



EPI WATCH

Monthly Epidemiology and Preparedness Newsletter

February 2017

Florida Department of Health in Pinellas County

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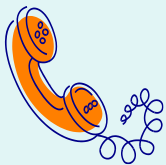
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Division of Disease Control and Health Protection



Disease Reporting

To report diseases and clusters of illness:

Phone: (727) 824-6932
Fax: (727) 820-4270
(excluding HIV/AIDS)

To Report HIV/AIDS by mail:

Surveillance Room 3-138
205 Dr. MLK Jr St. N
St. Petersburg, FL 33701

Animal Bite Reporting:

Phone: (727) 524-4410
x7665

Hansen's Disease

By Dana Elhassani, *Epidemiology Program Intern*

Hansen's disease, also known as Leprosy, is caused by an infection of *Mycobacterium leprae*. This bacteria is a slow-growing, acid-fast, rod-shaped bacillus that can be transmitted person to person via droplet transmission¹. Once exposed, the incubation period can range from 5-20 years². A majority of people (95%) are naturally immune to developing an infection; however, *M. leprae* can affect the peripheral nerves, skin, eyes, and nasal mucosa of infected individuals. Characteristic dermal symptoms include symmetrically-distributed skin lesions, nodules, plaques, and thickening of the dermis. Left untreated, Hansen's disease can lead to crippling nerve damage in the hands and feet, paralysis, and blindness¹.

There are two predominant classification systems currently used to determine the severity of illness, the Ridley-Jopling classification system and a method developed by the World Health Organization (WHO)^{3,4}. Both methods involve quantifying and assessing morphology of lesions. The Ridley-Jopling system has six histological classification types for Leprosy: indeterminate (I), tuberculoid (TT), borderline tuberculoid (BT), mid-borderline (BB), borderline lepromatous (BL), lepromatous (LL). The WHO systems collapsed these categories into two categories, either paucibacillary (I, TT, BT) or multibacillary (BB, BL, LL), for a field-friendlier method that would reduce the dependence on a stable medical infrastructure⁴.

Treatment of Leprosy is accomplished through long-term multi-drug therapy (MDT). Antibiotics used include dapsones with rifampicin, and for multibacillary infections, clofazimine. Typical treatment time can last from 1-2 years; however due to the long adherence and difficulties with patient compliance, treatment may last much longer^{2,6}.

Historically, leprosy was identified in China, Egypt, and India as far back as 600 BC. The debilitating symptoms of this disease often led to individuals being ostracized by their community¹. The advent of MDT has decreased the world wide prevalence from 5.4 million cases to a few hundred thousand. The global incidence was 211,973 and prevalence 176,176 by the end of 2015. Approximately 60% of new cases globally were identified in India, followed by Brazil (13%), and Indonesia (8%). At this time, only thirty countries worldwide were able to report zero new cases⁵.

In the United States, in the last 10 years, less than 300 cases have been reported. The states with the highest transmission rates in the last ten years include California, Florida, Hawaii, Louisiana and Texas. While there were only 101 cases in Florida between 2001 and 2010, there were 27 cases reported in 2015 which is triple the state's average annual incidence. The counties with the highest incidence include Brevard, Volusia, Polk, Hillsborough, and Dade^{1,3}.

Leprosy is predominately contracted from another human. However, the nine-banded armadillos have been found to carry strains of the bacteria that can affect humans. While the relationship is not fully understood, persons should wear protective gloves while handling the wildlife and wash hands before and after exposure¹.

References

1. Moore SP, Wisely SM. Facts about Wildlife Diseases : Leprosy. *Wildl Dis Risks to People Anim*. 2015:1-4.
2. WHO. Leprosy. 2016. <http://who.int/mediacentre/factsheets/fs101/en/>.
3. U.S. Department of Health and Human. A summary of hansen ' s disease in the United States-2014. 2015;(May):1-31.
4. Pardillo FEF, Tranquilino T, Fajardo RMA, Scollard D, Gelber and RH. Methods for the classification of leprosy for treatment purposes. *CID*. 2007;44(15):1096-1099. doi:10.1086/512809.
5. Oh DH, Dabbagh A, Goodson JL, et al. Global leprosy update, 2015: time for action, accountability and inclusion. *Wkly Epidemiol Rec*. 2016;35(91):461-468.
6. CDC. Hansen's disease (leprosy). 2017. <https://www.cdc.gov/leprosy/treatment/index.html>.

Overview of and Public Health Response to Mumps Outbreaks in the United States

By Kevin Baker, MPH, CPH, CHES

Mumps is a virus that has been largely controlled in the United States due to the introduction of the measles, mumps, and rubella (MMR) vaccine as a mandatory vaccine for school-aged children. Since the mumps vaccination program started in 1967, the United States experienced a 99% decrease in mumps cases¹. While two doses of the vaccine are considered to be 88% effective (range 66-95%) and the MMR vaccination rate is high nationwide, sporadic cases and outbreaks of mumps are still being reported. Even in highly vaccinated settings, fully vaccinated individuals can be infected if they are in close contact with someone with mumps, which can lead to outbreaks. Various risk factors for mumps outbreaks include the MMR vaccine's level of effectiveness, lack of exposure to wild-type mumps virus, and the type of setting and behaviors that increase the likelihood of disease transmission.

The Centers for Disease Control and Prevention (CDC) has received multiple reports of mumps outbreaks over the last decade, which have primarily taken place on school and college campuses². Viruses such as mumps can spread quickly through airborne and fomite transmission because the student population is known to be in constant close contact with each other in classes, dormitories, and social gatherings.

If a healthcare provider suspects mumps based on the patient's clinical presentation, exposures, and vaccination status, then the he/she should be tested for mumps. Symptoms of mumps infection may include parotitis (swollen and tender salivary glands), anorexia, fatigue, headache, muscle aches, and fever, which can appear anywhere between 12 and 25 days (average of 16-18 days) after exposure². Confirmatory laboratory criteria for mumps diagnosis by epidemiological standards include culture and PCR, and presumptive laboratory criteria includes IgM serology³. If the test result is positive, the Florida Department of Health should be notified by the next business day and the patient should be advised to stay isolated from others, including household contacts, for five days after parotitis onset.

The best way to prevent the spread of mumps is to ensure that individuals are vaccinated according to the CDC immunization schedule. The CDC recommends that the first dose of MMR be given to children at 12-15 months and the second dose at 4-6 years of age⁴. Also, the vaccine can be provided as post-exposure prophylaxis to any close contact (who does not have any medical contraindications to the vaccine) if they lack documented evidence of immunity⁵. Further information about the MMR vaccine recommendations can be found at <https://www.cdc.gov/vaccines/vpd/mmr/hcp/index.html>.

References

¹ U.S. Centers for Disease Control and Prevention. (2017, February 9). Mumps: Mumps Cases and Outbreaks. Retrieved from: <https://www.cdc.gov/mumps/outbreaks.html>

² U.S. Centers for Disease Control and Prevention. (2016, July 27). Mumps: Signs and Symptoms of Mumps. Retrieved from: <https://www.cdc.gov/mumps/about/signs-symptoms.html>

³ Florida Department of Health Bureau of Epidemiology. (2012, July 9). Guide to Surveillance and Investigation: Mumps. Retrieved from: http://www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/disease-reporting-and-surveillance/_documents/gsi-mumps.pdf

⁴ U.S. Centers for Disease Control and Prevention. (2017, February 6). Immunization Schedules: Child and Adolescent Schedule. Retrieved from: <https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html>

⁵ U.S. Centers for Disease Control and Prevention. (2017, February 6). Epidemiology and Prevention of Vaccine-Preventable Diseases: Mumps. Retrieved from: <https://www.cdc.gov/vaccines/pubs/pinkbook/mumps.html>

Yellow Fever: Travel Notice

The Centers for Disease Control and Prevention (CDC) has issued a Level 2 Travel Alert encouraging travelers to practice enhanced precautions when traveling to areas of Brazil currently reporting an ongoing outbreak of yellow fever. The outbreak started as early as December 2016 in the state of Minas Gerais and soon spread to neighboring areas, Espirito Santo and Sao Paulo. In response, the Brazilian Ministry of Health has conducted a mass vaccination campaign among unvaccinated residents in the affected areas. In addition, health authorities have expanded yellow fever vaccination recommendations for travelers to areas of Brazil.

Yellow fever is a virus transmitted by the bite of infected mosquito. The majority of individuals who become infected are asymptomatic or develop mild symptoms, including fever, headache, body aches, nausea, vomiting, and fatigue. A small percentage of individuals will develop high fever, jaundice, bleeding, and organ failure. Treatment is symptomatic. Those who recover from Yellow Fever generally have lasting immunity. Yellow fever vaccine is recommended for people aged ≥ 9 months who are traveling to or living in areas at risk for yellow fever virus transmission.

Changes to the environment, the increased mobility of people within and across borders from rural to densely populated urban areas, and the *Aedes aegypti* mosquito are increasing the risk of yellow fever epidemics.

For more information, please visit the CDC website: <https://www.cdc.gov/yellowfever/index.html>

Selected Reportable Diseases in Pinellas County

Disease	Pinellas		YTD Total		Pinellas County Annual Totals		
	January 2017	January 2016	Pinellas 2017	Florida 2017	2016	2015	2014
A. Vaccine Preventable							
Measles	0	0	0	2	0	0	0
Mumps	0	0	0	1	0	0	0
Pertussis	1	1	1	14	18	17	19
Varicella	3	10	3	51	74	38	35
B. CNS Diseases & Bacteremias							
Creutzfeldt-Jakob Disease (CJD)	0	0	0	2	2	3	0
Meningitis (Bacterial, Cryptococcal, Mycotic)	0	2	0	10	7	6	4
Meningococcal Disease	0	0	0	6	0	1	0
C. Enteric Infections							
Campylobacteriosis	14	4	14	164	137	104	103
Cryptosporidiosis	2	3	2	27	27	49	240
Cyclosporiasis	0	0	0	0	5	3	0
<i>E. coli Shiga Toxin (+)</i>	0	0	0	0	3	2	6
Giardiasis	5	2	5	93	41	30	42
Hemolytic Uremic Syndrome (HUS)	0	0	0	2	0	0	0
Listeriosis	0	0	0	6	2	2	0
Salmonellosis	5	6	5	250	188	196	216
Shigellosis	1	1	1	43	19	174	21
D. Viral Hepatitis							
Hepatitis A	0	1	0	12	2	4	2
Hepatitis B: Pregnant Woman +HBsAg	2	4	2	36	28	37	21
Hepatitis B, Acute	5	3	5	43	68	57	44
Hepatitis C, Acute	2	2	2	20	49	32	19
E. VectorBorne/Zoonoses							
Animal Rabies	0	0	0	15	4	1	2
Rabies, possible exposure	14	4	14	232	131	114	190
Chikungunya Fever	0	0	0	1	1	2	10
Dengue	0	0	0	5	2	3	1
Eastern Equine Encephalitis	0	0	0	0	0	0	0
Lyme Disease	0	0	0	10	11	6	5
Malaria	0	0	0	4	0	2	3
West Nile Virus	0	0	0	0	1	1	0
Zika Virus	3	0	3	55	23	0	0
F. Others							
AIDS**	8	8	8	n/a	108	118	129
HIV**	35	28	35	n/a	198	252	171
Chlamydia	319	317	319	n/a	4133	4168	3853
Gonorrhea	125	100	125	n/a	1566	1439	1295
Hansen's Disease	0	0	0	2	0	0	0
Lead Poisoning	4	0	4	44	32	40	62
Legionellosis	1	2	1	31	19	18	13
Mercury Poisoning	0	0	0	2	0	1	2
Syphilis, Total	19	19	19	n/a	400	289	186
Syphilis, Infectious (Primary and Secondary)	7	15	7	n/a	188	151	75
Syphilis, Early Latent	7	3	7	n/a	146	83	61
Syphilis, Congenital	0	0	0	n/a	2	3	0
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)	5	1	5	n/a	64	52	50
Tuberculosis	0	0	0	n/a	31	14	25
<i>Vibrio Infections</i>	2	0	2	13	8	11	10

n/a = not available at this time. Reportable diseases include confirmed and probable cases only. All case counts are provisional. Data is collected from the Merlin Reportable Disease database, surveillance systems maintained at the Florida Department of Health in Pinellas County, and Florida CHARTS <http://www.floridacharts.com/charts/default.aspx>.

*STD data in PRISM is continually updated. Please note, data from the previous month takes up to an additional month or more to be correctly updated.

* Current HIV Infection data by year of report 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 in Florida. If a case is later identified as being previously diagnosed and reported from another state, the case will no longer be reflected as a Florida case and the data will be adjusted accordingly. Data from the last calendar year (2016) and the current calendar year (2017) are considered provisional and therefore should not be used to confirm or rule out an increase in newly reported cases in Florida. The final year-end numbers for 2016 and 2017 are generated in July of the following year (2017 & 2018 respectively), after duplicate cases are removed from the dataset, as is customary of HIV surveillance in the US.