

Summary of Notable Outbreaks and Case Investigations, 1997-2006

Section 4

Selected Notable Outbreaks by Year, 1997-2006

In Florida, any disease outbreak in a community, hospital, or institution, as well as any grouping/clustering of patients having similar disease, symptoms, syndromes, or etiological agents that may indicate the presence of an outbreak is reportable, as per *Florida Administrative Code*, 64D-3. Selected outbreaks of public health interest that occurred during the period 1997-2006 are briefly summarized below. Following each outbreak summary are citations or links where additional information can be found about the outbreak or event. This section describes selected outbreaks only, and is more complete for recent years than for earlier years within the time frame described.

Additional Florida outbreak summaries can be found in *Epi Update* articles, an online publication of the Bureau of Epidemiology, Florida Department of Health. *Epi Update* articles can be accessed through the *Epi Update* archive site:

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/index.html.

Food and waterborne disease outbreaks in Florida are summarized in annual reports produced by the Bureau of Community Environmental Health, Florida Department of Health accessible via the following site: <http://www.doh.state.fl.us/environment/community/foodsurveillance/annualreports.htm>. Annual food and waterborne reports include overall statewide data as well as summaries of selected outbreaks. In addition, a bibliography of journal and *Epi Update* articles on food and waterborne diseases can be found at the following site: <http://www.doh.state.fl.us/Environment/community/foodsurveillance/index.html> under Bibliography.

***Acanthamoeba keratitis*, Multiple States, 2006**

A nationwide investigation of *Acanthamoeba keratitis* (AK) was undertaken in 2006 after the University of Illinois Department of Ophthalmology and Visual Science reported increasing numbers of cases of AK. Culture confirmed cases have now been reported from 37 states including Florida. The cases have been linked to AMO Complete® Moisture Plus™ (AMOCMP) contact lens solution. The manufacture has voluntarily recalled this product.

For additional information regarding this investigation please visit:

Centers for Disease Control, "*Acanthamoeba Keratitis Multiple States, 2005-2007*," *MMWR* 2007; 56(21); pp. 532-534, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5621a4.htm>.

Carrot Juice Associated Botulism, Hillsborough County, Florida, September 2006

The Hillsborough County Health Department Epidemiology Program, the Florida Department of Health Bureau of Epidemiology, and the Centers for Disease Control and Prevention (CDC) investigated a confirmed botulism case in a 53-year-old woman. This woman was hospitalized on September 16, 2006 with fatigue, respiratory failure, and descending flaccid paralysis. Laboratory results from the CDC indicate that the patient's serum tested positive for botulinum toxin Type A. The CDC issued antitoxin to be administered to the patient on September 28, 2006. A partially consumed bottle of carrot juice was found in the woman's vacated motel room, and it subsequently tested positive for botulinum toxin Type

A. In the U.S. and Canada, five other cases of botulism were connected to this same brand of carrot juice. Failing to keep carrot juice refrigerated can facilitate the growth of *Clostridium botulinum* spores, which can survive the flash pasteurization process that was used for this brand of carrot juice.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Botulism Associated with Commercial Carrot Juice-Georgia and Florida, September 2006," MMWR 2006; 55(Dispatch); pp. 1-2,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm55d106a1.htm>.

Centers for Disease Control, "Botulism Associated with Commercial Carrot Juice-Georgia and Florida, September 2006," MMWR 2006; 55(40); pp. 1098-1099,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5540a5.htm>.

Ciguatera Fish Poisoning Outbreaks from Recreationally-Caught Fish, Broward County, Florida, 2006

Two outbreaks of ciguatera fish poisoning were reported to the Broward County Health Department in 2006. In both outbreaks, the fish was recreationally caught by a fisherman who did not consume the fish, but who gave it as a gift to the cases. The first outbreak occurred in March, and involved eight cases who consumed a black grouper. There was a diagnosis of ciguatera poisoning by a Broward emergency department physician for one of the cases; a similar clinical syndrome consistent with ciguatera fish poisoning was reported among all eight persons who consumed the grouper.

The second outbreak occurred in August, and involved five cases who consumed a barracuda. The outbreak was confirmed through diagnosis of ciguatera poisoning by two separate Broward County emergency department physicians for two of the cases; along with a similar clinical syndrome consistent with ciguatera fish poisoning among all five persons who consumed the barracuda. Barracuda is a type of fish commonly associated with ciguatera fish poisoning.

An average of nine cases of ciguatera are reported to the Florida Department of Health each year, both from recreationally caught fish, and from fish served in restaurants, see for example, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001/eu110901.htm. Ciguatera is widely considered to be underreported in Florida, and efforts are underway to educate healthcare providers regarding diagnosis and treatment, as well as consumers and recreational fishermen about prevention.

For additional information regarding this investigation please visit:

R. Lowe, "Ciguatera Outbreak Associated with Consumption of Black Grouper, March 2006," *Epi Update*; 2006, July 10,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/07-10-06.htm.

Cryptosporidiosis Outbreak in a Travel Group Returning from Ireland, Nassau County, Florida, May 24, 2006-June 4, 2006

The Nassau County Health Department (NCHD) investigated a cryptosporidiosis outbreak in a returning choral group who toured Ireland from March 24 to June 4, 2006. The NCHD administered a telephone questionnaire to 40/41 of the group members to examine possible water exposures, common meals,

and food, travel, and clinical histories (29 persons met the outbreak's case definition). The analysis of survey data showed a strong association between drinking water at a dinner theater/restaurant in Killarney, Ireland, and developing illness. In addition, five stool samples from travelers tested positive for *Cryptosporidium parvum* and were subtyped IlaA16G1R1b, a strain that the CDC's Division of Parasitic Diseases scientists had detected twice in 2006 in human specimens from Northern Ireland.

For additional information regarding this investigation please visit:

R. Lazensky and K. Geib, "Cryptosporidiosis Outbreak in a Nassau County Travel Group Returning from Ireland, May 24, 2006-June 4, 2006," *Epi Update*, 2006; October 20, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2006/10-20-2006.pdf.

***Fusarium* keratitis, U.S., 2005-2006**

In 2006, there was a multi-state investigation of *Fusarium* keratitis. Report of 130 confirmed cases of *Fusarium* keratitis infection were received by the CDC with symptom onset between June 1, 2005 and May 18, 2006. Cases were reported from 26 states, including Florida, and one territory. Investigation found an association with Bausch & Lomb's ReNu with MoistureLoc® contact lens solution. This resulted in a global recall of the contact lens solution.

For additional information regarding this investigation please visit:

Centers for Disease Control, "*Fusarium* keratitis-Multiple States, 2006," *MMWR* 2006; 55(14); pp. 400-401, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5514a5.htm>.

Centers for Disease Control, "Update: *Fusarium* keratitis-United States, 2005-2006," *MMWR* 2006; 55(20); pp. 563-564, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5520a5.htm>.

D.C. Chang, G.B. Grant, and K. O'Donnell et al. "Multistate outbreak of *Fusarium* keratitis associated with use of a contact lens solution," *JAMA* 2006; 296:95363.

Legionellosis Outbreak, Volusia County, Florida, January 2006

The Volusia County Health Department (VCHD) investigated a cluster of pneumonia cases, and three laboratory confirmed cases of Legionnaires disease, who stayed at Florida Hotel A in January 2006. Eleven cases of pneumonia, with a history of staying or working at Hotel A, were reported to the VCHD. Legionnaires disease was confirmed in three patients by urine antigen test. One death was associated with the outbreak. The median age of cases was 70 years (range: 31-85), 9 of the cases (82%) were male. Seven case patients (64%) had underlying medical conditions associated with increased risk for Legionnaires' disease. Environmental sampling of the hotel's potable and permitted water and cooling features were negative for bacterial growth.

The VCHD and FDOH initiated a case-control study to determine possible risk factors for pneumonia illness. Of the 11 cases, there was no common travel history or lodging prior staying at Hotel A. There were also no similar or common community exposures among cases other than Hotel A. The indoor spa at Hotel A was the only significant exposure associated with illness, OR=9.82, 95% CI (1.57, 69.87) p-value= 0.006. Epidemiologic methods, and associations between pneumonia illness and

Hotel A exposures, pointed to a likely source of *Legionella* transmission. Data from the case-control study indicate the indoor spa as the most likely source for transmission of Legionnaires' disease. The recognition of an outbreak of Legionnaires disease relies heavily on the healthcare providers' ability to recognize the disease etiology, and to quickly communicate with their local health department. About 2-15% of all community-acquired pneumonia cases are due to infections of *Legionella* species.

Five Clusters of Neurotoxic Shellfish Poisoning, Lee County, Florida, 2006

During the month of July 2006, the Lee County Health Department (LCHD) received reports of 13 individuals (5 clusters) who experienced neurological symptoms consistent with neurotoxic shellfish poisoning after consuming recreationally harvested clams from an area not open to legal shellfish harvesting on Sanibel Island and Ft. Myers Beach. The 13 individuals were visitors to the area. Diagnoses from emergency department physicians, signs and symptoms of the cases, and laboratory confirmation from the Florida Fish and Wildlife Research Institute and the Federal Department of Agriculture (FDA) Gulf Coast Seafood Lab, confirms this outbreak of neurotoxic shellfish poisoning. The illness is caused by eating shellfish that have accumulated brevetoxin and its derivatives, which are the cause of red tide events. The main symptoms include tingling and/or numbness of the lips, tongue, throat, hands, and feet. Symptoms tend to be mild, and resolve quickly and completely. Onset of this disease occurs within a few minutes to a few hours; duration is fairly short, from a few hours to several days. Recovery is complete with few sequellae; no fatalities have been reported.

For additional information regarding this investigation please visit:

Terzagian, R. "Five Clusters of Neurotoxic Shellfish Poisoning (NSP) in Lee County, July, 2006," *Epi Update*, 2006; October 20.
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2006/10-20-2006.pdf

Multistate Outbreak of *Salmonella* Serotype Tennessee Infections Associated with Peanut Butter, U.S., 2006-2007

In November 2006, public health officials at the CDC and state health departments detected a substantial increase in the reported incidence of isolates of *Salmonella* serotype Tennessee. In a multi-state case-control study conducted during February 5-13, 2007, illness was strongly associated with consumption of either of two brands (Peter Pan or Great Value) of peanut butter produced at the same plant. Based on these findings, the plant ceased production and recalled both products on February 14, 2007. With diligent surveillance of salmonellosis cases in Florida, 11 cases were found to be associated with this multi-state outbreak. The outbreak strain of *S. Tennessee* subsequently was isolated from several opened, and unopened, jars of Peter Pan and Great Value peanut butter, and from two environmental samples obtained from the plant. New case reports decreased substantially after the product recall. As of May 22, 2007, a total of 628 persons infected with an outbreak strain of *Salmonella* serotype Tennessee had been reported from 47 states since August 1, 2006. The source of the peanut butter contamination is unknown. The FDA is investigating the plant operations, including heating temperatures, to determine the mechanism.

For additional information regarding this investigation please visit:

CDC. "Multistate Outbreak of *Salmonella* Serotype Tennessee Infections Associated with Peanut Butter --- United States, 2006—2007." *MMWR* 2007; 56(21); pp. 521-524.
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5621a1.htm>

Tuberculosis (TB) Outbreak in a Jacksonville Day Care, Jacksonville, Florida, 2006

The Duval County Health Department (DCHD) conducted a contact investigation in a local day care identifying one adult and five pediatric cases. Fifty-two children were skin tested (100%). There were 24 positives (46%), 26 negatives (50%), and two children did not have their skin tests read (4%). Six children had abnormal chest x-rays, and were started on a three drug treatment regimen. Staff of DCHD placed skin test positive children on Latent TB Infection (LTBI) treatment for nine months. DCHD staff also placed children who were skin test negative on window prophylaxis. DCHD retested 22 children, which identified one child that had converted their skin test; the rest remained skin test negative. Additional information gained in the beginning of 2007 suggests that there may be an epidemiologic link between the 2006 daycare outbreak and a case in a Jacksonville high school.

Tuberculosis (TB) Outbreak, Palm Beach County, Florida, 2006

Palm Beach County Health Department conducted three school investigations during 2006. During the most notable, health department staff screened over 200 individuals for Latent TB Infection (LTBI) and active TB disease. After the second round of skin testing, 70 students were identified to have LTBI. Case managers offered treatment to those infected. The contact investigation expanded, and will continue until the reactive rate falls below expected norms.

Tuberculosis (TB) Outbreak, Manatee County, Florida, 2006

The Manatee County Health Department (MCHD) conducted a TB contact investigation at a school. MCHD staff identified 219 contacts. Twenty eight individuals were skin test positive. Twenty-five of the 28 (89%) students were identified as having Latent TB infection and started treatment. Although the infection rate (12%) is not much higher than expected in the community, this investigation is notable due to the high treatment rate.

Tuberculosis (TB) Outbreak, Miami-Dade County, Florida, 2005

American High Contact Investigation:

The index case was a 16-year-old boy from Peru arriving in the U.S. in 2005. He was enrolled in high school during November 2005. He was admitted to the hospital in March 2005, and diagnosed with cavitary smear positive pulmonary TB.

Household contact investigation:

The patient's father was the only contact identified, and he had a negative Mantoux test. The limited amount of contacts in the household made the evidence of transmission in the initial concentric circle inconclusive. Because of this limitation, and the case was highly infectious, the contact investigation was extended to the school.

School Contact Investigation

One hundred and sixteen students, and seven teachers, were identified as potential contacts. Among the students, 91 had a negative PPD, 18 had a positive PPD, and seven were unable to be located. All 18 students with a positive PPD were foreign-born. Base on data collected on the 18 students, 10 had a prior negative PPD. However, there was no documentation of the exact measurement on the prior implanted PPDs. Among the seven teachers, five had a negative PPD, one had a prior positive PPD, and one was absent at the time of the initial evaluation. There were no secondary cases of TB. With the exception of four individuals, all students with positive PPD had a normal chest x-ray, eight had documentation of Latent TB infection (LTBI) treatment with INH. The only teacher with a positive PPD had a normal chest x-ray, and refused LTBI treatment.

In summary

Evaluation was completed on 85 foreign-born students. The infection rate was 18/85 (21%). Although this rate is high, it is not unusual in a foreign-born population. Furthermore, it could not be concluded that the 10 students with a prior negative PPD were true converters because the documentation of the prior PPDs was inadequate, and the booster effect could not be excluded. Therefore, this investigation did not demonstrate any evidence of transmission of TB in the school from the index case.

In light of the absence of evidence of transmission among the tested students, and because the PPDs were placed eight weeks after the last date of exposure, Mantoux test were not repeated on the individuals with a previous negative PPD. This investigation will end once the information on the seven students is updated as well as the one teacher absent at the time of the different screenings and information is obtained on the 10 students where there was no documentation of LTBI treatment.

Miami Dorsey Contact Investigation

The case is an 18-year-old female from Haiti who immigrated to the U.S. in 2005. She was enrolled in high school in the spring of 2005. She was diagnosed with cavitary smear positive pulmonary TB in 2006.

Household Contact Investigation:

Nine contacts were identified, all foreign-born. Seven of nine contacts had a positive PPD on initial testing and two of the nine converted their PPDs on repeat testing. All contacts had normal chest x-rays, and were started on Latent TB infection (LTBI) treatment. All household members were placed on LTBI treatment. There was evidence of transmission of TB infection from the index case, and the contact investigation was extended to the school.

School Contact Investigation:

Twenty-five contacts were identified (22 students and 3 teachers). Seventeen individuals had a positive PPD, three had a negative PPD, and five contacts could not be located. All 17 individuals with a positive PPD were foreign-born with no documentation of prior Mantoux test. Fourteen of 17 individuals with a positive PPD were placed on LTBI treatment. Three of 17 refused to have a chest x-ray. There were no secondary cases of TB.

In Summary

Among the 17 individuals who completed the evaluation, the infection rate was 14/17 (82%). This is a very high infection rate, which is also consistent with the epidemiology of TB in Haiti, the country of origin of most of the contacts. In light of the above, this investigation could not confirm any transmission of TB in the school from the index case as identified contacts also could have been infected in their country of origin. The investigation will be closed once the information on eight contacts has been updated.

Tuberculosis (TB) Outbreak in Correctional Institutions

Typically, 5-10% of Florida's annual TB morbidity comes from correctional settings, with the majority being from local county jails. However, in 2005 and 2006, an outbreak occurred at a state correctional facility.

Secondary cases from a 2005 prison outbreak prompted the Bureau of TB and Refugee Health to send a team to the prison to screen staff and inmates in an effort to halt transmission in the facility. Over 2,700 individuals received a screening and risk assessment. These individuals had skin tests placed and/or chest x-rays done, as indicated by their screening and risk assessment. The outbreak response team identified two additional cases as part of this process. Educational sessions were provided to the staff and inmates on the signs and symptoms of TB, while members of the TB-MD network reviewed case information with the healthcare providers in the facility. As of February 2007, 32 cases have been identified and attributed to this outbreak.

Outbreak of Cryptosporidiosis among Attendees of a Statewide T-Ball Tournament, Duval County, Florida, June 2005

On June 27, 2005 the Duval County Health Department (DCHD) Epidemiology Program received a report from a physician's office of cryptosporidiosis in a 6-year-old male. Two additional cases were reported the following day, among two brothers under the age of six. The investigation revealed that the three individuals developed symptoms after attending a statewide T-ball tournament in Chiefland, Florida held June 1-5. The tournament coordinator provided a list of all 17 teams attending the tournament. A case-control study was conducted to determine the source of this outbreak. Of 124 individuals surveyed, 47 (37.9 %) met the case definition. Of the 47 cases, 15 (31.9%) sought medical attention. None required hospitalization. A total of 12 stool samples, all from the Jacksonville team, were collected for testing. Five samples were positive for *Cryptosporidium* oocysts, six were negative, and one was lost during the testing process. The epidemiological investigation strongly suggests that the individuals affected in this outbreak were exposed to *Cryptosporidium* oocysts in the swimming pool at Hotel A in Gainesville. The organism was able to survive in the pool because of its resistance to chlorine and filtration. The source of contamination that led to transmission in the pool is unknown. Education about the importance of refraining from recreational water activities while symptomatic is key in preventing future outbreaks.

For additional information regarding this investigation please visit:

S. Traynor, K. Ward, S. Zaheer, and A. Morgan, "Outbreak of Cryptosporidiosis among Attendees of a Statewide T-Ball Tournament, June 2005," *Epi Update*, 2005; November 18, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/11-18-05.htm.

Statewide Outbreak of Cyclosporiasis, 2005

In 2005, between March and May, the Food and Waterborne Disease Program conducted an investigation of a statewide outbreak of Cyclosporiasis. A total of 592 cases were identified (385 confirmed, 277 probable). Of these, 493 were Florida residents, with 89 from other states, and 10 from Canada. All cases were exposed in Florida through several restaurants. The vehicle of transmission was fresh basil and fresh basil pesto in dipping oil, as well as fresh basil in salad dressing. The basil came from a single distributor in south Florida, and was imported from a single farm in Peru. This was the single largest Cyclosporiasis outbreak in Florida history.

For additional information regarding this investigation and topic please visit:

"Food and Waterborne Illness Surveillance and Investigation, Annual Report, 2005," Florida Department of Health, Bureau of Community Environmental Health, <http://www.doh.state.fl.us/environment/community/foodsurveillance/pdfs/annual2005.pdf>
D. Bodager and R. Hammond, "Surveillance and Investigation of a Large Statewide *Cyclospora* Foodborne Disease Outbreak Involving an Imported Stealth Product," Institute of Medicine Forum on Microbial Threats Board on Global Health, *Addressing Foodborne Threats to Health: Policies, Practices and Global Communication Workshop Summary (2006)*, The National Academies Press: Washington D.C., pp. 115-124.

***Escherichia coli* O157:H7 Outbreak Associated with Three Petting Zoos, Florida, 2005.**

In March 2005, Florida health officials identified a cluster *Escherichia coli* O157:H7 infections, including seven HUS cases, related to attendance at three fairs during February 10-21, 2005, and March 3-13, 2005. Interviews indicated that animal exposure (i.e. petting zoo animal contact) was common among cases. The implicated fairs had one common animal vendor, an exhibitor of a farm animal petting zoo. Sixty-three patients (median age: 4 years) were identified who had symptoms of *E. coli* O157:H7 infection within 10 days or HUS within 21 days after visiting the Central Florida fairs, and who had no alternate diagnosis to explain their symptoms. Of these, 20 (32%) persons had culture-confirmed *E. coli* O157:H7 infection. Bacterial isolates from human, petting zoo animals, and environmental samples were compared by PFGE. All had identical fingerprints.

For additional information regarding this investigation and the subsequent case control study that was done to determine risk factors for disease see:

Centers for Disease Control, "Outbreaks of *Escherichia coli* O157:H7 Associated with Petting Zoos-North Carolina, Florida, and Arizona, 2004 and 2005," *MMWR* 2005; 54(50); pp. 1277-1280, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5450a1.htm>.

A Multi-state Hepatitis A Outbreak Associated With Raw Oyster Consumption: A Summary of the Florida Cases, 2005

In September 2005, 20 cases of hepatitis A were reported in Florida; 15 associated with eating raw oysters, along with 5 secondary cases. Of the nine serum samples collected, all matched the DNA sequencing, and also matched cases in Alabama, South Carolina, and Tennessee. The oyster tags collected from four restaurants in Florida showed that the oysters came from the same harvesting area in Louisiana. Further investigation of the Alabama cases also showed the oysters were from the same harvesting area. This multi-state outbreak is the first reported hepatitis A outbreak in 20 years linked to raw oysters.

For additional information regarding this investigation please visit:

Wamnes, J., Hammond, R. "A Multi-state Hepatitis A Outbreak Associated with Raw Oyster Consumption: A Summary of the Florida Cases, 2005," *Epi Update*, 2005; November 18.
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/11-18-05.htm

Human Tissue Recall and Public Health, 2005

On October 26, 2005, the FDA notified the public that it was investigating a company in New Jersey that harvested tissue from individuals that did not meet FDA donor eligibility, and may not have been properly screened for infectious diseases. Two Florida tissue processors received implicated tissue, and were involved in the recall of products. The Florida Department of Health worked with the FDA and the CDC by contacting tissue processors in the state, and working with local healthcare institutions and providers. Patients that may have received the recalled products from the New Jersey company were notified by the healthcare institutions, and/or healthcare providers, to seek immediate testing for specific infectious diseases.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Brief Report: Investigation into Recalled Human Tissue for Transplantation-United States, 2005-2006," *MMWR* 2006; 55(20); pp. 564-566,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5520a6.htm>.

FDA News, "FDA Provides Information on Investigation into Human Tissue for Transplantation," P05-77, October 26, 2005, <http://www.fda.gov/bbs/topics/NEWS/2005/NEW01249.html>.

Leptospirosis at an Adventure Race, Hillsborough County, Florida, November 2005

The Hillsborough County Health Department, in conjunction with the CDC, investigated a leptospirosis outbreak associated with an adventure race held in Tampa, Florida on November 4 and 5, 2005. This race was a national championship event, and featured racers from around the country, who ran, biked, paddled, and orienteered during the competition. Symptoms of leptospirosis include fever, sudden onset headache, chills, sweats, severe myalgia (calves and thighs), and conjunctival suffusion. Complications can include liver damage, kidney failure, pulmonary hemorrhage, and death. A person acquires leptospirosis by coming into contact with animal urine or ingesting food or water that has been contaminated with animal urine.

Of the 200 participants in the race, 43 individuals had an illness clinically compatible with leptospirosis. Of these 43 affected adventure racers, 14 had laboratory tests confirming leptospirosis. Only one of these 43 individuals was a Florida resident. Symptom and risk factor questionnaires were completed for 193 of the 200 racers. Swallowing river water (OR=3.4, 95% CI 1.6-7.0), swallowing swamp water (OR=2.4, 95% CI 1.1-5.2), and being submerged in any water (OR=2.3, 95% CI 1.1-4.7) were all independently associated with getting leptospirosis. It is hypothesized that wild pigs (or other animals) in the area may have contaminated rivers and swamps that were part of the racecourse. Because leptospirosis outbreaks have also occurred at several adventure races in the past, it is important that participants are aware of the risks of this disease, and discuss pre-event antibiotic usage with their physicians as a means of preventing this disease.

Multi-state Investigation of Measles Among Adoptees from China, 2005

Florida Department of Health joined with Maryland, New York, Washington, Division of Global Migration and Quarantine, and the CDC to investigate the report of measles in adoptees from China. A group of 11 families traveled to China to adopt 12 children from two orphanages in Hunan Province. The investigation determined that nine of the children had measles-like rash illness, including four (three in Washington, and one in Maryland), who were serologically confirmed to have measles. Three of the children were likely infectious while traveling from China to the U.S. on multiple airline flights. The patients were aged 12-18 months; they had rash onset from March 22 to April 6. The three children who did not develop measles-like rash illness traveled to Washington (a child aged seven years), Alaska (a child aged 13 months), and Florida (a child aged 13 months).

Healthcare providers should consider measles in persons with febrile rash illness that have traveled internationally within the past 7-21 days. Any suspected cases should be reported to the local health department immediately to ensure that appropriate testing and follow-up is done. Continuing cases show that maintaining high levels of vaccination coverage and strong surveillance in the U.S. is critical.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Multistate Investigation of Measles Among Adoptees from China-April 2004," *MMWR*, 2004; 53(Dispatch);1-2,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm53d409a1.htm>.

Centers for Disease Control, "Brief report: Imported Measles Case Associated with Nonmedical Vaccine Exemption-Iowa, March 2004," *MMWR*, 2004; 53:244—6,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5311a6.htm>

Pertussis Outbreak, 2005

Pertussis (whooping cough) cases started increasing in 2002. In 2005 a pertussis outbreak, with 12 confirmed cases, occurred in a religious community with low immunization levels. Three cases were <7 years of age, one case was hospitalized; all recovered. Duration of cough was from 14 to 62 days. Community residents accepted medication for symptoms, but immunization of children was refused.

Imported Melioidosis, Florida, 2005

In 2005, two cases of melioidosis (one in August, one in October) were reported to the Florida DOH, the first cases since reporting the disease became mandatory in Florida in 2003. In one case, *Burkholderia pseudomallei* was not recognized as the bacterium that causes the disease melioidosis, which led to a delay in reporting the case to the local health department. In both cases, delayed recognition and unsafe laboratory practices resulted in laboratory workers being exposed to *B. pseudomallei*. This report summarizes the clinical and laboratory aspects of the cases and the epidemiologic study conducted by the Florida DOH. The findings emphasize the need for improved laboratory recognition and reporting of *B. pseudomallei*, safe laboratory handling of *B. pseudomallei*, and close adherence to antibiotic regimens for treating and preventing recurrence of melioidosis.

Centers for Disease Control, "Imported Melioidosis-South Florida, 2005," *MMWR*, 2006;55, pp. 873-876, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5532a1.htm>.

Surveillance for Illness and Injury after Hurricane Katrina, Three Counties, Mississippi, Sept. 5 – Oct 11, 2005

Hurricane Katrina made landfall along the gulf coast of Mississippi on August 29, 2005, causing significant destruction from wind damage and storm surge. In Hancock County, the storm surge was estimated to be 27 feet, and extended 6-12 miles inland. The coastal counties of Hancock, Jackson, and Harrison experienced the greatest damage, including the destruction of public infrastructure (electricity, sanitation systems, water treatment facilities, and roads). Hospitals, medical clinics, and public health facilities were also severely disrupted or destroyed immediately after the hurricane. The Mississippi Department of Health requested assistance from the CDC and the Florida Department of Health to conduct active surveillance at hospital emergency rooms, federal Disaster Medical Assistance Teams (DMAT), and other outpatient clinics. This report describes these surveillance activities and their findings, which determined that no major outbreaks of infectious disease occurred after the hurricane.

Centers for Disease Control, "Surveillance for Illness and Injury After Hurricane Katrina-Three Counties, Mississippi, Sept 5-Oct 11, 2005," *MMWR* 2006: 55, pp. 231-234, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5509a2.htm>.

Botulism in Four Adults Following Cosmetic Injections with an Unlicensed, Highly-Concentrated Botulinum Preparation, Palm Beach County, Florida, November 2005

In 2005, four cases of botulism occurred in residents of Palm Beach County. All four were caused by injections of botulism toxin for cosmetic purposes, using an unlicensed product.

For additional information regarding this investigation please visit:

Chertow, D., et. al. "Botulism in 4 Adults Following Cosmetic Injections with an Unlicensed, Highly Concentrated Botulinum Preparation." *JAMA*. 2006;296: pp. 2476-2479. <http://jama.ama-assn.org/cgi/content/full/296/20/2476>

Carbon Monoxide Poisonings During Hurricane Season, Florida, 2004

Four major hurricanes made landfall in Florida, between August 13 and September 25, 2004, resulting

in electrical power outages to several million homes. The Florida Department of Health and the CDC investigated the occurrence of fatal, and non-fatal, carbon monoxide poisonings during this period. Medical records from 10 hospitals (two with hyperbaric oxygen chambers), medical examiner records, and reports of investigations conducted by the U.S. Consumer Product Safety Commission were reviewed. A total of six fatal poisonings from five incidents, and a total of 167 non-fatal poisonings from 51 incidents, occurred between August 13 and October 15, 2004. Use of portable, gasoline-powered generators was implicated in 47 of 51 (96%) non-fatal incidents, and all fatal poisonings. In incidents in which a generator was known to be involved, most of the generators were located outdoors in close proximity to the home or inside the garage, followed by inside the home. Of the interviewed people involved in nonfatal incidents, 74% did not own a generator before the hurricanes, 86% did not have a CO detector, 69% revealed concerns about theft and exhaust influenced location of the generator, and 67% reported exposure to CO education messages before the incident. Education about the dangers of generator use and engineering solutions should be the focus of public health activities.

For additional information regarding this investigation please visit:

D. Van Sickle, et al., "Patterns of Carbon Monoxide Poisoning During the Florida 2004 Hurricane Season," *American Journal of Preventive Medicine* 2007; 32(4): pp. 342-346.

Centers for Disease Control, "Carbon Monoxide Poisoning from Hurricane Associated Use of Portable Generators, Florida 2004," *MMWR* 2005; 54: pp. 697-699.

A. Ourso, "A Report on Post-Hurricane Carbon Monoxide Poisoning in Volusia County," *Epi Update*; 2005; January 7,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/01-07-05.htm.

***Clostridium perfringens* Foodborne Outbreak at a Local School Board Luncheon, Manatee County, Florida, August 9, 2004**

In August 2004, the Manatee County Health Department was contacted by the local school board about members who had attended a luncheon and had subsequently become ill with gastrointestinal symptoms. Early information indicated that 22 of the 24 attendees had become ill approximately six hours after eating. Symptoms reported included diarrhea, nausea, and abdominal pains. The food served at the luncheon had been purchased from a local BBQ restaurant. BBQ pork, coleslaw, baked beans, several desserts, and soft drinks had been served at the luncheon. Pork was implicated in this investigation and tested positive for *Clostridium perfringens*, both from food samples collected at the restaurant and from leftover foods taken home. A positive stool specimen from one ill attendee also helped to confirm these findings.

For additional information regarding this investigation please visit:

M. Friedman, "*Clostridium perfringens* Foodborne Outbreak at a Local School Board Luncheon- Manatee County, August 9, 2004," *Epi Update*; 2004, September 24,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/09-24-04.htm.

A Hepatitis B Outbreak Associated With Outpatient Chelation Therapy, Miami-Dade County, Florida, 2004

In 2004, as part of standard communicable disease reporting, the Miami-Dade County Health Department (MDCHD) identified two cases of acute hepatitis B among elderly men (age ≥ 70 years) who denied traditional hepatitis risk factors. Interviews linked the men to the same clinical practice, where both had undergone outpatient chelation therapy. In response, the MDCHD and the Florida Department of Health Bureau of Epidemiology initiated an epidemiological investigation.

The MDCHD and the Florida DOH, Bureau of Epidemiology conducted several clinic visits to assess compliance with standard infection control practices. A retrospective cohort study was conducted among clinic patients. Clinical exposures were ascertained through medical record review and patient interviews. Information on hepatitis testing history, vaccination history, and hepatitis risk factors was collected. Patients were screened for hepatitis through serologic survey. Samples from patients with acute (IgM positive) and chronic (HBsAg positive) hepatitis B infections were submitted to the CDC for genotyping and nucleic acid sequencing.

Violations of standard infection control practices included failure to prepare and store intravenous infusions under aseptic conditions, inconsistent hand hygiene, inconsistent use of personal protection (gloves), and inadequate cleaning of multi-dose vials prior to use. Of the estimated 253 clinic patients, 106 (42%) patients were tested for hepatitis. A total of seven acute and two chronic hepatitis B cases were identified. One of the chronic cases was the clinic physician that administered all therapies. The physician was also positive for the hepatitis B antigen. All cases had received chelation therapy at the clinic, including the physician. Five specimens were tested by the CDC, including one from the physician, and all five were found to be of the same genotype and serotype, which is consistent with a common source or transmission event.

Both epidemiologic and laboratory data support hepatitis B transmission in this clinical practice. The high infectivity of the hepatitis B e antigen positive physician increased the consequences of breaks in infection control. This outbreak is one of the few documented instances linking transmission from a hepatitis B e antigen-positive healthcare professional to patients. Implementation of public health interventions, (including closing the practice) halted the hepatitis B transmission. As a result of this investigation the physician relinquished his license to practice medicine.

Cruise-Ship—Associated Legionnaires Disease, November 2003-May 2004

During a six-month period from November 2003 to May 2004, eight cases of *Legionella* were reported nationwide. One of the eight cases was a resident of Flagler County. The occurrence of *Legionella* occurring in individuals with cruise ship travel is an event with public health importance in Florida due to the multiple cruise ship departure points in the state.

For additional information regarding this investigation please visit:

CDC. "Cruise-Ship—Associated Legionnaires Disease, November 2003—May 2004." *MMWR*, 2005; 54(45); pp.1153-1155.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5445a2.htm>

Pufferfish Consumption Confirmed as Cause of Saxitoxin Poisoning Cases, Brevard County, Florida, 2002-2004

In 2002, the Brevard County Health Department was notified by the New Jersey State Health Department that a New Jersey resident had experienced neurological symptoms consistent with paralytic shellfish poisoning. Prior to onset, the patient case was reported to have consumed pufferfish caught from an unknown location. In 2002, a total of 21 cases were identified from recreationally caught pufferfish. After an educational campaign about the risks of consumption of Southern Pufferfish caught in the Indian River Lagoon area, and an emergency ban on the harvest of these fish, in 2003, five cases in a single cluster were reported, and in 2004, five cases in three clusters were reported. No other cases have been reported since 2004. These neurological illnesses are compatible with the known symptoms associated with paralytic shellfish poisoning. Each illness onset was preceded by the consumption of pufferfish harvested from the Indian River Lagoon in Brevard County. The presence of saxitoxin in the urine of several patients confirms the agent of this outbreak. The presence of saxitoxin in pufferfish filets confirms pufferfish as the vehicle of transmission. This outbreak is the first documented outbreak of saxitoxin poisoning associated with pufferfish. Saxitoxin is more commonly associated with the consumption of molluscan shellfish, causing paralytic shellfish poisoning.

For additional information regarding this investigation and topic please visit:

Centers for Disease Control, "Neurologic Illness Associated with Eating Florida Pufferfish, 2002," *MMWR*, 2002; 51(15); pp. 321-3,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5115a1.htm>.

Centers for Disease Control, "Update: Neurologic Illness Associated with Eating Florida Pufferfish, 2002," *MMWR*, 2002; 51(19); pp. 414-6,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5119a3.htm>.

Pertussis Outbreak Following Hurricane Ivan, 2004

In 2004, after Hurricane Ivan (9/16/04) landed on the panhandle, a high number of pertussis cases were identified by the Epidemiology Team assisting the local county health department. While there was concern that during the sheltering for Hurricane Ivan, susceptible family members and neighbors might have been infected, investigation showed that, of the 23 cases, most case onsets were prior to the close contact that occurred during the hurricane. Of the 15 confirmed cases, 7 had laboratory confirmation and 2 were hospitalized. The age range was 3 months to 67 years, and duration of cough was 19 to 112 days. As an extra precaution against disease transmission, the local county health department and school staff contacted 142 families of eighth graders to screen for symptomatic students or family members. During the telephone interview, family members' immunization histories were reviewed, and appropriate treatment /prophylaxis was provided, as indicated. These measures, and the four-week school closing due to hurricane damage, effectively prevented the further spread of pertussis.

Varicella (Chickenpox) Outbreak at a Local Elementary School, Seminole County, Florida, 2004

From March 10 to April 19, 2004, 28 students in an elementary school were infected with the varicella virus. The students' ages ranged from 5-12 years of age with a mean of 8 years of age. Of the 12

students interviewed, 67% reported fever, 83% reported itching, and 8% reported sore throat. The duration of illness for the unvaccinated students was 10 days. Of the 28 cases, 78.6% (22) of the students were previously vaccinated. The mean duration for illness in vaccinated students was 6.9 days, with a range of 3-14 days. Because the majority of students had received vaccine, most of the cases were less severe, with fewer lesions and a shorter duration of illness.

The parents were notified by phone, letters and fact sheets; immune-compromised children and pregnant staff members were advised to consult their doctors. A multidisciplinary health team provided education that focused on proper hand washing. School nurses were instructed to exclude all infected students from school until all lesions had crusted over.

Note: In school year 2001-2002, one dose of varicella vaccine was required for entry/attendance for pre-kindergarten and kindergarten, with an additional grade added each year. In the 2008-2009 school year, the entry/attendance requirement will be two doses of varicella vaccine, with an additional grade added each year. As of November 2006, all varicella cases are to be reported to the county health departments. Varicella disease occurring >42 days after vaccination, called breakthrough disease, has been well-documented and the Centers for Disease Control and Prevention now recommends a two-dose series of varicella vaccine.

K. Larry-Johnson, P. Booth, and K. Catterfeld, "Chickenpox Outbreak at a Local Elementary School, Seminole County," *Epi Update*, 2004; June, 25,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Update_files/Chickenpox.pdf.
 Florida Department of Health, Bureau of Immunization, "Immunization Guidelines Florida Schools, Child Care Facilities and Family Day Care Homes," Effective March 2007,
<http://www.immunizeflorida.org/schoolguide.pdf>.

Centers for Disease Control, "Prevention of Varicella Recommendations of the Advisory Committee on Immunization Practices (ACIP)," *MMWR*, 2007; 56(RR04); p. 3,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5604a1.htm>

A Study of Florida Panhandle Gulf Drownings, June-July 2003, and the Results from the Beachgoers' Survey, August 2003

Between 1989 and 2003, an average of 19 individuals per year died in rip current related drownings off the coast of Florida, either in the Atlantic Ocean or the Gulf of Mexico. The 2003 season was an especially severe year, as 34 rip current related drownings occurred in the waters surrounding Florida. The Florida Department of Health's Bureau of Epidemiology and Office of Injury Prevention conducted an investigation into 12 drownings that occurred during the period of June 1 to July 31, 2003 in a five-county area in the Florida Panhandle. The purpose of the study was two-fold: to provide a descriptive summary of the 12 drowning fatalities that occurred in this area, and to survey beachgoers with respect to their knowledge of beach safety.

The investigation found that the majority of the drowning victims (10 of 12) were from out of state, and all but one (11 of 12) of the drownings occurred during the most severe rip current conditions (red flag days). The survey of beachgoers revealed that many beachgoers (30.6%) were unaware of the rip current conditions at the time of the survey, and the majority of the survey respondents (59.3%) lacked knowledge of how to escape from a rip current.

For additional information regarding this investigation please visit:

- A. Rowan, D. Atrubin, and L. VanderWerf-Hourigan, "Beach Drowning Study Provides Clues to Panhandle Incidents," *Epi Update*, 2004; September 24, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/09-24-04.htm.
- A. Rowan, D. Atrubin, and L. VanderWerf-Hourigan, "Panhandle Beach Safety Study," Bureau of Epidemiology and the Office of Injury Prevention, Florida Department of Health, http://www.doh.state.fl.us/disease_ctrl/epi/FLEIS/Report_Beach_Study.pdf.

Locally-acquired Malaria, Palm Beach County, Florida, 2003

In 2003, eight locally-acquired cases of *Plasmodium vivax* were reported in Palm Beach County. All cases were male, and the average age was 34 years (range: 17-48 years). The cases all lived in the same West Palm Beach area, within 10 miles of the Palm Beach International Airport. Dates of symptom onset ranged from July 12 to September 14, 2003. Seven of the eight cases had the same strain genotypes. All eight cases reported no previous history of malaria, and six of the eight had never traveled to a malaria-endemic country.

During the same period, two individuals were evaluated for malaria in nearby Okeechobee County, raising concerns of a possible link. The subsequent investigation found no association with the Palm Beach County event.

For additional information regarding these investigations please visit:

- Centers for Disease Control, "Local transmission of *Plasmodium vivax* malaria-Palm Beach County, Florida, 2003," *MMWR*, 2003;52: pp. 908-11, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5238a3.htm>.
- Centers for Disease Control, "Multifocal Autochthonous Transmission of Malaria-Florida, 2003," *MMWR*, 2004; 53(19); pp. 412-413, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5319a2.htm>.
- M. Weems, and S. Kumar, "Locally Acquired Malaria "Probable" in Palm Beach County," *Epi Update*, 2003; August 8, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/08-08-03.htm.
- F. Arguello, "Multifocal Autochthonous Transmission of Malaria-Florida, 2003," *Epi Update*, 2004; June 4, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/06-04-04.htm.

Salmonella Outbreak at a Catered Dinner, Pinellas County, Florida, October 2003

The Pinellas County Health Department was notified on October 8, 2003 that members from a synagogue in Palm Harbor had become ill after attending a dinner on October 6. A local deli had catered this dinner, and leftover food was subsequently donated to a homeless shelter in Pasco County. Thirteen confirmed cases of *Salmonella* Group-C were identified (11 in Pinellas and 2 in Pasco), and a case-control study identified 47 additional cases (41 in Pinellas and 6 in Pasco). Egg salad was strongly implicated by the study (odds ratio of 35.0, p-value >0.05). Weaker associations were also seen with other food items served. Whitefish salad, tuna salad, and egg salad collected all tested positive for *Salmonella*. Investigation results identified significant time/temperature abuse of the various food items served at the synagogue dinner and at the homeless shelter in Pasco County.

For additional information regarding this investigation please visit:

K. Granger, and C. Mancini, "*Salmonella* Outbreak Affects 96 Persons in Pinellas County," *Epi Update*, 2003; December 5,

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/12-05-03.htm.

R. Hammond, and M. Friedman, "Environmental Aspects of *Salmonella* Outbreak," *Epi Update*, 2003; December 12,

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/12-12-03.htm.

A Salmonella Outbreak Associated with a BBQ Restaurant and Daycare Facility, Hillsborough County, Florida, 2003

Thirty cases of *Salmonella*, all linked to a BBQ restaurant in Tampa, FL, were identified during June and July, 2003. Nine of the isolates from this outbreak that underwent PFGE analysis at the DOH Jacksonville Laboratory have indistinguishable patterns. Implicated meals were eaten between June 18 and June 26, 2003. Ill patrons reported eating a variety of foods, with the only food in common being the BBQ sauce. One restaurant employee was ill, but she reported an onset date several days after some of the patrons were already symptomatic. Additionally, five cases of *Salmonella* among infants attending a daycare facility were identified. The three isolates from the daycare facility that underwent PFGE analysis were indistinguishable from those seen in the BBQ restaurant patrons. No epidemiologic link between the BBQ restaurant patrons and the day care attendees was discovered during the investigation.

For additional information regarding this investigation please visit:

D. Atrubin, "*Salmonella* Outbreak Traced to Tampa BBQ Restaurant," *Epi Update*, 2003; July 18, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/07-18-03.htm.

D. Atrubin and M. Friedman, "*Salmonella* Outbreak Traced to Tampa BBQ Restaurant," *Epi Update*, 2003; July 11,

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/07_11_03.htm.

D. Atrubin, M. Friedman, P. Fiorella, E. Gregos, and J. Kintz, "An Investigation into a *Salmonella enterica* serotype *Typhimurium* Outbreak in a BBQ Restaurant, Hillsborough County, June 18-July 6, 2003,"

http://www.doh.state.fl.us/disease_ctrl/epi/FLEIS/Investigation_Salmonella_Entericasero.type.pdf

Primary and Secondary Syphilis in MSM Populations, 1999-2003

In October 1999, the CDC, Division of STD Prevention disseminated The National Plan to Eliminate Syphilis from the U.S. after the national syphilis rate had declined to national lows. In 2000, the once common genital ulcerative disease reported the lowest rates of primary, and secondary, syphilis across the nation since reporting began in 1941. However, in Florida, an annual increase in rates of syphilis began in 1999, and data analysis identified that the outbreak was predominately contained in Miami and Ft. Lauderdale. The resurgence of syphilis in these cities mirrored trends in Los Angeles, Chicago, and San Francisco. While control efforts had focused on disenfranchised heterosexuals in concentrated areas, suddenly the risk had expanded to a new group of people known as MSM (men who have sex with men).

In 2001, the reported cases of infectious syphilis among males in Florida increased 28.37% from 2000 and then increased 30.22% from 2001 to 2002. In 2003, there were 172 cases of primary and secondary syphilis (20.8 per 100,000 population) in Broward County, and 171 cases (15.0 per 100,000 population) in Miami-Dade County, compared to a rate of 6.9 per 100,000 population (585 cases) in the rest of the state. An increase in cases and a shift in demographics occurred simultaneously. Historically, cases of syphilis in Florida were predominately reported in heterosexual black males, yet in 2003, 65% of primary and secondary syphilis cases were reported in white males identified as MSM, and cases in heterosexual black males and females steadily decreased. The programmatic response from the CDC and the Bureau of STD included social marketing, coalition building, and community outreach; as well as increased awareness around other STDs and HIV/AIDS.

For additional information regarding this investigation and topic please visit:
Centers for Disease Control, "Primary and Secondary Syphilis-United States, 2002," *MMWR*, 2003;52: pp. 1117-1120.

T. Peterman, D. Collins, and S. Aral, "Responding to the Epidemics of Syphilis Among Men Who Have Sex With Men," *Journal of the American Sexually Transmitted Disease Association*, 2005; pp. 32:1-3.

K. Schmitt, S. Bulecza, D. George, T. Burns, and L. Jordahl, "Florida's Multifaceted Response for Increases in Syphilis Among MSM: The Miami-Ft. Lauderdale Initiative," *Journal of the American Sexually Transmitted Disease Association*, 2005; 32: pp.19-23.

K. Schmitt, A. Cooksey, and M. Cuervo, "Epidemiology of Syphilis in Florida," *Journal of Florida Medical Association*, 2005; pp. 89:4-7.

Vibrio Outbreak Associated with the Consumption of Crabs, Duval County, Florida, 2003

In June 2003, the Duval County Health Department was notified that three out of four people became ill with gastrointestinal illness following the consumption of recently purchased garlic crabs from a

local restaurant. A joint investigation between the Division of Business and Professional Regulation and the Florida Department of Health identified the source of pathogen, mechanism of transmission, and exposure. Multiple cross-contamination violations and temperature abuse were observed at the seafood restaurant. Food specimens yielded *Vibrio parahaemolyticus*, *Vibrio alginolyticus*, and fecal coliform MPN/gm: 40/gm. *Vibrio parahaemolyticus* is a naturally occurring bacterial organism that inhabits coastal and estuarine water. Infection is most commonly associated with the consumption of raw or undercooked shellfish, resulting in gastrointestinal illness. Educating food handlers on the proper ways to store, prepare, cook, and distribute food is key in preventing foodborne outbreaks.

For additional information regarding this investigation please visit:

Vibrio Outbreak Discovered in Duval County

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/08-08-03.htm

R. Kay, "Vibrio Outbreak Discovered in Duval County," Epi Update, 2003; August 8,

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/Epi_Weekly/08-08-03.htm.

Bureau of Community Environmental Health, Department of Health, "Outbreak of *Vibrio parahaemolyticus* Associated with Consumption of Blue Crabs, Duval County, Florida, June, 2003," Food and Waterborne Illness Surveillance and Investigation Annual Report, Florida, 2003, pp. 20,

<http://www.doh.state.fl.us/environment/community/foodsurveillance/pdfs/annual2003.pdf>.

West Nile virus, 2003

In 2003, 94 cases of West Nile virus disease were reported to the Florida Department of Health. This represents the largest number of West Nile virus disease cases reported in Florida since the virus was first detected here in 2001. Sixty-nine percent of cases were the neuroinvasive form of the disease. Cases were reported from 29 counties (55% in the panhandle region), and resulted in six deaths. The majority (69%) of case onsets occurred during August and September.

For additional information regarding this investigation please visit:

Bureau of Community Environmental Health, Florida Department of Health, "Mosquito-borne Disease Summary, 2003,"

http://www.doh.state.fl.us/environment/community/arboviral/pdfs/2003/Summary_2003.pdf.

Outbreak of Toxic Anterior Segment Syndrome Following Cataract Surgery Associated with Impurities in Autoclave Steam Moisture, Duval County, Florida, 2002

Toxic anterior segment syndrome (TASS), a complication of cataract surgery, is a sterile inflammation of the anterior chamber of the eye. An outbreak of TASS was recognized at an outpatient surgical center, and its affiliated hospital, in Duval County in December 2002. During the outbreak, 8 (38%) of 21 cataract operations were complicated by TASS, compared with 2 (0.07%) of 2,713 operations performed from January 1996 through November 2002. Results of an initial investigation suggested that cataract surgical equipment may have been contaminated by suboptimal equipment reprocessing or as a result of personnel changes. Further investigation identified the presence of impurities (e.g. sulfates, copper, zinc, nickel, and silica) in autoclave steam moisture, which was attributed to improper maintenance of the autoclave steam generator in the outpatient surgical center.

For additional information regarding this investigation please visit:

W.C. Hellinger, S. Hasan, and L.P. Bacalis, et. al., "Outbreak of Toxic Anterior Segment Syndrome Following Cataract Surgery Associated With Impurities in Autoclave Steam Moisture," *Infection Control and Hospital Epidemiology*, Vol. 27, No. 3, March 2006, pp 294-298,
<http://www.journals.uchicago.edu/ICHE/journal/issues/v27n3/2004320/2004320.web.pdf>.

West Nile Virus Associated with Organ Transplant, 2002

In summer 2002, headache and fever cases in Georgia and Florida among patients who had received kidney transplants led to an investigation into the cause of encephalitis. It was determined that the original organ donor had received blood from a person with West Nile virus viremia. Of the two Florida organ recipients, one developed encephalitis, and the other developed a febrile illness; both met the case definition for West Nile virus infection. This and other investigations led to the initiation of blood screening for West Nile virus.

For additional information regarding this investigation please visit:

M. Iwamoto, D.B.Jernigan, and A. Guasch, et al., "Transmission of West Nile Virus from an Organ Donor to Four Transplant Recipients," *N Engl J Med*. 2003 May 29; 348 (22): pp. 2196-203.

Centers for Disease Control, "Virus Infection in Organ Donor and Transplant Recipients-Georgia and Florida, 2002," *MMWR*, 2002; 51(35): p 790,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5135a5.htm>.

Centers for Disease Control, "Public Health Dispatch: Investigation of Blood Transfusion Recipients with West Nile Virus Infections," *MMWR*, 2002; 51(36): p. 823,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5136a5.htm>.

"Second Florida Transplant Recipient Tests Positive for West Nile Virus Infection," *Epi Update*, 2002; Stepember, 5,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2002/eu090502.htm.

Anthrax, Palm Beach County, Florida, 2001

The multi-state anthrax attack of October, 2001, was first recognized because of a case of inhalation anthrax in a resident of Palm Beach County. A second case was recognized in another employee of the same media company as the index case. This epidemic was extensively documented in the peer-reviewed literature, as well as in the MMWR.

For additional information regarding this investigation please visit:

M.S. Traeger, S.T. Wiersma, N.E. Rosenstein, J.M. Malecki, C.W. Shepard, and P.L. Raghunathan, "First Case of Bioterrorism-Related Inhalational Anthrax in the United States, Palm Beach County, Florida, 2001," *Emerg Infect Dis* [serial online] 2002 Oct; 8,
<http://www.cdc.gov/ncidod/EID/vol8no10/02-0354.htm>.

D.B. Jernigan, P.L. Raghunathan, B.P. Bell, R. Brechner, E.A. Bresnitz, and J.C. Butler et al., Investigation of Bioterrorism-Related Anthrax, United States, 2001: Epidemiologic Findings, *Emerg Infect Dis* [serial online] 2002 Oct; 8, <http://www.cdc.gov/ncidod/EID/vol8no10/02-0353.htm>.

“Health Officials Investigating Isolated and Non-contagious Case of Anthrax,” *Epi Update*, 2001; October 8, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

“Update: Public Health Message Regarding Florida Anthrax Case,” *Epi Update*, 2001; October 8, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

“Public health update: Second Anthrax Case,” *Epi Update*, 2001; October 17, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

Multi-County Ciguatera Outbreak (Martin, Palm Beach, Broward Counties), Florida, 2001

A total of 11 cases of ciguatera intoxication were identified from the consumption of black grouper at restaurants in Martin and Palm Beach Counties who had obtained the fish from different fish markets, but ultimately from the same supplier and same source lot in Broward County. Six of the cases consumed the fish at the same restaurant in Palm Beach County on October 27, three in one party, three in another party. Three of the cases consumed the fish at the same restaurant in Martin County on October 27 and 28, two in one party, and one in another party. Two of the cases consumed the fish at a different restaurant in Martin County on October 27.

For additional information regarding this investigation please visit:

Wamnes, J., Hammond, R. “Multi-County Ciguatera Outbreak, Florida.” *Epi Update*, 2001; November 9. http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001/eu110901.htm#1

Epidemic of Hepatitis A Among Methamphetamine Drug Users, Polk County, Florida, 2001

In 2001, an increase in Hepatitis A was recognized in Polk County. From September 2001 through July 2002 the number of reported cases increased dramatically with 20-60 cases reported per month. Interviews with the cases indicated that the use of illicit drugs, specifically methamphetamine use, was a common risk factor. Polk County reported 263 cases or 28% of the states hepatitis A cases in 2002 while making up 3% of the state’s population. Cases were primarily among adults, with 28% of cases in the 30-39 year age group, and 59% of the cases males.

An analysis of risk factors was conducted, and it was found that over 50% of the cases had a history of incarceration in the Polk County Jail, 48% had used illicit drugs, of which methamphetamine was the most common. Three deaths were linked to this outbreak. Viral sequencing conducted at the CDC found 37 of the 39 specimens had an identical sequence and the two other specimens differed by a single-nucleotide difference.

Prevention activities included providing immune globulin and vaccination for contact of cases in their residences, in the Polk County Jail, and in public health clinics. Hospitals were asked to report E.R. patients with elevated liver function test, and no known etiology, immediately to the health department. This allowed quick identification of case and prophylaxis of contacts. During the outbreak, over 4,500 doses of vaccine were administered.

For additional information regarding this investigation please visit:

S. Vong, A. Fiore, D. Li J. Haight, N. Borgmiller, W. Kuhnert, and F. Nero et. al., "Vaccination in the County Jail as a Strategy to Reach High Risk Adults During a Community-Based Hepatitis A Outbreak Among Methamphetamine Drug Users," *Vaccine* 2005; 23: 1021-1028.

A Multi-state and International Hepatitis A Outbreak Associated With a Seafood Restaurant, Orange County, Florida, 2001

On February 14, 2001, the epidemiology section of the Orange County Health Department (CHD) received a telephone call from an individual seeking immune globulin protection for a recent hepatitis A exposure from a roommate. Hepatitis A infection was diagnosed among 40 individuals from several counties in Florida, nine additional states, and from the countries of France, Belgium, and Canada, from January 29 through February 28, 2001. Three of the confirmed cases were among restaurant staff who worked at Restaurant A; their onset dates were consistent with, and are included into, case reports. Their onset dates are also consistent with a common exposure. All of the other 36 confirmed, and epidemiologically-linked, cases reported having consumed food and beverages at Restaurant A within a ten day period, beginning January 3-13, 2001. While a number of cases were in the Orlando area for conventions, no food or water sources other than Restaurant A were common to all cases.

For additional information regarding this investigation please visit:

B. Toth, L. Patrick, D. Bodager, and R. Hammond, "A Multi-State and International Hepatitis A Outbreak Associated with a Seafood Restaurant in Orlando, Florida: A Preliminary Report," *Epi Update*, 2001; May 4,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

Meningococcal Outbreak, University of North Florida Campus, Duval County, Florida, 2001

Three University of North Florida (UNF) students became ill with *Neisseria meningitis*, serogroup C, during May 1-July 1, 2001. A total of 16 contacts to the three cases received chemoprophylaxis for their potential exposure. Since this was an organization-based outbreak, public health officials and UNF recommended vaccinating students currently enrolled at UNF for the summer B and C sessions. Public health officials successfully vaccinated more than 2,500 students during the mass vaccination campaign.

For additional information regarding this investigation please visit:

M. Traeger, "Meningococcal Outbreak, University of North Florida campus, Jacksonville/Duval County," *Epi Update*, 2001; July 27,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

M. Traeger, "Meningococcal Outbreak Update," *Epi Update*, 2001; July 27, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

M. Traeger, "Meningococcal Outbreak and Vaccination Campaign, University of North Florida Campus, Jacksonville/Duval County," *Epi Update*, 2001; August 3, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

A Multi-County and Multi-State Outbreak of *Salmonella enteritidis* (Group D) Among Oriental Restaurant and Market Patrons, 2001

In May 2001, infection control practitioners from two large Orlando, Florida area hospitals reported unusual numbers of *Salmonella sp.* Group D cases to the Orange County Health Department. Cases were diagnosed with diarrheal illness, treated and released, or admitted. Reported cases totaled approximately twice the number seen in background surveillance. Exposure questioning revealed that 14 of the first 15 reported cases had history of eating at Asian restaurants or purchasing foods from oriental markets within three days of onset. Laboratory-confirmed cases were reported from Orange (29) and Seminole (4) counties in Florida, with two cases reported from Minnesota. Twenty-four of the Orange County cases were laboratory-confirmed, and five were epidemiologically-linked. Reported cases ate at Asian restaurants or consumed food from Asian markets from April 22 to May 9, 2001. A rapid assessment of food items consumed indicated that mung bean sprouts was the single common food item among 14 of the initial 15 (93.3%) reported ill. The restaurants associated with this outbreak, serving primarily Vietnamese and Thai cuisine, serve entrées that include raw or undercooked mung bean sprouts.

For additional information regarding this investigation please visit:

B.Toth, D. Walsh, Z. Mulla, D. Bodager, and R. Hammond, "A Multi-County and Multi-State Outbreak of *Salmonella enteritidis* (Group D) Among Oriental Restaurant and Market Patrons," *Epi Update*, 2001; September 28, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

Ciguatera Intoxication, Palm Beach County, Florida, 2000

During the month of August 2000, the Palm Beach County Health Department, Division of Epidemiology and Disease Control (PBCHD-DEDC) reported three clusters (six people) of ciguatera intoxication. The six cases consumed fish bought at the same fish market, from the same supplier, and same lot. Four of the cases consumed the fish at the same restaurant on the same day, August 15, (three in one party, one in another party). Two of the cases had consumed fish three days earlier, August 12, at home. The fish market had bought 138 pounds of hog snapper (12-15 fish) from a licensed supplier in Miami-Dade County on August 12. According to the supplier, the fish had been caught in the Bahamas. All of the hog snapper had been sold. No leftover cooked or uncooked hog snapper was available for testing. No further cases were identified in this outbreak.

For additional information regarding this investigation please visit:

J. Wamnes, R. Hammond, and J. Masters, "Ciguatera Intoxication, Palm Beach County," *Epi Update*, 2000; August 30,
http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2000.htm.

Bureau of Environmental Epidemiology, Florida Department of Health, "Ciguatera Intoxication-Palm Beach County, August, 2000," Food and Waterborne Illness Surveillance and Investigation, Annual Report, Florida, 2000, 2000, Rev, November 18, pp. 18-19,
<http://www.doh.state.fl.us/environment/community/foodsurance/pdfs/annual2000.pdf>.

***Cryptosporidium* Outbreak Associated with a Swimming Pool, Nassau County, Florida, August 2000**

On August 25, 2000, the Nassau County Health Department received notification of an outbreak of gastrointestinal illness among 20 visitors (8 adults, 12 children) from New York City who had vacationed at a local resort during August 13-20, 2000. Based on symptoms reported, incubation period, and exposure histories, cryptosporidiosis was suspected. A case-control study was conducted to determine risk factors. Sixteen of 19 cases tested positive for *Cryptosporidium*. Statistical analysis demonstrated that pool exposure was a significant risk factor for infection with *Cryptosporidium*, and the risk increased markedly by the number of hours spent in the pool. The source of the *Cryptosporidium* contamination of the swimming pool that caused this outbreak is unknown.

For additional information regarding this investigation please visit:

Bureau of Environmental Epidemiology, Florida Department of Health, "*Cryptosporidium* Outbreak Associated With a Swimming Pool-Nassau County, August 2000," Food and Waterborne Illness Surveillance and Investigation, Annual Report, Florida, 2000, 2000, Rev, November 18, pp. 20-1,
<http://www.doh.state.fl.us/environment/community/foodsurance/pdfs/annual2000.pdf>.

Hepatitis A Outbreak in a Daycare Center, Hillsborough County, Florida, March 2000

An outbreak of hepatitis A in March 2000 associated with a Hillsborough County daycare center resulted in 14 cases in attendees, staff, and family members.

For additional information regarding this investigation please visit:

Bosbyshell, F., Kintz, J. "Outbreak of Hepatitis A in a Daycare Center." *Epi Update*, 2000; April 19, 2000. http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2000.htm

Hepatitis A Outbreak, Lake and Sumter County, Florida, November-December 2000

A foodborne outbreak of hepatitis A was reported to Lake and Sumter County in December 2000, associated with a community-wide outbreak of hepatitis A in intravenous drug users. There were 25 confirmed cases, all in adults with ages between 15 and 60, and with symptom onsets between November 21 and December 26, 2000. Twenty-two were primary cases, and three were secondary cases. A fast food outlet in Lake County was strongly associated with the foodborne hepatitis A cases.

Another hepatitis A outbreak involving nine cases occurred in Kentucky simultaneously with the Florida outbreak, and was associated with the same fast food chain. The CDC performed nucleic acid base sequencing tests on viral gene segments from both the Florida and Kentucky outbreaks, and found an identical match; these outbreaks are therefore related.

For additional information regarding this investigation please visit:

R. Hopkins, "Hepatitis A Outbreak in Lake and Sumter Counties-Update 12/21/00," *Epi Update*, 2000; December 22, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2000.htm.

M. Traeger, "Hepatitis A Outbreak in Lake and Sumter Counties-Update 1/26/00," *Epi Update*, 2000: January, 26, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2001.htm.

Risk of Hepatitis C Infection among First Responders

Public health scientists were interested in evaluating the prevalence of Hepatitis C infection among first responders (firefighter, paramedics, and emergency medical technicians). Hep-C ALERT and the University of Pittsburgh tested, and collected, occupational risk factor information from 1314 Miami-Dade County municipal firefighters. Anti-HCV positives were detected in 2.7% of participants. Hepatitis C infection was confirmed by HCV RNA in 1.5% of the participants. Post-exposure management will follow exposure to Hepatitis C positive or unknown blood status. While the occupational risk of Hepatitis C infection is among for first responders is low, first responders are encouraged to follow standard bloodborne precautions when responding to any type of event.

For additional information on this investigation and topic please visit:

Centers for Disease Control, "Hepatitis C Virus Infection Among Firefighters, Emergency Medical Technicians, and Paramedics-Selected Locations, United States, 1991-2000," *MMWR*, 2000; 49(29); pp. 660-5, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4929a3.htm>.

Centers for Disease Control, "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis," *MMWR*, 2001; 50 (RR11); pp 1-42, <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm>.

Multi-county Cluster of Oyster-Related Illness, Florida, 2000

The State of Florida investigated four clusters of oyster-related illness in four counties (Collier 8, Nassau 2, Bay 4, and Madison 4). Times of onset ranged from January 10 to 19, 2000. Primary symptoms included diarrhea, fever, abdominal cramps, nausea, vomiting, and headache. One stool from the Nassau County cluster and two from the Bay County cluster were positive for Norwalk virus. No stools were available from any of the other clusters. Tags found at the retail establishments for the same purchase dates indicated the oysters for all of these clusters were from Apalachicola Bay, Florida. As a precautionary measure, and according to established protocols, Apalachicola Bay was temporarily closed on January 21, 2000 at sunset. A voluntary recall of oysters harvested between January 4 and 21 from harvest area 1642 was initiated on January 25 by the state's Molluscan Shellfish Program (Division of Aquaculture, Florida Department of Agriculture and Consumer Services).

For additional information regarding this investigation please visit:

Hammond, R. "Multi-county Cluster of Oyster-Related Illness." *Epi Update*, 2000; January, 26.

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2000.htm

Reptile-Associated Salmonellosis, January 2000

During January 2000, an infant aged one month was diagnosed with *Salmonella* serotype Tennessee. One week before illness onset, the infant's family moved into a household that contained a bearded dragon (i.e. *Pogona vitticeps*). The pet reptile's cage had been washed in the kitchen near the infant's bottle nipples. It is also possible that the reptile's owner played with the reptile, and then fed the infant. A stool culture from the bearded dragon yielded *S. Tennessee*. Isolates from the infant and the bearded dragon were indistinguishable by PFGE.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Reptile-Associated Salmonellosis-Selected States, 1998-2002,"

MMWR, 2003; 52(49); pp. 1206-1209,

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5249a3.htm>.

M. Zuber, P. Tiffany, R. Baker, and P. Fiorella, "Infant Salmonellosis Linked to a Pet Reptile," *Epi Update*, 2000; March 8,

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2000.htm.

Cyclosporiasis Outbreak, Palm Beach County, Florida, June 1999

On June 18, 1999, the CDC confirmed that multiple stool samples from infected persons in California and Wisconsin were positive for *Cyclospora cayetanensis*, a parasite, after attending a convention in Palm Beach County. Multivariate analysis demonstrated that this was a foodborne outbreak associated with one of several convention events that was held at the hotel and the transmission vehicle was most likely either fresh strawberries, blackberries, blueberries, or raspberries served on May 13 or May 14, 1999.

For additional information regarding this investigation please visit:

R. Hammond, "Cyclosporiasis Outbreak in Palm Beach County," *Epi Update*, 1999; June 24,

http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/1999.htm.

Bureau of Environmental Epidemiology, Florida Department of Health, "Cyclosporiasis At A Hotel Convention, Palm Beach County, May, 1999," Food and Waterborne Illness

Surveillance and Investigation, Annual Report, Florida, 1999, pp. 16,

<http://www.doh.state.fl.us/environment/community/foods-surveillance/annualreports.htm>.

Nosocomial Transmission of Hepatitis C Virus Associated With the Use of Multi-dose Saline Vials, Dade County, Florida 1998

In 1999, staff from the Dade County Health Department and the State Health office investigated an outbreak of hepatitis C infection occurring in a hospital, and documented that the source was inappropriate use of multi-dose saline vials.

For additional information regarding this investigation please visit:

G rard Krause, MD, DrMed; Mary Jo Trepka, MD, MPH; Robert S. Whisenhunt; Dolly Katz, PhD; Omana Nainan, PhD; Steven T. Wiersma, MD, MPH; Richard S. Hopkins, MD, MSc. "Nosocomial Transmission of Hepatitis C Virus Associated With the Use of Multidose Saline Vials, 1998." *Infect Control Hosp Epidemiol* 2003;24: pp. 122-127

***Escherichia coli* O157:H7 Outbreak, Duval County, Florida, 1999**

In June, 1999, the Duval County Health Department reported an outbreak of *Escherichia coli* O157:H7 that was associated with a church supper among members of a local Baptist church. Seventeen (35%) of 49 attendees became ill. Seven individuals (41%) were hospitalized. Of the 14 stool samples obtained, 8 were culture-positive for *E. coli* O157:H7. Among the 6 culture-negative cases, 2 were EIA positive for enterohemorrhagic *E. coli*. Food samples were not available, and as a result, the source of the outbreak could not be conclusively identified. However, a beef and broccoli dish was consumed by 100% of cases and it was determined to be the most likely source of this outbreak.

For additional information regarding this investigation please visit:

A. Burns, and K. Ward, "Duval County *E. Coli* Outbreak," *Epi Update*, 1999; July 7, http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/1999.htm.

Meningococcal Disease Outbreak, Putnam County, Florida, 1998-1999

An intense outbreak of meningococcal disease occurred in Palatka, county seat of Putnam County. There were a total of nine cases of group C disease in late December 1998 and early January, 1999. A mass vaccination campaign provided vaccine to over 13,000 residents of Palatka under age 21.

For additional information regarding this investigation please visit:

G. Krause, C. Blackmore, S. Wiersma, C. Lesneski, L. Gauch, and R.S. Hopkins, "Mass Vaccination Campaign Following Community Outbreak of Meningococcal Disease," *Emerg Infect Dis* [serial online] 2002 Dec; 8, <http://www.cdc.gov/ncidod/EID/vol8no12/01-0421.htm>.

G. Krause, C. Blackmore, S. Wiersma, C. Lesneski, C.W. Woods, N.E. Rosenstein, and R,S, Hopkins, "Marijuana Use and Social Networks in a Community Outbreak of Meningococcal Disease," *South Med J*. 2001 May;94(5): pp. 482-5.

Outbreak of *Salmonella* Serotype Anatum Infection Associated with Unpasteurized Orange Juice, Florida, March 1999.

In March 1999, a patient was infected with *Salmonella* serotype Anatum after having consumed unpasteurized orange juice from a small fresh juice manufacturer in Florida. A cohort study was conducted among customers of the manufacturer, pulsed-field gel electrophoresis (PFGE) was conducted on isolates, and the manufacturing plant was inspected. Surveillance data identified three additional patients infected with *Salmonella* Anatum showing indistinguishable or closely related PFGE patterns. Three of the four patients had consumed orange juice from the same manufacturer. In the cohort study, 6 of 68 persons (9%) who consumed orange juice and/or orange ice cream from the

manufacturer were ill, compared with 1 of 47 (2%) who did not. A positive antigen test for *Salmonella* species and coliform growth in juice samples taken from the production line suggested contamination during the manufacturing process. Commercially produced orange juice should be pasteurized or otherwise processed to achieve equivalent reduction of pathogens.

An earlier *Salmonella* outbreak linked to fresh-squeezed orange juice was investigated in 1995 in Orange County:

K.A. Cook, T.E. Dobbs, G. Hlady, J.G. Wells et. al., "Outbreak of *Salmonella* Serotype Hartford Infections Associated With Unpasteurized Orange Juice," *Journal of the American Medical Association*, November 4, 1998, Vol. 280, No. 17, pp. 1504-1509.

For additional information regarding this investigation please visit:

G. Krause, R. Terzagian, R. Hammond, "Outbreak of *Salmonella* Serotype *Anatum* Infection Associated with Unpasteurized Orange Juice," *Southern Medical Journal* 94(12): pp. 1168-1173.

Possible Estuary-Associated Syndrome (PEAS), 1998-1999

Pfiesteria piscicida (Pp) is an alga that has been associated with fish kills in estuaries (where fresh water mixes with salty seawater) along the eastern seaboard. Surveillance for possible estuary-associated syndrome (PEAS), including possible Pp-related human illness, was conducted in Delaware, Florida, Maryland, North Carolina, South Carolina, and Virginia between June 1, 1998 and December 31, 1999. PEAS was defined as a person with exposure to estuary environments within two weeks of illness onset, with neurological and/ or dermatological, respiratory, and gastro-intestinal symptoms of unknown cause. A hotline was set up for disease reporting. No persons reported illnesses that met PEAS criteria.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Surveillance for Possible Estuary-Associated Syndrome-Six States, 1998-1999," *MMWR*, 2000; 49(17); pp. 372-3,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4917a4.htm>.

Several other marine and freshwater algae in Florida waters produce toxins that may be harmful to humans. *Karenia brevis*, the red tide alga, releases brevetoxin, a toxin that has been associated with asthma exacerbations.

For more information see:

B. Kirkpatrick, L.E. Fleming, and C. Lorraine et al., "Environmental Exposures to Florida Red Tides: Effects on Emergency Room Respiratory Diagnoses Admissions," *Harmful Algae*, October 2006; Volume 5, Issue 5, pp. 526-533.

Illnesses Associated With Use of Automatic Insecticide Dispenser Units, Florida, 1999

To control indoor flying insects, restaurants and other businesses commonly use pyrethrin and pyrethroid insecticides sprayed from automatic dispensing units. Usually placed near entrances, these

units are designed to kill flying insects in food service or work areas. On May 18, 1999, the Florida Department of Health was notified by the Florida Department of Business and Professional Regulation that during May 12-17, three persons, a 42-year-old cook working at a Florida restaurant, a 40-year-old male customer and a 47-year-old male customer, developed pesticide-related illnesses associated with improperly placed automatic insecticide dispensers. Symptoms included sore throat, dyspnea, headache, dizziness, shortness of breath, swelling, redness, and irritation of an eyelid.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Illnesses Associated with Use of Automatic Insecticide Dispenser Units-Selected States and United States, 1986-1999, *MMWR*, 2000; 49(22); pp. 492-5, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4922a3.htm>.

Outbreaks of *Shigella sonnei* Infection Associated with Eating Fresh Parsley, U.S. and Canada, July-August 1998

In August 1998, the Minnesota Department of Health reported to the CDC two restaurant associated outbreaks of *Shigella sonnei* infections. Isolates from both outbreaks had two closely related pulsed-field gel electrophoresis (PFGE) patterns that differed only by a single band. Epidemiologic investigations implicated chopped, uncooked, curly parsley as the common vehicle for these outbreaks. Through inquiries to health departments and public health laboratories, six similar outbreaks were identified during July and August (in California, Massachusetts, and Florida, in the U.S., and in Ontario and Alberta in Canada). Isolates from five of these outbreaks had the same PFGE pattern identified in the two outbreaks in Minnesota. Parsley imported from a farm in Mexico was implicated as the source of these outbreaks.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Outbreaks of *Shigella sonnei* Infection Associated with Eating Fresh Parsley-United States and Canada, July-August 1998," *MMWR*, 1999; 48(14); pp. 285-9, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056895.htm>.

Surveillance of Morbidity During Wildfires, Central Florida, 1998

Several large wildfires occurred in Florida during June-July 1998, many involving both rural and urban areas in Brevard, Flagler, Orange, Putnam, Seminole, and Volusia counties. To determine whether certain medical conditions increased in frequency during the wildfires, the Volusia County Health Department and the Florida Department of Health initiated surveillance of selected conditions. Eight local hospitals furnished data about persons seen in the emergency departments (E.D.) and/or admitted for the selected conditions during June 1-July 6, 1998. For comparison, the hospitals also provided the same information for June 1-July 6, 1997. From 1997 to 1998, E.D. visits increased substantially for asthma (91%), bronchitis with acute exacerbation (132%), and chest pain (37%). Changes in the number of admissions were minimal.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Surveillance of Morbidity During Wildfires-Central Florida, 1998," *MMWR*, 1999; 48(04); pp. 78-79,

<http://www.cdc.gov/mmwr/preview/mmwrhtml/00056377.htm>.

Cyclosporiasis, U.S. and Canada, 1997

As of June 11, 1997, there were 21 clusters of cases of cyclosporiasis reported from eight states (California, Florida, Maryland, Nebraska, Nevada, New York, Rhode Island, and Texas), and one province in Canada (Ontario). These clusters were associated with events (e.g. receptions, banquets, or time-place-related exposures i.e. meals in the same restaurant on the same day) that occurred during March 19-May 25, and comprise approximately 140 laboratory-confirmed and 370 clinically defined cases of cyclosporiasis. In addition, four laboratory-confirmed and approximately 220 clinically defined cases have been reported among persons who, during March 29-April 5, were on a cruise ship that departed from Florida. Approximately 70 laboratory-confirmed sporadic cases (i.e. cases not associated with events, the cruise, or recent overseas travel) were reported in the U.S. and Canada. The investigations implicated fresh red raspberries imported from Guatemala as the probable vehicle of infection for most of the outbreaks of cyclosporiasis identified in 1997. There is no evidence of ongoing transmission of *Cyclospora* in association with mesclun, which was the vehicle for one, and possibly two, early outbreaks in March and April in Florida.

For additional information regarding this investigation please visit:

Centers for Disease Control, "Update: Outbreaks of Cyclosporiasis-United States and Canada, 1997," *MMWR*, 1997; 46(23); pp. 521-523,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/00047875.htm>.

An Outbreak of Typhoid Fever Associated with an Imported Frozen Fruit, Florida, 1997

An outbreak of typhoid fever in Florida involving at least 16 persons during the winter of 1998-99 was investigated using case-control, environmental, and laboratory methods. The genomic profiles of *Salmonella* serovar *Typhi* (*Salmonella Typhi*) isolates from the 15 confirmed case subjects were identical. Consumption of fruit shakes made with frozen mamey, a tropical fruit, was significantly associated with illness (matched odds ratio, 7.6; 95% confidence interval, 1.4-81.4). Laboratory testing showed that the fruit was heavily contaminated with fecal coliforms although no *Salmonella Typhi* was isolated. The implicated frozen mamey was prepared in plants in Guatemala. No further cases occurred after the frozen product was recalled. As our nation's food sources become increasingly globalized, the risk of outbreaks of exotic diseases linked to contaminated imported food will increase. This outbreak highlights the need for new approaches to ensure the safety of our food supply.

For additional information regarding this investigation please visit:

Katz, D., Cruz, M., Trepka, M.J., Suarez, J., Fiorella, P., Hammond, R. "An Outbreak of Typhoid Fever in Florida Associated with an Imported Frozen Fruit." *The Journal of Infectious Diseases*, 2002;186: pp. 234-239:
<http://www.journals.uchicago.edu/JID/journal/issues/v186n2/011517/011517.html>