New Guidelines for Seasonal Influenza Vaccination

Willie Watts-Troutman, RN, PHN

The Centers for Disease Control and Prevention’s Advisory Committee on Immunization Practices (ACIP) recently published recommendations for the 2011-12 influenza season. Like the previous season, ACIP continues to recommend annual influenza vaccination for all persons aged ≥6 months in the United States for the 2011-12 season. Along with the recommendation to vaccinate all persons 6 months and older, ACIP provides new guidelines for vaccinating children aged 6 months through 8 years and assessing persons with an egg allergy. In addition, the Food and Drug Administration approved the new intradermally administered influenza vaccine formulation for adults aged 18 through 64 years.

2011-2012 Influenza Vaccine Strains
The 2011-2012 flu vaccine virus strains are the same as last season for Trivalent Influenza Vaccine (TIV) and Live Attenuated Influenza Vaccine (LAIV). They will protect against an H3N2 virus (A/Perth/16/2009 [H3N2]-like), an influenza B virus (B/Brisbane/60/2008-like), and the H1N1 virus (A/California/7/2009 [H1N1]-like) that caused so much illness in the 2009-10 season and was used for the 2009 H1N1 monovalent vaccines. Although the vaccine strains are the same as last season, ACIP strongly recommends annual flu vaccination due to waning immunity. Several studies have demonstrated that post-vaccination antibody titers decline over the course of a year; therefore, annual vaccination is recommended for optimal protection against influenza disease.

Summary of the 2011-2012 Flu Vaccination Recommendations
Annual vaccination is recommended for every person in the United States 6 months of age and older. Providers should make a special effort to vaccinate those at increased risk of complications from influenza and their close contacts.

The following people are considered at increased risk for influenza infection and/or complications:
• Children 6 months-18 years of age
• Adults 50 years and older
• Persons with underlying medical conditions; i.e., chronic pulmonary

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**Figure 1. Recommendations regarding influenza vaccination for persons who report allergy to eggs**

Advisory Committee on Immunization Practices (ACIP), 2011-2012 influenza season

- Can the person eat lightly cooked eggs (e.g., scrambled eggs) without reaction?*
  - YES: Administer vaccine per usual protocol
  - NO: After eating eggs or egg-containing foods, does the person experience ONLY hives?
    - YES: Administer TIV only. Observe for reaction for at least 30 minutes after vaccination
    - NO: Does the person experience other symptoms, such as:
      - Cardiovascular changes (e.g., hypotension)
      - Respiratory distress (e.g., wheezing)
      - Gastrointestinal (e.g., nausea/vomiting)
      - Reaction requiring epinephrine
      - Reaction requiring emergency medical attention
        - YES: Refer to a physician with expertise in management of allergic condition for further evaluation
        - NO: People with an egg allergy might tolerate egg in baked products (e.g., bread or cake). Tolerance to egg-containing foods does not exclude the possibility of an egg allergy.

*People with an egg allergy might tolerate egg in baked products (e.g., bread or cake). Tolerance to egg-containing foods does not exclude the possibility of an egg allergy.

**Figure 2. Influenza vaccine-dosing algorithm for children aged 6 months through 8 years**

Advisory Committee on Immunization Practices (ACIP), 2011-12 influenza season

- Did the child receive 1 or more doses of 2010-11 seasonal influenza vaccine?
  - NO/NOT SURE: Administer 2 doses of 2011-12 seasonal influenza vaccine a minimum of 4 weeks apart
  - YES: Administer 1 dose of 2011-12 seasonal influenza vaccine
(including asthma), cardiovascular (except hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus), or those who are immunocompromised

- Pregnant women at any stage of pregnancy
- Health care personnel
- Household contacts and caregivers of persons with medical conditions, children less than 5 years
- Morbidly obese (body mass index ≥40).

**Vaccination of Persons Reporting Allergy to Eggs**

Allergy to eggs must be distinguished from allergy to influenza vaccine. All currently available influenza vaccines are prepared by inoculation of virus into chicken eggs. Hypersensitivity to eggs has been listed as a contraindication to receipt of influenza vaccine on most package inserts. However, ACIP now lists egg allergy as a precaution to flu vaccine. ACIP has developed an algorithm to assist providers in evaluating persons with an egg allergy (Figure 1). Individuals who can eat lightly cooked eggs, such as scrambled, can be given either TIV or LAIV. However, those who eat eggs and only experience hives can only receive TIV, not LAIV. In addition, these patients should be observed for at least 30 minutes for signs of a reaction after vaccination.

Persons who experience other symptoms, such as cardiovascular (hypotension) or respiratory (wheezing) changes and gastrointestinal problems (nausea/vomiting) that require medical intervention, should not be vaccinated. Instead, they should be referred for further evaluation to a physician with expertise in managing allergic conditions.

**Flu Vaccine Dosing for Children 6 months-8 years**

ACIP revised vaccine recommendations for children 6 months through 8 years of age (Figure 2). Children who did not receive seasonal influenza vaccine during the 2010-11 influenza season should receive 2 doses at least 4 weeks apart for the 2011-12 season. In addition, children in this age group who received ≥1 dose of the 2010-11 seasonal vaccine require 1 dose for the 2011-12 season.

**New Intradermal Influenza Formulation**

In May 2011, the FDA approved a new inactivated influenza vaccine, Fluzone Intradermal, which is produced by Sanofi Pasteur. This intradermal vaccine is the first of its kind licensed in the United States for adults aged 18 through 64 years. The vaccine is supplied in 0.1 mL pre-filled syringes and uses an ultra-fine needle (0.06”) to deliver vaccine into the dermal layer of the skin. For additional information on Fluzone Intradermal and other influenza vaccine formulations, visit [www.cdc.gov/mmwr/pdf/ww/mm6033.pdf](http://www.cdc.gov/mmwr/pdf/ww/mm6033.pdf).

**Vaccination Coverage among Health Care Personnel**

ACIP and the Healthcare Infection Control Practices Advisory Committee recommend that all health care professionals (HCPs) be vaccinated annually against influenza to protect patients from disease transmitted by HCPs. A comprehensive infection control program increases influenza vaccination rates among HCPs. In a recent CDC study, 98.1% of HCPs who worked at a facility where the employer required vaccination were vaccinated.

**Pregnant Women and Flu Vaccination**

Pregnant women are at increased risk for morbidity and mortality from influenza disease. Since 2004, ACIP and the American College of Obstetricians and Gynecologists have recommended inactivated influenza vaccine for all women who are pregnant during influenza season, regardless of stage of pregnancy. Vaccination levels increased substantially in response to the 2009 influenza A (H1N1) pandemic to nearly 50% but were still well below the Healthy People 2020 target of 80%.

Several factors may deter pregnant women from vaccination. In a CDC survey, the top five reasons pregnant women did not receive an influenza vaccination were as follows: 1) Concern about safety risks to their baby (20%); 2) Concern that the vaccination would give her the flu (17%); 3) Perceived ineffectiveness of the vaccine (14%); 4) Concern about their own safety risk (11%); and 5) Belief that the flu is not serious or is easily treated (14%). HCPs should address these issues when educating their pregnant patients regarding the risks and benefits of influenza vaccination.

Most important, vaccinating pregnant women for influenza not only protects the mother, but it provides protection for the infant as well. Infants are less likely to have the flu if their mothers are vaccinated while pregnant. This implies that infants of mothers who receive flu vaccine during pregnancy receive some protection while inside the womb. This protection is especially important for infants less than 6 months of age who are not old enough to receive a flu vaccination. For more information regarding influenza and other vaccine-preventable diseases, contact the Immunization Program at (213) 351-7800 or visit [www.publichealth.lacounty.gov/ip](http://www.publichealth.lacounty.gov/ip).

**SOURCES**


New Human Rickettsial Pathogen Discovered in Local Ticks

By Emily Beeler, DVM, MPH

Disease surveillance in Los Angeles County dogs has yielded the discovery of a newly recognized human pathogen, *Rickettsia massiliae*, in local brown dog ticks.1

In early 2007, two veterinarians in LA County reported three ill dogs that were seropositive for Rocky Mountain Spotted Fever (RMSF, caused by *Rickettsia rickettsii*). RMSF has long been a legally reportable disease in humans, and is very rare in Los Angeles County. That year, the Veterinary Public Health and Rabies Control Program required local veterinarians to begin reporting RMSF cases in dogs. Since then, a total of 36 canine reports have been received.

A collaborative team, composed of staff from the LA County Department of Public Health, the California Department of Public Health, and the Centers for Disease Control and Prevention, searched for the agent that causes RMSF and any other rickettsiae that may have caused the dogs to become ill and seroconvert.

*R. rickettsii* is one of many rickettsial organisms that belong to the Spotted Fever Group (SFG) of rickettsiae. Infection with any SFG rickettsia species triggers the body (whether dog or human) to create antibodies that may react with other SFG rickettsiae. Hence, a positive serologic test for RMSF only means that exposure to some type of SFG rickettsia has occurred.3

Two of the canine cases, one reported in August 2007 and the second reported in March 2008, were heavily infested with ticks and came from the same property. These dogs rarely left their property. A total of 332 *Rhipicephalus sanguineus*, or brown dog ticks1 (Figure 1), were collected from the dogs and the property. PCR testing showed that 26.8% of the ticks were infected with a SFG rickettsia; however, the organism was not RMSF (*R. rickettsii*) but, rather, another SFG rickettsia, *Rickettsia massiliae*.1

*Rickettsia massiliae* had been considered non-pathogenic until 2006, when the first of three case reports of human illness was published.3 It is still unknown whether it causes illness in dogs.

What Physicians Can Do

Health care providers should know that Rocky Mountain Spotted Fever is not the only tick-borne rickettsial disease that can infect humans. As human cases of *Rickettsia massiliae* infection have only been recently recognized, the community’s knowledge is incomplete and likely to evolve.

Testing. Clear-cut indications for testing are not yet available because only three human cases in the world have been documented. Consider ordering serological tests for RMSF for a patient who has been exposed to ticks and presents with fever, eschar or rash, and elevated liver enzyme values. A positive result is nonspecific and only documents exposure to some type of SFG rickettsia. For consultation and potential PCR testing of eschar or blood, contact the LA County Department of Public Health at (213) 240-7941.

Ticks. Ticks may be identified by the Department of Public Health’s Vector Management Program (626/430-5450). Knowing the tick species associated with potentially infected patients provides clues to differential diagnosis. If a patient reports heavy tick infestation (50 or more) on his or her dog and property, the tick is most likely the brown dog tick. Patients should be counseled that treating their dog’s tick infestations can help protect their own health. They should be advised to seek the help of a veterinarian and/or exterminator.

Dogs. There are case reports of humans and dogs becoming ill simultaneously with RMSF.6 Dogs may also become ill with other SFG rickettsiae. It is worth inquiring whether dogs in the home have been recently ill. Consultation with the veterinarian caring for the dog(s) may provide insight into what has infected both the dog and human.

REFERENCES


**Rickettsiae massiliae Infection in Humans**

**Literature:** Only three published case reports worldwide: 2006 (Italy), 2008 (France), and 2010 (diagnosed in Spain, infected in Argentina).

**Agent:** *Rickettsiae massiliae* belongs to the Spotted Fever Group (SFG) in the genus *Rickettsia*. This means it is related to *Rickettsia rickettsii*, the agent that causes Rocky Mountain Spotted Fever (RMSF) in the United States, and *Rickettsia conorii*, the agent causing Mediterranean Spotted Fever (MSF) in Europe.

**Vector:** *Rhipicephalus sanguineus*, also known as brown dog tick (Figure 1). Brown dog ticks feed on dogs for all stages of their life cycle and do not require wildlife hosts or natural settings to proliferate. This is the only local tick species that can infest indoors. Infestations can grow to hundreds of ticks on one property. Between feedings, the ticks hide in cracks and other protected areas within the dogs’ environment, such as near dog bedding. In Europe, these ticks transmit Mediterranean Spotted Fever (MSF, *R. conorii*) to humans. In Arizona and Mexico, they have transmitted Rocky Mountain Spotted Fever (RMSF, *Rickettsia rickettsii*) to humans. In eastern Arizona and Los Angeles County, they have been found to carry the newly recognized pathogen *Rickettsia massiliae* and, therefore, present a local risk to human health. Surveillance at local animal shelters in Los Angeles County in 2009 and 2010 showed >95% of dogs impounded with ticks are infested with *Rhipicephalus sanguineus* (Beeler, unpublished data).

**Clinical Presentation.** Typical presentation is uncertain since only three cases have been documented, in Italy, France, and Spain.

**Case 1.** In 1985, a 45-year-old Italian man presented with fever, maculopapular rash on palms and soles, an eschar on one ankle, a normal white blood cell count and slight hepatomegaly. Tick exposure was not reported. The patient was seronegative for MSF on Day 11, but seropositive on Day 24 with a titer of 1:80. He recovered fully after treatment with tetracyclines. Archived blood was PCR positive for *R. massiliae* when tested in 2005.

**Case 2.** In 2007, a 25-year-old French man presented with fever, headache, night sweats, two eschars (on buttocks and thigh) and a maculopapular rash on the palms and soles, followed by acute chorioretinitis and blindness. He had stayed at friend’s home, which was infested with brown dog ticks. He was seropositive to 10 different species of SFG rickettsiae (performed in a research lab). His titer to all 10 were at the same level (IgG 1:2048, IgM 1:16) on a serum sample drawn 46 days after onset. Eschar and aqueous humor were PCR positive for *R. massiliae*. Treatment included oral doxycycline and ofloxacin. He improved but did not recover full vision.

**Case 3.** In 2005, a 56-year-old Argentinean woman was hospitalized in Spain. She presented with fever (104°F) and chills, followed by whole-body purpuric rash (Figure 2) with an eschar. Her liver function tests (ALT, AST, ALKP, GGT) and white blood cell count were moderately elevated, and she developed a pleural effusion. A week before her illness, she had removed ticks from a dog in Argentina. Twelve days after onset, she was seronegative for MSF. Her eschar was PCR positive for *R. massiliae*. She recovered fully after treatment with doxycycline. For the full clinical report, see the published article at www.ajtmh.org/content/82/4/691.full.pdf.

**Testing**

Serologic testing for *R. massiliae* infection is currently not commercially available. Serology for all SFG rickettsiae produces nonspecific results because antibodies produced in reaction to one species of SFG rickettsia are highly cross-reactive with other species. Serologic tests for RMSF (*R. rickettsii*) may help determine whether the patient has been exposed to some kind of SFG rickettsia. A fourfold change in two titers documents recent infection with an SFG rickettsia. It may take more than 12 days to seroconvert. PCR testing of affected tissues, such as eschar or blood, is the most specific test. Rickettsemia may be transient, so a negative PCR test result on blood does not rule out infection. PCR testing for SFG rickettsias is not yet commercially available but may be arranged by public health authorities.

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Measles Cases on the Rise

There is increased measles activity throughout the United States, including California. As of September 19, there were 28 reported cases of measles in California. Of those, 7 were in Los Angeles County. The statewide statistic has already surpassed the cases reported in 2010, which totaled 27. More than half of the 2011 cases have been linked to foreign travel or exposure to a tourist visiting the U.S.

Physicians and emergency departments should consider measles when evaluating a patient who has an acute rash illness with fever, especially in someone returning from international travel or who has had contact with international visitors. Respiratory and airborne precautions should be taken to prevent transmission. Suspect measles cases needing medical attention should be isolated and not allowed in patient waiting areas. They should be masked and placed immediately in an exam room with the door closed.

Health care providers are requested to obtain blood specimens at the time of clinical presentation for serologic confirmation of the diagnosis. Suspect cases in LA County should be reported immediately to the Morbidity Central Reporting Unit by phone (888/397-3993) or fax (888/397-3778). Health care providers should NOT wait for laboratory confirmation before reporting a suspect case. During non-business hours (weekdays before 7:30 am or after 5:30 pm, or on weekends), suspect cases should be reported to (213) 974-1234. For technical assistance or additional information about measles, physicians may call the LA County Immunization Program Surveillance Unit by phone (888/397-3993) or fax (888/397-3778). Health care providers are requested to obtain blood specimens at the time of clinical presentation for serologic confirmation of the diagnosis. Suspect cases in LA County should be reported immediately to the Morbidity Central Reporting Unit by phone (888/397-3993) or fax (888/397-3778). Health care providers should NOT wait for laboratory confirmation before reporting a suspect case. During non-business hours (weekdays before 7:30 am or after 5:30 pm, or on weekends), suspect cases should be reported to (213) 974-1234. For technical assistance or additional information about measles, physicians may call the LA County Immunization Program Surveillance Unit at (213) 351-7800.

Report Summarizes STD Morbidity in LA County

To provide an overview of sexually transmitted disease morbidity in Los Angeles County, the LA County Department of Public Health, in August, released a two-volume report titled “2010 Sexually Transmitted Disease Morbidity Report for Los Angeles County.”

This annual report from the department’s STD Program identifies trends and patterns and provides comprehensive updates on reportable STDs in the county. The first volume offers an overall LA County summary and is designed to provide a broader view of STD trends, while the second volume focuses on morbidity and trends within each of the eight LA County service planning areas. Both volumes include surveillance summary sections, followed by statistics on chlamydia, gonorrhea, syphilis, and pelvic inflammatory disease.

This latest report serves as a resource for health care providers, community organizations, public health officials, policymakers, and others in their efforts to guide disease prevention. To view the report, log on to www.publichealth.lacounty.gov/ std.

Report Focuses on Communicable Disease Case Studies in LA County

The Los Angeles County Department of Public Health’s Acute Communicable Disease Control Program recently released its “Special Studies Report 2010.”

This annual publication provides details of communicable disease-related investigations conducted by the department during the year.

The 86-page report is divided into several sections, including disease surveillance, trends, and summaries; health care-associated infections; infectious disease incidents/clusters/outbreaks; public health system, policies, and practice; and vaccine-preventable disease and vaccination.

In this edition, articles include “Meningococcal Disease Trends in Los Angeles County, 1995-2008,” “Pain Clinic Hepatitis Investigation Report,” “Nationwide Outbreak of Salmonella Enteritidis Associated with Contaminated Eggs,” “Ecstasy Overdose at New Year’s Eve Rave—Los Angeles, California 2010,” and “A Resurgence of Mumps in Los Angeles County Related to Exposures in the Northeast United States.”

To read all of the case studies and view the full report, go to www.publichealth.lacounty.gov/acd/Publications.htm.

Sugar-Loaded Drinks Campaign Addresses Local Obesity Epidemic

In early October, the Los Angeles County Department of Public Health’s RENEW LA County initiative launched its sugar-loaded drink awareness campaign aimed at addressing a major contributor to the county’s obesity epidemic.

Fueled by the release of local data on obesity and sugar-loaded drink consumption, the campaign focuses on the amount of sugar in popular drinks, such as sodas, sports drinks, and energy drinks, and the direct impact that excessive consumption of sugar-loaded drinks has on obesity, especially for the county’s children.

More than 58 percent of adults in Los Angeles County are overweight or obese, and almost 23 percent of county children in grades 5, 7 and 9 are obese. For younger children, obesity rates have increased from about 17 percent in 2003 to about 22 percent in 2008. Obesity rates have increased in tandem...
with consumption of sugar-loaded drinks, which has doubled over the past 30 years. Sugar-loaded beverages are the largest single source of added sugar in the American diet. The health consequences related to excessive consumption of sugar-loaded beverages are serious: the extra calories in sugar-loaded drinks may lead to obesity, diabetes, heart disease, and some cancers.

In Los Angeles County, more than 43 percent of children ages 17 years or younger consume at least one sugar-loaded drink on an average day. A child’s risk for obesity increases an average of 60 percent with every additional daily serving of soda.

Among adults in Los Angeles County, nearly 39 percent report drinking at least one soda or sweetened drink per day, far exceeding the American Heart Association’s recommendation of no more than 450 calories from sugary drinks per week, or fewer than three 12-ounce cans of soda.

Certain populations and regions in the county are more vulnerable than others. Among those residents consuming sugar-loaded drinks at a higher rate than the rest of the county are the following:

- Young adults aged 18–24: 71 percent drink at least one soda or sweetened drink per day
- Latino adults: 51 percent drink at least one soda or sweetened drink per day
- African American adults: 48 percent drink at least one soda or sweetened drink per day
- In South Los Angeles: 56 percent drink at least one soda or sweetened drink per day
- In East Los Angeles: 54 percent drink at least one soda or sweetened drink per day
- Low-income residents: 52 percent drink at least one soda or sweetened drink per day.

The obesity problem also directly impacts LA County’s economy. Health care and lost productivity related to overweight and obesity cost the county nearly $6 billion annually.

What Can Physicians Do?
In the clinical setting, patient visits are a prime opportunity for physicians to discuss sugar-loaded drinks and discuss healthier options. Healthier alternatives or actions include replacing soda with water or sparkling water, unsweetened tea, low-fat or fat-free milk, unsweetened coffee, or 100% fruit juice diluted with water or sparkling water; cutting back on the number of sugared coffees or teas; and reducing the consumption of sports drinks.

For children in the 85th to 94th percentile BMI, the American Academy of Pediatrics (AAP) recommends five servings of fruits/vegetables a day, two hours or less of screen time, one hour or more of physical activity, and no sugary drinks. The AAP recognizes the nutritional concerns regarding soft drink consumption. Physicians can take an active role in advocating for changes in the community, especially in schools by educating school authorities and parents about the health ramifications of sugar-loaded drink consumption.

To view the two-page brief “Consumption of Sugar-Sweetened Beverages in Los Angeles County,” published by the LA County Department of Public Health’s Division of Chronic Disease and Injury Prevention, go to www.ChooseHealthLA.com. To read the Cities and Communities Health Report “Obesity and Related Mortality in Los Angeles County,” released by the department’s Office of Health Assessment and Epidemiology, go to www.publichealth.lacounty.gov/ha.

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**Continuing Medical Education Courses**

The Los Angeles County Department of Public Health is pleased to offer the following free, online CME courses, which have been approved for AMA PRA Category 1 credit:

- Advance Care Planning: Assuring the Care that Patients Want at the End of Life
- Common Causes of Low Vision in Adults Aged 40 Years and Older
- Detection and Management of Age-Related Hearing Loss
- Preventing Cervical Cancer
- Successful Treatment of Tobacco Addiction

Sign in or register as a New Member at [https://publichealth.lacounty.gov/elearning](https://publichealth.lacounty.gov/elearning)
Rx for Prevention is published 10 times a year by the Los Angeles County Department of Public Health. If you would like to receive this newsletter by e-mail, go to www.publichealth.lacounty.gov and subscribe to the ListServ for Rx for Prevention.

Upcoming Trainings

Immunization Training Resources for Clinicians
The Los Angeles County Department of Public Health Immunization Program, the California Department of Public Health, the CDC and other entities offer a variety of web-based and in-person immunization training programs for clinicians and staff. Some programs offer CMEs. Visit www.publichealth.lacounty.gov/IP/trainconf.htm.

Immunization Skills Training for Medical Assistants
The Immunization Skills Institute is a 4-hour course that trains medical assistants on safe, effective, and caring immunization skills. Visit www.publichealth.lacounty.gov/ip or call (213) 351-7800.

Index of Disease Reporting Forms

All case reporting forms from the LA County Department of Public Health are available by telephone or Internet.

Reportable Diseases & Conditions
Confidential Morbidity Report
Morbidity Unit (888) 397-3993
Acute Communicable Disease Control
(213) 240-7941

Sexually Transmitted Disease
Confidential Morbidity Report
(213) 744-3070
www.publichealth.lacounty.gov/std/providers.htm (web page)
www.publichealth.lacounty.gov/std/docs/STD_CMRR.pdf (form)

Adult HIV/AIDS Case Report Form
For patients over 13 years of age at time of diagnosis
HIV Epidemiology Program
(213) 351-8196
www.publichealth.lacounty.gov/HIV/hivreporting.htm

Pediatric HIV/AIDS Case Report Form
For patients less than 13 years of age at time of diagnosis
HIV Epidemiology Program
(213) 351-8196
www.publichealth.lacounty.gov/HIV/hivreporting.htm

PEDIATRIC AIDS SURVEILLANCE PROGRAM
(213) 351-8153
Must first call program before reporting
www.publichealth.lacounty.gov/HIV/hivreporting.htm

Tuberculosis Suspects & Cases
Confidential Morbidity Report
Tuberculosis Control (213) 744-6160
www.publichealth.lacounty.gov/tb/forms/cmr.pdf

Lead Reporting
No reporting form. Reports are taken over the phone.
Lead Program (323) 869-7195

Animal Bite Report Form
Veterinary Public Health (877) 747-2243
www.publichealth.lacounty.gov/vet/biteintro.htm

Animal Diseases and Syndrome Report Form
Veterinary Public Health (877) 747-2243
www.publichealth.lacounty.gov/vet/disintro.htm

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