

EPI Update for Friday, February 26, 2010
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **Measles follow-up after exposure on an airplane**
- **Inclusion of H1N1 in seasonal influenza vaccine**
- **Meeting announcements and training opportunities**

Measles follow-up after exposure on an airplane

On February 23, IDPH was notified by the CDC's Division of Global Migration and Quarantine that a resident of Scott County had been exposed to a child with measles on a February 12th flight from India. The child developed symptoms of measles three days after the flight. Persons with measles can be infectious up to four days prior to onset of symptoms. The child's symptoms were typical of measles and included rash, high fever, cough, coryza and conjunctivitis. IgM laboratory tests were positive for measles, and the child's state health department immediately notified CDC. The CDC's quarantine station obtained fellow passengers' information from the airline, and then contacted these passengers' state health departments for follow-up investigations. Within an hour, IDPH had contacted the exposed Iowa passenger, explained the situation, and asked about his health and immunization history.

Since IDPH was contacted 11 days after the flight, it was too late to provide the passenger with post-exposure protection, since measles vaccine can only be used up to three days after exposure and immune globulin up to six days after exposure. He thought he had been immunized for measles prior to school entry decades before, but documentation could not be found. He also reported that he had a cough, which could be the first sign of measles. Given his symptom and lack of documented immunity, he was immediately placed in quarantine; he was asked to leave his workplace and go home, which he did voluntarily. He lived with his wife who was contacted and did have one documented MMR, so she was allowed to go home that night to the same house.

Since it was not known at that point if he was immune or coming down with measles, the Scott County health department met him at his house that afternoon to draw blood to test for both IgM (to test for acute disease) and IgG (to test for immunity). The blood was sent to the University Hygienic Laboratory (UHL) for emergency testing.

Late the next day, UHL reported that the IgM was negative, and the IgG was positive; thus he was immune, probably from childhood vaccination, and could not develop measles. He was released from quarantine and returned to work the next day.

Had he been IgM positive and IgG negative (i.e. he had developed measles), he would have been isolated at his house until four days after the rash started. At that time he would have no longer been infectious. Meanwhile, an investigation would have been started to identify and address the people that he had exposed to measles. If he had been both IgM and IgG negative (i.e. neither immune nor ill with measles yet), he would have been quarantined at his home until 21 days after exposure to the child on the airplane to ensure that he would not develop measles and expose others.

There are several lessons learned from this situation: 1) international travelers should receive all recommended immunizations prior to travel; 2) if history of vaccination is unsure or can't be documented, those vaccines should be given to ensure immunity; and 3) maintain records of all immunizations. In our global village it remains important to make sure that lowans are fully immunized!

Inclusion of H1N1 in seasonal influenza vaccine

The World Health Organization (WHO) has recommended that the 2010-2011 influenza vaccine contain three strains:

- A/California/7/2009 (H1N1)-like virus (pandemic strain)
- A/Perth/16/2009 (H3N2)-like virus
- B/Brisbane/60/2008-like virus.

Based on this year's experience, the pandemic A(H1N1), A(H3N2) and B viruses are expected to co-circulate next flu season in the northern hemisphere with a likelihood that pandemic A(H1N1) viruses will continue to predominate.

For a complete report on the recommendations from the WHO, including a summary of influenza activity, antigenic and genetic characteristics of recent influenza isolates and a discussion of antiviral drug sensitivity, go to www.who.int/csr/disease/influenza/201002_Recommendation.pdf.

Meeting announcements and training opportunities

None this week

Have a healthy and happy (and slightly warmer) week.

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