



EPI WATCH

Monthly Epidemiology and Preparedness Newsletter

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Animal Bite Reporting
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The Truth about Tetanus

BY ANDREA LEAPLEY, MPH

Tetanus is an infection caused by the bacteria *Clostridium tetani*. The bacteria are present throughout the environment in everything from soil to dust to manure. Infection occurs when the spores enter the body through broken skin. The injuries most likely to result in tetanus are contaminated wounds, puncture wounds, burns, crush injuries, and injuries with dead tissue.

After exposure, the incubation period is an average of eight days with a range of three to twenty one days. The further the site of injury is from the central nervous system, the longer the incubation period. If the injury is close to the central nervous system, the incubation is shorter and there is an increased chance of death. Severity also depends on the degree of immunity, amount of toxin present, and age and overall health of the patient.

Symptoms of tetanus include headache, jaw cramping, muscle spasms, muscle stiffness, difficulty swallowing, seizures, fever and sweating, and high blood pressure with increased heart rate. If tetanus is suspected, treatment should be initiated immediately. Tetanus immune globulin (TIG) should be administered along with a tetanus toxoid booster, medications to control muscle spasms, and treatment of the wound. There are no hospital lab tests to accurately diagnose an infection of tetanus as *C. tetani* is not usually able to be recovered from a wound and can be isolated from the skin of a person who is not infected. Case determination relies on symptoms and physician diagnosis. The death rate among cases is 10%-20%.

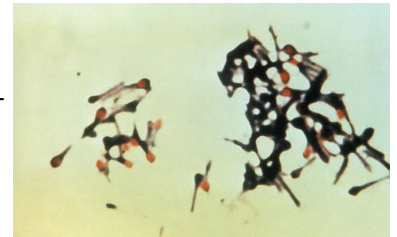


Image: This micrograph depicts a group of *Clostridium tetani* bacteria. www.cdc.gov

The best way to prevent tetanus infection is vaccination. The Advisory Committee on Immunization Practices recommends 5 doses of the diphtheria, tetanus, and pertussis (DTaP) vaccine at 2 months, 4 months, 6 months, 15-18 months, and 4-6 years of age. Teenagers and adults should have a booster dose of the Tdap vaccine every ten years. Pregnant women should receive a dose of the Tdap during the third trimester. Adults who were not vaccinated as children should receive a series of three shots and a booster every ten years.

Tetanus was first reported nationally in 1947 and rates have been steadily declining since. This trend is likely due to the use of tetanus antitoxin as part of wound management and the introduction of the tetanus vaccine in the 1930s and 1940s. The Centers for Disease Control and Prevention (CDC) reported an average of 29 cases in the United States each year between 2001 and 2008. Almost all cases were in people who were never vaccinated or adults who did not keep up with their boosters.

In Florida, cases have declined consistently with the national average. Between 1998 and 2012, 44 cases were reported, an average of 3 per year. Pinellas County reported one case in 1998, two cases in 2003, and more recently, one case in 2014. A review of Florida cases revealed that many patients experienced minor wounds before onset of tetanus. This is in line with the CDC Pink Book, which states that in recent years an increased proportion of tetanus patients are reporting minor wounds, likely because people who experience major wounds seek treatment and receive wound management. Many of the Florida cases involved adults who were never vaccinated or not currently up to date on boosters.

Tetanus cases should be reported by the next business day to your local health department.

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

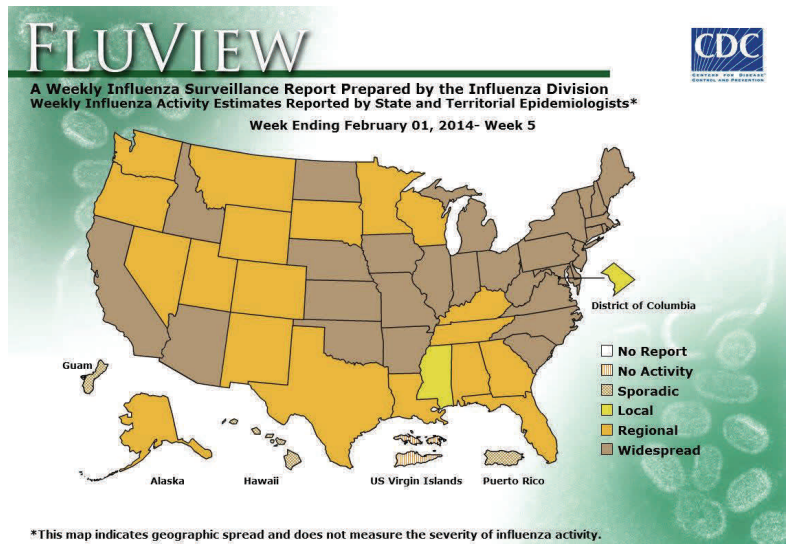
Influenza Season: It's not to late to get your flu shot!

Influenza activity remains elevated in Florida and around the nation. Most states are currently reporting regional or widespread activity. Flu activity is likely to continue for several more weeks.

Anyone aged 6 months and older who has not gotten a flu vaccine yet this season should get one now, especially if they are in a part of the country where activity began more recently or is increasing. All flu vaccines are designed to protect against 2009 H1N1 viruses which are the most common flu viruses so far this season.

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

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



Varicella in a Local Jail Inmate

BY: PATRICIA BORKOWSKI, RN

On Thursday, January 15, 2014, the Epidemiology Program at the Florida Department of Health in Pinellas County received an electronic lab report of a positive Varicella IgM. Upon review of lab, it was noted that the case was a 34 year old male inmate at a local jail. Contact was made with the Infection Control Practitioner at the jail to gather additional information.

Records revealed that the inmate developed a rash on the trunk of his body on January 6. By January 8, the rash completely covered his body from head to toe and he was placed in isolation. The inmate did not have a prior diagnosis of Varicella (chickenpox) and no history of vaccination. He was extradited from South America and was awaiting trial since August 2013. No additional cases of chickenpox or shingles were reported prior to his onset. The pod where he was originally located was placed on quarantine to prevent any further transmission.

The inmate was treated with Acyclovir and the rash completely crusted over. On January 17, the case was released from isolation. On January 20, another inmate from the quarantined pod was moved to a second pod in error. Upon discovery, it was decided that this second pod should also be quarantined until the end of the exposure period. Following the end of quarantine, no additional cases were identified.

Varicella (chickenpox) is a very contagious acute illness caused by the varicella-zoster virus (VZV). The rash typically starts on the face and quickly spreads to the rest of the body. Preceding symptoms include fever, fatigue, and other flu-like symptoms. The virus spreads easily from person to person by direct contact or airborne spread of vesicle fluids or respiratory secretions. In 10-20% of varicella cases, VZV reactivates in the body later in life and produces the disease herpes zoster (shingles). Shingles, which is characterized by a rash of blisters, can be very painful but is not life-threatening. Shingles cannot be passed from one person to another; however, VZV can be spread from a person with active shingles to a person who has never had chickenpox. In such cases, the person exposed to the virus might develop chickenpox, but they would not develop shingles.

The varicella vaccine is the best protection against chickenpox. The vaccine was licensed for use in the United States in 1995 and has become widely used. Despite high vaccination rates, sporadic cases and clusters of varicella still occur around the nation. Cases of varicella should be reported to your local health department within one business day.

For additional information on varicella and the current vaccine recommendations, please visit: <http://www.cdc.gov/chickenpox/about/>

Selected Reportable Diseases in Pinellas County

| Disease | Pinellas | | Year-to-Date | | Pinellas County Annual Totals | | |
|---|--------------|---------------|--------------|------|-------------------------------|------|--|
| | 2014 January | Pinellas 2014 | Florida 2014 | 2013 | 2012 | 2011 | |
| A. Vaccine Preventable | | | | | | | |
| Mumps | | | | | | | |
| Pertussis | 2 | 2 | 85 | 17 | 10 | 10 | |
| B. CNS Diseases & Bacteremias | | | | | | | |
| Creutzfeldt-Jakob Disease (CJD) | | | | | 2 | 3 | |
| <i>H. influenzae</i> (Invasive Disease) | 1 | 1 | 38 | 12 | 7 | 10 | |
| Meningitis (Bacterial, Cryptococcal, Mycotic) | 1 | 1 | 14 | 5 | 6 | 7 | |
| Meningococcal Disease | | | 8 | 1 | | | |
| Streptococcal Disease, Group A, Invasive | 4 | 4 | 48 | 12 | 6 | 3 | |
| <i>S. Pneumoniae</i> , Invasive Disease, Drug Resistant | 1 | 1 | 55 | 24 | 16 | 22 | |
| <i>S. Pneumoniae</i> , Invasive Disease, Susceptible | 1 | 1 | 77 | 11 | 25 | 11 | |
| C. Enteric Infections | | | | | | | |
| Campylobacteriosis | 9 | 9 | 175 | 63 | 59 | 83 | |
| Cryptosporidiosis | | | 42 | 19 | 29 | 19 | |
| Cyclosporiasis | | | | 5 | 1 | 2 | |
| <i>E. coli</i> Shiga Toxin (+) | | | 17 | 7 | 8 | 2 | |
| Giardiasis | | | 91 | 34 | 32 | 27 | |
| Hemolytic Uremic Syndrome (HUS) | | | 1 | 1 | | | |
| Listeriosis | | | 5 | | 5 | 3 | |
| Salmonellosis | 12 | 12 | 383 | 203 | 203 | 225 | |
| Shigellosis | 2 | 2 | 100 | 5 | 18 | 93 | |
| D. Viral Hepatitis | | | | | | | |
| Hepatitis A | | | 8 | 6 | 4 | 5 | |
| Hepatitis B: Pregnant Woman +HBsAg | | | 46 | 17 | 16 | 29 | |
| Hepatitis B, Acute | 1 | 1 | 29 | 39 | 16 | 10 | |
| Hepatitis C, Acute | 1 | 1 | 13 | 17 | 5 | 13 | |
| E. Vector Borne, Zoonoses | | | | | | | |
| Animal Rabies | | | 8 | | | 2 | |
| Dengue | | | 16 | 2 | 3 | 1 | |
| Eastern Equine Encephalitis | | | | | | | |
| Lyme Disease | 1 | 1 | 5 | 8 | 6 | 9 | |
| Malaria | | | 3 | 1 | 2 | 1 | |
| Rabies, possible exposure | 9 | 9 | 200 | 193 | 201 | 217 | |
| St. Louis Encephalitis | | | | | | | |
| West Nile Virus | | | | | | | |
| F. Others | | | | | | | |
| AIDS** | 13 | 13 | n/a | 123 | 130 | 123 | |
| Chlamydia | 306 | 306 | n/a | 4155 | 3812 | 3863 | |
| Gonorrhea | 112 | 112 | n/a | 1429 | 1029 | 1034 | |
| Hansen's Disease | | | | | | | |
| HIV** | 29 | 29 | n/a | 203 | 177 | 189 | |
| Lead Poisoning: Children < 6 years: | 1 | 1 | 10 | 4 | 2 | 4 | |
| Legionellosis | 1 | 1 | 22 | 10 | 13 | 13 | |
| Mercury Poisoning | 2 | 2 | 3 | | | 2 | |
| Syphilis, Total | 10 | 10 | n/a | 114 | 141 | 132 | |
| Syphilis, Infectious (Primary and Secondary) | 5 | 5 | n/a | 52 | 61 | 66 | |
| Syphilis, Early Latent | 3 | 3 | n/a | 37 | 47 | 35 | |
| Syphilis, Congenital | | | n/a | | | 1 | |
| Syphilis, Late Syphilis (Late Latent; Neurosyphilis) | 2 | 2 | n/a | 25 | 33 | 30 | |
| Tuberculosis | 1 | 1 | n/a | 28 | 17 | 9 | |
| <i>Vibrio</i> Infections | | | 3 | 11 | 10 | 11 | |

n/a = not available at this time. Blank cells indicate no cases reported.

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>.

** 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.