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Orange County Health Department

[www.orchd.com](http://www.orchd.com)

Florida Department of Health

[www.doh.state.fl.us](http://www.doh.state.fl.us)

Centers for Disease Control

[www.cdc.gov](http://www.cdc.gov)

# Epi - Flash

**Epidemiology  
and  
Surveillance  
Department  
News**



To promote and improve the health of all people in Orange County

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## Updates to the Reportable Diseases List

The role of the Epidemiology Program is to investigate reportable diseases and outbreaks in Orange County. The program's goal is to protect the health of all residents and visitors of Orange County by preventing the spread of disease within the community. The reportable disease list includes those illnesses, both rare and common, which are most likely to pose a significant risk to the health of Floridians through high

mortality, high infectivity, emerging diseases, or illnesses that could be the result of bioterrorist activity. It is required by law through rule 64D-3 of the Florida Administrative Code that physicians, hospitals and laboratories report these diseases to their county health department. In 2008 the Epidemiology Program investigated over 3700 reportable diseases as well as several outbreaks. On November 24, 2008 the

reportable disease list was updated. New to the list is:

- ✦ Amoebic Encephalitis
- ✦ Arsenic Poisoning
- ✦ Staphylococcus Aureus-community associated mortality
- ✦ Staphylococcus Aureus I isolated from a normally sterile site (labs only)

A modification to the reportable disease list includes:

Clostridium perfringens, epsilon toxin was removed from the list.

[http://www.doh.state.fl.us/disease\\_ctrl/epi/surv/reportable\\_diseases\\_08.pdf](http://www.doh.state.fl.us/disease_ctrl/epi/surv/reportable_diseases_08.pdf)

[http://www.doh.state.fl.us/disease\\_ctrl/epi/topics/surv.htm](http://www.doh.state.fl.us/disease_ctrl/epi/topics/surv.htm)

## Hepatitis Prevention Program

2008 saw the expansion of the Epidemiology Department's Hepatitis Prevention Program which was established in June 2007 through funds provided by the Florida Hepatitis Prevention Program. This comprehensive program provides services that include hepatitis education, screening, hepatitis A and B vaccine, and counseling and referral for high risk clients.

The most common types of viral hepatitis infections are hepatitis A, B, and C. Hepatitis is an infection that causes inflammation of the liver and symptoms of nausea, vomiting, diarrhea, fatigue, dark urine, jaundice, and loss of appetite. Hepatitis A is transmitted through the fecal-oral route either by poor hand washing or certain sexual practices.

Hepatitis B and C are transmitted through sexual contact and blood exposure. Chronic infections of hepatitis B or C may lead to liver cirrhosis or liver cancer, both of

which can be deadly. Chronic hepatitis B and C are serious diseases that affect Central Floridians in high numbers. In 2008, 511 cases of chronic hepatitis B and 2254 cases of chronic hepatitis C were reported in Orange County alone. Those considered at high risk for hepatitis infection include:

- ✦ Men who have sex with men.
- ✦ Persons who have ever used intravenous drugs.
- ✦ Persons with clotting factor disorders.
- ✦ Persons with chronic liver disease.
- ✦ Heterosexual persons with multiple sex partners.
- ✦ Hemodialysis patients.
- ✦ Persons who received a blood transfusion prior to 1992.
- ✦ Persons who were born to a mother with hepatitis B or C.

✦ Persons who have been told they have elevated liver enzymes.

The Hepatitis Prevention Program provides testing and vaccination through the Sexually Transmitted Disease Program at the Orange County Health Department Central clinic location every Wednesday, as well as at the Lake Ellenor Epidemiology clinic by appointment. The program works to provide hepatitis A and B vaccinations to at-risk populations by reaching out to various community partners such as homeless shelters and drug rehabilitation facilities. In addition, the Hepatitis Prevention Program has succeeded in securing memorandums of agreement with local organizations to supply them with free hepatitis A and B vaccine for their at-risk clients. Approximately 2835 vaccinations have been administered and 547 people have been tested through the program's efforts.



## Dr. Jani – A man of “Many Hats” at the Orange County Health Department

What's in a title? In Dr. Jani's case, much, much more than meets the eye; the title: senior physician and the official function: clinician-educator and epidemiologist, only begins to describe the full spectrum of Dr. Jani's activities, passions, and interests.

Dr. Jani provides consultation in the areas of clinical care (refugee health and vulnerable populations), research initiatives, collaborations, and epidemiology. His activities with epidemiology include guidance and support of investigations, surveillance activities, and improving epidemiological capacity through education, training, and advocacy.

Additionally, he is involved in a range of endeavors, which mostly center on developing and implementing greater academic involvement for the health department. The goal is to transform the Orange County Health Department into an **academic health department (AHD)**; a more academic institution with increasing capacity for service and teaching, as well as augmenting research activities. Anyone who talks with Dr. Jani about the academic health department project, even for only a few moments, can see just how enthusiastic he is about this concept and the prospects of the Orange County Health Department's future as an AHD. To understand why he is so enthusiastic about the AHD program, one needs only to learn a little about his background, passions, and interests.

Prior to joining the Florida Department of Health, he was

an academic physician working as a clinical faculty member with the Orlando Health Infectious Disease Fellowship Program at the Orlando Regional Medical Center. He has adjunct faculty positions with three state medical schools - University of South Florida, Florida State University, and the University of Central Florida. He was also an infectious disease consultant in the private sector for several years as well as clinician-educator for Internal Medicine residents, and medical and nursing students.

From 2003 - 2005, Dr. Jani joined the Centers for Disease Control and Prevention (CDC) as an Epidemic Intelligence Service officer and a medical officer with the United States Public Health Service, with the rank of Lt. Commander. From 2005-2007, he completed his Preventive Medicine residency and worked as a medical epidemiologist in the Coordinating Office for Global Health (COGH) at CDC.

His professional interests include teaching a range of infectious disease and population health topics and providing training in the disciplines of population and preventive medicine, clinical epidemiology, and infection control. His professional passions include clinical and epidemiological teaching, applied clinical and population-based research, patient education, mentorship, community health issues, and physician-advocacy for underserved populations. He is very committed to medical and resident education and it is one of his dreams to be able to develop a Department of Preventive Medicine & Population Health (PMPH) at the Orange County Health Department. He is optimistic that the health department can

provide both learning venues for physicians, nurses and mid-level practitioners in training as well as leadership for the organization and planning of pertinent PMPH activities.

Dr. Jani has a multi-faceted vision for the AHD that includes the development of a formal program concerned with tobacco prevention & control and smoking cessation. It will focus on patient care, public health education, community collaboration, academic involvement and research activities. As part of the AHD transformation, he and others will continue to develop a research agenda, including specific research projects, epidemiologic teaching and related curricula, and collaborations with academic entities in the community.

Dr. Jani has received several awards, including most recently the Unsung Hero award for his multi-disciplinary work at the COGH at CDC, and Guiding Light award for his service in HIV/AIDS during his previous employment with the Orange County Health Department.

Oh, by the way....did we mention he **also** serves at the Osceola County Health Department? He provides direct care to patients within the HIV/AIDS clinic, coordinating other clinic care providers and formulating policy and procedures around Quality Improvement of HIV/AIDS care, charting, and program collaboration.

We wish Dr. Jani the best of luck in **all** of his endeavors.



## Rabies Vaccine Shortage

For the past year and a half a limited supply of rabies vaccine has been available in the United States. In June 2007 Sanofi Pasteur, manufacturers of IMOVAX®, started planned renovations of their factory halting production of vaccine. Vaccine inventory had been established based on historic levels of demand in anticipation of the factory closure. The other supplier, Novartis, of RabAvert® rabies vaccine was unable to meet projected rabies vaccine supplies. In early 2008 Novartis supplied rabies vaccine for post-exposure use only. Rabies pre-exposure vaccine became available through Novartis in October 2008 for

persons at occupational risk. Sanofi Pasteur continues to provide rabies vaccine for post-exposure prophylaxis only by password request obtained from local health departments. Due to the limited supply of vaccine, orders are filled on a per patient basis. The Orange County Health Department's Epidemiology Program, Environmental Health Program, and Orange County Animal Control continue to work together to track animal bite victims, test the animals for rabies, and provide rabies vaccinations to bite victims. As a result of the limited supply, the Epidemiology Program is working diligently with local hospitals to ensure that

animal bite victims are evaluated per Florida Department of Health guidelines for appropriateness of rabies prophylaxis and that vaccine is provided to those who meet the recommended guidelines.



The raccoon; the most important wildlife rabies host in Florida. CDC

## Florida Arboviral Disease Surveillance, 2008

Statewide for 2008 (through December 13<sup>th</sup>), 3 locally-acquired human arbovirus cases were reported. Eastern Equine Encephalitis (EEE) represented one case reported in August in Leon County, while 2 cases of West Nile virus (WNV) were reported in September in Escambia County. Two additional cases were reported and determined to be acquired out-of-state. One of these was WNV diagnosed in a Wakulla County resident and the other was La Crosse encephalitis in a Hillsborough County resident. The La Crosse encephalitis virus is a member of the California serogroup of arboviruses.

The laboratory criteria for diagnosis of human arboviral disease include: a four-fold or greater change in serum antibody titer from acute to

convalescent samples; virus isolation or detection of viral antigen in tissue, blood, CSF, or other body fluid; or specific IgM in CSF or blood detected by EIA and confirmed by demonstration of IgG via another serologic assay (e.g. hemagglutination-inhibition or neutralization test).

June through September is the period during which the majority of cases of arboviral encephalitis occur in Florida. Arthropods are active late into the year in our state; cases can occur into the winter months. Most human infections are asymptomatic or may result in a nonspecific flu-like syndrome. Onset may be insidious or sudden with fever, headache, myalgias, malaise, and occasionally prostration. Infection can, however, lead to encephalitis, with a fatal outcome or permanent neurologic

sequelae. Fortunately, only a small portion of infected people progress to having encephalitis.

There are no commercially available human vaccines for these diseases at this time; however, several types of WNV vaccine are under development.

The Florida Department of Health stresses "The 5 D's for Prevention":

- Don't go outdoors at **D**usk and **D**awn
- To protect against bites, **D**ress so your skin is covered with clothing
- Protect bare skin and clothing with a **D**eet mosquito repellent
- Empty containers and **D**rain stagnant water

For more information, please see:

<http://www.doh.state.fl.us/Environment/medicine/arboviral/> and

<http://www.cdc.gov/ncidod/dvbid/arbor/> from which information for this article was derived.

*Culex quinquefasciatus*, the main transmitter of WNV in the southeastern US, on a human finger. CDC/Jim Gathany



# Antibiotic Resistance and MRSA

Antibiotic resistance occurs when bacteria change in a way that reduces or eliminates the effectiveness of the antibiotics designed to cure or prevent infection. Antibiotic resistance is a problem because it makes it more difficult to cure diseases that were once easily treatable with antibiotics. A person infected with a resistant strain of bacteria may suffer from a more severe infection and because the infection is more difficult to treat the person has additional opportunities to infect others. Antibiotic resistance is occurring because of the over prescription and misuse of these medications. Antibiotics are only effective in the treatment of bacterial illnesses. Colds and flu, for instance, are caused by viruses. Patients may misuse antibiotics by stopping the prescription once the illness has improved, or by self medicating with antibiotics left over from a previous illness. It is important to follow a prescription completely, even if symptoms have resolved, never self-medicate with leftover medicines, and do not insist on an antibiotic prescription if the doctor does not believe it is necessary. The Florida Department of Health is participating in the Centers for Disease Control and Prevention's Get Smart Campaign to promote awareness of antibiotic resistance among the Florida school community.

MRSA or Methicillin-Resistant *Staphylococcus aureus* is an antibiotic resistant bacteria that has received increased attention in the last year in Orange County. MRSA infections have been present in hospital and healthcare settings for decades but have increasingly been reported within the community in the last 10 years and are now relatively common. The infection is usually minor and easily treatable but can cause serious infection. People who are most frequently infected are those who are associated with the 5C's:

1. Crowding
2. Contact (skin-to-skin)
3. Lack of cleanliness
4. Compromised skin (cuts and scrapes)
5. Contaminated items and surfaces

The most important means of preventing infection is good hand washing and not sharing personal items. The Epidemiology Program is continuing to educate the public on MRSA and its prevention and to work with the community when clusters of disease are identified. For further information on MRSA, see <http://www.cdc.gov/MRSA/>.



This colorized scanning electron micrograph (SEM) depicts a grouping of methicillin resistant *Staphylococcus aureus* (MRSA) bacteria, magnified 20,000X.  
CDC/Jim Biddle

## The Childhood Lead Poisoning Prevention Program

The Lead Poisoning Prevention, Screening, and Education Act appropriated funds to assist targeted counties in Florida in developing strategies for increasing blood lead screening rates of high risk populations and to assure proper medical management of lead poisoned children.

The Orange County Health Department received recurring funding in 2008 through the Childhood Lead Poisoning Prevention Program to continue the Targeted Blood Lead Screening Pilot Project with the goal of increasing the blood lead screening rates among high risk populations. The memorandum of agreement entered into between the Orange County Health Department's Epidemiology Program and the Central Florida Family Health Center (CFFHC) has been extended through March 2009.

The Epidemiology Program provided a Lead Care II® Blood Lead Testing System Analyzer and Test Kits to the Central Florida Family Health Center at Hoffner to perform blood lead screenings on high risk populations. Test kits have also been provided to the CFFHC's Lake Underhill Family Health Center and Southside Family Health Center to continue performing blood lead screenings on high risk populations.

During the period from January through December 2008, 754 children received a blood lead screening test using the Lead Care II® Blood Lead Testing System Analyzer. Of the 754 children screened, 445 (59%) were uninsured. Goals for 2009 include extending the memorandum of agreement with the Central Florida Family Health Center and the continuation of the program at all three locations.

## Legionellosis Outbreaks

In 2008, 15 cases of Legionellosis were reported to the Orange County Health Department and 149 cases were reported statewide. Several clusters of Legionellosis, also known as Legionnaires' disease, were investigated in Orange County last year. *Legionella* is a bacterium which is naturally found in the environment but thrives in warm water particularly in hot-tubs, cooling towers, hot water tanks, large plumbing systems, or parts of the air-conditioning systems of large buildings. A person is infected by breathing in contaminated water vapor or mist from the water source. Infections can not be passed on from person to person. The illness

typically begins with fever, chills, and a cough that later manifests as pneumonia and may be confused with other etiologies. *Legionella* is treatable with antibiotics but may lead to death in 5-30% of cases. The majority of people who are exposed to *Legionella* do not become infected; however, those at most risk include people over age 65, those with chronic lung disease, diabetes, cancer, kidney disease, and weak immune systems, and smokers. The Epidemiology and Environmental Health Programs work together to investigate reported clusters of *Legionella* cases. Inspections are performed and recommendations are made to prevent further illnesses. For additional

information on Legionnaires' disease see

<http://www.cdc.gov/legionella/>



This scanning electron micrograph depicts an amoeba, *Hartmannella vermiformis* (orange) as it entraps a *Legionella pneumophila* bacterium (green) with an extended pseudopod. CDC/Dr. Barry S. Fields

## Orange County Health Department's "Drive-Thru" Exercise and Flu Vaccination Event Were Successes

On November 18<sup>th</sup>, the Emergency Operations Division of the Orange County Health Department conducted a Drive-Thru POD Mass Prophylaxis Functional Exercise. The purpose of this field exercise was to test the ability of the health department, in collaboration with other county agencies and community partners, to provide mass immunizations to the citizens of the county in the event of an emerging public health threat, such as pandemic flu.

The objectives were to: (1) test the on-site incident command structure, (2) test specific POD (Point of Dispensing) operational functions, and (3) test the feasibility of the drive-thru POD concept to provide mass immunizations.

During the planning phase, the idea of providing free flu vaccinations to the public as part of the exercise evolved. The public event title became "**DRIVE AWAY... THE FLU**". Over 700 Orange County citizens were vaccinated

within a 3 hour period, with those receiving the shots not even having to leave their vehicle.



**Vaccination stations (blue tents) ready for drive-thru patients.**

**Tenecia Wood/St. Lucie County Health Department**

Both the *exercise and the event* were a success due to the planning and participation of so many Orange County Health Department employees, including nurses and other staff members from programs within the health department. The participatory response from other county agencies, including Orange County Emergency Medical Services, community partners, and personnel from neighboring county health department emergency response offices was overwhelming.

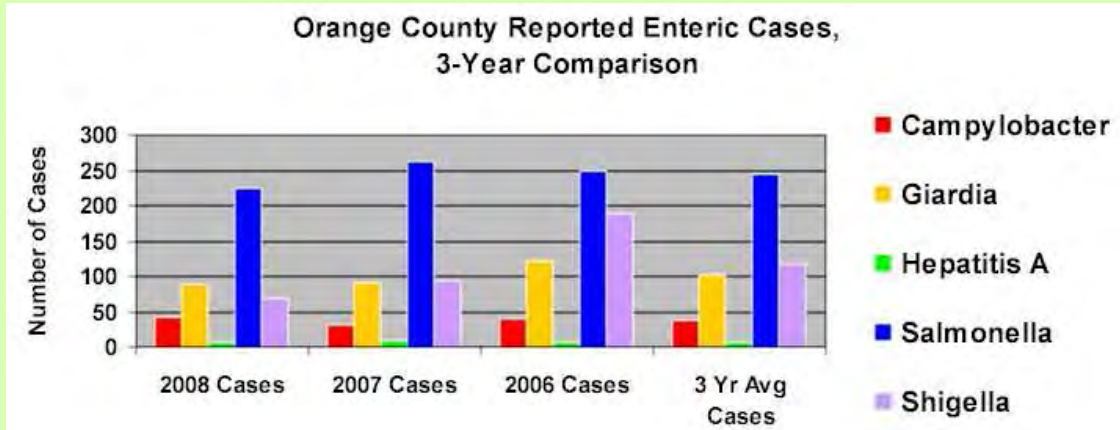
The Exercise Director was Arlene Crow, Cities Readiness Initiative Coordinator, and the Exercise Design Chief was Elizabeth Vazquez, Emergency Planner, both in the Emergency Operations Division of the Orange County Health Department. They would like to extend their gratitude to everyone who worked so hard to make the *exercise and the event* a success.



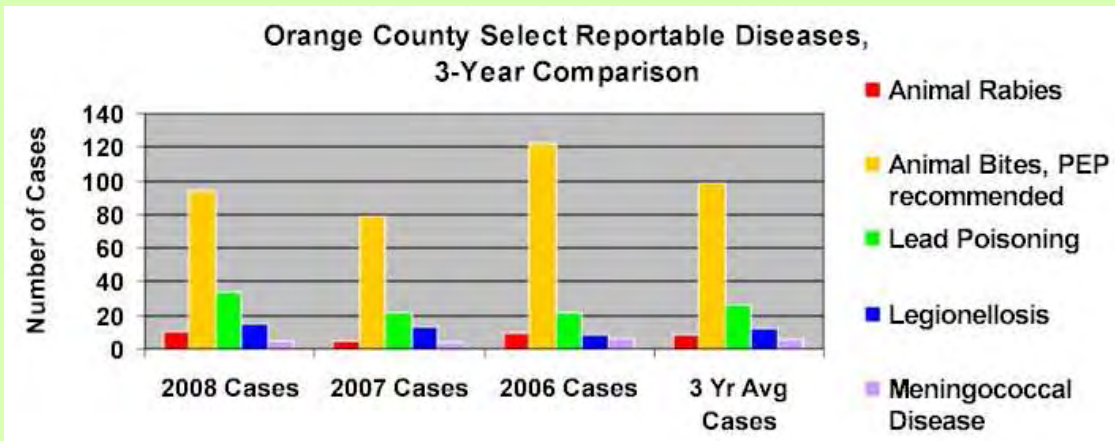
**Vehicles with patients receiving vaccinations.**  
**Kathy Walker/Orange County Health Department**

## Orange County Select Data Summaries

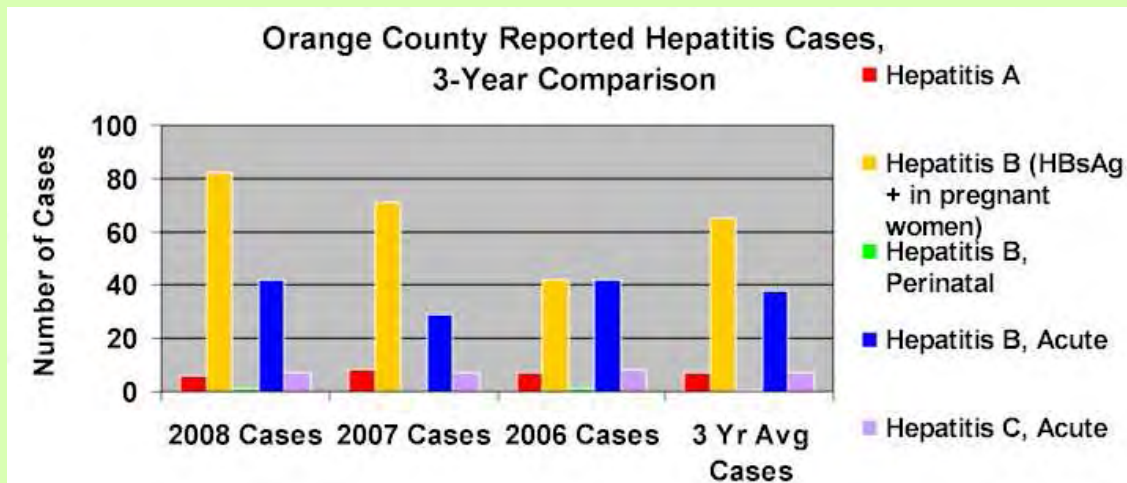
The graphs below depict select reportable diseases and conditions which are considered to be of public health significance. The represented data reflect reported cases from 2006 through 2008 and the average of those three years.



2008 saw a decrease in the number of reported cases of salmonella and shigellosis from previous years.



Each of the included diseases, with the exception of meningococcal disease, increased in 2008 as compared to 2007. Animal bites with post-exposure prophylaxis (PEP) recommended, and meningococcal disease totals for 2008 were less than the three year average.



In 2008, with the exception of Hepatitis A, each Hepatitis case type reflected higher numbers than the previous 2 years.