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and Health Protection

EPI-LOG

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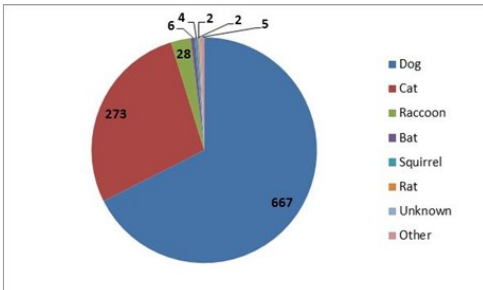
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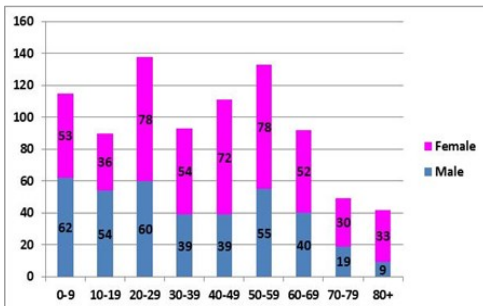
**Animal Incidents in Volusia County
(Nov 13—Oct 14)**

By: Paul Rehme, DVM, MPH

Animal bites and scratches cause significant morbidity in the United States every year. They also can put people at risk for rabies, a fatal neurologic disease. We began tracking all animal incidents reported to our office in November 2013 using an Epi Info database for future analysis. We recently completed descriptive epidemiology on a total of 987 incidents reported to and investigated by our office for the first year we began tracking. Out of the 987 incidents 667 of the offending animals were dogs, 273 were cats, 28 raccoons, six bats, four squirrels, and other animals accounted for nine others. There were 64 instances in which



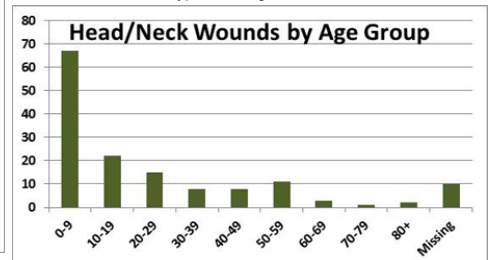
rabies post-exposure prophylaxis (PEP) was actually administered, 54 of which were deemed to be appropriate and unavoidable use, four could have likely been prevented and six instances where its use was unnecessary (biting animal not considered a risk – opossum, squirrel, rat; or animal was either quarantined or tested negative). Seventy-six percent of the animals involved were characterized as pets. Cats involved in incidents were more likely to be strays than were dogs. As would be expected PEP was rarely used for incidents where the offending animal was a pet. In fact 29 times the animal was either a raccoon or a bat (23 and six respectively). We did not observe any significant age group which was over-represented in the victim population nor did we see any real geographic or seasonal



variation in where and when the incidents occurred. We did identify that females were the victim 56 percent of the time and that cat bite victims were much more likely to be female.

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We looked at location of the wound and found that most of the wounds were on the hand or arms, however one concerning finding was that when the victim was under 20 years old, 47 percent of the time the wound was on the head or neck. We did look at dog bites by breed identified in the animal bite report and found that just under a third were noted to be “pit bulls”, however this was the victim’s identification and also means that a large majority of the bites are from other types of dogs. We reviewed the



circumstances involved in the bite and while most stemmed from handling or playing with pet animals, 27 percent could be characterized as occurring because strays or pets were unattended and running loose. Vaccine currency was something else that is noted on the bite reports and over half of the time the status was unknown, this includes many victims who were also the owners. It is important for all pet owners to keep their animals current for rabies vaccination. During the period of this study we had six animals test positive for rabies in Volusia County including four cats and two raccoons.

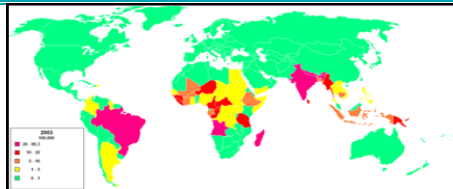
We set out to accomplish two things when we reworked the animal incident program here at the Florida Department of Health in Volusia County in the fall of 2013: (1) Reduce the number of persons receiving/recommended rabies PEP and (2) Gather information on all animal incidents for analysis to characterize the issues in the county to try to spot opportunities for prevention. In 2014 we had a 36 percent reduction in the number of times PEP was recommended for Volusia residents so the first was a success. The information noted here is a brief summary of the second. The entire report is available upon request from paul.rehme@flhealth.gov.

Animal bites and scratches can result in significant injuries as well as monetary loss. There were approximately 200 incidents reported to our department per 100,000 Volusia County residents last year. We will use the data in the report to attempt to reduce that number in 2015 which should also reduce the need for post-exposure prophylaxis to prevent rabies.

Hansen's Disease: Old Disease, New Infections

By: Jyothi Praveen, MPH

Hansen's disease also known as Leprosy is an infectious disease caused by the bacterium *Mycobacterium leprae*. There are only between 150 and 250 cases reported in the US each year, although it is still common in some parts of the world. On average seven to eight cases of Hansen's disease are reported annually in Florida, of which around 1/3rd are determined to be locally acquired. We recently reported three cases of confirmed Hansen's Disease within a few months in Volusia County. All three patients denied significant travel and all three spent time outdoors. Two of the patients reported exposure to armadillos. Some armadillos are naturally infected with *M. leprae* and have been reported to be a source of infection for humans.



Cases per 100K population



The bacteria causing the disease can infect skin, mucosa of the respiratory tract, peripheral nerves and eyes. Incubation period can vary from two to ten years. The two forms of the disease are lepromatous leprosy (LL) and tuberculoid leprosy (TL). Tuberculoid leprosy is the more benign type even though it can be accompanied by nerve involvement. Lepromatous leprosy can also affect the mucous membranes of the eyes, nose and throat. The disease is not highly infectious and over 95 percent of the population have natural immunity. Delayed diagnosis of Hansen's disease can have serious neurological consequences.

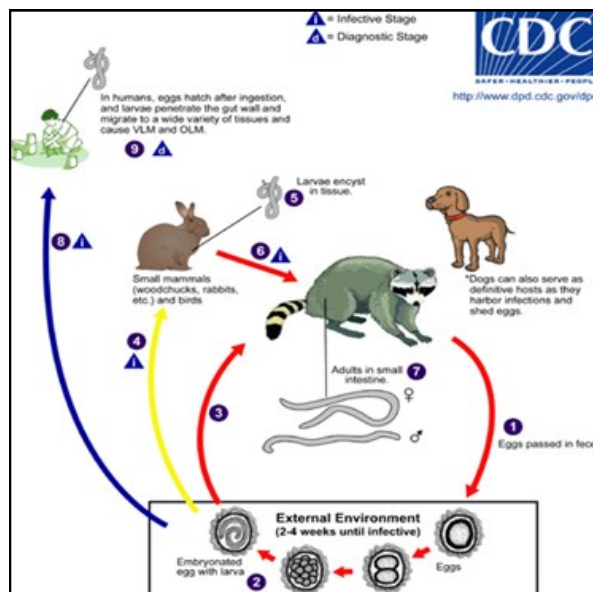
A combination of antibiotics is used in the treatment. The most commonly used ones are Dapsone, Rifampin and Clofazimine. Treatment can be as long as a year or two depending on the form and extent of the disease. Treatment rapidly renders the disease non-communicable to others. Physician awareness is key to the early diagnosis and treatment that can prevent disability.

The National Hansen's Disease (Leprosy) Program in Baton Rouge, Louisiana facilitates laboratory testing and provides support services which include free pathologic review of skin biopsy, consultations, antibiotics, education materials and surgical care/rehab.
For additional information follow the link: <http://www.hrsa.gov/hansensdisease/> or call 1-800-642-2477.

Baylisascariasis (raccoon roundworm) Threat

By: Paul Rehme, DVM, MPH

Recently the FDOH in Volusia County has been made aware of positive fecal samples for the raccoon roundworm (*Baylisascaris procyonis*) egg in Volusia County. This is a common nematode parasite in raccoons in other parts of the country and in the last few years has become more prevalent in Florida. Raccoons are the primary or definitive host and shed eggs in large quantities in their feces. Heavily infected juvenile raccoons can develop some signs of illness, but many do not appear obviously ill, and infected adults rarely show any signs of disease. Dogs that ingest raccoon feces can become infected and go on to shed eggs in their feces. Feces from infected animals are not immediately infectious to people. Fecal material that is left in the environment for more than 11 days may be infectious. The eggs can survive for years in the environment and are resistant to most disinfectants. However, eggs can be inactivated with heating (>144°F, scalding water, or steam). People who accidentally swallow material contaminated with eggs (fecal-oral exposure), can be infected. Young children are particularly at risk. Infections in people can result in parasite cyst formation in the brain, eye or other organs. Severe infections are dose dependent and relatively uncommon, but have resulted in deaths. Symptoms may include fever, nausea, unusual tiredness, loss of coordination, inability to focus attention, loss of muscle control, muscle aches or pain, vision impairment, and respiratory signs. Testing for suspected human cases is available through the Centers of Disease Control and Prevention (CDC). Treatment after neural involvement is usually ineffective but prophylactic treatment with albendazole may be effective if given prior to neurologic symptoms. Prevention is the best course of action: 1. Avoid raccoons and their latrine areas; clean and decontaminate raccoon latrines if possible. 2. Thorough hand washing anytime when there is the potential for exposure especially with children, and always prior to eating. 3. Check and deworm pets regularly; use appropriate parasite prevention medications to prevent infection. For more information: <http://www.cdc.gov/parasites/baylisascaris/>



Volusia County Disease Activity*	4th Quarter 2014	4th Quarter 2013	Full Year 2014	Full Year 2013
Vaccine Preventable				
Mumps	0	1	1	1
Pertussis	8	2	17	18
Varicella	2	1	8	15
CNS Diseases and Bacteremias				
Creutzfeldt-Jakob disease (CJD)	2	1	2	2
Haemophilus influenzae (invasive)	2	2	6	6
Meningitis (bacterial, cryptococcal, mycotic)	0	0	1	2
Meningococcal disease	0	1	0	2
Staphylococcus aureus (GISA/VISA)	0	0	0	0
Streptococcus pneumoniae (invasive disease)	3	10	34	39
Drug resistant	1	5	13	19
Drug susceptible	2	5	21	20
Enteric Infections				
Campylobacteriosis	13	12	61	75
Cryptosporidiosis	14	4	49	10
Cyclosporiasis	0	0	1	1
Escherichia coli, shiga-toxin producing (STEC)	4	5	17	11
Giardiasis	4	8	16	22
Listeriosis	0	0	0	0
Salmonellosis	47	77	146	178
Shigellosis	6	1	19	3
Typhoid Fever	0	0	0	0
Viral Hepatitis				
Hepatitis A	1	0	2	2
Hepatitis B, acute	2	0	6	7
Hepatitis B, chronic	19	14	84	70
Hepatitis C, acute	0	0	2	12
Hepatitis C, chronic	194	199	745	848
Hepatitis E	0	0	0	0
Hepatitis +HBsAg in pregnant women	2	1	7	6
Vector Borne, Zoonoses				
Brucellosis	0	0	1	0
Chikungunya	2	0	4	0
Dengue Fever	0	0	1	2
Ehrlichiosis/Anaplasmosis	1	0	2	2
Lyme disease	3	1	11	7
Malaria	1	0	2	0
Monkey bite	0	0	0	0
Q Fever, acute	0	0	0	0
Rabies, animal	0	3	3	5
Rabies (possible exposure)	12	54	116	178
Rocky Mountain spotted fever	0	1	0	2
West Nile virus, neuroinvasive	2	0	4	0
HIV/AIDS†				
HIV	30	31	119	113
AIDS	11	14	54	71
STDs†				
Chlamydia	460	451	1672	1729
Gonorrhea	134	148	438	576
Syphilis				
Infectious (Primary and Secondary)	5	6	17	29
Early latent (Infection for <1 year)	3	4	11	14
Late latent (Tertiary)	6	4	32	23
Latent, unknown duration	0	3	8	9
Others				
Carbon monoxide poisoning	5	7	27	10
Ciguatera Fish Poisoning	0	0	1	0
Hansen's Disease (leprosy)	2	0	2	0
Hemolytic Uremic Syndrome	0	2	0	2
Influenza due to novel or pandemic strains	0	0	0	0
Influenza-associated pediatric mortality	0	0	0	0
Lead poisoning	5	4	6	5
Legionellosis	1	5	7	6
Pesticide related illness or injury	0	0	0	3
Tuberculosis			8	13
Vibriosis	2	0	4	3

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

Influenza Season Update

By: David Parfitt, MPH

According to the Florida Flu Review influenza activity remains geographically widespread across the state. During the most recent statewide reporting week, 11 of 44 samples submitted to the Bureau of Public Health Laboratories (BPHL) tested positive for seasonal strains of influenza. The most common subtype determined by the BPHL continues to be influenza A (H3). This strain is associated with both higher morbidity and mortality rates especially within the elderly population. The state is also continuing to investigate influenza-like illness (ILI) outbreaks. Approximately 71 percent of investigated outbreaks have been within facilities that serve the 65+ age group. Although activity is widespread, the recent decrease in overall flu activity may indicate that the current season has peaked.

Volusia County is also beginning to see a decrease in ILI based on reporting from local providers and through other surveillance measures. The percentage of emergency department visits for ILI and the percentage of patients admitted for ILI are currently on downward trends. In addition, the pneumonia and influenza mortality rates are also decreasing. The county continues to see influenza A as the dominant type in circulation. Of the six samples submitted to the BPHL this year for confirmatory testing four were subtyped as influenza A (H3).

Nationally, influenza activity continues to remain elevated. During the latest reporting week available 17.5 percent (3,869) of samples submitted were positive for influenza. Additionally, the percentage of outpatient visits for ILI was at 4.1 percent which is above the national baseline of 2.0 percent. The geographic distribution across the nation, like Florida, continues to be widespread. Influenza A continues to be the dominant type determined by laboratory testing.

According to the CDC, the single best way to prevent influenza is to make sure to get the annual vaccination. The Florida Department of Health recommends administration of the vaccine while circulation is active. This is especially important for the elderly, the young, those that are pregnant and individuals with certain health conditions. Also, remember to practice hand hygiene and to stay home when feeling ill to prevent further spread.

For more information regarding the flu, the current vaccine, or other health department recommendations please contact the Florida Department of Health in Volusia County at 386-274-0651.

References:

Centers for Disease Control and Prevention
Florida Department of Health



Florida Department of Health in Volusia County
Office of Disease Control and Health Protection