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Alaska Influenza Surveillance Summary, 2016–17 Season

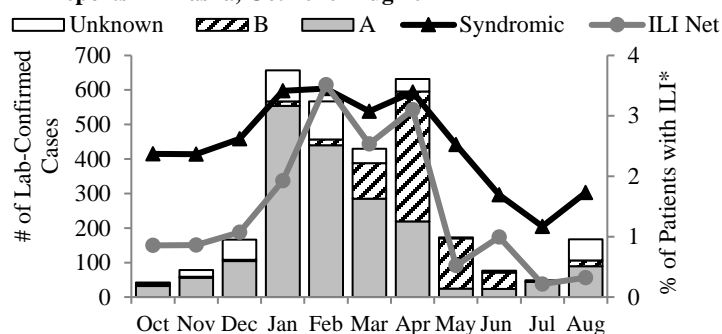
Background

The Alaska Section of Epidemiology (SOE) conducts routine influenza surveillance throughout the year, with heightened surveillance occurring October through May. Influenza surveillance provides information on where influenza activity is happening, tracks influenza-related illness (ILI) and associated mortality, identifies which viruses are circulating, and detects changes in those viruses. Weekly surveillance reports are posted on the SOE influenza webpage.¹ The purpose of this *Bulletin* is to provide an epidemiologic summary of the 2016–17 influenza season.

Alaska 2016–17 Influenza Activity

Sporadic influenza activity started during the early winter months and gradually increased, with peak activity occurring during January through April (Figure). Influenza A(H3) viruses predominated earlier in the season; influenza B viruses were detected more frequently later in the season (Figure).

Figure. Positive Influenza Laboratory Tests (PCR and Rapid), Emergency Department Syndromic Surveillance, and Outpatient ILI Reports — Alaska, Oct 2016–Aug 2017



*Proportion of patients seen in an outpatient clinic (ILINet) or in an emergency department (syndromic) who had ILI.

Laboratory Surveillance

To ensure confidence in detecting and characterizing influenza activity, national targets for specimen throughput and positive results must be met based on jurisdiction population size.² A subset of the Alaska State Virology Laboratory (ASVL) respiratory samples (n=76) were sent to the Centers for Disease Control and Prevention (CDC) for genome sequencing and antigenic typing, per specific CDC criteria.³ Another subset of respiratory samples (n=45) were sent to New York-Wadsworth for pyrosequencing/antigenic typing.

Nationally and in Alaska, the majority of influenza A and B isolates were well matched to the 2016–17 influenza vaccine.⁴ All 22 specimens selected for susceptibility testing were susceptible to neuraminidase inhibitors. ASVL publishes a weekly report that contains PCR data (i.e., A vs. B and hemagglutinin type) and antigenic characterization data.⁵

Outpatient Surveillance

Outpatient ILI surveillance through ILINet has been an important component of Alaska's influenza surveillance since 1997.⁶ During the 2016–17 season, six Alaska health care providers participated in weekly outpatient ILINet reporting. Additionally, SOE uses syndromic surveillance data from 14

hospital emergency departments. Syndromic surveillance involves using clinical data systems to monitor disease indicators, such as fever and cough, in near real-time as an indicator of regional influenza activity. During 2016–17, syndromic surveillance data matched laboratory trend data. This may not always occur as other respiratory viruses (e.g., coronaviruses, respiratory syncytial virus) can increase ILI activity without a corresponding increase in influenza activity.

Influenza-Associated Mortality

During the 2016–17 season, 11 adult and no pediatric influenza-associated deaths were identified from health care provider reports and Alaska death certificate reviews.

Summary

Compared to 2015–16, peak influenza activity occurred earlier in the 2016–17 season and reports persisted further into the late spring and summer.

Recommendations

1. Health care providers should strongly urge all eligible patients aged ≥ 6 months to receive influenza vaccine every year as soon as it becomes available. Influenza vaccine is the most effective tool available to prevent influenza-associated morbidity and mortality.
2. Providers can submit respiratory specimens from patients with ILI to ASVL for influenza testing; supplies can be obtained free of charge by calling 1-907-371-1000. Laboratory request forms are available at: <http://www.dhss.alaska.gov/dph/Labs/Documents/publications/FbxSupplyReq.pdf>
3. Laboratories must report all positive influenza test results (including rapid test results) to SOE per 7 AAC 27.007. Laboratories are also encouraged to report the total number of tests performed and the number of positive results directly to CDC to help meet Alaska's National Respiratory and Enteric Virus Surveillance System goals;⁷ call ASVL at 1-907-371-1000 for more information.
4. Health care providers must report suspected and confirmed influenza-associated deaths and unusual clusters of respiratory illness to SOE (call 907-269-8000 during business hours, or 1-800-478-0084 after hours).

References

1. Alaska SOE Influenza Surveillance Report. Available at: <http://dhss.alaska.gov/dph/Epi/id/Pages/influenza/fluinfo.aspx>
2. APHL. Influenza Virologic Surveillance Right Size Roadmap. Available at: https://www.aphl.org/programs/infectious_disease/influenza/Influenza-Virologic-Surveillance-Right-Size-Roadmap/pages/default.aspx
3. CDC Criteria for Selecting Influenza Specimens for Referral. See: http://www.aphl.org/programs/infectious_disease/influenza/Documents/ID_2013July_Laboratory-Testing-Implementation-Guidance.pdf
4. CDC. Influenza activity — United States, 2016–17 season and composition of the 2017–18 influenza vaccine. *MMWR* 2016;65(22):567-75. Available at: <http://www.cdc.gov/mmwr/volumes/65/wr/mm6522a3.htm>
5. Alaska State Virology Laboratory Weekly Report. Available at: <http://dhss.alaska.gov/dph/Labs/Pages/asvl.aspx>
6. Alaska SOE *Bulletin*. "Influenza Surveillance Update and New Laboratory Guidelines." No. 7, March 12, 2010. Available at: http://www.epi.alaska.gov/bulletins/docs/b2010_07.pdf
7. CDC. The National Respiratory and Enteric Virus Surveillance System. Available at: <https://www.cdc.gov/surveillance/nrevss/index.html>

Table. Characterization of Specimens Submitted from ASVL to CDC — Alaska, October 2016 through August 2017

# of Samples Tested	Results	Subtype	Covered in the Northern Hemisphere 2017–18 Vaccine?	Covered in the Northern Hemisphere 2016–17 Vaccine?
24 A (H3)	24 (100%)	A/HONG KONG/4801/2014-LIKE (H3N2)	Yes	Yes
3 A (H1N1)	2 (67%)	A/MICHIGAN/45/2015-LIKE (H1N1)pdm09	Yes	No
	1 (33%)	A/CALIFORNIA/07/2009-LIKE (H1N1)pdm09	No	Yes
9 B (Yamagata)	9 (100%)	B/PHUKET/3073/2013-LIKE	Yes (quadrivalent)	Yes (quadrivalent)
6 B (Victoria)	6 (100%)	B/BRISBANE/60/2008-LIKE	Yes	Yes

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