Yakima Health District BULLETIN

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HANTAVIRUS PULMONARY SYNDROME CASE, YAKIMA COUNTY

Inside this issue:

Two cases of hantavirus pulmonary syndrome have recently been diagnosed in persons from Grant and Yakima Counties. The Grant County case died, the Yakima County case survived. This brings Washington State's total case count to 28 (10 deaths) since surveillance began a decade ago. Overall, the United States has reported 396 cases cumulatively.

HPS is transmitted by infectious feces and urine of rodents, typically when they become aerosolized in high doses by disturbing nesting in close, confined spaces. Cases with less intense exposure (e.g., outdoor, unrecognized or undetected) have been reported only rarely. The dominant vector and reservoir for HPS is the deer mouse (*Peromyscus maniculatus*). The Grant County case appears to have fit the typical exposure history, whereas the Yakima County case only reported outdoor exposures while working in an orchard and his backyard garden. Environmental inspection of his indoor living space demonstrated no evidence of rodent infestation.

Anecdotal reports from the community, as well as some rodent surveillance data from the northwest region, suggest that the deer mouse population is indeed high this fall. Prevalence studies indicate that HPS can vary across time and regions from several percent to over one-third of tested mice. These data and the two human cases suggest that the risk for acquiring HPS may be increased this year and that the risk may be further exacerbated as colder weather forces rodents to nest indoors or other analogous places (e.g., outbuildings, barns, crawl spaces, cabins).

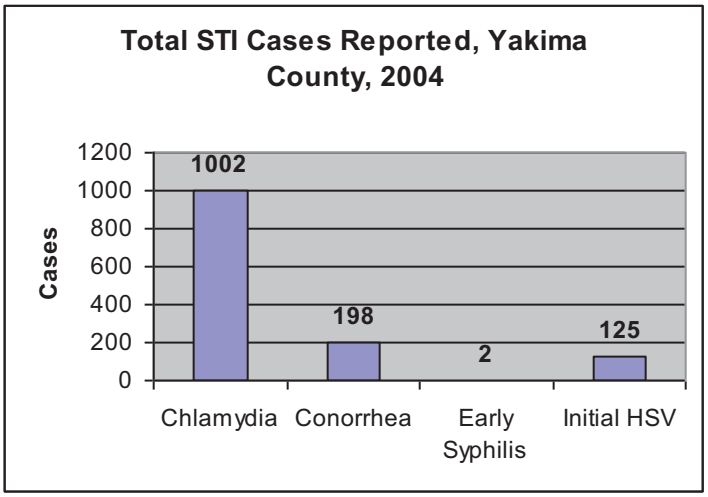
Health care providers should consider the diagnosis of HPS in clinically compatible cases, particularly when rodent exposure is reported or suspected. After an incubation period of several days to several weeks, patients with HPS typically present with nonspecific prodromal symptoms of fever, myalgias, non-productive cough, nausea, vomiting, and anorexia. The prodromal phase of HPS is indistinguishable clinically from numerous other viral infections. This progresses within several days to respiratory distress with non-cardiogenic pulmonary edema and hypotension. Characteristic findings are hypoxemia and diffuse pulmonary infiltrates with thromobocytopenia, elevated hematocrit, neutrophilia with a left shift, and circulating immunoblasts/myelocytes. Some experts suggest obtaining serial blood counts and serum chemistries (e.g., every 8 to 12 hours) in clinically suspected cases. Early interventions to support respiratory function and hemodynamics appear to carry improved prognosis. Mechanical ventilation and inotropic agents are usually but not always required. Ribavirin is available for treatment on an investigational basis.

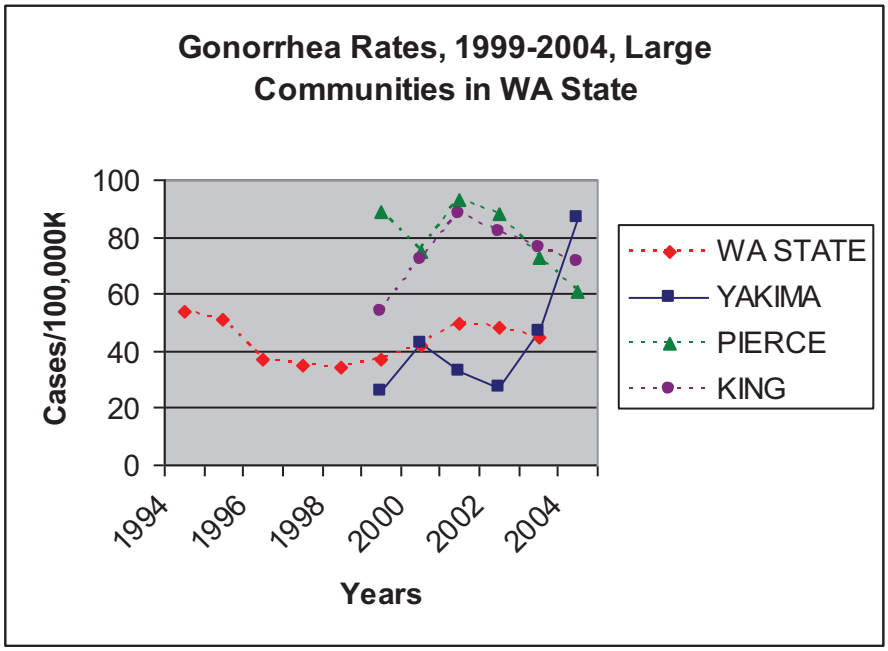
If you are evaluating a suspected HPS case, please report it to YHD immediately by calling (509) 249 -6541. We can facilitate laboratory testing (i.e., serum IgM and, if feasible, tissue PCR) through CDC. We also want to investigate the patient's home and work environment to identify and eliminate sources of future exposure to others. YHD is educating local agricultural business owners and workers by disseminating information on reducing risk of exposure. For patient information and educational materials addressing prevention of rodent infestation and HPS exposure, please visit http://www.yakima publichealth.org and click on "For Health Care Providers."

Special thanks go to Mark Farley, MD, of YVFWC -Toppenish, and John Moran, MD, of Toppenish Community Hospital, for suspecting and reporting the Yakima County case. In addition, thank you to Mira Leslie, DVM/MPH, Washington State Public Health Veterinarian, for assisting in the investigation of this case.

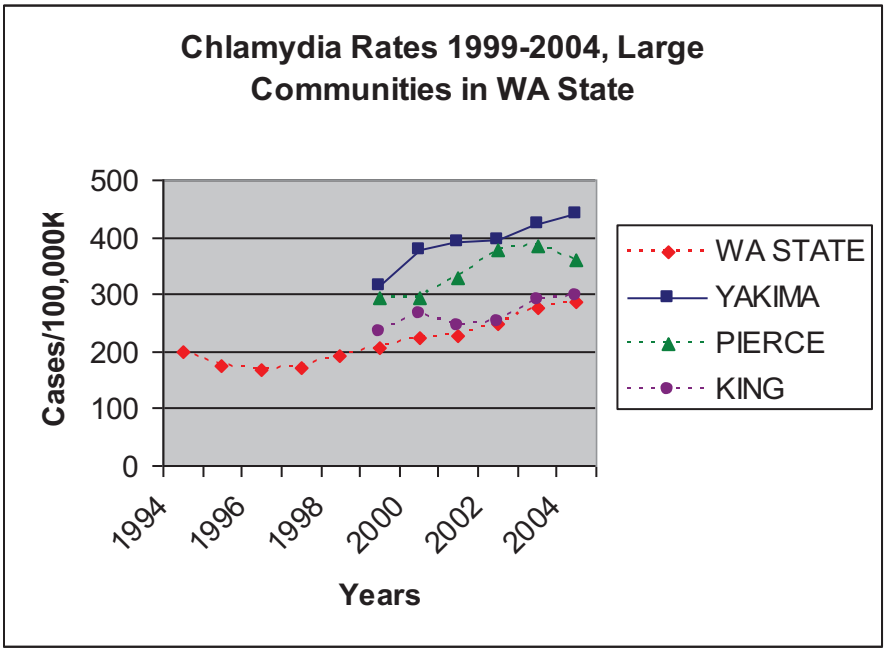
Sexually Transmitted Infections (STIs) Update

Over 1000 cases of chlamydia and nearly 200 cases of gonorrhea were reported in Yakima County residents during 2004. These both represent sustained increases over recent years and give Yakima County the highest reported incidence for both conditions statewide (Figures). No single cause for increasing gonorrhea rates has been identified, but frequent partner change, failure to use condoms, and difficulty identifying recently exposed individuals for chemoprophylaxis are certainly contributing. The steady increase in chlamydia, on the other hand, is seen across all jurisdictions in this state and may well reflect increased screening, increased test sensitivity, and improved attention to reporting cases. Among chlamydia cases, women greatly outnumber men because most of the screening is occurring among women. Identifying funding and mechanisms for testing asymptomatic high risk adolescents and young men remains an unmet need for exerting greater control over transmission of chlamydia.





Despite climbing rates of gonorrhea and chlamydia, some good news does exist with respect to STIs in Yakima County. We have been relatively unaffected by current syphilis transmission occurring on the west side of the Cascades, HIV incidence in publicly funded testing sites remains low (<1%, but still not zero), providers seem to be testing and reporting cases (thank you), and several key family planning and primary care providers are making major contributions to screening and follow-up efforts (e.g., Planned Parenthood of Central Washington, Yakima Valley Farmworkers Clinic Network, Yakima Neighborhood Health, Cedar River Clinic, IHS, Cascade Women's Healthcare Associates and other reporters).



Among our list of challenges are that no publicly-funded STD clinic operates in Yakima County to facilitate control efforts among disenfranchised, difficult-to-reach, or uncooperative populations; clinical service capacity in our community is limited by resources and other practical considerations; and repeat infections continue to account for 5-10% of cases.

Education, screening, diagnosis, treatment and partner follow-up services for STIs remain a critical public health function for their beneficial effects upon prevention of tubal infertility, tubal pregnancies, neonatal infections, and HIV transmission. In addition to benefits in these areas, STI and family planning prevention efforts also promote healthy reproductive choices and provide parallel opportunities to assist youth in

better equipped for parenthood.

For clinical guidance on STD screening, diagnosis, and treatment, visit the following website:

CDC STD Treatment Guidelines http://www.cdc.gov/std/treatment/default.htm

To report an STD or obtain more information on YHD's STD control services, please call Alex Popov at (509) 249-6531.

Pandemic Influenza Preparedness: YHD Discourages Personal Antiviral Stockpiling

Since late 2003, avian influenza (type A H5N1) has caused the death of millions of birds, particularly chickens and wild waterfowl, primarily in southeast Asia. However, recent avian outbreaks have been detected as far west as Russia, Romania and Turkey. Thus far, western Europe, Africa, and the Americas have been spared. However, migratory patterns of affected species suggests that this may only be a temporary stay.

Meanwhile, of greater immediate concern are the 116 virologically confirmed cases and 60 deaths that have occurred predominantly in Vietnam and Thailand, but also in Cambodia and Indonesia. Also noteworthy has been the detection of episodes of resistance to oseltamivir in Vietnam and this H5N1 strain's universal resistance to amantidine and rimantidine. Last, but certainly not least, several instances of possible human-to-human transmission are being investigated (e.g., mother-to-infant and other intrafamilial spread), although definitive proof of such remains pending. Given the propensity of influenza viruses to mutate and recombine, the proximity of human activity to domestic birds in southeast Asia, and the mobility of people given modern transportation and commerce, emergence of a pandemic strain that remains highly pathogenic in humans and is much more easily transmissible from human-to-human remains a threat.

As media attention to a possible influenza pandemic continues, patients motivated by recent expert opinion are asking their physicians to prescribe oseltamivir (Tamiflu) for personal stockpiles for possible later use during an influenza pandemic. To date, the Centers for Disease Control and Prevention and the Washington State Department of Health have not issued formal opinions regarding this practice. *YHD, however, discourages healthcare providers from prescribing and the public from requesting this or any antiviral agent for private stockpiling purposes with respect to the potential for an avian influenza pandemic.* YHD recognizes, however, that physicians may wish to consider the special circumstances of individual patients before making a decision about whether to honor these requests. As a resource to physicians in such cases, and as background justification for YHD's general discouragement of this practice, formal treatment of this issue can be found by reviewing our website's posting of statements from Public Health Seattle & King County, the Colorado Department of Public Health and Environment, and the Virginia Department of Health at http://www.yakimapublichealth.org. Click on "For Health Care Providers."

The highest current priority for use of oseltamivir is for treatment of people during the upcoming regular flu season who are at highest risk from serious complications from influenza infection (e.g. persons >65 years, young children, and persons with certain chronic diseases). The next highest priority for use of oseltamivir and other influenza antiviral medications is for prophylaxis in persons at high risk of serious complications from influenza infection who are exposed to influenza (e.g. household in which someone has been diagnosed with influenza or hospital or nursing home with an outbreak of influenza) during the regular flu season.

Steps people can take to keep themselves and others healthy this flu season include: getting their flu shot, covering their cough, stay home from work or school when sick with cough illness, and washing hands after coughing or touching respiratory secretions. To view a list of priority groups and clinic sites for influenza immunization, please visit our website at http://www.co.yakima.wa.us/health/commhealth/flushots.htm.

To view multiple links related to this article, please visit http://www.yakimapublichealth.org and click on "For Healthcare Providers."

Advisory Regarding Meningococcal Congjugate Vaccine

As of October 4, 2005 five reports of Guillan-Barre syndrome (GBS) had been filed with the Vaccine Adverse Event Reporting System in adolescents after the receipt of quadrivalent meningococcal conjugate vaccine (MCV4). Athough the investigation is ongoing, early analysis suggests that the rate of GBS based on the number of cases reported within six weeks of administration of MCV4 is similar to what might have been expected to occur by chance alone. However, the timing of the onset of neurologic symptoms (i.e., within 2-5 weeks of vaccination) is of concern. In addition, the extent of underreporting of GBS to VAERS is unknown; therefore, additional cases might be unreported. CDC recommends that vaccine recipients and their consenting guardians be informed of this ongoing investigation as part of the consent process for MCV4. For a complete report on this investigation, please visit http://www.cdc.gov/mmwr/preview/mmwrhtml/mm54d1006a1.htm

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Notifiable Conditions Summary September, 2005

Condition	Cases Reported in September			Cases Reported Through September		
	2005	2004	% change	2005	2004	% change
Campylobacteriosis	12	7	71%	92	83	11%
Cryptosporidiosis	4	0	400%	7	4	75%
Enterohemorrhagic E. coli	3	0	300%	3	2	50%
Giardiasis	2	4	-50%	18	27	-67%
Salmonellosis	4	3	33%	46	30	53%
Shigellosis	3	0	300%	15	6	250%
Hepatitis A acute	0	0	0%	1	2	-50%
Hepatitis B acute	0	1	-100%	4	4	0%
Hepatitis B chronic	1	5	-80%	11	20	-45%
Hepatitis C acute	0	0	0%	1	2	-50%
Hepatitis C chronic	17	25	-32%	161	165	-2.5%
Meningococcal	0	0	0%	0	1	-50%
Pertussis	24	15	60%	155	44	352%
Tuberculosis	0	2	-200%	14	11	27%
HIV New	2	1	100%	8	11	-17%
Chlamydia	74	101	-17%	709	771	-8%
Genital Herpes—Initial	5	9	-45%	70	105	-33%
Gonorrhea	2	34	-96%	99	161	-39%
Primary and Secondary Syphilis	0	0	0%	0	0	0%