Physicians Should Be Alert for Measles Cases

In response to recent increased measles activity throughout the United States, including one case in Los Angeles County, the LA County Department of Public Health reminds providers to be vigilant about diagnosing measles cases. From January 1 through June 17, there were 156 confirmed cases of measles in the U.S. reported to the Centers for Disease Control and Prevention. This is the highest reported number since 1996. Most of the cases were linked to foreign travel or exposure to a tourist visiting the U.S.

Because measles is a highly contagious viral disease that spreads through airborne transmission, a single case of measles can expose hundreds of people and begin an outbreak. This underscores the importance of proper immunization, early diagnosis, proper infection control measures, and timely reporting to prevent the spread of measles.

Now that summer is here, there is the potential for even more cases of measles as more Angelenos vacation abroad and numerous tourists visit LA County.

Be Alert to Possible Cases
Physicians and hospital emergency departments should consider measles when evaluating any patient who has an acute rash illness with fever, especially in someone returning from international travel or who has had contact with international visitors.

Fever can reach 105°F. Rashes (red, blotchy, maculopapular) usually start on the hairline and face and spread downward to the rest of the body. Patients may also have a cough, coryza, and/or conjunctivitis.

Isolate Suspected Cases
Respiratory and airborne precautions should be taken to prevent transmission. Suspect measles cases needing medical attention should not be allowed in patient waiting areas. They should be masked and placed immediately in an examination room, with the door closed. If possible, limit patient contact to health care staff who have had two or more doses of MMR vaccines or documented immunity. Do not reuse the room for at least 2 hours.

Obtain blood specimens at the time of clinical presentation for serologic confirmation of the diagnosis. For measles testing and infection control guidelines, go to www.publichealth.lacounty.gov/acd/docs/MeaslesAlertMay2011.pdf.

Report Suspect Cases
Public Health depends on health care providers to identify and report suspect measles cases in a timely manner to minimize disease transmission. Do not wait for laboratory confirmation before reporting a suspect case.

Suspect cases in LA County should be reported immediately to the Public Health's Morbidity Central Reporting Unit at (888) 397-3993 (phone) or (888) 397-3778 (fax). During non-business hours (before 7:30 am or after 5 pm, or on weekends), call (213) 974-1234.

Prevent Measles
Vaccinate all patients 6 months of age and older who are traveling to countries where measles is circulating if a) they were born after 1956 and b) have no documentation of vaccination or immunity. Children who are 6-11 months old should receive at least one MMR dose before travel, plus the routine childhood dose at 12 months of age. Others who are not considered immune should receive 2 MMR doses. For vaccination guidelines, go to wwwnc.cdc.gov/travel/notices/in-the-news/measles.htm.
The Centers for Disease Control and Prevention (CDC) estimates that there are 8,000 to 18,000 individuals requiring hospitalization for Legionella annually in the United States. Since 2006, annual case reporting in Los Angeles County has increased 400%, from 20 to 100. The reasons for the increase are uncertain; however, it may be due in part to increased reporting as a result of changes in California laboratory reporting requirements as well as improved electronic laboratory reporting. Although case reports have increased, speculation of misdiagnosis, underutilization of diagnostic testing, and underreporting continue to underestimate true prevalence.

Legionella is a pathogenic Gram-negative bacterium with at least 50 species and 70 serogroups identified. It is found naturally in the water environment and thrives in temperatures between 25°C–45°C (77°F–113°F). Common sources include cooling towers, domestic hot water systems, and spas. Additional sources include central air conditioning systems, fountains, ponds, and swimming pools. Transmission occurs through the inhalation of aerosol droplets containing the bacteria, and aspiration of contaminated water. Rare cases of legionellosis caused by L. longbeacheae have been associated with inhalation of dust from dry potting soil. Person-to-person transmission does not occur.

How a Patient Presents
Legionellosis is a potentially fatal infectious disease that is caused by Legionella and is associated with two clinically and epidemiologically distinct illnesses: Legionnaires’ disease and Pontiac fever. Legionnaires’ disease is the more severe form of legionellosis and is characterized by fever, myalgia, cough, and clinical or radiographic pneumonia 2-10 days after exposure. Legionnaires’ disease causes death in up to 5%-40% of cases, although most cases can be successfully treated with antibiotics. Pontiac fever produces a milder flu-like, non-pneumonic illness, occurring within a few hours to 2 days of exposure. It is a self-limited illness that requires no treatment and most commonly occurs in persons who are otherwise healthy. (Table 1)

Who Should Be Tested for Legionnaires’ Disease?
The following people should be tested for the disease:

- Hospitalized patients with unknown cause of pneumonia
- Patient with enigmatic pneumonia sufficiently severe to require care in the ICU
- Compromised host with pneumonia
- Patients with pneumonia in the setting of a legionellosis outbreak
- Patients who fail to respond to treatment to β-lactam or cephalosporin
- Patients with a travel history within 10 days before the onset of illness
- Patients suspected of nosocomial pneumonia with unknown etiology.

How to Diagnose
The challenge of acceptable diagnostic testing to meet the CDC case definition of Legionnaires’ disease still continues. The case definition states that a confirmed case should have a compatible clinical history of pneumonia diagnosed by radiography and one of the following criteria: 1) Culture positive for Legionella species; 2) demonstration of Legionella...
species by direct fluorescent antibody testing; 3) fourfold or greater rise in immunofluorescent antibody titer to Legionella species to 128 or greater; 4) detection of L. pneumophila serogroup 1 antigen in the urine. Serology is valuable only when a paired serum is drawn 3-6 weeks from onset of symptoms and a fourfold increase of titers is observed. A single elevated antibody titer does not confirm a case of Legionnaires’ disease. Despite this, our records indicate that providers continue to perform this test.

In LA County, approximately 99% of reported Legionella cases are diagnosed by urine antigen. Though urine antigen testing is the most common method of diagnosing Legionella, it only tests for serogroup 1. Patients infected with a different Legionella serogroup or species will be falsely negative if tested by this method alone. (Table 2)

To better understand the epidemiology and public health burden and impact of this important disease, all patients who present with pneumonia and have legionellosis in the differential diagnosis should have at least one Legionella diagnostic test performed. Obtaining cultures is also valuable for identifying the organism. During outbreaks, having available isolates allows for strain typing and molecular comparisons with other cases and environmental specimens, which will expedite public health intervention in any location.

In 2006, as part of a six-month retrospective review of a health care-associated Legionnaires’ case in a large medical center in LA County, 145 medical records with community-acquired pneumonia listed as the discharge diagnosis were audited. All of them were given empiric treatment for pneumonia upon presentation in the emergency department and subsequently admitted; however, testing for Legionella was not performed on any of these patients despite radiology-confirmed pneumonia.

### What Physicians Need to Know

The Department of Public Health encourages all clinicians to know the specific pathogen they are treating. Increased awareness among physicians to utilize available noninvasive tests such as the urine antigen will improve recognition of Legionella cases. In addition, thorough history taking and review of medical records is valuable to determine a possible source of infection and potential outbreaks. Providers are encouraged to obtain a history of recent hospitalization, skilled nursing home and long-term residency, outpatient visits, travel, convention attendance, recreational water activities, and gym membership from all patients who present with clinical symptoms of pneumonia.

Notification of confirmed cases of legionellosis to the Department of Public Health is mandatory and is solely the responsibility of the provider. Approximately 50% of acute care facilities in LA County have reported Legionnaires’ disease in the past 5 years. In 1985, Legionnaires’ disease was made a reportable disease in California and, in 2009, it became a laboratory-notifiable disease. Cases must be reported within 7 days from the time of identification.

To report, complete the confidential morbidity report, available at [www.publichealth.lacounty.gov/acd](http://www.publichealth.lacounty.gov/acd), and fax it to Communicable Disease Reporting at (888) 397-3778. Physicians may also call the Communicable Disease Reporting System at (888) 397-3993 or use the secured web-based reporting system. Any provider interested in the web-based reporting system should call the Acute Communicable Disease Control Program at (213)-240-7941.

By performing the diagnostic tests that aid in the prompt diagnosis and reporting of Legionella species and legionellosis, the medical community plays a vital role in identifying single cases and outbreaks in the community and hospital environment.

### Table 2. Legionella Diagnostic Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture</td>
<td>• Clinical &amp; environmental isolates can be compared</td>
<td>• Technically difficult</td>
</tr>
<tr>
<td></td>
<td>• Detects all species &amp; serogroups</td>
<td>• Slow (&gt;5 days to grow)</td>
</tr>
<tr>
<td></td>
<td>• 100% specific</td>
<td>• Sensitivity highly dependent on technical skill</td>
</tr>
<tr>
<td>Urine Antigen</td>
<td>&gt;99% specific</td>
<td>• May be affected by antibiotic treatment</td>
</tr>
<tr>
<td></td>
<td>• Rapid (same day)</td>
<td>Only for L. pneumophila serogroup 1 (Lp1) (which may account for up to 80% of cases)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Limited utility when compared to environmental isolates</td>
</tr>
<tr>
<td>Serology</td>
<td>• Not affected by antibiotic treatment</td>
<td>Must have paired sera</td>
</tr>
<tr>
<td></td>
<td>• 70%-80% sensitive; &gt;90% specific</td>
<td>5%-10% of population has titer &gt;256</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single acute phase antibody titers of &gt;256 do not discriminate between cases of Legionnaires’ disease and other causes of community-acquired pneumonia</td>
</tr>
<tr>
<td>DFA</td>
<td>• Can be performed on pathologic specimens</td>
<td>25%-75% sensitive</td>
</tr>
<tr>
<td></td>
<td>• 95% specific</td>
<td>• Pathogenic isolates</td>
</tr>
</tbody>
</table>

**References**

The Link Between Animal Feces and Zoonotic Disease

Emily Beeler, DVM, MPH
Meredith May

Animals add a great deal of enjoyment to our patients’ lives, and pet ownership can lead to lower stress, lower blood pressure, and increased exercise. However just as human feces present health hazards, so do animal feces. Primary care physicians can help prevent health problems in their patients by promoting good sanitation and veterinary care to their pet-owning patients.

Animal owners may mistakenly believe that only fresh, odiferous feces present a health risk. In fact, many parasite eggs found in feces do not reach the infectious stage until days or weeks after the animal defecated. Allowing feces to dry out and disintegrate contaminates the soil and creates an elevated risk for exposure to parasites. Most parasite eggs can remain viable in soil for months or years. People or other animals may become infected through fecal-oral exposure to this soil. The single most important step pet owners can take to protect both themselves and their pets is to remove stool daily. Weekly removal is not frequent enough.

Duration from Defecation to Infectivity of Common Zoonotic Pathogens in Animal Stool

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Infectivity Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giardia</td>
<td>Immediate – Bacteria, 24 hours – (cats) Toxoplasma oocysts start to become infectious</td>
</tr>
<tr>
<td></td>
<td>7 days – Roundworm eggs start to become infectious</td>
</tr>
<tr>
<td></td>
<td>Disintegrating feces contaminate soil with parasite eggs for months or years</td>
</tr>
<tr>
<td></td>
<td>Duration of infectivity in feces of bacteria, Giardia cysts, and Toxoplasma oocysts depends on ambient temperature. These pathogens can survive for weeks in refrigeration-level temperatures. Roundworm eggs typically survive for years in contaminated soil.</td>
</tr>
</tbody>
</table>

There are many pathogens that can be found in animal stool. Animals infected with intestinal pathogens may be asymptomatic, have diarrhea, or may develop systemic disease. Certain infections in pets, such as ascarisiasis and giardiasis, are easily detected in routine tests on pet feces performed in veterinary clinics. This routine fecal examination is recommended two to four times a year for puppies and kittens, and one to two times per year in adult pets, depending on the animal’s risk of exposure to the parasites. Other intestinal zoonotic infections in pets, such as salmonellosis, colibacillosis, and toxoplasmosis, require more advanced testing.

Veterinary care is always recommended for ill animals, which also helps to protect human health. Animals that are found to be infected with zoonotic pathogens are treated by veterinarians, thereby reducing the overall risk of human exposure. Here, we discuss a few pathogens commonly found in local pets.

Pathogens Commonly Found in Pets

Pets infected with Salmonella or Campylobacter produce stool that is immediately infectious to people or other animals. These pathogens are diagnosed in pets via fecal culture, a test that is not commonly performed unless the pet has diarrhea that is resistant to standard treatment. In the case of Campylobacter, puppies and kittens are more likely to become infected than adult animals, to develop diarrhea from the infection, and to transmit it to humans. Salmonella can infect dogs and cats of all ages via exposure to contaminated pet foods, raw meat, or consumption of prey. To date in 2011, five brands of pigs’ ears and taffy-style dog treats have been recalled for potential Salmonella contamination. Feeding raw meat to pets has become popular in the past few years, creating additional risk of Salmonella exposure to humans through direct contact with the meats, contamination of surfaces, or through exposure to infected pets’ feces.

Giardia is a protozoan intestinal parasite that infects most mammals. Just as with bacterial infections, Giardia cysts are immediately transmissible to people. Pets become infected when they ingest the cysts in the feces of other animals or drink contaminated water in the environment. Giardiasis is frequently diagnosed in local dogs and occasionally in cats. A 2006 unpublished study of 10 local dog parks by LA County Veterinary Public Health found that approximately 22% of dogs tested positive for the protozoan.

There are many different Giardia species and genotypes. The ability to infect an animal varies for each strain. Many strains are not infectious to people. However, since advanced diagnostics like genotyping are rarely performed, the true zoonotic risk from local giardiasis cases in pets is unknown. Fecal centrifugation and flotation tests, and Giardia ELISA tests, are commonly performed on pets to identify Giardia infections. These tests are often a part of the annual physical exam or are performed when the pet has diarrhea. Local pets are often treated for Giardia infection, although recurrence is common.

Toxoplasmosis is a zoonotic disease caused by the protozoan parasite Toxoplasma gondii. Cats are the definitive hosts, meaning that the parasite can sexually reproduce only in cats, and produce oocysts that are shed in the stool. Cats become infected when they consume infected small prey, such as rodents. Most other animals (including humans, dogs, and rodents) are intermediate hosts, meaning that after they...
become infected, the parasite does not sexually reproduce; it converts into cysts that become dormant in muscle and nervous tissue. Intermediate hosts do not shed oocysts in their feces. Initial infection (of a person or animal) occurs either congenitally or through ingestion of tissue cysts in meat or oocysts from cat feces. In most cats and dogs, just as in humans, infection is usually subclinical, although infected pets can become ill with fever and respiratory, ocular, or neurological signs. Kittens, puppies, and immunocompromised pets are more likely to become ill when infected. Tests for toxoplasmosis are usually performed only when the animal has signs compatible with clinical disease. In these cases, serological tests (for IgM, IgG) are performed.

Key Points about Toxoplasmosis in Cats

- After becoming infected for the first time, cats shed Toxoplasma oocysts in the feces for only about 2-3 weeks. After this point, the cat develops lifelong immunity and no longer sheds the oocysts.
- The Toxoplasma oocysts in these feces then take 1-5 days after defecation to sporulate and become infective to people and other animals.
- Serologic testing of cats provides little useful public health information. Seropositive animals are not necessarily considered a risk because they have lasting immunity and typically do not shed oocysts. Seronegative cats may appear safer, but if they later become infected (for example, after eating a mouse that enters the house) they will transiently shed oocysts.
- Pregnant women do not need to get rid of their cats, per guidance from the Centers for Disease Control and Prevention. They do need to follow safety guidelines to prevent exposure, as described in the patient handout (see page 6).

People are typically infected through ingestion of raw or undercooked meat, or through oral exposure to contaminated soil. Gardening or playing in uncovered sandboxes can lead to exposure as outdoor cats often defecate in these areas.

There are several species of ascarids, or roundworms, that infect dogs, cats, and wildlife (such as raccoons and skunks). Children are at the highest risk of roundworm infection, especially those with pica. Roundworms found in dogs and cats may cause visceral or ocular larva migrans in humans.

Roundworms in wildlife, especially raccoons, are neurotropic and can cause significant brain injury. As with all fecal pathogens, people become infected via the fecal-oral route. However, roundworms are unique in a few respects:

- Roundworm eggs in animal stool do not begin to become infectious until the stool has aged for a week or longer.
- Roundworm eggs can remain viable for years, creating long-term contamination of soil wherever infected feces are allowed to disintegrate.
- Roundworms are some of the easiest parasites to detect and eliminate. Standard fecal examination and deworming performed by veterinarians effectively treat this infection in pets.

Various texts describe the clinical presentation of these infectious diseases in detail. There are many additional zoonotic diseases that can be transmitted by animal feces, including E. coli infection, cryptosporidiosis, hookworm infection, hydatid disease, yersiniosis, and psittacosis (birds—by inhalation). Physicians can help protect their patients against a long list of zoonotic diseases by promoting the general principles of good sanitation and proper veterinary care.

Asking patients about pet ownership is a great way to build doctor-patient rapport. It can also provide opportunities to point out the connections between human and animal health, and to recommend routine fecal testing for pets. To assist in this discussion, refer to the patient resource titled “The Problem with Animal Waste” on page 6. It is easy to photocopy this handout and share with pet-owning patients.

Emily Beeler, DVM, MPH, is a veterinarian, Animal Disease Surveillance, Veterinary Public Health and Rabies Control Program, Los Angeles County Department of Public Health. Meredith May is in the DVM class of 2011, College of Veterinary Medicine, Western University of Health Sciences.

REFERENCES

Animal stool (poop, feces, waste) can contain bacteria and parasite eggs that infect humans and pets. Infection happens when tiny amounts of animal stool containing the germs reach the mouth. People may also become accidentally infected when they touch their mouth with soiled hands. Children often have their hands in their mouths and are at higher risk of infection.

Did you know that old, dried-out stool is more likely to contain infectious parasite eggs than is fresh stool? If a pet is infected with parasites, the eggs from the parasites are passed into the pet’s stool. But the eggs can’t infect anyone until the stool has “aged.” This usually takes 1-7 days. Animal stool that is allowed to dry up and/or disintegrate can contaminate soil with parasite eggs for months or years!

What You Can Do to Reduce Infection

**Keep your pet healthy.**
- Have your pet’s stool checked regularly by a veterinarian for parasites. Fecal testing and deworming are important for all pets, especially for puppies and kittens, and pets with diarrhea.
- Do not feed raw meat to your pet. Bacteria and parasites can be spread to pets through raw meat.
- Keep your cat indoors. When cats hunt and eat rodents or birds, they can become infected with a parasite called *Toxoplasma gondii*.
- Do not let your dog eat feces.

**Discard pet stool DAILY.**
- Wear gloves or cover hands with a waterproof bag (that has no holes) when removing stool. Wash hands well afterward.
- Pick up dog stool immediately when on a dog walk. The person who steps in it later may be you!
- Do not remove stool by hosing it down with water – this just washes the parasite eggs into the ground.
- Discard dog stool at least daily from your yard. Don’t let it “grow old.”
- Clean stool out of litter boxes every day, before parasites like *Toxoplasma gondii* have a chance to become infectious.

**Protect your yard.**
- The stool of raccoons and other nocturnal wildlife often carry roundworm eggs. Do not tempt wildlife to stay in your yard: Do not leave pet food and water outdoors after dusk. Pick up fallen fruit every day. Do not touch or harass wildlife.
- Cover children’s sandboxes when not in use so that cats do not use them as litter boxes.

**For pregnant women.** To protect yourself and your baby from toxoplasmosis, which can be carried in the stool of cats, you ALSO need to follow these extra safety tips. You do NOT have to give up your cat.
- Have someone else handle the litter box duties, if possible. If you must handle these duties, wear disposable gloves and wash your hands thoroughly with soap and water afterward.
- Stool must be removed from the litter box daily. Empty and clean the entire litter box at least weekly.
- Avoid stray cats, especially kittens. Do not get a new cat while you are pregnant.
- Wear gloves when gardening. Avoid working in areas frequently visited by cats. Wash your hands when you are finished.

Disaster Registry Assists People with Access and Functional Needs

Los Angeles County physicians may wish to share a helpful resource with their patients: the Specific Needs Awareness Planning (SNAP) disaster registry. This registry, launched by the LA County Office of Emergency Management, is a voluntary program for people in Los Angeles County who may need specific disability-related assistance and/or accommodations in the event of a major disaster.

The SNAP registry is an Internet-based system that allows LA County residents to provide information about their access or functional needs to public safety officials, such as first responders. While the program does not guarantee priority response to registrants, it assists emergency response officials in planning and response by integrating database and mapping technology.

Residents who may benefit from registry participation include those with physical disabilities, cardiac and/or respiratory circumstances, developmental disabilities, emotional or psychiatric disabilities, deafness or hearing loss, blindness or severe vision loss, speech impairments, and short-term disabilities. Others who may benefit include those who rely on technologies that use electricity, use medications, participate in a home-delivery program, need specialized paratransit vehicles, experience seizures or have immune system deficiencies, communicable diseases, or severe chemical or other allergies.

For more information, residents may call 2-1-1 or log on to http://snap.lacounty.gov.

New Report Shows Dog Bites Underreported in Los Angeles County

Reports of dog bites and other animal bites in Los Angeles County have increased over the past few years, according to a new brief released by the Los Angeles County Department of Public Health. In 2009, there were 7,623 dog bite reports compared to 5,066 in 2006, and 939 cat bite reports in 2009 compared to 5,066 in 2006. Emergency room visits due to dog bites also increased, from 7,054 in 2006 to 8,353 in 2009. According to the brief, titled “Preventing Animal Bites in LA County,” these figures could be higher since most animal bites go unreported. “Only 5% of animal bites in the county are reported. It is important to report animal bites for many health-related reasons, including rabies control and assisting health authorities in tracking trends in animal bites,” said Jonathan E. Fielding, MD, MPH, Director of Public Health and Health Officer.

Physicians who wish to report an animal bite may download the form at www.publichealth.lacounty.gov/vet/Forms.htm.

Recently, the U.S. Postal Service announced that Los Angeles County ranks third in the nation for dog bites to postal carriers, with 44 attacks occurring in 2010. State Farm Insurance Company also announced that last year, California led the nation in dog bite claims, with 369 claims totaling more than $11 million. Many bite victims, unfortunately, are children. While not all dog bites are preventable, most of these bites can be prevented with proper supervision. The report may be viewed at www.publichealth.lacounty.gov/docs/2011mayAnimalBites.pdf.

Also available online is a pet quiz designed to test pet owners’ knowledge about their animals, show how human health and pet health are linked, and provide information about how to keep pets safe and healthy. The online pet health and safety quiz can be accessed at https://admin.publichealth.lacounty.gov/phcommon/public/vet.

LA Health Data Snapshot Highlights Health Disparities and Tracks Trends

Using data from the Los Angeles County Health Survey, the Department of Public Health has created a new resource to disseminate survey information to those who need it and to facilitate its use for public health assessment, policy development, and program planning and evaluation.

The LA Health Data Snapshot, a one-page summary report that highlights various topics from the survey, focuses on health disparities across population subgroups within Los Angeles County and tracks trends over time, providing a more global view.

The first Data Snapshot, released in May, is titled, “Physical Activity Among Adults in Los Angeles County.” It focuses on physical activity levels and sedentary behavior in adults across LA County and describes the guidelines and recommendations for physical activity levels in adults from the Centers for Disease Control and Prevention.

One of the goals of this new resource is to provide information that researchers, students, community organizations, other public health departments, and members of the public can readily access. By visiting the LA Health Data Snapshot web page, users can download figures, graphs, and maps that may be incorporated into PowerPoint presentations and reports.

To read the first Data Snapshot or download its figures, log on to www.publichealth.lacounty.gov/ha/Snapshots.htm.
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

**CDC Immunization Update Webinar**
August 4, 2011, 9 am (Pacific)
The webinar will cover influenza, meningococcal, zoster, Tdap, human papillomavirus, vaccine briefs, and other emerging issues.

View online at www.cdc.gov/vaccines/ed/imzupdate/default.htm or visit www.publichealth.lacounty.gov/ip to learn where to attend in person in Los Angeles.

**Shots for School: Clinician’s Role in California’s New Tdap Requirement**
Pertussis boosters (Tdap) are now required for school entry for all 7th-12th graders in California. Learn about Tdap recommendations, the school mandate, resources, and tips for promoting Tdap vaccination.

View this pre-recorded webinar at www.shotsforschool.org/providerwebinars.html

**Reportable Diseases & Conditions**

<table>
<thead>
<tr>
<th>Confidential Morbidity Report</th>
<th>Morbidity Unit (888) 397-3993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult HIV/AIDS Case Report Form For patients over 13 years of age at time of diagnosis HIV Epidemiology Program (213) 351-8196</td>
<td><a href="http://www.publichealth.lacounty.gov/HIV/hivreporting.htm">www.publichealth.lacounty.gov/HIV/hivreporting.htm</a></td>
</tr>
<tr>
<td>Pediatric HIV/AIDS Case Report Form For patients less than 13 years of age at time of diagnosis</td>
<td></td>
</tr>
</tbody>
</table>