



# Influenza Season 2016 - 2017

Summary Report | June 2017

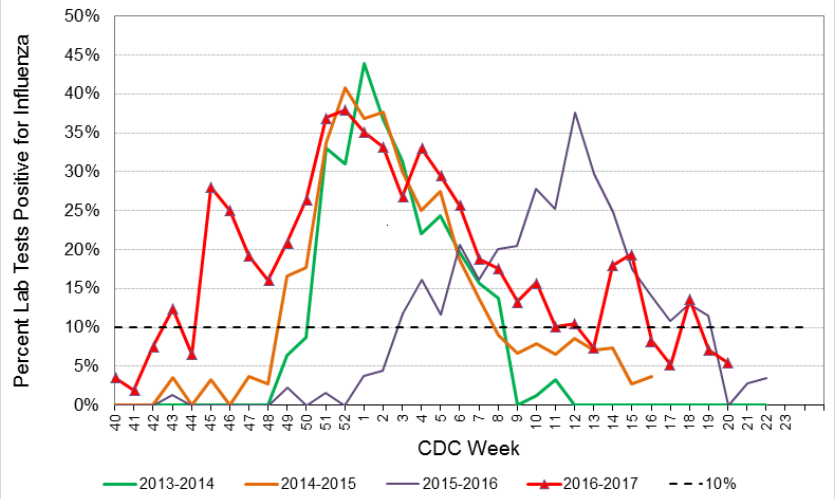
- In Clark County, there were at least 1550 lab-confirmed influenza cases, 20 influenza outbreaks in Long Term Care Facilities, and 26 influenza-associated deaths.
- Nationally, H3N2 was the most commonly characterized strain by the CDC, followed by B/Yamagata-Phuket. Most H3N2 samples were the A/Hong-Kong strain, which was included in the seasonal vaccine.
- The seasonal vaccine was a moderate match to circulating viruses, with most recent studies estimating it to be about 48% effective.

The positivity rate is the percent of influenza tests done by reporting laboratories for this influenza season that are positive. Historically, the CDC has used  $\geq 10\%$  positivity to define flu seasons for modeling studies and for calculating influenza-like-illness baselines.

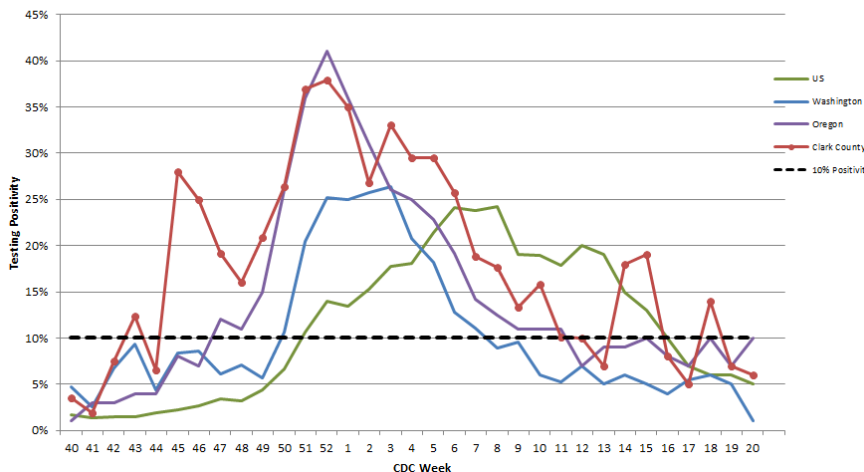
Clark County influenza activity for the 2016-2017 season slowly declined throughout the winter and spring, with positivity falling below the 10% threshold for two weeks in late April. As a result of decreased activity, surveillance was discontinued in early May.

Peak positivity for the season fell nearly 3 months earlier than in 2015-2016, but aligned more closely with the timing seen in years past.

Positivity Rate of Influenza Tests by Week from Reporting Laboratories in Clark County



Positivity Rate of Influenza Tests by Week, USA, Washington, Oregon, and Clark County, 2016-2017



Influenza positivity in Clark County spiked earlier than other regional or national reporting entities; however, peak and decline patterns for the remainder of the season were similar to Washington state, and even more closely followed those in Oregon. U.S. positivity, as reported by the CDC, has been notably lower for most of the season, but late season increases put national flu activity higher than that seen in Clark, Washington, and Oregon throughout the winter and spring 2017.

# SEASON COMPARISONS

Season	'14-'15	'15-'16	'16-'17
Start Date <sup>1</sup>	Nov. 30	Jan. 17	Nov. 6
End Date <sup>2</sup>	Feb. 14	May 14	Apr. 29
Length (weeks)	11	17	25
Peak Positivity	41%	38%	38%
Flu Tests <sup>3</sup>	2,789	3,168	6,567
Flu Associated Deaths <sup>4</sup>	5	8	26
Long Term Care Facility Outbreaks	7	5	20

<sup>1</sup> Defined as the beginning of the first week with a flu positivity above 10%

<sup>2</sup> Defined as the beginning of the second consecutive week with a flu positivity below 10%

<sup>3</sup> Total number of flu tests conducted by reporting facilities in Clark County

<sup>4</sup> Number of influenza related deaths in Clark County, reported to WA DOH



## Was this flu season worse than in years past?

2016-2017 had the longest period of elevated flu activity in the last several years; however, peak positivity was comparable to, or even below, years past. Further, we saw a drastic increase in the number of flu tests that were conducted and reported, making it much easier to *detect* flu outbreaks and deaths. So although, as a whole, this season may not have been notably worse, additional factors such as resource availability, inclement weather, and the timing of peak flu activity may have made influenza response more challenging.

## Why were there so many more outbreaks in Long Term Care Facilities this season?

Influenza outbreaks in healthcare settings such as long term care, skilled nursing, or assisted living communities are reportable to Clark County Public Health as soon as they are identified. These facilities are in charge of their response during an outbreak, while Public Health provides materials, guidance, and recommendations, as well as declares the official start and end of an outbreak. While there were notably more outbreaks this season than in years past, much of this increase can likely be attributed to more testing in the community and improved reporting practices by these facilities.

## How do we know when influenza season is over?

Traditionally, influenza positivity at or over 10% is used as the threshold for elevated influenza activity. When this rate drops below the 10% threshold for two weeks in a row, this period of high activity is considered over. This determination is not always straightforward, and can be subject to change. In the 2014-2015 season, influenza positivity hovered between 7 and 14 percent for eight weeks. Continuing surveillance and maintaining good precautions until seasonal flu activity fades is the best way to prevent continued transmission.

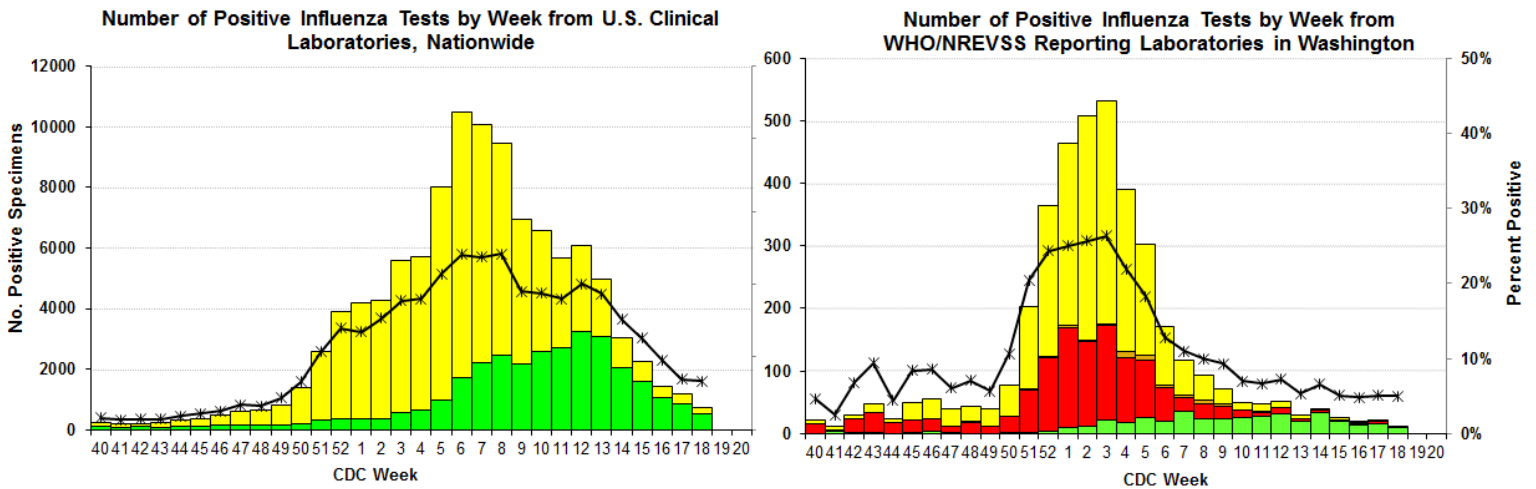
## Why did Clark County Public Health discontinue seasonal influenza surveillance after Week 18, when activity was still near or above the 10% threshold?

Although it's true that the last few weeks of this influenza season were quite dynamic, the reliability of influenza positivity numbers is greatly decreased late in the season, and may be skewed by a small number of reports. For example, a week with 1 influenza positive out of 4 total tests would trigger a very different response than a week with 100 positives out of 400 tests, even though both have a 25% positivity rate. Due to the low positivity reported by regional and state agencies, declining numbers of influenza tests, and the relatively low number of positives coming from our surveillance partners, this season's active surveillance was discontinued to prevent mischaracterization of this information.

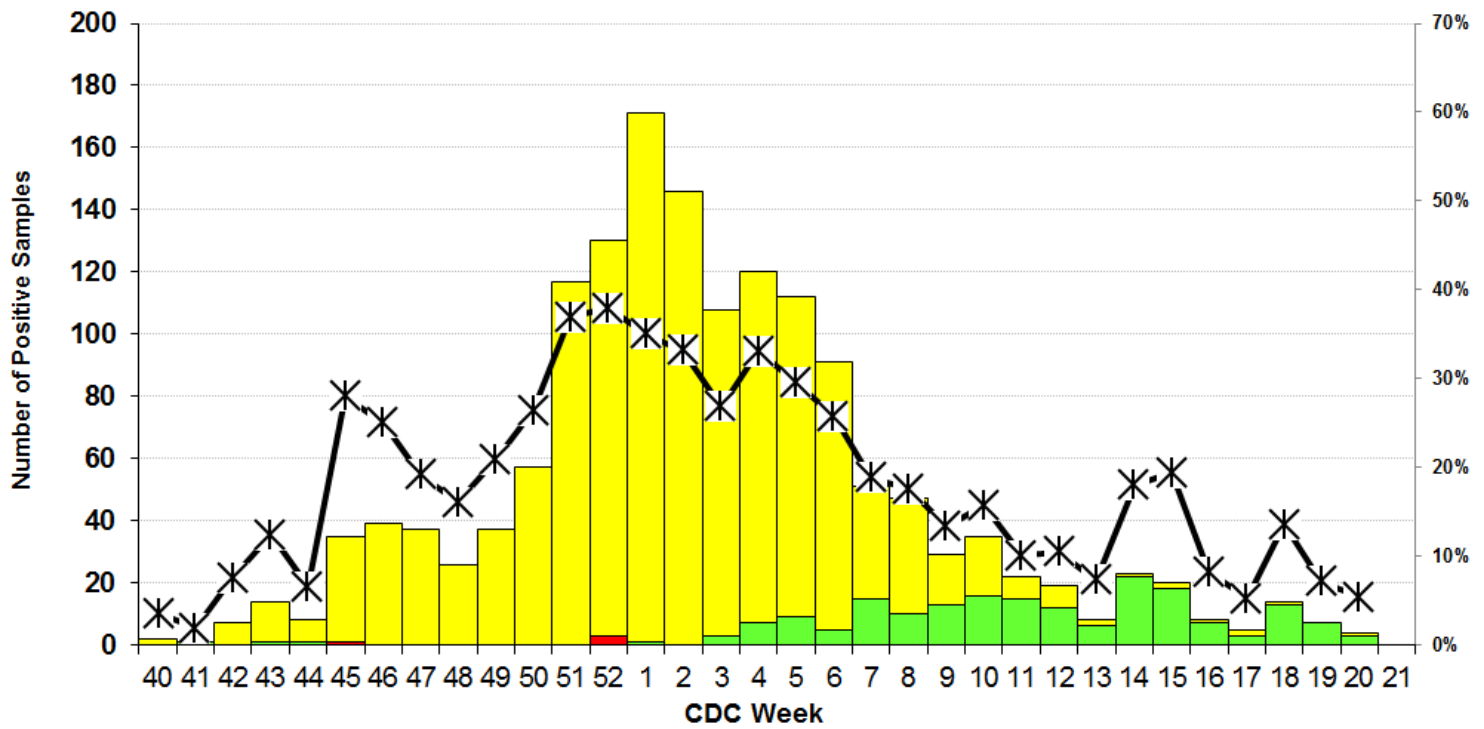
# Circulating Strains from Reporting Laboratories

## Local, State, and National Data

Reporting laboratories may provide details on what strain of influenza came back positive. The colored bars represent how much of each strain of influenza is being reported, while the black line is the percent of reported lab tests being positive. The below summaries display the breakdown of influenza strains identified in positive results at the local, state, and national level, by CDC week. This season, A subtypes were predominantly recorded, with a surge of influenza B subtypes later in the season.



**Number of Positive Influenza Tests by Week from Reporting Laboratories in Clark County**

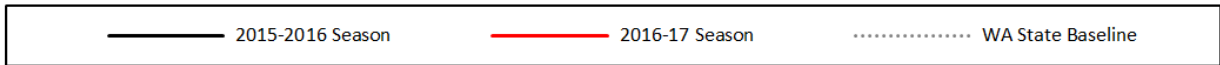
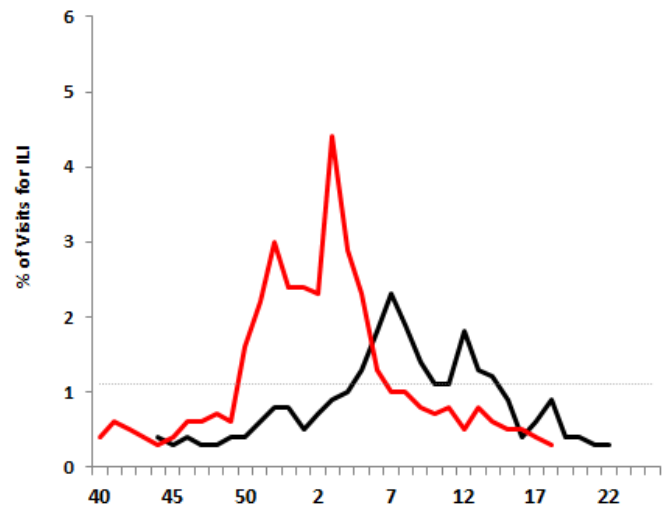
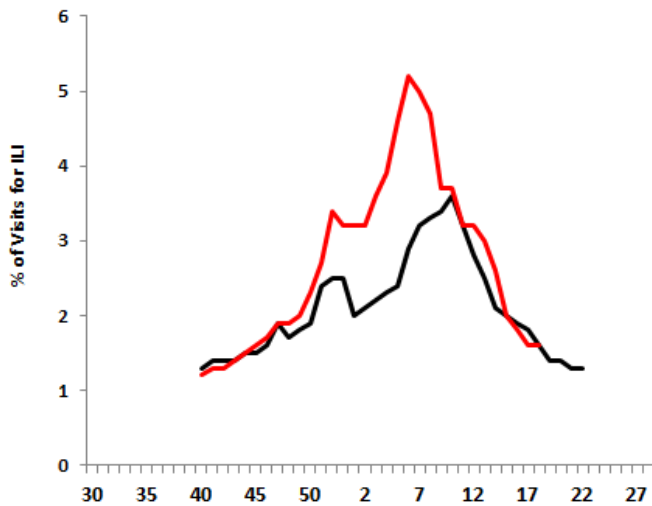


■ A(H3N2v)   
 ■ B   
 ■ A (not subtyped)   
 ■ A(H3)   
 ■ A(2009 H1N1)   
 —\* % Positive

# Influenza-Like Illness (ILI) Surveillance

Percentage of ILI Visits Reported by Sentinel Providers, Nationally, 2015-2017

Percentage of ILI Visits Reported by Sentinel Providers, Washington 2015-2017



Sentinel Provider Data are the percent of patient visits to a clinic that meet the case definition for influenza-like illness (ILI). ILI is defined as fever  $\geq 100^{\circ}$  F or  $37.8^{\circ}$  C (oral or equivalent) AND cough and/or sore throat (in the absence of a known cause other than influenza). Overall, reported ILI activity at the state and national levels was higher than in years past, with state ILI peaking at 4.4% and national levels reaching a maximum of 5.2%

## Vaccine Coverage and Estimated Effectiveness

In June 2017, the CDC released this year's final results of data collected through the US Influenza Vaccine Effectiveness Network, indicating an overall vaccine effectiveness of 42%. Interpreted, this means the influenza vaccine this season "reduced the overall risk for influenza-associated medical visits by 42%". The most recent report, including more detailed information on the CDC's vaccine effectiveness study, can be found [here](#).

During the 2016-2017 season, the influenza vaccine was composed of the following components:

- A (H1N1)
- A/Hong Kong/(H3N2)
- B/Victoria
- B/Yamagata (quadrivalent vaccine only)

The Food and Drug Administration's Vaccines and Related Biological Products Advisory Committee (VRBPAC) recommended the following components for the 2017-2018 trivalent influenza vaccine:

- A/Michigan/45/2015 (H1N1)pdm09-like virus
- A/Hong Kong/4801/2014 (H3N2)-like virus
- B/Brisbane/60/2008-like (B/Victoria lineage) virus

## Additional Resources

National influenza surveillance data are available at:

<http://www.cdc.gov/flu/weekly/>

Washington influenza surveillance data are available at:

<http://www.doh.wa.gov/Portals/1/Documents/5100/420-100-FluUpdate.pdf>

Oregon influenza surveillance data available at:

<http://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Influenza/Pages/surveil.aspx>

Disease outbreak news from the World Health Organization (WHO):

<http://www.who.int/csr/don/en/>

Recommendations of the Advisory Committee on Immunization Practices – ACIP – Influenza 2016-2017:

<http://www.cdc.gov/flu/professionals/acip/index.htm>

## Acknowledgements

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## Contact Information

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