



## Communicable Disease and Epidemiology News

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- **Animal Bites and Rabies Post-Exposure Prophylaxis**
- **Disseminated Gonorrhea in King County**
- **Hantavirus Pulmonary Syndrome Alert**

### Animal bites and Rabies Post-Exposure Prophylaxis in King County

As the temperature rises, so do reports of animal bites and bat exposures. Typically, about half of all animal bites reported to Public Health – Seattle & King County each year are reported between June and September.

Washington State law requires health care providers to report animal bites received by humans immediately. King County providers are also requested to report bat exposures, and cases where rabies post exposure prophylaxis (PEP) is prescribed. Bat exposures include bare-skin contact with a bat, and situations where bat-to-skin contact or bat bites cannot be ruled out, for example, when a bat is found in a room with a child or inebriated person, or if an adult wakes up to find a bat in the room. These exposures are reportable so that Public Health can: 1) assist health care providers in assessing the risk for rabies, 2) help determine the need for rabies post-exposure prophylaxis, and 3) facilitate laboratory testing of animals for rabies, if indicated.

From 2003 to 2005, 181 persons reported to Public Health in King County met the criteria to receive rabies PEP. Sixteen of these persons were exposed to bats who subsequently tested positive for rabies (10 total bats tested positive and 16 people had been exposed). In 165 cases, no animal was available for testing or observation. Approximately 10 percent of people who are recommended to receive rabies PEP each year in King County were bitten by an animal while traveling outside the US. Follow-up for these cases can be complex because rabies PEP initiated outside the United States may include the administration of biologics that are not approved by the US Food and Drug Administration (such as vaccines of nerve tissue origin), the schedule or dosage for vaccine or rabies immune globulin (RIG) may differ from the US schedule, and RIG is not always available. In these situations, Public Health provides recommendations for post exposure vaccine and/or RIG on a case-by-case basis, at times in consultation with the Centers for Disease Control and Prevention (CDC).

Although rare, rabies cases still occur in humans in the US. One or two deaths each year are attributed to human rabies, and there may be additional unrecognized deaths due to rabies in the US. In 2004, 3 transplant recipients died from rabies after receiving solid organ transplants from a donor who died with undiagnosed rabies. The most recent rabies death in the US occurred in a Texas teenager in May 2006. Four to six weeks prior to his death, the teenager awoke due to direct contact with a bat in his bedroom. The bat was disposed of and therefore was not available for rabies testing, and public health officials were not consulted. The teenager did not seek medical care until symptoms of rabies developed, at which point it was too late to administer PEP.

Between 1990 and 2000, 24 of the 32 reported human rabies cases in the US were caused by rabies virus strains associated with bats, and in the majority of these cases, a bite from a bat

was not documented. In Washington State, the most recent human cases, (in 1995 in Lewis County and in 1997 in Mason County), were both due to infection with bat rabies strains. The primary reservoir for rabies in Washington State is bats and, though no rabies cases have been identified in wild terrestrial animals in Washington in the past 60 years, there is currently no active surveillance for rabies among these animals.

Approximately 8 percent of bats tested in Washington State between 1960 and 2004 were positive for rabies.

Rabies is preventable with timely and appropriate care. Health care providers should advise persons who have been bitten by an animal to wash the wound with soap and water and consult with Public Health about how to manage the animal. In addition, health care providers should immediately **call Public Health – Seattle & King County (206-296-4774), preferably before beginning PEP.** Public Health staff include physicians and veterinarians, and are available 7 days a week, 24 hours a day for consultation. Public Health staff can recommend whether testing or confinement and observation of the animal is appropriate. In the case of bat exposures, it is especially important to capture and test the bat in order to avoid unnecessary administration of PEP, because most bats do not have rabies. Information about how to capture bats without exposing additional persons is available at: [www.metrokc.gov/health/prevcont/bats.htm](http://www.metrokc.gov/health/prevcont/bats.htm).

Cats, dogs, and ferrets who aren't exhibiting signs of rabies at the time of the bite can be observed for a 10 day quarantine period. If the animal survives this 10 day observation period in good health it means the animal would not have been infectious for rabies at the time of the bite and the person who was bitten does not need rabies PEP. If the animal becomes sick or dies during this period, testing for rabies should be done.

For people who have never been immunized for rabies, PEP after a potential rabies exposure consists of 5 doses of rabies vaccine given intramuscularly on days 0, 3, 7, 14, and 28, and RIG (dosage based on body weight), administered at the site of the wound (if possible). RIG is given at the same time as the first dose of vaccine. In King County, RIG is typically available only through hospital emergency departments and hospital-based urgent care clinics, however, rabies vaccine for doses 3, 7, 14 and 28, can be ordered by any health care provider through most vaccine distributors in King County, and overnight delivery is often available. Additional information on rabies and decision trees for assessing the need for PEP is also available at: [www.metrokc.gov/health/providers/epidemiology/rabiesqa.htm](http://www.metrokc.gov/health/providers/epidemiology/rabiesqa.htm) [www.cdc.gov/mmwr/preview/mmwrhtml/00056176.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/00056176.htm)

### Disseminated Gonorrhea in King County

Since March of 2006, clinicians in King County have reported five cases of disseminated gonococcal infection (DGI). Although DGI was relatively common in the 1970s, strains of *Neisseria gonorrhoeae* prone to dissemination have been rare in

recent decades, with only two cases of DGI reported to Public Health – Seattle & King County between 1991 and 2005. The first case of DGI occurring in 2006 involved a man who presented with a septic knee after having sex with multiple partners while in Southeast Asia. Clinicians have subsequently reported 2 additional cases in men and 2 in women. All of the reported cases have required hospitalization and intravenous antibiotics, and 4 underwent surgery. Three of the cases acknowledged using crack cocaine, and one was homeless. Microorganisms were available for antimicrobial susceptibility testing in 3 cases, all of which were resistant to fluoroquinolones.

DGI is a rare complication of gonorrhea. Patients can present with a monoarticular purulent arthritis, or the arthritis-dermatitis syndrome. The arthritis-dermatitis syndrome manifests as an asymmetric, oligoarticular or polyarticular arthritis, arthralgias or tenosynovitis which develops over several days and primarily involves the knees, elbows and distal joints. Approximately 75 percent of cases have dermatologic manifestations, most frequently discrete papules, pustules or vesicles, sometimes with a hemorrhagic or necrotic component. Most patients do not have concurrent symptoms of genital tract infection. Meningitis, osteomyelitis, septic shock, endocarditis and acute respiratory distress syndrome are rare complications.

Clinicians should consider the diagnosis of DGI in adolescents and adults presenting with new symptoms of arthralgia or arthritis. Evaluation should include culture of the blood, synovial fluid and unroofed skin lesions. Empiric therapy should include intravenous ceftriaxone or an alternative third generation cephalosporin. All cases should be reported immediately by telephone to Public Health at (206) 731-2275.

#### Hantavirus Pulmonary Syndrome Alert

Between January 1 and June 26, 2006, three cases of hantavirus pulmonary syndrome (HPS) have been reported in Washington State. The cases have occurred in Whatcom, Yakima, and Okanogan counties, and two were fatal. Additionally, in mid-June, a 14 year old boy who resided in Southwestern British Columbia died of HPS. National data indicates that there has been an increase in HPS cases this year throughout the Western United States.

Since its recognition in 1993, there have been 32 reported cases of hantavirus pulmonary syndrome in Washington State with 11 associated deaths; three of these 32 cases, and one associated death, occurred in King County residents who were probably exposed in Eastern or Central Washington. The risk for HPS occurs throughout Washington State, particularly in rural areas. HPS usually affects previously healthy adults; the median age of

HPS cases in Washington State is 36 years old (range 19-75 years).

Hantavirus pulmonary syndrome (HPS) was first reported in the US in the Southwest in 1993. The Sin Nombre virus is the main cause of HPS reported in the US, but other viruses may cause similar diseases in other countries. The deer mouse *Peromyscus maniculatus* is the main carrier of the virus in the US, but other wild rodents can also be carriers. Infected rodents shed the virus in their urine, saliva, and droppings, but do not show any signs of illness. Illness results from inhalation of aerosolized virus-containing rodent excreta and nesting material.

The incubation period is approximately two weeks, with a range of a few days to six weeks. The first symptoms are non-specific, including fever, myalgias, and gastrointestinal symptoms, progressing abruptly to hypotension, and ventilatory compromise, often requiring mechanical ventilation. Most cases have an elevated hematocrit (hemoconcentration), hypoalbuminaemia, leukocytosis and thrombocytopenia.

Persons with suspected HPS should be reported to Public Health by calling (206) 296-4774. Diagnosis of HPS involves detection of virus-specific IgM and IgG antibodies in serum with an ELISA test. Laboratory testing at the Washington State Public Health Laboratory can be facilitated by Public Health for cases that meet the criteria for testing.

For additional information on HPS, please see: [www.metrokc.gov/health/prevcont/hanta.htm](http://www.metrokc.gov/health/prevcont/hanta.htm)

<b><u>Disease Reporting</u></b>	
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
<b><u>Hotlines</u></b>	
Communicable Disease .....	(206) 296-4949
HIV/STD .....	(206) 205-STDS
<b><u>Public Health-Seattle &amp; King County Online Resources</u></b>	
Home Page: <a href="http://www.metrokc.gov/health/">www.metrokc.gov/health/</a>	
The EPI-LOG: <a href="http://www.metrokc.gov/health/providers">www.metrokc.gov/health/providers</a>	

### Reported Cases of Selected Diseases, Seattle & King County 2006

	Cases Reported in May		Cases Reported Through May	
	2006	2005	2006	2005
<b>Campylobacteriosis</b>	25	27	93	111
<b>Cryptosporidiosis</b>	3	9	9	40
<b>Chlamydial infections</b>	447	409	2,215	2,338
<b>Enterohemorrhagic E. coli (non-O157)</b>	0	0	0	4
<b>E. coli O157: H7</b>	2	3	6	8
<b>Giardiasis</b>	12	8	49	43
<b>Gonorrhea</b>	198	147	827	661
<b>Haemophilus influenzae (cases &lt;6 years of age)</b>	0	0	0	1
<b>Hepatitis A</b>	1	1	6	7
<b>Hepatitis B (acute)</b>	0	4	5	11
<b>Hepatitis B (chronic)</b>	63	73	344	264
<b>Hepatitis C (acute)</b>	0	1	3	4
<b>Hepatitis C (chronic, confirmed/probable)</b>	114	125	617	553
<b>Hepatitis C (chronic, possible)</b>	27	29	139	181
<b>Herpes, genital (primary)</b>	63	22	337	252
<b>HIV and AIDS (includes only AIDS cases not previously reported as HIV)</b>	36	66	136	193
<b>Measles</b>	0	0	0	0
<b>Meningococcal Disease</b>	0	0	4	10
<b>Mumps</b>	0	0	2	1
<b>Pertussis</b>	12	39	60	102
<b>Rubella</b>	0	2	1	2
<b>Rubella, congenital</b>	0	0	0	0
<b>Salmonellosis</b>	11	21	62	87
<b>Shigellosis</b>	4	4	15	26
<b>Syphilis</b>	22	7	103	66
<b>Syphilis, congenital</b>	0	0	0	0
<b>Syphilis, late</b>	6	4	32	34
<b>Tuberculosis</b>	20	6	48	42

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