EPI INVESTIGATOR

Florida Department of Health—Alachua

Fall 2014

"Improving Public Health in Our Community Through Cooperation"

Alachua County Health Department
(352) 334-7900

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If you would like to receive the Epi InvestiGator by email or fax, please contact us at the following email address: Nadia.Kovacevich@flhealth.gov, or phone: (352) 334 - 7981.

Immunizations
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Sexually Transmitted Disease
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Tuberculosis
Geneva Saulsberry, RN
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(352)-334-7900

Editor
Sheila Griffis

If I have latent TB infection, how can I keep from developing TB disease?

Submitted by: **Geneva Saulsberry, RN**
Regional Nurse Case Manager

Many people who have latent TB infection never develop TB disease. But some people who have latent TB infection are more likely to develop TB disease than others. Those at high risk for TB disease include:

- People with HIV infection
- People who became infected with TB bacteria in the last 2 years
- Babies and young children
- People who inject illegal drugs
- People who are sick with other diseases that weaken the immune system
- Elderly people
- People who were not treated correctly for TB in the past

If you have latent TB infection (a positive TB skin test reaction or positive TB blood test) and you are in one of these high-risk groups, you need to take medicine to keep from developing TB disease. This is called treatment for latent TB infection. There are several treatment options.

One treatment option for latent TB infection is isoniazid (INH). Taken for 6 to 9 months, INH kills the TB bacteria that are in the body. If you take your medicine as instructed by your doctor or nurse, it can keep you from developing TB disease. Children, adolescents, and people infected with HIV who have latent TB infection need to take INH for 9 months. The preferred regimen for children 2-11 years old is 9 months of daily INH.

Another effective treatment option for people with latent TB infection is the 12-dose regimen. This regimen of INH and rifapentine (RPT) is taken once a week for 3 months under directly observed therapy (DOT). This means the patient will meet with a health worker at a place they both agree on, and the health worker will observe the patient taking the medicine.

You and your health care provider must decide which treatment option is best for you.

Because there are less bacteria, treatment for latent TB infection is much easier than treatment for TB disease. A person with TB disease has a large amount of TB bacteria in the body. Several drugs are needed to treat TB disease.

Sometimes people are given treatment for latent TB infection even if their TB skin test reaction or TB blood test result is negative. This is often done with infants, children, and people infected with HIV who have recently spent time with someone with TB disease. This is because they are at very high risk of developing TB disease soon after they become infected with TB bacteria.

People who have latent TB infection need to know the symptoms of TB disease. If they develop symptoms of TB disease, they should see a doctor right away. Information for this article retrieved directly from: http://www.cdc.gov/tb/publications/faqs/qa_latenttbinf.htm#Latent4

Ebola Preparedness

Submitted by: Nadia Kovacevich, MPH
Epidemiologist, Alachua County Health Dept.

The state of Florida is prepared to identify and treat patients who may have Ebola Virus Disease (EVD). In the event that a patient with Ebola Virus Disease (EVD) is diagnosed in Florida, the Florida Department of Health will collaborate with healthcare partners to ensure appropriate patient care, protocols for isolation, infection control, and the assessment of risk to relevant individuals. The Florida Department of Health in Alachua County can be reached **24/7 at 352-334-7900 (listen to prompts)** for reporting suspected EVD. **Please call 352-334-7981 during business hours**.

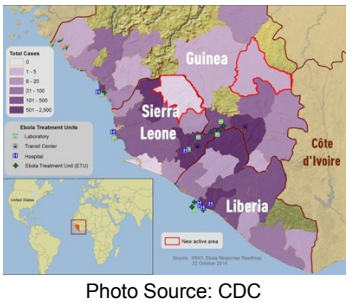

Photo Source: CDC

Identify, Isolate, and Inform

Identify: Ask about travel history. Did the person travel to/from Western Africa within 21 days of symptom onset? Look for symptoms. Symptoms typically include fever, headache, joint and muscle aches, weakness, diarrhea, vomiting, stomach pain and lack of appetite. **Isolate**: Don personal protective equipment. Move the patient to a private room with a private bathroom. Close the door. Post isolation signs on the doors of the patient's room. **Inform**: Call FDOH-Alachua **24/7 at 352-334-7900**; please call **352-334-7981 during business hours**.

*__Please__ visit the following website for updates: http://www.floridahealth.gov/diseases-and-conditions/ebola/index.html

Reference: Florida Department of Health. (2014). Ebola Virus Disease Fact Sheet. Retrieved from http://newsroom.doh.state.fl.us/wp-content/uploads/newsroom/2014/10/100814-ebola-fact-sheet.pdf

Ebola Virus Disease (EVD) Fact Sheet for Medical Professionals

Submitted by: Nadia Kovacevich, MPH
Epidemiologist, Alachua County Health Dept.

Background

Ebola is a disease in humans and nonhuman primates caused by five virus species, four of which are known to cause disease in humans. The 2014 epidemic in Western Africa is caused by *Zaire ebolavirus*, considered the most virulent species. Transmission is through unprotected direct contact with blood, body fluids (including but not limited to feces, saliva, sweat, urine, vomit, semen), and organs/tissues of infected persons or animals. The virus also can be spread through contact with contaminated objects, like needles and syringes. Ebola virus dried on surfaces such as doorknobs and countertops can survive for several hours; however, virus in fluids (such as blood) can survive up to several days at room temperature. Ebola virus is killed with hospital -grade disinfectants (such as household bleach). The incubation period, from exposure to when signs or symptoms appear, is 2 to 21 days, generally averaging 8-10 days for the current outbreak.

Clinical Presentation

- Patients have abrupt onset of fever and symptoms, typically 8 – 10 days after exposure.
- Initial signs and symptoms are nonspecific and may include fever, chills, myalgias, and malaise.
- Patients can progress after several days (from early symptom onset) to gastrointestinal symptoms such as severe watery diarrhea, nausea, vomiting and abdominal pain. Patients often have conjunctival injection. Chest pain, shortness of breath, headache or confusion may also develop. Hiccups have been reported. Seizures may occur, and cerebral edema has been reported.
- Bleeding is not universally present but can manifest later in the course as petechiae, ecchymosis/bruising, or oozing from venipuncture sites and mucosal hemorrhage. Frank hemorrhage is less common; in the current outbreak unexplained bleeding has been reported from only 18% of patients, most often as blood in the stool (about 6%).
- Patients may develop a diffuse erythematous maculopapular rash by day 5 to 7 (after early symptom onset and usually involving the neck, trunk, and arms) that can desquamate.
- Pregnant women may experience spontaneous miscarriages.

Diagnostic Evaluation

- Travel history is critical. If a person has early symptoms of Ebola (fever, chills, myalgia and malaise) and had contact with the blood or body fluids of a person sick with Ebola, contact with objects contaminated with the blood or body fluids of a person sick with Ebola, or contact with infected animals, that individual should be **isolated (with standard, contact, and droplet precautions) and Public Health officials notified.** Samples from the patient can then be collected and tested to confirm infection.
- Due to nonspecific symptoms, particularly early in the course, EVD can often be confused with other more common (especially from West Africa) diseases such as malaria, dengue, yellow fever, influenza, meningococcemia, typhoid fever, shigella, and bacterial pneumonia.
- Concern for possible EBV should not delay diagnosis and treatment of other infections.
- Diagnostic laboratory testing within a few days after symptoms begin can be accomplished with PCR, ELISA, IgM ELISA, and virus isolation. Later in the disease course or after recovery, diagnostic testing includes detection of IgM and IgG antibodies.
- PCR may be negative during the first 72 hours after initial symptom onset, so a repeat PCR test post 72 hours may be needed to rule out EVD.

Other clinical laboratory tests:

- Early leukopenia (as low as 1,000 cells per µL) with lymphopenia and subsequent neutrophilia, left shift with atypical lymphocytes. In a later stage, secondary bacterial infection might lead to raised counts of white blood cells.
- Thrombocytopenia (50,000–100,000 cells per µL).
- Prothrombin and partial thromboplastin times are extended and fibrin split products are detectable, indicating diffuse intravascular coagulopathy.
- High serum aminotransferase (aspartate aminotransferase typically exceeding alanine aminotransferase). However, peak serum concentrations of these enzymes are usually much lower than seen in hepatitis A or B or yellow fever.
- Hyperproteinemia and proteinuria

Initial Management

- No FDA-approved vaccine or medicine (e.g., antiviral drug) is available for Ebola.
- Symptoms of Ebola are treated as they appear. The following basic interventions, when used early, can significantly improve the chance of survival:
- Providing intravenous fluids and balancing electrolytes
- Maintaining oxygenation and blood pressure
- Treating other infections if they occur.
- Experimental vaccines and treatments for Ebola are under development, but they have not yet been fully tested for safety or effectiveness.

Disposition/Recovery

- Recovery from Ebola depends on good supportive clinical care and the patient's immune response.
- People who recover from Ebola infection develop antibodies that last at least 10 years. It isn't known if they are immune for life or can become infected with a different species of Ebola.
- In non-fatal cases, patients may have fever for several days and improve, typically around day 6. Patients that survive can have a prolonged convalescence.
- Some people who have recovered from Ebola have developed long-term complications, such as joint and muscle pain and vision problems.
- Patients with fatal disease usually develop more severe clinical signs early during infection and die between days 6 and 16 of complications, including multi-organ failure and septic shock (mean of 7.5 days from symptom-onset to death during the current outbreak in West Africa).
- Risk factors significantly associated with a fatal outcome in the affected countries in West Africa include age >45 years old, unexplained bleeding, and a constellation of other signs and symptoms (diarrhea, chest pain, cough, difficulty breathing, difficulty swallowing, conjunctivitis, sore throat, confusion, hiccups, and coma).

*This fact sheet was published on October 20, 2014 by the Florida Department of Health. Please reference the following website for all updates: http://www.floridahealth.gov/diseases-and-conditions/ebola/index.html

FLORIDA REPORTABLE DISEASES *Alachua County 2 year activity*

Disease Activity	2014 Jan-Sep	2013 Jan-Sep	2013 Jan-Dec
AIDS	26	23	35
Animal Bites to Humans (07101)	47	49	61
Anthrax	0	0	0
Arsenic Poisoning (98080)	0	0	0
Botulism	0	0	0
Brucellosis	0	0	0
Campylobacteriosis (03840)	25	21	28
Carbon Monoxide Poisoning (98600)	0	0	0
Chikungunya Fever (06540)	2	0	0
Chlamydia trachomitis	1433	1330	1836
Cholera	0	0	0
Ciguatera	0	0	0
Creutzfeldt-Jakob Disease (CJD)	0	0	0
Cryptosporidiosis (13680)	8	3	5
Cyclosporiasis (00720)	0	4	4
Dengue (06100)	1	1	2
Diphtheria	0	0	0
Encephalitis	0	0	0
Eastern Equine	0	0	0
Non-arboviral	0	0	0
Other arboviral	0	0	0
St. Louis	0	0	0
West Nile	0	0	0
Western Equine	0	0	0
E.coli 0157:H7 (41601)	0	0	0
Ehrlichiosis/anaplasmosis,HGE, Anaplasma Phagocytophilum (08381)	0	0	0
Ehrlichiosis/anaplasmosis,hme e chaff. 08382	6	0	0
Escherichia Coli, Shiga Toxin Producing 00800	3	2	4
E.coli, Other (41603)	0	0	0
Giardiasis (acute) (00710)	15	15	18
Gonorrhea	296	480	648
H. Influenzae Pneumonia (48220)	0	0	0
Haemophilus influenzae, inv disease(03841)	6	2	2
Hansen's Disease (Leprosy)	0	0	0
Hantavirus infection	0	0	0
Hemolytic Uremic Syndrome 42000	0	0	0
Hepatitis A	0	0	0
Hepatitis B (+HBsAG in preg women or child < 24 months (07039)	8	9	10
Hepatitis B Perinatal (07744)	0	0	0
Hepatitis B Acute (07030)	1	1	1
Hepatitis B Chronic (07032)	54	43	58
Hepatitis C Acute (07051)	0	0	0
Hepatitis C Chronic (07054)	252	162	240
Herpes Simplex Virus in < 6mo of age	0	0	0
HIV	55	40	51
Human Papillomavirus (HPV) <12 yrs	0	0	0
Influenza A, Novel or Pandemic Strains	0	0	0
Lead Poisoning (94890)	3	4	5
Legionellosis (48280)	0	0	0

Disease Activity Con'td.	2014 Jan-Sep	2013 Jan-Sep	2013 Jan-Dec
Listeriosis (02700)	1	0	0
Lyme Disease (06959)	0	0	0
Lymphogranuloma Venereum	0	0	0
Malaria (08460)	0	2	2
Measles (05590)	0	0	0
Meningitis, Group B Strep (32040)	0	0	0
Meningitis other (32090)	0	0	1
Meningitis Strep Pneumoniae (32020)	0	0	0
Meningococcal (*Neisseria Meningitidis*)03630	0	0	1
Mercury Poisoning	0	0	0
Monkey Bite (07103)	0	0	0
Mumps	0	0	0
Neurotoxic Shellfish Poisoning	0	0	0
Pertussis (03390)	18	3	4
Pesticide-Related Illness or Injury	0	0	0
Plague	0	0	0
Psittacosis	0	0	0
Q fever	0	0	0
Rabies Animal (07102)	0	4	6
Ricin Toxin	0	0	0
Rocky Mountain Spotted Fever (08200)	2	0	0
Rubella	0	0	0
SARS	0	0	0
Salmonellosis (00300)	53	57	80
Saxitoxin poisoning psp	0	0	0
Shigellosis (00490)	8	6	6
Smallpox	0	0	0
Staphylococcus aureus, VRSA	0	0	0
Staphylococcus enterotoxin B	0	0	0
Streptococcal Disease grp A inva (03400)	0	0	0
Strep pneumoniae invasive Disease, Drug resistant (04823)	1	7	7
Strep pneumoniae invasive Disease, susceptible (04830)	4	13	14
Syphilis	38	21	32
Syphilis in pregnant women & neonates	0	0	0
Tetanus	0	0	0
Toxoplasmosis (acute)	0	0	0
Trichinosis	0	0	0
Tuberculosis	4	5	6
Typhoid Fever	0	0	0
Typhus Fever	0	0	0
Vaccinia Disease	0	0	0
Varicella (05290)	5	13	13
Vibrio Parahaemolyticus (00540)	0	1	1
V. cholerae Serogroup Type non 01 (00198)	1	1	1
Vibriosis (Vibrio mimicus) 00197	0	1	1
Vibriosis (Vibrio vulnificus) 00199	0	0	0
West Nile Virus Neuroinvasive Dis. 06630	0	0	1
West Nile Virus Non-Neuroinvasive Disease (06631)	1	0	0

Any disease outbreak (e.g., in the community, hospital, or other institution; or foodborne or waterborne) ***Any grouping or clustering*** of patients having similar diseases, symptoms or syndromes that may indicate the presence of a disease outbreak. All cases suspected and confirmed are included in this report..

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Fall 2014
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It's that time of year again!

The dreaded "Flu Season" is now upon us.

Submitted By: **Michael Smith, RN**
ACHD Immunizations Supervisor

There are many questions and concerns about the flu and what one can do to become protected against this possible deadly disease. The fact is, the flu kills thousands of people a year and hospitalizes many more. Hopefully, after reading this article, you will have gained a better understanding on how to protect yourself from becoming one less victim of the flu virus.

The Centers for Disease Control and Prevention performs research year-round to help produce vaccinations for the protection against some of the most common types of flu viruses known in the United States. Questions do arise pertaining to the flu and the vaccines given for protection. First of all, what is the flu? The flu is a very contagious virus that is mostly spread in the winter season in the United States. It is usually the months of October-May that this occurs. How is it spread? It can be transmitted through coughing, sneezing, and close contact. Who can get the flu? Anyone can, however; children are most at risk for contracting the flu. What are the common side effects of the flu? Symptoms range from the following: fever/chills, sore throat, muscle aches, cough, fatigue, headache, and runny or stuffy nose. How old does one have to be to get the flu vaccine? Anyone from 6 months old and older can receive the flu vaccine. Who should get the vaccine? CDC recommends that people who are at high risk of developing pneumonia if they get sick with the flu. This includes: people with asthma, diabetes and chronic lung diseases, pregnant women, and people over age 65. Healthcare workers in close contact with patients who are high risk should also consider being vaccinated against the flu.

There are 2 types of the flu vaccine. **O**ne is an inactivated, which means the viruses in the vaccine are not alive. They have been killed. Therefore, someone who receives this type of vaccine will not "catch the flu" from it. This type of vaccine is given as an injection. There can be mild problems associated with the vaccine including: soreness, redness, or swelling where the shot was given; hoarseness; sore, red itchy eyes; cough; fever; aches; headaches; itching; fatigue. If these problems occur, it is usually right after the injection and lasts 1-2 days.

The **2nd** type is activated, which means it is live but weakened. This vaccine is administered through the nostrils. **Healthy** people ages 2-49 and not are not pregnant can use this alternative choice if desired. What are common side effects in the activated vaccine? In children, side effects can include runny nose, headache, wheezing, vomiting, muscle aches, and fever. In adults, side effects can include runny nose, headache, sore throat, and cough. Fever is not a common side effect in adults receiving the nasal-spray flu vaccine.

Some people should **not** get the flu vaccines if they have severe life threatening allergies, especially eggs or the mercury-based preservative called Thimerosal. If you have ever had Guillain-Barre Syndrome (a severe paralyzing illness) you should not get the vaccine. If you aren't feeling well it may be advised for you to return when you feel better.

Flu viruses change every year. Each year's flu vaccines are made to protect you from the most common flu viruses likely to cause disease. Be aware that once vaccinated against the flu, it takes approximately 2 weeks for your body to build protection against those strains. Protection can last from a few months up to a year. Don't wait until there is an outbreak in your community to get the flu vaccine. It may be too late and you will have already been exposed. Remember, the flu is spread by someone coughing, sneezing or having close contact with another person. Take precaution by washing hands, keeping hands out of the mouth or nose, and limit/avoid close contact with those showing symptoms. Protect the community, protect your family, but most importantly…protect yourself!

For questions please utilize the CDC website, as it offers more detail of the 2014-2015 flu season. www.cdc.gov/flu Portions of this article was obtained from the CDC Vaccine Information Statement for the Influenza Vaccine dated 08/19/2014.

Florida HEALTH
Alachua County

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