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In This Issue

Hepatitis B in an Assisted Living Facility in Miami

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Background

On August 27, 2007, the Miami-Dade County Health Department (MDCHD) received a positive serology test result for acute hepatitis B for a 59-year-old female (index case) who was admitted to a local hospital. This patient was hospitalized for a fall and had a history of severe depression, hypertension, and type-II diabetes. There was no mention of hepatitis-related symptoms in the hospital records. However, the medical records noted elevated liver enzymes (ALT, AST and bilirubin). A hepatitis panel was ordered at the hospital and the medical records showed positive serology results for hepatitis B surface antigen (HBsAg) and IgM antibody to hepatitis B core antigen (anti-HBc). The client had resided at an assisted living facility (ALF) during the previous six months before her hospitalization. The client's guardian confirmed that she could not be interviewed at the time, because of depressive symptoms, but reported that the client was not sexually active nor had other obvious risk factors for hepatitis B infection. Due to the patient's institutionalization during the period when she was likely infected, combined with a lack of obvious risk factors for hepatitis B infection, the MDCHD launched an investigation.

Investigation methods

The investigation consisted of several components: a site visit to the ALF involved, interviews with residents and staff, direct observation of diabetes-care procedures, a detailed interview with medical staff regarding infection control procedures, and laboratory testing. Blood specimens were obtained for all residents and staff at the ALF including the index case. A viral hepatitis panel was performed on all specimens at the Miami branch laboratory of the Florida Department of Health (DOH), Bureau of Laboratories (BOL). For individuals who tested positive for HBsAg or

anti-HBc antibody, specimens were forwarded to the Centers for Disease Control and Prevention (CDC) for further viral characterization.

Findings

Site visit

The ALF is a one-story residential home of approximately 1200-1500 square feet that has been converted to a residential facility. It consists of three resident bedrooms, one staff bedroom, two full bathrooms, a kitchen, living room, and dining room. The facility has a capacity of six residents (two per room) and there is reportedly at least one staff member on site at all times. The on-site staff did not have medical training, so medical and nursing care were provided by a home-health nursing service. The facility also had a consulting physician who visited monthly and was the primary care provider for most of the residents. Meals were prepared on site and served in the dining area.

Resident and staff questionnaire

At the time of the site visit, the index case no longer lived at the ALF. A questionnaire was administered to the index case, six current residents, and two non-medical staff of the ALF. Because many of the residents had some level of mental and cognitive impairment, they were not able to provide detailed and fully reliable responses to all of the questions. In some instances, facility staff participated in conducting the interview and assisted in providing responses to the questions. Risk factor data and laboratory test results for the two ALF staff were unremarkable. Demographic, clinical, risk factor, and laboratory information on the index case (B1) and six other ALF residents are presented in Table 1.

Table 1. Characteristics of ALF residents

ID	Age	Sex	Resi-dent since	Underlying diagnosis	Dia-betic (Y/N)	Insu-lin inject	Glu-cose monit-oring	Used other's razor	Ele-vated LFTs	Hepatitis B status
B1	59	F		Major Depression	Y	N	N	Y	Y	Acute
B2	79	F	2005	Alzheimer's	Y	Y	Y		Y	Acute
B3	56	M	2005	Paralysis	Y	Y	Y	Y	Y	Chronic
B4	40	F	2007	Mental Illness	Y	Y	Y		N	Chronic
B5	41	M	2006	Chronic Schizo-phrenia	Y	Y	Y		Y	Chronic*
B6	81	M	2006	Alzheimer's & Parkinson's	N	N	N		N	Immune
B7	87	M	2007	Alzheimer's	N	N	N		N	Suscept-ible

*First detected as HBsAg+ in 2002; lost to follow-up.

Five of the seven residents were infected with hepatitis B; two with acute infections, and three with chronic infections. Another resident was immune from past infection and only one resident was susceptible. When the Merlin database was cross-referenced with the names of residents, it was discovered that one resident (B5) was first reported with a chronic hepatitis B infection in 2002. At that time, Resident B5 was not living at a residential care facility and was eventually lost

to follow-up. Of the five residents with acute or chronic infection, all were diabetic, and four of the five underwent glucose monitoring with insulin injections. The index case was diabetic, but was on oral insulin and did not have daily glucose monitoring. Six residents denied being sexually active, and one resident (B4) refused to respond. Given the relatively young age of some of the residents, sexual contact between residents could not be entirely ruled out. At least two residents reported using the razors of other residents to shave, however, it is not clear which resident's razor they used. They reportedly used razors stored in the men's bathroom, so it could have been the razor of residents B5, B6, or B7. No other specific risk factors for hepatitis B were reliably reported for any of the residents.

Infection control procedures

Four of the residents (B2-B5) were insulin-dependent diabetics with standing medical orders for twice-daily glucose monitoring and insulin injections. A home-health nursing service was used to provide this service. The nursing service visited once in the morning and once in the afternoon, every day, usually by the same person (Nurse A). Each patient was prescribed a one-month supply of insulin in a reusable vial, marked with his or her name and the date dispensed. The patients used slightly different insulin formulations and insulin from the same vial was reportedly not used on more than one person. Insulin vials were stored in a small box that was locked and stored in the refrigerator between uses. All non-perishable diabetes-care materials were stored in a plastic container kept in a locked cabinet in the dining room. All diabetes-care procedures were conducted around the dining room table. Each patient had his or her own lancing device with the patient's name written on tape attached to the lancing device. All lancing devices were stored in the plastic container and used single-use, disposable, non-retractable lancets. The unused lancets were also stored in the plastic container, as were the unused, single-use, disposable syringes, and glucometer strips. All patients used the same glucometer, which used single-use strips of approximately three cm. in length. Generally, blood did not come in direct contact with the glucometer. The glucometer was stored in the plastic container along with the other materials. Each patient's lancing device was returned to the plastic container after use, but was only cleaned occasionally and not after each use. The glucometer was also cleaned occasionally, but not after each use or each day. Once used, all lancets and syringes were disposed of in a sharps container, also stored in the locked cabinet.

Patient B1 was diabetic, but used oral insulin. Since Medicaid reimbursement is based on injection procedures, no routine glucose monitoring of Patient B1 was conducted by the nursing agency, and no injections were given. However, on further discussion with Nurse A, it was revealed that Patient B1 obtained a glucometer and lancing device from her private physician which she kept in her bedroom. Since having these devices in her possession was a violation of facility rules, the items were taken away from Patient B1 when they were discovered. It is not certain how Patient B1 may have used these devices on herself or others before they were taken away.

Laboratory analysis

Blood specimens were collected from the seven facility residents and two staff members. Blood specimens were not drawn on the home-health nursing staff or consulting physician, since they were not present during the initial visit to the ALF. Patients B1-B6 were positive for hepatitis B surface antigen or anti-HBc antibody and no staff members tested positive. HBV viral amplification and sequencing were conducted at the CDC as well as HBeAg testing. Results for Patients B1-B6 are shown in table 2. Virus could not be amplified for patients B1 or B6. For Patients B2-B5, HBV was amplified and all viral sequences were identical throughout the entire genome. The matching viruses were genotype A, subtype adw2, and HBeAg reactive. Genotype A is the most common type in the southeastern United States [1], and subtype adw2 is among the

most common HBV subtypes in North America [2]. Matching viral genomes does not prove conclusively that the residents acquired infection from one another, however, in the presence of plausible exposures, the matching viral genomes strongly support the possibility that infection occurred between residents of the facility.

Table 2. Laboratory results

ID	Age	Sex	Hepatitis B category	Genotype	Subtype	HBeAg
B1	59	F	Acute	Undetected		Non-reactive
B2	79	F	Acute	A	adw2	Reactive
B3	56	M	Chronic	A	adw2	reactive
B4	40	F	Chronic	A	adw2	reactive
B5	41	M	Chronic*	A	adw2	reactive
B6	81	M	Immune	Undetected		Non-reactive

***** Infection first identified in 2002

All facility residents and staff without evidence of infection were offered HBV vaccine and everyone accepted the vaccination. In addition several recommendations were made to the facility staff regarding infection control procedures. These recommendations include:

- Limiting percutaneous exposures to the minimum necessary for adequate blood glucose control.
- Storing diabetes-care equipment, especially the lancing devices, in a separate container for each patient. This will reduce the likelihood that the device will accidentally be used on more than one individual.
- Assigning separate glucometers to each patient.
- Cleaning lancing devices with an alcohol swab after each use.
- Placing a drop cloth on the dining room table or other surface where diabetes care takes place and wiping the table with a disinfectant afterward.

Discussion and Conclusions

The data gathered in the course of the investigation do not definitively establish the route of infection among facility residents. Table 3 summarizes available evidence on the most likely possible routes of infection for each resident. It is important to keep in mind that Patient B5 had evidence of infection dating back to 2002 and, therefore, was not infected at the facility, but rather, is likely the true index case for the outbreak.

Table 3. Possible routes of infection

ID	Age	Sex	Hepatitis B category	Sexual activity	Glucose monitoring	Use of someone else's razor
B1	59	F	Acute	Unlikely	Only if used own device	Possible – may have used razor of B5
B2	79	F	Acute	Unlikely	Possible	No evidence to support
B3	56	M	Chronic	Unknown	Possible	Possible – may have used razor of B5
B4	40	F	Chronic	Possible with B5	Possible	No evidence to support
B5	41	M	Chronic*	Primary case	True index case	True index case

* Infection first identified in 2002.

Individuals with severe mental illness such as schizophrenia, bipolar disorder, or major depression have been shown to be at increased risk for acquiring HBV infection [3] and in the pre-vaccination era, hepatitis B was hyperendemic in institutionalized settings for the developmentally disabled. In this instance, however, transmission of hepatitis B virus through glucose monitoring may be the most likely explanation, and has been previously described in long-term care facilities [4]. The CDC has also provided recommendations for preventing patient-to-patient transmission of hepatitis viruses through diabetes-care procedures [3]. Some of these recommendations, such as separate glucometers for each patient, were not in place at the Miami facility at the time of the outbreak.

Other instances of health-care-associated hepatitis B transmission have been described in Florida. One outbreak was associated with an outpatient dermatology practice [5] and the other occurred at an outpatient chelation therapy facility [6]. A recent review identified 33 outbreaks of hepatitis B or C, at non-hospital health care settings in the United States, during the past decade [7]. Lapses in fundamental principles of infection control procedures were believed responsible in most of these outbreaks. The authors pointed out that these outbreaks may be difficult to detect, and the true problem may be more widespread than indicated by the outbreaks identified in their review.

Though this outbreak in Miami occurred over a year ago, in light of the recent national review of similar outbreaks [7], findings from the Miami outbreak may be helpful to share with epidemiology staff throughout Florida. County health department epidemiology staff in Florida who identify cases of acute hepatitis B or C without obvious risk factors are urged to rule out healthcare-associated transmission in the course of their investigation.

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Colorectal Cancer in Florida, 2005

Aruna Surendera Babu, M.P.H.

The Florida Department of Health (DOH) recognizes March as *National Colorectal Cancer Awareness Month*. This health observance was created in 2000 to increase awareness of the importance of regular screening to save lives and decrease the burden of colorectal cancer. Colorectal cancer is the second leading cause of cancer-related death in the United States, after lung/bronchus cancer. During the entire month of March, efforts are dedicated to educate and increase awareness for all people over 50 years old in Florida about colorectal cancer.

Colorectal cancer, most commonly known as colon cancer, is the third most diagnosed cancer among men and women in the United States. The risk of developing colorectal cancer increases with advancing age and more than 90% of cases occur in people 50 and older. Other risk factors include having a personal or family history of colorectal cancer or colorectal polyps and having inflammatory bowel disease. Lifestyle factors that may contribute to increasing the risk of developing colorectal cancer include lack of physical activity, tobacco use, alcohol consumption, being overweight or obese, and having a diet low in fruits, vegetables, and fiber content.

For this article data on colorectal cancer incidence and diagnosis stage are from the Florida Cancer Data System (FCDS), and mortality data are from the Florida Department of Health, Office of Vital Statistics. Florida data on cancer screening are from the Behavioral Risk Factor Surveillance System (BRFSS) survey. The Florida data are compared with that from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute (NCI). The U.S. mortality data reported by SEER are provided by the National Center for Health Statistics (NCHS).

In Florida in 2005, the colorectal cancer incidence rate was 44.7 per 100,000 population and the mortality rate was 15.6 per 100,000 population. Both incidence and mortality rates were higher among those in older age groups, males, and blacks. The 2005 incidence rate was 25% lower than the rate observed in 1981 (59.4 per 100,000). The 2005 mortality rate was 39% lower than the rate observed in 1981 (25.6 per 100,000). Florida incidence rates were significantly lower than SEER rates, except for black males, and Florida mortality rates were significantly lower than U.S. rates, except for black females.

Of all Florida colorectal cancer cases, 48.8% were diagnosed at an advanced stage in 2005. The percentage of cases diagnosed at an advanced stage was higher among females (38.4%) and whites (39.2%) compared to their counterparts. The percentage of cancer cases diagnosed at an early stage was higher in 2005 (38.7%) compared to the percentage in 1981 (32.6%).

The U.S. Preventive Services Task Force recommends screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults beginning at age 50 years and continuing until age 75 years. The risks and benefits of these screening methods vary. About

31% of Florida adults age 50 years and older have had a blood stool test in the past two years, and about 54% have had a sigmoidoscopy exam in the past five years. Lower screening rates were observed among adults 50 to 64 years of age, among those with less than a high school education, and among those without health insurance compared to their counterparts.

A comprehensive fact sheet with detailed data table on colorectal cancer in Florida is available at Florida Department of Health, Bureau of Epidemiology's website at: http://www.doh.state.fl.us/disease_ctrl/epi/cancer/Colorectal_Report.pdf.

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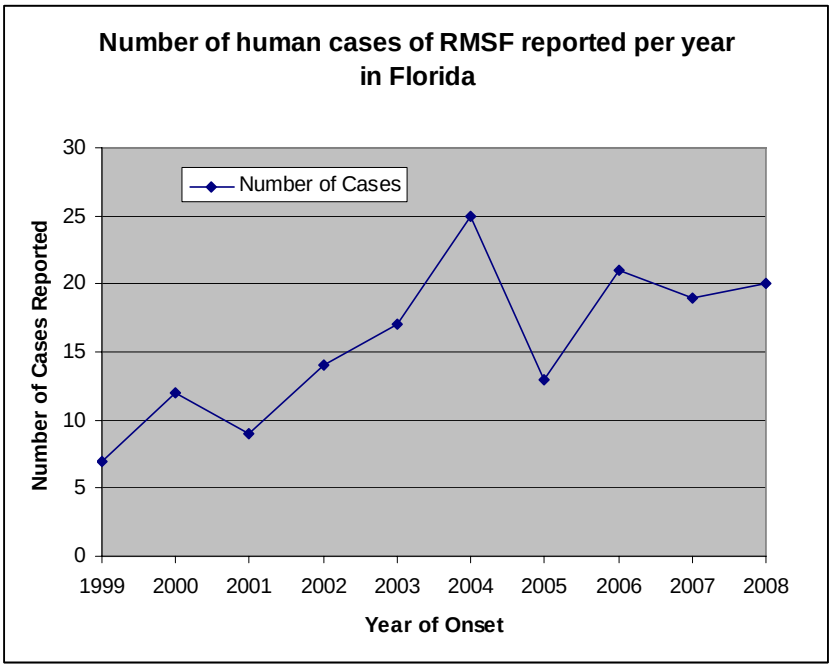
Rocky Mountain Spotted Fever: Update

Jocelyn Mullins-Ramey, DVM

Rocky Mountain Spotted Fever (RMSF) results from infection with the intracellular bacterial species *Rickettsia rickettsii*, which is one of many spotted fever group rickettsial organisms found worldwide. The disease was first described by pioneers in the western United States in the late 1880s and is found throughout the Americas. The most common vector of *R. ricketsii* in Florida is the American dog tick (*Dermacentor variabilis*), but other tick species may have the capacity to transmit the organism. Ticks serve as both reservoir and vector for disease. Between 1999 and 2008, 495 to 2,288 human cases of RMSF were reported annually in the United States [1,2]; the incidence has risen sharply since the late 1990s, possibly as a result of increased reporting, increased recognition, or a true increase in spotted fever group disease. In Florida the reported incidence has also increased overall since 1999, with between seven and 25 cases reported annually (Figure 1). Many RMSF cases, including fatal cases, are probably not diagnosed, and so the true incidence of disease is likely higher [1].

Figure 1. Number of human RMSF cases reported in Florida 1999



People, dogs, and rodents can become ill following infection by *Rickettsia rickettsii*. In humans and dogs most cases occur in the summer months. People most at risk for illness are aged five to nine years, male, and white [1]. Many patients will not report a tick bite; however, report of lesions thought to be a result of another type of insect bite, exposure to tick habitat, finding ticks on household pets, or a similar illness in a household pet can indicate possible tick exposure. RMSF initially resembles a viral infection, beginning with an acute onset of fever, headache, and myalgia, and possibly nausea, vomiting, and anorexia. Symptoms occur within 14 days of tick exposure and a maculopapular rash may appear approximately two to four days after the onset of symptoms. If untreated, the disease can progress rapidly to multi-organ vasculitis and death. RMSF is effectively treated with Doxycycline, which is the treatment of choice in both children and adults. Case-fatality ratio estimates are between 1.2% and 5.3% for treated patients and about 20% for untreated patients [1]. Risk factors associated with a severe or fatal outcome include advanced age, treatment delays over 5 days from the onset of symptoms, male gender, black race, glucose-6-phosphate dehydrogenase (G6PD) deficiency, treatment with drugs other than tetracyclines, and chronic alcohol abuse [1]. Deficiency of G6PD enzyme is present in approximately 12% of the U.S. black male population. Of the 157 cases reported in Florida between 1999 and 2008 71.3% were male, 81.5% white, 3.1% were under nine-years-old, and 48.4% occurred from June through September.

The epidemiology of RMSF and the clinical disease in dogs are nearly identical to those of humans. Major risk factors for infection in dogs include young age and outdoor lifestyle. German Shepherds appear to be at increased risk and English Springer Spaniels with G6PD deficiency are at increased risk of severe disease. In dogs RMSF typically manifests as lethargy, fever, and anorexia, and, on exam, dogs may show ocular signs, vasculitis, enlarged lymph nodes, joint swelling, or neurologic signs. Fatal outcomes are associated with delays in diagnosis and treatment, and thrombocytopenia is a common laboratory abnormality in both dogs and humans. Mild and subclinical infections occur in dogs, possibly due to cross-protective immunity from exposure to non-pathogenic rickettsial species [3]. Since the 1940s there have been case reports of concurrent illness in people and dogs within households and of family clusters of illness, and there is evidence that the same organism is responsible for human and canine illness within a geographic region [1,4]. Based on these findings, tick-borne disease in dogs could serve as a warning that humans in the community are at increased risk for infection.

Unfortunately, recognizing and diagnosing RMSF remains a challenge in both humans and dogs, potentially resulting in delayed treatment. Not all human patients present with the “classic triad” of fever, headache, and rash, or a history of tick bite. In both species serology may be negative (<1:64) during the first two to three days of symptoms, and elevated IgG titers may persist for eight months or more after exposure to a rickettsial agent [1,3]. Antibodies to other rickettsial agents and possibly other tick-borne agents cross-react with the *Rickettsia rickettsii* antigen. One such emerging agent that may be of clinical significance in Florida is *Rickettsia parkeri.* This agent is transmitted by the Gulf Coast tick (*Amblyomma maculatum*) and is suspected to cause milder spotted fever-type illness in people in the Southeast. One probable case of *R. parkeri* infection in Florida was reported in 2007 [5,6]. In 2008 the national case definition for serologic confirmation of RMSF was updated to require a fourfold rise in IgG as demonstrated by immunofluorescent assay (IFA). Because of the high likelihood of cross-reactions in both dogs and people, a single positive sample should be interpreted with caution, particularly as more rickettsial species with both known and unknown pathogenicity are emerging worldwide.

Physicians should be aware that RMSF may have nonspecific symptoms in its early stages, and because RMSF can rapidly progress before positive test results are available, appropriate treatment should be initiated as soon as the disease is suspected. Furthermore, an absence of

reported tick exposure should not delay treatment. Confirmatory rickettsial testing for humans is available through the DOH BOL-Jacksonville; several commercial labs and the Kissimmee Animal Disease Diagnostic Lab (KADL) provide testing for canine RMSF. In order to better understand the incidence and epidemiology of rickettsial spotted fever group illness in Florida, it is encouraged that all suspected cases have acute and convalescent samples submitted for antibody testing. Requiring reporting of canine cases of tick-borne diseases to Florida Department of Agriculture and Consumer Services (FDACS), Animal Industry should also be considered.

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New Florida Youth Survey Data Available

Jamie Weitz, M.S.

The Bureau of Epidemiology is proud to announce the release of some new reports.

Youth Risk Behavior Survey (YRBS)

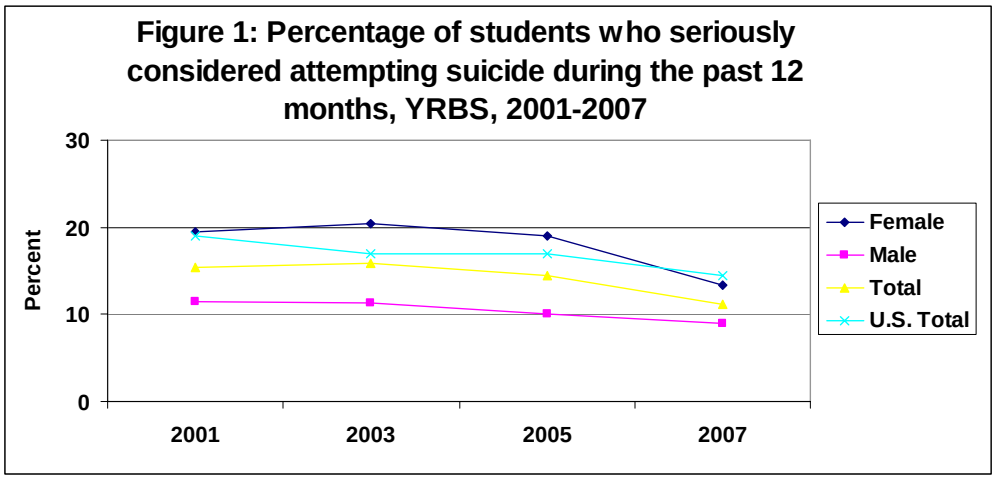
The *2007 Florida YRBS: Changes and Trends from 2001 to 2007* present data about Florida's high school students in the six categories that have been determined to have the most detrimental effect on children and adolescents: physical inactivity; poor nutrition; risky sexual behaviors; alcohol and other drug use; tobacco use; and unintentional injuries and violence. Trend data are provided by gender, race/ethnicity, gender by race/ethnicity, and by grade level.

Findings from the YRBS show significant decreases from 2001 to 2007 in the areas of injury and violence-related behaviors and activities, alcohol and other drug use, and tobacco use. Specifically, the percentage of students who:

- Did not go to school because they felt unsafe on their way to or from school decreased from 14.0% to 6.7% (Figure 1).

- Seriously considered attempting suicide during the past year decreased from 15.4% to 11.2%.
- Had their first drink of alcohol before age 13 decreased from 30.7% to 24.2%.
- Were offered, sold, or given an illegal drug by someone on school property during the past year decreased from 24.9% to 19.0%.

This *2007 Florida YRBS: Changes and Trends from 2001 to 2007,* is available at the following link: http://www.floridachronicdisease.org/YRBS/2007/2007_YRBS.html

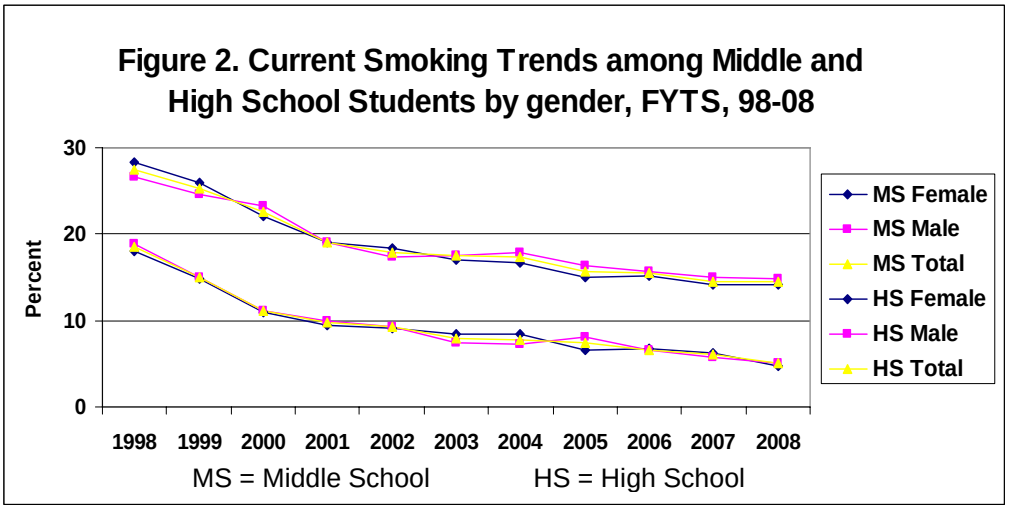


Florida Youth Tobacco Survey (FYTS)

The *2008 Florida Youth Tobacco Fact Sheets* and the *2008 Florida Youth Tobacco Survey County Level Data Book* present data about Florida's middle and high school students' thoughts and behaviors regarding tobacco use. The fact sheets provide data broken down by gender, race/ethnicity, and grade level and trends from 1998 to 2008, while the data book provides maps and tables by county and by gender of the key indicators captured on the 2008 Florida Youth Tobacco Survey.

From 1998 to 2008, the prevalence of several behaviors among Florida's middle and high school have shown significant improvements. Specifically, the prevalence of:

- Current cigarette smoking has decreased by 73.0% among middle school students and by 47.1% among high school students (Figure 2).
- Florida students who definitely did not think that smoking cigarettes helps people feel more comfortable in social activities increased by 143.5% among middle school students and by 109.5% among high school students.
- Being exposed to second-hand smoke in a room or car decreased by 18.9% among both middle and high school students.



The *2008 FYTS Fact Sheets* and the *2008 FYTS County Level Data Book* are available under State Level Reports and County Level Reports, respectively, at the following link: http://www.floridachronicdisease.org/FYTS/Reports.htm.

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Florida Year-to-Date Mosquito-Borne Disease Summary Through February 14, 2009

Elizabeth Radke, M.P.H., Kristina Weis, Ph.D., Danielle Stanek, D.V.M., Carina Blackmore, D.V.M., Ph.D.

During the period from January 1 through February 14, the following arboviral activity was recorded in Florida:

Eastern equine encephalitis virus (EEEV) Activity
Positive samples were obtained from three equines, two sentinel chickens, and one live wild bird in five counties.

West Nile virus (WNV), St. Louis encephalitis virus (SLEV) Activity
None

Highlands J virus (HJV) Activity
None

California encephalitis group viruses (CEV). Activity
None

In addition the following imported mosquito-borne disease was reported and reviewed:

Dengue Virus (DENV)
Four cases were reported from three counties. Countries of origin included Puerto Rico (2), Panama (1), Suriname (1), and Santo Domingo (1).

Malaria
Nine cases were reported from four counties. Countries of origin included Haiti (6), Nigeria (1), Malawi (1), and Venezuela (1).

Dead Bird Reports
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. Since January 1, 60 reports representing a total of 157 dead birds (28 crows, no jays, 6 raptors, and 123 others) were received from seven of Florida's 67 counties.

Please note that FWC collects reports of birds that have died from a variety of causes, not only arboviruses. Report dead birds to www.myfwc.com/bird/.

See the following web site for more information:
http://www.doh.state.fl.us/Environment/medicine/arboviral/index.html.

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Florida Influenza Surveillance Report

Kateesha McConnell, M.P.H.

Influenza surveillance in Florida consists of seven surveillance components: 1) Florida Sentinel Provider Influenza Surveillance Network (FSPISN); 2) Florida Pneumonia and Influenza Mortality Surveillance System; 3) State laboratory viral surveillance; 4) County influenza activity levels; 5) Notifiable Disease Reports 6) Influenza or influenza-like illness (ILI) outbreaks and 7) Syndromic surveillance.

For the most up to date information regarding influenza surveillance and the progress of influenza season in Florida please visit the Bureau of Epidemiology influenza surveillance reports website at: http://www.doh.state.fl.us/disease_ctrl/epi/htopics/flu/reports.htm.

During the first through the fifth weeks of 2009 (01/04/09-02/07/09) statewide influenza activity was reported as regional. Widespread activity was reported for the first time in the sixth week (02/08/09-02/14/09) using the national CDC influenza activity criteria. During the fifth week, for the first time during the 2008-2009 influenza season, the proportion of patient visits for ILI as

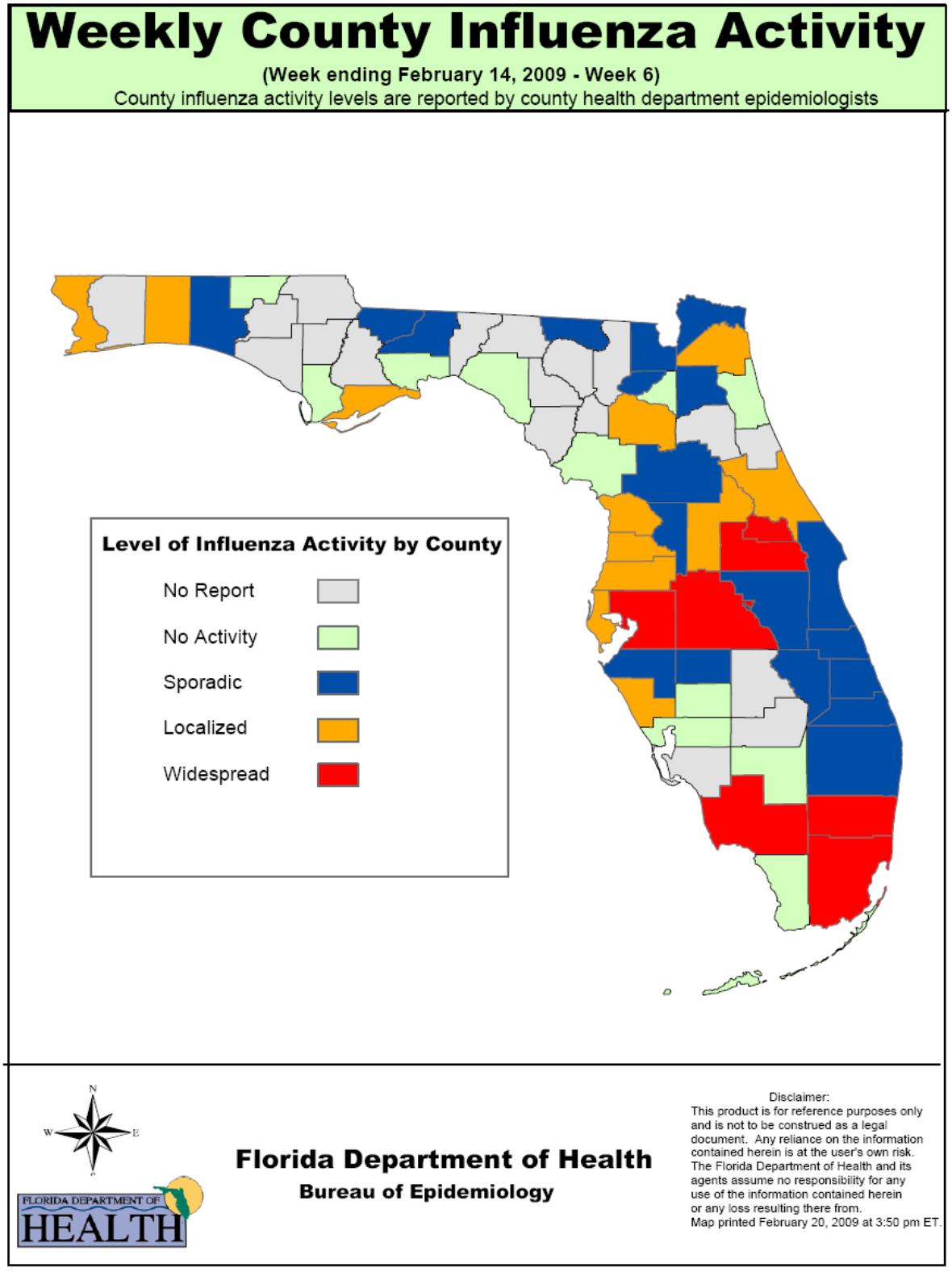
reported by the FSPISN (3.70%) was above the state threshold for moderate activity (2.98%). Influenza activity across the nation has also been increasing during this same time period. There have been three reported ILI outbreaks investigated in Florida so far this season. Nationally, most of the viruses characterized this season have been related to the strains found in the 2008-2009 vaccine. In Florida, laboratory testing has shown a recent change in the proportion of positive influenza A and B isolates or specimens. Influenza A is typically associated with more severe illness and the ability to cause more outbreaks than influenza B. Earlier this season Florida was seeing a larger proportion of influenza B. Over the last two weeks, Florida has seen a 10% increase in the number of influenza A specimens and a 10% decrease in the number of specimens positive for influenza B. Laboratory testing in Florida has also detected some influenza A specimens that are resistant to oseltamivir or "Tamiflu." A number of influenza A specimens resistant to oseltamivir have also been detected nationally.

Florida Bureau of Laboratories in Jacksonville and Tampa have tested a total of 345 specimens for influenza viruses since September 28, 2008. One hundred fifty-five (45%) of the specimens have tested positive for influenza. Of the 155 specimens, 67 were influenza A and 88 were influenza B isolates.

During the sixth week, seven counties reported widespread activity and 12 counties reported localized activity. Nineteen counties reported sporadic activity and 11 counties reported no activity. Eighteen counties did not report.

The full force of influenza season is here so now is an excellent time to protect yourself and your family from the flu. Practice good respiratory etiquette by covering your mouth when you cough and washing your hands after coughing or blowing your nose. You can help prevent the spread of flu by staying home from social gatherings, work, or school when you are sick.

Thank you to all of our surveillance partners for their continuous surveillance efforts in monitoring influenza activity in the state.



Kateesha A. McConnell is the respiratory disease surveillance epidemiologist in the Bureau of Epidemiology. She can be contacted at 850.245.4444, ext 2417 or by email at Kateesha_McConnell@doh.state.fl.us.

Upcoming Events

Bureau of Epidemiology Monthly Grand Rounds
Date: Last Tuesday of each month (except March)
Time: 10 a.m.-11 a.m.
Location: Building 2585, Room 310A
Dial-In Number: 877.646.8762 (password: Grand Rounds)

Upcoming Topics:

- March 24 – "Comprehensive Review of Salmonellosis in Florida" presented by Leah Eisenstein, MPH

- April 28 – "Reported Cases of *Vibrio* Illness in Florida, 1998-2007" presented by Kristina Weis, PhD

Reportable Diseases in Florida

Up-to-date information about the occurrence of reportable diseases in Florida, based on the Merlin surveillance information system, is available at the following site: http://www.floridacharts.com/merlin/freqrpt.asp. Counts can be displayed by disease, diagnosis status, county, age group, gender, or time period.

Monthly Notifiable Disease Data

Table 1. Provisional Cases* of Selected Notifiable Diseases, Florida, January 1-31, 2009

	Month				Cumulative (YTD)	
Disease Category	**2009**	**2008**	**Mean†**	**Median¶**	**2009**	**2008**
A. Vaccine Preventable Diseases						
Diphtheria	0	0	0	0	0	0
Measles	1	0	0.0	0	1	0
Mumps	0	4	1.0	3	0	4
Pertussis	35	7	11.6	7	35	7
Poliomyelitis	0	0	0	0	0	0
Rubella	0	0	0	0	0	0
Smallpox	0	0	0	0	0	0
Tetanus	0	0	0.0	0	0	0
Varicella	101	95	38.4	96	101	95
B. CNS Diseases & Bacteremias						
Creutzfeldt-Jakob Disease	4	1	1.8	1	4	1
H. Influenzae (invasive)	19	16	9.2	2	19	16
in those ≤5	2	6	3.4	3	2	6
Listeriosis	1	3	2.2	3	1	3
Meningitis (bacterial, cryptococcal, mycotic)	13	0	0	0	0	0
Meningococcal Disease	6	6	6.4	5	6	6
Staphylococcus aureus (VISA, VRSA)	0	0	0	0	0	0
Streptococcal Disease, Group A, Invasive	21	32	25.2	22	21	32
Streptococcus pneumoniae (invasive disease)						
Drug resistant	85	95	70.8	62	85	95
Drug susceptible	82	93	75.2	71	82	93
C. Enteric Infections						
Campylobacteriosis	75	84	63.6	58	75	84
Cholera	0	0	0	0	0	0
Cryptosporidiosis	26	23	20.4	20	26	23
Cyclospora	5	0	1.2	3	5	0
Escherichia coli, Shiga-toxin producing (STEC)**	13	7	4.4	3	13	7
Giardiasis	129	84	71.6	65	129	84
Hemolytic Uremic Syndrome	0	0	0.6	1	0	0
Salmonellosis	295	379	268.8	218	295	379
Shigellosis	55	95	99.8	86	55	95
Typhoid Fever	0	4	1.2	1	0	4
D. Viral Hepatitis						
Hepatitis A	21	15	17.2	15	21	15
Hepatitis B, Acute	24	24	33.2	32	24	24
Hepatitis C, Acute	1	6	5.4	5	1	6
Hepatitis +HBsAg in pregnant women	51	52	42.4	44	51	52
Hepatitis D, E, G	0	0	0	0	0	0

* Confirmed and probable cases based on date of report as reported in Merlin

Incidence data for 2009 is provisional, data for 2008 will be finalized on April 1, 2009

† Mean of the same month in the previous five years

¶ Median for the same month in the previous five years

** Includes *E. coli* O157:H7; shiga-toxin positive, serogroup non-O157; and shiga-toxin positive, not serogrouped

†† Includes neuroinvasive and non-neuroinvasive

N/A indicates that no historical data is available to caculate mean and median

Table 1. (cont.) Provisional Cases* of Selected Notifiable Diseases, Florida, January 1-31, 2009

	Month				Cumulative (YTD)	
Disease Category	**2009**	**2008**	**Mean†**	**Median¶**	**2009**	**2008**
F. Vector Borne, Zoonoses						
Dengue	3	4	1.4	4	3	4
Eastern Equine Encephalitits††	0	0	0	1	0	0
Ehrlichiosis/Anaplasmosis	1	0	0.2	1	1	0
Leptospirosis	0	0	0	1	0	0
Lyme Disease	14	1	1.6	2	14	1
Malaria	5	6	6.2	6	5	6
Plague	0	0	0	0	0	0
Psittacosis	0	0	0	0	0	0
Q Fever (acute and chronic)	0	0	0	0	0	0
Rabies, Animal	15	7	13.0	13	15	7
Rabies (possible exposure)	113	82	80.6	78	113	82
Rocky Mountain Spotted Fever	0	0	0.6	2	0	0
St. Louis Encephalitis††	0	0	0	0	0	0
Toxoplasmosis	1	0	0.2	1	1	0
Trichinellosis	0	0	0	0	0	0
Tularemia	0	0	0	0	0	0
Typhus Fever (epidemic and endemic)	0	0	0	0	0	0
Venezuelan Equine Enchephalitis††	0	0	0	0	0	0
West Nile Virus††	0	0	0.4	1	0	0
Western Equine Encephalitis††	0	0	0	0	0	0
Yellow Fever	0	0	0	0	0	0
G. Others						
Anthrax	0	0	0	0	0	0
Botulism-Foodborne	0	0	0	0	0	0
Botulism-Infant	0	0	0	0	0	0
Brucellosis	1	1	1.0	2	1	1
Glanders	0	0	0	0	0	0
Hansen's Disease (Leprosy)	0	2	0.6	2	0	2
Hantavirus Infection	0	0	0	0	0	0
Legionella	13	15	9.6	9	13	15
Melioidosis	0	0	0	0	0	0
Vibriosis	5	3	2.2	2	5	3

* Confirmed and probable cases based on date of report as reported in Merlin
Incidence data for 2009 is provisional, data for 2008 will be finalized on April 1, 2009

† Mean of the same month in the previous five years

¶ Median for the same month in the previous five years

†† Includes neuroinvasive and non-neuroinvasive

N/A indicates that no historical data is available to caculate mean and median

Note: The 2008 case counts are provisional and are subject to change until the database closes. Cases may be deleted, added, or have their case classification changed based on new information and therefore the monthly tables should not be added to obtain a year to date number.

Please refer any questions regarding the data presented in these tables to Kate Goodin at Kate_Goodin@doh.state.fl.us or 850.245.4444 Ext. 2440.

This Month on EpiCom

Christie Luce

EpiCom is located within the Florida Department of Health's Emergency Notification System (FDENS). The Bureau of Epidemiology encourages *Epi Update* readers not only to register on the EpiCom system by emailing the Florida Department of Health Emergency Notification System Helpdesk at FDENS-help@doh.state.fl.us, but to sign up for features such as automatic notification of certain events. Users are invited to contribute appropriate public health observations related to any suspicious or unusual occurrences or circumstances through the system. EpiCom is the primary method of communication between the Bureau of Epidemiology and other state medical agencies during emergency situations. Following are selected recent postings:

- Multiple GI illness outbreaks, Hillsborough County
- GI Illness outbreak at a nursing home, Osceola County
- Norovirus outbreak in nursing home, Indian River County
- Confirmed case of *Neisseria meningiditis* - Hernando County
- Suspected foodborne outbreak at a correctional facility, Taylor County
- Adverse reactions following cosmetic procedures, Hillsborough County
- GI illness outbreak at a skilled nursing facility, Broward County
- FL DOH has identified a single case related to the nationwide Salmonellosis *typhimurium* outbreak
- Possible pertussis case, Pasco County
- GI illness among hospital staff, Pinellas County
- Carbapenem-resistant *Klebsiella pneumoniae* outbreaks in Florida
- GI illness at a long-term-care facility, Clay County
- Norovirus outbreak in an elementary school, Escambia County
- Pertussis case, Martin County
- Fatal Waterhouse-Friderichsen Syndrome in a young child, Polk County
- Pertussis cases, Palm Beach County
- Confirmed pertussis cases update, Sarasota County
- Suspected infant botulism, Hillsborough County
- Gastrointestinal illness outbreaks, Duval County

For physicians and other health care providers who want more information on diagnosis and treatment of foodborne illness: *Recommendations and Reports April 16, 2004 / Vol. 53 / No. RR-4: Diagnosis and Management of Foodborne Illnesses A Primer for Physicians and Other Health Care Professionals* at http://www.cdc.gov/mmwr/PDF/rr/rr5304.pdf

Christie Luce is the Surveillance Systems Administrator for the Bureau of Epidemiology. She can be contacted at 850.245.4418 or by email at Christie_Luce@doh.state.fl.us.

Epi Update *is the peer-reviewed journal of the Florida Department of Health, Bureau of Epidemiology, and is published monthly on the Internet. Current and past issues of Epi Update are available online: http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/index.html. The current issue of Epi Update is available online at* http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2009/February2009EpiUpdate.pdf.

For submission guidelines or questions regarding Epi Update, please contact Leesa Gibson at 850.245.4409 or by email at Leesa_Gibson@doh.state.fl.us.


FLORIDA BUREAU OF EPIDEMIOLOGY


DIVISION OF
Disease Control