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Influenza Surveillance Update and New Laboratory Guidelines

Background

The 2009 influenza A H1N1 (2009 H1N1) virus emerged in the United States in April 2009 and the first Alaska case was detected in late May. Influenza surveillance has enabled health officials, health care providers and the public to track 2009 H1N1 influenza activity throughout the course of the pandemic. The purpose of this *Bulletin* is to summarize some of the findings of the various influenza surveillance systems utilized to monitor influenza activity in Alaska this season, to inform health care providers of the new Alaska State Virology Laboratory (ASVL) testing guidelines for respiratory viruses, and to provide hospital infection preventionists with a status update on inpatient influenza surveillance reporting.

Alaska Influenza Surveillance

The main goals of influenza surveillance are to identify when influenza virus is circulating, to estimate the amount of illness that is occurring by region, and to determine the circulating strain(s). Several strategies have been used for past influenza seasons; data are posted on the Section of Epidemiology influenza website.¹

Information on circulating viral strains is provided by laboratory surveillance. During the 2008–09 influenza season, peak influenza activity occurred in February and March 2009 (Figure 1), and ASVL identified seasonal influenza strains as late as May 2009. Three seasonal influenza strains predominated: influenza A (H1), A (H3), and B. The first laboratory-confirmed case of 2009 H1N1 influenza in Alaska was reported on May 27, 2009. This novel influenza strain continued to circulate widely throughout the summer and autumn months, waning in late November.

Information on patient visits to health care providers for influenza-like illness (ILI) is collected through the U.S. outpatient Influenza-Like Illness Surveillance Network (ILINet). ILI is defined as fever (temperature $\geq 100^{\circ}\text{F}$ [37.8°C]) and a cough and/or a sore throat in the absence of a known cause other than influenza. Each week ILINet providers report the proportion of their total patients seen with ILI. ILI activity in Alaska during the 2009–10 season matched trends established by other surveillance data, especially when influenza was highly prevalent (Figure 2).

In 2009, hospital surveillance was also used to measure the impact of 2009 H1N1 influenza in Alaska. Initially, hospitals were asked to report weekly admissions of laboratory-confirmed influenza (Figure 2). However, with lag times on testing results and changes to testing recommendations, beginning November 1, hospitals were asked to report weekly admissions of patients with influenza or pneumonia (I&P) syndrome in order to better estimate the burden influenza-associated hospitalizations.

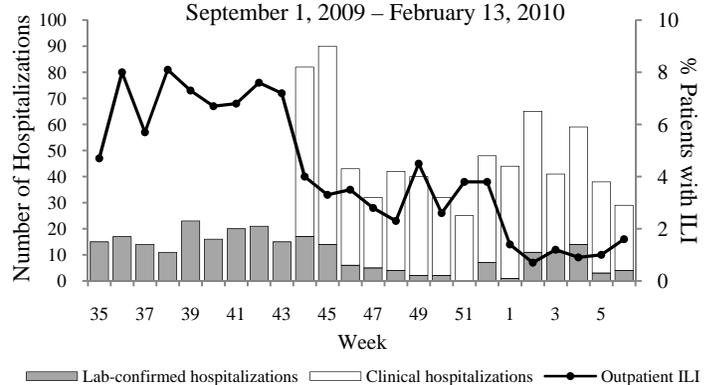
Discussion

2009 H1N1 influenza activity occurred throughout the summer in Alaska, began increasing steadily in August, peaked in

November, and began decreasing in December. Although the 2009–10 influenza season is not over yet, laboratory indicators currently show low levels of 2009 H1N1 influenza activity in Alaska. While this is a good sign, it is certainly possible that we could see an increase in influenza activity later this season.

Clinical indicators based on the levels of reported ILI and I&P hospitalizations suggest that respiratory pathogens other than influenza virus are now responsible for the bulk of acute respiratory infection hospitalizations. Therefore, weekly hospital admission reporting of patients with I&P syndrome is no longer necessary. We are still asking for reports of hospitalized patients with laboratory-confirmed influenza through the end of the season, however.

Figure 2: Hospitalizations for Influenza and Pneumonia Compared with Outpatient ILI Surveillance: September 1, 2009 – February 13, 2010



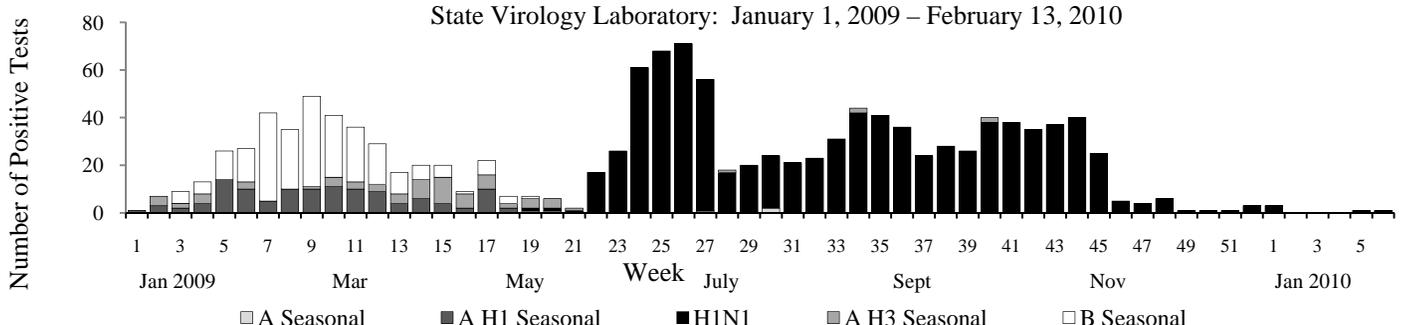
Recommendations

1. Submit specimens to ASVL from *both inpatients and outpatients* to be tested for influenza and other respiratory viruses. ASVL no longer automatically performs a culture on all respiratory specimens; therefore, providers must check one or more boxes on the new lab request form to request respiratory viral culture and/or influenza testing.²
2. Laboratories should report all positive influenza test results (including rapid test results) to the Section of Epidemiology.
3. Hospitals should continue to report patients admitted with laboratory-confirmed influenza on a weekly basis.
4. Providers should continue to vaccinate individuals with seasonal and 2009 H1N1 influenza vaccine.
5. Providers should report suspected or confirmed influenza-associated pediatric deaths and clusters of respiratory illness by calling 907-269-8000 during business hours, or 1-800-470-0084 after hours.

References

1. Section of Epidemiology Alaska Influenza Surveillance Report. Available at: <http://www.epi.hss.state.ak.us/id/influenza/influenza.jsp>
2. Alaska State Virology Laboratory Lab Request Form (v2/23/10). Available at: <http://www.hss.state.ak.us/dph/labs/publications/image/FbxSupplyReq.pdf>

Figure 1: Positive Influenza Culture and PCR Results by Week of Specimen Submission to the Alaska State Virology Laboratory: January 1, 2009 – February 13, 2010



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