

**EPI Update for Friday, December 15, 2017**  
**Center for Acute Disease Epidemiology (CADE)**  
**Iowa Department of Public Health (IDPH)**

**Items for this week's EPI Update include:**

- **Vaccination still best defense against flu**
- **Neurocysticercosis case identified in Iowa**
- **FDA streamlines updating of antimicrobial susceptibility breakpoints**
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**Vaccination still best defense against flu**

A recent New England Journal of Medicine article cited studies conducted in Australia indicating the effectiveness of this year's influenza vaccine there was about 10 percent against H3N2 virus and 33 percent against all influenza viruses. This article has prompted questions about how effective the influenza vaccine will be in the U.S. this season. While it is too early to know how effective this year's vaccine will be, information from previous years provides clues.

Influenza vaccine effectiveness varies from year to year among different age and risk groups and is affected by the circulating viruses that season. This season's vaccine includes the same H3N2 vaccine component as last season and most H3N2 viruses characterized in the U.S. this season are still similar to the H3N2 vaccine strain. Therefore, last season's estimates of vaccine effectiveness from the U.S. are likely to be a better predictor of vaccine effectiveness in the U.S. this year than estimates from Australia's season. Last season, the vaccine effectiveness in the U.S. was about 40 percent overall and 32 percent against H3N2 viruses.

No vaccine is 100 percent effective, but there are many reasons to get vaccinated for influenza. It is the best way to prevent influenza-related illness, serious complications and death. Even with vaccine effectiveness in the range of 30 to 60 percent, influenza vaccination prevents millions of illnesses and tens of thousands of hospitalizations each year.

It is important to take other protective actions, such as the 3 Cs: cover your cough, clean your hands, and contain germs by staying home when ill. Antivirals can be prescribed as a second line of defense to treat influenza and to prevent illness in certain high risk settings, such as long-term care facilities, during suspected influenza outbreaks.

For answers to frequently asked questions about influenza, visit [www.cdc.gov/flu/about/season/flu-season-2017-2018.htm](http://www.cdc.gov/flu/about/season/flu-season-2017-2018.htm).

### **Neurocysticercosis case identified in Iowa**

A case of neurocysticercosis in an Iowa resident was reported this week. Cysticercosis is a parasitic infection caused by larval cysts of the tapeworm *Taenia solium*. Infection typically occurs after swallowing eggs excreted in the stool of an infectious individual who has the tapeworm. Once consumed, the larval cysts have the potential to infect the brain, muscles or other tissues. The parasite is found worldwide, but is more common in rural areas of Latin America, Asia and Africa with poor water quality and sanitation practices. The infected Iowa resident did have out-of-country travel to a high risk area.

Neurocysticercosis symptoms include seizures, headaches, confusion and tender lumps under the skin. Household members of someone ill with this infection are at increased risk of contracting this illness, so testing is recommended for those individuals.

For more information about this illness, visit [www.cdc.gov/parasites/cysticercosis/index.html](http://www.cdc.gov/parasites/cysticercosis/index.html).

### **FDA streamlines updating of antimicrobial susceptibility breakpoints**

When a patient has an infection, healthcare providers often order antimicrobial susceptibility testing to help them select a drug that is likely to work against the infection. The criteria used to determine whether bacteria or fungi are considered “susceptible” or “resistant” to a particular drug are referred to as breakpoints, or more formally as Susceptibility Test Interpretative Criteria (STIC). Over time, bacteria and fungi may become less susceptible to some drugs. When this happens, breakpoints may need to be changed so that laboratories are using the most up-to-date information to help healthcare providers choose appropriate treatment.

This week, FDA took an important first step in implementing a more streamlined process of updating breakpoints for antimicrobial drugs by launching new web pages that contain Susceptibility Test Interpretive Criteria.

For more information on FDA-Recognized Antimicrobial Susceptibility Test Interpretive Criteria, visit [www.fda.gov/Drugs/DevelopmentApprovalProcess/DevelopmentResources/ucm410971.htm](http://www.fda.gov/Drugs/DevelopmentApprovalProcess/DevelopmentResources/ucm410971.htm).

### **Babesiosis in Iowa**

While Lyme disease is the most commonly reported tick-borne disease in Iowa, it is not the only tick-borne infection of concern. One of the rarest, but important tick-borne infections that is not well known is Babesiosis. Babesiosis is usually caused by the parasite *Babesia microti*, which infects red blood cells. The parasite is spread by the blacklegged tick (or deer tick), the same tick that

spreads Lyme disease in Iowa. Babesiosis in the U.S. mainly occurs in parts of the Northeast and upper Midwest.

In 2016, one case of Babesiosis was reported to IDPH. In 2017, two cases have been reported and another is under investigation.

For more information on Babesiosis, visit [www.cdc.gov/parasites/babesiosis/](http://www.cdc.gov/parasites/babesiosis/).

**In the news: Guano-filled tunnels cause deadly outbreak in Dominican Republic**

[www.healio.com/infectious-disease/respiratory-infections/news/online/%7B72b1c6ef-1169-4a54-89a3-a61f057aac8%7D/guano-filled-tunnels-cause-deadly-outbreak-in-dominican-republic](http://www.healio.com/infectious-disease/respiratory-infections/news/online/%7B72b1c6ef-1169-4a54-89a3-a61f057aac8%7D/guano-filled-tunnels-cause-deadly-outbreak-in-dominican-republic)

**Infographic: Keep hot foods above 140° F**



To view in full-size, visit [www.cdc.gov/foodsafety/images/socialmedia/Holiday-gingerbread-buffet2-fb.png](http://www.cdc.gov/foodsafety/images/socialmedia/Holiday-gingerbread-buffet2-fb.png).

**Meeting announcements and training opportunities**

None

**Distribution of this issue of the EPI Update was delayed due to technical challenges. The next EPI Update will be issued on Friday, December 29th.**

**Have a healthy and happy week!**

Center for Acute Disease Epidemiology

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