EPI Update for Friday December 16, 2005

Center For Acute Disease Epidemiology

Iowa Department of Public Health

Items for this week's EPI Update include:

- **Influenza update**
- **Parotitis: What's the cause?**
- **December is National Drunk and Drugged Driving (3D) Prevention Month by presidential proclamation**
- **Meetings and announcements**

Influenza update

Seasonal Influenza: Iowa and the United States

Iowa Department of Public Health (IDPH) - Center for Acute Disease Epidemiology (CADE) has had two additional cases of seasonal influenza confirmed by UHL, bringing our total number of influenza cases to three. All three cases have occurred in western Iowa and are influenza type A, H3 strain. Neuraminidase determination for these cases will be performed at CDC in Atlanta, Georgia, but it is most likely this is the strain covered by the vaccine.

All neighboring states to the north and west of Iowa continue to report influenza activity.

Influenza-like illness reported by participants in the Iowa Influenza Surveillance Network (IISN) is remaining *slightly* below the baseline. For more information on the IISN, visit our Web site at www.idph.state.ia.us/adper/flu.asp.

IDPH stresses that all high-risk Iowans (and anyone else who doesn't want to get the flu this year) get the flu vaccine now if they haven't already. This is the best way to avoid getting the flu. Supplies of the vaccine are available across the state. Contact your local county health department or personal health care provider about availability. For healthy Iowans aged 5 - 49, the nasal flu vaccine, FluMist™, is an option. The peak time of flu season usually doesn't occur until mid-January, so there is still good reason to get vaccinated.

Avian influenza

H5N1 avian influenza activity continues to persist throughout countries in Asia with Indonesia confirming their 14th human case. This most recent case in Indonesia was a 35-year-old male from West Jakarta. The patient developed symptoms of fever, cough, and difficulty breathing on Nov. 6, was hospitalized on Nov. 9, and died on Nov. 19. Although the patient did not raise poultry on his property, chickens and other birds are in the neighborhood where he lived. Observation and testing of family members and contacts did not reveal any additional cases of H5N1 avian influenza.

This brings the total number of confirmed human cases of H5N1 avian influenza to 138, which includes 71 deaths. For the most up-to-date information on H5N1 avian influenza, visit the WHO's Web site at www.who.int/csr/disease/avian_influenza/en/.

Pandemic influenza planning efforts

The WHO pandemic alert phase for the world continues to remain at "3." Alert phase 3 is defined as there being a new influenza subtype causing illness in humans, but the new virus strain is not spreading directly or continuously from human to human.

Visit www.who.int/csr/disease/avian_influenza/pandemic/en/index.html for information on the WHO epidemic and pandemic influenza alert criteria and response plans.

Parotitis: What's the cause?

Recently the IDPH Immunization Program has received several calls from health care providers regarding three different clusters of students with pain and swelling of the parotid glands (parotitis) that they suspected might be due to mumps. The first cluster of 10 students all had painful swelling of the parotid glands on one side only, elevated white blood cell count, and fever. One of the students in this cluster was positive for mononucleosis and strep throat; all other laboratory tests were negative. The second cluster involved four male students who had significant pain and swelling of both parotid glands, which caused them to have difficulty opening their mouth. Three of these four individuals had low white blood cell counts. The third cluster involved nine students who all had pain and swelling of their parotid glands. All of the students in all three clusters had documented proof of two MMR vaccinations and had negative mumps IgM antibody test results.

Because parotitis can be caused by many viruses besides the mumps virus (genus *Paramyxovirus*, family *Paramyxoviridae*), it can be difficult to differentiate parotitis due to mumps from other causes of parotitis. Some of the other viruses that can cause parotitis include adenovirus, Epstein-Barr virus, parainfluenza virus types 1 and 3, influenza A virus, Coxsackie A virus, echovirus, lymphocytic choriomeningitis virus, HHV-6, human immunodeficiency virus. Parotitis can also occur due to non-infectious causes such as drugs, tumors, immunologic diseases, and obstruction of the salivary duct.

The incidence of mumps in the U.S. has declined dramatically since 1967 when the vaccine came into use. Children in Iowa receive two doses of Measles-Mumps-Rubella (MMR) vaccine prior to entering school. The clinical efficacy of the vaccine is estimated to be 95 percent (range, 90-97 percent). Duration of immunity has been demonstrated to be more than 25 years, and is probably life-long. Consequently, individuals who have had two doses of MMR vaccine who are ill with "mumps-like symptoms" and/or parotitis are NOT likely to be ill due to the mumps virus.

To help determine the cause of parotitis, a thorough patient history (including previous vaccinations) and physical examination are necessary. Additionally, if the patient may be part of a cluster or an outbreak, CADE recommends that the health care provider eliminate/"rule out" mumps as a possible cause of the parotitis. This is best accomplished by:

- Massaging the swollen glands and submitting a throat swab for virus isolation and identification to UHL. When submitting specimens to UHL please:

  - include patient symptoms;
  - collect specimen in viral transport medium and keep cold; and
  - ship specimen on ice packs as soon as possible to UHL.

Complete instructions for specimen submission to UHL are available at www.uhl.uiowa.edu/kitsquotesforms/respiratoryvidcollectioninstructions.pdf

- IgG and IgM antibody testing. Two very important items to remember regarding IgG and IgM test results are:
  - "False positive" mumps IgM antibody tests performed by immunofluorescent antibody assays (IFA) have been reported – so it is important to request both IgM *and* IgG antibody levels.

  - Patients who are actually ill with mumps will have a positive IgM antibody test (and IgG negative), or a fourfold increase in IgG over a period of several weeks. A positive IgG antibody test with a negative (or potential "false positive") IgM indicates the patient **does not** currently have mumps, but had mumps in the past, or has been previously vaccinated.

December is National Drunk and Drugged Driving (3D) Prevention Month by presidential proclamation

Studies conducted by the National Highway Traffic and Safety Association (NHTSA) and other agencies and researchers have shown that impaired driving affects one in three Americans during their lifetime. Dr. Susan Brockus, state public health veterinarian at IDPH-CADE, can personally attest to this – her grandparents were killed in an automobile accident in Tulsa, OK, caused by a drunk driver who was driving at least 65 mph in a school zone at 2:30 PM on Nov. 29, 2000.

Here are some sobering facts and figures from NHTSA and CDC to drive home the point to not drink alcohol (or use drugs, legal or illegal, that impair your mental status and responses) and then drive:

- 16,694 persons died in alcohol-related motor vehicle accidents. This accounts for 39 percent of all traffic related deaths in the U.S. (NHTSA 2004).

- Alcohol-related motor vehicle crashes kill someone every 31 minutes and nonfatally injure someone every two minutes (NHTSA 2005).

- In 2002 about 1.5 million drivers were arrested for driving under the influence of alcohol or narcotics. This figure is slightly more than 1 percent of the 120 million self-reported episodes of alcohol–impaired driving among U.S. adults each year (Dellinger 1999).

- Drugs other than alcohol (e.g., marijuana and cocaine) are involved in about 18 percent of motor vehicle driver deaths. These other drugs are generally used in combination with alcohol (NHTSA 2003).

- More than two-thirds of child passengers 14 years of age and younger who died in alcohol-related crashes during 1997–2002 were riding with the drinking driver; only 32 percent of these child passengers were properly restrained at the time of the crash (Shults 2004).

- Each year, alcohol-related crashes in the United States cost about $51 billion (Blincoe et al. 2002).
- To further decrease alcohol-related fatal crashes, communities need to implement and enforce strategies that are known to be effective, such as sobriety checkpoints, 0.08 percent BAC laws, minimum legal drinking age laws, "zero tolerance" laws for young drivers, and others (Elder et al. 2002, Howat et al. 2004, Shults et al. 2001, Shults et al. 2002).

For more information including groups at risk and risk factors, in addition to activities, interventions, and prevention strategies to decrease the occurrence of impaired driving (whether due to alcohol or drugs), visit the CDC's Web site at http://www.cdc.gov/ncipc/duip/spotlite/3d.htm and

http://www.cdc.gov/ncipc/factsheets/drving.htm

Meeting announcements and training opportunities

Pandemic influenza newspaper insert next week

IDPH is working with two of its media partners to help Iowans understand the issue of seasonal flu, pandemic flu and avian flu. Through the Iowa Newspaper Association, IDPH has put together a large newspaper ad, scheduled to run over the next week, that talks about what Iowans need to know about the types of flu they keep hearing about in the news. IDPH has also included several additional newspapers articles that well over 100 newspapers will run talking about other aspects of the flu and pandemic planning. The newspapers will run those articles on the pages surrounding the IDPH ad. The other media partner is Radio Iowa (Learfield Communications). Those radio stations will run ads featuring IDPH Director Dr. Mary Mincer Hansen promoting the newspapers ad and stories.

The goal is by having the articles distributed statewide, Iowans will feel more comfortable about the seasonal flu season, and the talk about pandemic and avian flu.