Healthcare Personnel Influenza Vaccine Coverage after Implementation of a Mandatory Influenza Vaccination Policy
Cheyenne Jim, Jeffrey McCollum, Amy Groom

Background:
Influenza vaccination for health care facility staff and licensed independent practitioners is a major patient safety issue in the United States and is an important component of comprehensive infection control programs. This is especially important for Healthcare Personnel (HCP) working in Indian Health Service (IHS) facilities as American Indian/Alaska Native (AI/AN) populations have higher risk for influenza-related morbidity and mortality. AI/AN death rates for influenza and pneumonia are almost twice that of the U.S. white population.

Setting:
All Federal IHS healthcare facilities

Population:
We defined HCP as all Civil Service employees, contract staff, temporary employees, students, and volunteers, whose duties and responsibilities require them to work permanently, temporarily or occasionally in an IHS health care facility regardless of their job category or level of patient contact.

Project Description:
The IHS HCP influenza vaccination policy was partially implemented during the 2015-2016 influenza season and applied to all non-Union IHS HCP. The policy was fully implemented during to the 2016-2017 influenza season. The policy states all HCP must receive a seasonal influenza vaccination by October 31 of each year or have on file a valid medical or religious exemption.

Results/Lessons Learned:
Prior to implementation of the policy, influenza vaccine coverage was 74.6% for HCP working at an IHS healthcare facility. With a partial implementation of the policy, influenza vaccine coverage increased to 84.8% in the 2015-2016 influenza season, representing a 10.2 percentage point increase from the previous year. The 2016-2017 influenza season was the first time ever IHS achieved the national Healthy People 2020 goal of >90% influenza vaccine coverage among HCP. Following successful development and full policy implementation, the IHS facilities achieved HCP influenza vaccine coverage of 90.0%. The 2017-2018 IHS HCP influenza vaccine coverage data will be available in April 2018 and will be presented at the conference.
Laboratory Testing Algorithm for Asymptomatic Rubella Contacts
Beth Isaac, Eugene Lam, Jennifer Rosen

Background:
Up to 50% of rubella cases are asymptomatic. Rubella-specific Immunoglobulin G (IgG) titers alone cannot distinguish between evidence of immunity or recent infection. Sole reliance on IgG titers for determining rubella immunity status has led to missed cases of recent asymptomatic rubella infection resulting in cases of congenital rubella syndrome (CRS).

Objectives:
An algorithm was developed to guide the management of asymptomatic rubella contacts taking into account the limitations of IgG titers and the potential for asymptomatic reinfection.

Methods:
The pregnancy and immunity status of contacts were used to determine whether additional laboratory testing was warranted. Evidence of immunity was defined as IgG positive titers or receipt of one dose of rubella-containing vaccine prior to exposure, or birth before 1957. In addition to rubella IgG, recommended testing for asymptomatic contacts included IgM to identify recent infection and IgG avidity to distinguish between recent infection and prior immunity or infection.

Results:
In the algorithm, no testing was recommended for non-pregnant contacts with evidence of immunity prior to exposure. Non-pregnant contacts with unknown immunity status were recommended for IgM and IgG testing to detect infection and determine their immunity status. Once the immunity status was known, these contacts could be managed accordingly. For non-immune, non-pregnant contacts and all pregnant contacts regardless of immunity status, IgM testing after the incubation period was recommended to detect asymptomatic infection. Because of the potential for false-positive IgM results, IgG avidity testing was recommended for all IgM positive results.

Conclusion:
Asymptomatic infection should be considered in the management of rubella contacts based on pregnancy and immunity status. The algorithm developed can be used to triage testing of asymptomatic contacts to prevent transmission of rubella virus and ultimately cases of CRS.
Syndromic Surveillance as a Tool for Case-based Varicella Reporting, Georgia, 2016-2017
Carolyn Adam, René Borroto, Ebony Thomas, Jessica Tuttle, Cherie Drenzek

Background:
Syndromic surveillance refers to the systematic gathering and analysis of automated health data to detect clusters of symptoms that might indicate a public health threat. The Georgia Department of Public Health sought to use syndromic surveillance to enhance case-based varicella reporting.

Objectives:
1. To describe the utility of syndromic surveillance for detection of individual varicella cases, clusters, and outbreaks in Georgia

Methods:
Georgia’s syndromic surveillance system receives data from 125 hospital emergency departments and urgent care facilities. The system was queried to capture visits to a reporting facility from 5/1/ 2016 -10/31/2017 with a discharge diagnosis containing the terms “varicella” or “chickenpox.” Notifications were matched by medical record number to reports entered into Georgia’s State Electronic Notifiable Disease Surveillance System (SendSS) and classified as false-positive (not a varicella case in Georgia) or true-positive (a varicella case in Georgia).

Results:
Two hundred (200) notifications were received via syndromic surveillance. Of these, 118 (59%) were false-positive, 77 (38.5%) were true-positive, and five (2.5%) were pending review. The median age for notifications was 2.9 years for true-positives and 7.5 years for false-positives.

True-positive notifications were matched to 26% of all varicella cases reported in SendSS with rash onset 5/1/2016-10/31/2017.

Of cases matched to true-positive notifications, 62 (82%) were sporadic and 14 (18%) were epi-linked. Three (21%) epi-linked case notifications were associated with outbreaks; one led to early detection, while two were associated with known outbreaks. The median days between public health notification and rash onset for cases matched to true-positives was four (range 1-25).

Conclusion:
Syndromic surveillance notifications can lead to varicella outbreak detection, and were more useful in detecting younger cases. Use of Georgia’s syndromic surveillance system has helped enhance case-based and outbreak reporting for varicella, and could be used as an additional tool to improve routine notifiable disease surveillance.