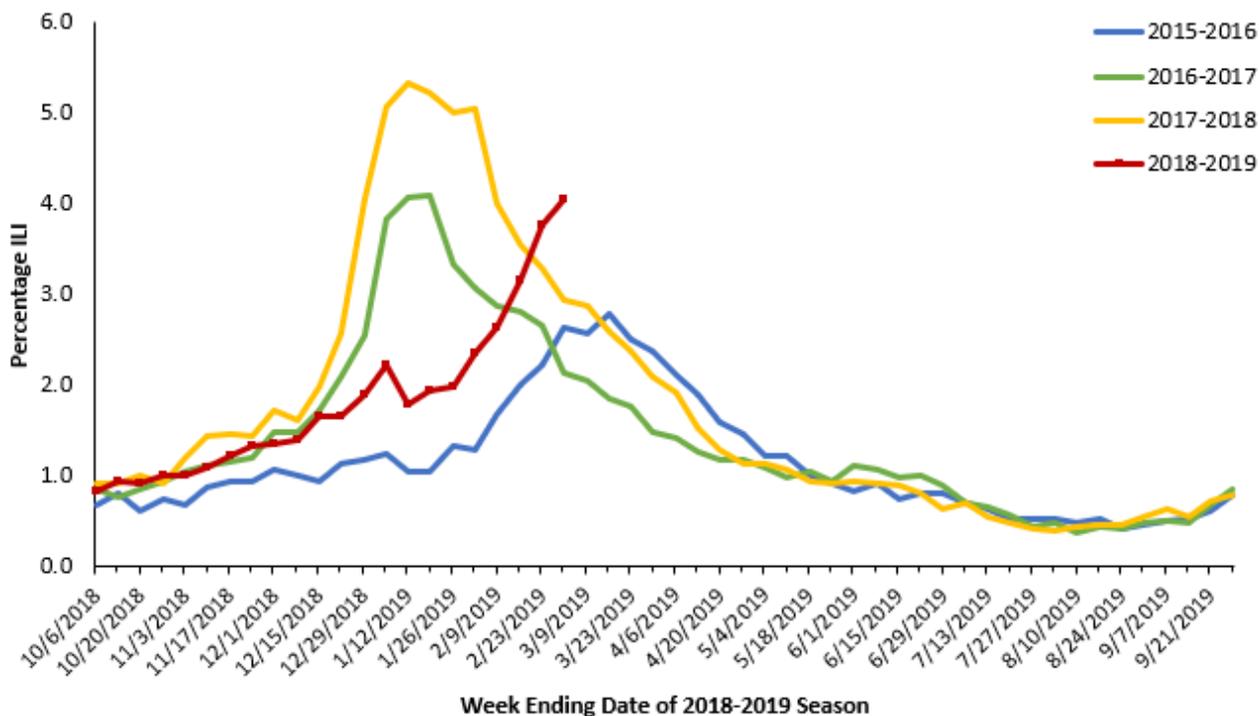
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 4.0% during week 8, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 34.9% of specimens tested at Oregon labs were positive for influenza during week 9, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

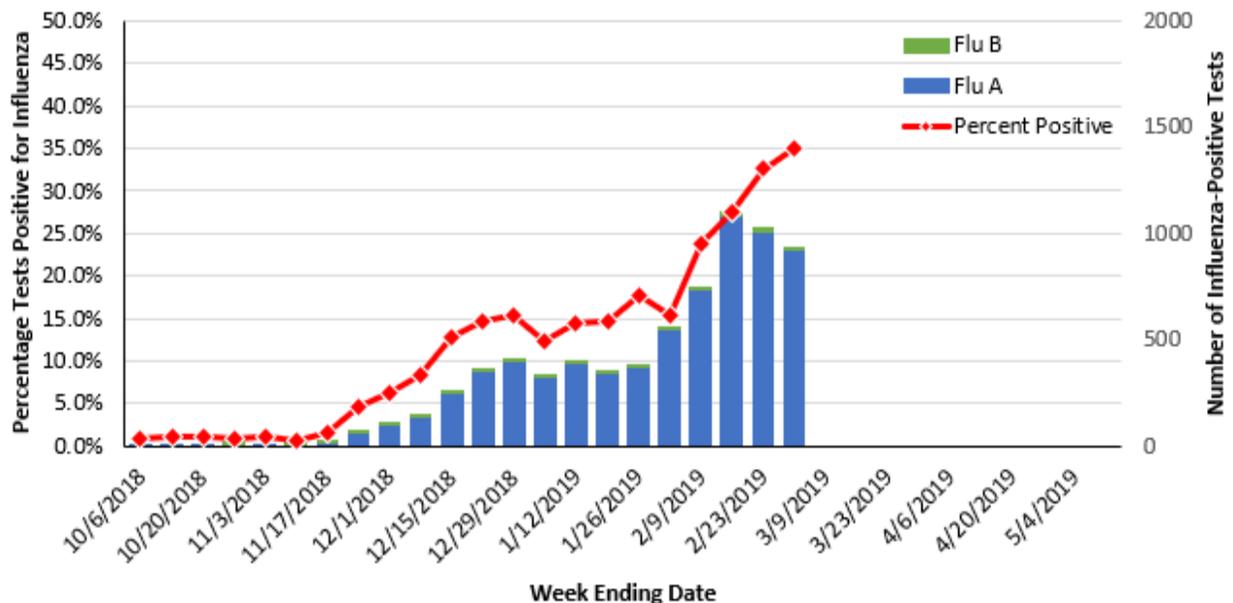
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

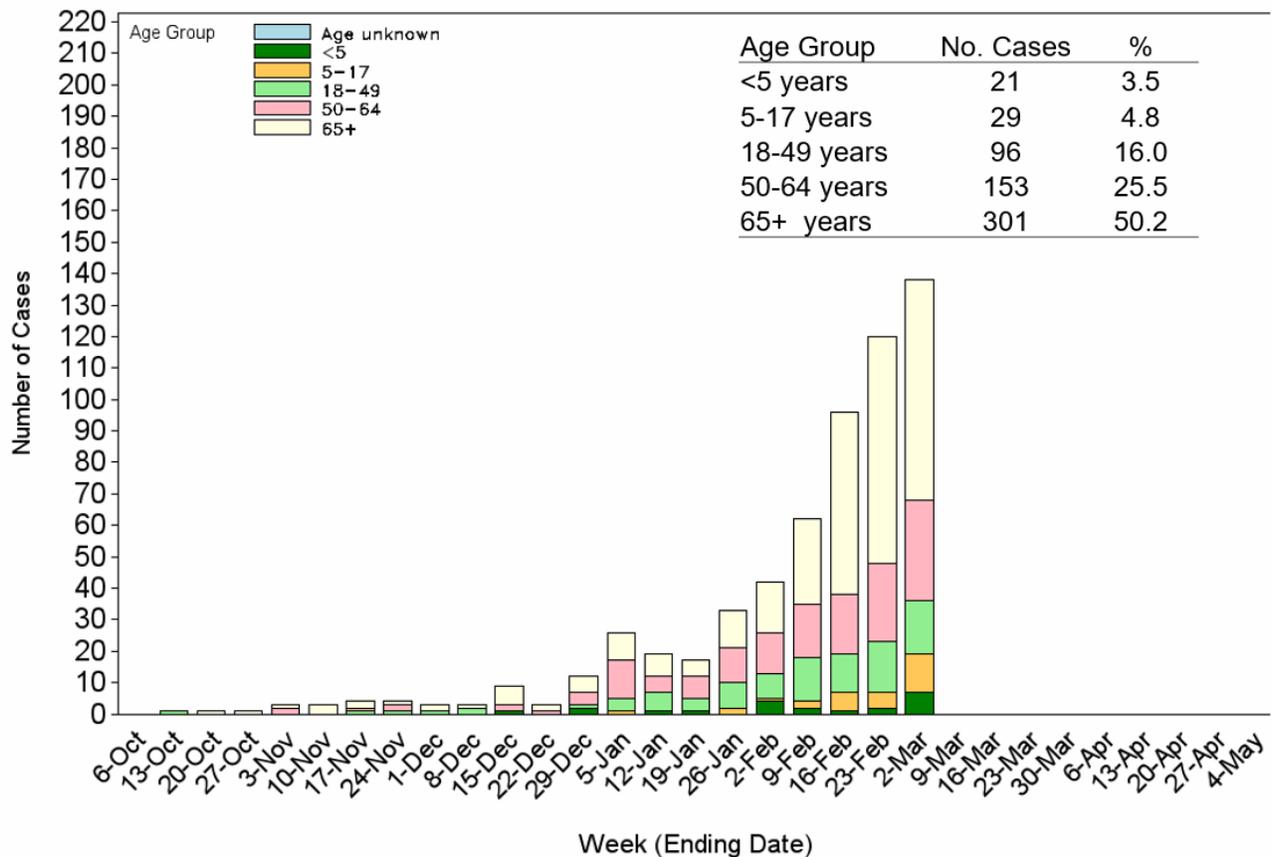
	Current Week	Cumulative
No. of specimens tested	2,648	45,368
No. of positive specimens (%)	925 (34.9%)	7,193 (15.9%)
<i>Positive specimens by type</i>		
Influenza A	923 (99.8%)	7,106 (98.8%)
Influenza B	2 (0.2%)	87 (1.2%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



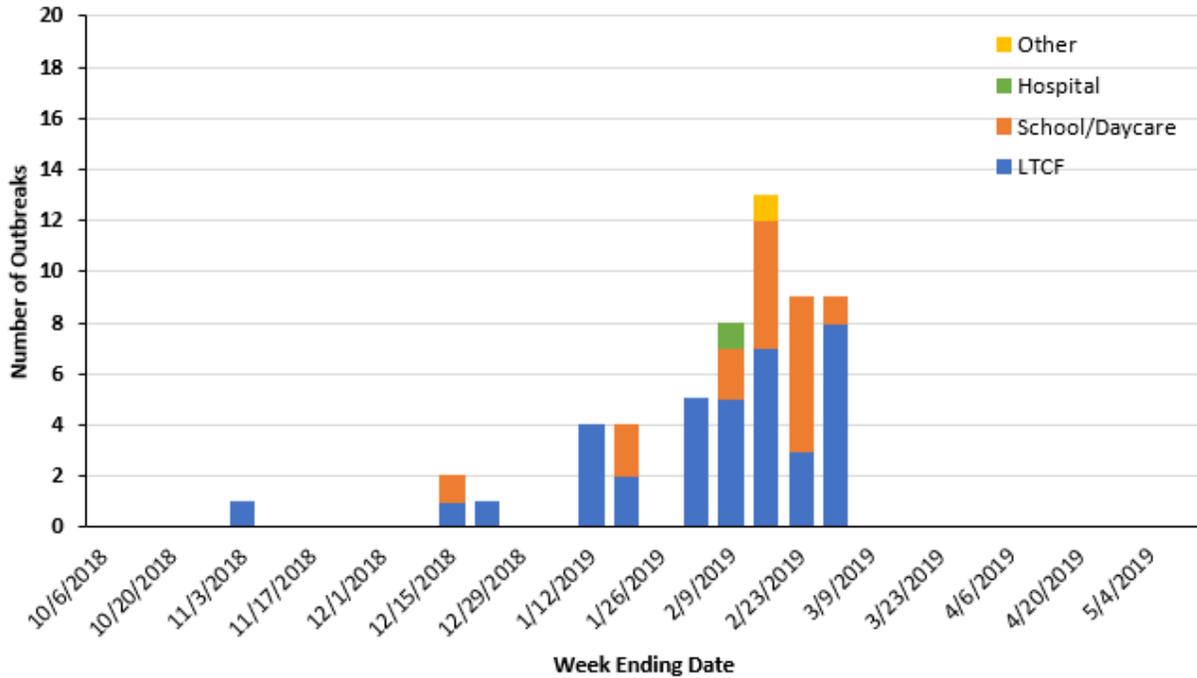
Hospitalizations: In Clackamas, Multnomah, and Washington counties 138 influenza-associated hospitalizations were reported during week 9 of 2019. In total, there have been 600 hospitalizations, 594 (99.0%) of which have been positive for flu A. Of the 129 tests that have been subtyped, 73 (56.6%) are flu A 2009 H1N1 and 56 (43.4%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



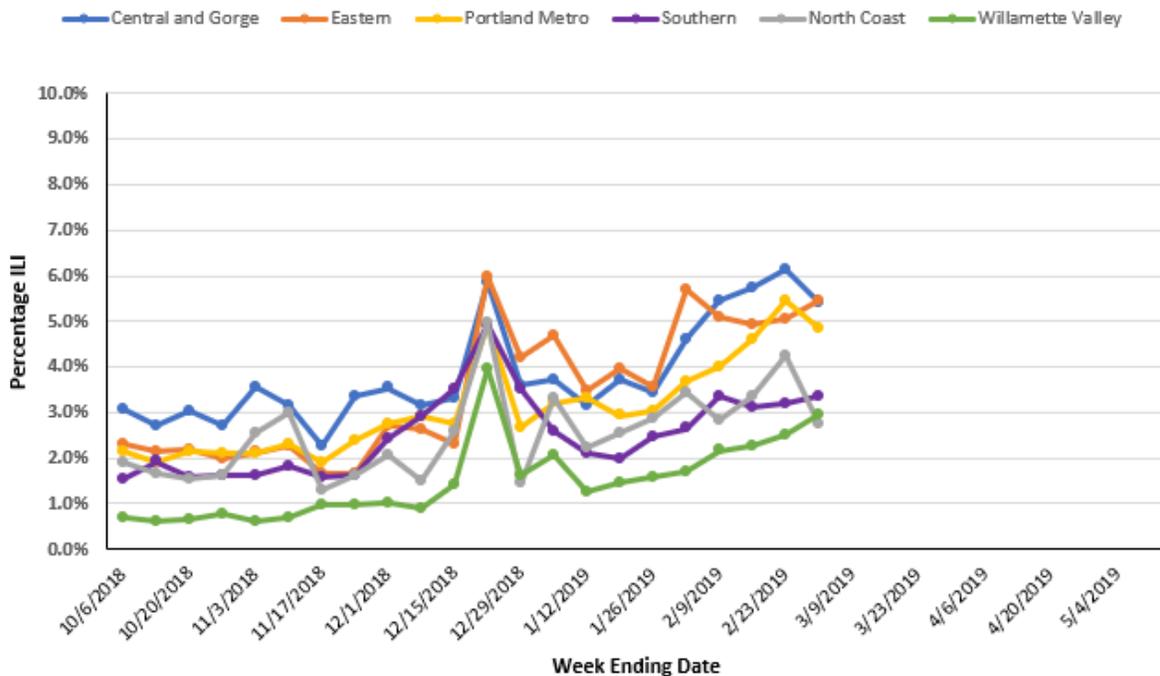
Influenza Outbreaks: There were 9 influenza outbreaks reported during Week 9, 2019. There have been a total of 56 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 37 of which have occurred in long-term care facilities and 17 of which have occurred in schools.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 182 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 9 of 2019 was 4.2%. Regionally, the percent was highest in both the Eastern and Central Oregon and Columbia Gorge areas (5.4%) and lowest in the North Coast (2.7%).

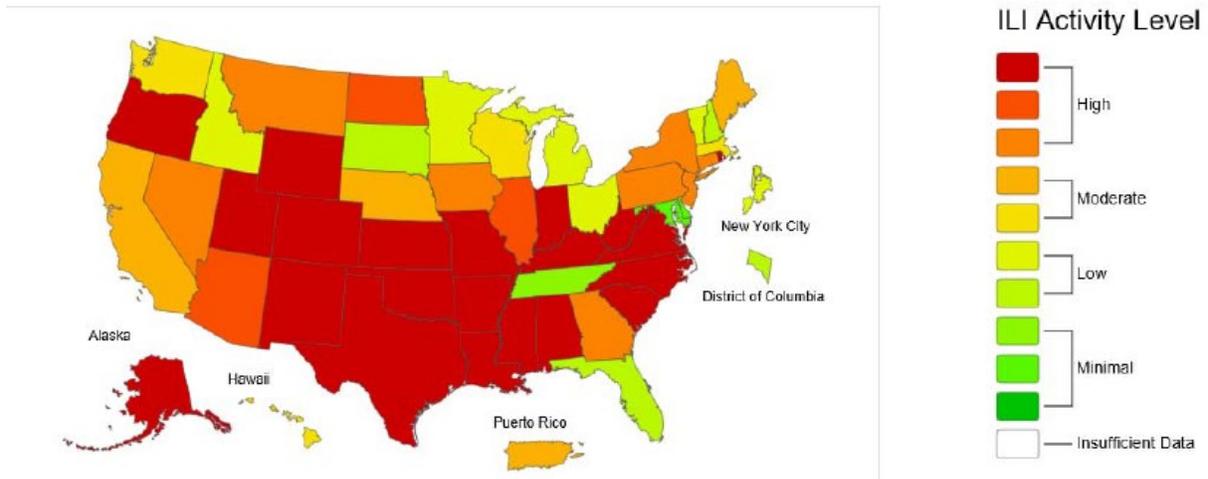
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



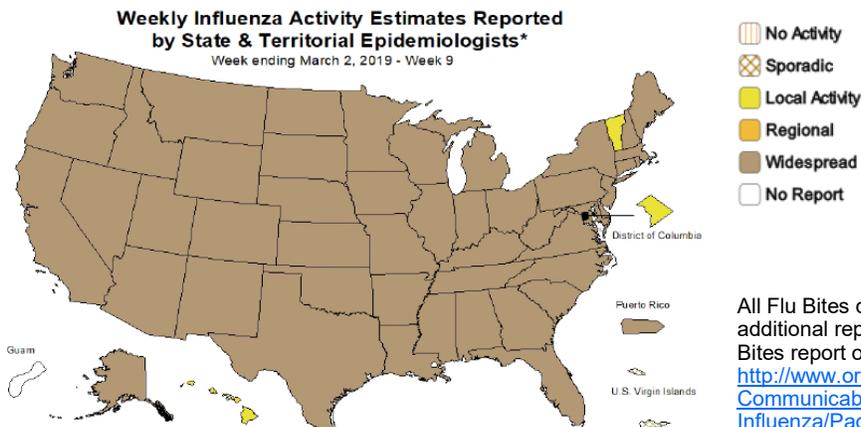
US Data (from CDC FluView): Influenza activity remains elevated in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending March 2, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories increased slightly. Nationally, during week 9, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses in HHS Regions 2, 4, 6, 7 and 8.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased slightly to 4.7%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** 32 states experienced high ILI activity; Puerto Rico and seven states experienced moderate ILI activity; New York City, the District of Columbia and eight states experienced low ILI activity; three states experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 48 states was reported as widespread; the District of Columbia and two states reported local activity; the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 36.6 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (107.7 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Nine influenza-associated pediatric deaths were reported to CDC during week 9. Eight deaths occurred during the 2018-2019 season and one death occurred during the 2015-2016 season.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet 2018-19 Influenza Season Week 9 ending Mar 02, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance February 17 - February 23, 2019 (Week 8)

	Current Week (8)	Previous Week (7)
Percentage of emergency department visits for ILI¹	3.8%	3.2%
Percentage positive influenza tests²	32.9%	27.5%
Influenza-associated hospitalizations³	103	92
Reported influenza outbreaks	9	13
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity⁴	11.7%	10.2%

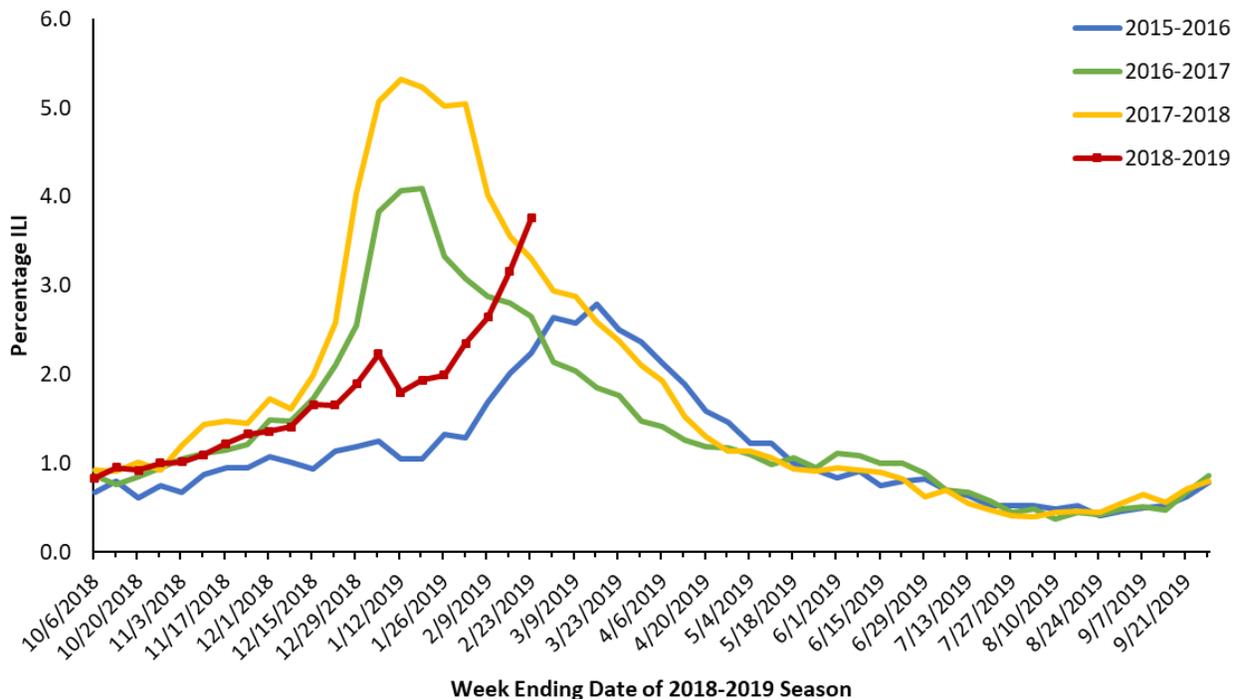
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 3.8% during week 8, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 32.9% of specimens tested at Oregon labs were positive for influenza during week 8, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

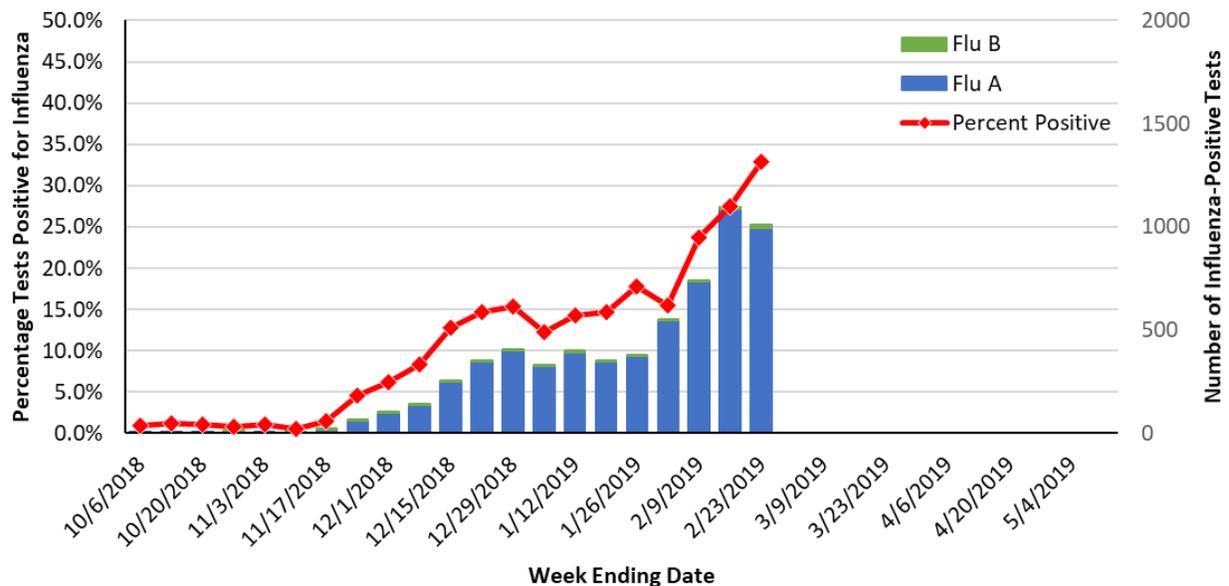
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

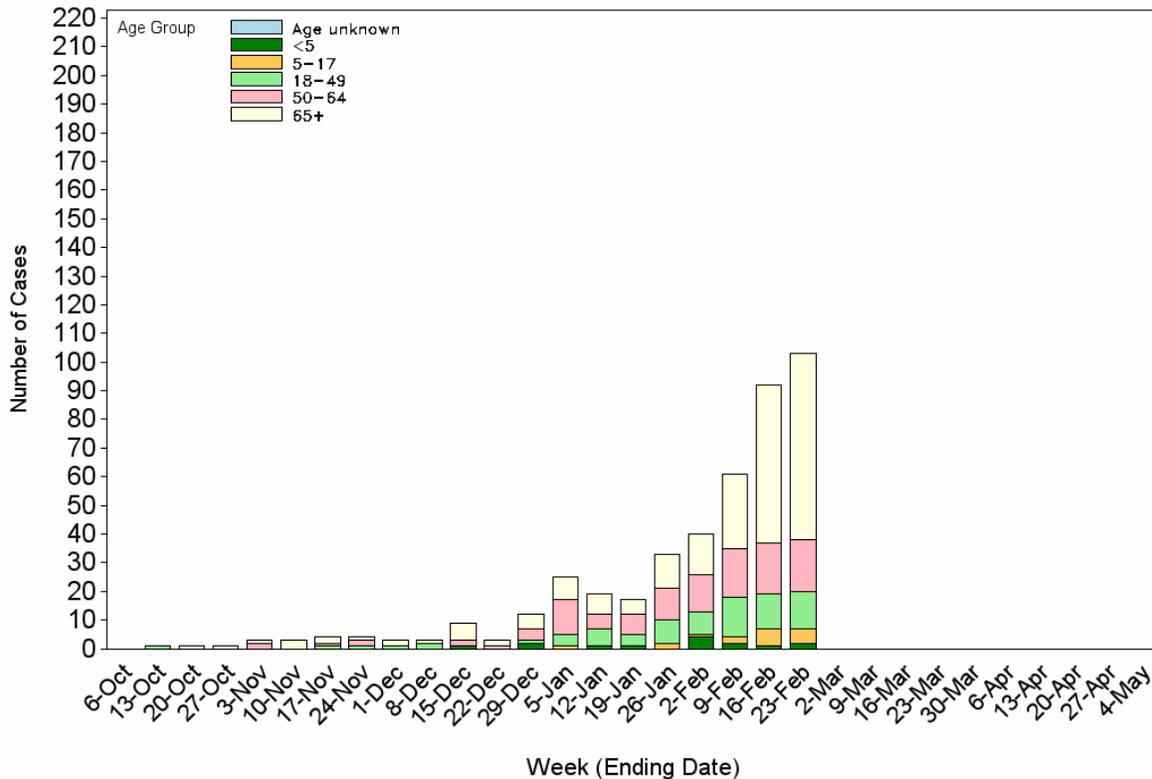
	Current Week	Cumulative
No. of specimens tested	3,076	42,648
No. of positive specimens (%)	1,012 (32.9%)	6,255 (14.7%)
<i>Positive specimens by type</i>		
Influenza A	997 (98.5%)	6,170 (98.6%)
Influenza B	15 (1.5%)	85 (1.4%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



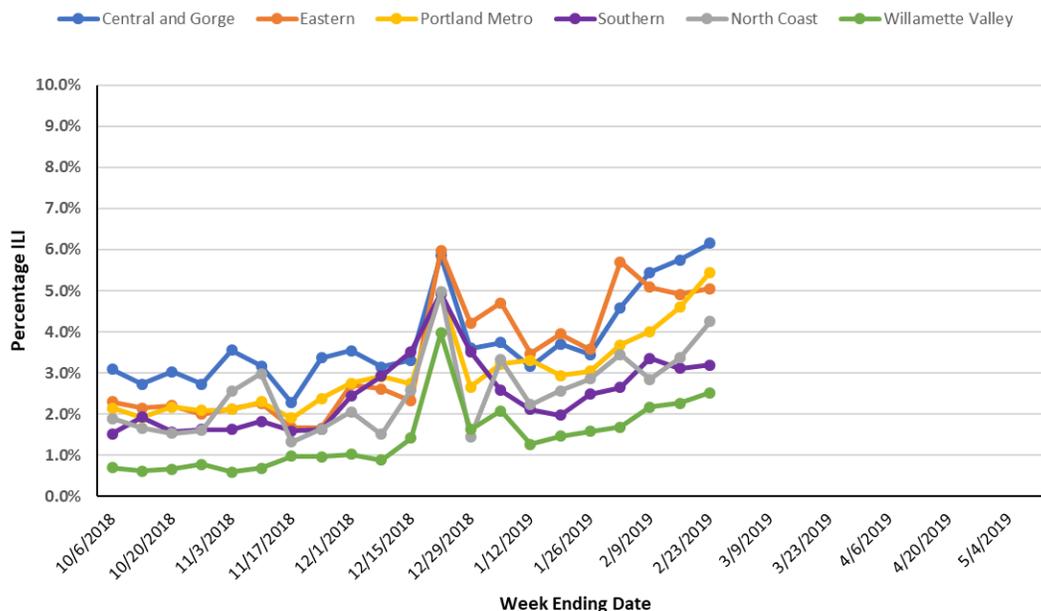
Hospitalizations: In Clackamas, Multnomah, and Washington counties 103 influenza-associated hospitalizations were reported during week 8 of 2019. In total, there have been 437 hospitalizations, 431 (98.6%) of which have been positive for flu A. Of the 110 tests that have been subtyped, 65 (59.1%) are flu A 2009 H1N1 and 45 (40.9%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



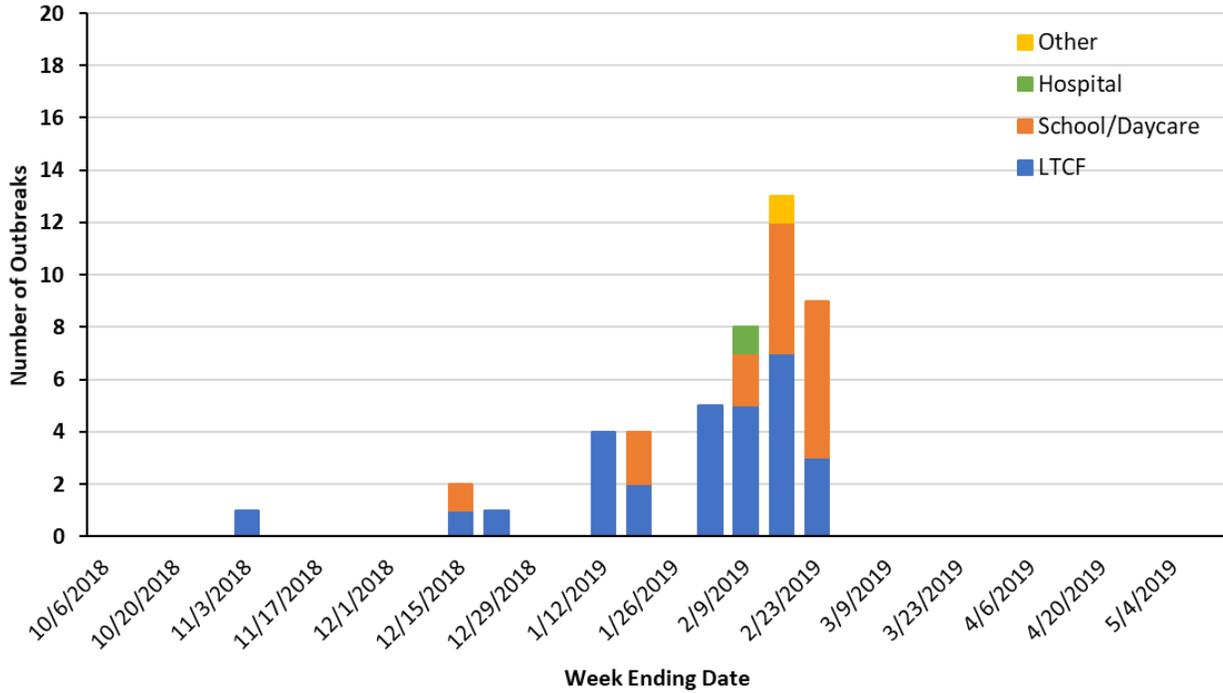
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 182 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 8 of 2019 was 4.5%. Regionally, the percent was highest in the Central Oregon and Columbia Gorge area (6.2%) and lowest in the Willamette Valley (2.5%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



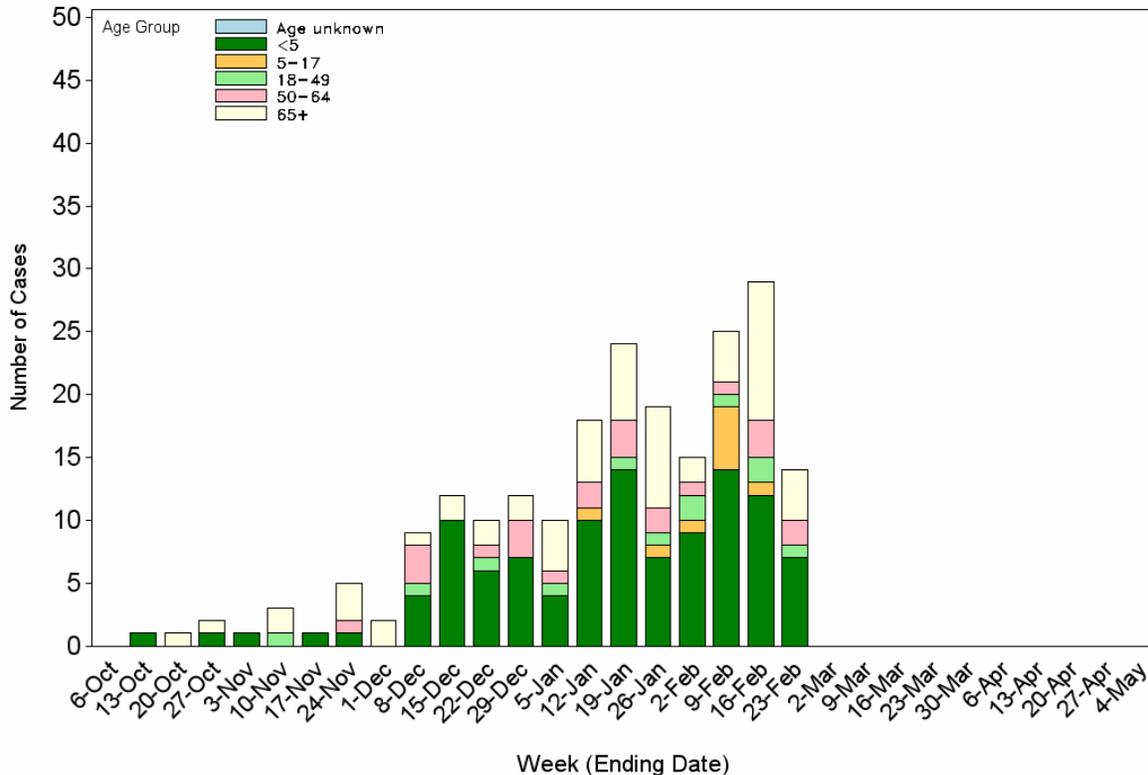
Influenza Outbreaks: There were 9 influenza outbreaks reported during Week 8, 2019. There have been a total of 47 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 29 of which have occurred in long-term care facilities and 16 of which have occurred in schools.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



RSV Hospitalizations: This year, OHA is conducting surveillance for RSV hospitalizations in Clackamas, Multnomah, and Washington counties. As of week 8, 2019 there have been 214 RSV hospitalizations. 110 hospitalizations (54.1%) were in children under the age of 5.

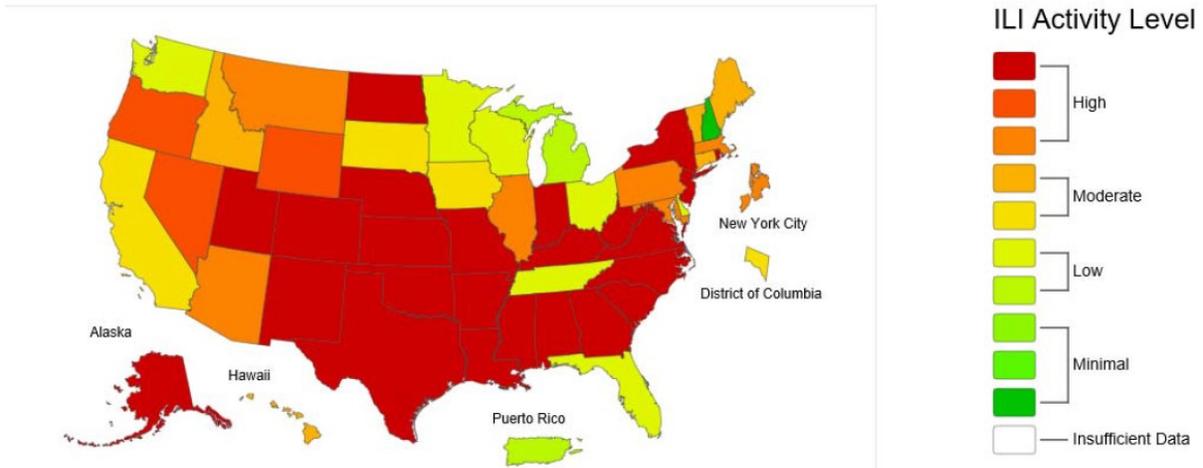
Figure 3. Portland Metro Area RSV-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



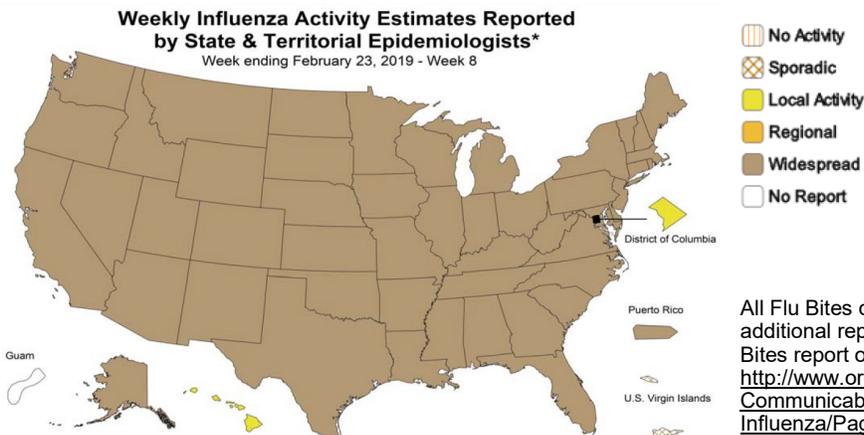
US Data (from CDC FluView): Influenza activity remains elevated in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending February 23, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories increased slightly. Nationally, during week 8, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses in HHS Regions 2, 4, 6 and 7.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained at 5.0%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** New York City and 33 states experienced high ILI activity; the District of Columbia and eight states experienced moderate ILI activity; Puerto Rico and eight states experienced low ILI activity; one state experienced minimal ILI activity; and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 49 states was reported as widespread; the District of Columbia and one state reported local activity; the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 32.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (91.5 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** 15 influenza-associated pediatric deaths were reported to CDC during week 8.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 8 ending Feb 23, 2019**



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance February 10 - February 16, 2019 (Week 7)

	Current Week (7)	Previous Week (6)
Percentage of emergency department visits for ILI ¹	3.2%	2.6%
Percentage positive influenza tests ²	27.5%	23.7%
Influenza-associated hospitalizations ³	87	60
Reported influenza outbreaks	13	8
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	10.2%	12.3%

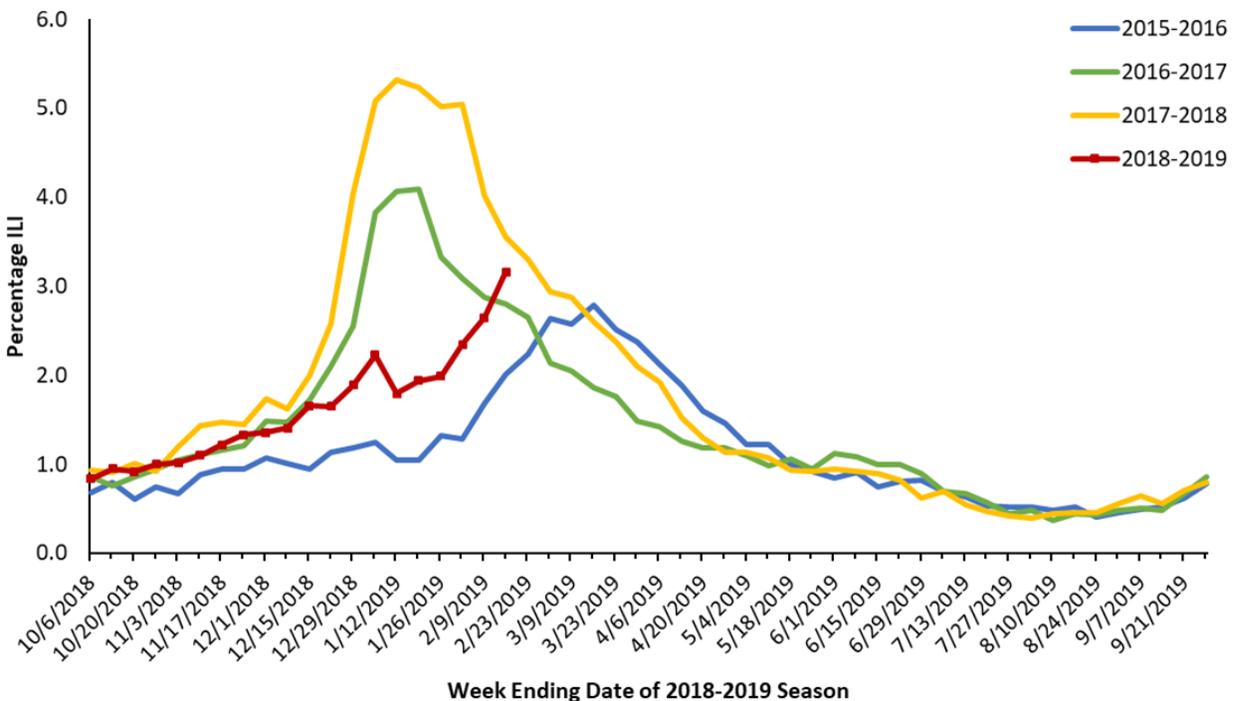
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 3.2% during week 7, 2019.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **27.5% of specimens tested at Oregon labs were positive for influenza during week 7**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

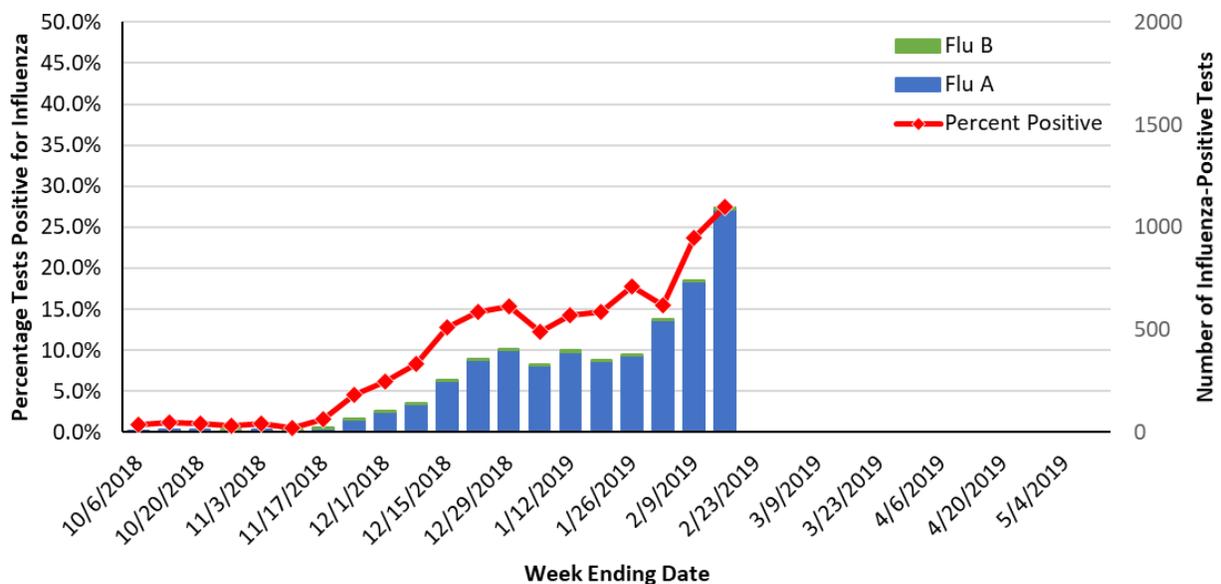
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

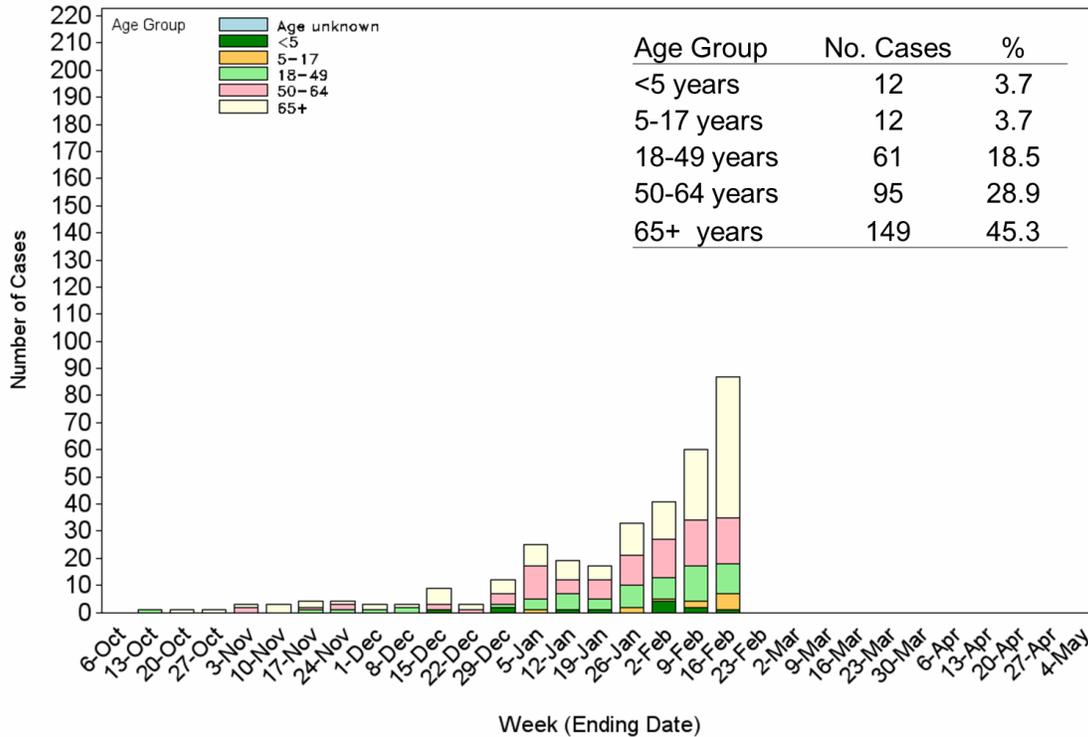
	Current Week	Cumulative
No. of specimens tested	3,987	39,572
No. of positive specimens (%)	1097 (27.5%)	5,243 (13.2%)
Positive specimens by type		
Influenza A	1,087 (99.1)	5,173 (98.7%)
Influenza B	10 (0.9%)	70 (1.3%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



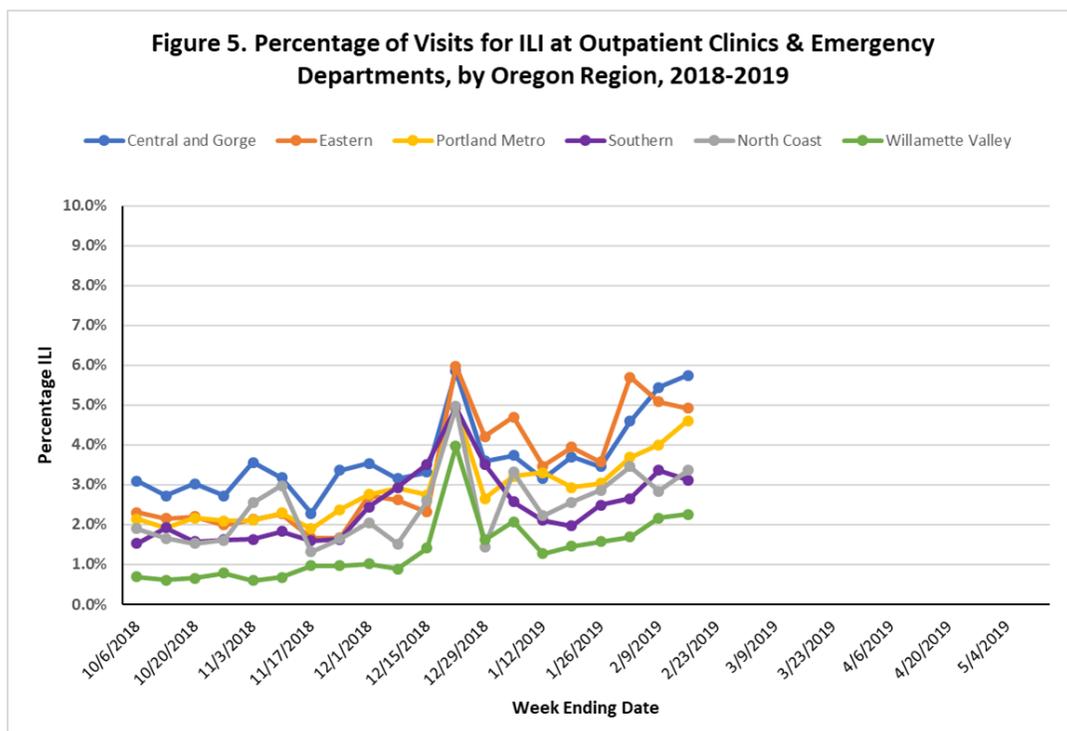
Hospitalizations: In Clackamas, Multnomah, and Washington counties 87 influenza-associated hospitalizations were reported during week 7 of 2019. In total, there have been 329 hospitalizations, 324 (98.8%) of which have been positive for flu A. Of the 80 tests that have been subtyped, 51 (63.8%) are flu A 2009 H1N1 and 29 (36.3%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



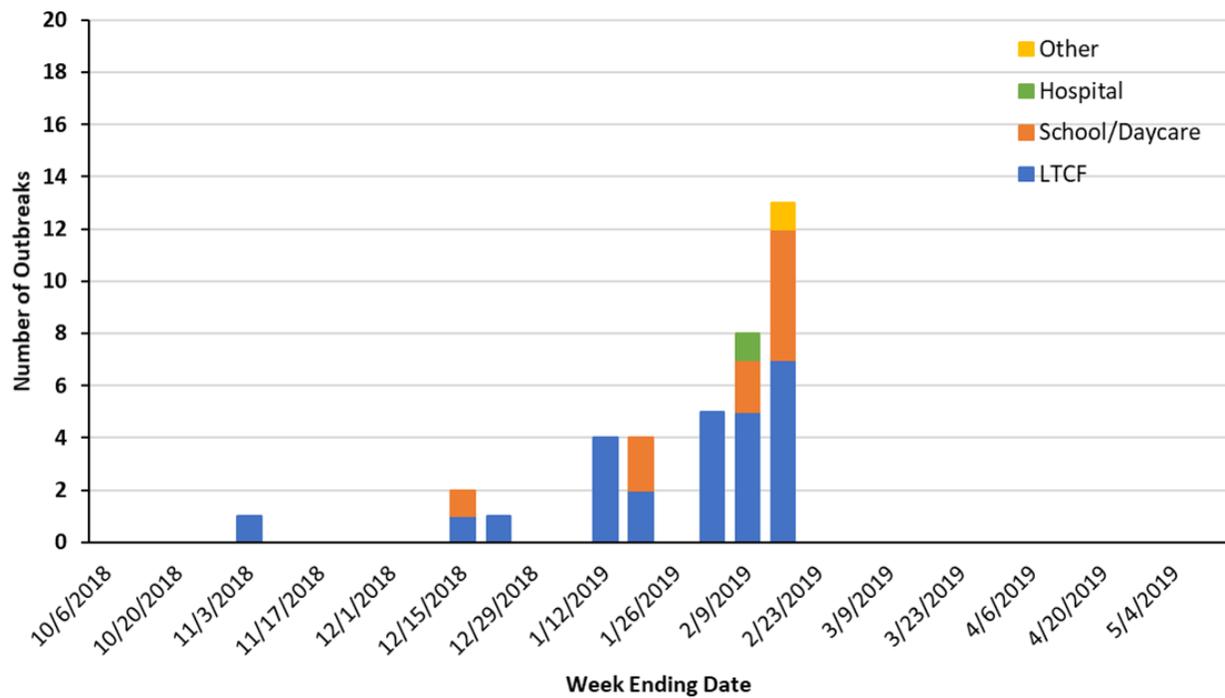
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 186 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 7 of 2019 was 4.0%. Regionally, the percent was highest in the Central Oregon and Columbia Gorge area (5.7%) and lowest in the Willamette Valley (2.3%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Influenza Outbreaks: There were 13 influenza outbreaks reported during Week 7, 2019. There have been a total of 38 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 26 of which have occurred in long-term care facilities and 10 of which have occurred in schools.

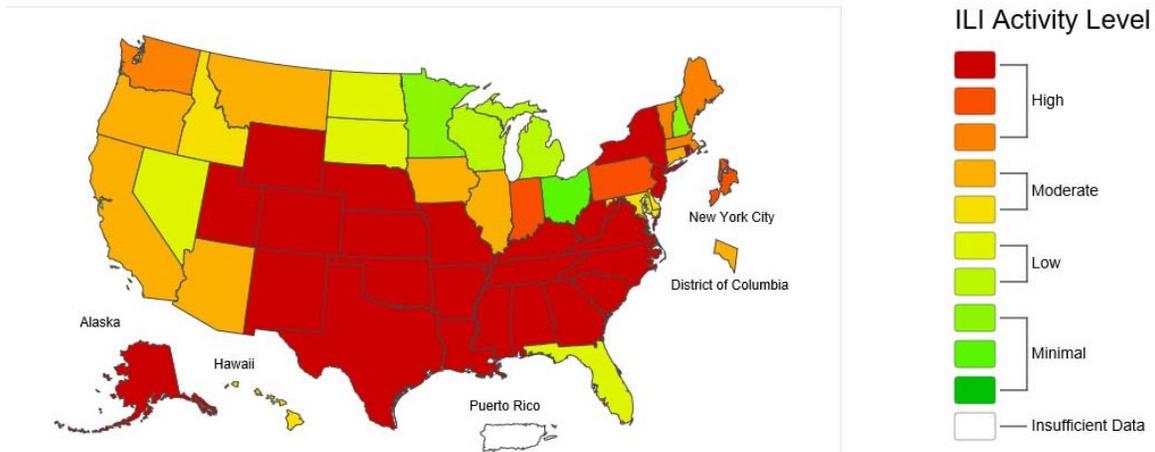
Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



US Data (from CDC FluView): Influenza activity continues to increase in the United States. Influenza A(H1N1) pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending February 16, 2019:

- o **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories increased. While influenza A(H1N1)pdm09 viruses predominated in most areas of the country, influenza A(H3) viruses have predominated in HHS Region 4 and accounted for 47% of subtyped influenza A viruses detected nationally during week 7. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses in HHS Regions 6 and 7 and influenza A(H1N1)pdm09 and influenza A(H3) viruses were reported in approximately equal numbers in HHS Region 2.
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased to 5.1%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** New York City and 30 states experienced high ILI activity; the District of Columbia and 11 states experienced moderate ILI activity; six states experienced low ILI activity; the U.S. Virgin Islands and three states experienced minimal ILI activity; and Puerto Rico had insufficient data.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 48 states was reported as widespread; one state reported regional activity; the District of Columbia reported local activity; the U.S. Virgin Islands and one state reported sporadic activity; and Guam did not report.
- o **Influenza-associated Hospitalizations:** A cumulative rate of 27.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (75.6 hospitalizations per 100,000 population).
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** Seven influenza-associated pediatric deaths were reported to CDC during week 7.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 7 ending Feb 16, 2019**



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance February 3 - February 9, 2019 (Week 6)

	Current Week (6)	Previous Week (5)
Percentage of emergency department visits for ILI ¹	2.6%	2.3%
Percentage positive influenza tests ²	23.7%	15.5%
Influenza-associated hospitalizations ³	59	40
Reported influenza outbreaks	8	5
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	12.3%	11.8%

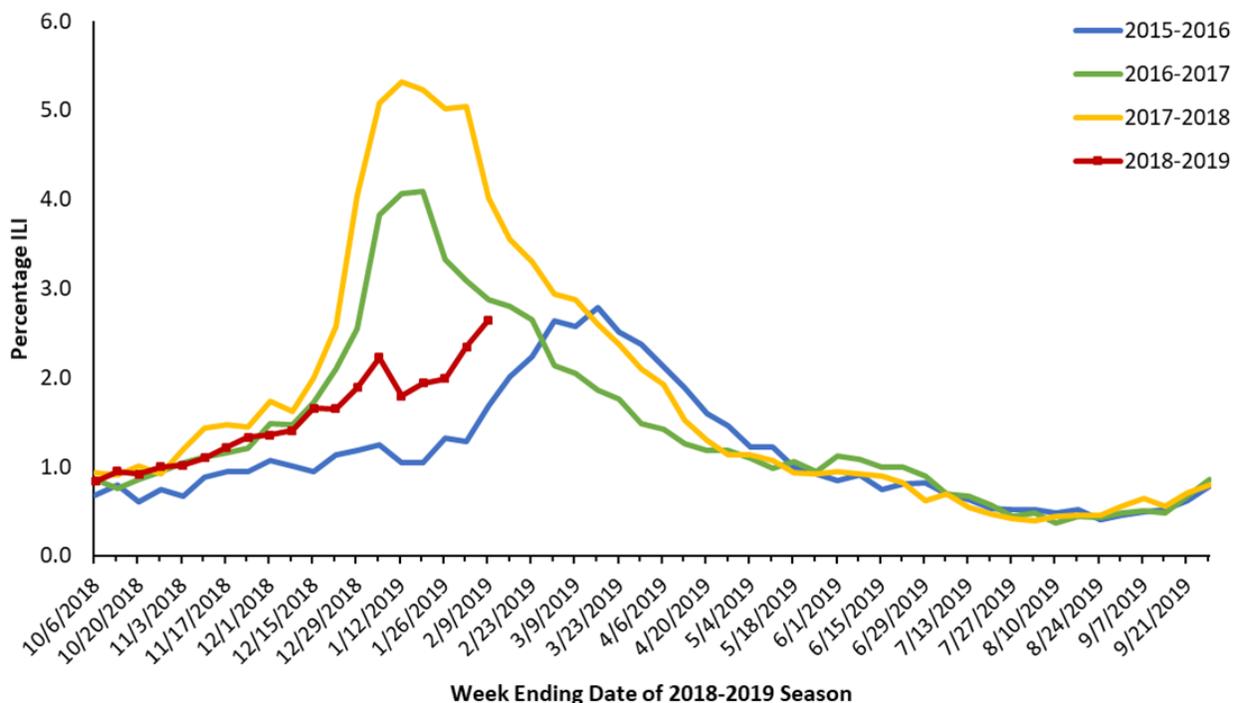
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 2.6% during week 6, 2019.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **23.7% of specimens tested at Oregon labs were positive for influenza during week 6**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

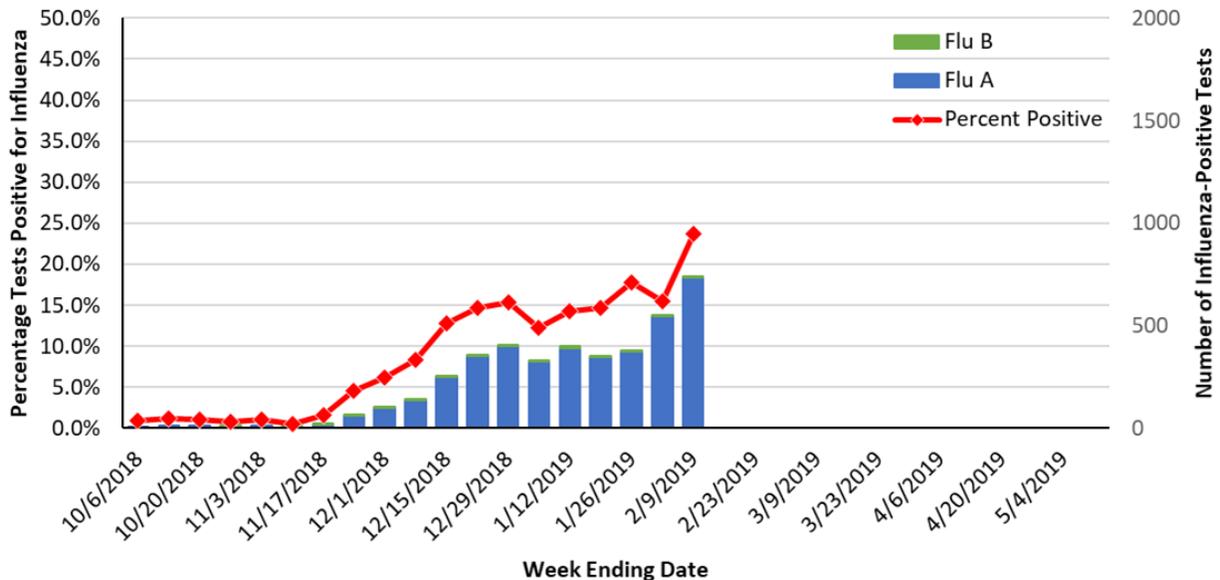
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

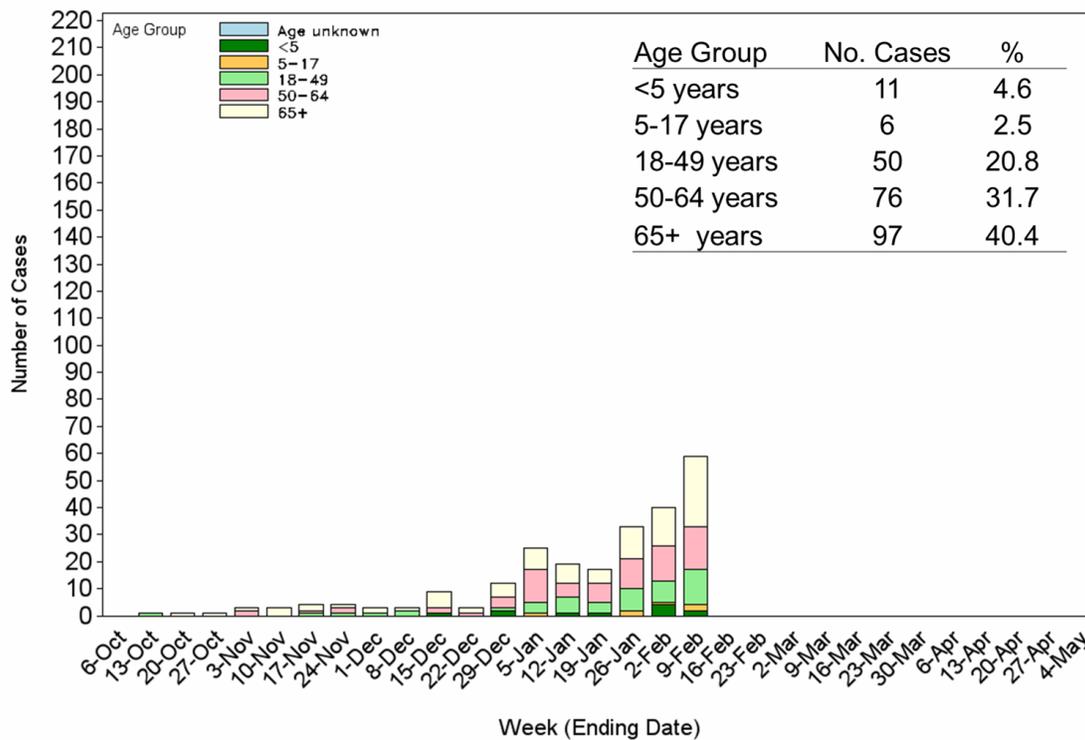
	Current Week	Cumulative
No. of specimens tested	3,106	35,585
No. of positive specimens (%)	737 (23.7%)	4,145 (11.6%)
<i>Positive specimens by type</i>		
Influenza A	735 (99.7)	4,086 (98.6%)
Influenza B	3 (0.4%)	60 (1.4%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



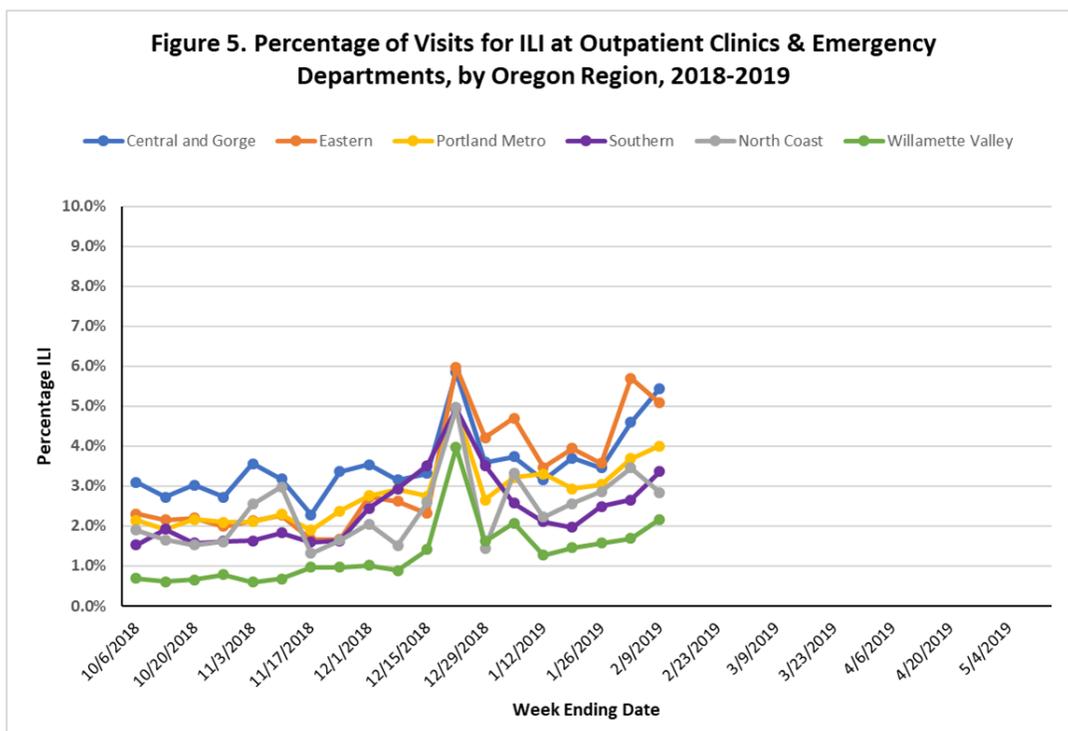
Hospitalizations: In Clackamas, Multnomah, and Washington counties 59 influenza-associated hospitalizations were reported during week 6 of 2019. In total, there have been 240 hospitalizations, 238 (99.2%) of which have been positive for flu A. Of the 63 tests that have been subtyped, 47 (74.6%) are flu A 2009 H1N1 and 16 (25.4%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



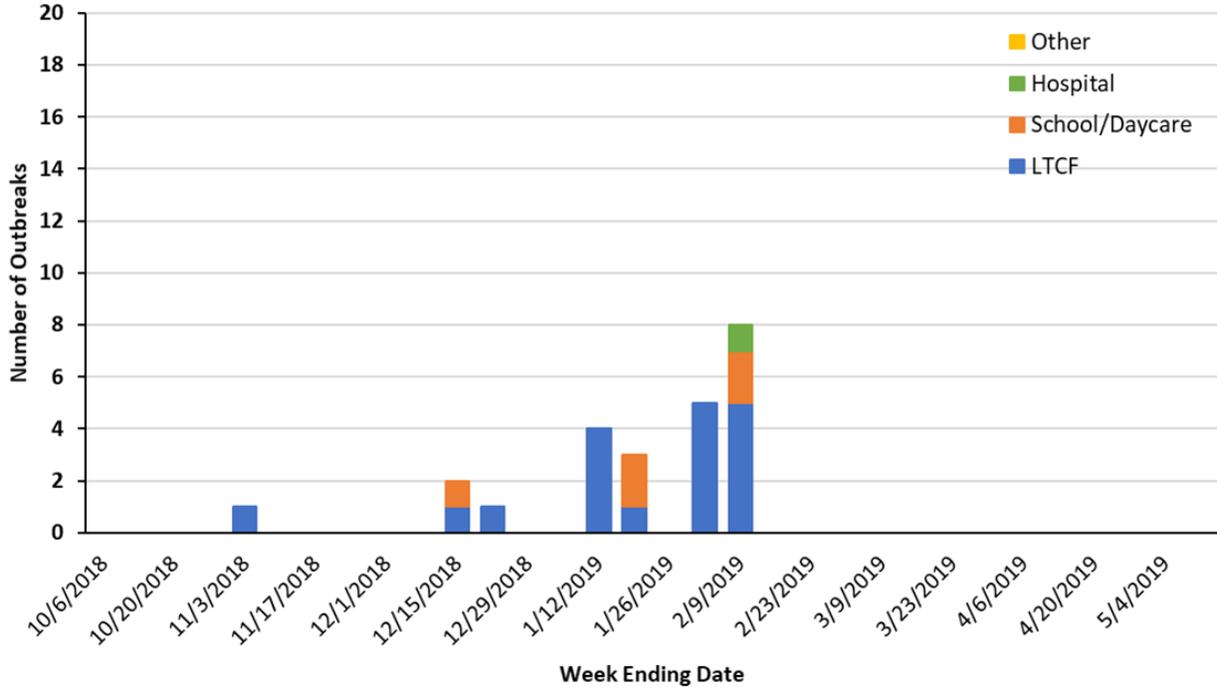
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 186 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 6 of 2019 was 3.7%. Regionally, the percent was highest in the Central Oregon and Columbia Gorge area (5.4%) and lowest in the Willamette Valley (2.2%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



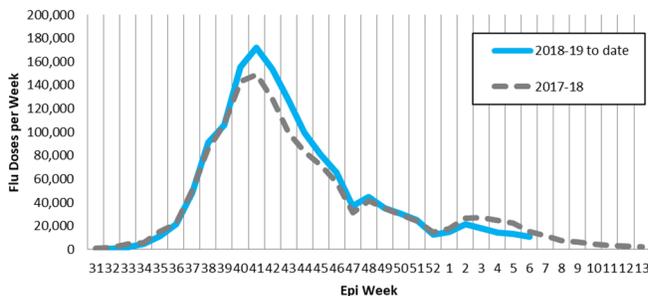
Influenza Outbreaks: There were eight influenza outbreaks reported during Week 6, 2019. There have been a total of 24 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 18 of which have occurred in long-term care facilities and 5 of which have occurred in schools.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season

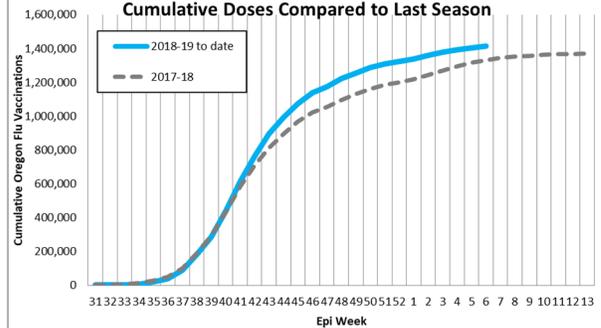


Vaccination Data: This week's reporting is based on ALERT IIS data through Epiweek 6 of 2019 (February 9th). To date, over 1.42 million seasonal influenza immunizations for Oregonians have been reported this season to ALERT IIS. Current influenza immunization activity is below last year's activity at this time but is consistent with other prior seasons. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.

2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



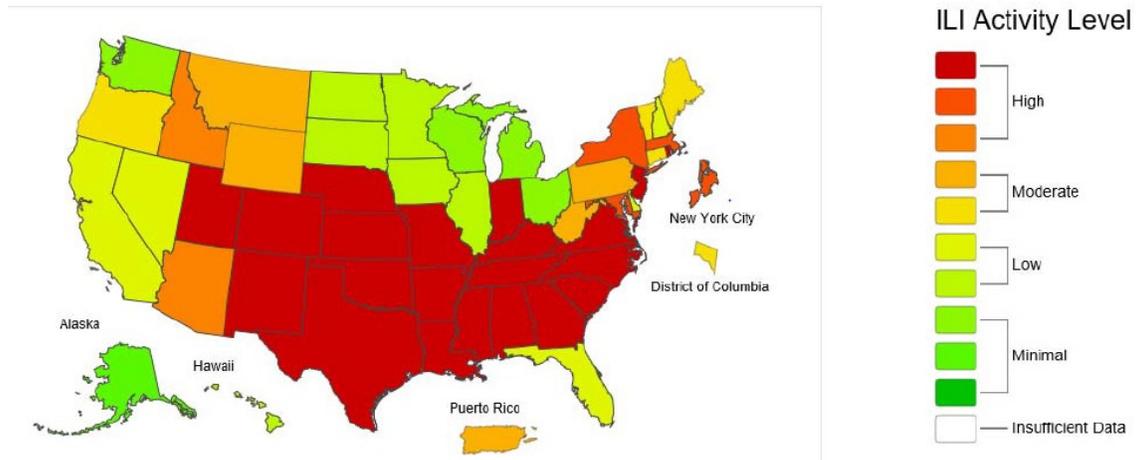
2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



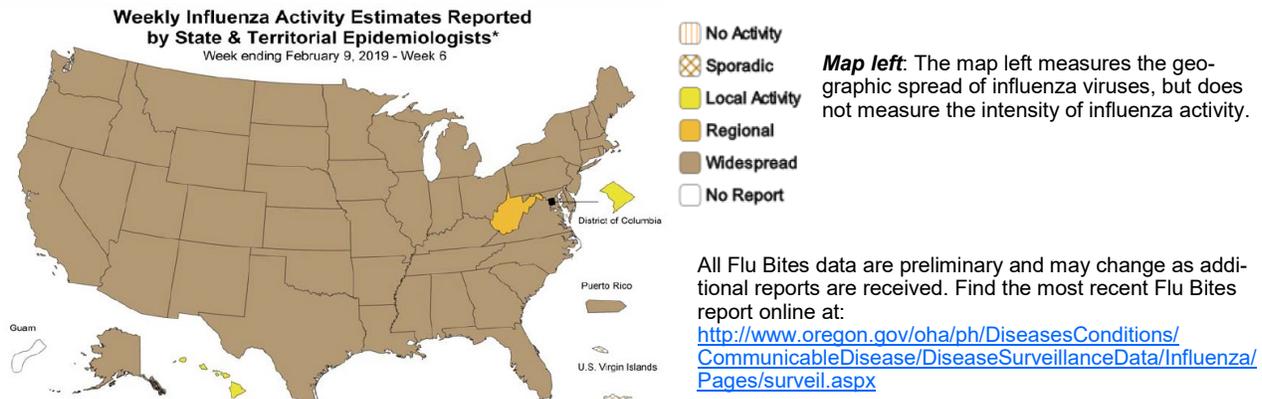
US Data (from CDC FluView): Influenza activity continues to increase in the United States. Influenza A (H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending February 9, 2019:

- o **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories increased. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4). In the most recent three weeks, influenza A(H1N1)pdm09 and influenza A(H3) viruses were reported in approximately equal numbers in HHS Regions 6 and 7.
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased to 4.8%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** New York City and 26 states experienced high ILI activity; the District of Columbia, Puerto Rico and eight states experienced moderate ILI activity; 11 states experienced low ILI activity; and the U.S. Virgin Islands and five states experienced minimal ILI activity.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 48 states was reported as widespread; one state reported regional activity; the District of Columbia and one state reported local activity; the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- o **Influenza-associated Hospitalizations:** A cumulative rate of 23.8 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (64.1 hospitalizations per 100,000 population).
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** Six influenza-associated pediatric deaths were reported to CDC during week 6.

2018-19 Influenza Season Week 6 ending Feb 09, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Data at a Glance January 27 - February 2, 2019 (Week 5)

	Current Week (5)	Previous Week (4)
Percentage of emergency department visits for ILI ¹	2.3%	2.0%
Percentage positive influenza tests ²	15.5%	17.8%
Influenza-associated hospitalizations ³	34	33
Reported influenza outbreaks	4	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	11.8%	10.4%

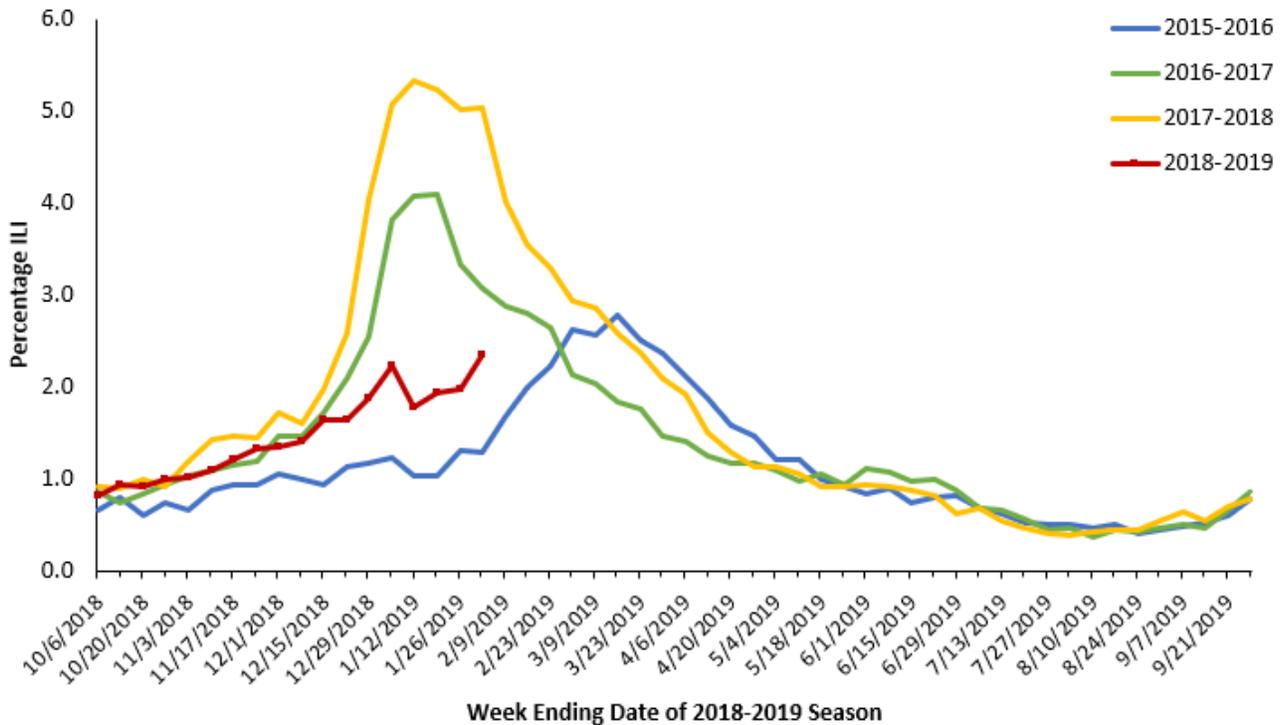
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 2.3% during week 5, 2019.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **15.5% of specimens tested at Oregon labs were positive for influenza during week 5**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

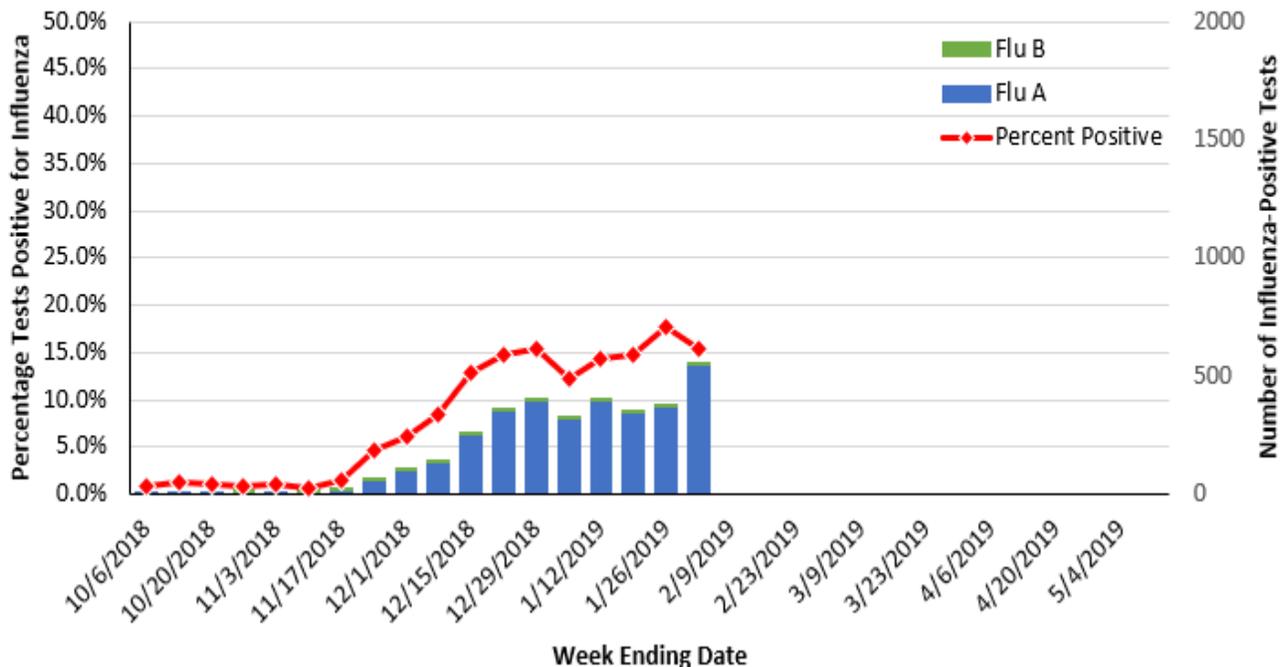
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

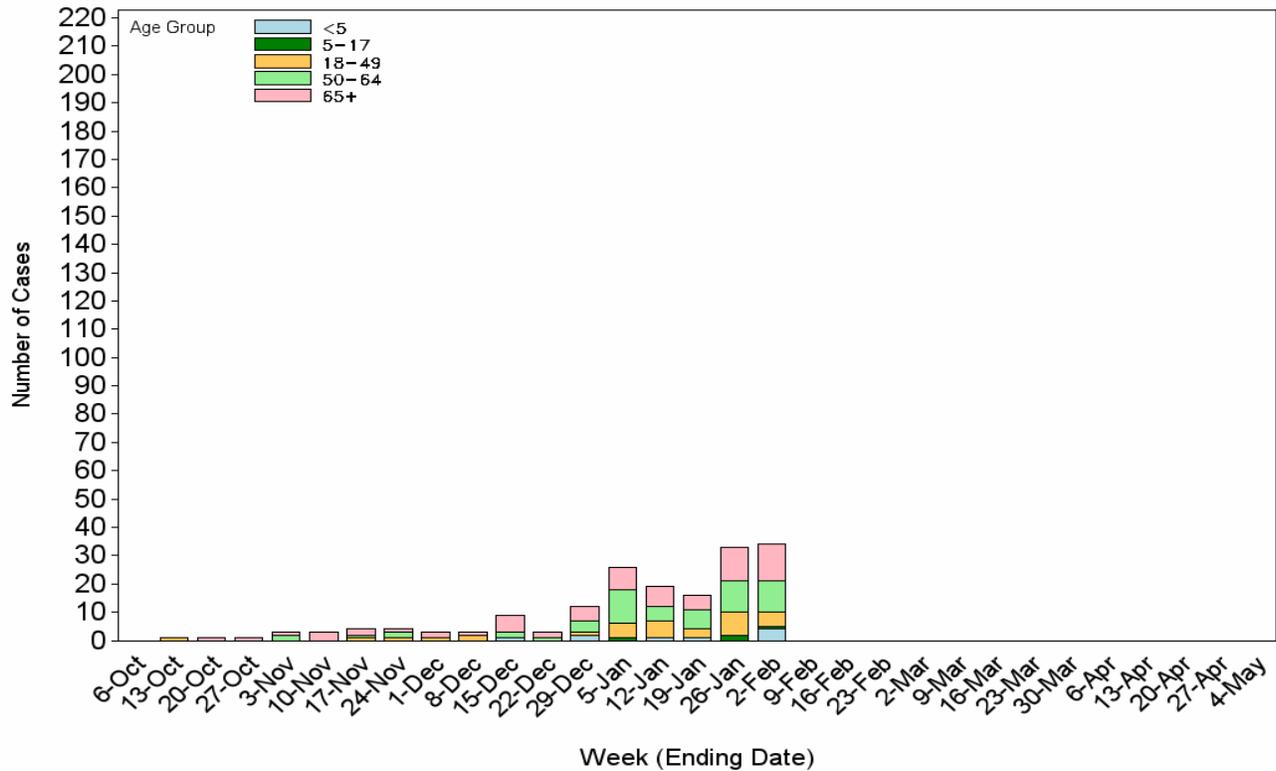
	Current Week	Cumulative
No. of specimens tested	3,565	32,417
No. of positive specimens (%)	551 (15.5%)	3,400 (10.5%)
<i>Positive specimens by type</i>		
Influenza A	545 (98.9%)	3,343 (98.3%)
Influenza B	6 (1.1%)	57 (1.7%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



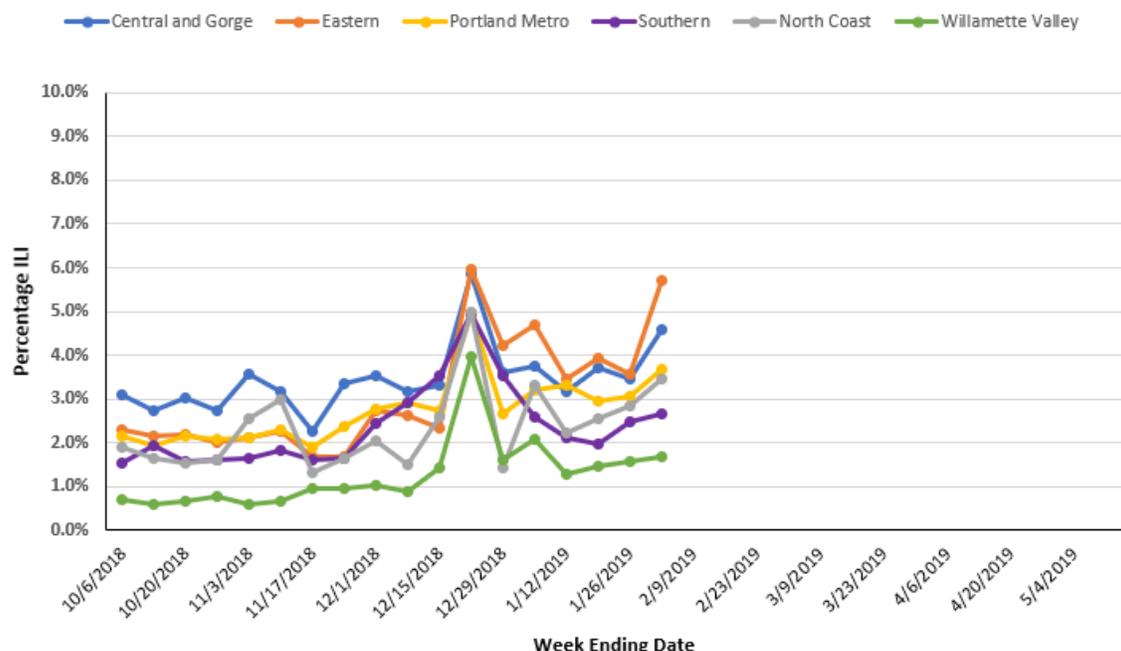
Hospitalizations: In Clackamas, Multnomah, and Washington counties 34 influenza-associated hospitalizations were reported during week 5 of 2019. In total, there have been 175 hospitalizations, 173 (98.9%) of which have been positive for flu A. Of the 50 tests that have been subtyped, 37 (74.0%) are flu A 2009 H1N1 and 13 (26.0%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



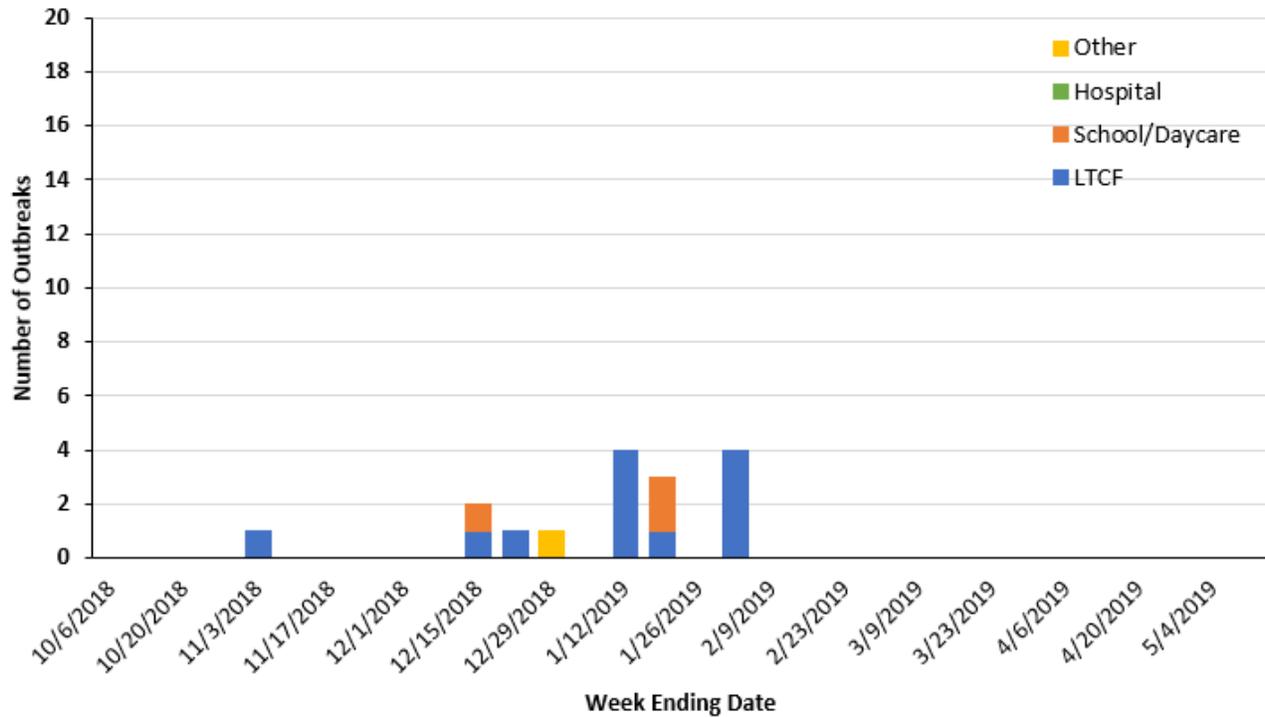
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 181 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 5 of 2019 was 3.4%. Regionally, the percent was highest in the Eastern area (5.7%) and lowest in the Willamette Valley (1.7%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

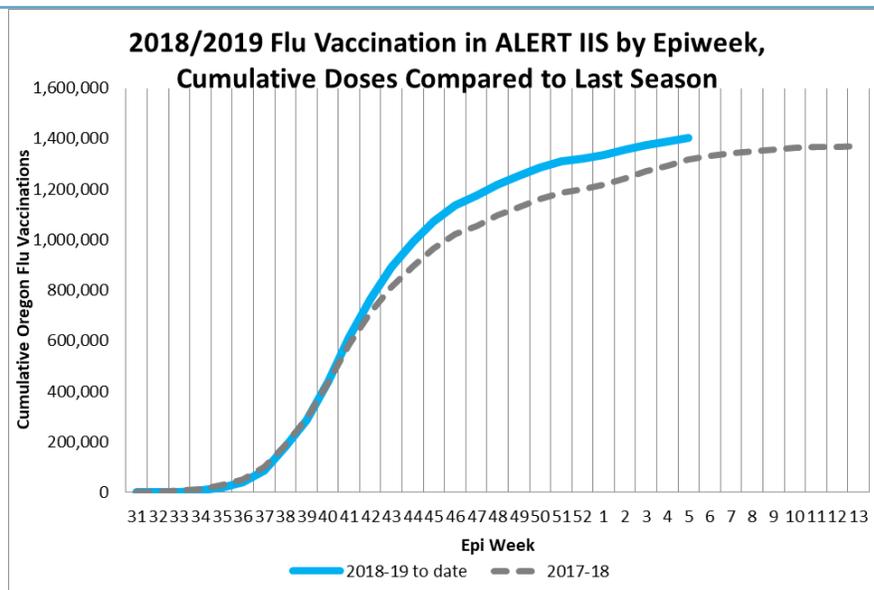


Influenza Outbreaks: There were four influenza outbreaks were reported during Week 5, 2019. There have been a total of 16 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, 12 of which have occurred in long-term care facilities and 3 of which have occurred in schools.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Vaccination Data: This week’s reporting is based on ALERT IIS data through Epiweek 5 of 2019 (February 2nd). With over 1.4 million seasonal influenza immunizations for Oregonians this season reported to ALERT IIS, the influenza immunization season continues to slow down. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.



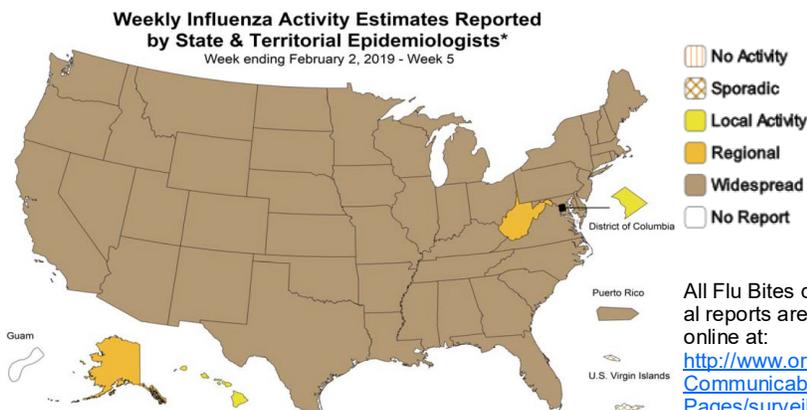
US Data (from CDC FluView): Influenza activity increased in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending February 2, 2019

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories increased. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased to 4.3%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** New York City and 24 states experienced high ILI activity; Puerto Rico and 10 states experienced moderate ILI activity; the District of Columbia and 13 states experienced low ILI activity; and three states experienced minimal ILI activity.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 47 states was reported as widespread; two states reported regional activity; the District of Columbia and one state reported local activity; the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 20.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (53.0 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Four influenza-associated pediatric deaths were reported to CDC during week 5.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 5 ending Feb 02, 2019**



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance January 20 - January 26, 2019 (Week 4)

	Current Week (4)	Previous Week (3)
Percentage of emergency department visits for ILI ¹	2.0%	1.9%
Percentage positive influenza tests ²	17.8%	14.7%
Influenza-associated hospitalizations ³	32	16
Reported influenza outbreaks	0	3
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	10.4%	10.5%

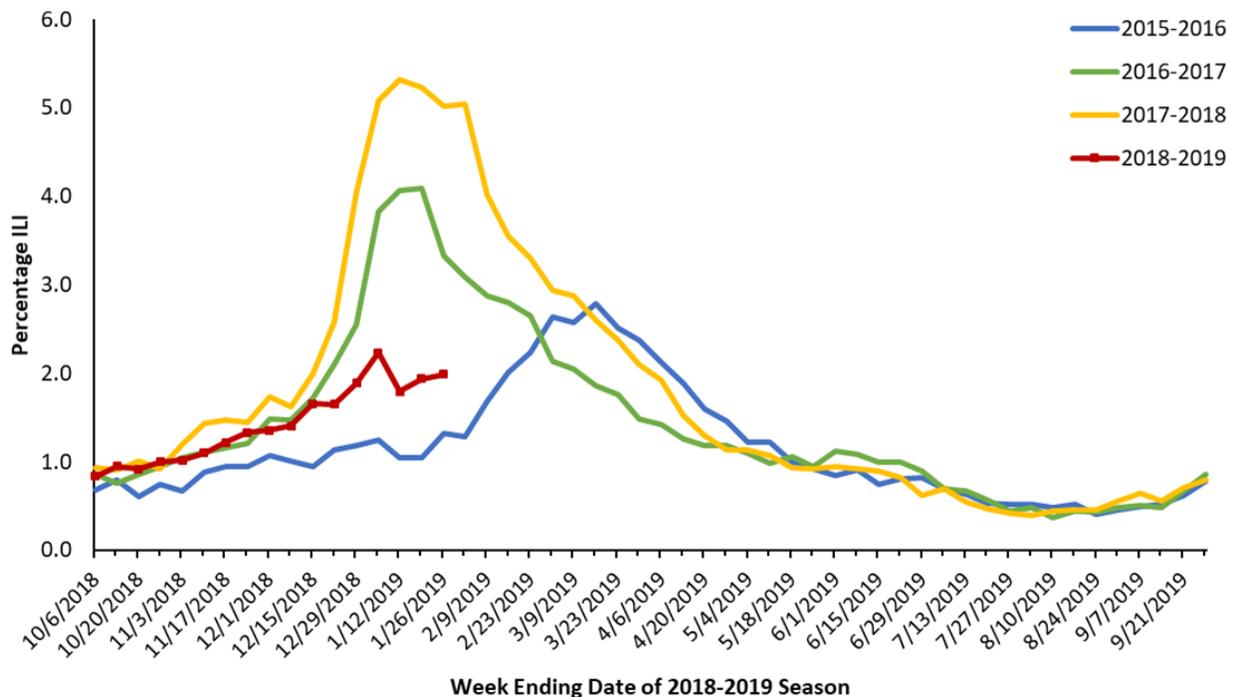
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. The percent of ED visits for ILI in all of Oregon was 2.0% during week 4, 2019.

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **17.8% of specimens tested at Oregon labs were positive for influenza during week 4**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

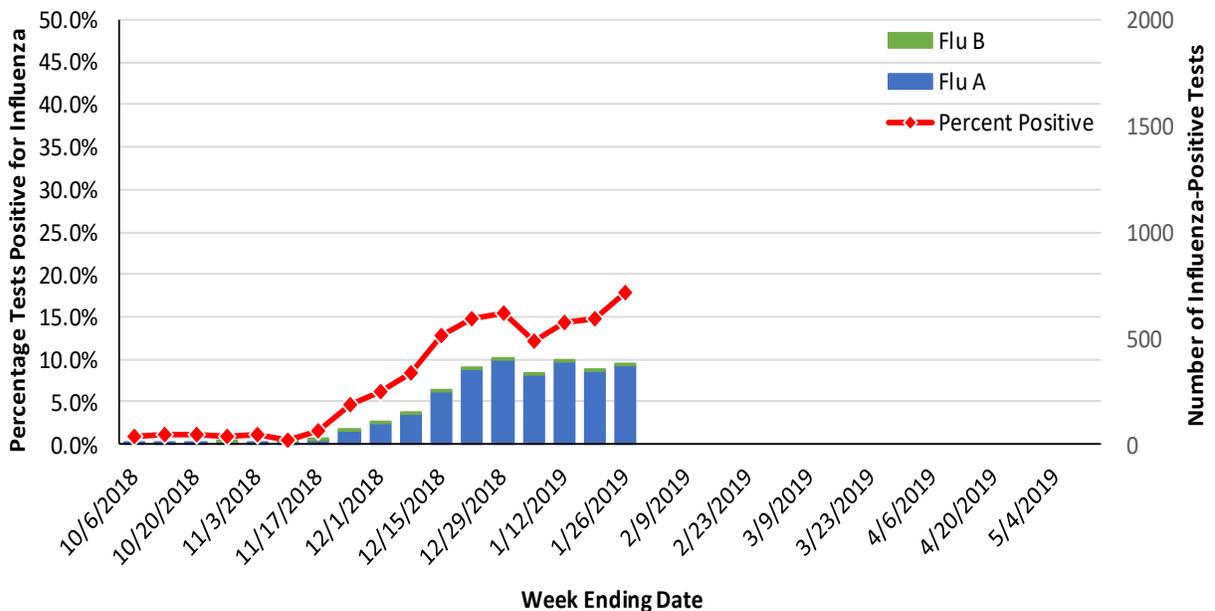
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

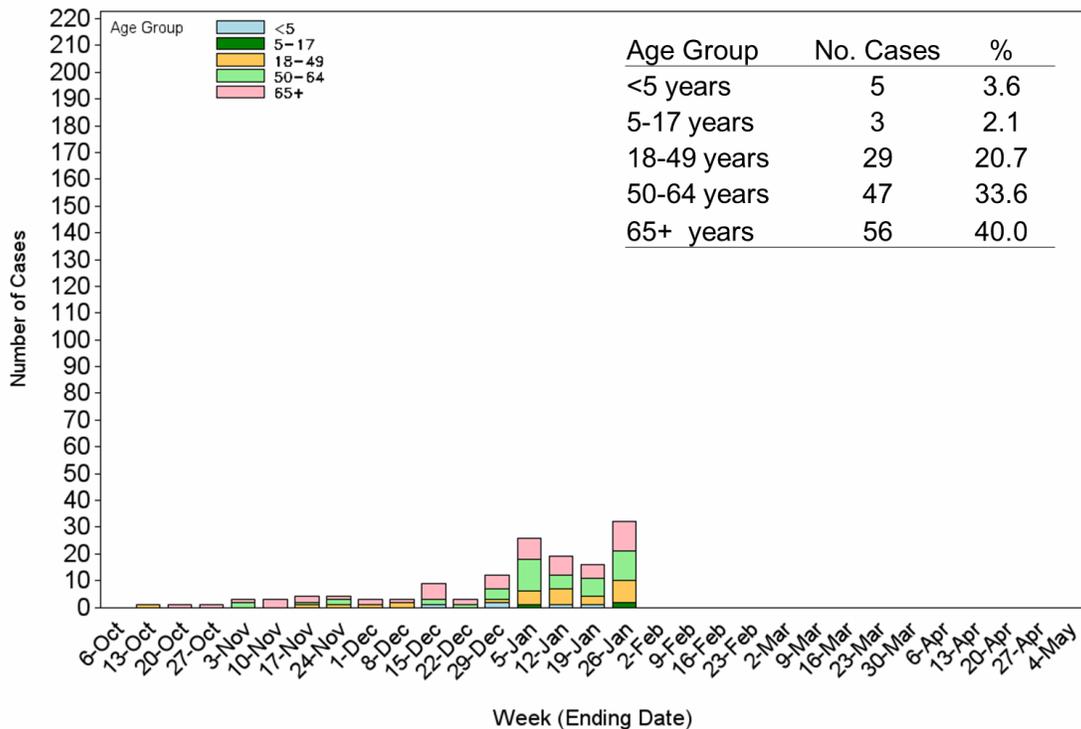
	Current Week	Cumulative
No. of specimens tested	2,120	28,852
No. of positive specimens (%)	377 (17.8%)	2,849 (9.9%)
<i>Positive specimens by type</i>		
Influenza A	372 (98.7%)	2,798 (98.2%)
Influenza B	5 (1.3%)	51 (1.8%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



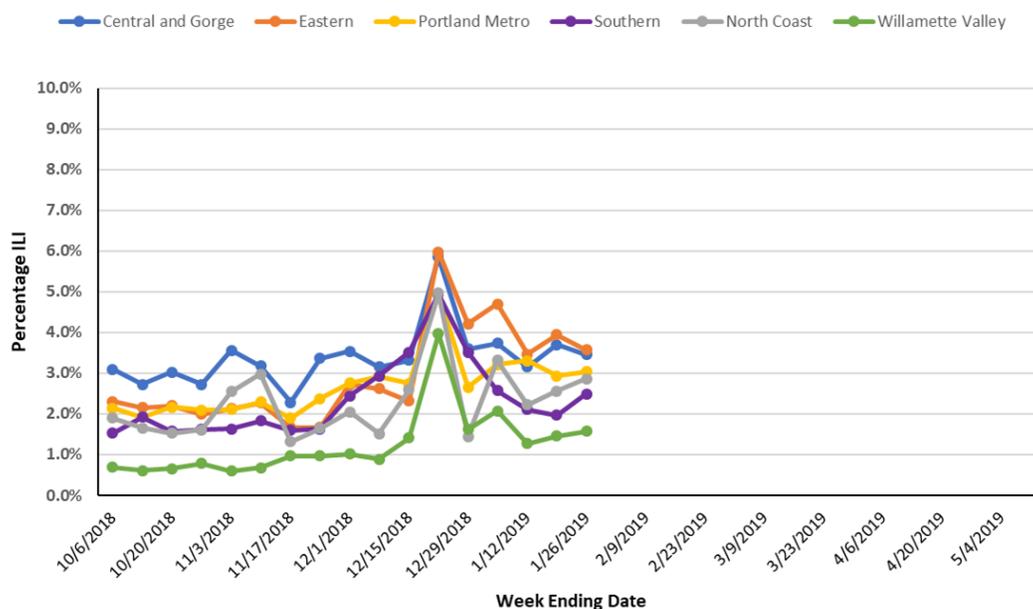
Hospitalizations: In Clackamas, Multnomah, and Washington counties 32 influenza-associated hospitalizations were reported during week 4 of 2019. In total, there have been 140 hospitalizations, 135 (98.5%) of which have been positive for flu A. Of the 38 tests that have been subtyped, 31 (81.6%) are flu A 2009 H1N1 and 7 (18.4%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



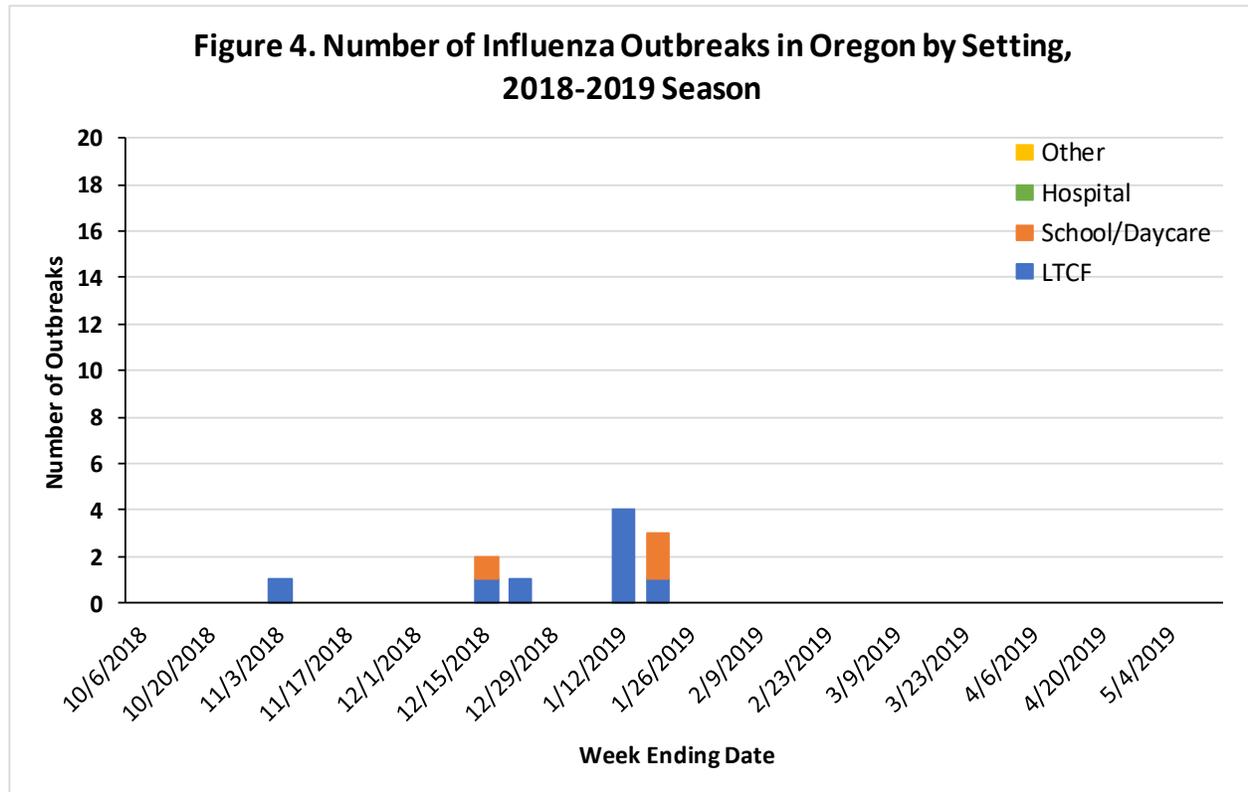
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 173 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 4 of 2019 was 2.6%. Regionally, the percent was highest in the Eastern area (3.6%) and lowest in the Willamette Valley (1.6%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

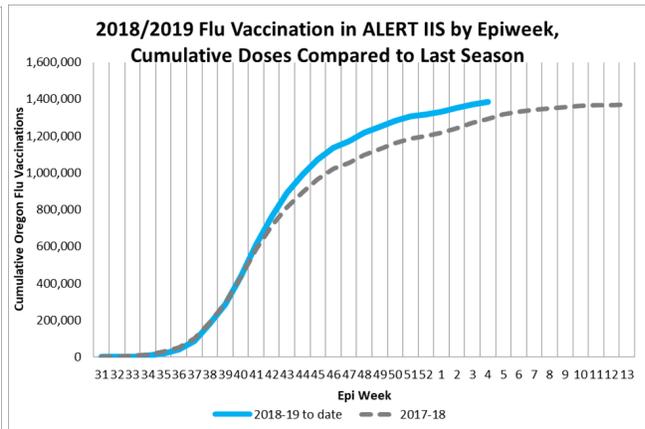
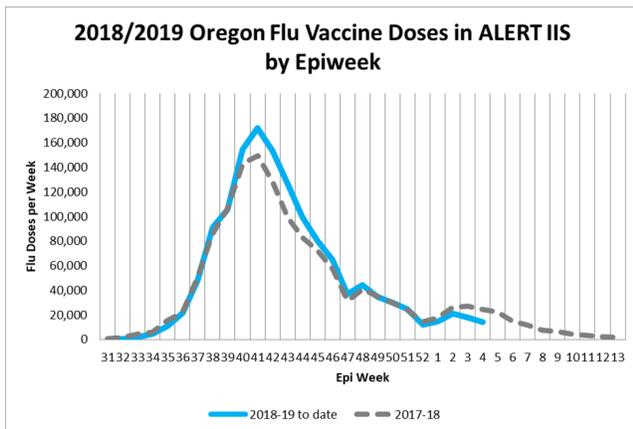


Influenza Outbreaks: There were no influenza outbreaks were reported during Week 4, 2019. There have been a total of 11 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, eight of which have occurred in long-term care facilities and three of which have occurred in schools.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Vaccination Data: This week’s reporting is based on ALERT IIS data through Epiweek 4 of 2019 (January 26th). To date 1.4 million seasonal influenza immunizations for Oregonians this season are in ALERT IIS. The number of weekly influenza immunizations is declining as we move into February. While this season’s immunization totals remain above last season’s total, the gap between the two is diminishing as flu immunization activity declines. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed; current weekly totals may be adjusted upward later.



Data at a Glance January 13 - January 19, 2019 (Week 3)

	Current Week (3)	Previous Week (2)
Percentage of emergency department visits for ILI ¹	1.9%	1.8%
Percentage positive influenza tests ²	14.7%	14.3%
Influenza-associated hospitalizations ³	13	19
Reported ILI/influenza outbreaks	3	4
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	10.5%	8.4%

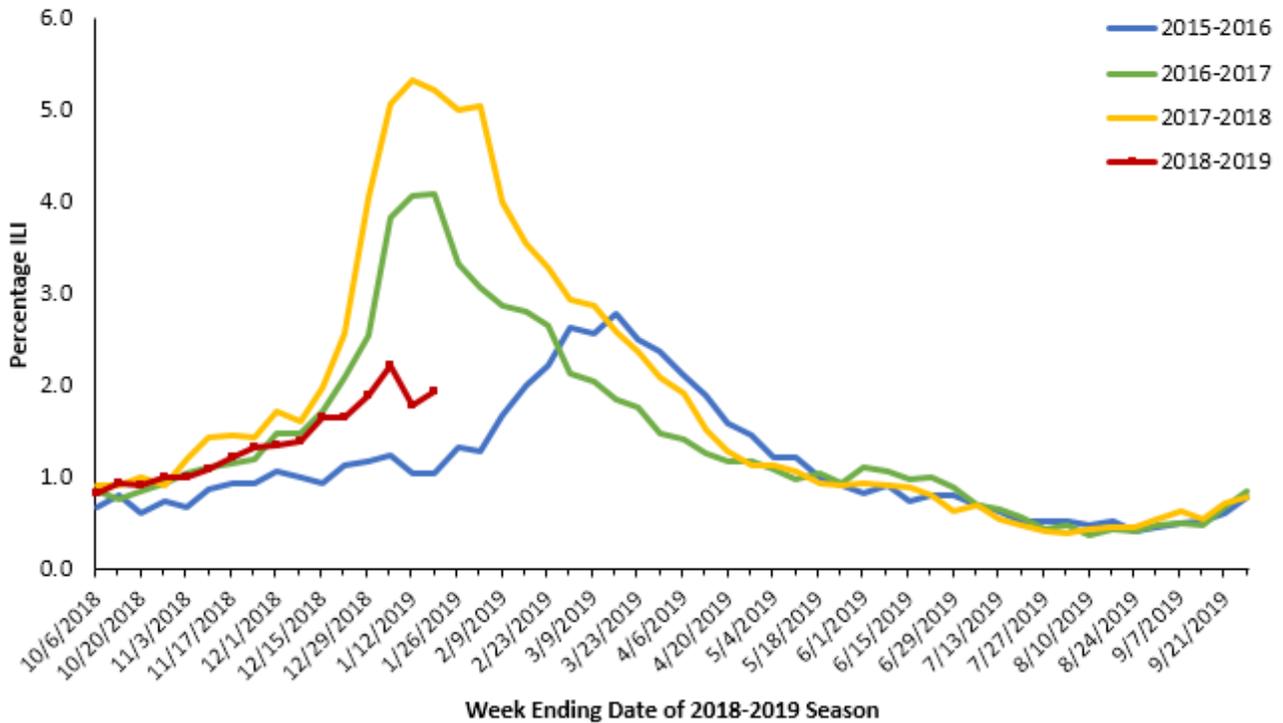
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.9% during week 3, 2019.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **14.7% of specimens tested at Oregon labs were positive for influenza during week 3**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

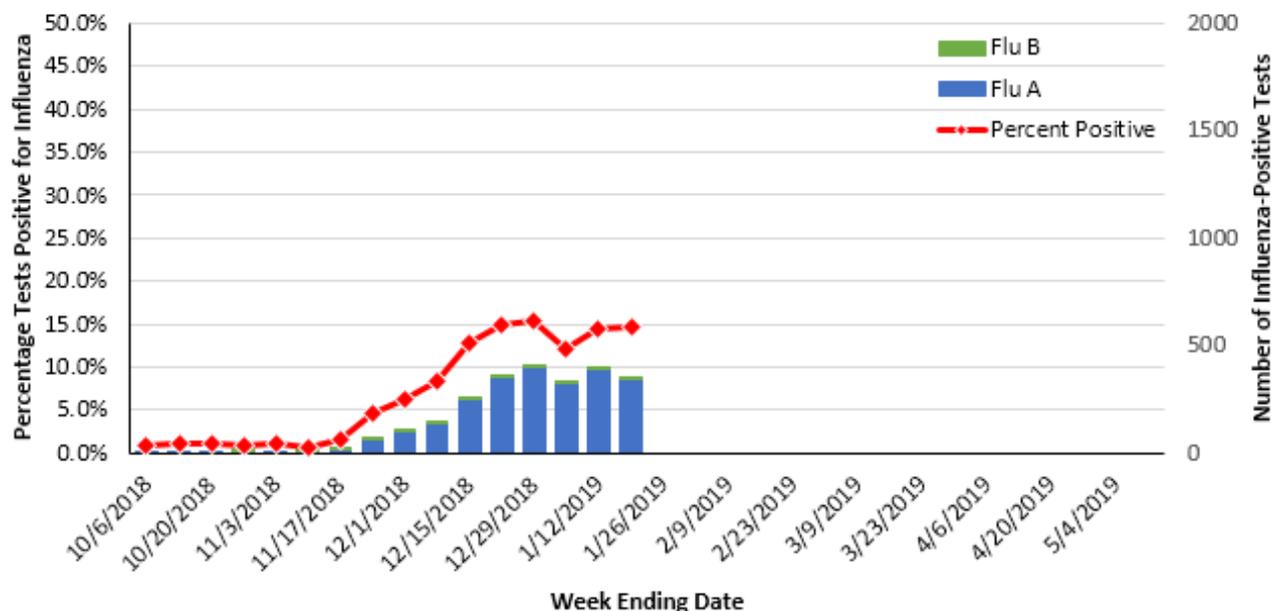
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

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Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

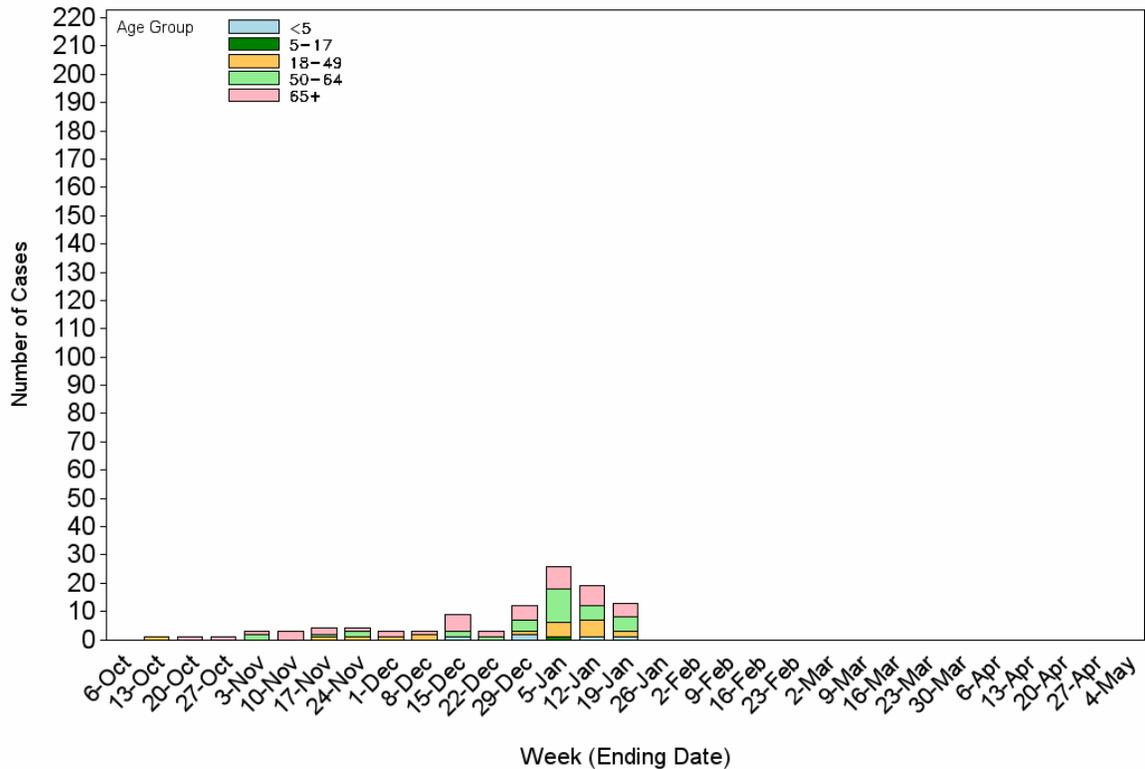
	Current Week	Cumulative
No. of specimens tested	2,416	26,732
No. of positive specimens (%)	354 (14.7%)	2,472 (9.2%)
<i>Positive specimens by type</i>		
Influenza A	347 (98.0%)	2,426 (98.1%)
Influenza B	7 (2.0%)	46 (1.9%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



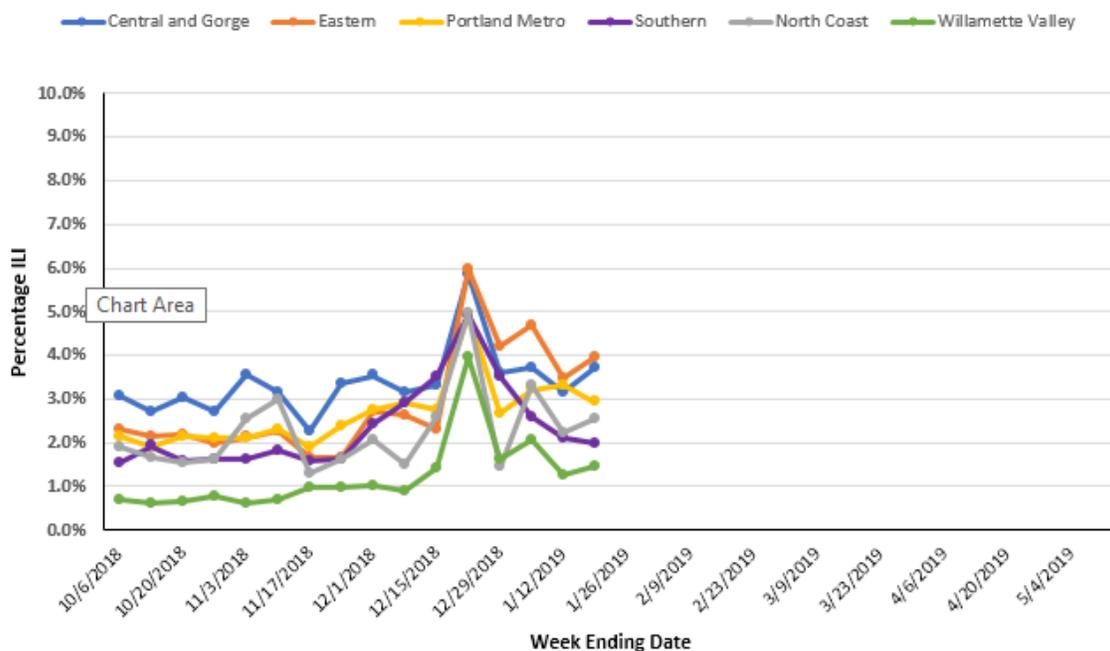
Hospitalizations: In Clackamas, Multnomah, and Washington counties 13 influenza-associated hospitalizations were reported during week 3 of 2019. In total, there have been 106 hospitalizations, 105 (99.1%) of which have been positive for flu A. Of the 33 tests that have been subtyped, 28 (84.9%) are flu A 2009 H1N1 and 5 (15.2%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



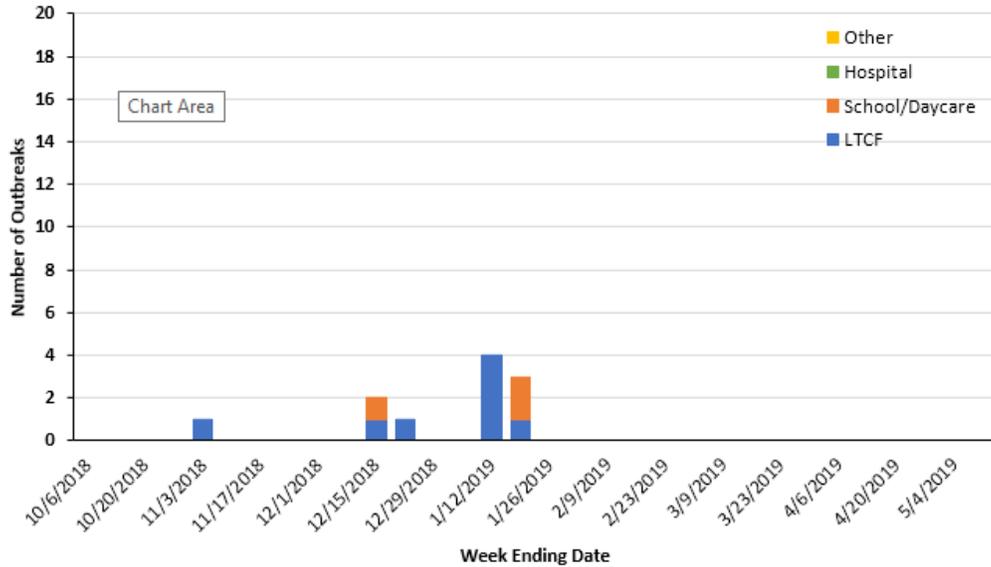
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 166 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 3 of 2019 was 2.6%. Regionally, the percent was highest in the Eastern area (3.9%) and lowest in the Willamette Valley (1.5%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



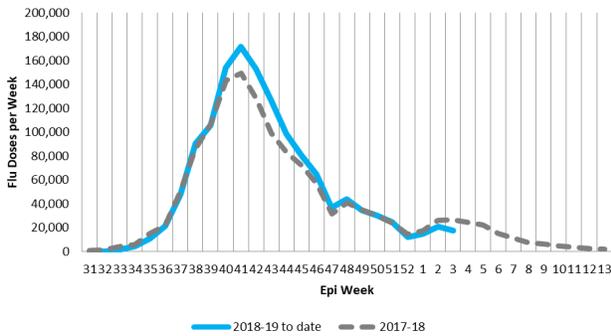
Influenza Outbreaks: Three influenza outbreaks were reported during Week 3, 2019. There have been a total of 11 influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, eight of which have occurred in long-term care facilities and three of which have occurred in a school.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season

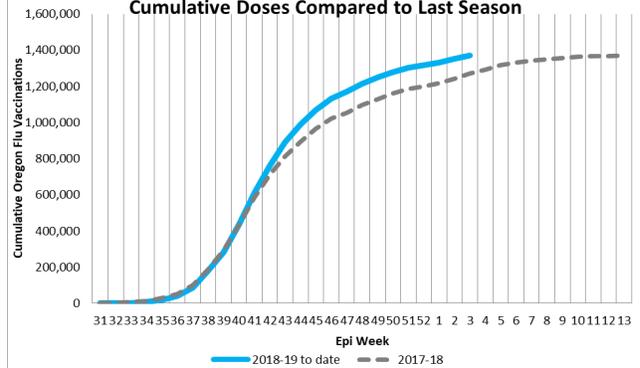


Vaccination Data: This week’s reporting is based on ALERT IIS data through Epiweek 3 of 2019 (January 19th). To date 1.37 million seasonal influenza immunizations for Oregonians this season are in ALERT IIS. Presently it appears that a mild January rally in new influenza immunizations may be over. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed-current weekly totals may be adjusted upward later. For this week we are including a look at the effects of the reintroduction of the live-attenuated influenza vaccine (LAIV) marketed as FluMist. The return of LAIV was not without controversy, as the American Academy of Pediatrics declined its support. In the 2015-16 season, which was the last season prior to the withdrawal of the LAIV recommendation, 36% of influenza immunizations given to Oregon children aged 2 through 17 were LAIV. In the current season, only 2% of influenza immunizations given to Oregon children aged 2 through 17 are LAIV.

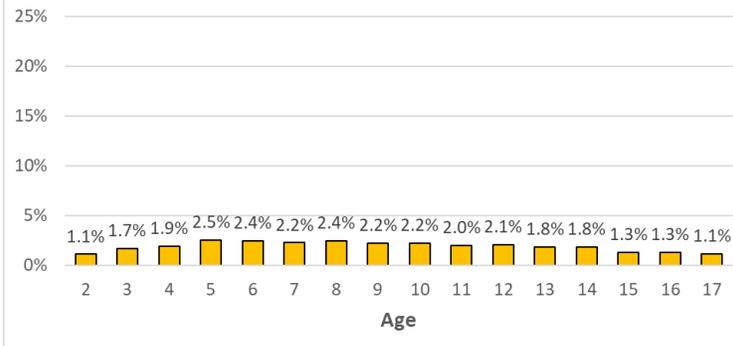
2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



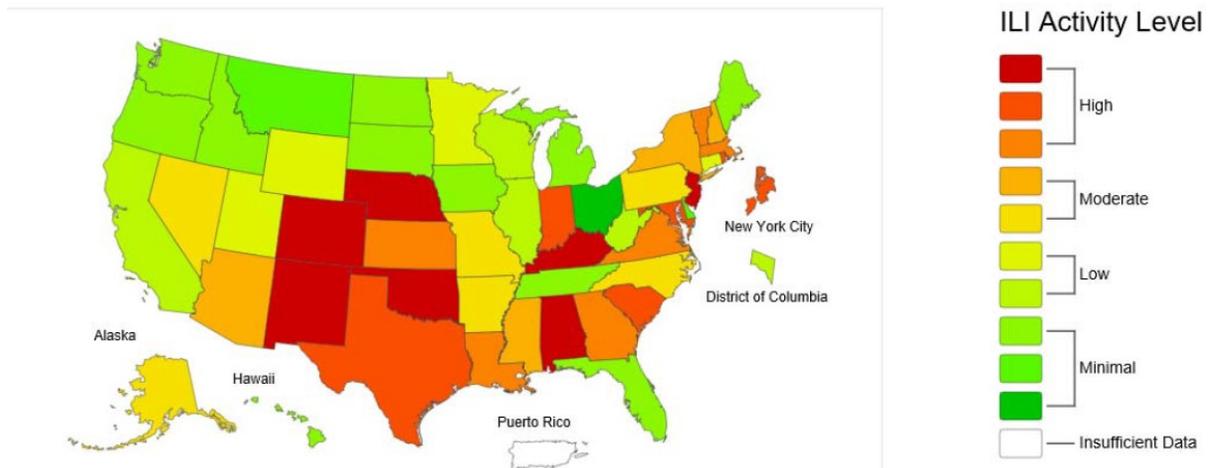
Live-Attenuated Influenza Vaccine (LAIV) Usage by Oregon Children in the 2018-19 Season, as a Percentage of Total



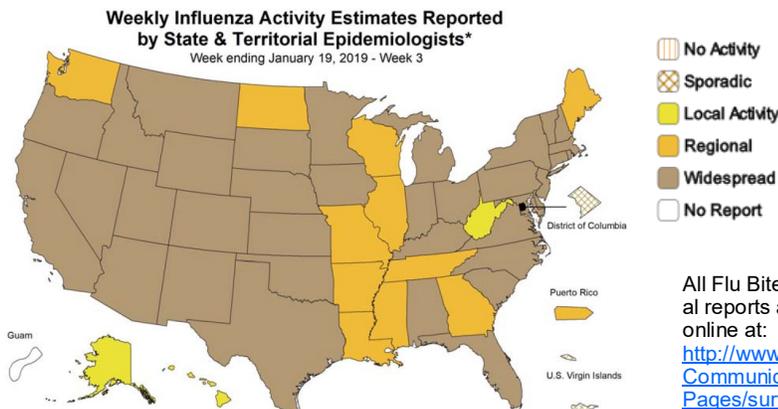
US Data (from CDC FluView): Influenza activity increased in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending January 19, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories increased. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased to 3.3%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** New York City and 18 states experienced high ILI activity; 10 states experienced moderate ILI activity; the District of Columbia and eight states experienced low ILI activity; 14 states experienced minimal ILI activity; and Puerto Rico had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 36 states was reported as widespread; Puerto Rico and 11 states reported regional activity; three states reported local activity; the District of Columbia and the U.S. Virgin Islands reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations** A cumulative rate of 14.8 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (38.3 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Three influenza-associated pediatric deaths were reported to CDC during week 3.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 3 ending Jan 19, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance January 6 - January 12, 2019 (Week 2)

	Current Week (2)	Previous Week (1)
Percentage of emergency department visits for ILI ¹	1.8%	2.2%
Percentage positive influenza tests ²	14.3%	12.2%
Influenza-associated hospitalizations ³	19	27
Reported ILI/influenza outbreaks	4	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	8.4%	8.1%

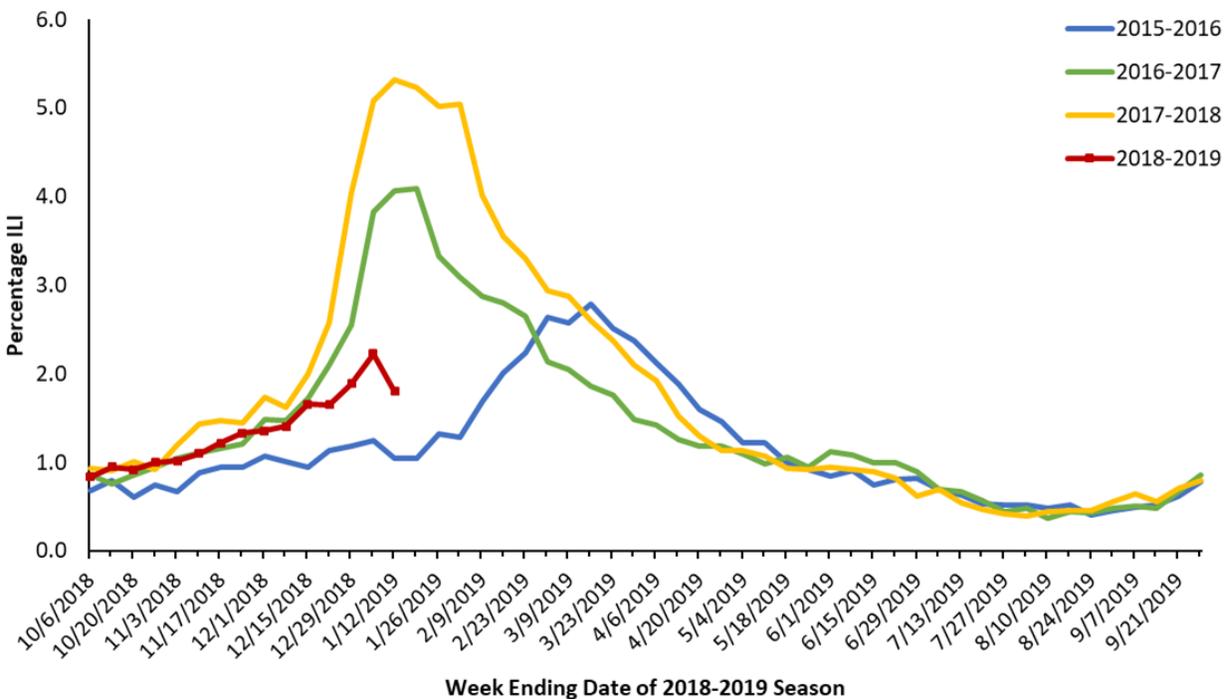
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.8% during week 2, 2019.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **14.3% of specimens tested at Oregon labs were positive for influenza during week 2**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

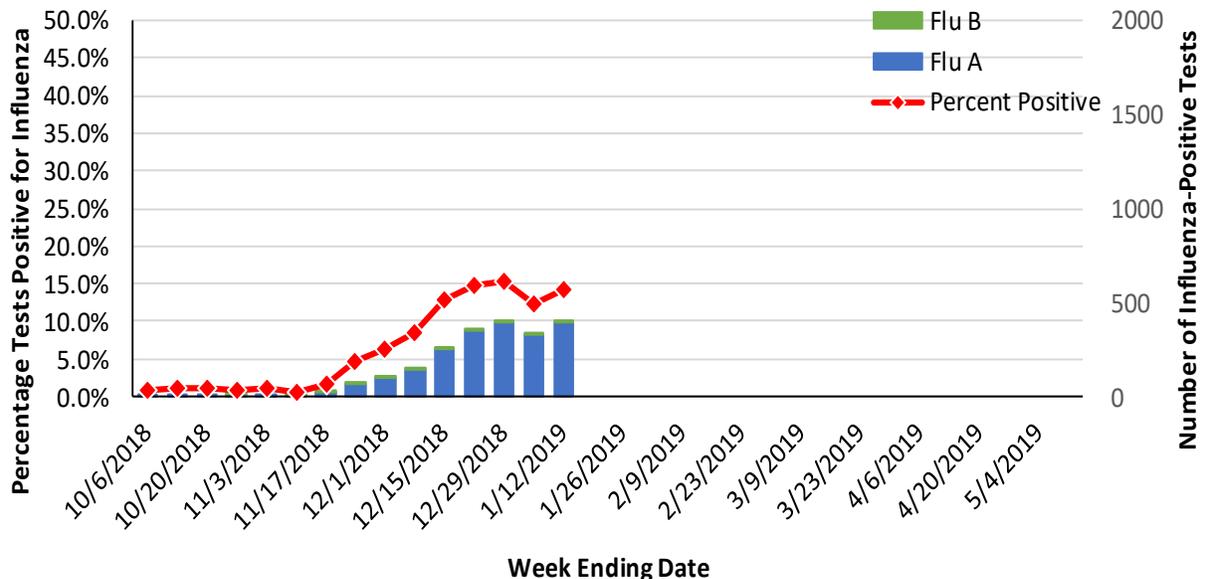
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR).

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

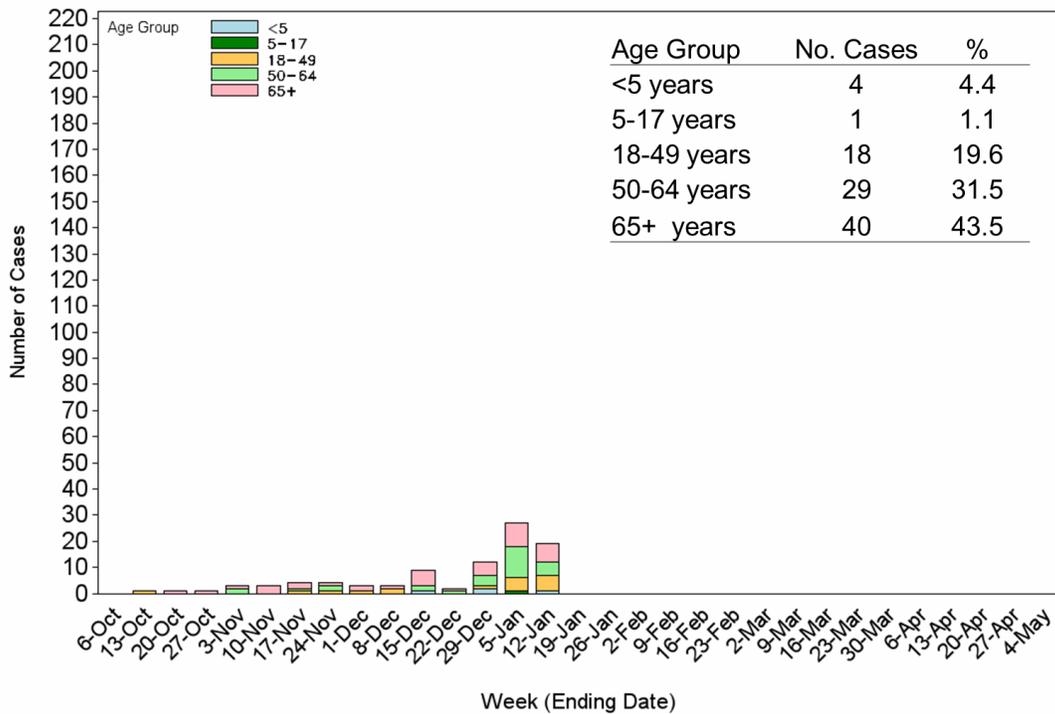
	Current Week	Cumulative
No. of specimens tested	2,793	24,316
No. of positive specimens (%)	400 (14.3%)	2,118 (8.7%)
<i>Positive specimens by type</i>		
Influenza A	392 (98.0%)	2,079 (98.2%)
Influenza B	8 (2.0%)	39 (1.8%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



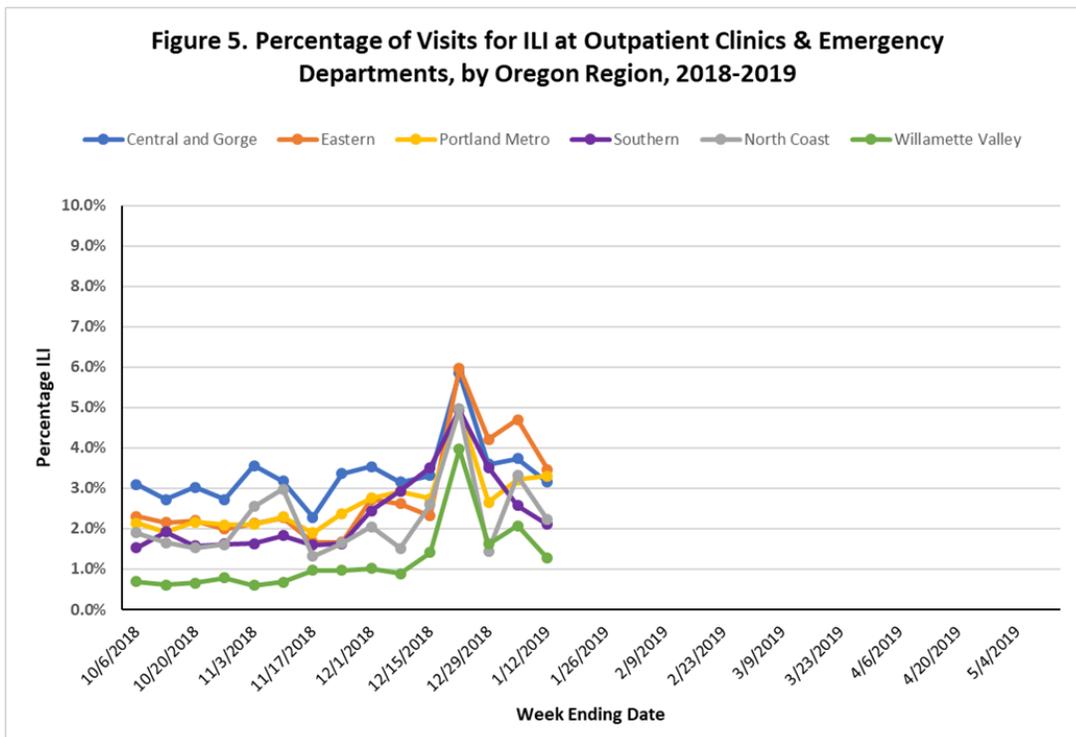
Hospitalizations: In Clackamas, Multnomah, and Washington counties 19 influenza-associated hospitalizations were reported during week 2 of 2019. In total, there have been 92 hospitalizations, 91 (98.9%) of which have been positive for flu A. Of the 22 tests that have been subtyped, 18 (81.8%) are flu A 2009 H1N1 and four (18.2%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



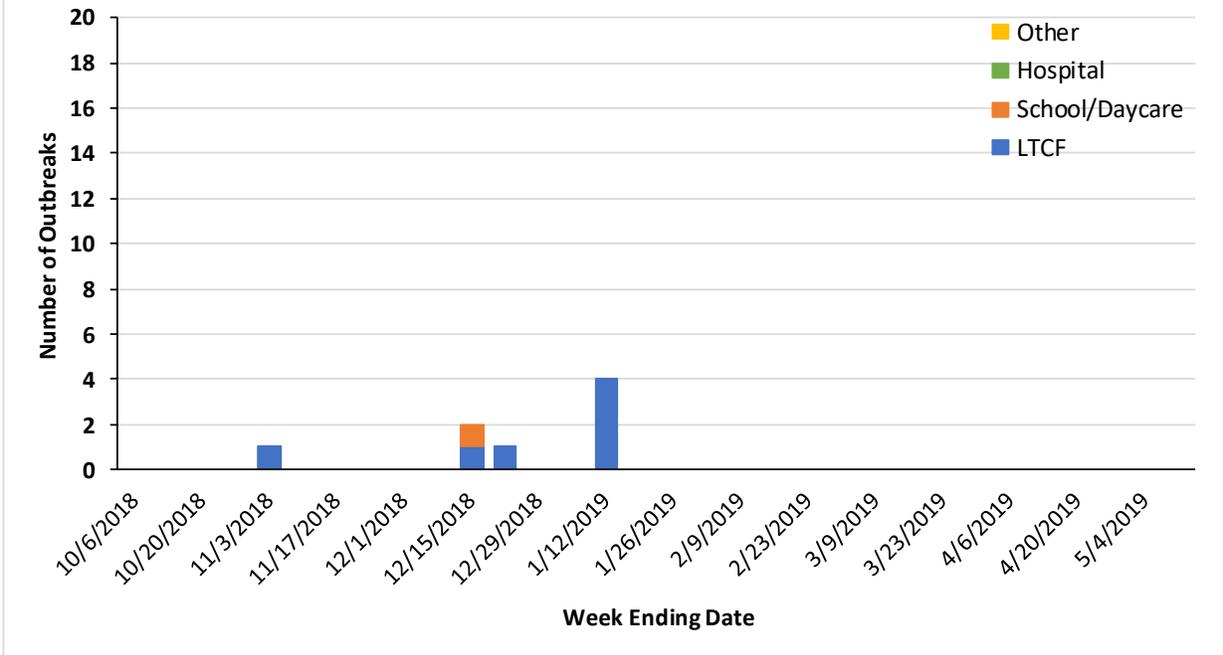
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 2 of 2019 was 2.7%. Regionally, the percent was highest in the Eastern area (3.5%) and lowest in the Willamette Valley (1.3%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

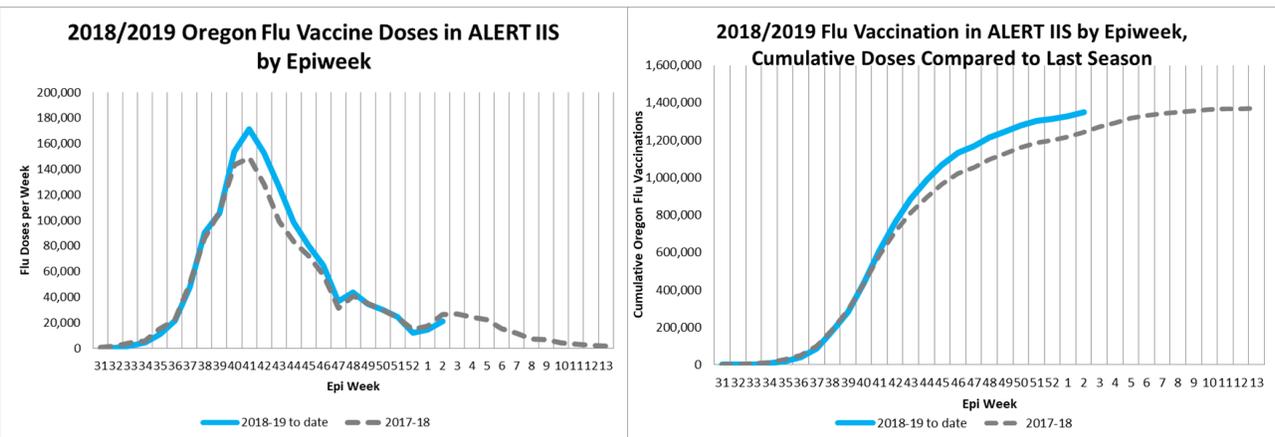


Influenza Outbreaks: Four influenza outbreaks were reported during Week 2, 2019. There have been a total of eight influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, seven of which have occurred in long-term care facilities and one of which has occurred in a school.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



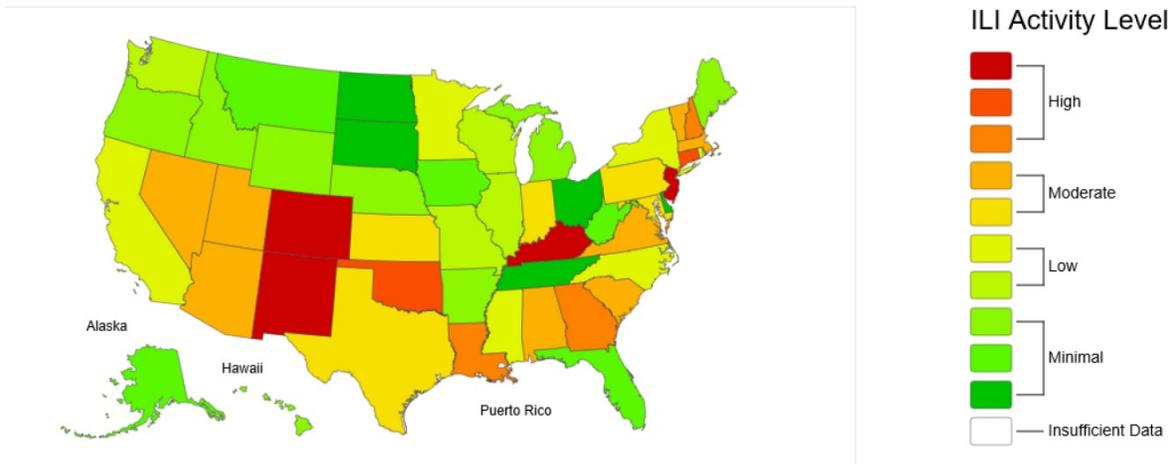
Vaccination Data: This week’s reporting is based on ALERT IIS data through Epiweek 2 of 2019 (January 12th). To date 1.35 million seasonal influenza immunizations for Oregonians this season are in ALERT IIS. ALERT IIS has also received over 80,000 influenza immunization reports for residents of Washington, over 7,000 for California residents, and over 6,000 for Idaho residents. As of Epiweek 2, ALERT IIS is showing the start of a January surge in immunization that appears similar to last season’s January uptick. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.



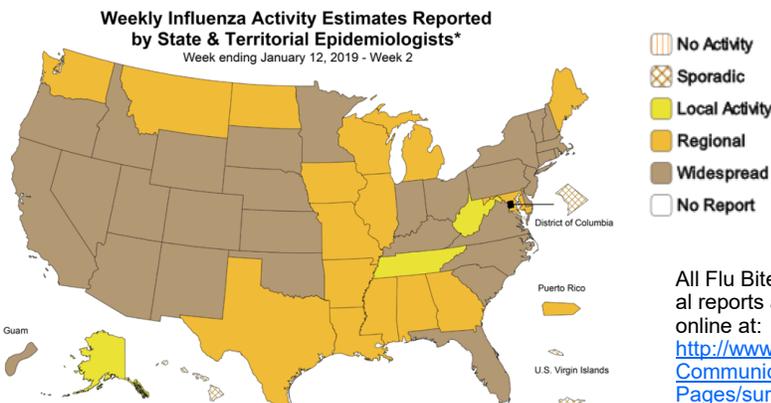
US Data (from CDC FluView): Influenza activity remains elevated in the United States. Influenza A (H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending January 12, 2019:

- o **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** None of the viruses tested were associated with highly reduced inhibition by any of the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased from 3.5% to 3.1%, but remains above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** Nine states experienced high ILI activity; New York City and 13 states experienced moderate ILI activity; 10 states experienced low ILI activity; and the District of Columbia, Puerto Rico and 18 states experienced minimal ILI activity.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in Guam and 30 states was reported as widespread; Puerto Rico and 16 states reported regional activity; three states reported local activity; and the District of Columbia, the U.S. Virgin Islands and one state reported sporadic activity.
- o **Influenza-associated Hospitalizations:** A cumulative rate of 12.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (31.9 hospitalizations per 100,000 population).
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** Three influenza-associated pediatric deaths were reported to CDC during week 2.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 2 ending Jan 12, 2019**



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveillance.aspx>

Data at a Glance December 30, 2018 - January 5, 2019 (Week 1)

	Current Week (1)	Previous Week (52)
Percentage of emergency department visits for ILI ¹	2.2%	1.9%
Percentage positive influenza tests ²	12.2%	15.3%
Influenza-associated hospitalizations ³	25	12
Reported ILI/influenza outbreaks	0	1
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	8.1%	6.9%

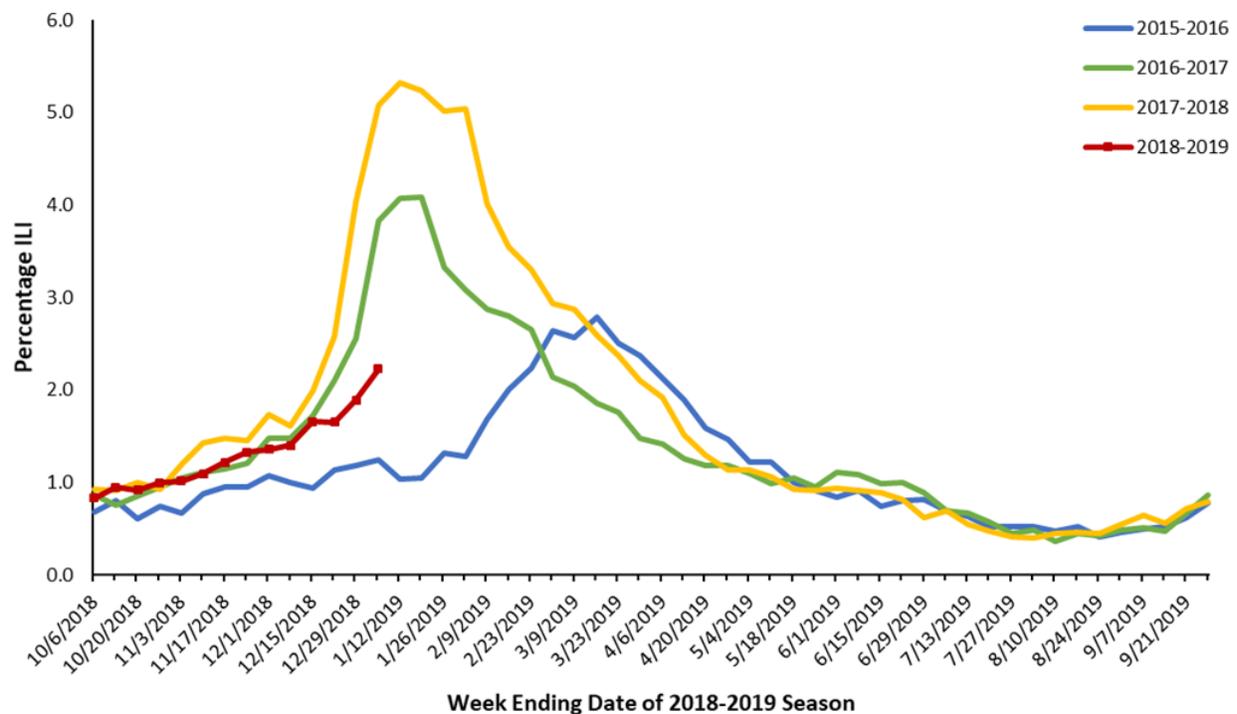
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 2.2% during week 1, 2019.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **12.2% of specimens tested at Oregon labs were positive for influenza during week 1**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

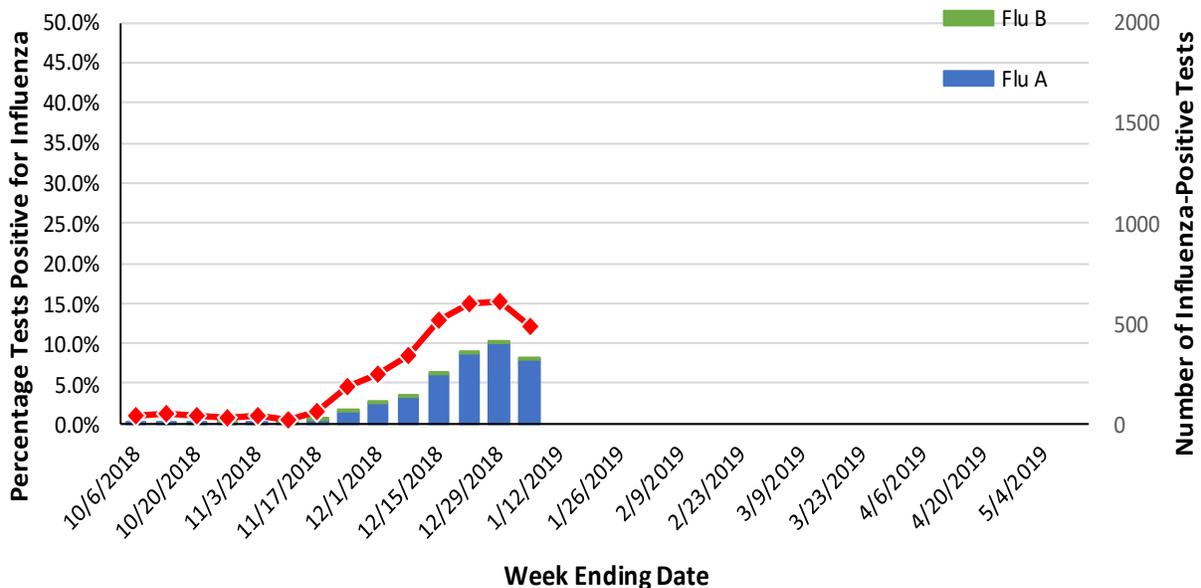
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

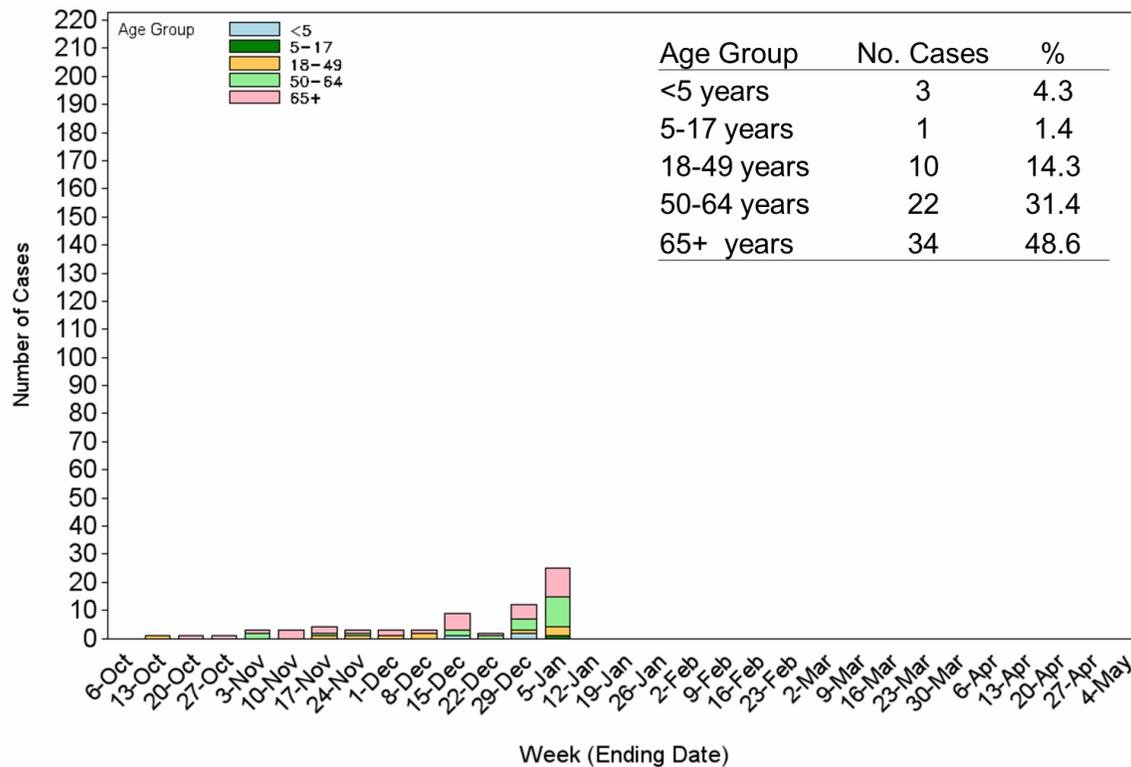
	Current Week	Cumulative
No. of specimens tested	2,685	21,523
No. of positive specimens (%)	327 (12.2%)	1,718 (8.0%)
Positive specimens by type		
Influenza A	324 (99.1%)	1,687 (98.2%)
Influenza B	3 (0.9%)	31 (1.8%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



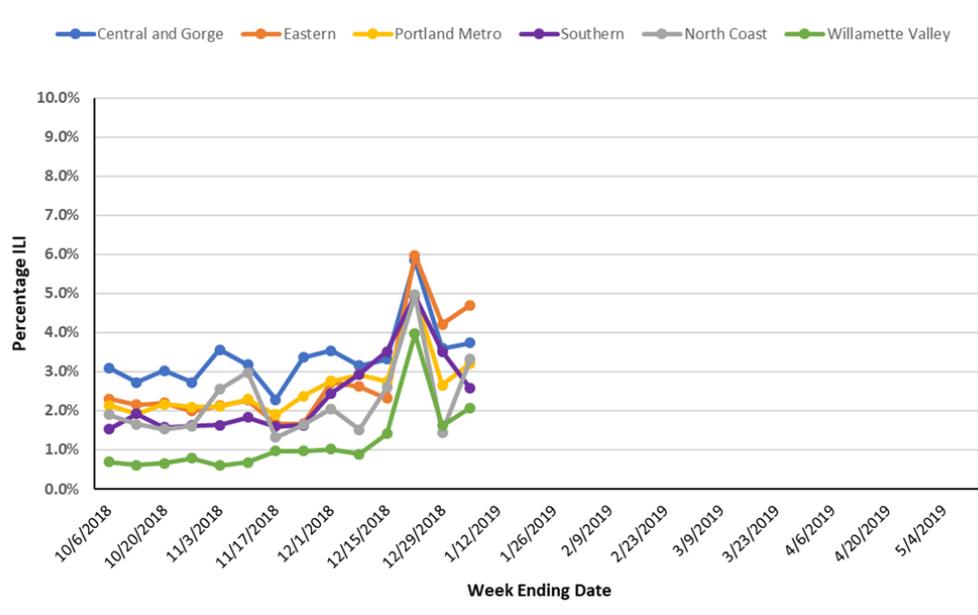
Hospitalizations: In Clackamas, Multnomah, and Washington counties 25 influenza-associated hospitalizations were reported during week 1 of 2019. In total, there have been 70 hospitalizations, 69 (98.6%) of which have been positive for flu A. Of the 17 tests that have been subtyped, 14 (82.4%) are flu A 2009 H1N1 and three (17.7%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



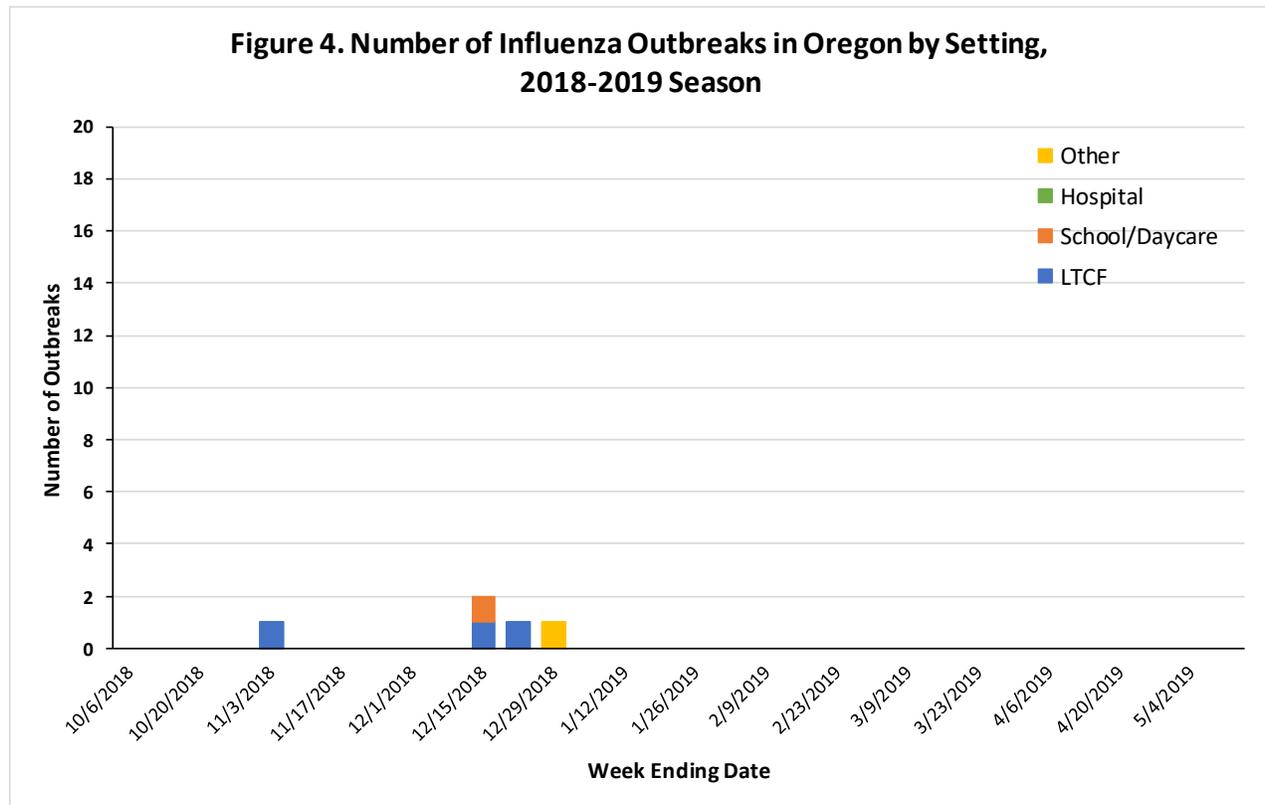
Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 1 of 2019 was 3.0%. Regionally, the percent was highest in the Eastern area (4.7%) and lowest in the Willamette Valley (2.1%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

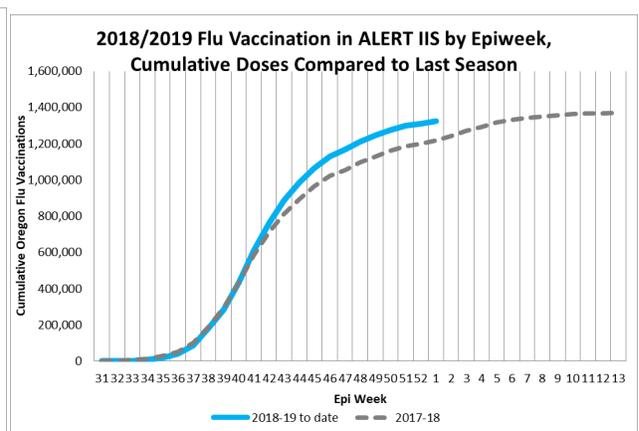
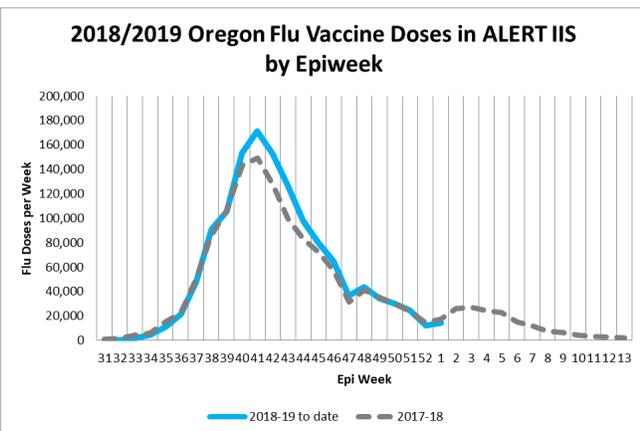


Influenza Outbreaks: No influenza outbreaks were reported during Week 1, 2019. There have been five total influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season. All have been flu A outbreaks and three occurred in long-term care facilities.

Figure 4. Number of Influenza Outbreaks in Oregon by Setting, 2018-2019 Season



Vaccination Data: This week’s reporting is based on ALERT IIS data through Epiweek 1 of 2019 (January 5th). To date, over 1.33 million seasonal influenza immunizations for this season have been reported to ALERT IIS. The new year has started with a small uptick in new influenza immunizations; whether there will be a substantial spike in January immunizations is currently unknown. In the previous 2017-18 season, a January spike occurred that coincided with increased media coverage of influenza disease. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed—current weekly totals may be adjusted upward later.



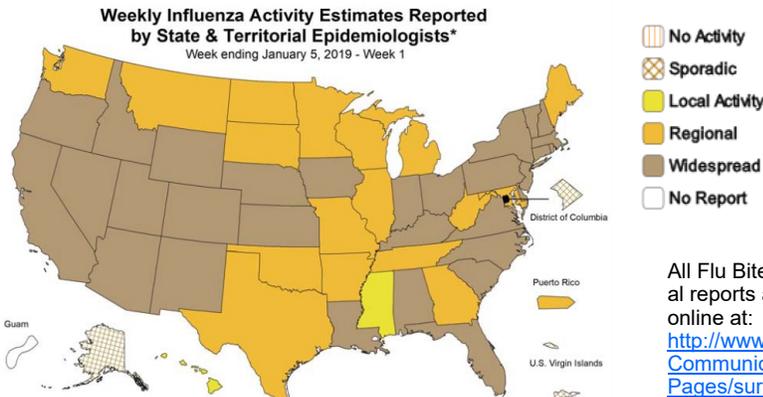
US Data (from CDC FluView): Influenza activity remains elevated in the United States. Influenza A(H1N1) pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending January 5, 2019:

- o **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) decreased from 4.0% to 3.5%, but remains above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** New York City and 15 states experienced high ILI activity; 12 states experienced moderate ILI activity; the District of Columbia, Puerto Rico and eight states experienced low ILI activity; and 15 states experienced minimal ILI activity.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in 30 states was reported as widespread; Puerto Rico and 17 states reported regional activity; two states reported local activity; the District of Columbia, the U.S. Virgin Islands and one state reported sporadic activity; and Guam did not report.
- o **Influenza-associated Hospitalizations:** A cumulative rate of 9.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (22.9 hospitalizations per 100,000 population).
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** Three influenza-associated pediatric deaths were reported to CDC during week 1.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 1 ending Jan 05, 2019



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance December 23-December 29, 2018 (Week 52)

	Current Week (52)	Previous Week (51)
Percentage of emergency department visits for ILI ¹	1.9%	1.7%
Percentage positive influenza tests ²	15.3%	14.8%
Influenza-associated hospitalizations ³	11	2
Reported ILI/influenza outbreaks	1	1
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	6.9%	7.0%

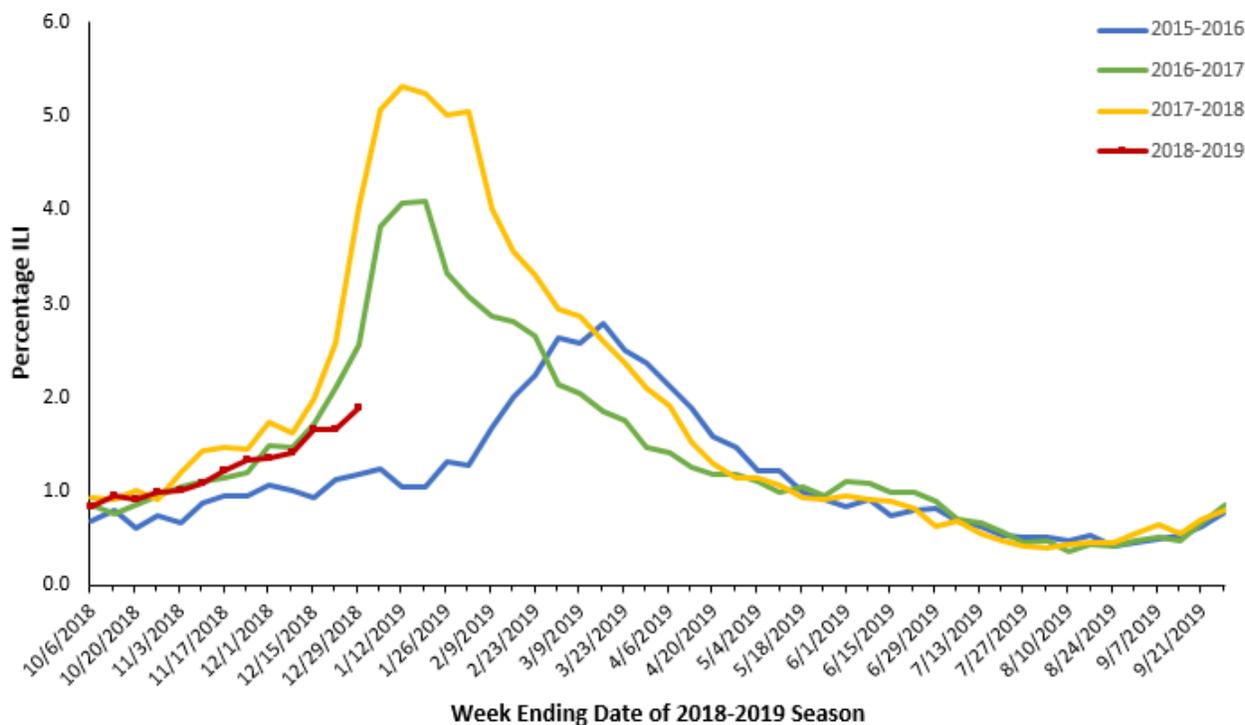
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018–2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.9% during week 52, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **15.3% of specimens tested at Oregon labs were positive for influenza during week 52**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

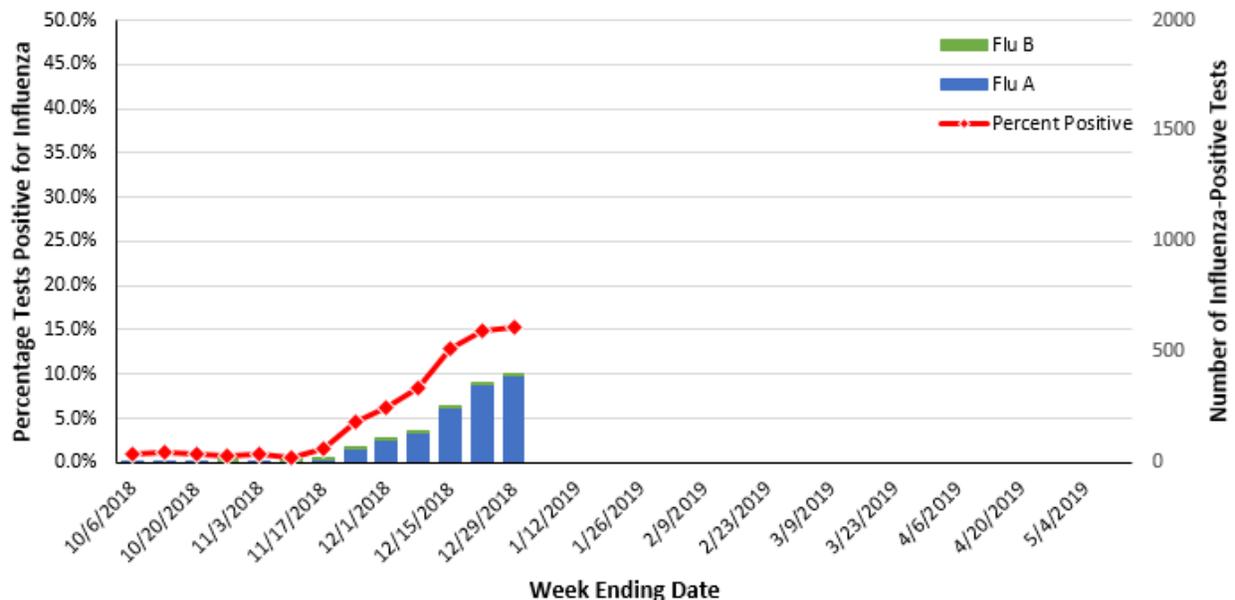
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

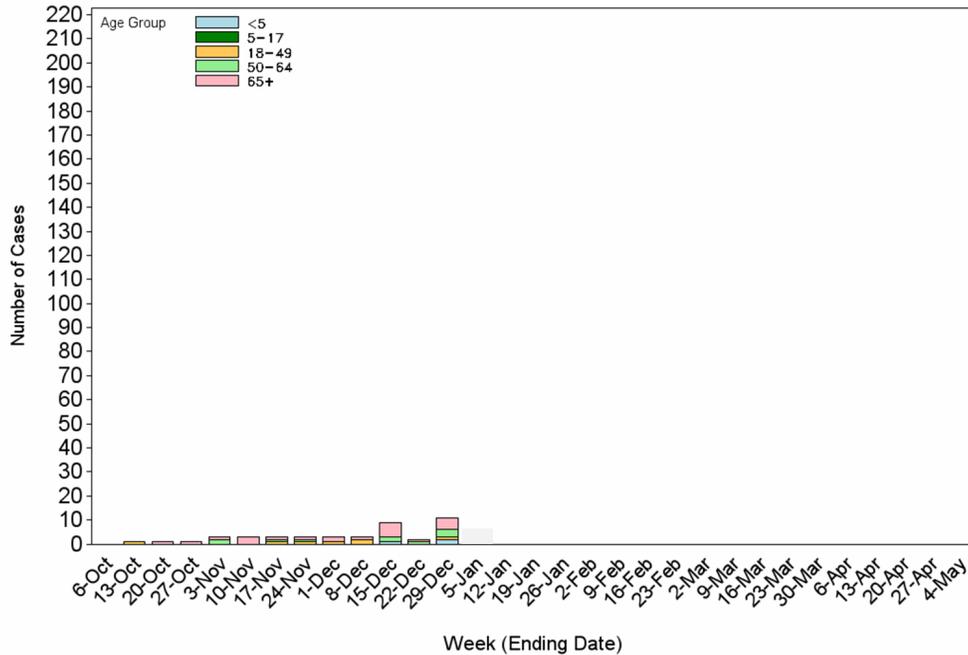
	Current Week	Cumulative
No. of specimens tested	2,618	18,838
No. of positive specimens (%)	401 (15.3%)	1391 (7.4%)
<i>Positive specimens by type</i>		
Influenza A	397 (99.0%)	1363 (98.0%)
Influenza B	4 (1.0%)	28 (2.0%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



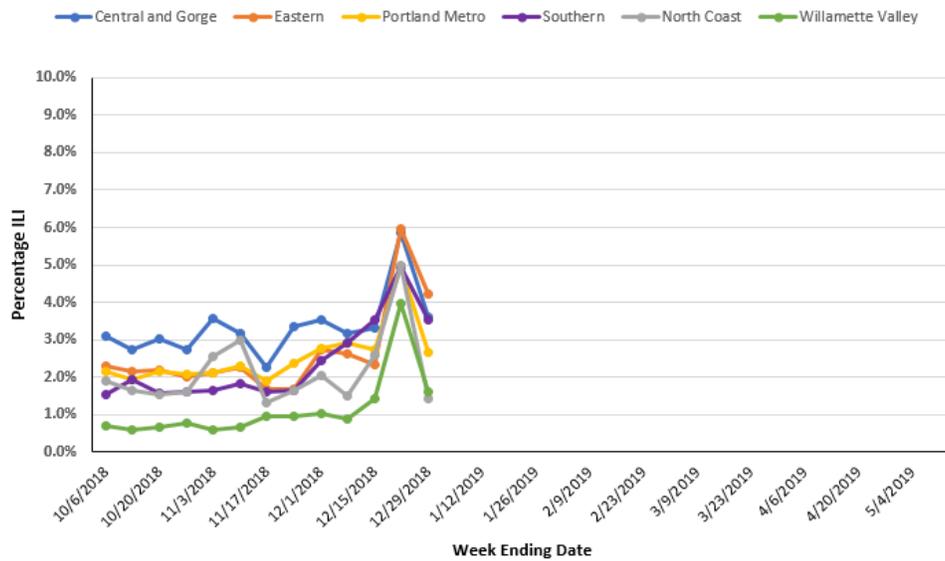
Hospitalizations: In Clackamas, Multnomah, and Washington counties 11 influenza-associated hospitalizations were reported during week 52 of 2018. In total, there have been 43 hospitalizations, all of which have been positive for flu A. Of the 12 tests that have been subtyped, nine (75.0%) are flu A 2009 H1N1 and three (25.0%) are flu A H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



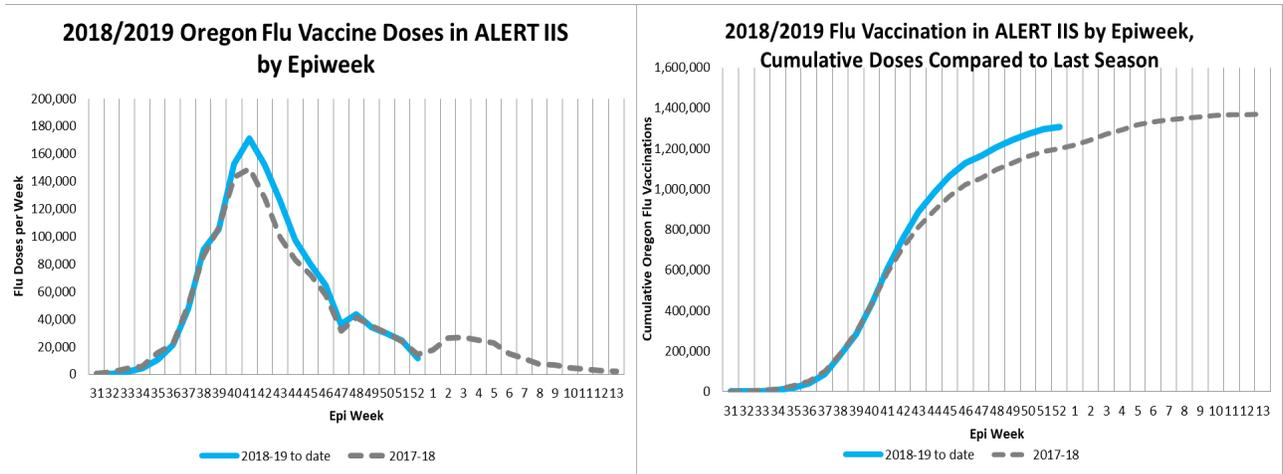
Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. With 109 of 183 OHIN clinics reporting, the percent of outpatients seen with ILI across the state during week 52 of 2018 was 2.7%. Regionally, the percent was highest in the Eastern area (4.2%) and lowest in the North Coast (1.4%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Influenza Outbreaks: One influenza outbreaks were reported during Week 52. There have been five total influenza A outbreaks reported to the Oregon Health Authority in the 2018-2019 flu season.

Vaccination Data: This week’s reporting is based on ALERT IIS data through Epiweek 52 (December 29th). To date over 1.3 million seasonal influenza immunizations for this season have been reported to ALERT IIS. It is an open question at this point of whether a January surge in immunization will add substantially to influenza immunization totals or not. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.



For this week, a table of influenza immunizations to date by vaccine type for adults is presented. For children, over 95% of influenza immunizations this season have been quadrivalent injectable vaccines, with less than 2% for the reintroduced live, attenuated inactivated vaccine (LAIV) nasal spray. For adults, the bulk of non-senior immunizations is also with quadrivalent injectable vaccines, though a wider range of products are available. For seniors, 66% have to date received a high-dose vaccination, with another 12% receiving an adjuvanted influenza vaccine. Both the high-dose and adjuvanted vaccines are specifically intended to boost senior response to influenza immunization.

Table 2. Oregon Adult 2018-19 Flu Season Vaccinations by Type

Vaccine Type	19 to 49	50 to 64	65plus
Adjuvanted	0.1%	0.1%	12.4%
Cell-based	5.4%	5.2%	1.1%
High-Dose	0.2%	0.6%	66.5%
Nasal	0.1%	0.0%	0.0%
Quadrivalent Injectable	87.1%	83.8%	17.1%
Recombinant	1.8%	4.2%	1.3%
Trivalent Injectable	5.3%	6.0%	1.6%

Data at a Glance December 16-December 22, 2018 (Week 51)

	Current Week (51)	Previous Week (50)
Percentage of emergency department visits for ILI ¹	1.7%	1.7%
Percentage positive influenza tests ²	14.8%	12.8%
Influenza-associated hospitalizations ³	2	9
Reported ILI/influenza outbreaks	1	2
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	7.0%	4.5%

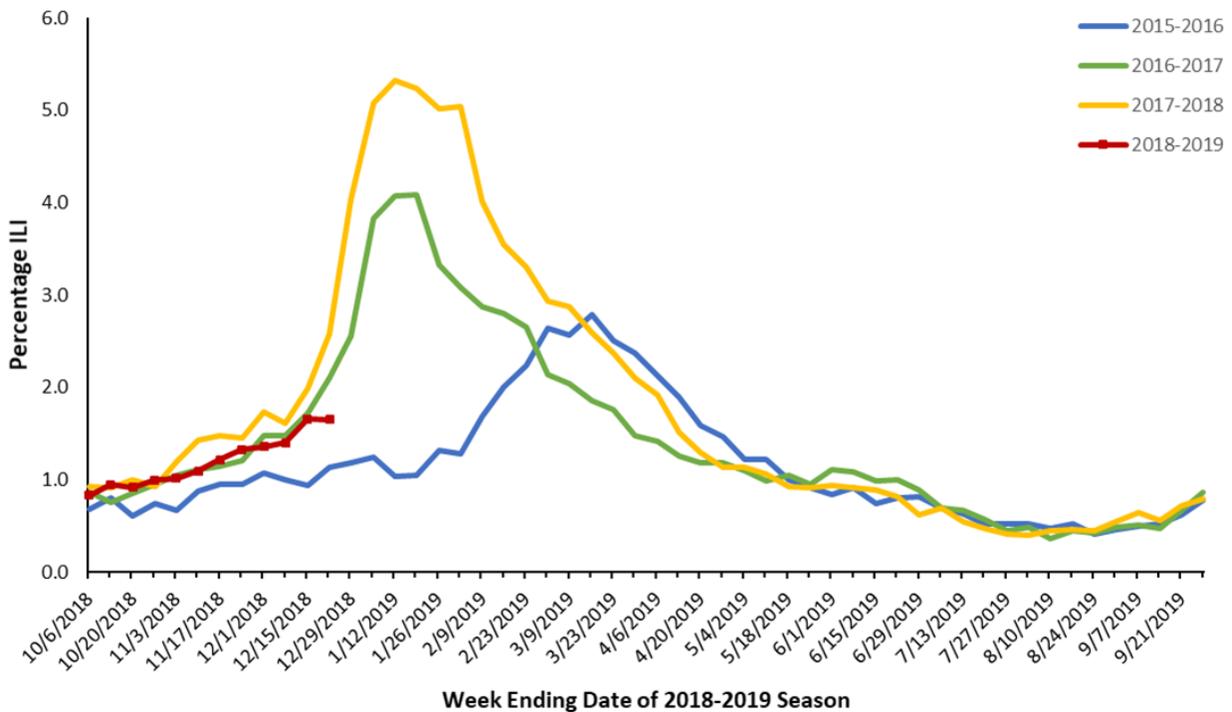
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.7% during week 51, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **14.8% of specimens tested at Oregon labs were positive for influenza during week 51**, and the bar chart displays the number of influenza -positive tests by flu type and percent positivity.

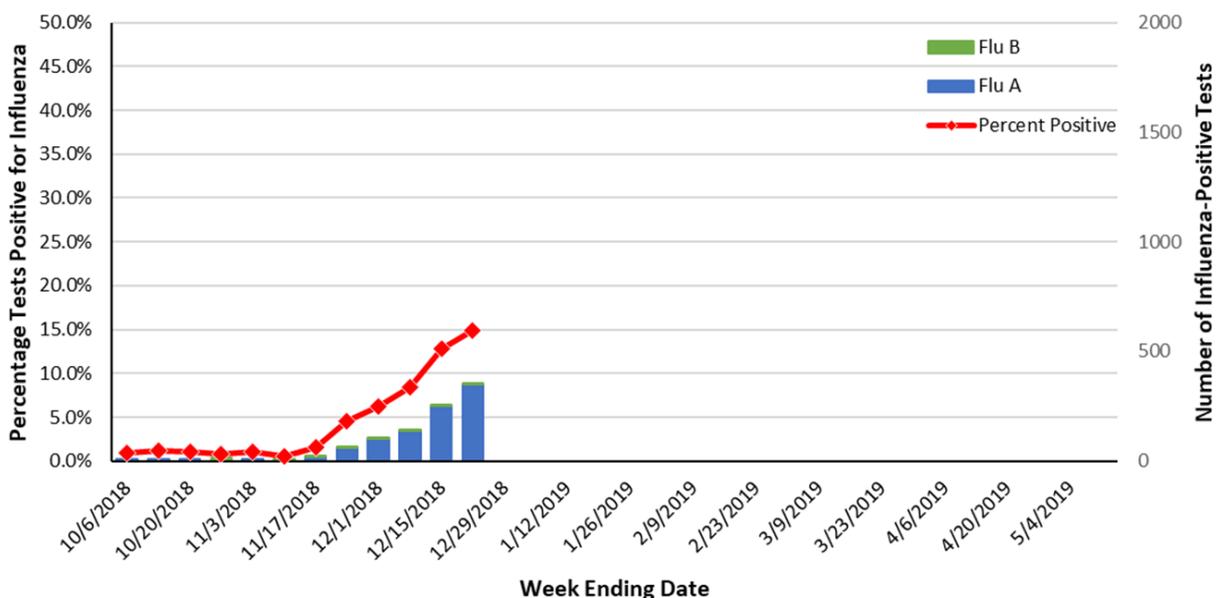
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

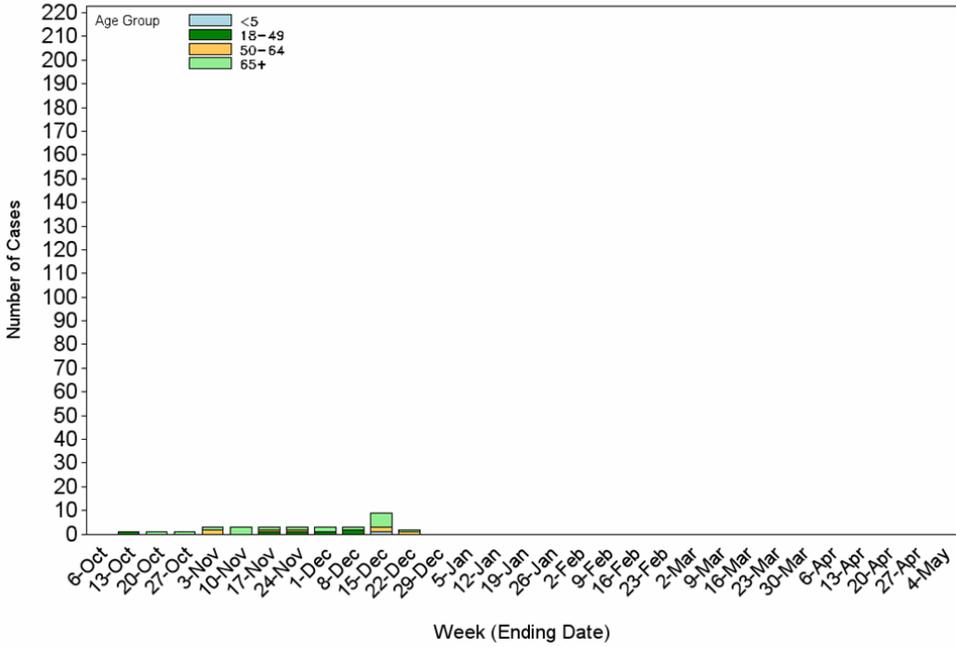
	Current Week	Cumulative
No. of specimens tested	2,393	16,220
No. of positive specimens (%)	355 (14.8%)	990 (6.1%)
<i>Positive specimens by type</i>		
Influenza A	350 (98.6%)	966 (97.6%)
Influenza B	5 (1.4%)	24 (2.4%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



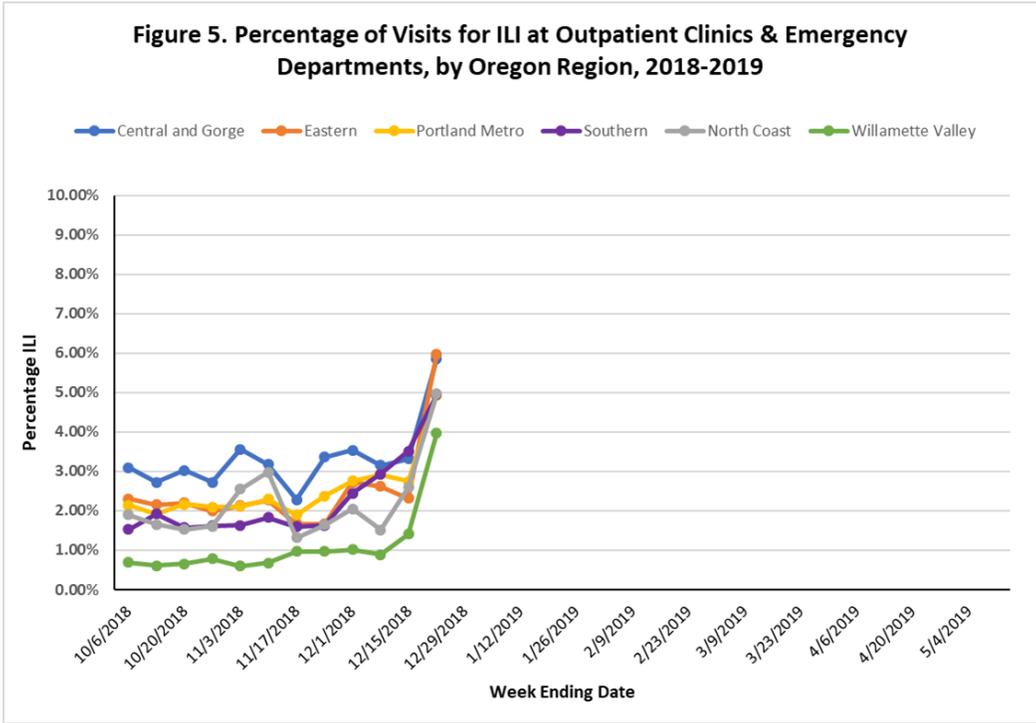
Hospitalizations: In Clackamas, Multnomah, and Washington counties two influenza-associated hospitalizations were reported during week 51 of 2018. To date, all 32 cases have been positive for flu A (100%). Of the ten that have been subtyped, seven (70.0%) are 2009 H1N1 and three (30.0%) are H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 51 of 2018 was 5.1%. Regionally, the percent was highest in the Eastern area (6.0%) and lowest in the Willamette Valley (4.0%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

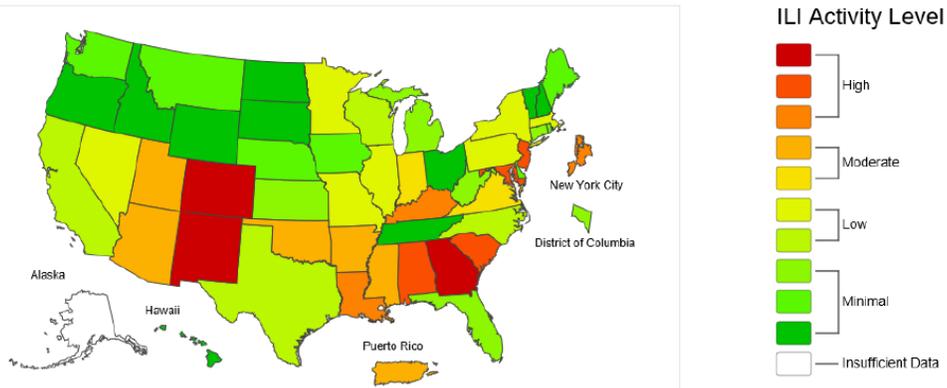


Influenza Outbreaks: One influenza outbreak was reported during Week 51. There have been four total influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season, all of which have been flu A.

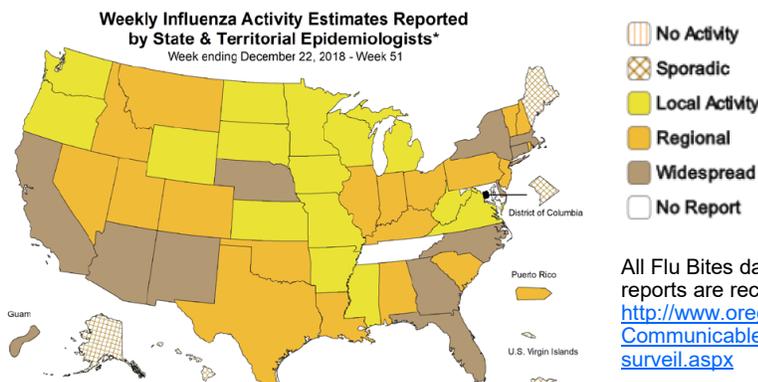
US Data (from CDC FluView): Influenza activity in the United States is increasing. Influenza A(H1N1) pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending December 22, 2018:

- o **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses predominated in the southeastern United States (HHS Region 4). The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories is increasing.
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. A comparison of gene sequences of recent influenza A(H1N1)pdm09 viruses from the U.S. and Mexico/Central America showed them to be similar.
- o **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased to 3.3%, which is above the national baseline of 2.2%. Nine of 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** New York City and nine states experienced high ILI activity; Puerto Rico and seven states experienced moderate ILI activity; 11 states experienced low ILI activity; the District of Columbia and 22 states experienced minimal ILI activity; and one state had insufficient data. Among the four states along the southern U.S. border, ILI activity increased to moderate in Arizona and high in New Mexico.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in Guam and 11 states was reported as widespread; Puerto Rico and 19 states reported regional activity; 15 states reported local activity; the District of Columbia, the U.S. Virgin Islands and three states reported sporadic activity; and two states did not report.
- o **Influenza-associated Hospitalizations:** A cumulative rate of 3.6 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among children younger than 5 years (10.0 hospitalizations per 100,000 population).
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** Four influenza-associated pediatric deaths reported to CDC during week 51.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 51 ending Dec 22, 2018



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance December 9-December 15, 2018 (Week 50)

	Current Week (50)	Previous Week (49)
Percentage of emergency department visits for ILI ¹	1.7%	1.4%
Percentage positive influenza tests ²	12.8%	8.4%
Influenza-associated hospitalizations ³	9	3
Reported ILI/influenza outbreaks	2	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	4.5%	2.3%

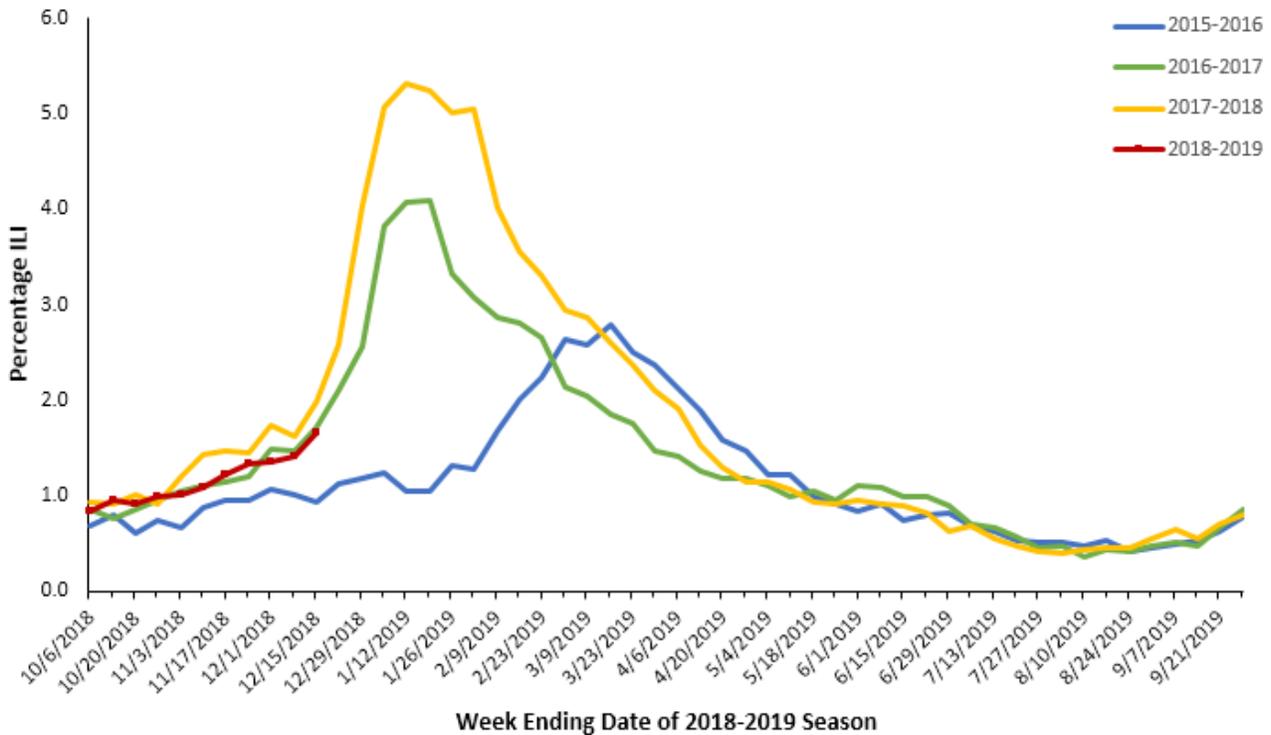
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.7% during week 50, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **12.8% of specimens tested at Oregon labs were positive for influenza during week 50**, and the bar chart displays the number of influenza -positive tests by flu type and percent positivity.

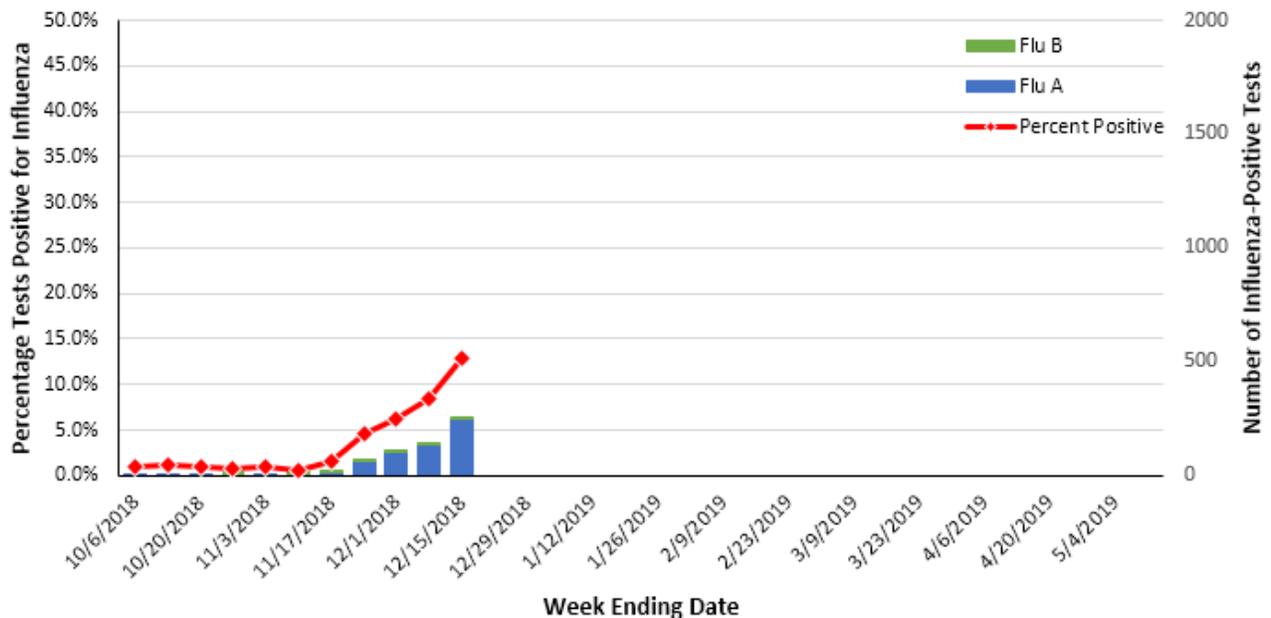
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

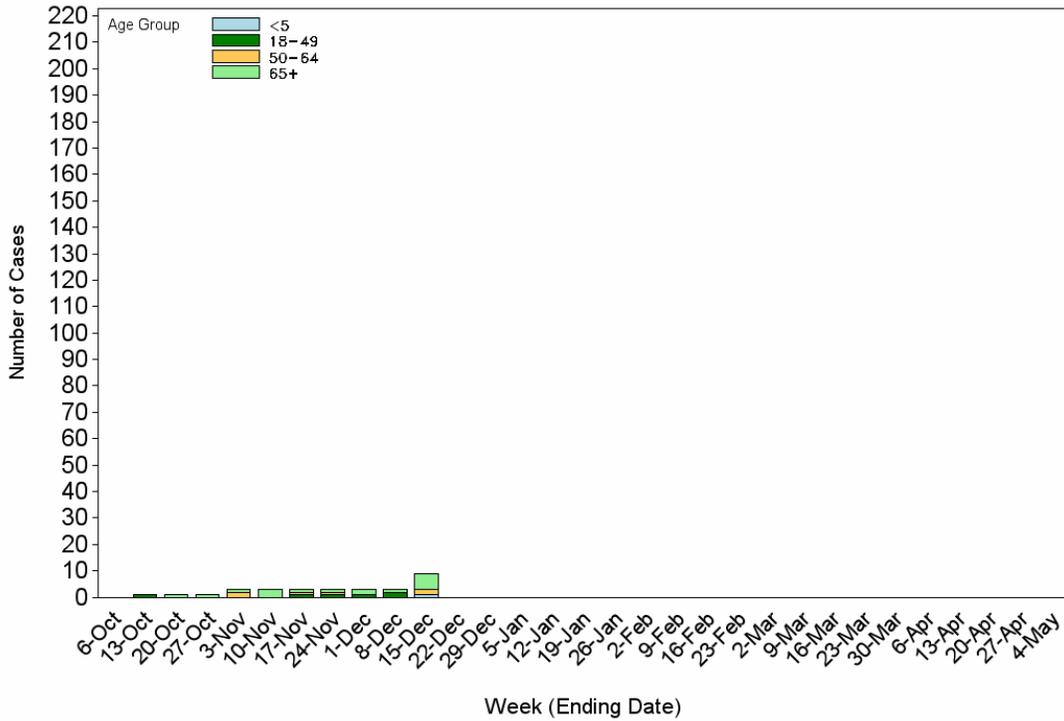
	Current Week	Cumulative
No. of specimens tested	1,978	13,827
No. of positive specimens (%)	253 (12.8%)	635 (4.6%)
<i>Positive specimens by type</i>		
Influenza A	249 (98.4%)	616 (97.0%)
Influenza B	4 (1.6%)	19 (3.0%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



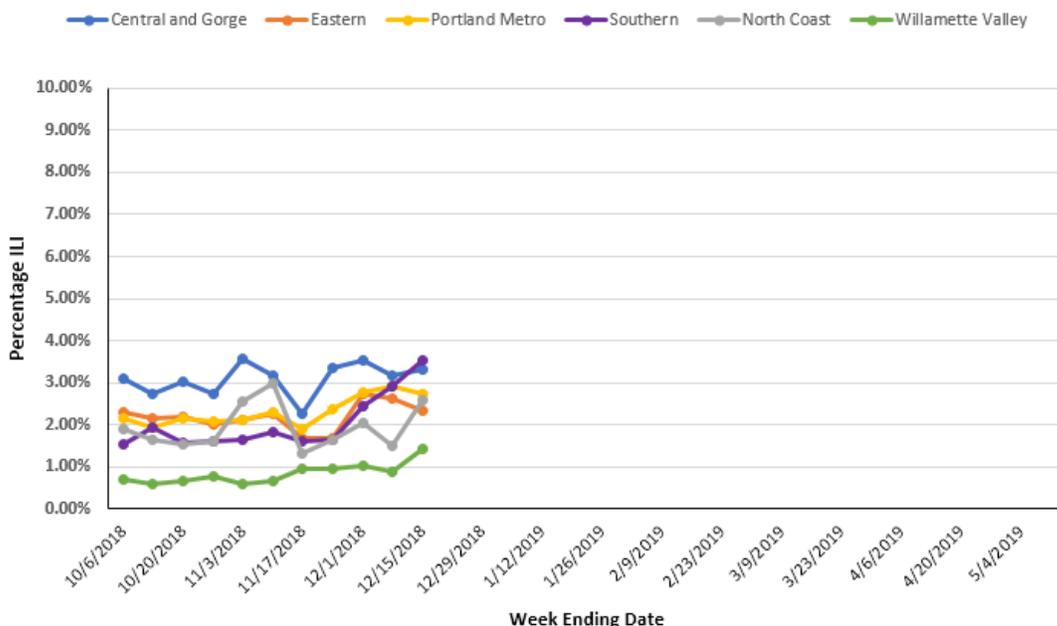
Hospitalizations: In Clackamas, Multnomah, and Washington counties nine influenza-associated hospitalizations were reported during week 50 of 2018. To date, all 30 cases have been positive for flu A (100%). Of the ten that have been subtyped, seven (70.0%) are 2009 H1N1 and three (30.0%) are H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon's Outpatient Influenza-like Illness Surveillance: Oregon's outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 50 of 2018 was 2.7%. Regionally, the percent was highest in the Southern area (3.5%) and lowest in the Willamette Valley (1.4%).

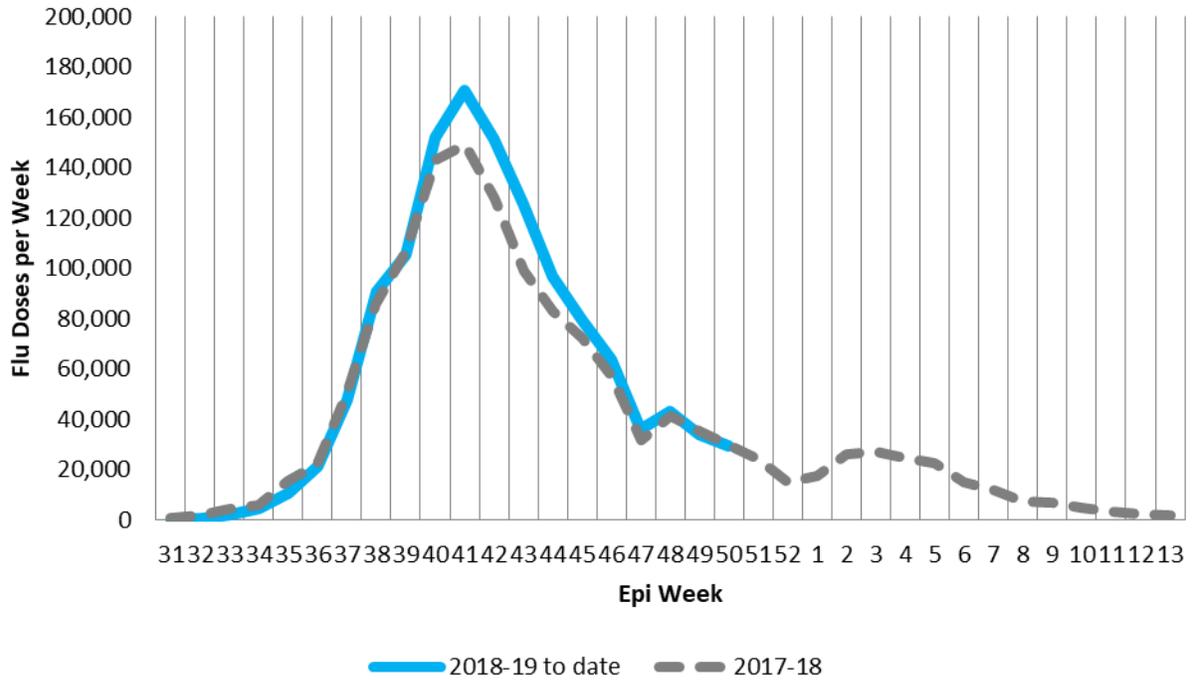
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



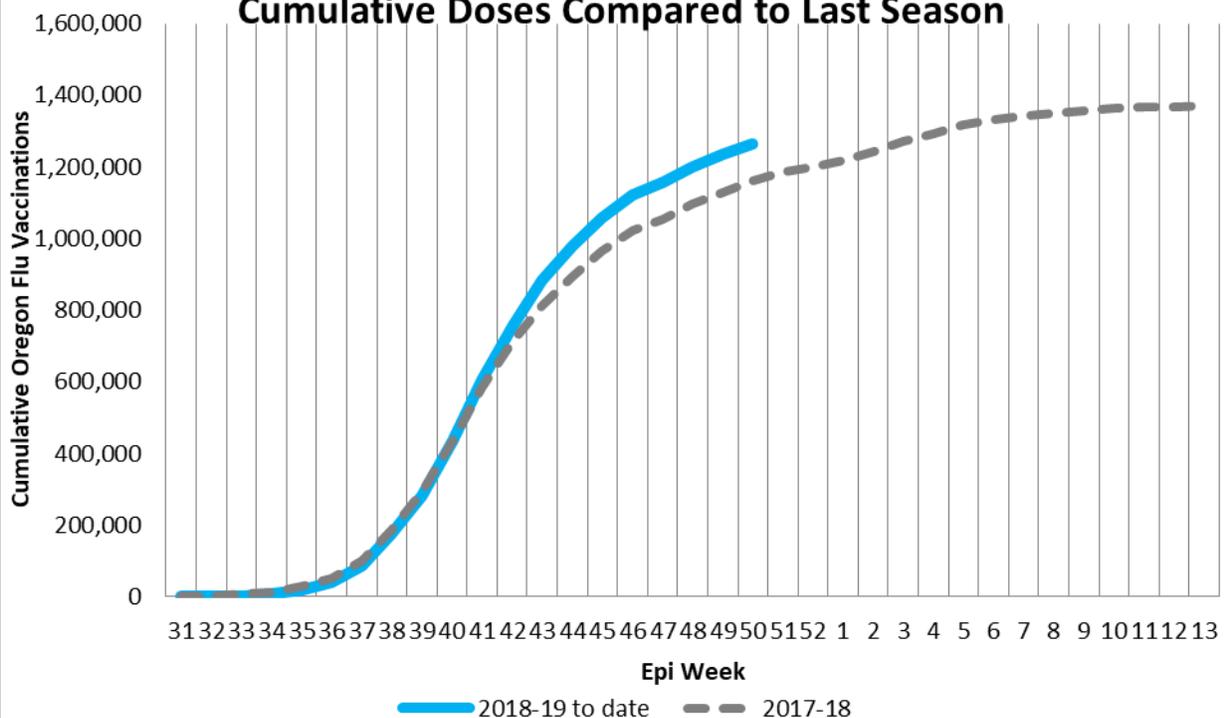
Influenza Outbreaks: Two influenza outbreaks were reported during Week 50. There have been three total influenza outbreaks reported to the Oregon Health Authority in the 2018-2019 flu season.

Vaccination Data: This week's reporting is based on ALERT IIS data through Epiweek 50 (December 15th). As of this date, the ALERT IIS has received 1.27 million immunization reports of seasonal influenza immunizations for Oregon residents. From Thanksgiving onward, weekly immunization totals in Oregon continue to closely match last season's totals. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.

2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



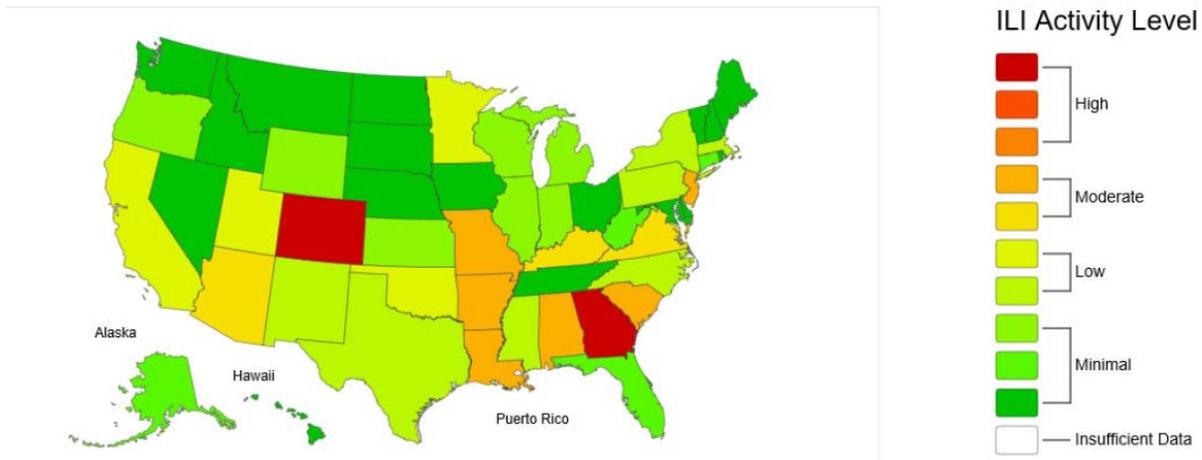
2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



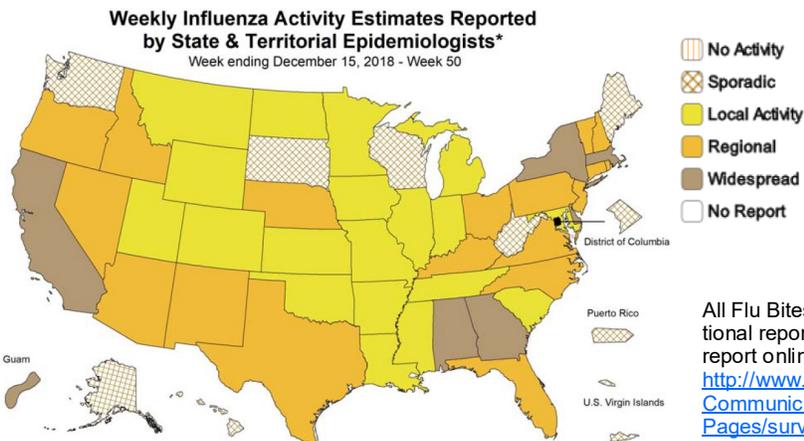
US Data (from CDC FluView): Influenza activity in the United States is increasing. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending December 15, 2018:

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses are predominating in most areas of the country. However, in the most recent three weeks, influenza A(H3) viruses were most commonly reported in the southeastern United States (HHS Region 4). The percentage of respiratory specimens testing positive for influenza in clinical laboratories is increasing.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased to 2.7%, which is above the national baseline of 2.2%. Eight of 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** Two states experienced high ILI activity; New York City and nine states experienced moderate ILI activity; Puerto Rico and 11 states experienced low ILI activity; the District of Columbia and 28 states experienced minimal ILI activity.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Guam and six states was reported as widespread; 18 states reported regional activity; 19 states reported local activity; and the District of Columbia, Puerto Rico, the U.S. Virgin Islands and seven states reported sporadic activity.
- **Influenza-associated Hospitalizations:** A cumulative rate of 2.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among children younger than 5 years (7.7 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death was reported to CDC during week 50.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 50 ending Dec 15, 2018



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at:
<http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance December 2-December 8, 2018 (Week 49)

	Current Week (49)	Previous Week (48)
Percentage of emergency department visits for ILI ¹	1.4%	1.4%
Percentage positive influenza tests ²	8.4%	6.2%
Influenza-associated hospitalizations ³	3	3
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	2.3%	2.3%

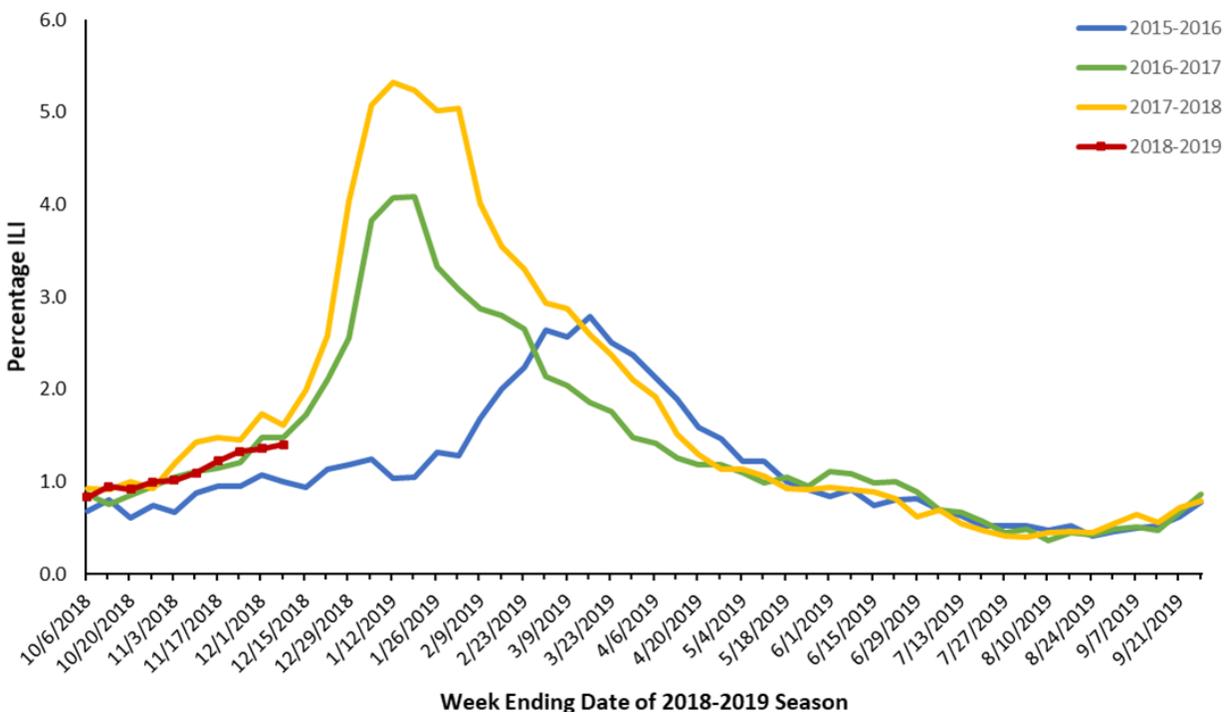
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.4% during week 49, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **8.4% of specimens tested at Oregon labs were positive for influenza during week 49**, and the bar chart displays the number of influenza -positive tests by flu type and percent positivity.

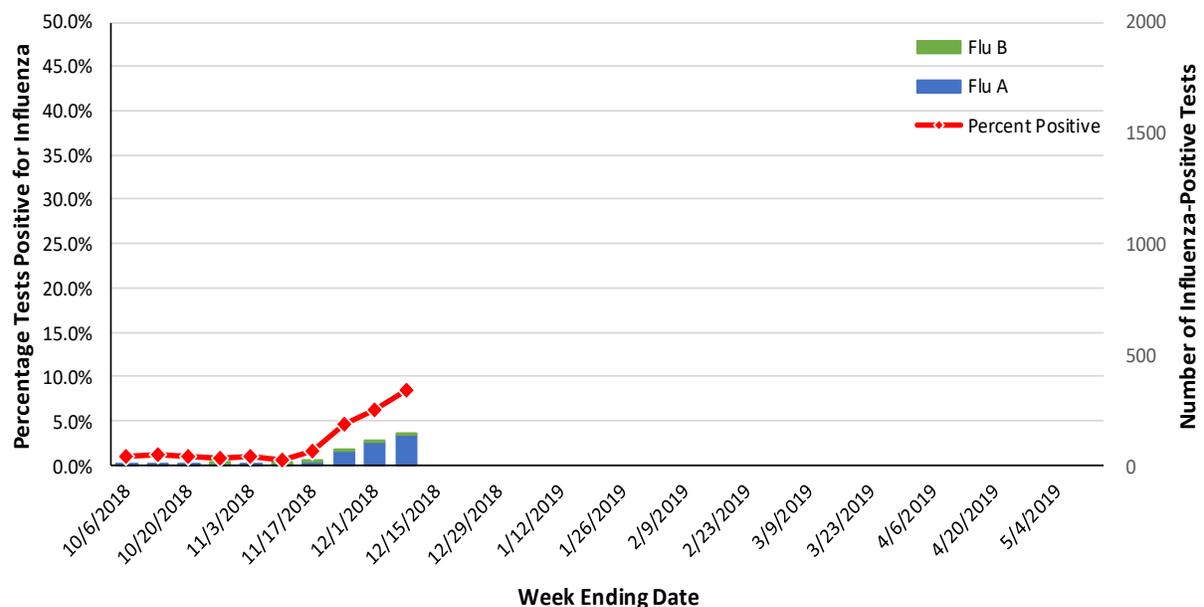
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

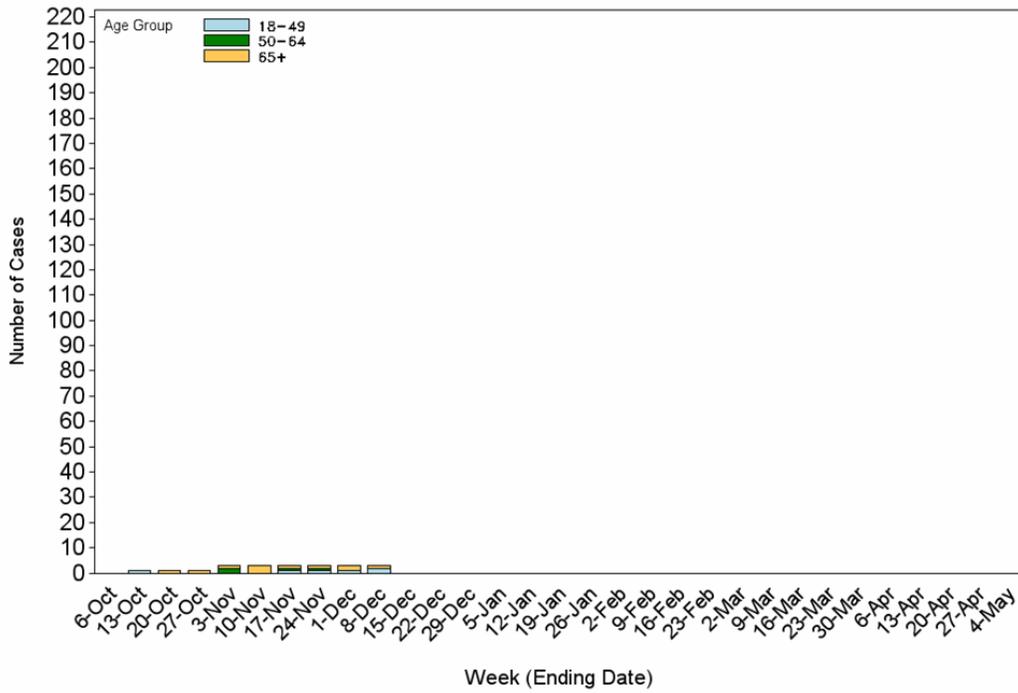
	Current Week	Cumulative
No. of specimens tested	1,698	10,151
No. of positive specimens (%)	142 (8.4%)	382 (3.2%)
<i>Positive specimens by type</i>		
Influenza A	137 (96.5%)	367 (96.1%)
Influenza B	5 (3.5%)	15 (3.9%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



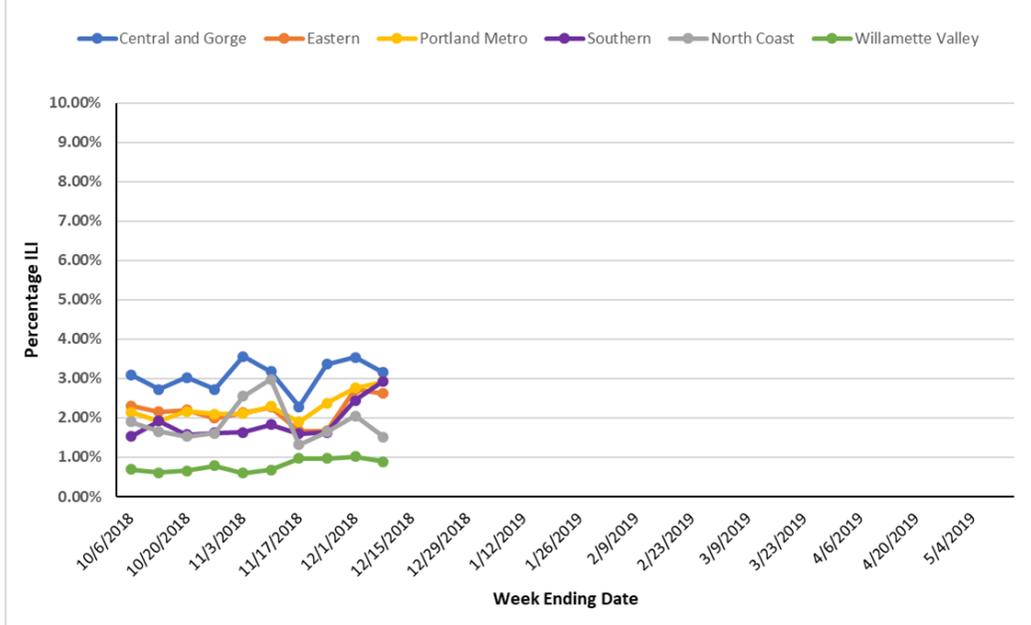
Hospitalizations: In Clackamas, Multnomah, and Washington counties three influenza-associated hospitalizations were reported during week 49 of 2018. To date, all 21 cases have been positive for flu A (100%). Of the ten that have been subtyped, seven (70.0%) are 2009 H1N1 and three (30.0%) are H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 49 of 2018 was 2.5%. Regionally, the percent was highest in the Central and Gorge area (3.2%) and lowest in the Willamette Valley (0.9%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



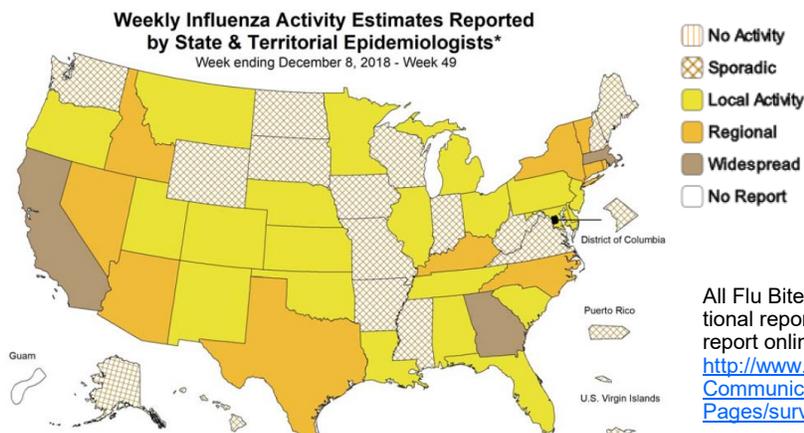
Influenza Outbreaks: No influenza outbreaks were reported during Week 49. There has been one prior influenza outbreak reported to the Oregon Health Authority in the 2018–2019 flu season.

- US Data (from CDC FluView):** Influenza activity in the United States remained slightly elevated. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A (H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018. Below is a summary of the key influenza indicators for the week ending December 8, 2018:
- o **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of October. The percentage of respiratory specimens testing positive for influenza in clinical laboratories remains low.
 - o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
 - o **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
 - o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained at 2.2%, which is at the national baseline of 2.2%. Five of 10 regions reported ILI at or above their region-specific baseline level.
 - o **ILI State Activity Indicator Map:** One state experienced high ILI activity; Puerto Rico and four states experienced moderate ILI activity; New York City, the District of Columbia and nine states experienced low ILI activity; and 36 states experienced minimal ILI activity.
 - o **Geographic Spread of Influenza:** The geographic spread of influenza in three states was reported as widespread; 10 states reported regional activity; 21 states reported local activity; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 16 states reported sporadic activity; and Guam did not report.
 - o **Influenza-associated Hospitalizations:** A cumulative rate of 1.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.
 - o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
 - o **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death was reported to CDC for week 49.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 49 ending Dec 08, 2018**



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance November 25-December 1, 2018 (Week 48)

	Current Week (48)	Previous Week (47)
Percentage of emergency department visits for ILI ¹	1.4%	1.3%
Percentage positive influenza tests ²	6.2%	4.6%
Influenza-associated hospitalizations ³	5	3
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	2.3%	2.5%

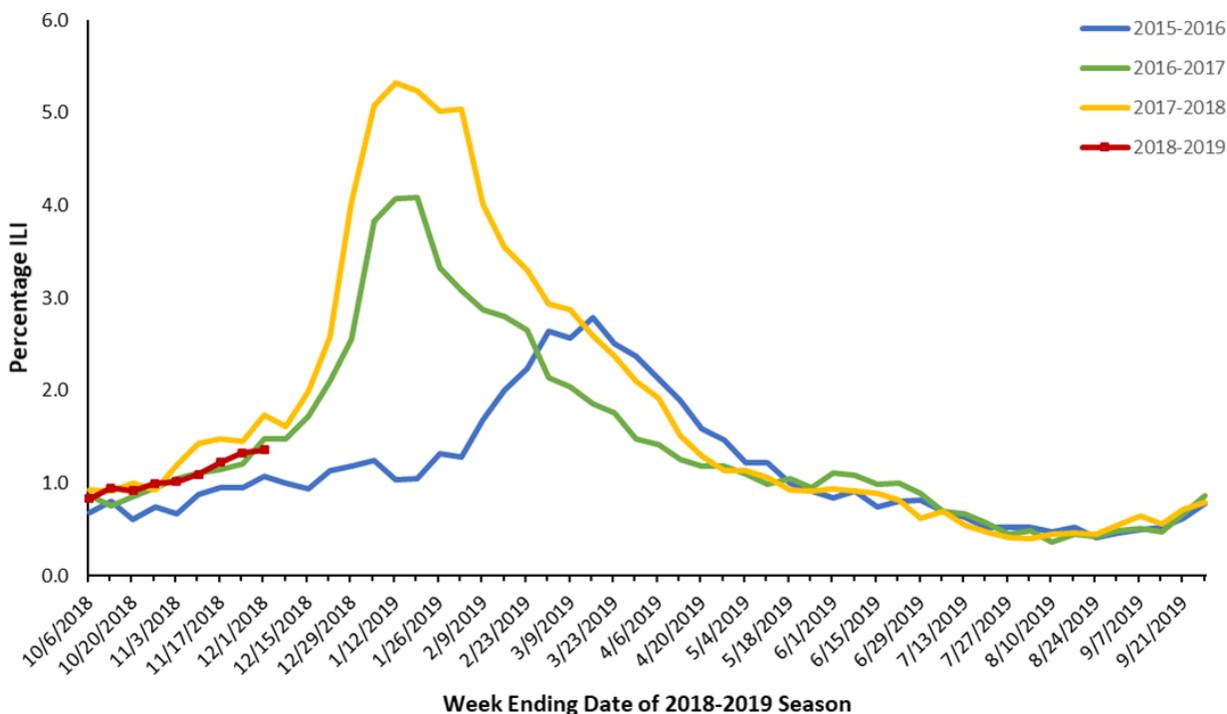
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.4% during week 48, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

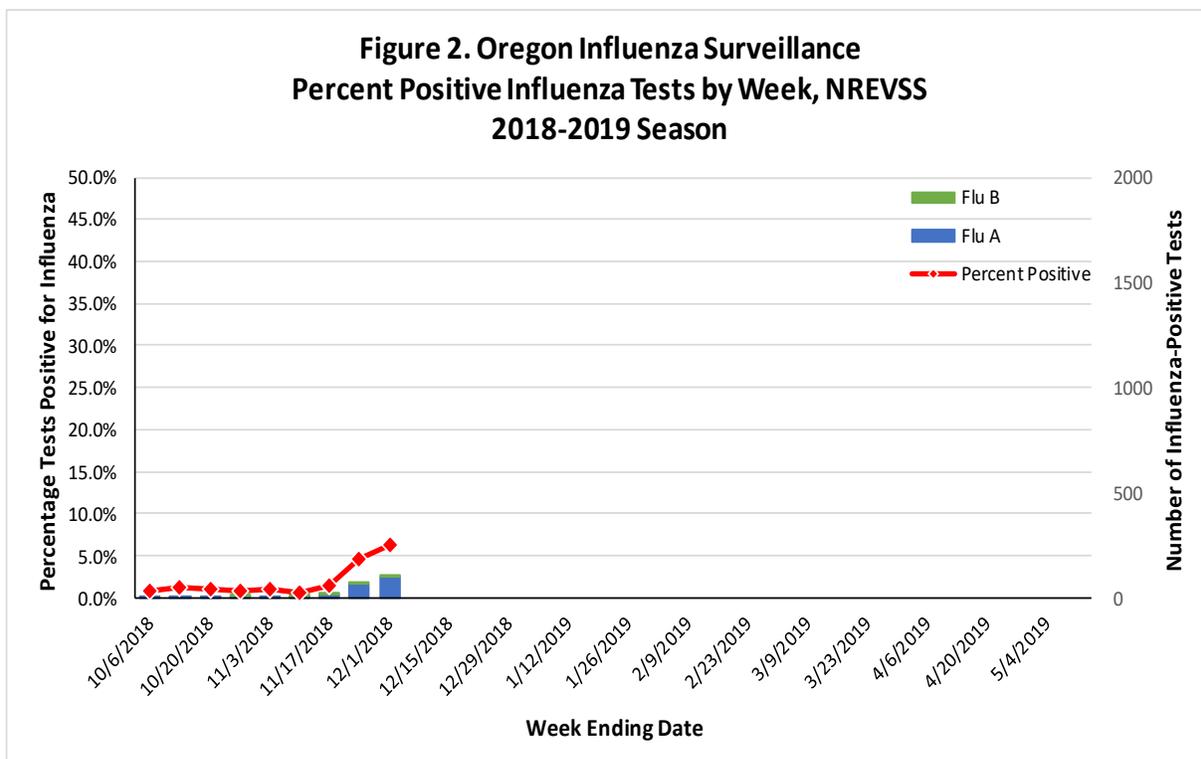
Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **6.2% of specimens tested at Oregon labs were positive for influenza during week 48**, and the bar chart displays the number of influenza -positive tests by flu type and percent positivity. **Of note, there were marked regional differences in percent positivity, with 15.9% of specimens in the Southern region positive for flu as compared to 1.8% across the rest of the state.**

Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

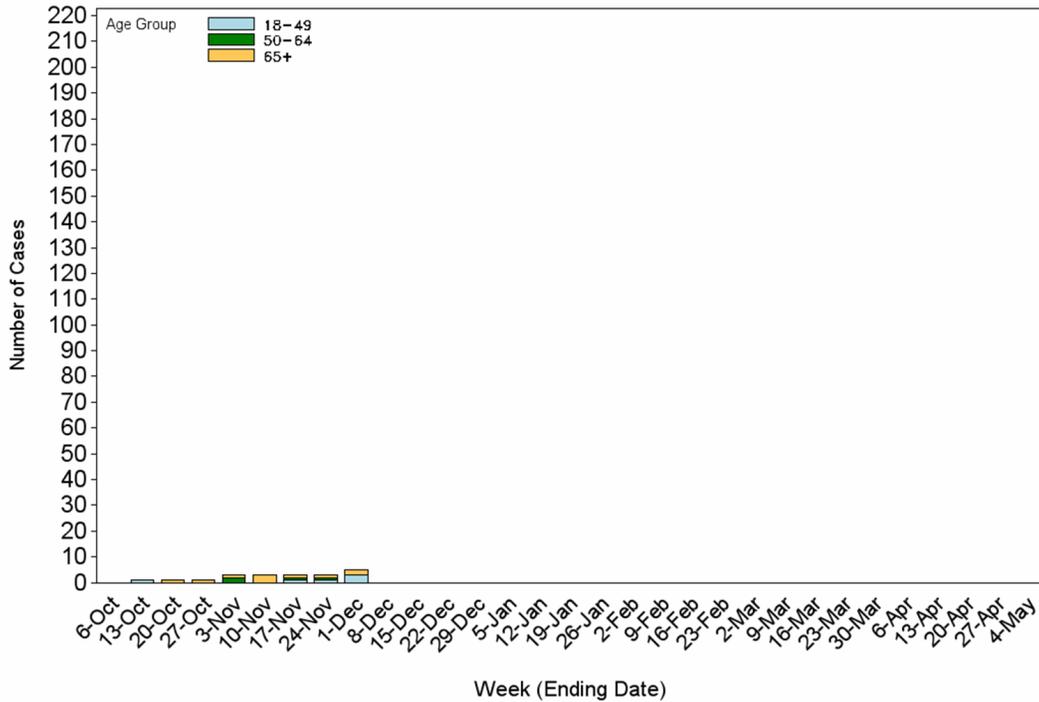
Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

	Current Week	Cumulative
No. of specimens tested	1,666	10,151
No. of positive specimens (%)	103 (6.2%)	240 (2.4%)
<i>Positive specimens by type</i>		
Influenza A	101 (98.1%)	230 (95.8%)
Influenza B	2 (1.9%)	10 (4.2%)
Type Unavailable	0 (0%)	0 (0%)



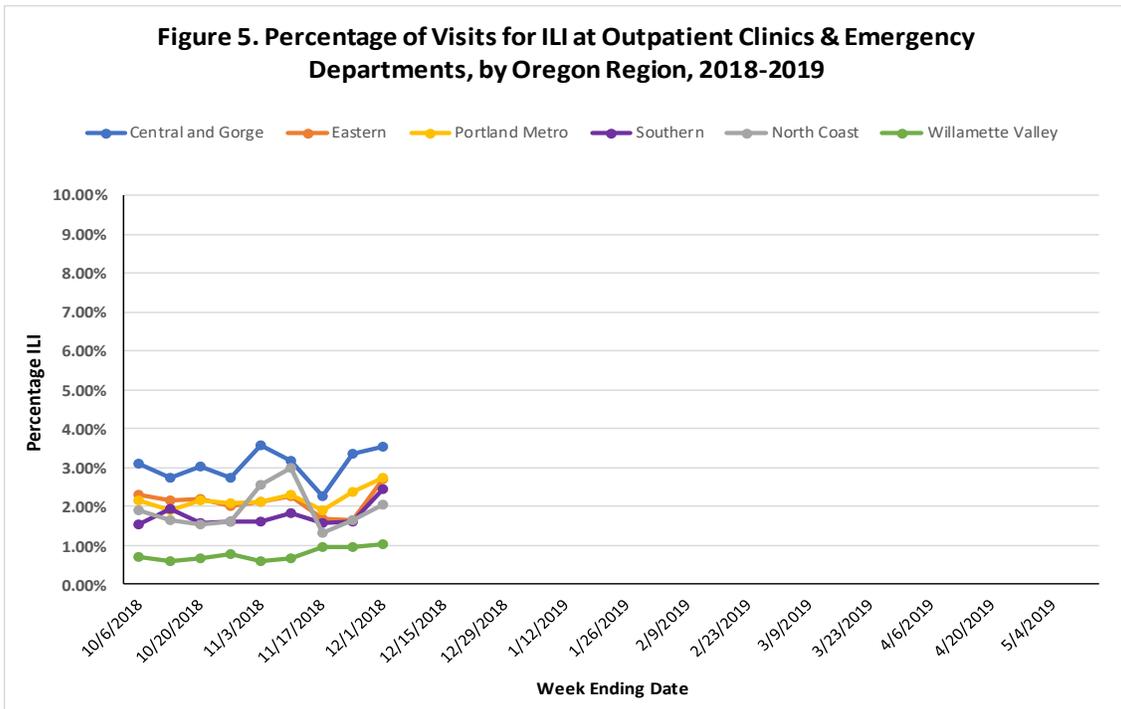
Hospitalizations: In Clackamas, Multnomah, and Washington counties five influenza-associated hospitalizations were reported during week 48 of 2018. To date, all 20 cases have been positive for flu A (100%). Of the ten that have been subtyped, seven (70.0%) are 2009 H1N1 and three (30.0%) are H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



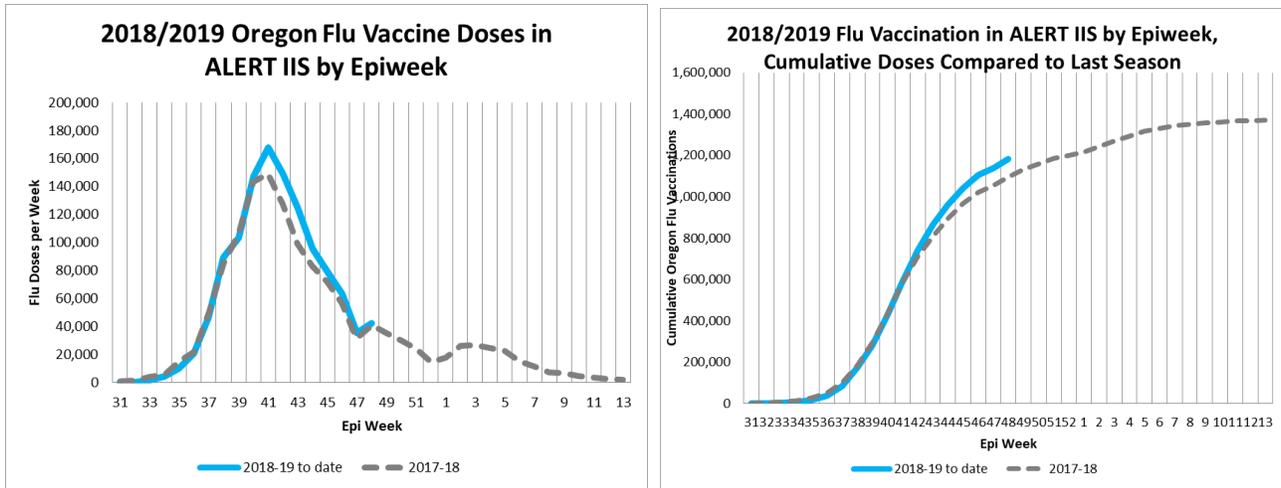
Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 48 of 2018 was 2.4%. Regionally, the percent was highest in the Central and Gorge area (3.5%) and lowest in the Willamette Valley (1.0%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

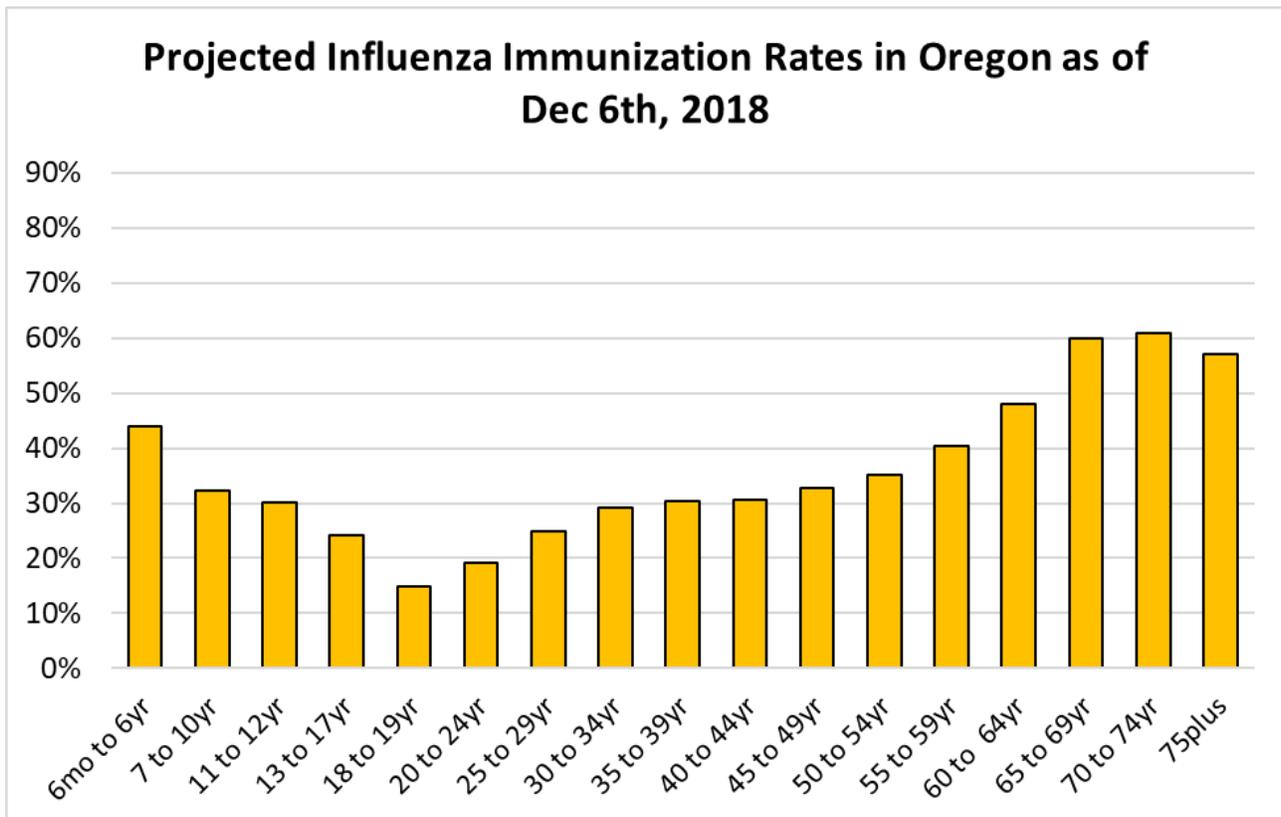


Influenza Outbreaks: There has been one influenza outbreak reported to the Oregon Health Authority in the 2018–2019 flu season.

Vaccination Data: This week's reporting is based on ALERT IIS data through Epiweek 48 (December 1st). As of this date, the ALERT IIS has received 1.2 million immunization reports of seasonal influenza immunizations for Oregon residents. Current influenza immunization seeking is closely matching last season's pattern at this time. Overall influenza immunization totals are running slightly above those seen last season. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.



For this week, the Oregon Immunization Program is providing a preliminary estimate of influenza immunization estimates by age groups. These are preliminary rate estimates as of December 6, 2018. Rates presented here are likely to increase, particularly for children and seniors, as the season advances.

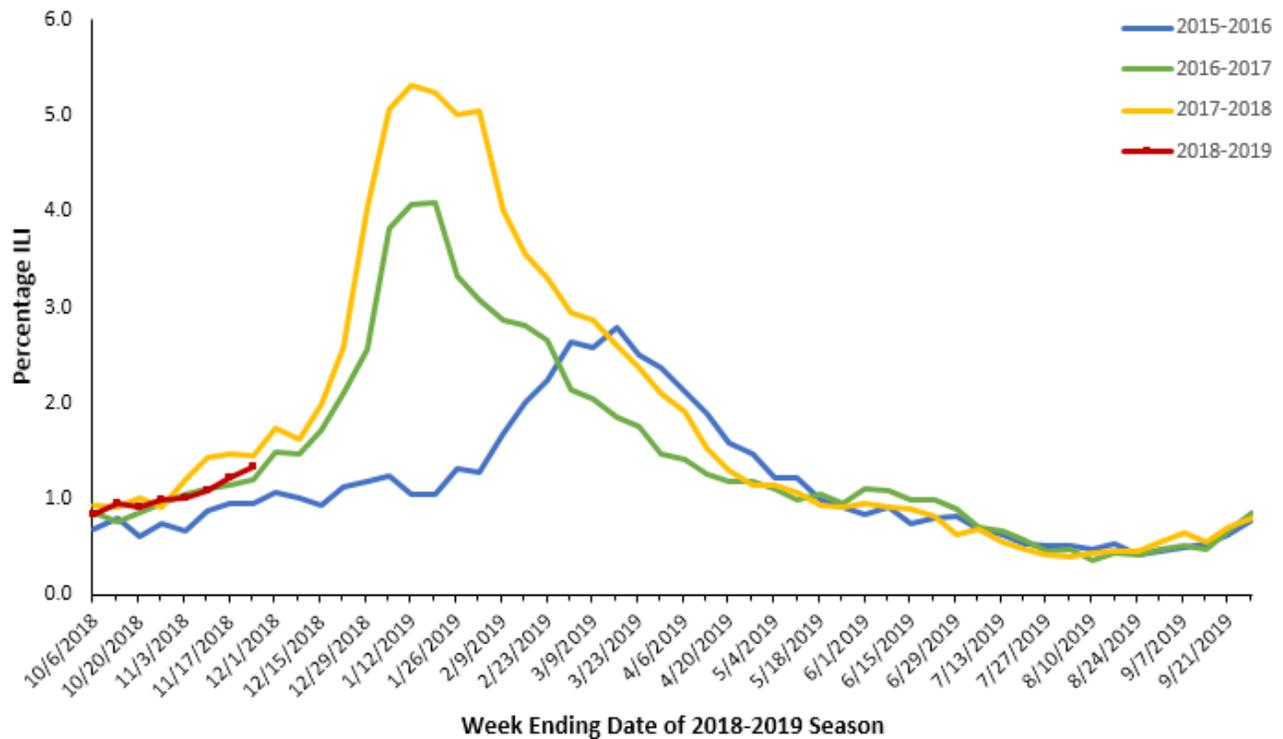


Data at a Glance November 18-24, 2018 (Week 47)

	Current Week (47)	Previous Week (46)
Percentage of emergency department visits for ILI ¹	1.3%	1.2%
Percentage positive influenza tests ²	4.6%	1.5%
Influenza-associated hospitalizations ³	3	3
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	2.5%	1.6%

¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.
²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)
³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.
⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.3% during week 47, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **4.6% of specimens tested at Oregon labs were positive for influenza during week 47**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

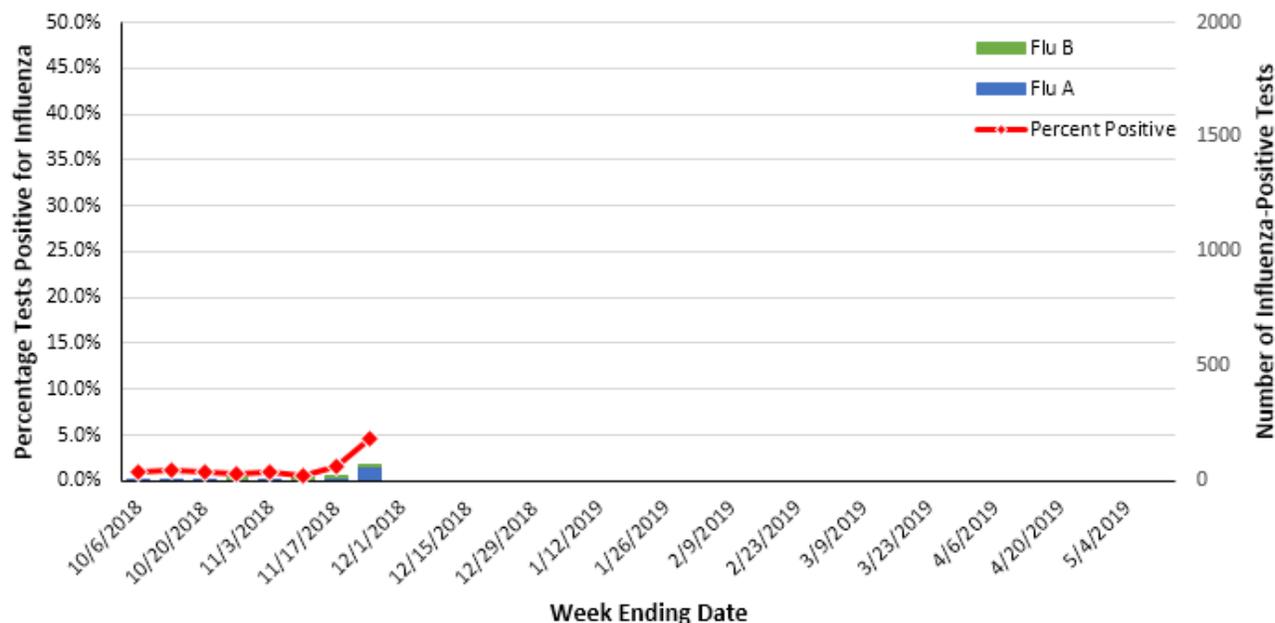
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

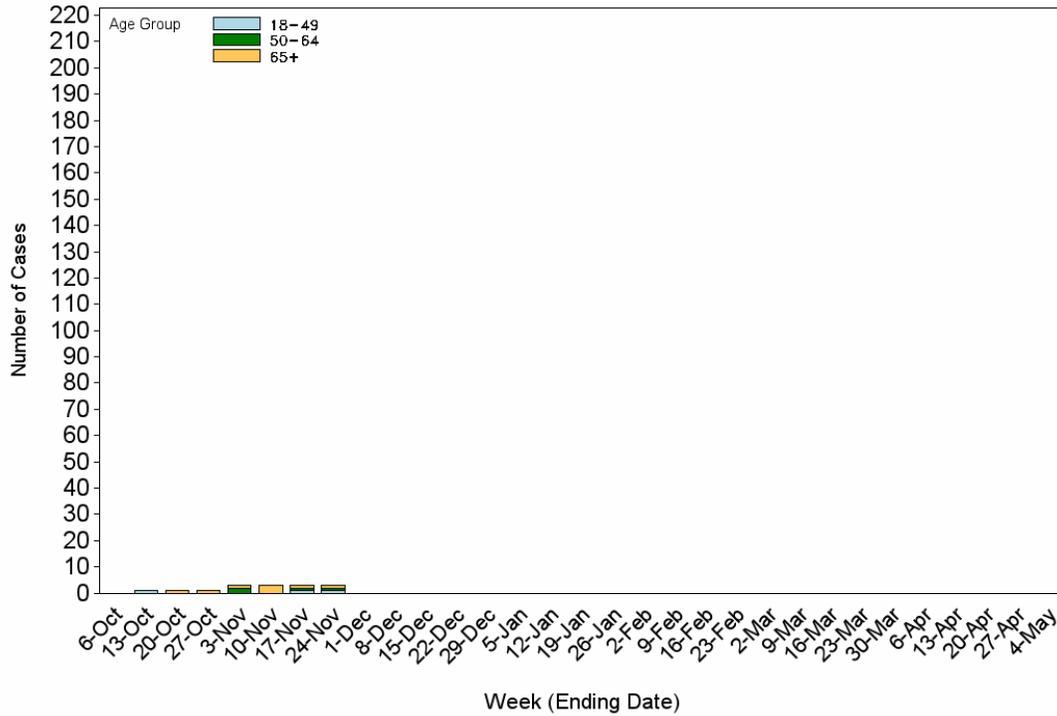
	Current Week	Cumulative
No. of specimens tested	1,413	8,485
No. of positive specimens (%)	65 (4.6%)	137 (1.6%)
<i>Positive specimens by type</i>		
Influenza A	62 (95.4%)	129 (94.2%)
Influenza B	3 (4.6%)	8 (5.8%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



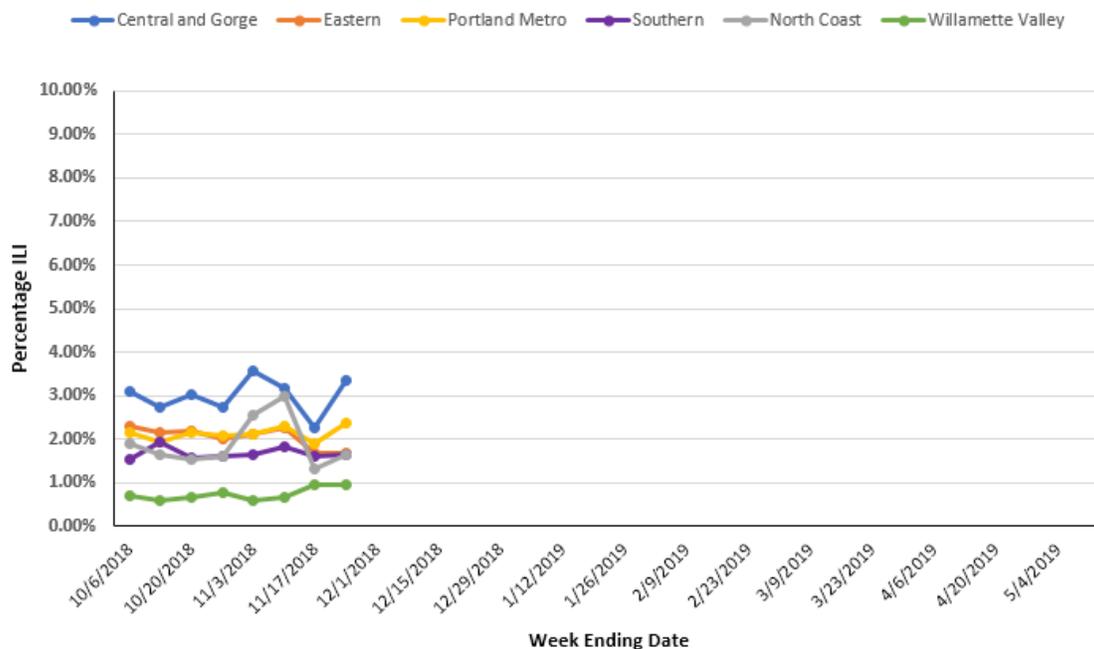
Hospitalizations: In Clackamas, Multnomah, and Washington counties three influenza-associated hospitalizations were reported during week 47 of 2018. To date, all 15 cases have been positive for flu A (100%). Of the eight that have been subtyped, 5 (62.5%) are 2009 H1N1 and 3 (37.5%) are H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 47 of 2018 was 2.0%. Regionally, the percent was highest in the Central and Gorge area (3.4%) and lowest in the Willamette Valley (1.0%).

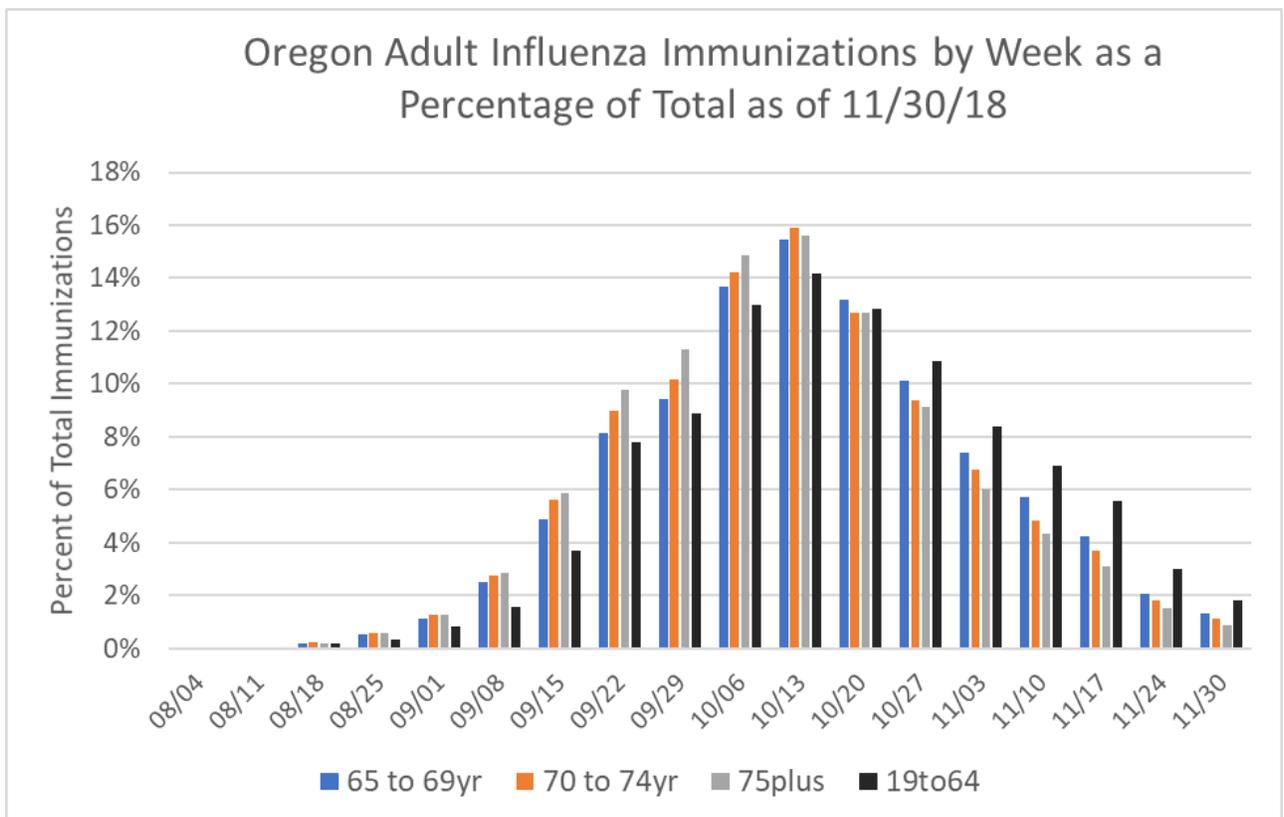
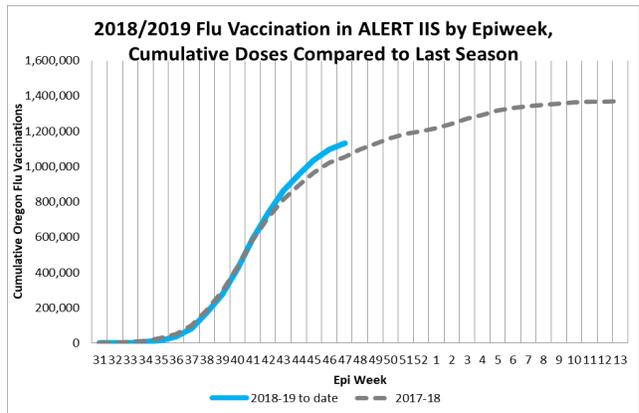
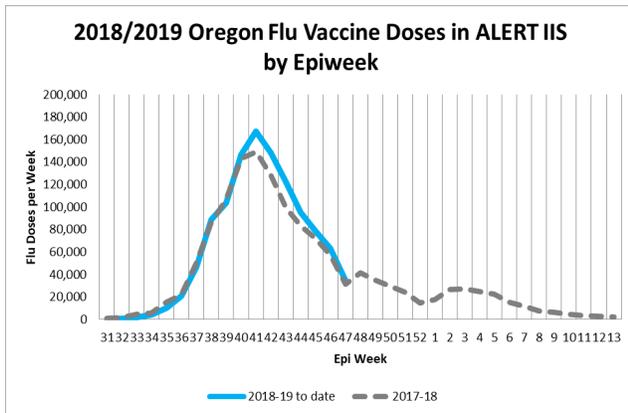
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Influenza Outbreaks: There has been one influenza outbreak reported to the Oregon Health Authority in the 2018–2019 flu season.

Vaccination Data: This week's reporting is based on ALERT IIS data through Epiweek 47 (November 24th). As of this date, the ALERT IIS has received over 1.1 million immunization reports of seasonal influenza immunizations for Oregon residents. Influenza immunization totals are trending slightly above last season. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.

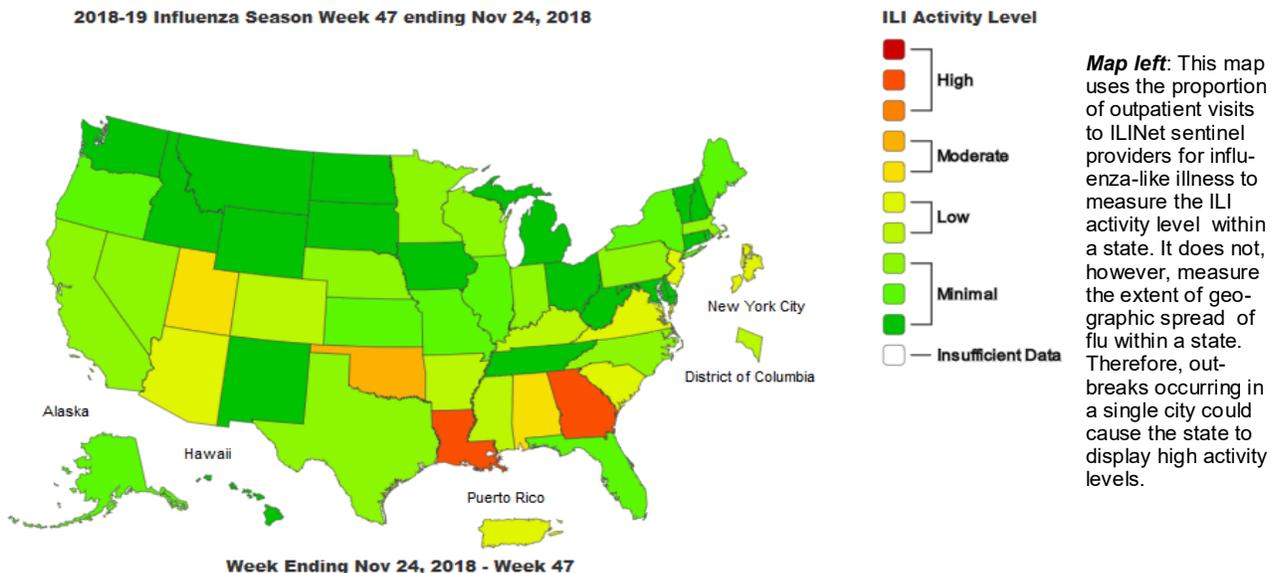
A topic of concern for influenza immunization is whether there is a disadvantage to immunizing seniors and vulnerable populations early in the season, rather than waiting until late October or November. It is possible that some degree of protection from vaccination may drop or 'wane' as time passes. However immunizing seniors at the start of the season also provides protection against the possibility of having an early influenza season. For this week, we are presenting a chart of senior influenza immunization by week for the 2018-19 season to date. In comparison to non-senior adults, seniors by this data tend to receive earlier influenza immunizations.



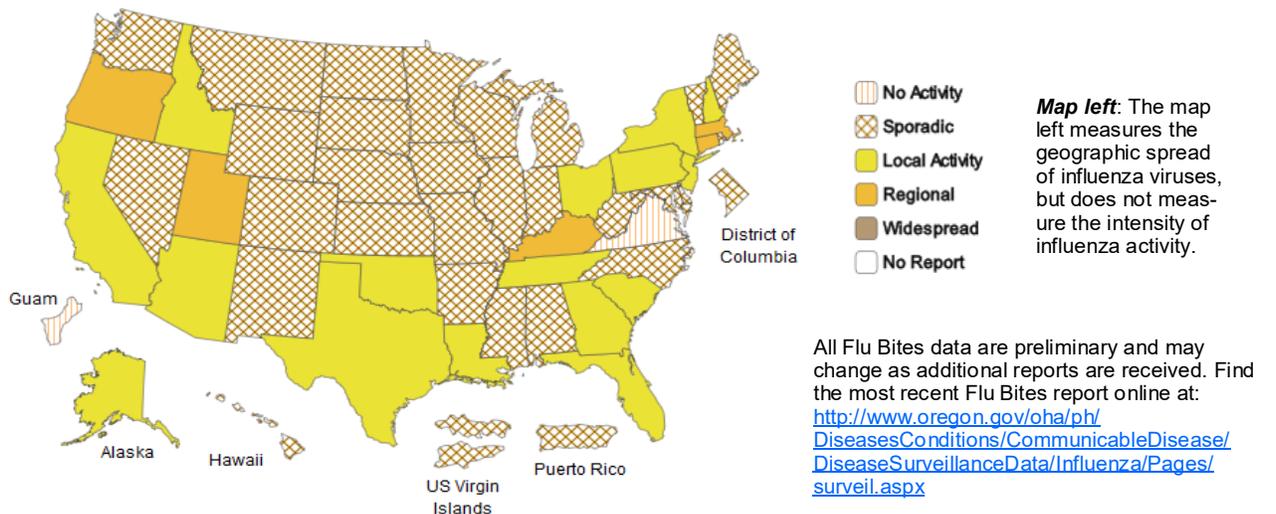
US Data (from CDC FluView): Influenza activity in the United States remains low, although small increases in activity were reported. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018. Below is a summary of the key influenza indicators for the week ending November 17, 2018:

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained at 1.9%, which is below the national baseline of 2.2%. Two of 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** Three states experienced moderate ILI activity, New York City and eight states experienced low ILI activity; the District of Columbia and 39 states experienced minimal ILI activity; and Puerto Rico had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in one state was reported as regional; Guam and 14 states reported local activity; and the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 35 states reported sporadic activity.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death was reported to CDC for week 46.

2018-19 Influenza Season Week 47 ending Nov 24, 2018



Week Ending Nov 24, 2018 - Week 47



All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance November 11-17, 2018 (Week 46)

	Current Week (46)	Previous Week (45)
Percentage of emergency department visits for ILI ¹	1.2%	1.1%
Percentage positive influenza tests ²	1.5%	0.5%
Influenza-associated hospitalizations ³	3	3
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	1.6%	1.0%

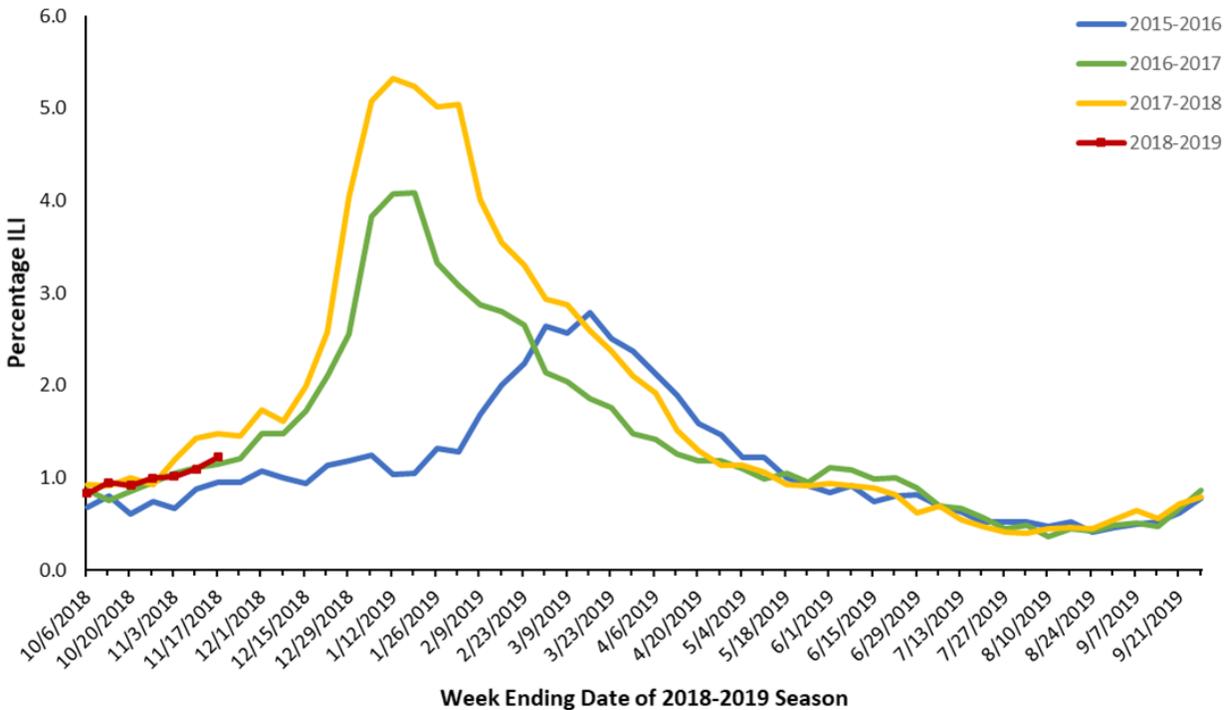
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.2% during week 46, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

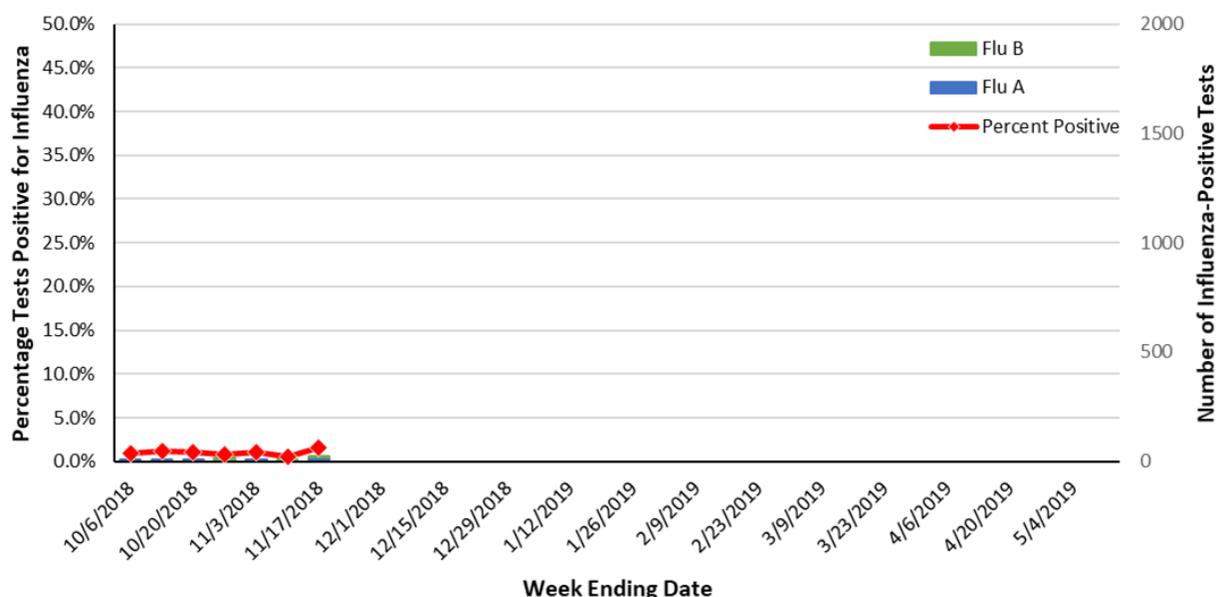
Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **1.5% of specimens tested at Oregon labs were positive for influenza during week 46**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include: Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

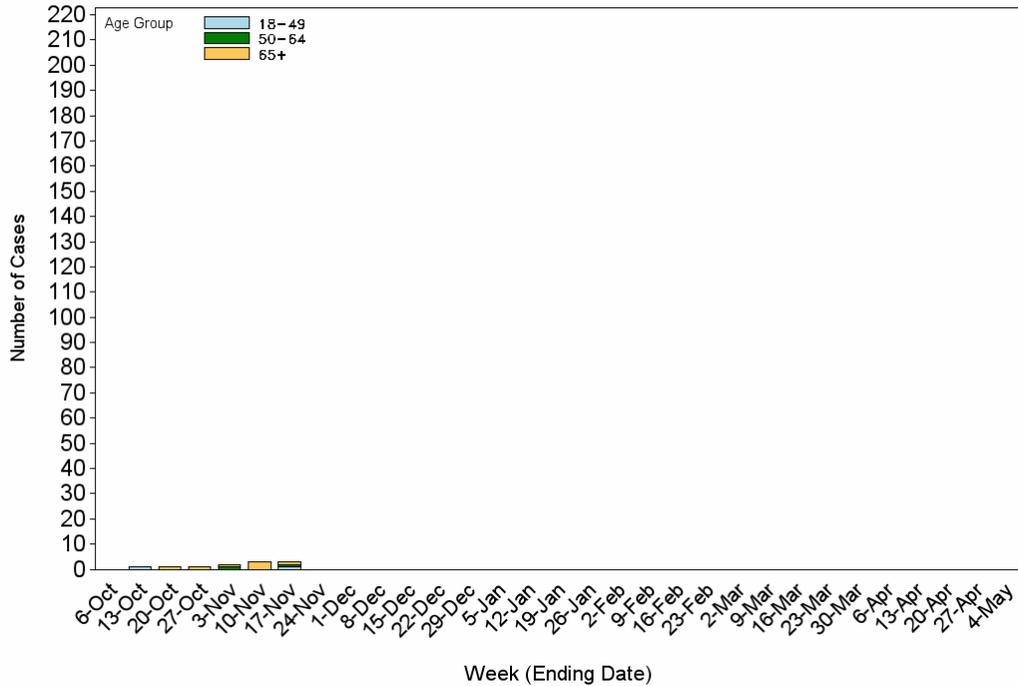
	Current Week	Cumulative
No. of specimens tested	1,306	7,072
No. of positive specimens (%)	20 (1.5%)	72 (1.0%)
<i>Positive specimens by type</i>		
Influenza A	17 (85.0%)	67 (93.1%)
Influenza B	3 (15.0%)	5 (6.9%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



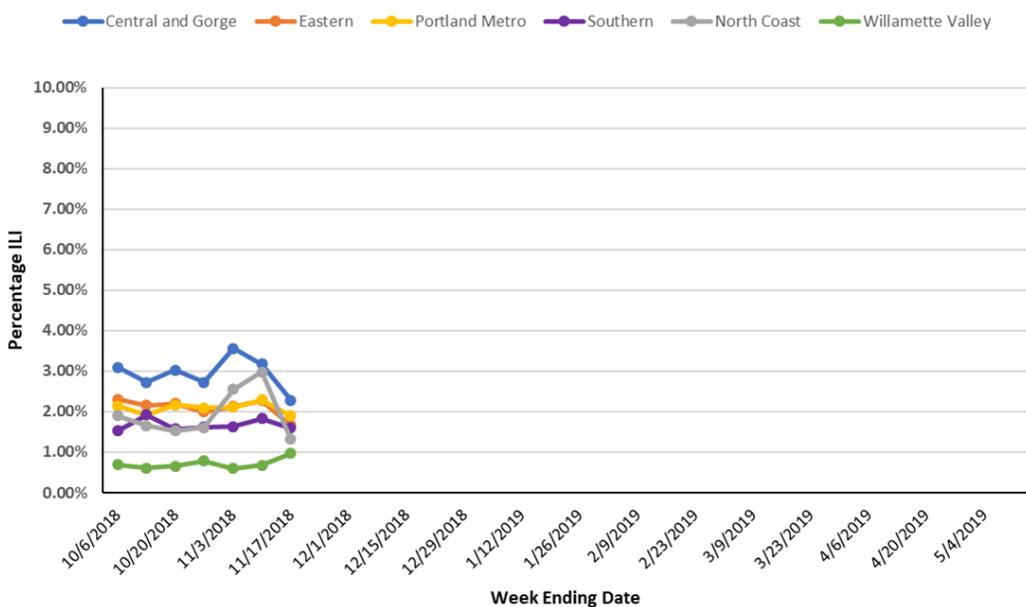
Hospitalizations: In Clackamas, Multnomah, and Washington counties three influenza-associated hospitalizations were reported during week 46 of 2018. To date, all 11 cases have been positive for flu A (100%). Of the three that have been subtyped, one is 2009 H1N1 and two are H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI across the state during week 46 of 2018 was 1.7%. Regionally, the percent was highest in the Central and Gorge area (2.3%) and lowest in the Willamette Valley (1.0%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

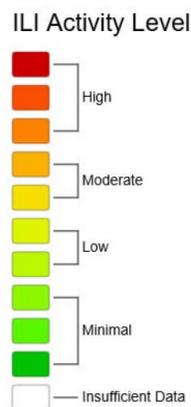
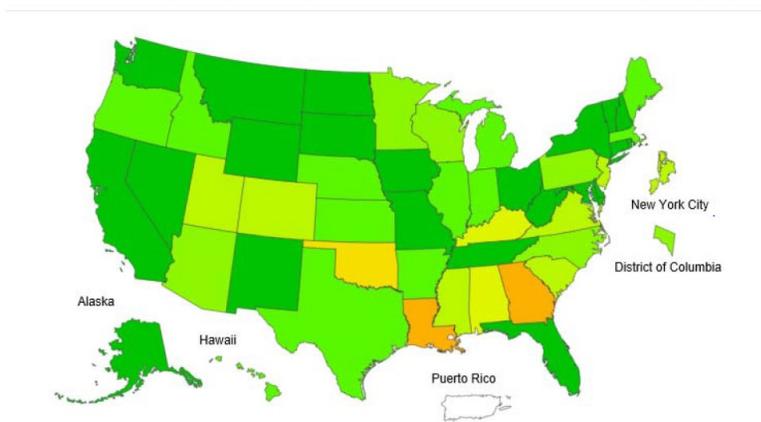


Influenza Outbreaks: There has been one influenza outbreak reported to the Oregon Health Authority in the 2018–2019 flu season.

US Data (from CDC FluView): Influenza activity in the United States remains low, although small increases in activity were reported. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018. Below is a summary of the key influenza indicators for the week ending November 17, 2018:

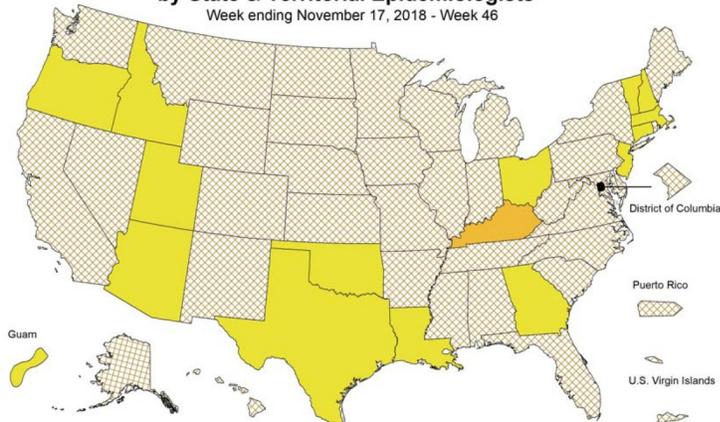
- o **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained at 1.9%, which is below the national baseline of 2.2%. Two of 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** Three states experienced moderate ILI activity, New York City and eight states experienced low ILI activity; the District of Columbia and 39 states experienced minimal ILI activity; and Puerto Rico had insufficient data.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in one state was reported as regional; Guam and 14 states reported local activity; and the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 35 states reported sporadic activity.
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death was reported to CDC for week 46.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 46 ending Nov 17, 2018



Map left: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
 Week ending November 17, 2018 - Week 46



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

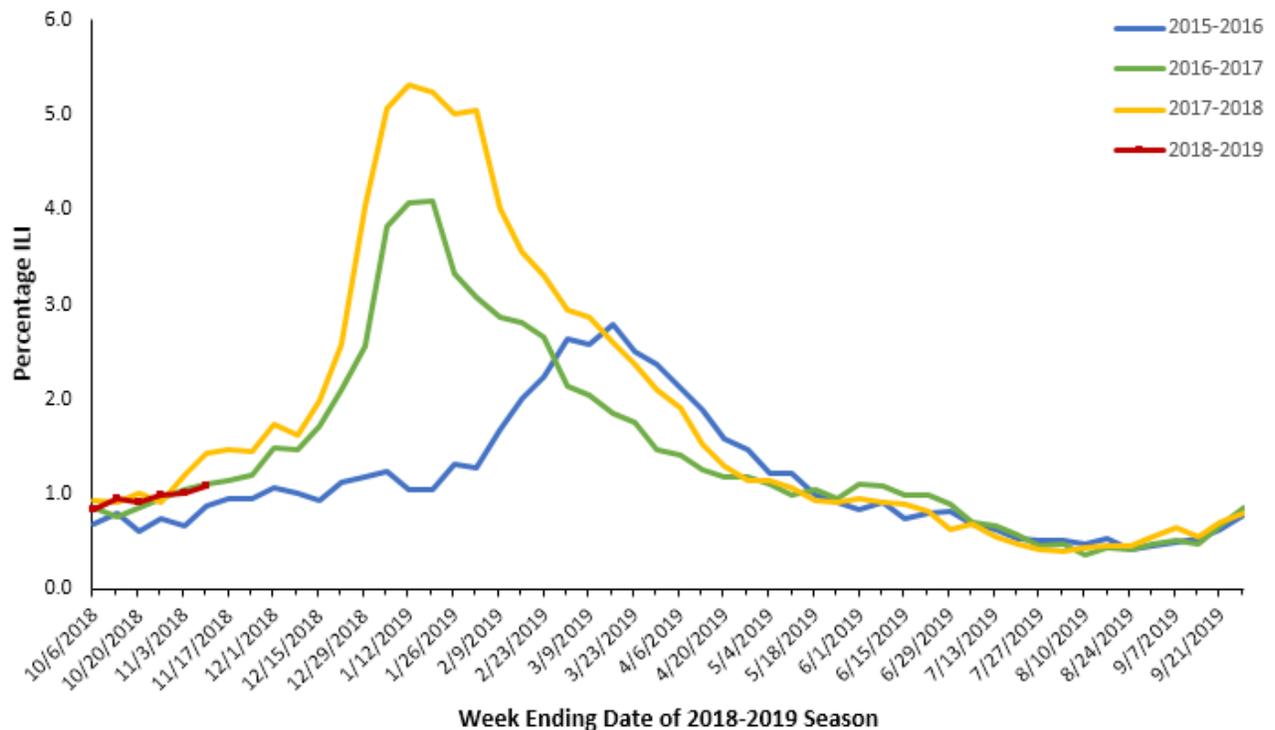
All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance November 4-10, 2018 (Week 45)

	Current Week (45)	Previous Week (44)
Percentage of emergency department visits for ILI ¹	1.1%	1.0%
Percentage positive influenza tests ²	0.5%	1.0%
Influenza-associated hospitalizations ³	3	2
Reported ILI/influenza outbreaks	0	1
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	1.0%	0.9%

¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.
²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVVSS)
³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.
⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.1% during week 45, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **0.5% of specimens tested at Oregon labs were positive for influenza during week 45**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

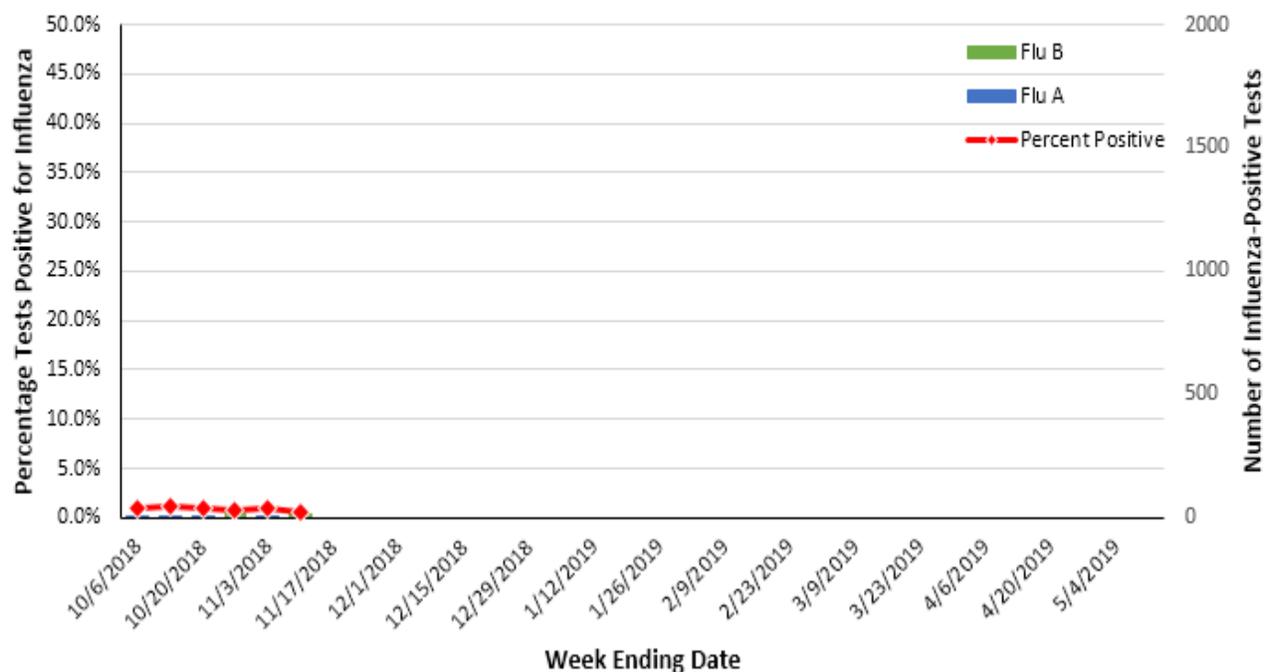
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

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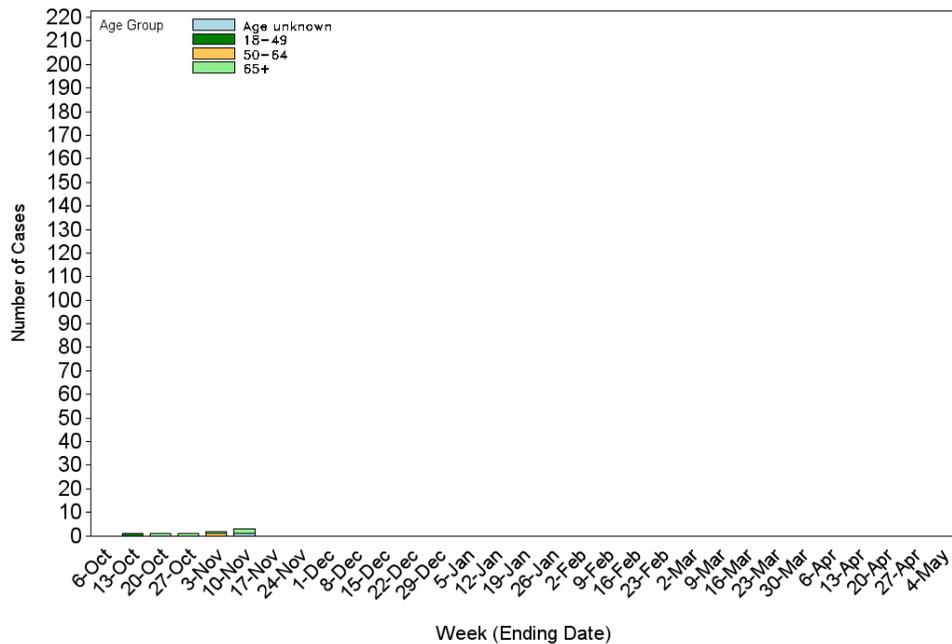
	Current Week	Cumulative
No. of specimens tested	1,118	5,766
No. of positive specimens (%)	6 (0.5%)	52 (0.9%)
<i>Positive specimens by type</i>		
Influenza A	5 (83.3%)	50 (96.2%)
Influenza B	1 (16.7%)	2 (3.9%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



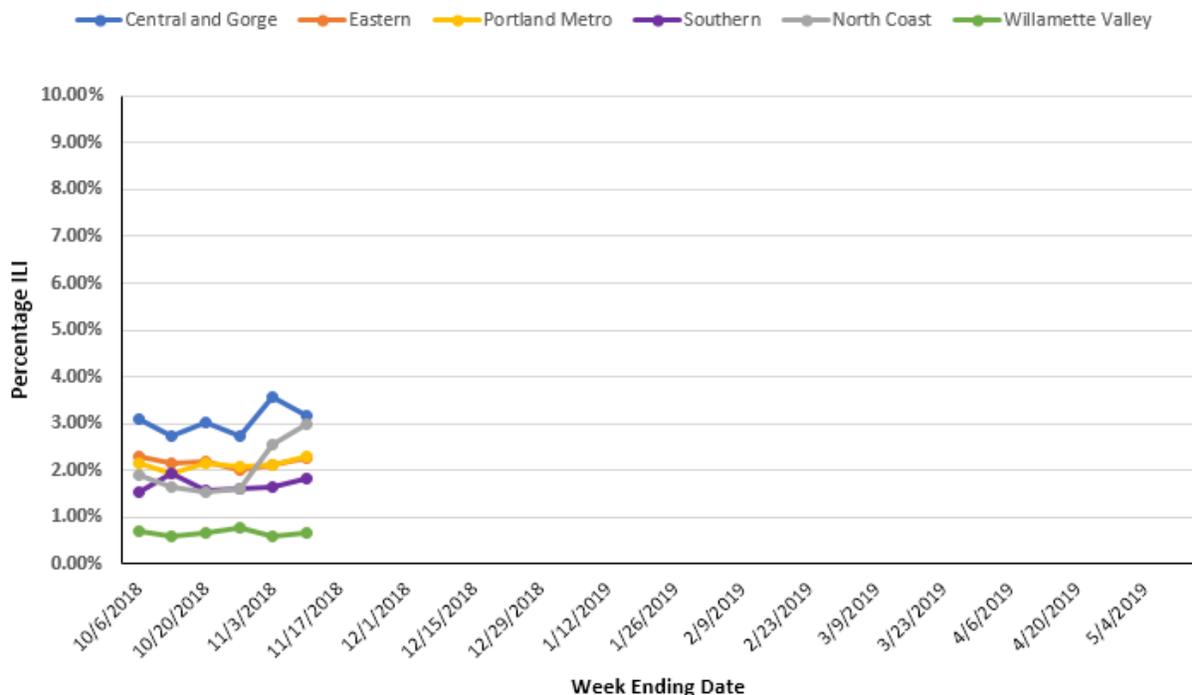
Hospitalizations: In Clackamas, Multnomah, and Washington counties 3 influenza-associated hospitalizations were reported during week 45 of 2018. To date, all 8 cases have been positive for flu A (100%). Of the two that have been subtyped, one is 2009 H1N1, and the second is H3.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 183 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI for week 45 of 2018 was highest in the Central and Gorge area (3.2%) and lowest in the Willamette Valley (0.7%).

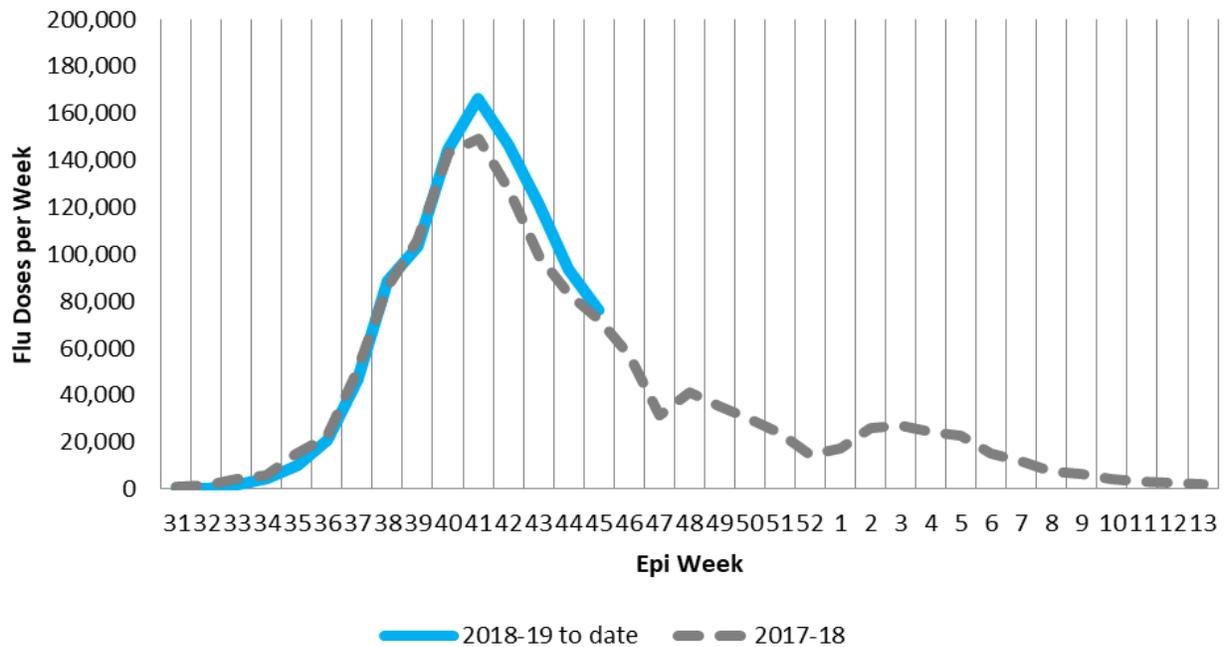
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



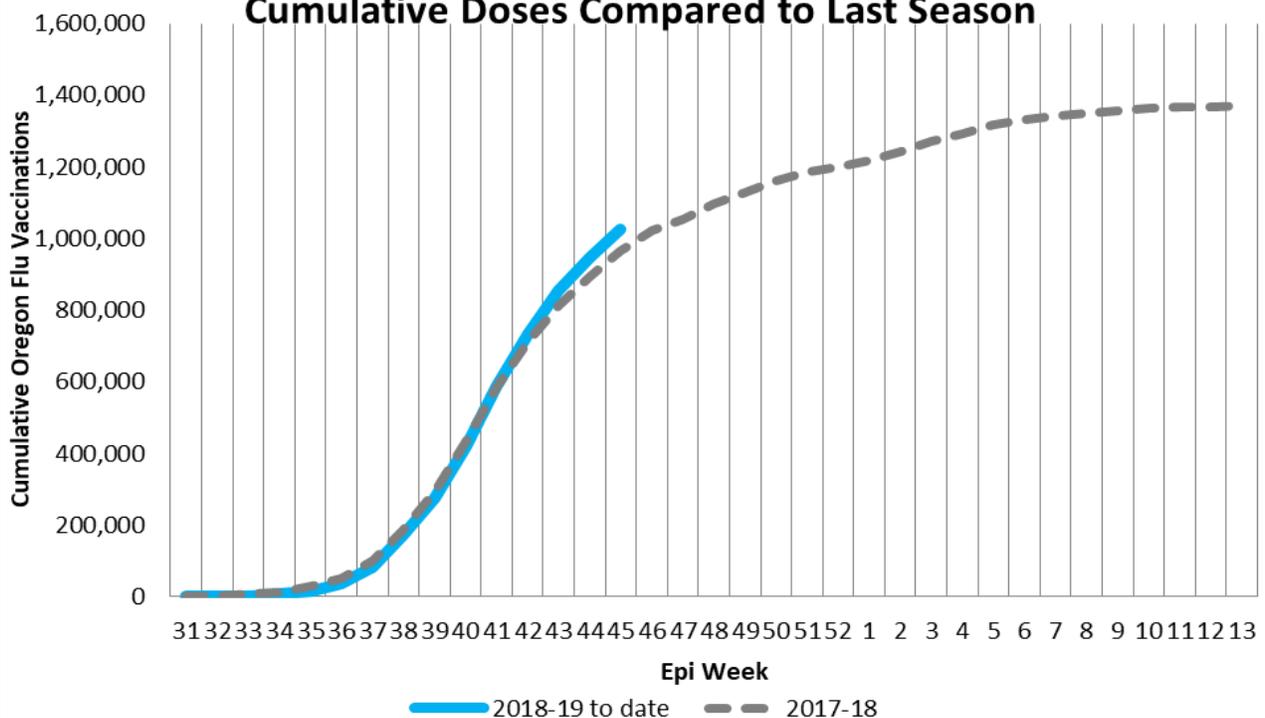
Influenza Outbreaks: There has been one influenza outbreak reported to the Oregon Health Authority in the 2018–2019 flu season.

Flu Immunization Update: This week's reporting is based on ALERT IIS data through Epiweek 45 (November 10th). As of this date, the ALERT IIS has received over one million immunization reports of seasonal influenza immunizations for Oregon residents. The pattern of weekly immunizations remains similar to that of last season. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.

2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



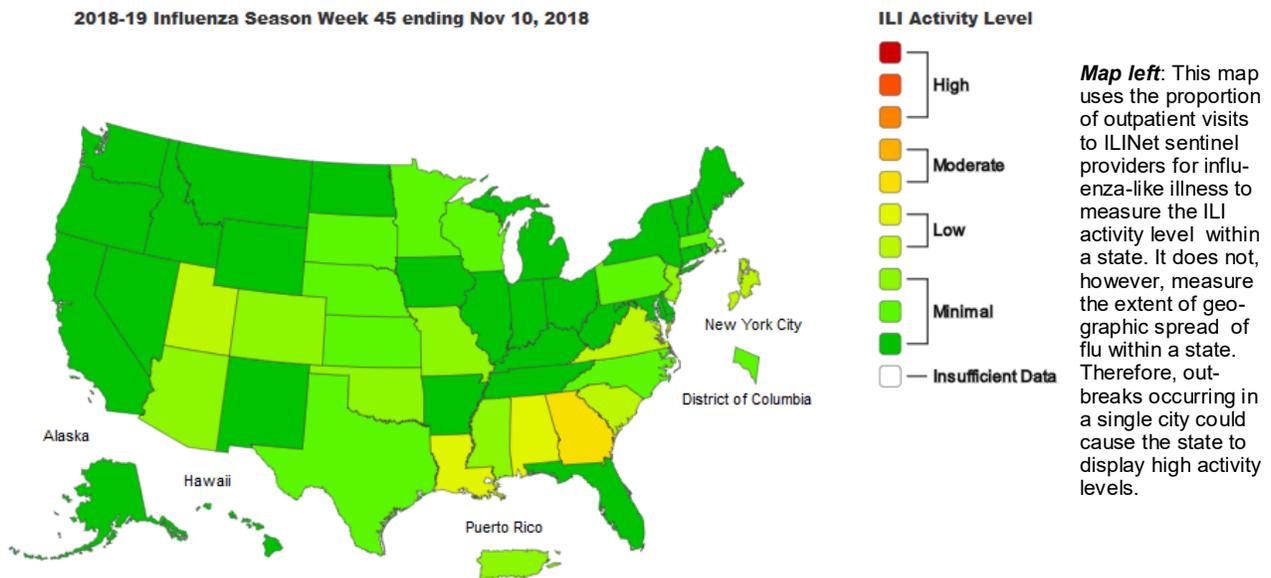
2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



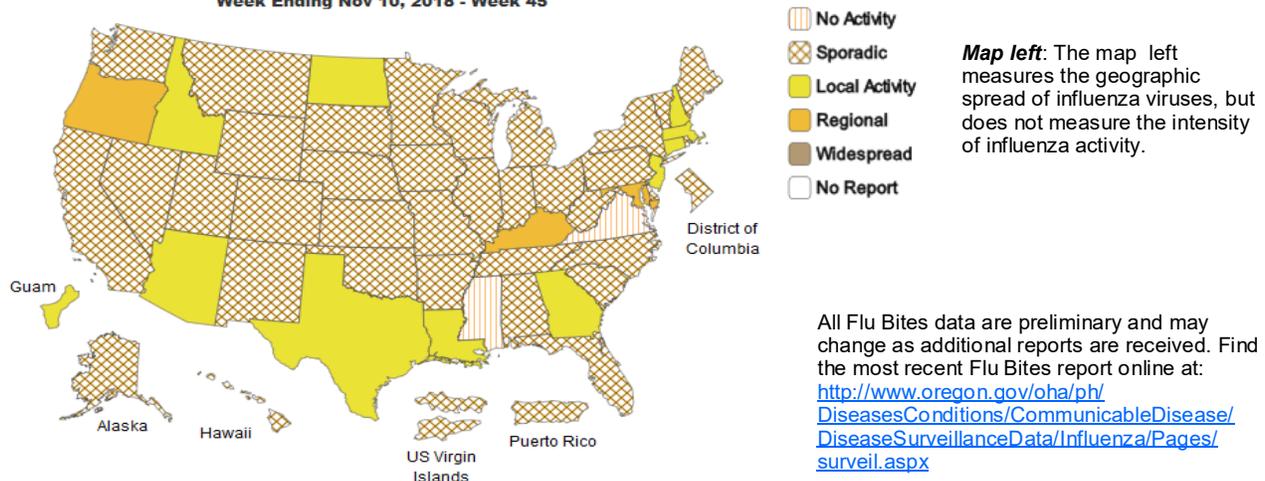
US Data (from CDC FluView): Influenza activity in the United States remains low, although small increases in activity were reported. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018. Below is a summary of the key influenza indicators for the week ending November 10, 2018:

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased slightly to 1.9%, which is below the national baseline of 2.2%. One of 10 regions reported ILI at or above their region-specific baseline level.
- **ILI State Activity Indicator Map:** One state experienced moderate ILI activity, New York City and five states experienced low ILI activity; and the District of Columbia, Puerto Rico and 44 states experienced minimal ILI activity.
- **Geographic Spread of Influenza:** The geographic spread of influenza in three states was reported as regional; Guam and 10 states reported local activity; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 35 states reported sporadic activity; and two states reported no activity.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** No influenza-associated pediatric deaths were reported to CDC for week 45.

2018-19 Influenza Season Week 45 ending Nov 10, 2018



Week Ending Nov 10, 2018 - Week 45



All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance October 28 – November 3, 2018 (Week 44)

	Current Week (44)	Previous Week (43)
Percentage of emergency department visits for ILI ¹	1.0%	1.0%
Percentage positive influenza tests ²	1.0%	0.8%
Influenza-associated hospitalizations ³	1	1
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	0.9%	1.0%

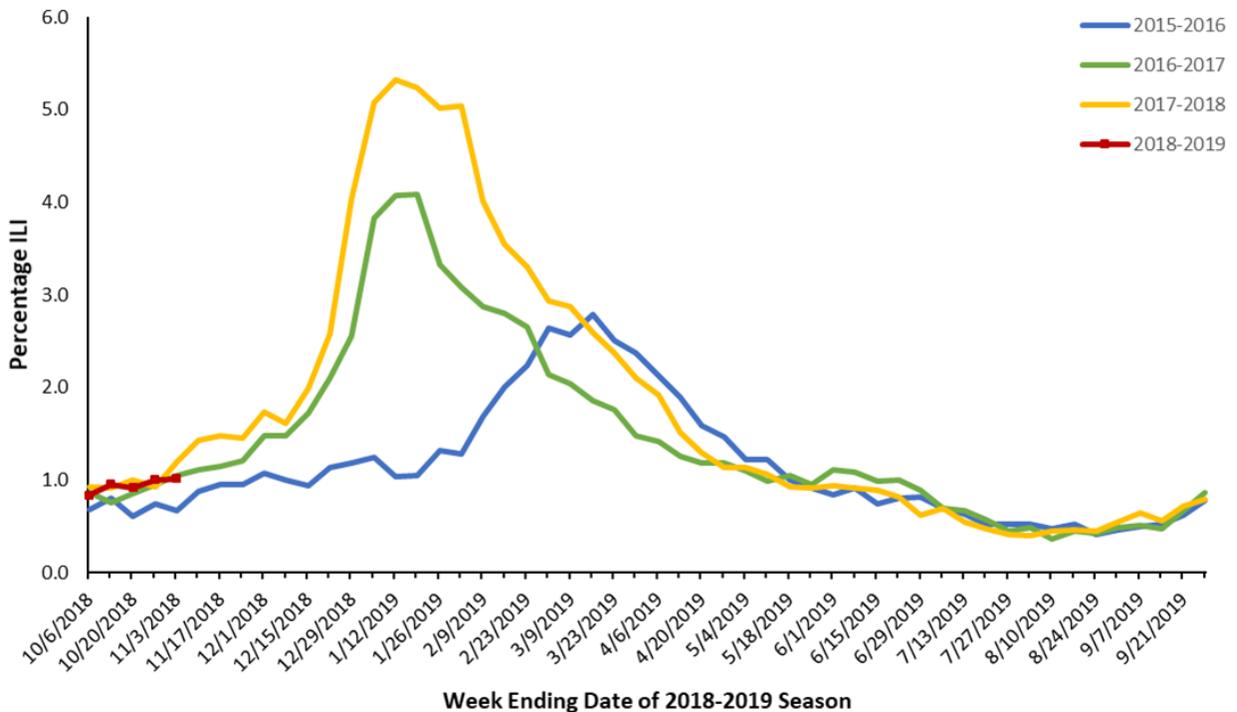
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.0% during week 44, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **1.0% of specimens tested at Oregon labs were positive for influenza during week 44**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

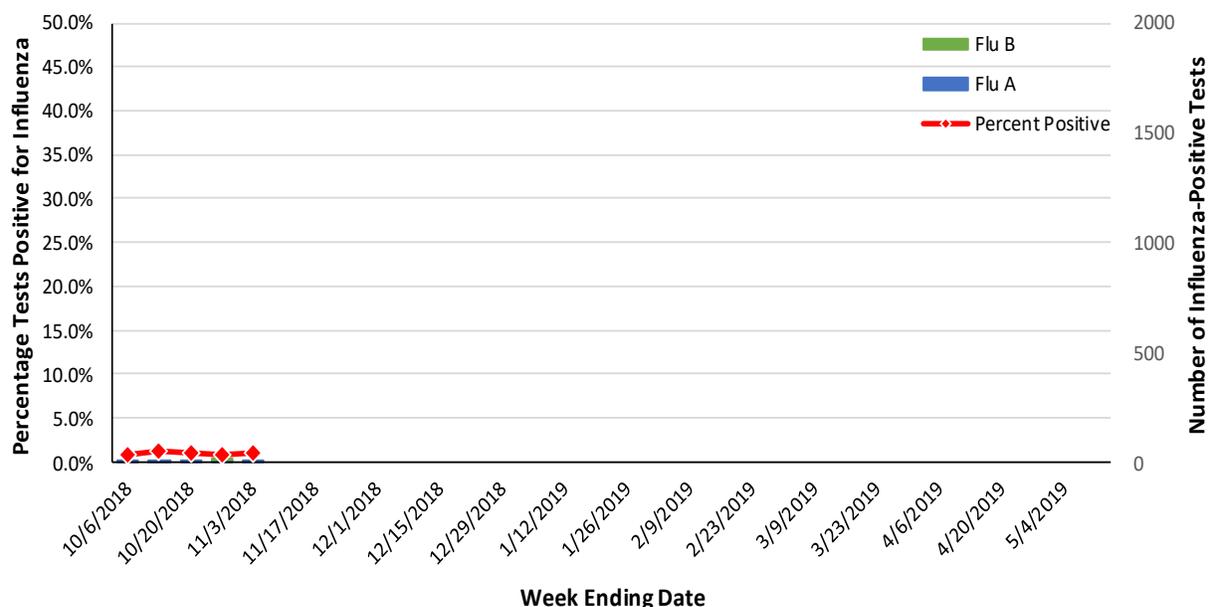
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

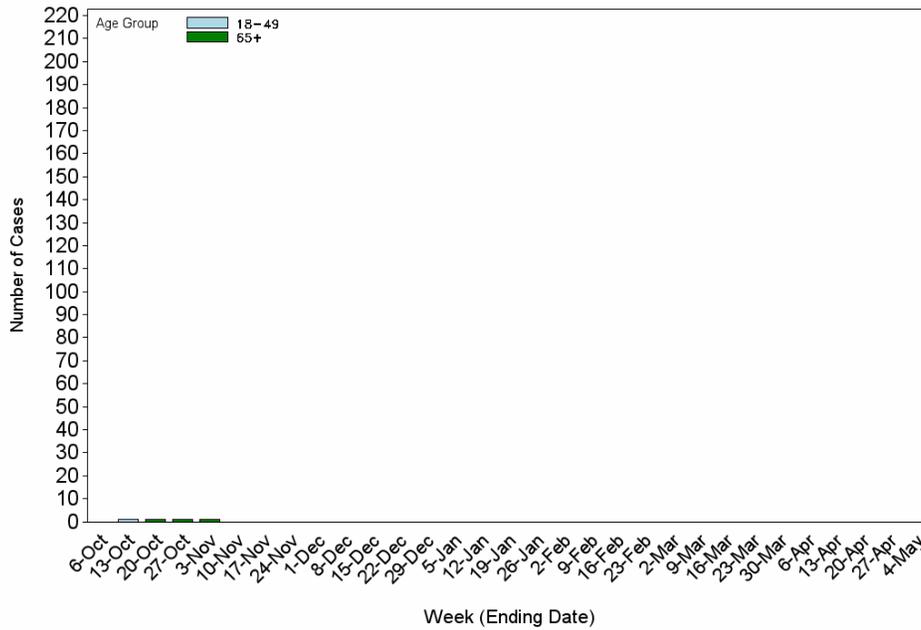
	Current Week	Cumulative
No. of specimens tested	977	4,648
No. of positive specimens (%)	10 (1.0%)	46 (1.0%)
<i>Positive specimens by type</i>		
Influenza A	10 (100%)	45 (97.8%)
Influenza B	0 (0%)	1 (2.2%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



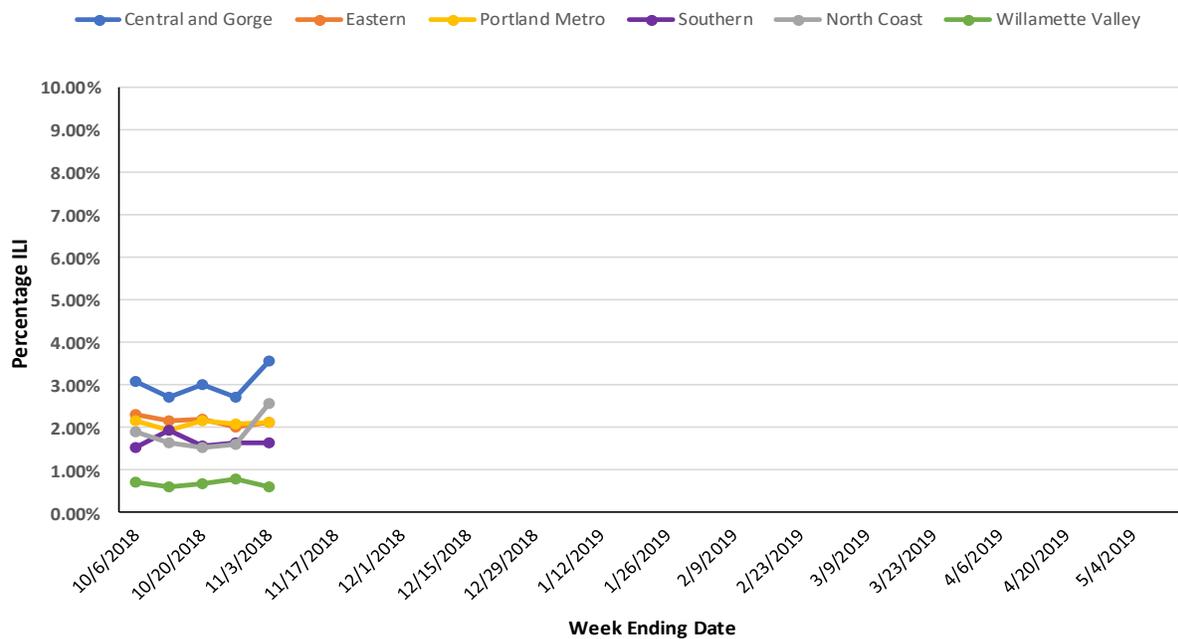
Hospitalizations: In Clackamas, Multnomah, and Washington counties one influenza-associated hospitalization was reported during week 44 of 2018.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



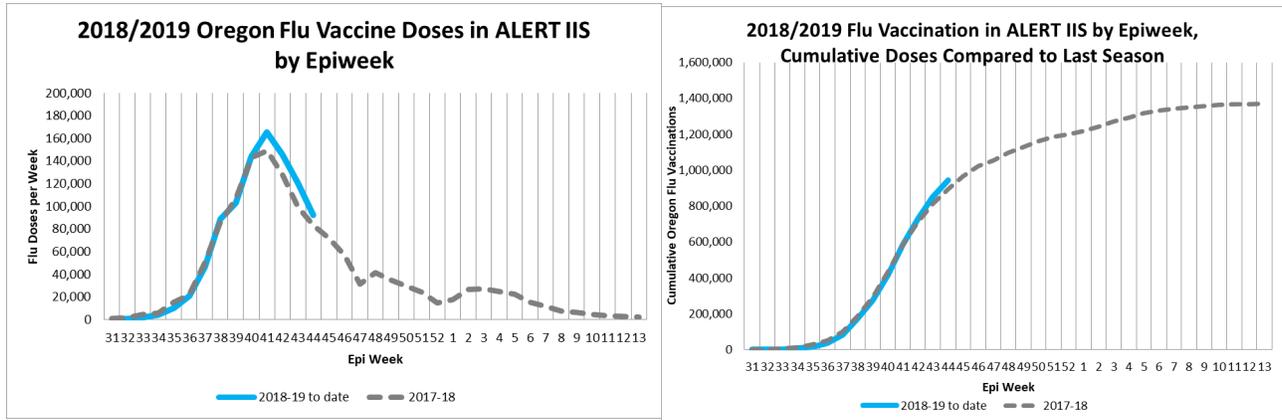
Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 173 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI for week 44 of 2018 was highest in the Central and Gorge area (3.6%) and lowest in the Willamette Valley (0.6%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019

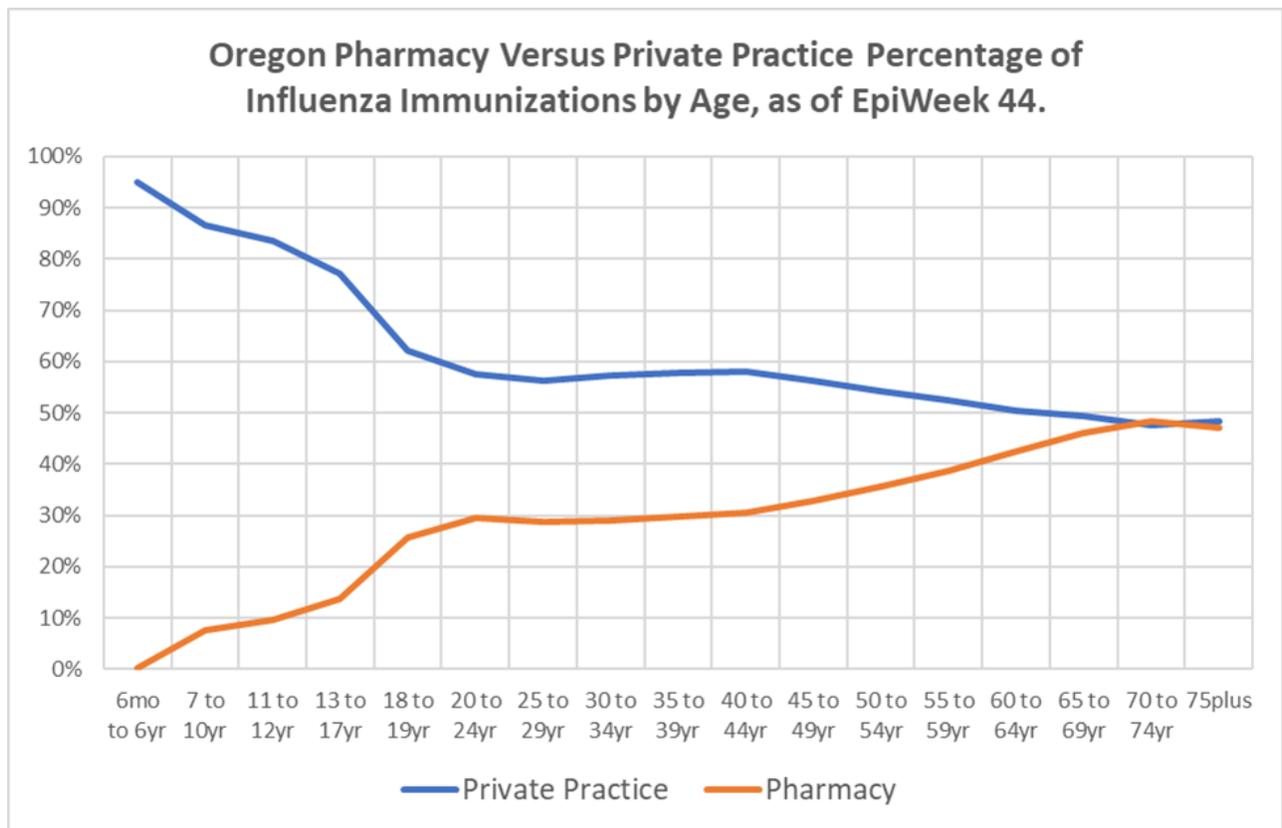


Influenza Outbreaks: There have been no influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season.

Flu Immunization Update: This week's reporting is based on ALERT IIS data through Epiweek 44 (November 3rd). To date, the ALERT IIS has received almost one million immunization reports of seasonal influenza immunizations for Oregon residents. Weekly immunizations continue to follow the pattern of last season, declining into November. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed—current weekly totals may be adjusted upward later.



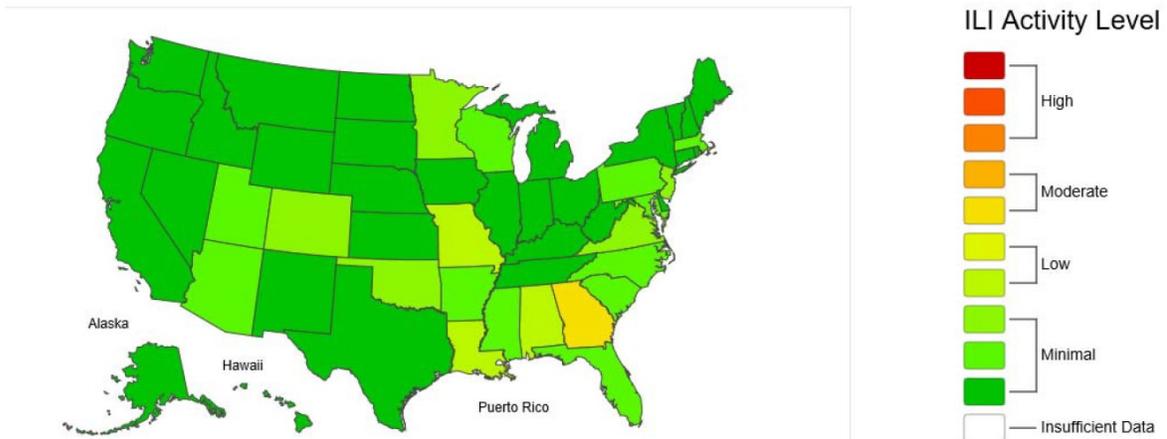
As of this date, 59% of influenza immunizations have been reported to ALERT IIS from private practices; 33% are from pharmacies, 2% are from Local Health Departments, 2% are from hospitals, and 4% are from other, mainly non-provider, sources. An age-breakdown of private practice versus pharmacy influenza immunization is in the figure below. Pharmacists provide almost half of reported senior influenza immunizations in Oregon.



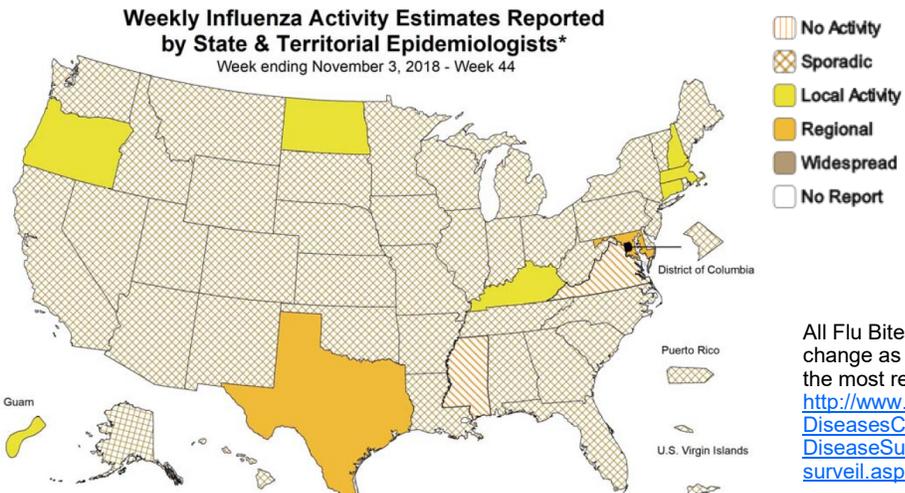
US Data (from CDC FluView): Influenza activity in the United States remains low, although small increases in activity were reported. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018. Below is a summary of the key influenza indicators for the week ending November 3, 2018:

- o **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased slightly to 1.8%, which is below the national baseline of 2.2%. One of 10 regions reported ILI at or above their region-specific baseline level.
- o **ILI State Activity Indicator Map:** One state experienced moderate ILI activity, three states experienced low ILI activity; and New York City, the District of Columbia, Puerto Rico and 46 states experienced minimal ILI activity.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in two states was reported as regional; Guam and six states reported local activity; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 40 states reported sporadic activity; and two states reported no activity.
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** No influenza-associated pediatric deaths were reported to CDC for week 44.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 44 ending Nov 03, 2018



Map above: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance October 21 – October 27, 2018 (Week 43)

	Current Week (43)	Previous Week (42)
Percentage of emergency department visits for ILI ¹	1.0%	0.9%
Percentage positive influenza tests ²	0.8%	1.0%
Influenza-associated hospitalizations ³	1	1
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	1.0%	0.8%

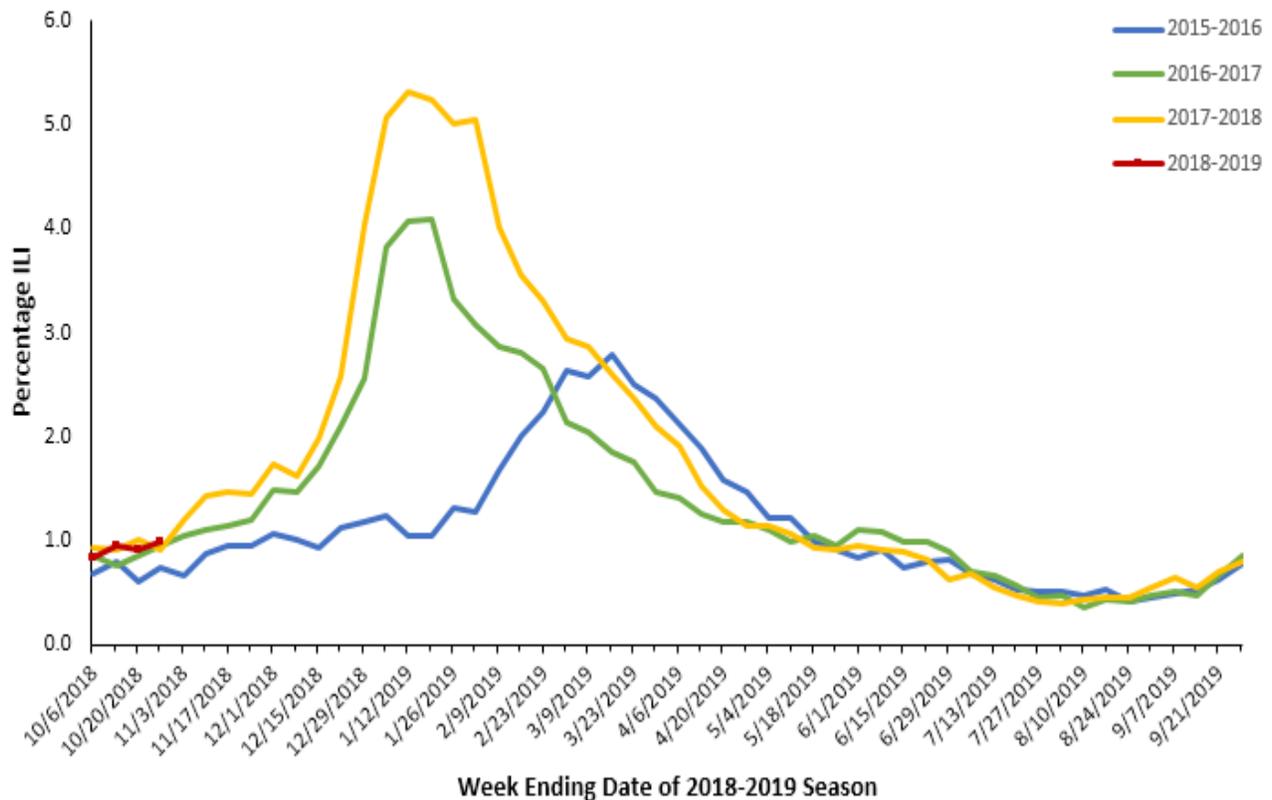
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 1.0% during week 43, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **0.8% of specimens tested at Oregon labs were positive for influenza during week 43**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

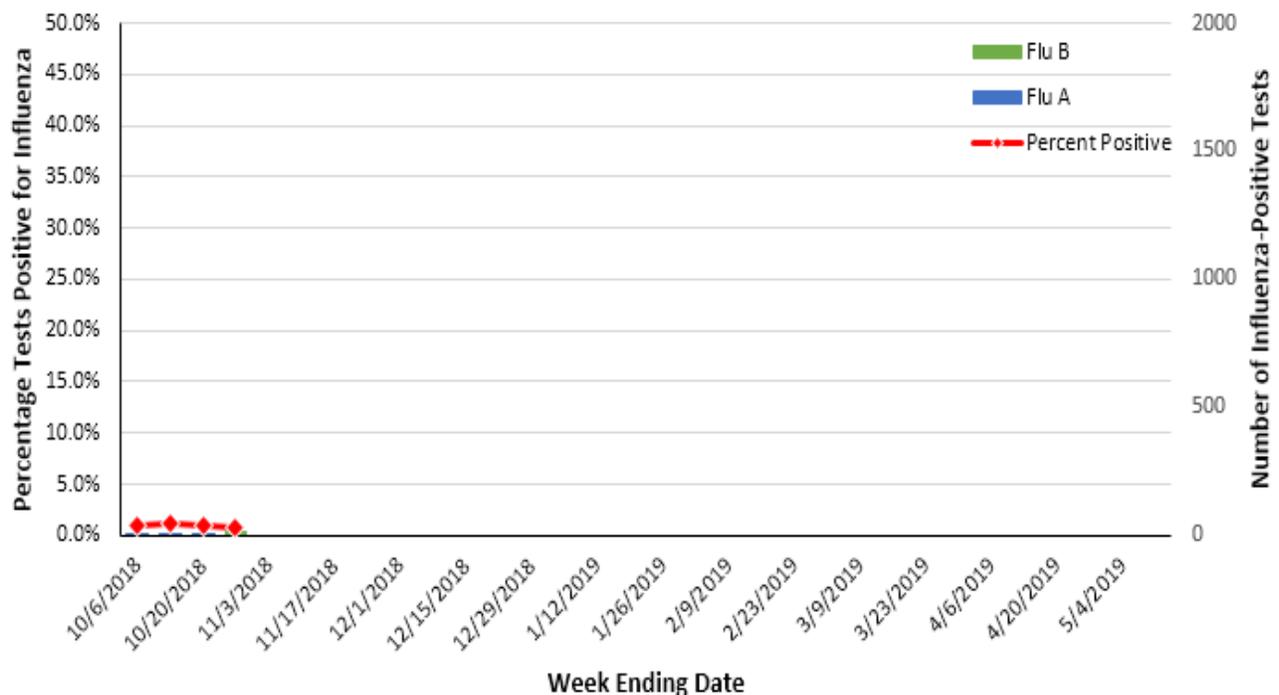
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

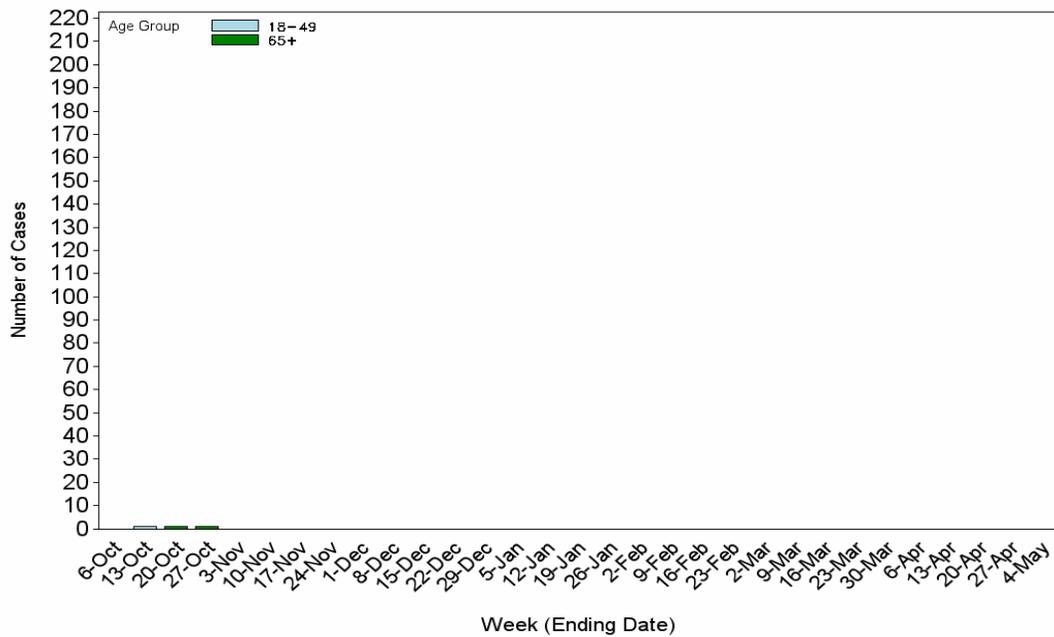
	Current Week	Cumulative
No. of specimens tested	1,073	3,671
No. of positive specimens (%)	9 (0.8%)	36 (1.0%)
<i>Positive specimens by type</i>		
Influenza A	8 (88.9%)	35 (97.2%)
Influenza B	1 (11.1%)	0 (0%)
Type Unavailable	0 (0%)	1 (2.8%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



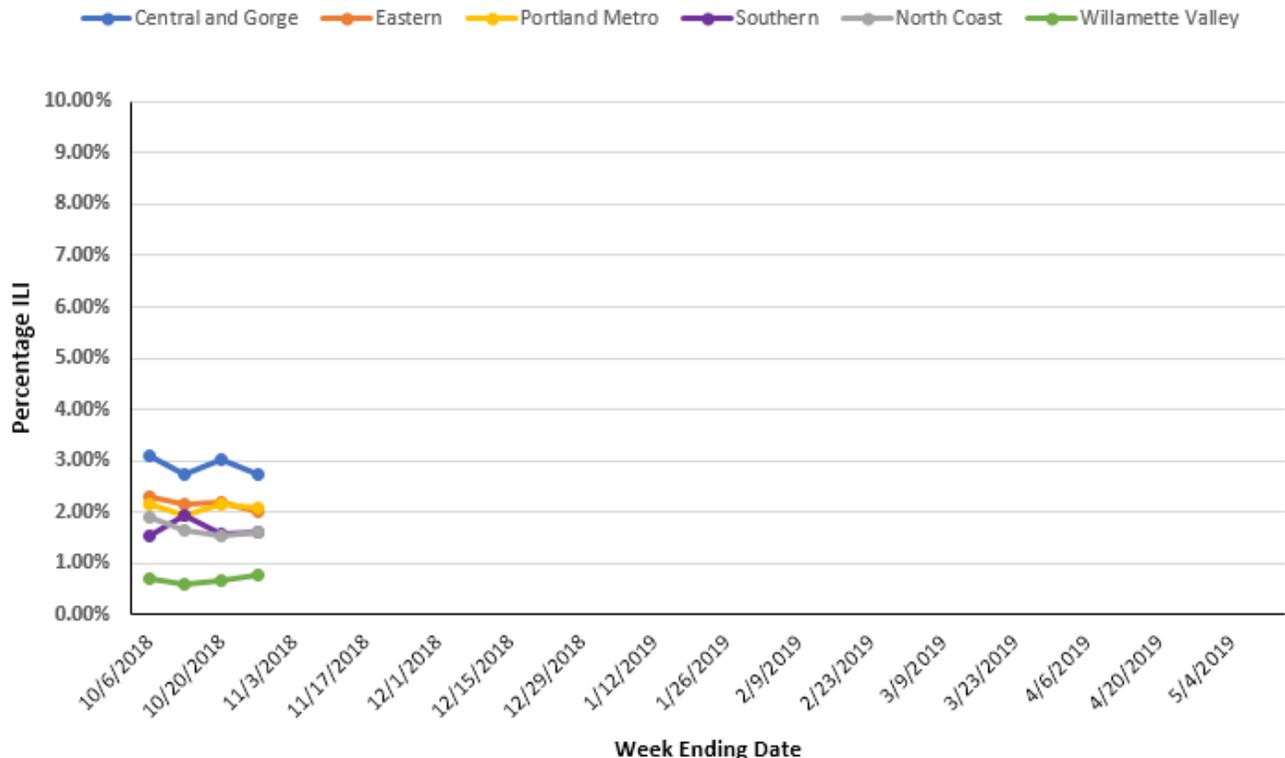
Hospitalizations: In Clackamas, Multnomah, and Washington counties one influenza-associated hospitalization was reported during the week 43 of 2018.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 173 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI for week 43 of 2018 was highest in the Central and Gorge area (2.7%) and lowest in the

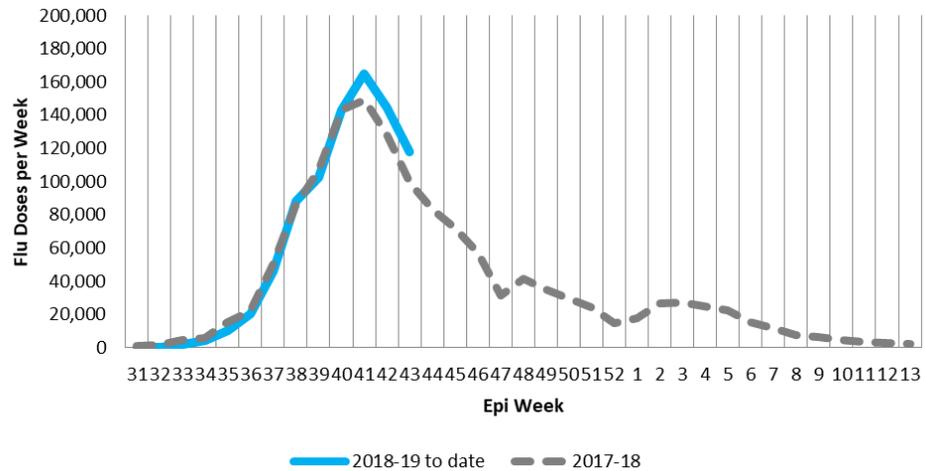
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



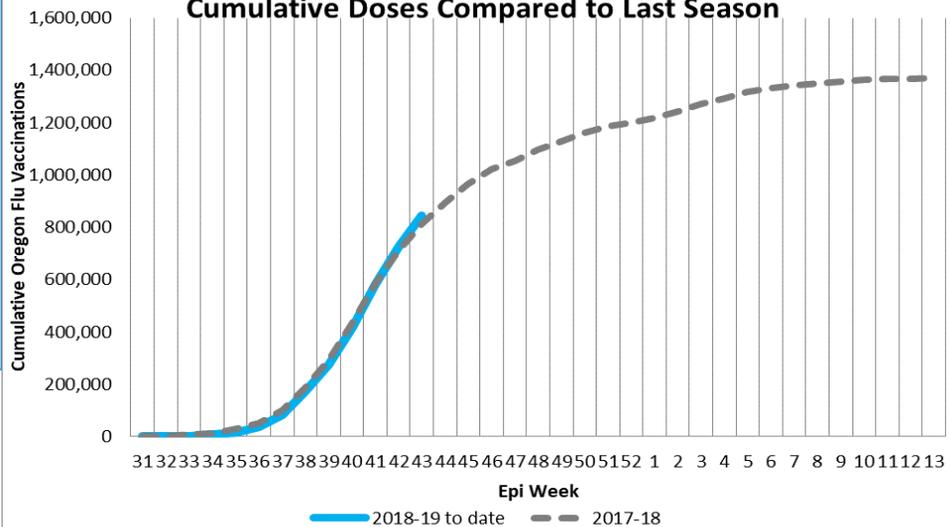
Influenza Outbreaks: There have been no influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season.

Flu Immunization Update: This week's reporting is based on ALERT IIS data through Epiweek 43 (October 27th). By this date, ALERT IIS has received over 880,000 reports of seasonal influenza immunizations for Oregon residents. We are past the peak of weekly influenza immunization delivery at this point, and likely will continue to decline into Thanksgiving. Influenza immunization totals to date appear to be slightly above last season. Population increases since last year in Oregon are a possible explanation for the observed increase. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.

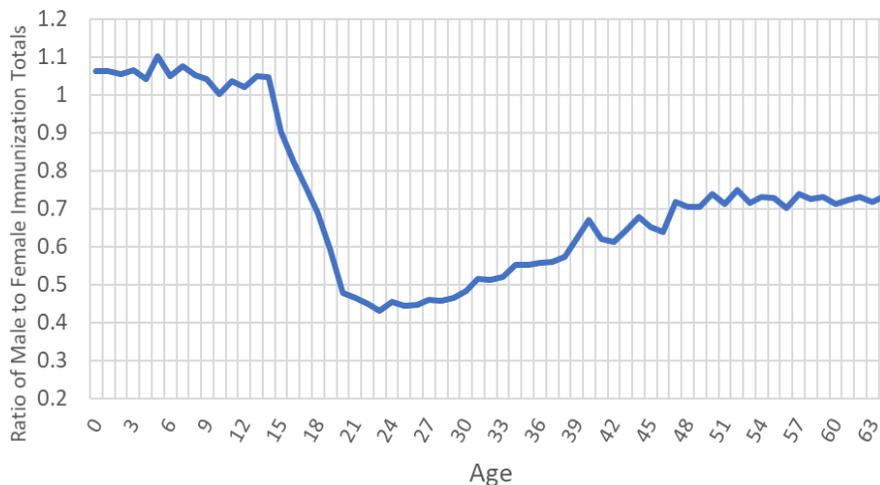
2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



Oregon 2018-19 Season Ratio of Male to Female Influenza Immunization by Year of Age, as of Oct 27th, 2018, for Non-Seniors

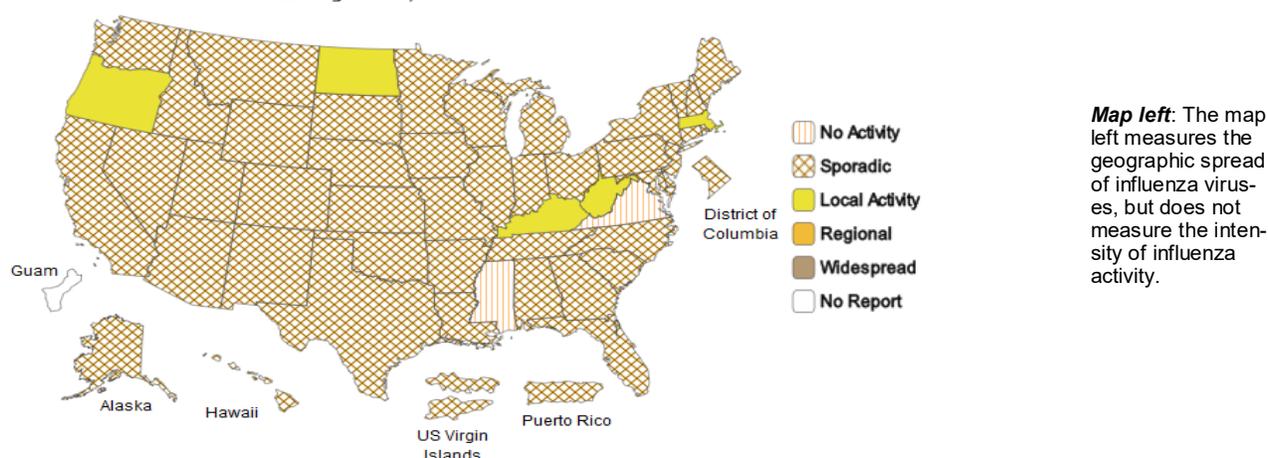
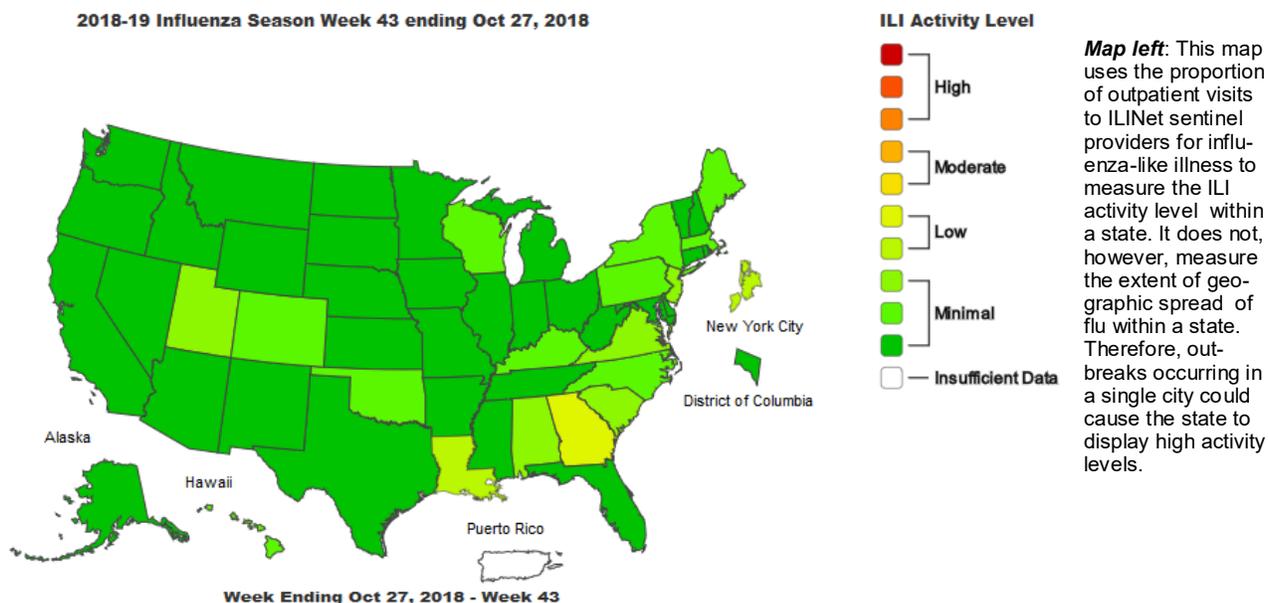


For this week we are including a chart showing the ratio of reported male to female influenza immunizations. For children, there is a slight bias to reported influenza immunization among male children, reflecting in part that there are slightly more male than female children in Oregon. However for adults, the ratio is strongly biased toward female influenza immunization. This chart can be interpreted, using men age 21 as an example, as that they are less than half as likely to receive an influenza immunization as women of the same age.

US Data (from CDC FluView): Influenza activity in the United States remains low, although small increases in activity were reported. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories during the most recent three weeks. Below is a summary of the key influenza indicators for the week ending October 27, 2018:

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased slightly to 1.7%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.
- **ILI State Activity Indicator Map:** New York City and two states experienced low ILI activity; the District of Columbia and 48 states experienced minimal ILI activity; and Puerto Rico had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in five states was reported as local; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 43 states reported sporadic activity; two states reported no activity; and Guam did not report.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Three influenza-associated pediatric deaths were reported to CDC. One occurred during the 2018-2019 season and two occurred during the 2017-2018 season.

2018-19 Influenza Season Week 43 ending Oct 27, 2018



All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Data at a Glance October 14 – October 20, 2018 (Week 42)

	Current Week (42)	Previous Week (41)
Percentage of emergency department visits for ILI ¹	0.9%	0.9%
Percentage positive influenza tests ²	1.0%	1.2%
Influenza-associated hospitalizations ³	1	1
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	0.8%	1.0%

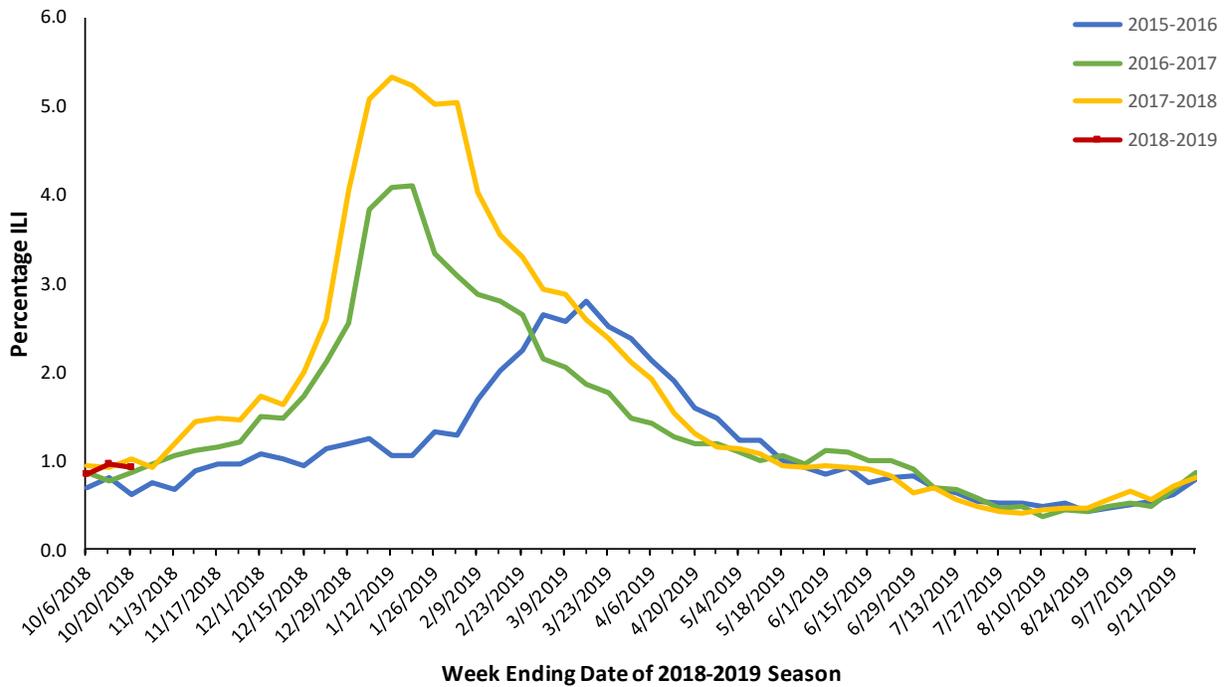
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018–2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 0.9% during week 42, 2018.**

Laboratory Surveillance: The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that **1.0% of specimens tested at Oregon labs were positive for influenza during week 42**, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

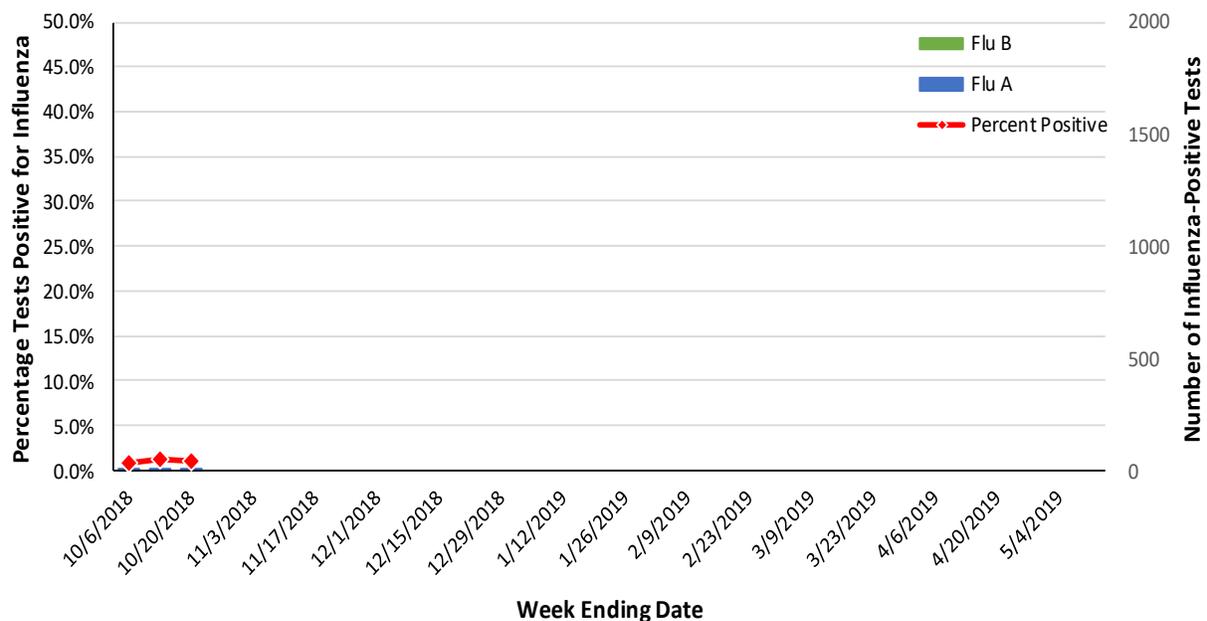
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR) .

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

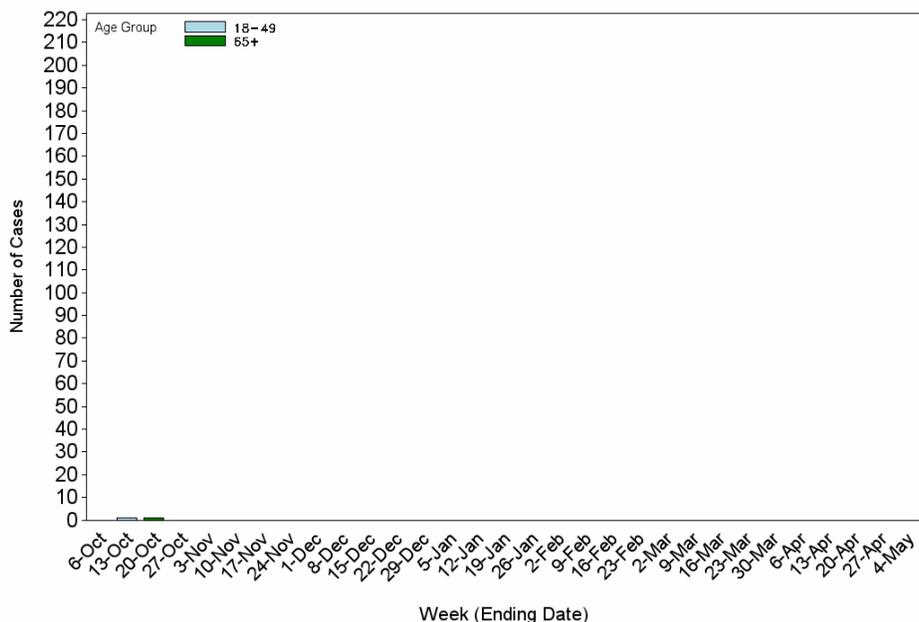
	Current Week	Cumulative
No. of specimens tested	974	2,598
No. of positive specimens (%)	10 (1.0%)	27 (1.0%)
<i>Positive specimens by type</i>		
Influenza A	10 (100.0%)	27 (100.0%)
Influenza B	0 (0%)	0 (0%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



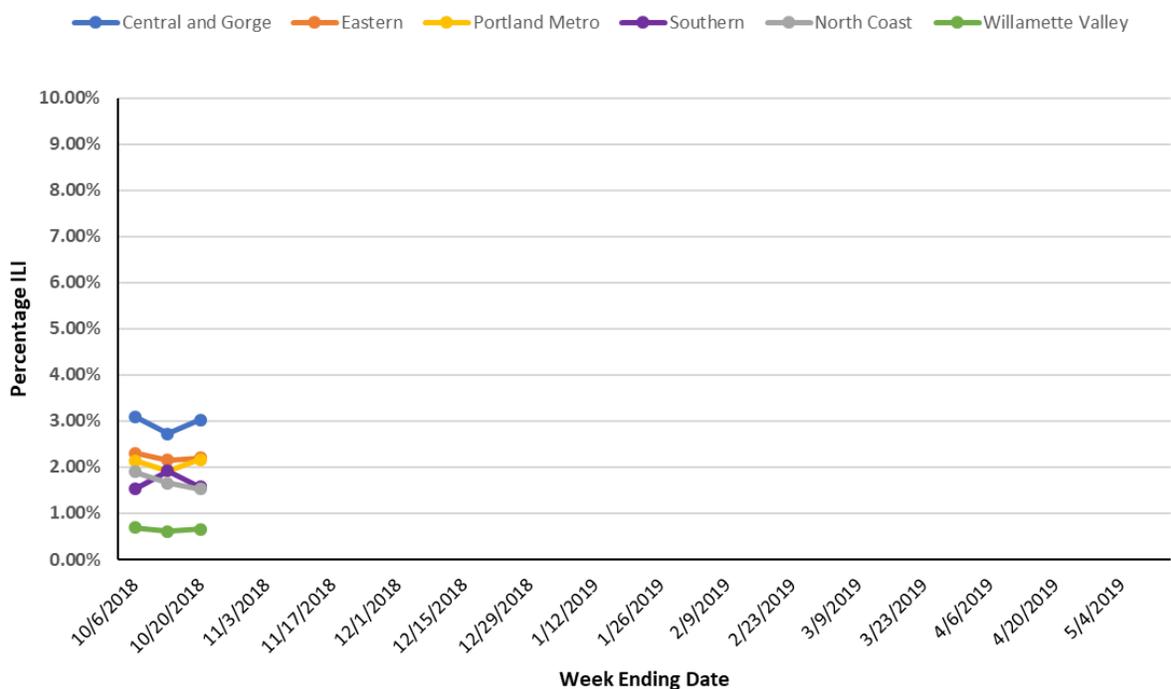
Hospitalizations: In Clackamas, Multnomah, and Washington counties one influenza-associated hospitalization was reported during the week 42 of 2018.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 176 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI for week 42 of 2018 was highest in the Central and Gorge area (3.0%) and lowest in the Willamette Valley (0.7%).

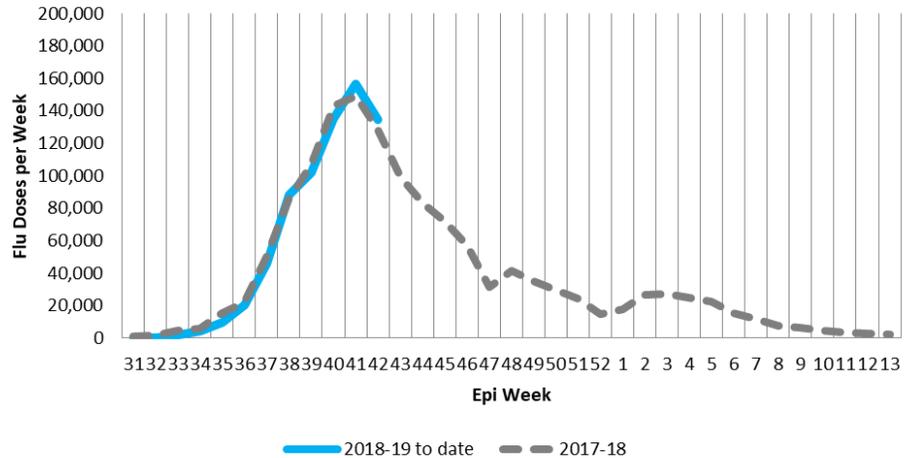
Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



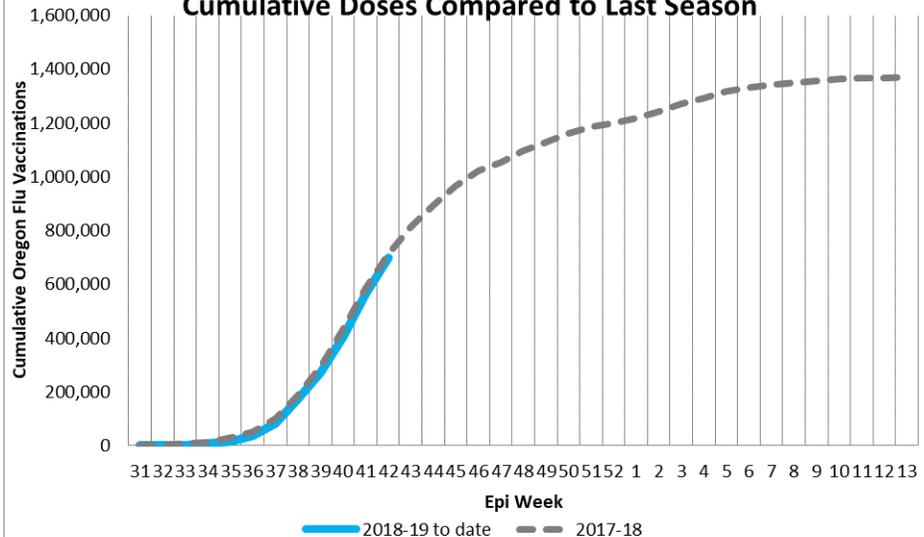
Influenza Outbreaks: There have been no influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season.

Flu Immunization Update: This week's reporting is based on ALERT IIS data through Epiweek 42 (October 20th). By this date, ALERT IIS has received almost three-quarters of a million reports of seasonal influenza immunizations for Oregon residents. This week's data points to Epiweek 41 as the peak of the influenza immunization season. However weekly activity after Epiweek 41 remained strong, above last season's late October totals. Some amount of delayed reporting has also brought the current season's immunizations in ALERT IIS to the same level as last season. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed.

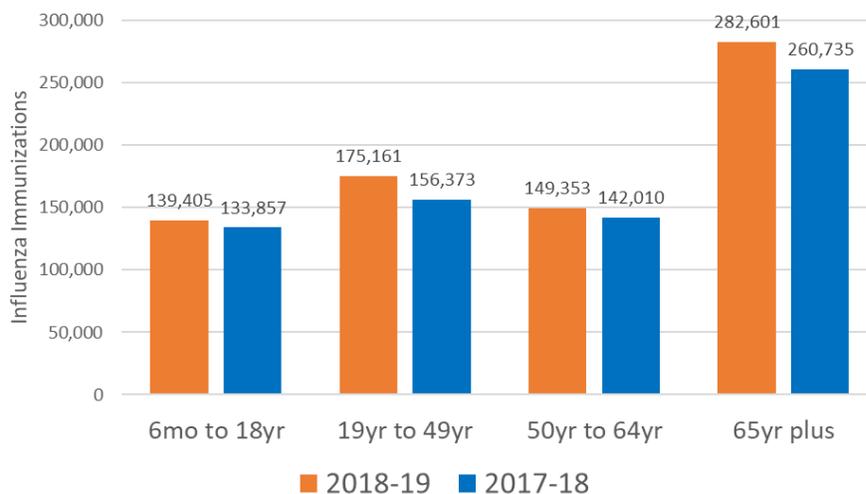
2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



Oregon Influenza Immunization Totals by Age Groups, EpiWeek 42

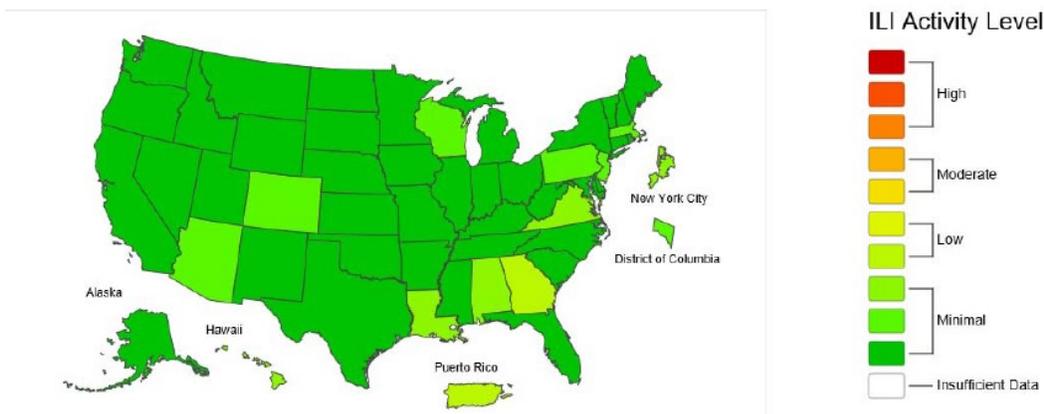


For this week we are including a chart (left) showing how, across age groups, the current reported total of influenza immunizations is slightly above what was reported last season at this time. This season, two non-egg based vaccines are also in general use in Oregon. To date, 5% of adults aged 19-49 years, 9% of adults aged 50-64 years, and 2% of adults aged 65 years and over have received a non-egg based vaccine.

US Data (from CDC FluView): Influenza activity in the United States remains low. Influenza A(H1N1) pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories during the most recent three weeks. Below is a summary of the key influenza indicators for the week ending October 20, 2018:

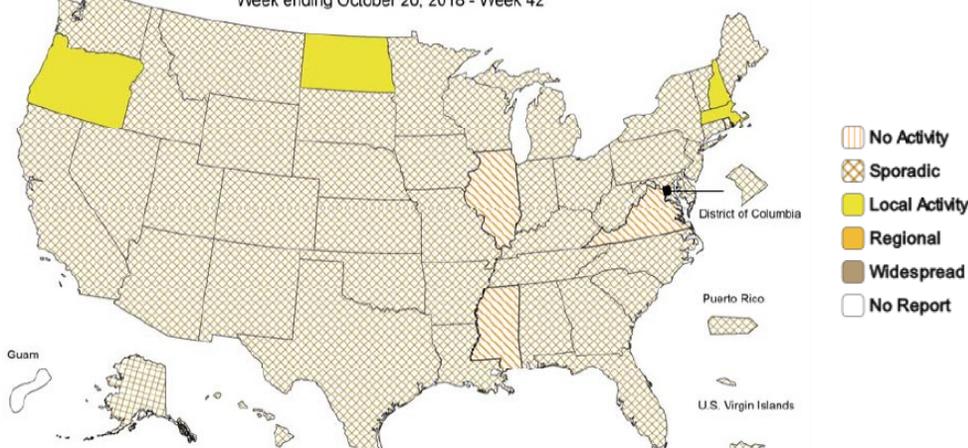
- o **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- o **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- o **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- o **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained low at 1.5%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.
- o **ILI State Activity Indicator Map:** Puerto Rico and one state experienced low ILI activity; and New York City, the District of Columbia, and 49 states experienced minimal ILI activity.
- o **Geographic Spread of Influenza:** The geographic spread of influenza in four states was reported as local; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 42 states reported sporadic activity; four states reported no activity; and Guam did not report.
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- o **Influenza-associated Pediatric Deaths:** No influenza-associated pediatric deaths were reported to CDC.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 42 ending Oct 20, 2018



Map left: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending October 20, 2018 - Week 42



Map left: The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

Data at a Glance October 7–October 13, 2018 (Week 41)

	Current Week (41)	Current Week (40)
Percentage of emergency department visits for ILI ¹	0.9%	0.8%
Percentage positive influenza tests ²	1.2%	0.9%
Influenza-associated hospitalizations ³	1	0
Reported ILI/influenza outbreaks	0	0
Influenza-associated pediatric mortality	0	0
Respiratory Syncytial Virus (RSV) activity ⁴	1.2%	<1.0%

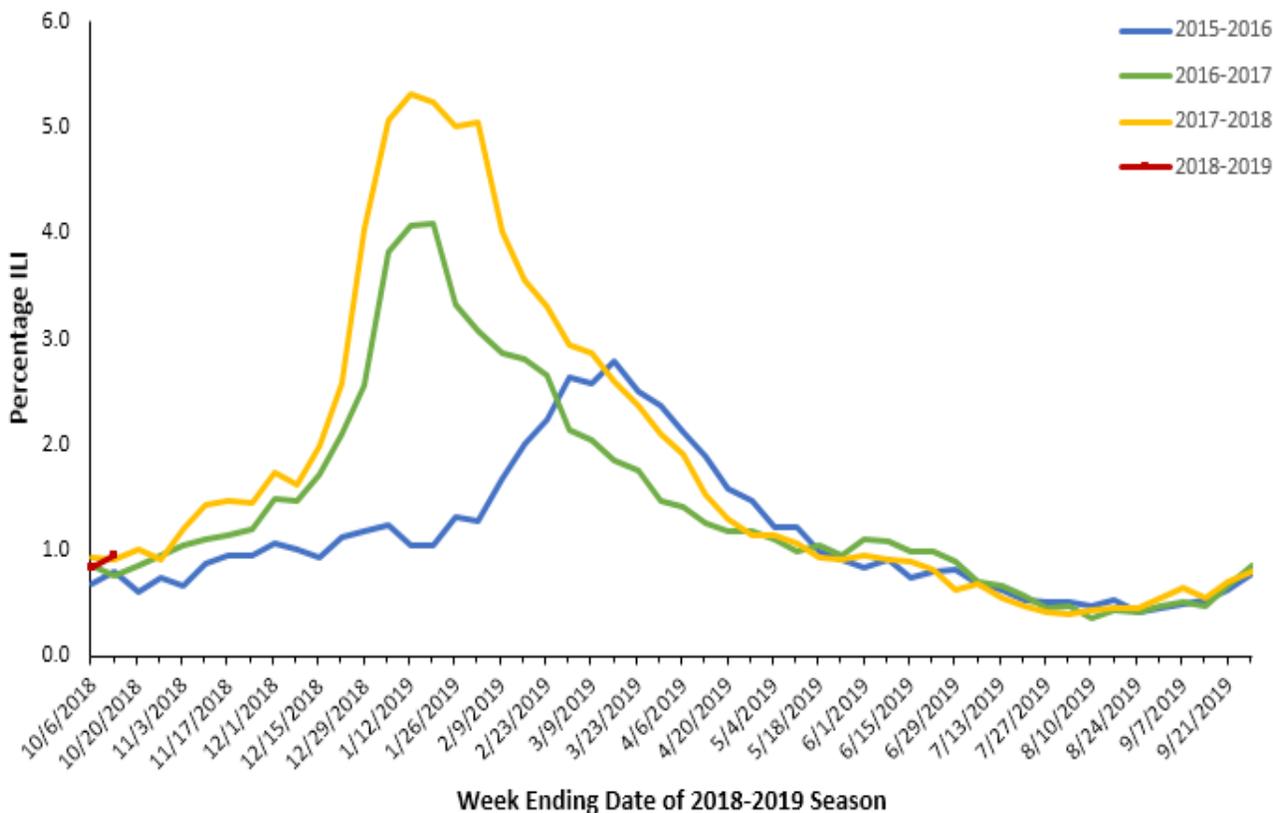
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 0.9% during week 41, 2018.**

Laboratory Surveillance:

The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 1.2% of specimens tested at Oregon labs were positive for influenza during week 41, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

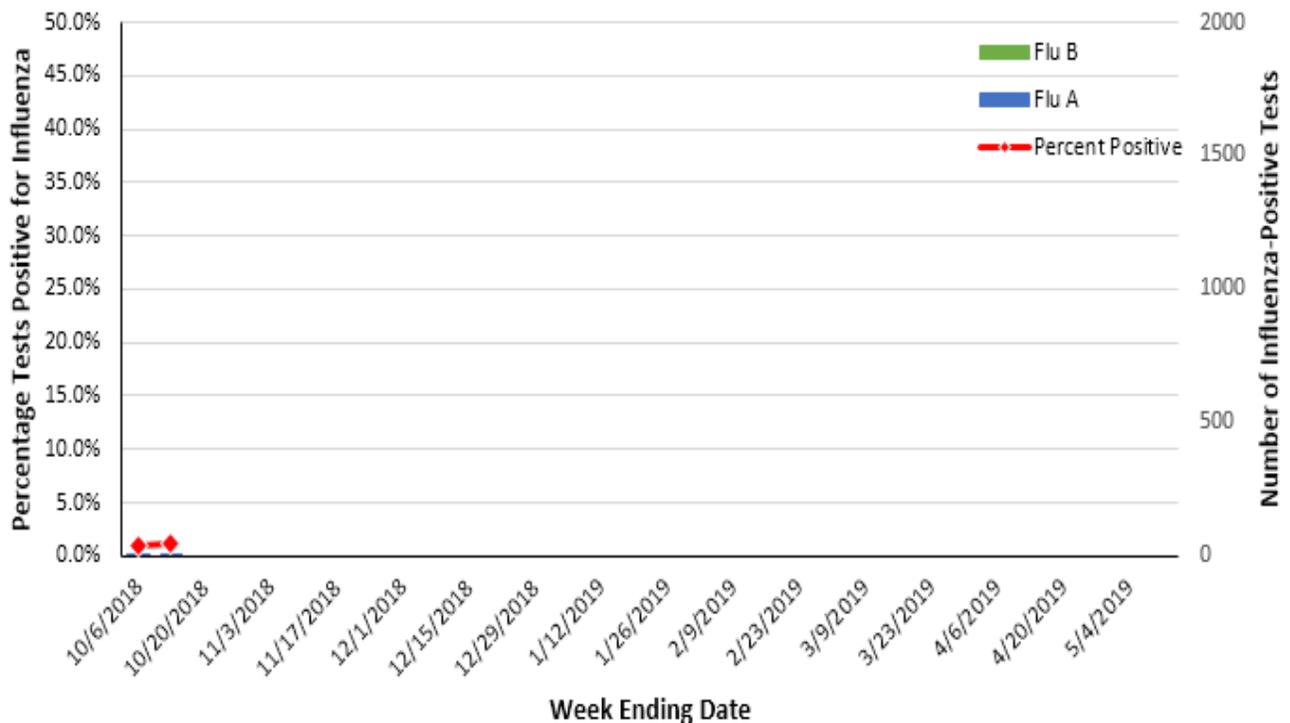
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR)

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

	Current Week	Cumulative
No. of specimens tested	854	1624
No. of positive specimens (%)	10 (1.2%)	17 (1.1%)
<i>Positive specimens by type</i>		
Influenza A	10 (100.0%)	17 (100.0%)
Influenza B	0 (0%)	0 (0%)
Type Unavailable	0 (0%)	0 (0%)

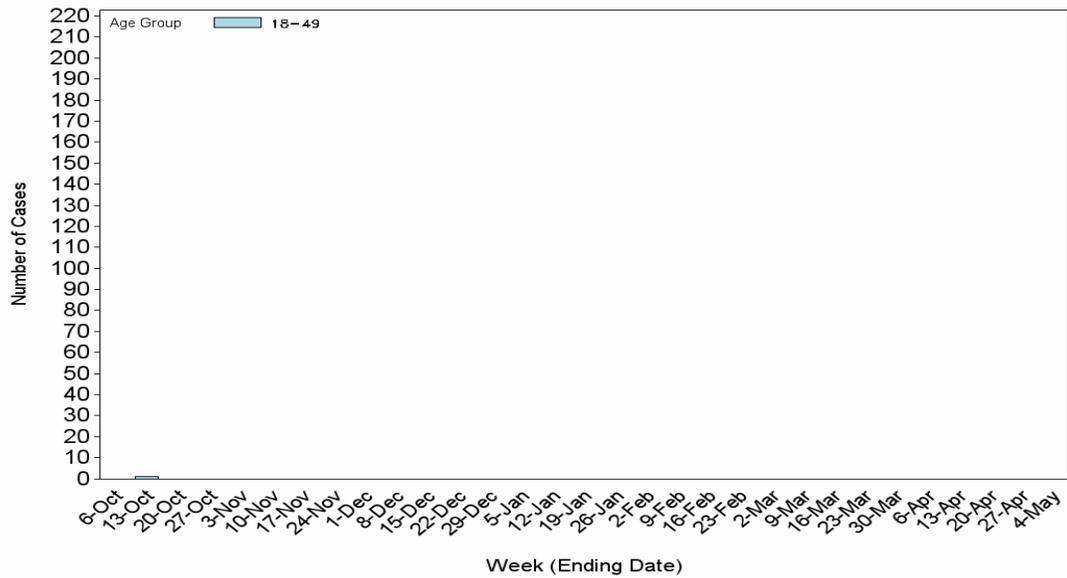
**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**



Hospitalizations:

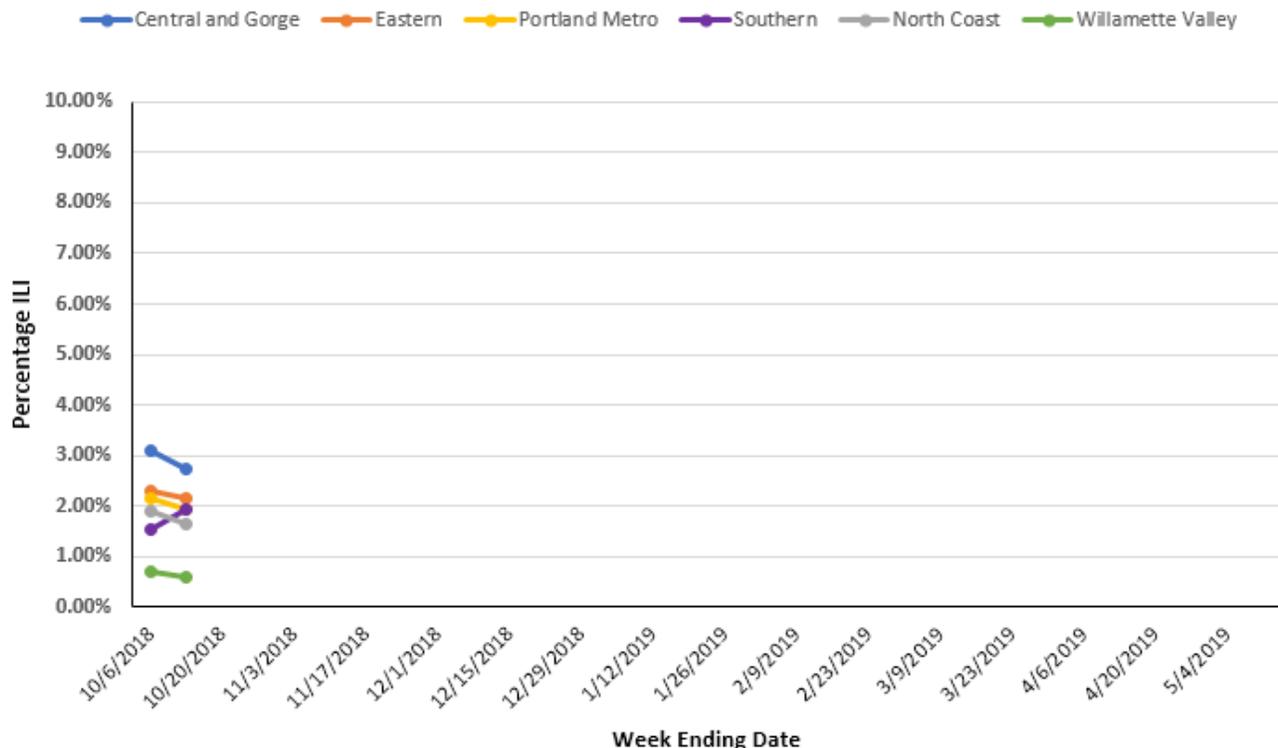
In Clackamas, Multnomah, and Washington counties one influenza-associated hospitalizations was reported during the week 42 of 2018.

Figure 3. Portland Metro Area Influenza-Associated Hospitalizations by Week and Age Group, 2018-2019 Season



Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 176 OCHIN clinics from across Oregon. The percent of outpatients seen with ILI for week 41 of 2018 was highest in the Central and Gorge (2.7%) area and lowest in the Willamette Valley (0.6%).

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



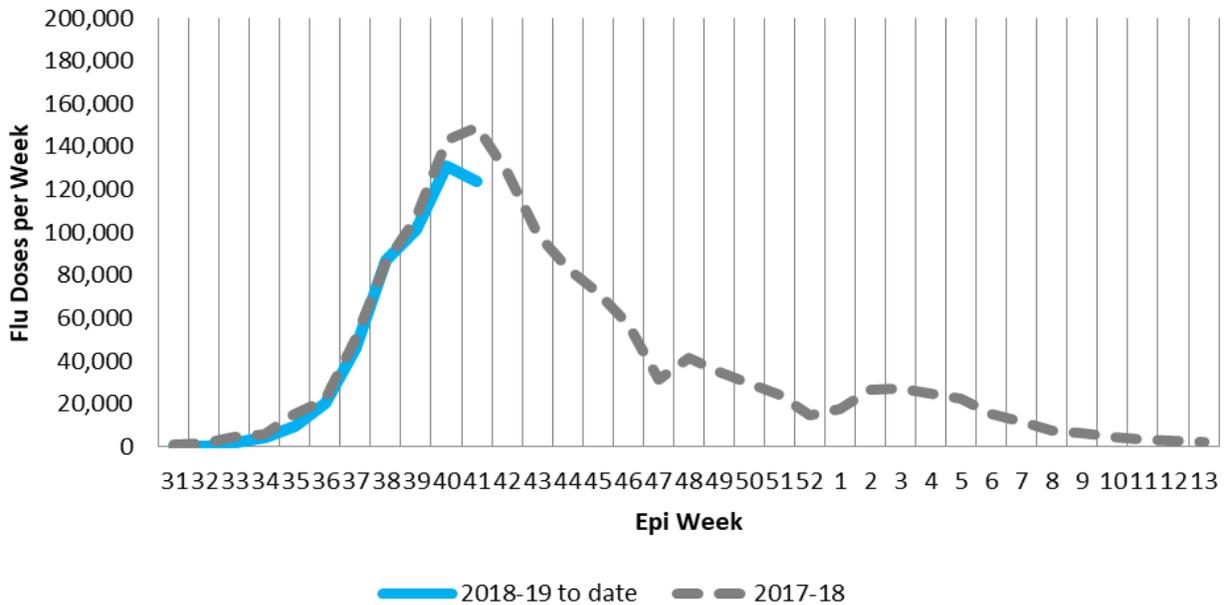
Influenza Outbreaks:

There have been no influenza outbreaks reported to the Oregon Health Authority in the 2018–2019 flu season.

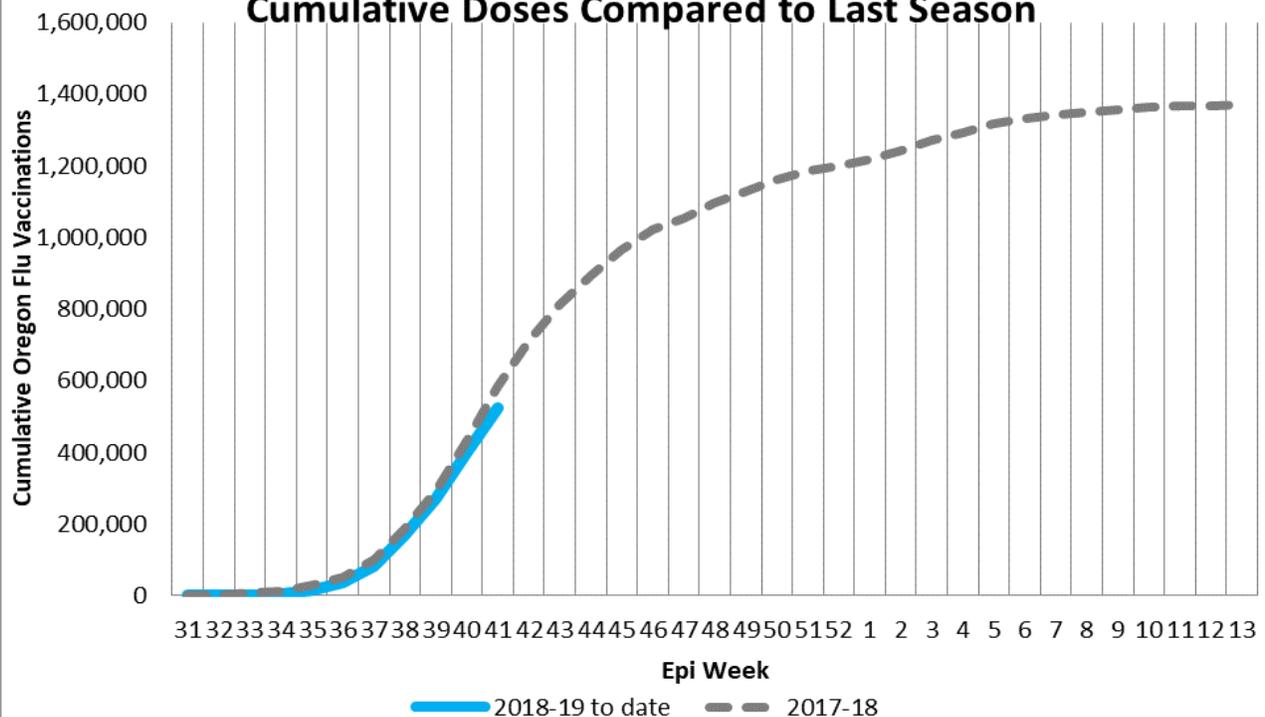
Flu Immunization Update:

This week's reporting is based on ALERT IIS data through Epiweek 41 (October 13th). By this date, ALERT IIS has received over 526,000 reports of seasonal influenza immunizations for Oregon residents. As of Epiweek 41, we appear to have reached the peak of weekly influenza immunizations for this season. To date, immunization totals are running slightly less than last season. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed- current weekly totals may be adjusted upward later.

2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek



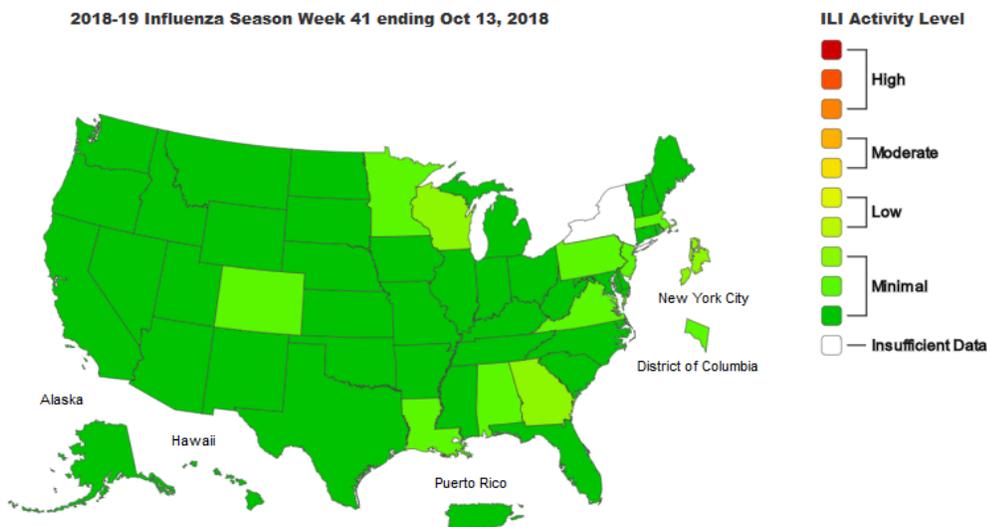
2018/2019 Flu Vaccination in ALERT IIS by Epiweek, Cumulative Doses Compared to Last Season



US Data (from CDC FluView): Influenza activity in the United States remains low. Influenza A(H1N1) pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories during the most recent three weeks. The first influenza-associated pediatric death occurring during the 2018-2019 season was reported this week. Below is a summary of the key influenza indicators for the week ending October 13, 2018.

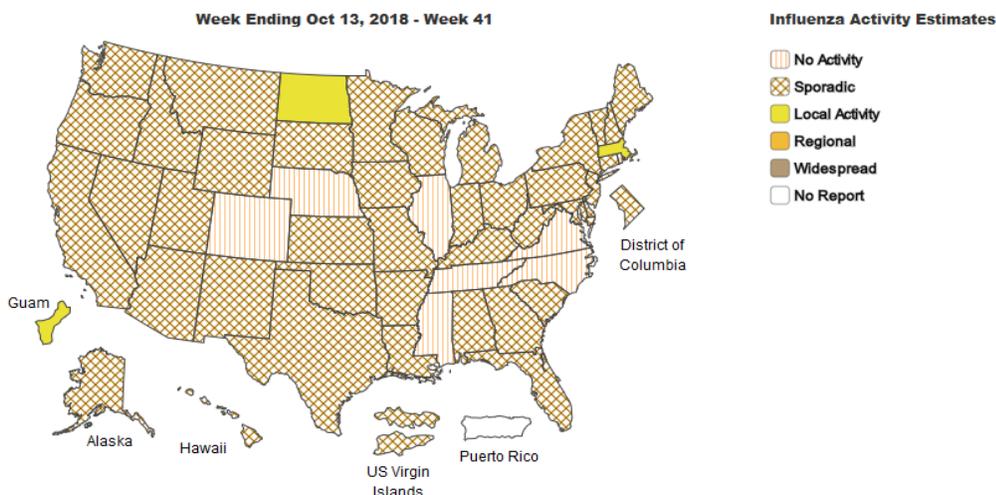
- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
- **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained low at 1.4%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.
- **ILI State Activity Indicator Map:** New York City, the District of Columbia, and 49 states experienced minimal ILI activity, and Puerto Rico and one state had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Guam and two states was reported as local activity; the District of Columbia, the U.S. Virgin Islands and 40 states reported sporadic activity; eight states reported no activity; and Puerto Rico did not report.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death that occurred during the 2018-2019 season was reported to CDC.

2018-19 Influenza Season Week 41 ending Oct 13, 2018



Map left: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

Week Ending Oct 13, 2018 - Week 41



* The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.asp>

Data at a Glance September 30–October 6, 2018 (Week 40)

	Current Week (40)
Percentage of emergency department visits for ILI¹	0.8%
Percentage positive influenza tests²	0.9%
Influenza-associated hospitalizations³	0
Reported ILI/influenza outbreaks	0
Influenza-associated pediatric mortality	0
Respiratory Syncytial Virus (RSV) activity⁴	<1.0%

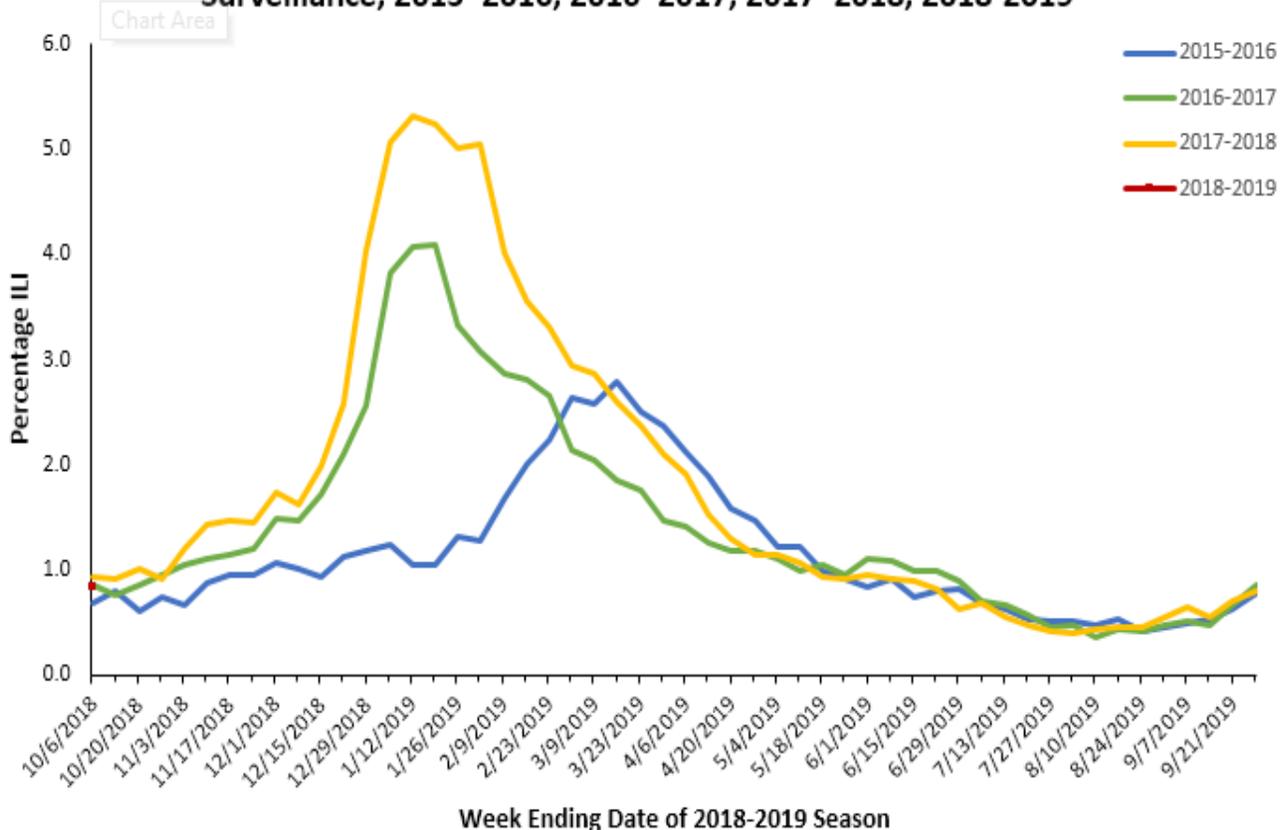
¹Based on Oregon ESSENCE Syndromic Surveillance. Data represent statewide aggregate percent.

²Percent positivity based on data from Oregon reporters to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

³Based on hospitalization surveillance in Clackamas, Multnomah, and Washington counties only.

⁴Percent positivity based on data from Oregon's RSV Laboratory Surveillance System.

Figure 1. Percentage of ED Visits for ILI, Oregon ESSENCE Syndromic Surveillance, 2015–2016, 2016–2017, 2017–2018, 2018-2019



Oregon ESSENCE Syndromic Surveillance: Oregon Public Health tracks hospital emergency department (ED) visits throughout the state using the Oregon ESSENCE syndromic surveillance system. ESSENCE categorizes chief complaints into syndrome categories, which include ILI. Figure 1, above, displays percentages for all of Oregon during this flu season compared with the previous three flu seasons. **The percent of ED visits for ILI in all of Oregon was 0.8% during week 40, 2018.**

Laboratory Surveillance:

The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors influenza and other respiratory viruses circulating the United States. More information is at CDC's [website](#).

Table 1 shows the current week and cumulative totals (since October 1, 2018) for influenza in specimens tested at the Oregon laboratories reporting to NREVSS. Figure 2 shows that 0.9% of specimens tested at Oregon labs were positive for influenza during week 40, and the bar chart displays the number of influenza-positive tests by flu type and percent positivity.

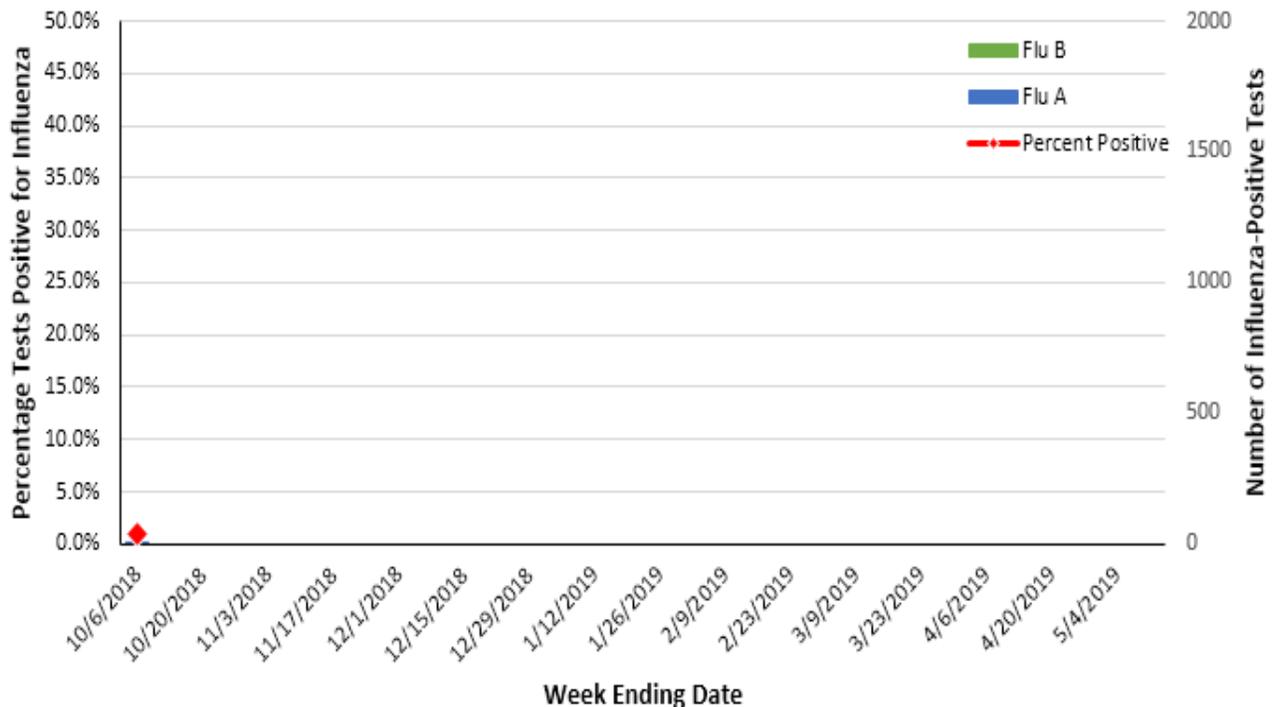
Participation by laboratories is voluntary. Current labs participating in NREVSS in Oregon include:

Legacy Emanuel Hospital and Health Center (Portland, OR), Oregon Health & Science University (Portland, OR), Providence Health (Oregon), Kaiser Permanente (Oregon), Veteran's Administration Hospital (Portland, OR), Bay Area Hospital (Coos Bay, OR), Curry Health Network (Brookings, OR), Mercy Medical Center (Roseburg, OR), Sky Lakes Medical Center (Klamath Falls, OR), Lake Health District, (Lakeview, OR), Rogue Valley Medical Center (SW Oregon), Good Shepherd Medical Center (Hermiston, OR), Mid-Columbia Medical Center (The Dalles, OR), Central Oregon Pediatric Associates (Central Oregon), Harney District Hospital (Burns, OR), St. Charles (Bend, OR), Columbia Memorial Hospital (Astoria, OR), Salem Hospital (Salem, OR), Willamette Valley Medical Center (McMinnville, OR)

Table 1. Influenza Test Results in Oregon, NREVSS, 2018–2019.

	Current Week	Cumulative
No. of specimens tested	770	770
No. of positive specimens (%)	7 (0.9%)	7 (0.9%)
<i>Positive specimens by type</i>		
Influenza A	7 (100.0%)	7 (100.0%)
Influenza B	0 (0%)	0 (0%)
Type Unavailable	0 (0%)	0 (0%)

**Figure 2. Oregon Influenza Surveillance
Percent Positive Influenza Tests by Week, NREVSS
2018-2019 Season**

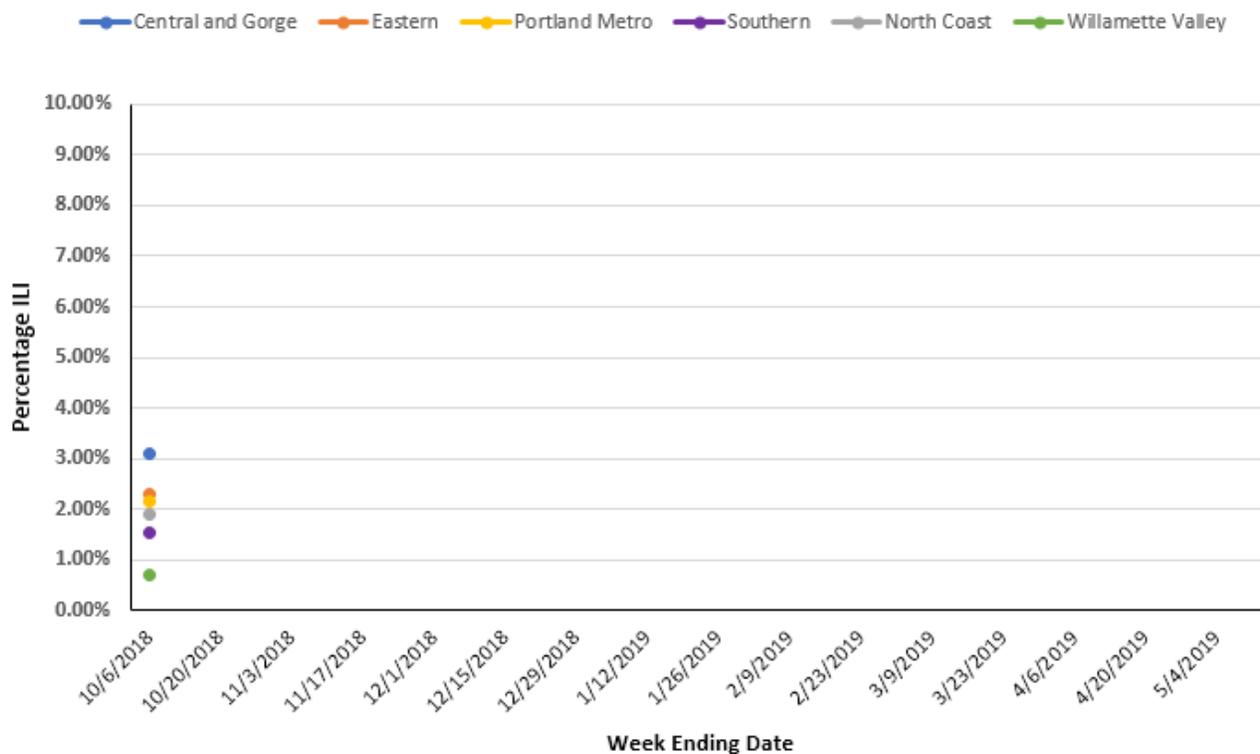


Hospitalizations:

In Clackamas, Multnomah, and Washington counties no influenza-associated hospitalizations were reported during the first week of flu season.

Oregon’s Outpatient Influenza-like Illness Surveillance: Oregon’s outpatient influenza-like illness (ILI) surveillance comprises 17 voluntary reporting outpatient providers, 64 emergency departments and urgent care clinics reporting to ESSENCE, and 178 OCHIN clinics from across Oregon. **The percent of outpatients seen with ILI for week 40 of 2018 was highest in the Central and Gorge (3.1%) area and lowest in the Willamette Valley (0.7%).**

Figure 5. Percentage of Visits for ILI at Outpatient Clinics & Emergency Departments, by Oregon Region, 2018-2019



Influenza Outbreaks:

There have been no influenza outbreaks reported to the Oregon Health Authority the first week of the 2018 –2019 flu season.

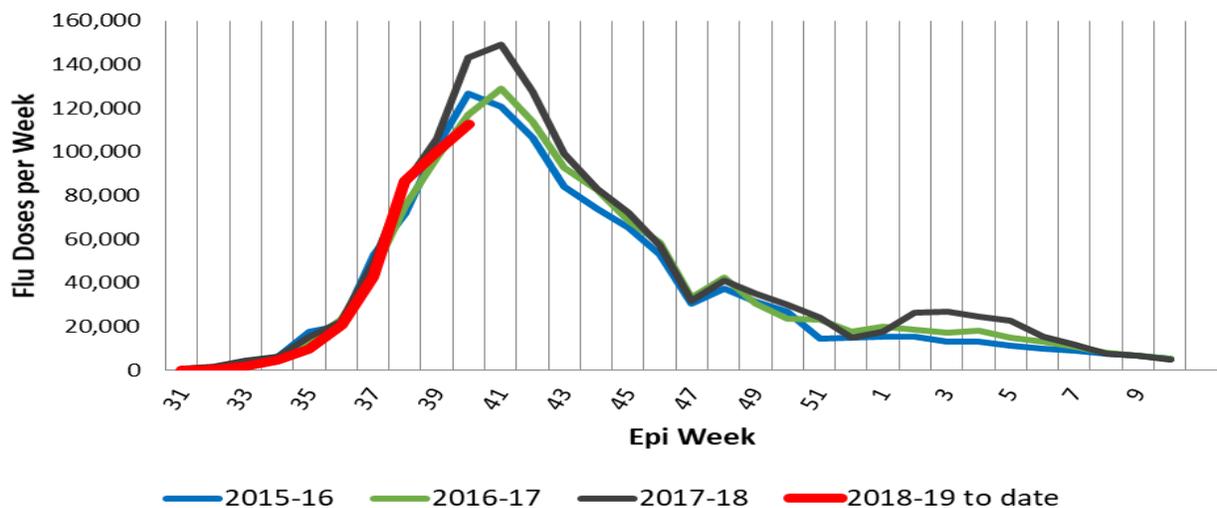
Flu Immunization Update:

Influenza immunizations across the state are reported to the Oregon Immunization Program (OIP) ALERT Immunization Information System (ALERT IIS), which receives both child and adult immunization reports from Oregon healthcare providers and payors. In the 2017-18 flu season, ALERT received 1.4 million reports of influenza immunizations.

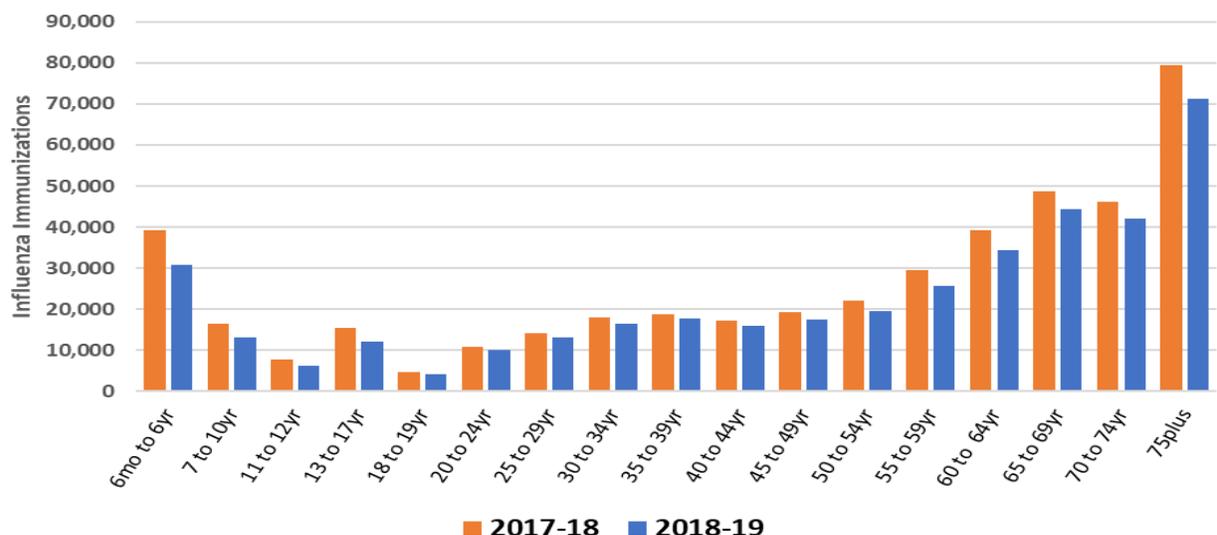
This week's reporting is based on ALERT IIS data through Epiweek 40 (October 6th). ALERT IIS has received approximately 396,000 reports of seasonal influenza immunizations for Oregon residents, compared to 440,000 reports last year at this time. In a typical season, influenza immunizations peak in mid to late October. While last season (2017-18) saw a record number of influenza immunizations in Oregon, this season looks more like the 2015-16 and 2016-17 seasons, when fewer Oregonians received flu vaccine. As a caveat, while most immunizations are reported quickly and electronically to ALERT IIS, some reporting is delayed—current weekly totals may be adjusted upward later.

To date, lower uptake of influenza vaccine is seen across all age groups. Although last season Oregon saw gains in influenza immunization of children and seniors, the numbers of immunizations given to these two vulnerable groups is well below vaccination levels last year at this time.

2018/2019 Oregon Flu Vaccine Doses in ALERT IIS by Epiweek, Compared to Prior Three Seasons, as of Oct. 6th



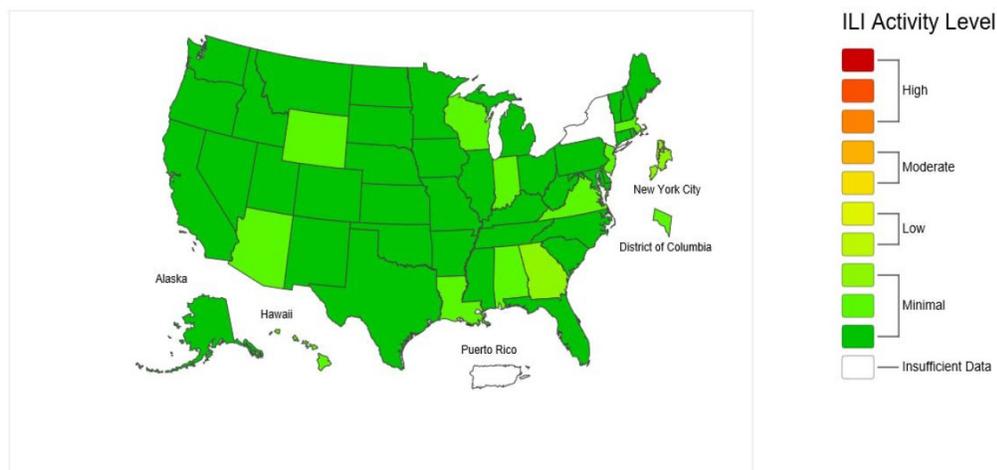
Oregon Influenza Immunizations Reported to ALERT IIS by EpiWeek 40 (Oct 6th) for the 2018-19 Season, by Age, Compared to 2017-18 EpiWeek 40



US Data (from CDC FluView): Influenza activity in the United States remained low throughout the summer months and early October.

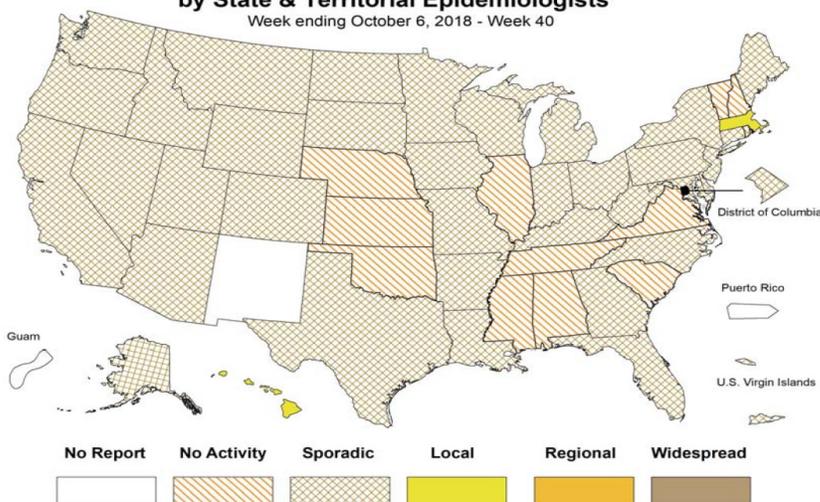
- **Viral Surveillance:** While influenza B viruses were more commonly detected from May until late June, influenza A viruses have predominated from the beginning of July onward. The percentage of respiratory specimens testing positive for influenza in clinical laboratories is low.
- **Virus Characterization:** The majority of tested influenza viruses were characterized antigenically and genetically as being similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
- **Antiviral Resistance:** All tested viruses showed susceptibility to antiviral drugs.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained low and was 1.4%, which is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels.
- **ILI State Activity Indicator Map:** New York City, the District of Columbia, and 49 states experienced minimal ILI activity, and Puerto Rico and one state had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in two states was reported as local activity; the District of Columbia, the U.S. Virgin Islands and 35 states reported sporadic activity; 12 states reported no activity; and Guam, Puerto Rico and one state did not report.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Two influenza-associated pediatric deaths were reported that occurred during the 2017-2018 season. No influenza-associated pediatric deaths for the 2018-2019 season have been reported to CDC.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2018-19 Influenza Season Week 40 ending Oct 06, 2018



Map left: This map uses the proportion of outpatient visits to ILINet sentinel providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending October 6, 2018 - Week 40



* The map left measures the geographic spread of influenza viruses, but does not measure the intensity of influenza activity.

All Flu Bites data are preliminary and may change as additional reports are received. Find the most recent Flu Bites report online at: <http://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.asp>