



EPI WATCH

Monthly Epidemiology and Preparedness Newsletter

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Florida Department of Health in Pinellas County
205 Dr. M.L King Street North
St. Petersburg, FL 33701
(727) 824-6900
www.PinellasHealth.com

Division of Disease Control and Health Protection
8751 Ulmerton Road
Largo, FL 33771
(727) 524-4410

Director
Claude Dharamraj, MD, MPH, FAAP
claude.dharamraj@flhealth.gov

Editor
JoAnne Lamb, MPH
joanne.lamb@flhealth.gov

For more information, or to add your e-mail address to the distribution list, please contact the Editor.

Disease Reporting

To report diseases and clusters of illness (other than TB/STD/HIV/AIDS)
Phone: (727) 507-4346
Fax: (727) 507-4347

For TB, STD or HIV/AIDS Reporting
Phone: (727) 824-6932

Animal Bite Reporting
Phone: (727) 524-4410 x7665

The Epidemiology of Meningococcal Disease

BY ANDREA LEAPLEY, MPH

Meningococcal disease refers to any illness caused by the bacteria *Neisseria meningitidis*. The most well-known is meningitis, but *N. meningitidis* can also cause infections such as pneumonia, bacteremia, or septicemia. The bacteria are spread through the direct exchange of respiratory or throat secretions and those most at risk are young children, people living in close quarters, such as students in college dormitories, and travelers to endemic areas of the world. If meningococcal disease is suspected, prompt antibiotic treatment is very important. According to the Centers for Disease Control and Prevention (CDC), 10-14% of cases are fatal, and 11-19% of patients that recover suffer from loss of limbs, hearing loss, mental retardation, or other serious long term effects.

Rates of meningococcal disease in the United States have been decreasing since the late 1990s. The CDC estimates the rate of infection was 0.92 per 100,000 population in 1998. By 2012, the rate had fallen to 0.15 cases per 100,000 population. The rates in Florida have followed a similar trend. The Florida Department of Health, Bureau of Epidemiology reports the rate of infection was 0.9 per 100,000 population in 1998 and steadily declined to a rate of 0.20 per 100,000 population in 2012. Cases in Pinellas County have also decreased since 1998 and no cases were reported in 2012; however, there have been years where the number of cases has spiked (see figure 1).

Meningococcal disease patterns tend to be cyclical with peaks and troughs that occur every 5-8 years. The recent decrease has been outside of the expected cycle and rates through 2012 are historic lows. Reasons for the reduction are uncertain, though it is thought to be due to a combination of factors. Environmental factors including smoking and crowding, both of which have been associated with meningococcal disease, have decreased. After the peak of *N. meningitidis* circulation in the 1990s, population immunity to the circulating strains may have increased. The widespread use of certain medications, such as the 7-valent pneumococcal vaccine and fluoroquinolone antibiotics, may be changing the composition of organisms carried in the nasopharynx, which can include *N. meningitidis* (Cohn, et al., 2010).

In 2005, a quadrivalent vaccine that protects against serogroups A, C, Y, and W-135 was approved for use in the United States. The Advisory Committee on Immunization Practices recommended that the vaccine be given to all children aged 11-18 and anyone ages 2-55 at an increased risk of contracting meningococcal disease. Because the decrease in cases began before introduction of the vaccine and initial uptake was low, it is not thought that the vaccine contributed to the observed decrease in cases in the few years after its introduction. This does not mean that the vaccine is ineffective, but that more time is needed to assess the impact of the vaccine on disease rates (Cohn, et al., 2010).

The current Meningococcal vaccines regularly used in the United States protect against most types of meningococcal disease, but they do not prevent all cases. Recent outbreaks of meningococcal disease at Princeton University and the University of California, Santa Barbara were caused by serogroup B. There is no vaccine against serogroup B licensed for use in the U.S. though some are in the development stages. A vaccine licensed for use in Europe, Canada, and Australia was granted investigational new drug status and provided to students (CDC, 2013).

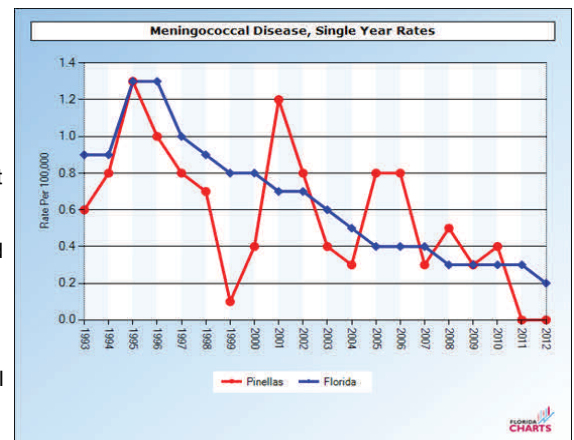
Upon suspicion, meningococcal disease should be reported immediately to your local health department by telephone 24 hours a day.

For more information on meningococcal disease and recent outbreaks, please visit the Centers for Disease Control and Prevention's website: <http://www.cdc.gov/meningococcal/index.html>

Sources:

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- Florida Department of Health, Bureau of Epidemiology. (n.d.) Meningococcal Disease. Retrieved from <http://www.floridacharts.com/charts/OtherIndicators/NonVitalIndNoGrpDataViewer.aspx?cid=0208>

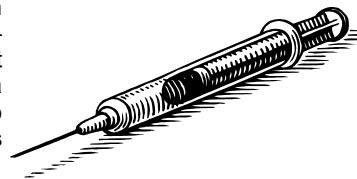
Figure 1: Rates of Meningococcal Disease in Florida and Pinellas County, 1993-2012



2013 Drive-Thru/Walk-In Flu Clinic

By Fatima Conteh, Public Health Preparedness

On December 11th, 2013, the Department of Health in Pinellas County (DOH-Pinellas), Public Health Preparedness Program held its 2nd annual Drive-Thru/Walk-In Flu Clinic. The purpose of the Flu Clinic was to vaccinate Pinellas County residents and visitors against influenza at no cost and to conduct a full scale exercise of the Points of Dispensing (POD) Plan that would be activated in the event of a mass prophylaxis situation. The clinic was held from 5:00pm to 8:30pm to accommodate those who worked during the day. For optimum accessibility from both Northern and Southern areas of Pinellas County, the clinic was held at the Mid-County Health Department on Ulmerton Road in Largo.



Both DOH-Pinellas staff and Medical Reserve Corps (MRC) volunteers worked to run the Flu Clinic. DOH-Pinellas provided medical and support staff (runners, traffic control, greeters, and dispensers) while the MRC provided nurses for giving the vaccinations. In total, there were 30 staff and volunteers who participated in the event. The Flu Clinic was set up in two parts: drive-thru clinic and walk-in clinic. Signs were placed at the entrance of the Mid-County Health Department to direct clients to the Flu Clinic. As clients arrived, they were greeted and directed to the drive-thru lanes or the walk-in clinic depending on which they preferred. The drive-thru clinic was set up in the parking area of the Mid-County Health Department, utilizing the two parking lots on the North side of the building to provide two drive-thru lanes. The walk-in clinic was set up in the detached conference center that is easily accessible from the South parking lot of the facility.

The planning team for this event made great effort to notify the public of the Drive-Thru/Walk-In Flu Clinic. The DOH-Pinellas Public Information Officer sent a media alert to all media outlets in the Bay Area announcing the event details. Several local news stations, both television and radio, picked up the story to help notify the public. Flyers were distributed to businesses and offices in areas surrounding the Mid-County Health Department. Community partners such as law enforcement, fire departments, Emergency Management, and hospitals were also notified of the event.

Overall, the event was a great success. The clinic was able to provide vaccinations to individuals who otherwise might not have sought out the vaccine. Having been a mild flu season up to that point, the turnout was lower than expected at 40 vaccinations given; compared to 102 given at the 2012 Flu Clinic. Staff and volunteers worked together to set up the drive-thru and walk-in clinics and inventory was well stocked in anticipation of clients. The checkpoints, registration areas, and vaccination stations were well staffed and stocked with relevant and necessary materials. Staff and volunteers were well informed of their objectives and worked together to assist the clients with their vaccinations and provide education. The result was a seamless flow of clients through the vaccination clinics and a successful exercise of one of DOH-Pinellas' disaster plans for mass prophylaxis.

CDC HEALTH ALERT NETWORK (HAN) ADVISORY:

Notice to Clinicians: Early Reports of pH1N1-Associated Illnesses for the 2013-14 Influenza Season

Distributed via the CDC Health Alert Network December 24, 2013

From November through December 2013, CDC has received a number of reports of severe respiratory illness among young and middle-aged adults, many of whom were infected with influenza A (H1N1) pdm09 (pH1N1) virus. Multiple pH1N1-associated hospitalizations, including many requiring intensive care unit (ICU) admission, and some fatalities have been reported. The pH1N1 virus that emerged in 2009 caused more illness in children and young adults, compared to older adults, although severe illness was seen in all age groups. While it is not possible to predict which influenza viruses will predominate during the entire 2013-14 influenza season, pH1N1 has been the predominant circulating virus so far. For the 2013-14 season, if pH1N1 virus continues to circulate widely, illness that disproportionately affects young and middle-aged adults may occur.

Recommendations for Healthcare Providers

- Clinicians should encourage all patients 6 months of age and older who have not yet received an influenza vaccine this season to be vaccinated against influenza. There are several flu vaccine options for the 2013-2014 flu season and all available vaccine formulations this season contain a pH1N1 component; CDC does not recommend one flu vaccine formulation over another. **Additional information on the 2013-2014 influenza vaccine can be found here:** http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#Tab1
- Clinicians should encourage all with influenza-like illness who are at high risk for influenza complications to seek care promptly to determine if treatment with influenza antiviral medications is warranted.

For the complete HAN, please visit: <http://emergency.cdc.gov/HAN/han00359.asp>

The Summary of Weekly U.S. Influenza Surveillance Report can be found here: <http://www.cdc.gov/flu/weekly/summary.htm>

Selected Reportable Diseases in Pinellas County

Disease	2013 December	Pinellas 2013	Pinellas 3 YR AVG	Florida 2013
A. Vaccine Preventable				
Mumps			0	1
Pertussis		17	10	735
B. CNS Diseases & Bacteremias				
Creutzfeldt-Jakob Disease (CJD)			2	20
<i>H. influenzae</i> (Invasive Disease)		12	9	273
Meningitis (Bacterial, Cryptococcal, Mycotic)		5	8	157
Meningococcal Disease	1	1	1	57
Streptococcal Disease, Group A, Invasive	2	12	5	299
<i>S. Pneumoniae</i> , Invasive Disease, Drug Resistant	2	24	18	520
<i>S. Pneumoniae</i> , Invasive Disease, Susceptible	2	11	17	578
C. Enteric Infections				
Campylobacteriosis	3	63	60	2026
Cryptosporidiosis	1	19	24	409
Cyclosporiasis		5	2	47
<i>E. coli</i> Shiga Toxin (+)	1	7	4	139
Giardiasis	2	34	34	1124
Hemolytic Uremic Syndrome (HUS)		1	0	14
Listeriosis			3	41
Salmonellosis	17	203	228	6143
Shigellosis		5	53	1049
D. Viral Hepatitis				
Hepatitis A		6	4	134
Hepatitis B: Pregnant Woman +HBsAg		17	24	487
Hepatitis B, Acute	1	39	11	373
Hepatitis C, Acute		17	10	219
E. Vector Borne, Zoonoses				
Animal Rabies			1	104
Dengue		2	2	169
Eastern Equine Encephalitis			0	2
Lyme Disease		8	6	159
Malaria		1	2	54
Rabies, possible exposure	10	194	171	2728
St. Louis Encephalitis			0	
West Nile Virus			0	8
F. Others				
AIDS**	8	125	N/A	N/A
Chlamydia	290	3812	N/A	N/A
Gonorrhea	114	1029	N/A	N/A
Hansen's Disease			0	11
HIV**	22	210	135	N/A
Lead Poisoning: Children < 6 years:	2	4	3	191
Legionellosis		10	13	250
Mercury Poisoning			1	5
Syphilis, Total	5	109	N/A	N/A
Syphilis, Infectious (Primary and Secondary)	4	51	N/A	N/A
Syphilis, Early Latent	1	37	N/A	N/A
Syphilis, Congenital			N/A	N/A
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)		21	N/A	N/A
Tuberculosis	4	28	N/A	N/A
<i>Vibrio</i> Infections	1	11	11	196

Provisional cases reported by the Florida Department of Health in Pinellas County. The 2013 Reporting Year includes cases reported from 12/29/2012 - 12/28/2013. Blank cells indicate no cases reported.

** Current HIV Infection data reflects any case meeting the CDC definition of "HIV infection" which includes all newly reported HIV cases and newly reported AIDS cases with no previous report of HIV. Newly reported HIV Infection cases do not imply they are all newly diagnosed cases. For a more detailed explanation on changes in reporting and changes in trends, please contact the HIV/AIDS Program, 727-824-6932. or the Florida Department of Health, Bureau of HIV/AIDS, Data Analysis Section 850-245-4334.