



EPI-GRAM

Sarasota County Health Department
Health and Human Services
June, 2010 Issue

Inside this issue:
Pertussis
Botulism
Lyme Disease



Website:
www.sarasotahealth.org
Administrator
William L. Little, MBA, MPH
Medical Executive Director
William C. Heymann, MD, FACEP
Environmental Health Administrator
Charles Henry, RS, MPA
Division Director, ECDC
Christine Griffith, BA, RN
Epidemiologist
Scott Pritchard, MPH
Sr. CHN Supervisor, DIS
Virginia McGowan, BS, RN

To report a disease, or disease outbreak, phone, mail or fax* the appropriate office (Please mark confidential)
Mailing Address:
P.O. Box 2658
Sarasota, FL 34230-2658
(941) 861-2873 M-F, 8am-5pm
Fax: (941) 861-2902
After Hours: 941-861-2900

Epidemiology & Communicable Disease Control (ECDC)
Disease Intervention Services (DIS)
Reportable Diseases,
Marissa DeVita, RN, BSN
TB Program
Fran Pagen, RN, MS, CIC
Carole Estes, RN, BS
HIV/AIDS (*Please do not fax)
Lauren Sporillo, BS
Sexually Transmitted Disease (STD)
Gary Ervin, MPA (941) 861-2919
Animal Control
(to report animal bites)
(941) 316-1081 or 1082
Environmental Health
(941) 861-6133
Fax: (941) 861-6152

Please share this issue of the Epi-GRAM with your staff and colleagues. Contact Marissa DeVita with any comments or suggestions at (941) 861-2873, by e-mail at Marissa_DeVita@doh.state.fl.us or by mail to the address listed above. If you would like the Epi-GRAM or other disease control information e-mailed or faxed to you, please contact us.

Increasing Pertussis Incidence... The Need for Vaccination Vigilance among Children and Adults

Scott Pritchard, MPH, County Epidemiologist

Pertussis is characterized by the gradual onset of a cough illness that worsens over a period of 1-2 weeks and lasts for 1-2 months or longer.

As the illness progresses cases often experience paroxysms, or fits of coughing, post-tussive vomiting, and possibly inspiratory whoop. Complications, although rare, include: pneumonia, seizures, encephalopathy, hernias, and death.

Pertussis is highly contagious with up to 90% of susceptible household contacts developing clinical disease following exposure. Adults and adolescents can become susceptible as a result of waning of the immunity provided by childhood vaccinations.

In 2009, 59 cases of pertussis were reported in Sarasota County. This is a dramatic increase from the previous 3 year average of 6.3 cases per year. Similarly, the number of cases in Florida increased 58.2% from 314 cases in 2008 to 497 cases in 2009, with large outbreaks also occurring in Escambia and Santa Rosa Counties. Nationwide data indicate that pertussis incidence increased approximately 17% in 2009.

In Sarasota, the increase in 2009 was driven by two large outbreaks, with greater than 20 cases each, largely among older children and adolescents, most of which had no or partial vaccination. Unfortunately in Sarasota, five cases occurred among the most vulnerable group, infants less than one year of age. Among this group hospitalization is required in approximately 60% of cases. Our collective efforts to prevent pertussis should be focused on preventing illness

among this group by creating a barrier of protection among the adults and siblings that surround the infants that are too young to have completed the primary vaccination series.

Table 1. Distribution of 2009 Sarasota Pertussis Cases by Age

Age Group	Pertussis Cases (%)
< 1 year	5 (8.3%)
1-9 years	22 (36.7%)
10-19 years	19 (31.7%)
≥ 20 years	14 (23.3%)

The patterns that were observed among the 2009 cases demonstrate the need to increase outreach and education to parents about the importance of vaccination of infants, children, and adults, and also to providers about the availability and scheduling of pre-adolescent pertussis vaccination.

Providers are reminded that:

- When adolescents 11 through 18 come to a medical provider in need of a booster dose of tetanus vaccine, the requirement is that they receive the Tdap vaccine rather than the Td, unless contraindicated
- Providers may administer Tdap vaccine as early as 10 or 11 years of age, fulfilling the seventh grade requirement. The ages for which the Tdap vaccines are approved are: Boosterix (0-64 years), and Adacel (1-64 years)
- Adults who have not received a single dose of Tdap are recommended to receive a dose in place of Td, with a minimum interval of 2 years from the last dose of Td

Botulism

Marissa DeVita, RN, BSN – Disease Intervention Services

Botulism is a rare paralytic illness caused by a nerve toxin produced by a group of bacterium called *Clostridium botulinum* commonly found in soil. It grows best in low oxygen conditions, forming spores allowing the bacteria to live in a dormant state for long periods of time.



Although cases of botulism are rare in Sarasota County, with the last cases reported in 1999, the Disease Intervention

Services (DIS) department of the Sarasota County Health Department (SCHD) recently had an opportunity to investigate a suspected case. The process began with a physician's request for the antitoxin. Upon further investigation by DIS, the Florida Department of Health (DOH) was made aware of the potential case. DOH contacted the Centers for Disease Control and Prevention (CDC). The antitoxin is stored at the CDC. The CDC has the ultimate decision to disperse antitoxin to state/county health departments based on specific criteria.

The criteria are outlined below:

- Acute onset of descending paralysis
- Symptoms of cranial nerve and autonomic dysfunction, such as double vision, blurred vision and difficulty focusing eyes, drooping eyelids, slurred speech, difficulty swallowing, dry mouth and muscle weakness

Additional information to include:

- History of diet, travel and activity for the past eight days including ingestion of home-canned foods, fermented native foods from Alaska and/or Northern Canada, shellfish or pufferfish in the previous few hours, and honey in infants under one year of age

- Drug history and potential toxic exposures, e.g., organophosphates, belladonna alkaloids such as atropine, carbon monoxide, and aminoglycosides
- Lumbar puncture (test would be normal in Botulism)
- Brain CT or MRI to rule out stroke or mass lesion (test would be normal in Botulism)
- Tensilon testing/Edrophonium challenge test (usually negative in Botulism)
- Careful physical exam to exclude tick related paralysis
- Chest x-ray to rule out lung carcinoma (often associated with Lambert-Eaton syndrome, a differential diagnosis for Botulism)



The CDC decided that in this case the symptoms presented were more likely due to atypical Guillain-Barre syndrome or myasthenia gravis, but did agree to do testing for the toxin. The test was found to be negative; however this case investigation became a good exercise on the process of reporting and managing a botulism case. Botulism is one of the diseases that must be reported to the health department *immediately* upon suspicion. The sudden appearance of multiple patients with characteristic illness could suggest a common source exposure as would be associated with a bioterrorist attack.

The three main kinds of botulism are food borne, wound associated botulism, and infant botulism. All forms can be fatal due to respiratory failure and are considered medical emergencies. An average of 145 cases are reported in the United States each year with approximately 15% being food borne, 20% wound associated, and 65% infant botulism. The CDC website can be accessed for further information about botulism by logging onto www.cdc.gov.



Laboratory Testing for Lyme Disease

Marissa DeVita, RN, BSN – Disease Intervention Services

Lyme disease is caused by the bacterium *Borrelia burgdorferi* which is transmitted by the bite of an infected tick. Lyme disease is diagnosed based on symptoms such as fever, headache, fatigue, and physical findings, such as the characteristic bull's eye rash or erythema migrans (EM), the possibility of tick exposure and laboratory findings. When serum or cerebral spinal fluid (CSF) is tested, it is recommended that a two-test approach be considered when suspecting active or previous infection with Lyme disease. The two-test approach first uses a sensitive enzyme immunoassay (EIA) or immunofluorescent assay (IFA) followed by a Western immunoblot for both immuno-globulin M (IgM) and immuno-globulin G (IgG). In some cases a clinical specimen can be cultured for *B. burgdorferi*. Left untreated, Lyme disease infection can spread to joints, the heart and the nervous system. The Centers for Disease Control and Prevention web site can be accessed for further information, <http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>.



Reportable Diseases/Conditions in Florida

Practitioner* List 11/24/08

Did you know that you are required by Florida statute** to report certain diseases to your local county health department?

*Reporting requirements for laboratories differ. For specific information on disease reporting, consult Rule 64D-3, Florida Administrative Code (FAC).

- ! = Report immediately 24/7 by phone upon initial suspicion or laboratory test order
- ☎ = Report immediately 24/7 by phone
- = Report next business day
- + = Other reporting timeframe

! Any disease outbreak	Granuloma inguinale*	! Rabies (possible exposure)
! Any case, cluster of cases, or outbreak of a disease or condition found in the general community or any defined setting such as a hospital, school or other institution, not listed below that is of urgent public health significance. This includes those indicative of person to person spread, zoonotic spread, the presence of an environmental, food or waterborne source of exposure and those that result from a deliberate act of terrorism.	! <i>Haemophilus influenzae</i> (meningitis and invasive disease)	! Ricin toxicity
Acquired Immune Deficiency Syndrome (AIDS)+	Hansen's disease (Leprosy)*	Rocky Mountain spotted fever*
Amebic encephalitis*	☎ Hantavirus infection	! Rubella (including congenital)
Anaplasmosis*	☎ Hemolytic uremic syndrome	St. Louis encephalitis (SLE) virus disease (neuroinvasive and non-neuroinvasive)*
! Anthrax	☎ Hepatitis A	Salmonellosis*
Arsenic poisoning*	Hepatitis B, C, D, E, and G*	Saxitoxin poisoning including paralytic shellfish poisoning (PSP)*
! Botulism (foodborne, wound, unspecified, other)	Hepatitis B surface antigen (HBsAg) (positive in a pregnant woman or a child up to 24 months old)*	! Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV) disease
Botulism (infant)*	Herpes simplex virus (HSV) (in infants up to 60 days old with disseminated infection with involvement of liver, encephalitis and infections limited to skin, eyes and mouth; anogenital in children ≤ 12 yrs)*	Shigellosis*
! Brucellosis	Human immunodeficiency Virus (HIV) infection (all, and including neonates born to an infected woman, exposed newborn)+	! Smallpox
California serogroup virus (neuroinvasive and non-neuroinvasive disease)*	Human papillomavirus (HPV) (associated laryngeal papillomas or recurrent respiratory papillomatosis in children ≤ 6 years of age; anogenital in children ≤ 12 yrs)*	Staphylococcus aureus, community associated mortality*
Campylobacteriosis*	! Influenza due to novel or pandemic strains	☎ Staphylococcus aureus (infection with intermediate or full resistance to vancomycin, VISA, VRSA)
Cancer (except non-melanoma skin cancer, and including benign and borderline intracranial and CNS tumors)+	☎ Influenza-associated pediatric mortality (in persons aged < 18 yrs)	☎ Staphylococcal enterotoxin B (disease due to)
Carbon monoxide poisoning*	Lead poisoning (blood lead level ≥ 10µg/dL); additional reporting requirements exist for hand held and/or on-site blood lead testing technology, see 64D-3 FAC*	Streptococcal disease (invasive, Group A)*
Chancroid*	Legionellosis*	Streptococcus pneumoniae (invasive disease)*
Chlamydia*	Leptospirosis*	Syphilis*
! Cholera	☎ Listeriosis	☎ Syphilis (in pregnant women and neonates)
Ciguatera fish poisoning (Ciguatera)*	Lyme disease*	Tetanus*
Congenital anomalies*	Lymphogranuloma venereum (LGV)*	Toxoplasmosis (acute)*
Conjunctivitis (in neonates ≤ 14 days old)*	Malaria*	Trichinellosis (Trichinosis)*
Creutzfeldt-Jakob disease (CJD)*	! Measles (Rubeola)	Tuberculosis (TB)*
Cryptosporidiosis*	! Melioidosis	! Tularemia
Cyclosporiasis*	Meningitis (bacterial, cryptococcal, mycotic)*	☎ Typhoid fever
Dengue*	! Meningococcal disease (includes meningitis and meningococemia)	! Typhus fever (disease due to Rickettsia prowazekii infection)
! Diphtheria	Mercury poisoning*	Typhus fever (disease due to Rickettsia typhi, R. felis infection)*
Eastern equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)*	Mumps*	! Vaccinia disease
Ehrlichiosis*	☎ Neurotoxic shellfish poisoning	Varicella (Chickenpox)*
Encephalitis, other (non-arboviral)*	☎ Pertussis	Varicella mortality*
☎ Enteric disease due to: <i>Escherichia coli</i> , O157:H7 <i>Escherichia coli</i> , other pathogenic <i>E. coli</i> including entero-toxicogenic, invasive, pathogenic, hemorrhagic, aggregative strains and shiga toxin positive strains	Pesticide-related illness and injury*	! Venezuelan equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)
Giardiasis*	! Plague	Vibriosis (Vibrio infections)*
! Glanders	! Poliomyelitis, paralytic and non-paralytic	! Viral hemorrhagic fevers (Ebola, Marburg, Lassa, Machupo)
Gonorrhea*	Psittacosis (Ornithosis)*	West Nile virus disease (neuroinvasive and non-neuroinvasive)*
	Q Fever*	Western equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)*
	☎ Rabies (human, animal)	! Yellow fever

You are an invaluable part of Florida's disease surveillance system.

For more information, please call the epidemiology unit at your local county health department or the Bureau of Epidemiology, Florida Department of Health (FDOH): 850-245-4401 or visit http://www.doh.state.fl.us/disease_ctrl/epi/topics/surv.htm



**Section 381.0031(1.2), Florida Statutes provides that "Any practitioner, licensed in Florida to practice medicine, osteopathic medicine, chiropractic, naturopathy, or veterinary medicine, who diagnoses or suspects the existence of a disease of public health significance shall immediately report the fact to the Department of Health." The FDOH county health departments serve as the Department's representative in this reporting requirement. Furthermore, this Section provides that "Periodically the Department shall issue a list of diseases determined by it to be of public health significance... and shall furnish a copy of said list to the practitioners."

Sarasota County Health Department - Disease Intervention Services
 Mon - Fri, 8 am - 5 pm: 941-861-2873; Nights, weekends, holidays: 941-861-2900
 Fax reports to: 941-861-2902

** MAIL HIV/AIDS REPORTS (DO NOT FAX)