

Office of Disease Control
and Health Protection

EPI-LOG

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To report a disease or outbreak:

Phone: 386-274-0634 M-F, 8 a.m.-5 p.m.
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Outbreak Investigations
By: Jyothi Praveen, MPH, CPH

The World Health Organization defines a disease outbreak as the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season. An outbreak may occur in a restricted geographical area, or may extend over several countries. It may last for a few days or weeks, or for several years. A single case of a communicable disease long absent from a population, or caused by an agent (e.g. bacterium or virus) not previously recognized in that community or area, or the emergence of a previously unknown disease, may also constitute an outbreak and should be reported and investigated.

Outbreaks are generally classified according to their manner of spread through a population. It can be **common-source** when a group of persons are all exposed to an infectious agent or toxin from the same source. If the group is exposed for a relatively brief period and everyone who becomes ill within one incubation period, the common-source is further classified as a **point-source** outbreak. **Intermittent** and **continuous** types of common-source outbreak occur when people are exposed intermittently or continuously to a common harmful source. On the contrary, a **propagated** outbreak is spread from person to person.

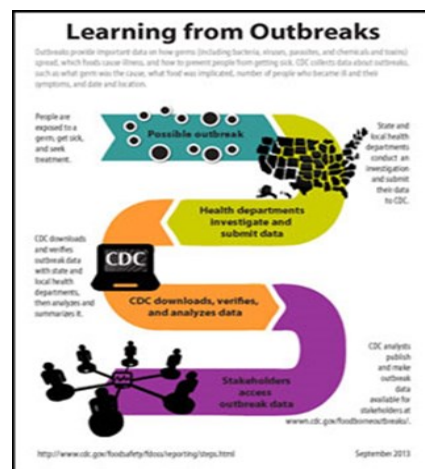
One of the essential components in outbreak investigations is establishing the existence of an outbreak. Before initiating an investigation, it is important to compare the number of reported cases to the baseline rate of the disease. Once it is confirmed that the rates are over expected rates, diagnosis is verified through obtaining medical records and lab reports. Further testing may be conducted using state labs. State labs provide reference and confirmatory testing of specimens and employ state-of-the-art techniques not available in most labs. A case definition is developed using descriptive epidemiology including criteria for person, place, time, clinical features and lab results. Once the cases are systematically recognized, a line list is developed. The line list is used in collecting demographic information, exposure and clinical information (symptoms and onset time). Using line lists, epidemic curves are constructed that give a graphical representation of progression of illness or distribution of cases over time. These steps are used together to identify source and path of exposure.

This Issue:
Outbreak Investigations—Page 1
Medical Reserve Corps—Page 2
Hunters and Disease—Page 2
Disease Activity—Page 3
Influenza Update—Page 4

Timely implementation of control measures help in minimizing further illness and death. The control measures are based on the origin of disease, spread and development. Early control measures such as isolation, cohorting and cleaning will reduce the spread of infectious disease in vulnerable population (residential care, day care, nursing and domiciliary care). Chemoprophylaxis can be very effective in asymptomatic close contacts for certain diseases. Vaccinations are also recommended as part of prevention strategy based on the nature of the disease. Control measures are often guided by the epidemiologic results and environmental investigation. Depending on the intensity of the outbreak, media is informed when public action is required. Surveillance is maintained until an outbreak is over and to evaluate the effectiveness of control measures in place.

Reporting communicable disease outbreaks thus serves many purposes. The primary goal is to control further spread of the disease. Information gained from investigations help in identifying source and their elimination to prevent future outbreaks. In the event of outbreak or with questions, please contact the Florida Department of Health in Volusia County at: 386-274-0651

References:
World Health Organization
Center for Disease Control and Prevention



Medical Reserve Corps

By: *Tiara Anderson*



The Volusia County Medical Reserve Corps (MRC) is actively recruiting medical and non-medical volunteers to assist with disaster response and community health promotion. The need for the Medical Reserve Corps became apparent after the 9/11 terrorist attacks. Thousands of medical and public health professionals, eager to volunteer in support of emergency relief activities, found that there was no organized approach to channel their efforts. In addition, local responders were overwhelmed and had no way to manage the spontaneous volunteers. As a result, the MRC was established to provide a way to recruit, train, and activate medical and health professionals to respond to community health needs, including disasters and other public health emergencies.

In Volusia County, the Medical Reserve Corps is coordinated by the Florida Department of Health (DOH) where both medical and non-medical volunteers are pre-trained, prepared, and ready to supplement local emergency and public health resources during a time of need. MRC volunteers are called upon to serve alongside public health and emergency services professionals in a variety of ways. MRC staff will work with you to place you in a service area that is best suited to your expertise and preference.



Becoming a volunteer is simple, the requirements are: CH110 Application, two personal reference forms, background screening, completion of FEMA IS 100 and IS 700 courses, and an orientation session. We offer a variety of specialty trainings and opportunities for involvement such as participation in DOH disaster exercises like a point of dispensing, outreach events, radiation response training, first aid stations at local races, etc. We would love to offer these opportunities to you if you choose to join our mission.



For more information, contact Tiara Anderson, MRC Coordinator, by email Tiara.Anderson@flhealth.gov or by phone at 386-274-0500 ext 7527.

Volunteers Building Strong, Healthy, and Prepared Communities



Hunters and Disease

By: *Paul Rehme, DVM, MPH*

Hunting is a popular activity in the fall in Florida as well as throughout the country. Hunters and their hunting dogs are at higher risk for many different and uncommon diseases. They can be exposed to infectious diseases not only from infected animals but also via insect vectors and contaminated soil and water. Diseases that are transmitted from animals to humans, either through direct contact with the animal or a contaminated surface or water, through ingestion of animal products (including meat and milk) or through insect transmission from an animal are called zoonotic diseases. Insects such as mosquitoes, ticks, flies, fleas, or mites serve as vectors, capable of transmitting infection from an infected animal to another animal or a person.

There are some common sense precautions hunters can take to prevent these diseases:

- Vector-borne diseases:
 - Use mosquito/tick repellents on exposed skin and clothing (DEET for the skin and permethrin for the clothing)
 - Wear long sleeved shirts and long pants and wash clothing immediately after returning home
 - Conduct a full body check immediately after returning from outdoor activities
 - Use topical or systemic tick-control treatments for pets
- Avoid hunting when you are ill and your immune system might be weakened
- Do not handle or eat wild game or fowl if the animal appeared ill or acting in an abnormal manner
- Do not eat drink or smoke while cleaning wild game or fowl
- Always protect your hands with gloves when field dressing wild game or fowl
- Do not use the same utensils to clean different species
- Any old wounds on the animal should be trimmed removing a large area of tissue around the wound
- If there are any abnormalities in the chest or abdominal cavity, dispose the entire carcass
- Minimize contact with brain and spinal tissue.
- Avoid contaminating meat with abdominal contents. If intestinal contents contaminate meat, it should be discarded
- Wash hands thoroughly with soap and water immediately after handling wild game or fowl including tissues and meat
- Wash all tools and equipment thoroughly with soap and water followed by disinfection with bleach water (1 tsp per gallon of water)
- Cook all wild game or fowl thoroughly to where the meat is no longer pink and juices run clear
- Uncooked meat should be frozen or refrigerated properly as soon as possible or discarded
- Report any signs of sick wildlife or wild bird die off to the Florida Fish and Wildlife Conservation Commission
- Consult your veterinarian on animal vaccinations (especially rabies), heartworm prevention, and other preventive treatments



For a comprehensive list of diseases visit: <https://www.avma.org/public/Health/Pages/Disease-Precautions-for-Hunters.aspx>

Volusia County Disease Activity*	3rd Quarter 2015	3rd Quarter 2014	YTD 2015 (30 Sep)	Full Year 2014
Vaccine Preventable				
Mumps	0	0	0	1
Pertussis	0	5	2	17
Varicella	9	1	13	8
CNS Diseases and Bacteremias				
Creutzfeldt-Jakob disease (CJD)	0	0	0	2
Haemophilus influenzae (invasive)‡	1	0	2	6
Meningitis (bacterial, cryptococcal, mycotic)	0	0	1	1
Meningococcal disease	0	0	1	0
Staphylococcus aureus (GISA/VISA)	0	0	0	0
Streptococcus pneumoniae (invasive disease)‡	1	4	6	34
Enteric Infections				
Campylobacteriosis	19	17	62	61
Cryptosporidiosis	16	26	29	49
Cyclosporiasis	0	1	0	1
Escherichia coli, shiga-toxin producing (STEC)	1	3	2	17
Giardiasis	3	4	9	16
Listeriosis	0	0	1	0
Salmonellosis	57	58	109	146
Shigellosis	1	6	4	19
Typhoid Fever	0	0	0	0
Viral Hepatitis				
Hepatitis A	0	1	0	2
Hepatitis B, acute	1	1	6	6
Hepatitis B, chronic	27	23	67	84
Hepatitis C, acute	1	0	4	2
Hepatitis C, chronic	216	187	605	745
Hepatitis E	0	0	0	0
Hepatitis +HBsAg in pregnant women	0	2	1	7
Vector Borne, Zoonoses				
Brucellosis	0	0	0	1
Chikungunya	2	2	5	4
Dengue Fever	0	1	0	1
Ehrlichiosis/Anaplasmosis	1	1	2	2
Lyme disease	3	5	6	11
Malaria	0	0	0	2
Monkey bite	0	0	0	0
Q Fever, acute	0	0	0	0
Rabies, animal	1	1	1	3
Rabies (possible exposure)	32	42	91	116
Rocky Mountain spotted fever/Spotted Fever	2	0	5	0
Rickettsiosis	2	0	5	0
West Nile virus, neuroinvasive	1	2	1	4
HIV/AIDS†				
HIV	33	31	102	119
AIDS	7	15	31	54
STDs†				
Chlamydia	535	436	1433	1672
Gonorrhea	168	94	448	438
Syphilis				
Infectious (Primary and Secondary)	3	2	12	17
Early latent (Infection for <1 year)	5	2	10	11
Late latent (Tertiary)	10	16	17	32
Latent, unknown duration	0	0	0	8
Others				
Carbon monoxide poisoning	6	3	21	27
Ciguatera Fish Poisoning	0	0	0	1
Hansen's Disease (Leprosy)	0	0	2	2
Hemolytic Uremic Syndrome	0	0	0	0
Influenza due to novel or pandemic strains	0	0	0	0
Influenza-associated pediatric mortality	0	0	0	0
Lead poisoning	5	1	6	6
Legionellosis	1	3	1	7
Pesticide related illness or injury	0	0	0	0
Tuberculosis	-	-	4	8
Vibriosis	0	2	1	4

*Includes reported confirmed/probable cases. Data is provisional and subject to change.
† Numbers are for Area 12 (Volusia/Flagler)
‡ Only reportable for young children

Influenza Update

By: David Parfitt, MPH, CPH

The 2015-2016 flu season is currently underway. The season characteristically begins in the fall and winter with the peak of activity occurring in January or February. According to the Centers for Disease Control and Prevention (CDC) seasonal flu activity can begin as early as October and can last until next May.

The CDC's recommendation is for everyone 6 months of age and older to receive the annual flu vaccine to offer the best protection against the three main flu viruses throughout the year (influenza A (H1N1), influenza A (H3N2) and influenza B). Additional consideration should be given for those at high risk of complications from the flu including those with chronic conditions, pregnant women, adults 65 and older and children younger than 5. Additional prevention methods include frequent hand washing, avoiding contact with others who are symptomatic, keeping hands away from your eyes, nose and mouth, and getting plenty of rest and exercise (flu.gov).

Approximately 171 to 179 million doses of the influenza vaccine are expected to be manufactured for the 2015-2016 season. A quadrivalent vaccine (containing a second influenza B virus – B/Brisbane/60/2008-like virus) is also available (cdc.gov). The routes of administration for flu vaccine include intramuscular, intradermal, jet injector and nasal spray (cdc.gov). Health care providers should be sure to maintain an adequate supply.

Currently, per the Florida Flu Review, influenza activity remains low state wide. All Florida counties have reported mild or no influenza activity for the most current reporting period. Influenza A (H3) has been the most common identified virus circulating this season as reported by the Bureau of Public Health Labs (BPHL). In addition, no influenza-associated pediatric deaths were reported, pneumonia and influenza associated deaths are relatively stable and one outbreak of rhinovirus was reported. Volusia County has been relatively mild for the duration of the flu season. For the county, the percentage of those with influenza like illness (ILI) admitted as inpatients remains below seasonal average, electronic flu reporting indicates low activity, and the percentage of persons seen at Emergency Department's with ILI is stable at 2 percent of total patients seen.

For more information regarding the flu or the current vaccine or if you are interested in becoming a sentinel provider, please contact the Florida Department of Health in Volusia County at 386-274-0651.



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