



Fall 2005

EPIDEMIOLOGY BULLETIN

FLU

Also known as influenza, is a contagious disease that is caused by the influenza virus. It attacks the respiratory tract in humans (nose, throat, and lungs). Most people who get infected recover in one to two weeks, but some develop life-threatening complications. Millions of people in the United States — about 5% to 20% of U.S. residents get influenza each year. On average about 36,000 people per year in the United States die from influenza, and more than 200,000 are admitted to the hospital as a result of complications.

Rates of infection are highest among children, but rates of serious illness and death are highest among persons older than 65 years, children under 2 years, and anyone who has medical conditions that increase their risk for complications from influenza.

Types

Influenza A and B are the two types of influenza viruses that cause epidemic human disease. Influenza A viruses are further categorized into subtypes on basis of surface antigens.

Symptoms

- fever (usually high)
- headache
- extreme tiredness
- dry cough
- sore throat
- runny or stuffy nose
- muscle aches

Spread of Flu

Flu viruses spread in respiratory droplets caused by coughing and sneezing. They usually spread from person to person, though sometimes people become infected by touching something with flu viruses on it and then touching their mouth, nose or eyes.

Lab Diagnosis

Tests are not recommended for all individuals. It is only advisable during outbreaks of respiratory illness. Diagnostic tests available for influenza include viral culture, serology, rapid antigen testing, polymerase chain reaction (PCR), and immunofluorescence assays. Commercial rapid diagnostic tests are available that can detect influenza virus within 30 minutes.

Prevention

The best way to prevent the flu is to get a flu vaccination each fall (October-December). There are two types of vaccines:

- *The "flu shot" —that is given with a needle
- *The nasal-spray flu vaccine

Who should get vaccinated?

Anyone and everyone who wants to reduce their chance of getting flu. High risk group includes:

- people aged 65 years and older, with and without chronic health conditions
- residents of long-term care facilities
- people aged 2–64 years with chronic health conditions
- children aged 6–23 months
- pregnant women
- health-care personnel who provide direct patient care
- household contacts and out-of-home caregivers of children less than 6 months of age

Who should not get vaccinated?

- People who have a severe allergy to chicken eggs.
- People who have had a severe reaction to an influenza vaccination in the past.
- People who developed Guillain-Barré syndrome (GBS) within 6 weeks of getting an influenza vaccine previously.
- Children less than 6 months of age

Treatment

Antiviral drugs for influenza are an adjunct to influenza vaccine for controlling and preventing influenza. However, these agents are not a substitute for vaccination. Four licensed influenza antiviral agents are available in the United States: amantadine, rimantadine, zanamivir, and oseltamivir

BIRD FLU

Avian influenza is a serious form of flu which has threatened the world in the past decade. Usually occurs in wild birds. Recently cases have spread from wild birds to domestic birds and from domestic birds to humans. There is no evidence of human to human spread of this disease. There have been no cases of bird flu in the US. Public Health authorities in the US and worldwide are collaboratively working together to control the spread of this disease and working to develop an effective vaccine.

Source: www.cdc.gov/flu

Communicable Disease: Fact Sheet for Champaign County

July-September 2005

Rate Adjusted per 100,000 population

Selected Reportable Communicable Disease	Champaign Urbana 2005			Champaign County 2005			Champaign Urbana 2002-2004 Average			Champaign County 2002-2004 Average		
	July	August	Sept	July	August	Sept	July	August	Sept	July	August	Sept
Enteric E Coli	1	1	1	0	0	0	0	0	0	0	0	0
Foodborne Illness	0	0	0	0	0	0	0	0	0	0	0	0
Pertussis	5	0	0	0	0	3	3	1	1	4	0	0
Streptococcal	0	0	0	0	0	1	0	0	0	0	0	0
Blastomycosis	0	0	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	3	1	1	1	0	1	2	2	0	0	0	1
Chickenpox	0	0	0	0	0	0	0	1	0	0	0	0
Chlamydia	42	61	75	15	17	15	68	67	73	26	30	22
Cryptosporidiosis	0	2	2	0	0	0	0	0	0	0	0	0
Tuberculosis	0	1	0	0	0	0	1	0	1	0	0	0
Giardiasis	3	3	2	0	0	0	3	2	1	0	0	0
Gonorrhea	22	38	27	9	12	5	21	41	39	5	11	8
Hepatitis B	2	1	0	0	0	0	3	1	3	0	0	0
Hepatitis C	15	5	0	0	1	0	1	1	6	0	0	0
Histoplasmosis	0	0	0	0	1	0	0	0	0	0	0	0
Meningitis, Aseptic	0	2	3	0	0	0	1	2	2	0	0	3
Salmonella	1	2	0	1	3	1	3	1	0	3	0	0
Shigellosis	0	0	1	0	0	0	0	0	0	0	0	0
Strep Pneumonia	0	1	0	0	0	0	0	0	0	0	0	0
HIV	0	0	0	1	3	3	5	2	1	0	0	0
Rabies, Exposure	2	4	1	0	0	0	0	0	0	0	0	0

Population : Champaign Urbana: 103,913 & Champaign County: 75,756

Updated: 11/22/2005

Please report all suspected communicable disease to Rachella Thompson, Communicable Disease Investigator at 217-531-4271 or email rthompson@cuphd.org

Common Foodborne Diseases

Norovirus: a group of viruses that cause the “stomach flu,” or gastroenteritis in people. The Center for Disease Control estimates that 23 million cases of acute gastroenteritis are due to norovirus infection, and it is now thought that at least 50% of all foodborne outbreaks of gastroenteritis can be attributed to noroviruses. The symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. Sometimes people have a low-grade fever, chills, headache, muscle aches, and tiredness. The illness often begins suddenly, and the infected person may feel very sick. The illness is usually brief, with symptoms lasting only about 1 or 2 days. Noroviruses are very contagious and can spread easily from person to person. Both stool and vomit are infectious.

Noroviruses are transmitted primarily through the fecal-oral route, either by consumption of fecally contaminated food or water or by direct person-to-person spread. Environmental contamination may also act as a source of infection. Currently, there is no antiviral medication against norovirus and there is no vaccine to prevent infection. Norovirus infection cannot be treated with antibiotics. This is because antibiotics work to fight bacteria and not viruses.

A person can reduce the chance of contracting the disease by following these preventive steps:

- Frequent hand washing especially after toilet visits and changing diapers and before eating or preparing food
- Wash fruits, vegetables and steam oysters before eating them
- Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness by using a bleach-based household cleaner. Wash contaminated clothes and linen with hot soap and water.

Salmonella: a group of bacteria that can cause diarrheal illness in humans. There are many different kinds of Salmonella bacteria. Salmonella serotype Typhimurium and Salmonella serotype Enteritidis are the most common in the United States. Most persons infected with Salmonella develop diarrhea, fever, and abdominal cramps 12 to 72 hours after infection. Salmonella are usually transmitted to humans by eating foods contaminated with animal feces. Undercooked food, cross contamination by an infected food handler and feces of pets are some of the common sources.

Approximately 40,000 cases of salmonellosis are reported in the United States each year and about 600 die of the disease. The illness usually lasts 4 to 7 days, and most people do not require treatment unless they become severely dehydrated or the infection spreads from the intestines. Persons with severe diarrhea may require rehydration, often with intravenous fluids. Antibiotics are not usually necessary unless the infection spreads from the intestines, then it can be treated with ampicillin, gentamicin, trimethoprim/sulfamethoxazole, or ciprofloxacin.

Prevention is the best strategy to prevent salmonella. Some of the measures that one can take are:

- Cook poultry, ground beef, and eggs thoroughly before eating
- Wash hands, kitchen work surfaces, and utensils with soap and water immediately after they have been in contact with raw meat or poultry.
- Wash hands with soap after handling reptiles or birds, or after contact with pet feces

Ecoli: *Escherichia coli* O157:H7 is an emerging cause of foodborne illness. An estimated 73,000 cases of infection and 61 deaths occur in the United States each year. Eating meat, especially ground beef, that has not been cooked sufficiently to kill *E. coli* O157:H7 can cause infection. Among other known sources of infection are consumption of sprouts, lettuce, salami, unpasteurized milk and juice, and swimming in or drinking sewage-contaminated water.

E. coli O157:H7 infection often causes severe bloody diarrhea and abdominal cramps; sometimes the infection causes nonbloody diarrhea or no symptoms. Usually little or no fever is present, and the illness resolves in 5 to 10 days.

Most people recover without antibiotics or other specific treatment in 5-10 days. There is no evidence that antibiotics improve the course of disease. You can prevent infection by doing the following:

- Cook all ground beef and hamburger thoroughly until the thermometer reads 160° F.
- Keep raw meat separate from ready-to-eat foods. Wash hands, counters, and utensils with hot soapy water after they touch raw meat.
- Drink only pasteurized milk, juice, or cider
- Wash fruits and vegetables thoroughly, especially those that will not be cooked
- Drink municipal water that has been treated with chlorine or other effective disinfectants.
- Avoid swallowing lake or pool water while swimming
- Make sure that persons with diarrhea, especially children, wash their hands carefully with soap after bowel movements to reduce the risk of spreading infection

Preparing For Bird Or Avian Flu: Lessons Learned from Severe Acute Respiratory Syndrome (SARS)

Avian Flu or Bird Flu is constantly in the news right now with questions on how are we going to respond and what can we do if and when it happens. Well, we are better prepared for an epidemic due in large part to the first major epidemic of this century, SARS. SARS took the world by storm in 2003. It pointed our strengths and weakness in the face of an international epidemic.

What are the lessons learned from SARS?

- Infection Control measure is a major weakness and needs to be addressed.
- Most of the SARS infections were nosocomial, spread by one medical professional or another.
- Plans need to be in place to identify whole wings or hospitals as treatment center for the specific infection.
- Quarantine procedures need to be reviewed and updated. Quarantine and Isolation measures are necessary, but they should be used as a last resort.
- Communication between medical professionals and public health authority must be paramount when the first signs of something out of the ordinary presents itself.
- Early detection can prevent many unnecessary deaths or hardships.

These are just a few lessons from the SARS epidemic that can help us prepare for Bird Flu or any major epidemic.

An interesting book about SARS and the how an epidemic can take on international scale: [Behind the Mask, How the World Survived SARS, the First Epidemic of the Twenty-First Century](#) by Tim Brookes published by the American Public Health Association. It discusses the SARS epidemic from its obscure beginnings through its peak and the aftermath of it end. Only from past experiences from epidemics such as SARS can we prepare ourselves for the next battle whether its Avian Flu or something else.

For more information on Champaign County Emergency Preparedness Plan please contact John Dwyer at jdwyer@cuphd.org or call 217-531-2932



Champaign Urbana Public Health District



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Mission: To Improve the health of the Champaign County Community