



Public Health
Prevent. Promote. Protect.

COMMUNICABLE DISEASES

MONTHLY NEWSLETTER

For Joplin City, Barton, Dade, Jasper, McDonald, Newton and Vernon Counties

Vol.1 , Issue 8

AUG / SEP 2008

State's First Verified Cases of Human West Nile Virus Reported: Missourians Urged to Protect Themselves, Family, Community

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Special Point of interest

E.Coli O:111 identified as the organism from the foodborne illnesses outbreak in N.E Oklahoma and sickens more than 200 people.

(See p. 3 for more details)

The first verified human case of West Nile virus (WNV) in 2008 has been reported to the Missouri Department of Health and Senior Services (DHSS). The acute WNV infection was reported in St. Louis County.

The July to August timeframe for Missouri's first WNV human cases has become typical over the past few years. Missouri's WNV case numbers typically rise in August and September and then decline with cooling weather. As with ticks, mosquitoes remain active and can still spread disease until the first hard frosts and freezes, so it is important for Missourians to protect themselves from mosquito bites through the fall and even early winter.

Anyone can be at risk of serious health problems from WNV infection. Prevention is therefore vital and so people should take the necessary steps in order to reduce their risk of infection," said Dr. Howard Pue, State Public Health Veterinarian. According to Dr. Pue, the number of human WNV cases saw a steady decline from 2002 to 2005, but there has been a steady increase in cases since then.

The best ways to prevent infection are using an effective insect repellent containing DEET or picaridin before going outside to work or play, especially in the morning and evening. People should also make sure homes, properties, and communities are protected by cleaning up junk, trash, and other things that can hold water, as well as eliminating standing water as they can serve as breeding grounds for mosquitoes that can carry WNV.

It also helps to wear long sleeve shirts and pants when outdoors to cover the skin. Some people may want to consider staying indoors at dawn,

dusk, and in the early evening, which are peak mosquito biting times. Pue added that homes should be mosquito-proofed by ensuring doors and windows have screens.

Most people infected with the West Nile virus do not develop any symptoms. Sometimes, a flu-like illness results 1 to 2 weeks after exposure with symptoms such as fever, headache, body aches, skin rash, and swollen lymph nodes. Less than 1% of infected people may develop serious illness that includes encephalitis (inflammation of the brain). They might experience headache, high fever, neck stiffness, disorientation, convulsions, and muscle weakness. Infection may prove fatal, especially among the elderly, in a small number of those who develop encephalitis. West Nile virus is not transmitted directly from birds to humans or from person to person.

Medical care should be sought as soon as possible if you have symptoms suggesting severe illness. There is no specific treatment for West Nile infection or vaccine to prevent it. Treatment of severe illnesses includes hospitalization, use of intravenous fluids and nutrition, respiratory support, prevention of secondary infections, and good nursing care.

Because West Nile virus can infect many bird species and some game animals, hunters should wear gloves when handling and cleaning animals to prevent blood exposure to bare hands and meat should be thoroughly cooked.

For more information about West Nile virus and free awareness campaign materials, visit the DHSS web site at: www.dhss.mo.gov/WestNileVirus <<http://www.dhss.mo.gov/WestNileVirus>>.

Source: Missouri DHSS

Communicable Diseases Report

Table 1

Cumulative Cases From January Through End of August By Local Jurisdiction and Years (2007 & 2008) (Includes confirmed, probable and suspect cases)														
CONDITION / YEAR BY LPHA	JOPLIN		JASPER		BARTON		DADE		MCDONALD		VERNON		NEWTON	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
ANAPLASMA PHAGOCYTOPHIL	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ANIMAL BITES	127	86	62	66	4	1	4	3	13	7	2	2	25	19
ADULT RESPIRATORY DISTRESS	1	0	0	0	0	0	0	0	0	0	0	0	0	0
BOTULISM (INFANT)	0	0	0	0	0	0	0	0	0	0	0	0	0	1
BRUCELLOSIS	0	0	0	2	0	0	0	0	0	0	0	0	0	0
CAMPYLOBACTERIOSIS	11	3	11	18	2	1	0	2	0	2	5	3	10	8
CREUTZFELDT-JAKOB DIS	0	0	1	0	0	0	0	1	0	0	0	0	0	0
CRYPTOSPORIDIOSIS	3	1	4	2	0	1	0	0	0	1	5	7	3	2
DENGUE FEVER	0	1	0	0	0	0	0	0	0	0	0	0	0	0
E. COLI SHIGA TOXIN	1	1	1	8	0	0	0	0	0	0	0	2	1	0
E. COLI O157 H7	0	0	0	0	0	0	0	1	0	1	0	1	0	0
EHRlichia CHAFFEENSIS	1	1	7	4	1	2	0	0	1	2	1	1	8	5
EHRlich/ANAPLASM, UNDET	0	0	2	0	1	0	0	0	0	0	0	0	2	0
GIARDIASIS	3	2	4	1	4	0	1	1	0	1	1	2	5	1
HEMOLYTIC UREMIC SYNDROME	0	0	0	0	0	0	0	0	0	0	0	0	1	0
HEPATITIS A ACUTE	0	1	1	0	0	0	0	0	1	0	0	0	0	0
HEPATITIS B (INFANT) PERINAT	0	0	0	0	0	0	0	0	0	0	0	0	1	0
HEPATITIS B PREGNANCY	2	0	0	2	0	0	0	0	0	0	0	0	1	1
HEPATITIS B ACUTE	6	2	2	4	1	0	1	3	1	1	2	1	3	5
HEPATITIS B CHRONIC	4	6	1	3	0	1	1	0	1	0	0	2	1	3
HEPATITIS C ACUTE	2	0	0	0	0	0	0	0	0	0	0	2	1	0
HEPATITIS C, CHRONIC INFECTIO	103	61	41	41	7	4	5	1	18	20	25	15	31	40
LEGIONELLOSIS	0	1	2	1	2	0	0	0	0	0	1	0	0	0
LISTERIOSIS	0	0	0	3	0	0	0	0	0	0	0	0	0	0
LYME	1	0	2	2	3	0	0	1	0	0	1	0	0	0
MENINGOCOCCAL DISEASE	1	2	0	1	0	0	0	0	0	0	0	0	0	0
MUMPS	0	0	0	0	0	0	0	0	0	1	0	0	0	0
NEUROINVASIVE WEST NILE	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Q FEVER (ACUTE)	0	0	2	0	0	0	0	0	1	0	0	0	2	0
Q FEVER (CHRONIC)	0	0	0	0	0	0	0	0	0	0	0	0	2	0
RABIES POST EXPO PROPHY	0	0	0	0	0	0	0	0	0	0	0	0	0	2
ROCKY MOUNTAIN SPOTTED FE	5	4	11	11	0	0	0	1	2	6	2	3	33	20
SALMONELLOSIS	6	11	3	8	1	1	1	0	2	5	2	3	5	8
SHIGA TOXIN + (NON E. COLI)	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SHIGELLOSIS	0	1	2	2	0	0	0	0	0	0	0	0	0	0
STREP DISEASE, GROUP	0	1	0	0	0	0	0	0	0	0	0	1	0	0
STREP PNEUMONIAE, <4	0	1	0	0	0	0	0	0	0	0	0	0	0	0
STREP PNEUMONIAE, DR	0	0	2	0	0	0	0	1	1	0	0	0	0	0
TULAREMIA	0	0	2	0	0	1	0	0	0	0	0	0	0	0
VARICELLA (CHICKENPOX)	6	0	15	11	0	0	0	0	2	0	0	0	2	6
Total Cases Per Year To-Date	285	187	178	190	26	12	13	15	43	47	47	45	137	121

Source: Missouri Department of Health and Senior Services, Crystal Reports

Data period : January through end of August 2008

The overall number of cases reported in 2008 exceeded those in 2007 in Jasper, Dade and McDonald counties by August 31, 2008.

No cases of West Nile Virus have been reported in the region as of the end of August 2008. However, two (2) cases had already been reported in Joplin in 2007 during the same time period i.e. by the end of August.

The reported cases of animal bites and chronic Hepatitis cases continue to rise although most of the counties reported less cases in 2008 than 2007. The reported GI cases are slowly increasing in few of the counties compared to the previous month data.

Analysis: Joseph Njenga

ER Visits for *Gastrointestinal Illnesses* in Jasper, Vernon, Dade, Barton and McDonald counties in August, 2008 (ESSENCE Surveillance)

According to ESSENCE surveillance data, which is collected from the ER visits in various Missouri hospitals, a number of these hospitals posted higher than expected number of gastrointestinal and respiratory illnesses visits in August, 2008.

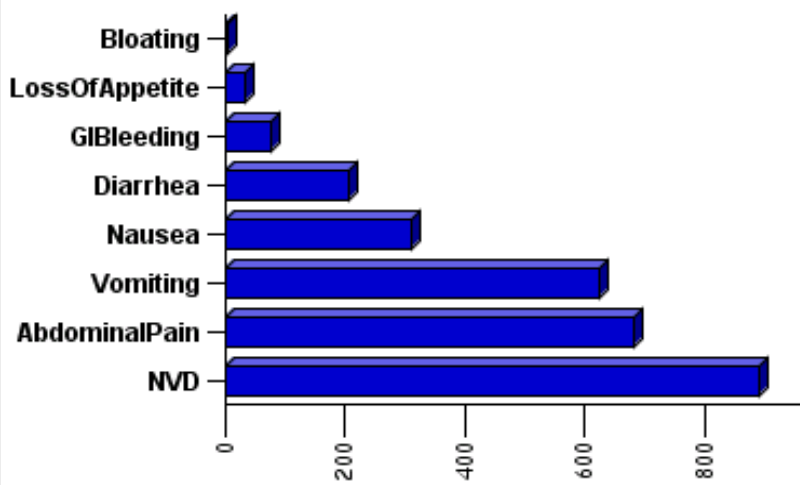
According to fig. 1 alongside, the August data was analyzed for Dade, Barton, Jasper, Newton, Vernon and McDonald counties and it indicated that among all the medical sub-groupings under gastrointestinal illnesses, NVD was the most prevalent category, followed by abdominal pain and vomiting.

This is crucial especially during a period of time when numerous reports of foodborne illnesses and outbreaks in the nation have become part of the every day news.

Analysis: Joseph Njenga

Figure 1

GI Illnesses reported in some SW Counties' ER in August, 2008 by categories



Source: ESSENCE Surveillance (ER Data only)

Irradiation: A Safe Measure for Safer Iceberg Lettuce and Spinach

August 22, 2008

The Food and Drug Administration (FDA) published a final rule that allows the use of irradiation to make fresh iceberg lettuce and fresh spinach safer and last longer without spoiling.

Infections from bacteria such as *Salmonella* and *Escherichia coli* O157:H7 (*E. coli*) continue to be a public health problem in the U.S. Illnesses from these bacteria can range from mild symptoms to life-threatening health problems. Severe illness from *E. coli*, for example, can lead to kidney failure.

The foods affected by the final rule are;

- Loose, fresh iceberg lettuce and fresh spinach
- Bagged iceberg lettuce and spinach

Irradiation and Safety

Irradiation is a process of treating products with a measured dose of radiation. It is not new. FDA has conducted irradiation safety evaluations for more than 40 years and has determined the process to be safe for use on a variety of foods.

After studying the safety of irradiating fresh iceberg lettuce and fresh spinach, FDA has determined that these greens, when irradiated under the conditions specified in the final rule, retain their nutrient value and are safe to eat.

FDA considers irradiation a complement to, not a replacement for, proper food-handling practices by producers, processors, and consumers.

It does not replace of washing. FDA continues to recommend that consumers wash fresh and bagged produce before eating unless the packaging specifically states that the product has been pre-washed.

Irradiation of Other Foods

Many foods are already permitted to be irradiated to control bacteria and keep the foods longer without spoiling. For example, FDA approved the irradiation of red meat in 1997 after reviewing numerous scientific studies conducted worldwide on the effects of irradiation on various meat products. Other examples of foods that may be irradiated to kill microbes include spices, poultry, and molluscan shell-fish (e.g. oysters, clams, mussels, and scallops). However, the doses used for these purposes are lower than what is required to kill most disease-causing bacteria.

How Will I Know if My Fresh Iceberg Lettuce or Spinach Has Been Irradiated?

Irradiation of iceberg lettuce and spinach is voluntary on the part of food processors. FDA requires that irradiated foods to bear the "radura" logo along with the statement "Treated with radiation" or "Treated by irradiation."

FDA's Role in Safe Irradiation of Food

FDA regulates sources of irradiation (the equipment used) for foods as "food additives" that do require approval before being allowed on the market. FDA approves a source of irradiation for use on food only after it has determined that irradiating the food is safe at a maximum dose specified by FDA. The agency continues to evaluate the safe use of irradiation in additional foods.

For More Information visit: www.cfsan.fda.gov/~dms/irradlet.html

Source: Food and Drug Administration, FDA

U.S. study finds 140,000 bad reactions to Antibiotics

Aug 13, 2008

Bad reactions to antibiotics, mostly allergic ones, send people to U.S. emergency rooms more than 140,000 times each year according to government researchers report.

The team at the U.S. Centers for Disease Control and Prevention said that the findings offer another reason for doctors to limit their use of the drugs, which are overused in the U. S. "This number is an important reminder for physicians and patients that antibiotics can have serious side effects and should only be taken when necessary," said the CDC's Dr. Daniel Budnitz, who led the study.

For the first report ever done on adverse reactions to antibiotics in the United States, the researchers used the National Electronic Injury Surveillance System-Cooperative Adverse Drug Event Surveillance project, a sample of 63 U.S. hospitals, between 2004 and 2006 and found more than 6,600 emergency visits were due to an adverse reaction to an antibiotic. Penicillin and related antibiotics such as amoxicillin, widely prescribed and widely seen as safe, accounted for half the emergency visits. Other classes of antibiotics such as cephalosporins, fluoroquinolones and newer antibiotics accounted for the rest.

"Persons aged 15-44 years accounted for an estimated 41.2 percent of ED visits. Infants accounted for only an estimated 6.3 percent of ED visits," they wrote. Budnitz and colleagues said 78 percent of the adverse events in the study were allergic reactions, ranging from rash to a serious reaction known as anaphylaxis, and the remaining 22 percent were caused by errors and overdoses. Many studies have suggested that half of the estimated 100 million antibiotic prescriptions written for respiratory tract infections in the United States are unnecessary. Most such infections are caused by viruses, and antibiotics are useless against them.

But, Budnitz and colleagues said, doctors still often believe their patients are exceptions to the rule and therefore continue to write the prescriptions. "Because antibiotics are frequently used, both appropriately and inappropriately, if doctors would reduce the number of antibiotics they prescribe to their patients by even a small percentage, we could significantly reduce the number of emergency visits for antibiotic adverse events," Budnitz said in a statement.

"Antibiotics are among the most frequently used medications in the U.S. Annually, they are prescribed to an estimated 16 percent of patients during ambulatory care visits, and pharmaceutical manufacturers spend \$1 billion promoting antibiotics," Budnitz wrote.

Source: Missouri Department of Health and Senior Services

Horse Shown at State Fair Tested Positive for Rabies

August 22, 2008

Officials with the Missouri Department of Health and Senior Services notified people who had attended the Missouri State Fair in Sedalia of a confirmed case of rabies in a horse stabled and shown on the grounds during this event. While there is little likelihood any visitor to the Fair was exposed to rabies from this horse, public health officials made this notification as a precaution.

The horse originated from Missouri and was a 2-year-old. During the fair, the horse was shown in the Saddle-bred Show and was stabled in Barn C. Illness was first noted in the horse on Aug 17. Over the next day and a half, the horse developed severe neurologic signs and died the morning of August 19. The horse subsequently tested positive for rabies.

Rabies is transmitted mainly through bite wounds from an infected animal " said Howard Pue, State Public Health Veterinarian. In some cases, it may be transmitted through fresh open cuts in the skin or onto mucous membranes such as the eyes, mouth, or nose from the saliva of a rabid animal.

The Missouri Department of Health and Senior Services did request that those who attended the State Fair between August 7 and August 9 contact their physician if they possibly had contact with this horse, was bitten by a horse, had contamination of a fresh open wound with saliva from a horse or had saliva from a horse come in contact with eyes, nose, mouth or other mucous membranes.

Questions pertaining to human health aspects of this situation may be directed to the Missouri DHSS at 573-751-6114. Questions pertaining to animal health may be directed to the Missouri Department of Agriculture, Division of Animal Health at 573-751-3377.

Source: Missouri Department of Health and Senior Services

OKLAHOMA: *E. coli* outbreak sickens more than 200, grows to largest in U.S. history

September 2, 2008

The federal Centers for Disease Control and Prevention (CDC) notified the Oklahoma State Department of Health that it has identified *E. coli* 0111 from laboratory specimens CDC analyzed as part of the investigation into the diarrheal illness outbreak in northeastern Oklahoma.

State health officials say the number of people sickened by an *E. coli* outbreak in northeastern Oklahoma has grown to more than 200, making it the largest outbreak of this particular strain of bacteria ever reported in the U.S.

The state Health Department reported that 206 people have become sick as a result of the *E. coli* 0111 outbreak, including 53 children as of 09/02/2008. Those sickened range in age from 2 months to 88 years.

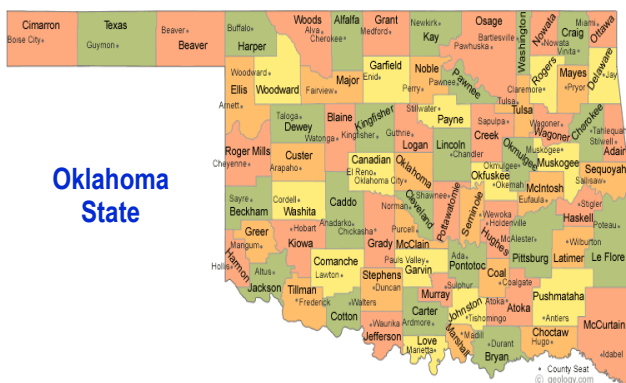
Bradley urged the public to be extra diligent in their hand washing and food preparation to prevent more illnesses.

These cases have been connected to the Country Cottage restaurant in Locust Grove, but state epidemiologist Dr. Kristy Bradley says investigators still haven't pinpointed a potential source. Bradley says investigators are continuing to conduct interviews and test food preparation and serving surfaces in the restaurant.

The incubation period from time of exposure to this bacteria to becoming ill is between 2 and 10 days."

Source: Oklahoma State Department of Health

Figure 2



Map Source:Geology.com

Most Measles cases reported since 1996

August 21, 2008

More measles cases have been reported in the U.S. since Jan. 1, 2008 than during the same period in any year since 1996, according to a report released on August 21, 2008 in the Centers for Disease Control and Prevention's Morbidity and Mortality Weekly Report.

Between Jan 1 and July 31, 2008, 131 cases were reported to CDC's National Center for Immunization and Respiratory Diseases (NCIRD). At least fifteen patients, including four children younger than 15 months of age, were hospitalized. No deaths have been reported.

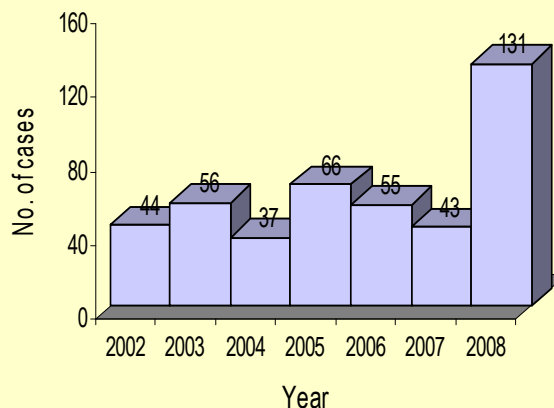
Of the 131 patients, 112 were unvaccinated or had unknown vaccination status. Among the 112 unvaccinated U.S. residents with measles, 16 were younger than 12 months of age and too young for vaccination, and one had presumed evidence of measles immunity because the person was born before 1957.

Of the 95 patients eligible for vaccination, 63 were not vaccinated because of their or their parents' philosophical or religious beliefs.

Reports included cases from 15 states: Illinois (32 cases), New York (27), Washington (19), Arizona (14), California (14), Wisconsin (7), Michigan (4), Hawaii (5), Arkansas (2), and Washington, D.C., and Georgia, Louisiana, **Missouri**, New Mexico, Pennsylvania, and Virginia (1 each).

Figure 3

Trend in Measles Cases in the U.S., from 2002 to July 2008



Source:Missouri DHSS & CDC

Health Department Administrators

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Questions/Comments, please

contact:

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Communicable Diseases Surveillance

If your institution would like to participate in the Local Communicable Disease surveillance, please contact your local health department for more information.

A surveillance site can be:

- Public/Private school
- College
- Large employer
- Childcare facility
- Physician clinic
- Community clinic

Surveillance is the ongoing systematic collection, analysis and dissemination of health related data with the goal of detecting health related issues within our community, and using that information to control and prevent disease as well as promote health.

UPCOMING EVENTS / TRAININGS

Laboratory Specimen and Packaging Training - September 15, 2008 at 10:00 am at Jasper County Health Department, Carthage, MO. Presented by the Missouri State Public Health Lab training staff. For more information contact Joseph Njenga, City of Joplin Health Department at 417-623-6122 or e-mail at JNjenga@Joplinmo.org

Missouri Immunization Conference - October 2-3 at St. Louis Marriott West.

The training will provide a forum for the exchange of information between private and public health care providers, and examine emerging issues regarding immunizations for all age groups.

Speaker: Dr. Paul Offit, Children's Hospital of Philadelphia. CMEs & CEUs offered. More information regarding this year's conference, as well as registration information, can be found at www.dhss.mo.gov/immunizations. For additional questions, contact Jennifer Paulk, Bureau of Immunization Assessment and Assurance, at jennifer.paulk@dhss.mo.gov, or call 573-751-6124.

Bi-State Infectious Disease Conference - Friday October 10, 2008 at St. Louis Airport Hilton. For more information and/or registration, visit <http://www.bistateidconference.org/index.html>

Principles of Epidemiology Course – October 22- 23

The training is made up of two parts: On-line and 2 days of face-to-face exercises in Jefferson City on October 22 and 23. Class size is limited. To attend, see instructions at <http://www.dhss.mo.gov/fridayfacts/7ff25.html>. The registration deadline is August 15. For questions, call 573-751-6113.

International Infection Prevention Week - October 19 - 25

