EPI-LOG

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Leptospirosis: Update for Health Care Providers in King County

During December 2005, twelve leptospirosis cases were diagnosed in dogs from Vashon and Maury Islands. The majority of cases had the highest titers to *L. autumnalis*, a serovar that is most closely associated with raccoons. Rodents and opossums are other possible reservoirs of this serovar. Typically, Public Health receives fewer than three dog case reports each month, and a cluster like this is very unusual. A seroprevalence survey of raccoons conducted in Western Washington in 2005 found that 13 of 47 (27%) had antibodies to leptospirosis with the most common serovars being *L. autumnalis*, however, *L. pomona*, *L. harjo*, and *L. bratislava* were also present. Human cases are uncommon in Washington but may be underdiagnosed and underreported. Only twelve cases were reported between 1990 and 2005, and, of these, seven were exposed in Washington, including three in 2005. The last confirmed case reported in King County was in 2003.

Leptospirosis is a bacterial disease of worldwide distribution that affects humans and numerous animal species. While it is a zoonotic disease worldwide, only 100-200 cases are reported annually in the US, and half of these are from Hawaii. It is caused by infection with bacteria of the genus Leptospira, specifically the species *L. interrogans* which has over 200 serovars. Serovars vary by region and are associated with different domestic or wild animal hosts which can be chronic carriers. The most commonly identified serovars in the U.S. are *L. icterohaemorrhagiae*, *L. canicola*, *L. autumnalis*, *L. hepdomadis*, *L. australis* and *L. pomona*. Transmission from a mammalian host happens most often through contact of skin (especially if abraded) or mucous membranes with water contaminated by urine from infected animals. Drinking contaminated water can also cause infection. Leptospirosis is an occupational hazard for rice and sugarcane field workers, farmers, miners, veterinarians, dairy, slaughterhouse, sewer workers, and military troops. Recent outbreaks have been associated with exposure to contaminated water during outdoor events such as triathlons or adventure racing. Leptospirosis appears to be increasing in some urban areas especially during heavy rains when flooding occurs.

The incubation time is about ten days, with a range of two to twenty days. Infection in humans can cause a range of symptoms from subclinical to serious disease that tends to depend on the infecting serovar. The common features are fever with sudden onset, severe headache, myalgia, and conjunctival suffusion. Other manifestations include diphasic fever, meningitis, rash, hemolytic anemia, hepatorenal failure, jaundice, mental confusion and depression, myocarditis and pulmonary involvement with or without hemorrhage or hemoptysis. Weil's disease, characterized by impaired hepatic and renal function, may develop after the acute phase.

Diagnosis is confirmed by seroconversion or 4-fold or greater increase in leptospiraemic titers using the microscopic agglutination test (MAT), and by isolation of leptospires from blood (first 7 days) or CSF (days 4-10) during acute illness, and from urine after the 10th day. Because of regional variations in serovars, the MAT should use locally occurring serovars. Treatment with antibiotics should be initiated promptly and preferably before the 5th day of illness to reduce severity and duration of illness. Penicillin is probably the drug of choice. Doxycycline or erythromycin can be used in patients who are allergic to penicillin.

Leptospirosis is a notifiable disease, and health care providers must report cases to Public Health at (206) 296-4774. For suspect human cases, Public Health will arrange for laboratory testing at the Centers for Disease Control and Prevention (CDC) to confirm the diagnosis. Leptospirosis in animals is also a notifiable disease and veterinarians should report cases to Public Health at (206)296-4880.

For more information see the CDC's Website at:
www.cdc.gov/ncidod/diseases/submenus/sub_lepto.htm

For information about pets and leptospirosis, see:www.cdc.gov/ncidod/dbmd/diseaseinfo/leptospirosis_g_pet.htm

CDC Issues Recommendation Against the Use of Amantadine and Rimantidine for Prophylaxis or Treatment of Influenza for the Remainder of the 2005-2006 Season

On January 14th, 2006, the Centers for Disease Control and Prevention (CDC) issued a Health Advisory recommending that Amantadine and Rimantidine not be used for either the treatment or prophylaxis of influenza for the remainder of the 2005-2006 influenza season. They issued this recommendation after tests at the CDC indicated that a high proportion of currently circulating Influenza A (H3N2) viruses in the United States were resistant to both amantadine and rimantidine.

Amantadine is also used to treat the symptoms of Parkinson's disease, and should continue to be used for this indication.

At the time of the announcement, 120 influenza A (H3N2) viruses isolated from patients in 23 states, during the 2005-2006 season, had been tested at CDC; 109 of the isolates (91 percent) were resistant to amantadine and rimantadine. Only three influenza A (H1N1) viruses had been tested and demonstrated susceptibility to these drugs. All influenza viruses from the United States that have been screened for antiviral resistance at CDC have demonstrated susceptibility to the neuraminidase inhibitors (i.e., oseltamivir and zanamivir). During this period, oseltamivir or zanamivir should be selected if an antiviral medication is used for the treatment or prophylaxis of influenza. Specific information regarding the use of the neuraminidase inhibitors is available at: www.cdc.gov/flu/protect/antiviral/index.htm

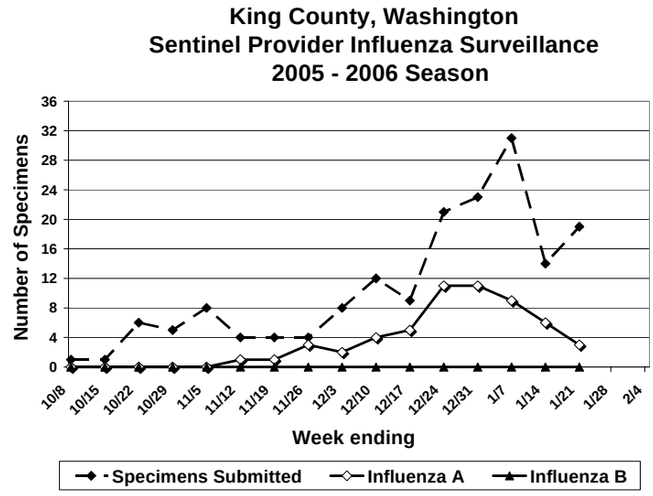
The CDC will continue testing influenza isolates for resistance to antivirals throughout the 2005-06 influenza season, and recommendations will be updated as needed. Annual influenza vaccination remains the primary means of preventing morbidity and mortality associated with influenza.

The full Health Advisory statement can be found at: www.cdc.gov/flu/han011406.htm

King County Influenza Update

During the week ending January 21, 2006, 15.6 percent (3/19) of specimens submitted by sentinel influenza providers were positive for influenza A (see graph). Since the beginning of October 2005**,** sentinel influenza providers have submitted 170 specimens from people with influenza-like illness (ILI) for viral culture. Twenty specimens have been positive for influenza A (not yet typed), and 30 have been positive for influenza A (H3N2). No specimens have tested positive for influenza B. The number of submitted specimens that have been positive for influenza A has steadily declined since the week ending December 31st, 2006, though it is too early to say that the influenza season has peaked because King County often sees significant influenza activity in February and into March.

For more information about influenza activity in King County, Washington State, and the United States, visit the King County Influenza web page: www.metrokc.gov/health/immunization/fluseason.htm



Disease Reporting

AIDS/HIV ..... (206) 296-4645
STDs ..... (206) 731-3954
TB ..... (206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day) .... (206) 296-4774
Automated reporting line for conditions not immediately notifiable ..... (206) 296-4782

Hotlines

Communicable Disease ..... (206) 296-4949
HIV/STD ..... (206) 205-STDS

Public Health-Seattle & King County Online Resources

Home Page: www.metrokc.gov/health/
The *EPI-LOG*: www.metrokc.gov/health/providers
Communicable Disease listserv (PHSKC INFO-X) at: mailman.u.washington.edu/mailman/listinfo/phskc-info-x

Reported Cases of Selected Diseases, Seattle & King County 2005

	Cases Reported in December		Cases Reported Through December	
	2005	2004	2005	2004
Campylobacteriosis	22	21	337	264
Cryptosporidiosis	3	4	69	34
Chlamydial infections	416	537	5,602	5,337
Enterohemorrhagic *E. coli* (non-O157)	0	0	7	0
***E. coli* O157: H7**	3	1	38	42
Giardiasis	4	15	144	126
Gonorrhea	136	151	1,786	1,261
***Haemophilus influenzae* (cases <6 years of age)**	0	0	2	2
Hepatitis A	2	1	17	14
Hepatitis B (acute)	1	4	23	23
Hepatitis B (chronic)	52	61	692	632
Hepatitis C (acute)	1	2	10	10
Hepatitis C (chronic, confirmed/probable)	106	129	1331	1306
Hepatitis C (chronic, possible)	22	32	394	334
Herpes, genital (primary)	76	54	798	701
HIV and AIDS (new diagnoses only)	51	62	455	437
Measles	0	0	1	6
Meningococcal Disease	1	3	15	18
Mumps	0	0	1	1
Pertussis	29	4	318	201
Rubella	0	0	1	0
Rubella, congenital	0	0	0	0
Salmonellosis	12	12	218	234
Shigellosis	2	5	72	63
Syphilis	22	25	176	164
Syphilis, congenital	0	0	0	0
Syphilis, late	3	2	72	63
Tuberculosis	26	17	127	133

The *Epi-Log* is available in alternate formats upon request.