



Yakima Health District BULLETIN

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Inside this issue:

Selected Arthropods and the Diseases They Transmit	2
Pertussis on the Rise	2
Homeless TB Update	3
Measles Among Adoptees	3
Foodborne Illness Primer for Physicians	3
Thank You to Providers	4

Arthropod-borne Disease

Summer time brings increased populations of arthropods and exposure as people spend more time outdoors. Arthropods are vectors to a wide array of infectious diseases, as seen in the Table (page 2). The most likely to be acquired locally are Lyme disease, West Nile Virus, and St. Louis encephalitis. When evaluating patients for systemic febrile illnesses of undetermined etiology, ask about vector exposure and travel history. It is also a good idea to make insect exposure reduction pamphlets available to patients in the waiting area of your office or facility (see websites below for resources). Basic reminders can include:

to trap and identify known vector mosquitoes, track the number of dead bird reports, collect certain dead birds for laboratory testing (e.g., crows, ravens, magpies, jays, hawks), and provide reference laboratory testing for cases of suspected WNV neuroinvasive disease. On cases without neurologic involvement, the DOH Public Health Lab will confirm positive serologic results obtained through commercial laboratories. Please report suspected cases of WNV to the Health District at 249-6541. For more clinical information about WNV and other arthropod-borne diseases, visit the following websites:

Resources

Arthropod-borne Disease
<http://www.cdc.gov/ncidod/diseases/insects/diseases.htm>

<http://www.doh.wa.gov/ehp/ts/Zoo/WNV/MosquitoProblems.html>

<http://www.doh.wa.gov/topics/hanta.htm>

<http://www.doh.wa.gov/ehp/ts/Zoo/WATickDiseases.htm>

Tuberculosis
<http://www.cdc.gov/nchstp/tb/>

Foodborne Illness
<http://www.ama-assn.org/ama/pub/category/3629.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5304a1.htm>

- Wear long sleeves and pants when entering insect exposure areas
- Use an effective insect repellent (e.g., DEET) and follow directions for safe use
- Avoid outdoor exposure during peak mosquito hours (e.g., dawn and dusk)
- Eliminate mosquito breeding habitats (e.g., standing water, leaking hose faucets, tires, etc.) in outdoor areas
- Keep rodents away from your home (close access, remove potential food/garbage)
- Avoid rodent infested areas and rodent burrows
- Check pets, children, and yourself for ticks after returning from hikes or working in grasslands or other tick-friendly areas
- Use tweezers to grab ticks from the base and lift; do not squeeze them or remove them with hands

As you may recall, no cases of human or animal West Nile Virus (WNV) were reported in Washington State last year. In Yakima County, one suspected case with false positive serologic results was later ruled-out by subsequent confirmatory testing. To monitor for the possible emergence of WNV this year, the Washington State Department of Health (DOH) will be working with local health departments

Arthropod-borne Disease
http://www.co.yakima.wa.us/health/about_us/bulletin/bulletin1_4.pdf
<http://www.cdc.gov/ncidod/diseases/insects/diseases.htm>

Fleas (Rodent Control)
<http://www.doh.wa.gov/topics/hanta.htm>

Mosquito Repellent Use
http://www.doh.wa.gov/here/CRA/CRA_detail.asp?ID=321

Mosquito Bite Prevention
http://www.doh.wa.gov/here/CRA/CRA_detail.asp?ID=280

Mosquito Control
<http://www.doh.wa.gov/ehp/ts/Zoo/WNV/MosquitoProblems.html>

Tick Bite Prevention
<http://www.doh.wa.gov/ehp/ts/Zoo/WATickDiseases.htm>

<http://www.cdc.gov/ncidod/dvrd/ehrlichia/Prevention/Prevention.htm>

SEE PAGE 2 FOR DISEASE TRANSMISSION INFORMATION

Table: Selected Arthropod Vectors and Some Infections They Transmit

Vector	Disease	Typical Manifestations
Fleas	Plague	Fever, prostration, and suppurative adenopathy
Lice	Infestation	Pruritus, secondary bacterial infections
Mosquitoes	West Nile Virus St. Louis Western equine	Systemic febrile illness with neurologic manifestations (e.g., meningoencephalitis) Local acquisition possible
	Eastern equine La Crosse Japanese Dengue fever Yellow	Systemic febrile illness with neurologic manifestations (e.g., meningoencephalitis) Travel associated
	Malaria	Cyclical febrile illness with anemia Travel associated
Ticks	Lyme disease Relapsing fever RMSF Tularemia Babesiosis Ehrlichiosis	Febrile illness with additional system involvement (e.g., cutaneous, lymphadenitis)
	Tick Paralysis	Acute ascending flaccid paralysis rapidly reversed upon tick removal

Pertussis Cases on the Rise in 2004

Pertussis transmission is increasing again. After no cases were reported in the fourth quarter of 2004, eight cases were reported during January through February of this year, and YHD has investigated or detected 16 cases since March 1. Cases have involved familial clusters most often, but child care centers and other congregate settings also have been involved. YHD not only plays a role in ensuring adequate diagnosis and treatment for reported cases, but also conducts case finding and chemoprophylaxis among their close contacts.

Pertussis typically presents as an afebrile non-productive cough illness preceded by several days of coryza. The cough is paroxysmal, with patients appearing relatively well between coughing spells. In infants and young children, paroxysms are often followed by apneic episodes, cyanosis, and/or vomiting. The pertussis component of DtaP provides approximately 80% protection following the three doses given in infancy, but immunity wanes within 5-10 years following the kindergarten booster, leaving adolescents and adults susceptible. Disease in these age groups usually presents as a prolonged paroxysmal cough illness (e.g., 1-4 months) without additional features.

Please suspect pertussis in patients presenting with spasmodic cough illness lasting greater than two weeks in duration (or of any duration if recent exposure to pertussis is reported). Diagnostic testing of choice is nasopharyngeal swab or lavage submitted for DFA, PCR, and culture. Standard treatment is two weeks of erythromycin estolate (e.g. 40 mg/kg divided qid up to maximum of 2 gm per day). Unfortunately, gastrointestinal tolerance of this regimen is poor and qid dosing presents yet another barrier to compliance. Although clinical experience with alternate macrolides is limited, studies to date support the use of these agents in shorter courses at standard doses (e.g., azithromycin 10 mg/kg qd [500 mg qd maximum] x 5 d, clarithromycin 7.5 mg/kg bid [500 mg bid maximum] x 7d). Because these agents are better tolerated and less frequently dosed than erythromycin, adherence and effectiveness are likely to be greater in clinical practice. For further reading see the articles below:

Pichichero ME. An Open Label Study of Azithromycin for Pertussis. *Pediatr Inf Dis J* 2003;22(9):847-849.

Lebel MH. Efficacy and safety of clarithromycin versus erythromycin for the treatment of pertussis: a prospective, randomized, single blind trial. *Pediatr Inf Dis J* 2001;20(12):1149-54.

Homeless TB Update

During the six months since November 2003, five cases of active TB have been found in homeless men in Yakima County. Two additional suspected (but not confirmed) homeless male cases are on treatment for active TB. From 1999-2002, Yakima County averaged eleven total active cases per year; usually one-to-three cases were homeless males.

All five confirmed recent cases are epidemiologically linked via exposure at service sites for the homeless. All three of the cases for which DNA fingerprinting have been completed show a match (i.e., infected by the same organism); results are pending for the others. This strain is distinct from the one which has caused approximately 50 cases in Seattle's homeless population over the past two years. Most of the outbreak cases here are non-Hispanic white and 30-60 years of age. Only one of the cases is HIV infected. However, this is a debilitated population with alcoholism, other substance abuse, malnutrition, and underlying liver disease being common characteristics. Fortunately, the nature of the secondary cases' presentations (focal non-cavitary disease, tending to be smear negative or minimally smear-positive) suggests that YHD's case finding efforts are being effective in catching disease early. Aggressive screening, follow-up and treatment efforts are underway to ensure that this outbreak is controlled to the maximum extent feasible and that further cases are minimized. To date, serial screening of approximately 162 potentially exposed individuals has yielded a 38% skin-test conversion rate (i.e., recently acquired latent TB) during the three-month interval since the first screening. YHD is providing directly observed therapy to treat latent infections detected through this screening.

When evaluating productive cough illnesses, please maintain a high index of suspicion for tuberculosis in homeless individuals and in persons who are exposed regularly to homeless individuals. The diagnostic test of choice is plain chest radiography, followed by sputum collection (3 specimens) for AFB smear and culture if the radiograph is suggestive of TB (i.e., upper lung zone infiltrates and/or hilar adenopathy). If you suspect a patient has active TB, please contact Lela Hansen, RN, at 249-6532.

For more information on YHDs TB services and TB in homeless individuals, visit the following websites:

http://www.co.yakima.wa.us/health/about_us/bulletin/bulletin2_4.pdf

http://www.co.yakima.wa.us/health/about_us/bulletin/bulletin1_3.pdf

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5249a4.htm>

Clinical Information on TB can be found at <http://www.cdc.gov/nchstp/tb/> and clinical consultation can be obtained by calling YHD at 249-6532.

Washington State Investigation of Measles Among Adoptees from China

Seven Chinese adoptees developed measles after their arrival in King and Snohomish Counties on March 26, 2004, leading to an extensive follow-up investigation among hundreds of local contacts, as well as among passengers exposed aboard aircrafts. No secondary cases were reported and two full incubation periods (42 days) has elapsed since their arrival, suggesting that secondary transmission did not occur. CDC has recommended that adoption proceedings of children from the affected orphanage be temporarily suspended. The last case of measles reported in Yakima County occurred in 1994. Statewide, 1-3 cases are reported per year and have been imported. Endemic transmission of measles in Washington State no longer occurs. Nevertheless, as this report suggests, measles and other seemingly eliminated acute infectious diseases are only a plane flight away. Maintaining good immunization coverage, medical capacity to recognize and diagnose these illnesses, and public health capacity to investigate and control transmission remain a critical part of our health and safety infrastructure.

Measles presents typically with fever, cough, coryza, conjunctivitis. About four days later, a maculopapular rash starts on the face and spreads to the extremities. Typically, ill patients are too sick to maintain usual daily activities. Diagnosis is based upon clinical findings and anti-measles IgM detected in serum (collected ≥ 72 hours after rash onset), as well as isolation of virus from throat swab and urine. Treatment is supportive. Prevention is via immunization. Two doses of measles containing vaccine or detectable serum antibodies (IgG or total) are considered adequate documentation of immunity.

For more information on vaccine preventable diseases, contact YHD's Immunization Program Coordinator, Darlene Agnew at 509.249.6514. To report a rash illness suggestive of measles or rubella, please call YHD Communicable Disease Line at 509.249.6541.

Foodborne Illness Primer for Physicians and Other Health Care Professionals

It is estimated that 76 million people get sick, more than 300,000 are hospitalized, and 5,000 die as a result of foodborne illnesses annually in the U.S. To help increase awareness of foodborne illnesses among physicians, nurses and other healthcare providers, a new edition of *Diagnosis and Management of Foodborne Illness: A Primer for Physicians and Other Health Care Professionals* has been released by CDC and its partners. The updated primer includes new sections on hepatitis A, noroviruses, antibiotic-resistant salmonella, congenital toxoplasmosis and intentional contamination. The primer offers 2.75 hours of Category I Continuing Medical Education credit for physicians, 3.3 hours of Continuing Nursing Education credit for nurses, 3.0 hours of CHES credit for health care educators, or 0.5 Continuing Education Units. A PDF version of the primer is available at <http://www.ama-assn.org/ama/pub/category/3629.html> and <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5304a1.htm>.

YAKIMA HEALTH DISTRICT

104 N 1st St, Suite 204
 Yakima, WA. 98901
 Phone: 509-575-4040
 ext 541 for CD reporting and information
 After hours Public Health Emergencies:
 509-575-4040 #1 (answering service)
 Toll Free: 800-535-5016
 Fax: 509-575-7894
<http://www.co.yakima.wa.us/health/default.html>

Dennis Klukan, Administrator
Christopher Spitters, M.D., Health Officer



Prevention is Our Business

Condition	Cases		Year to Date		Total
	March to April		January to April		
	(Years)	2004	2003	2004	2003
Campylobacteriosis	13	6	30	22	116
Cryptosporidiosis	0	0	0	0	3
Enterohemorrhagic E. coli	0	0	0	0	1
<u>E. coli O157:H7</u>	1	0	1	0	3
Giardiasis	4	5	6	8	29
Salmonellosis	8	9	9	19	55
Shigellosis	2	1	2	4	20
Hepatitis A acute	1	0	1	0	1
Hepatitis B acute	1	0	2	0	0
Hepatitis B chronic	3	3	4	7	22
Hepatitis C acute	2	0	2	1	2
Hepatitis C chronic	33	39	66	80	253
Meningococcal	0	1	1	3	4
Pertussis	16	6	24	16	17
Tuberculosis	2	0	7	1	13
HIV New	5	1	7	1	13
HIV Deaths	0	0	0	1	2
HIV Cumulative Living	128	110	128	110	122
Chlamydia	162	175	322	309	953
Genital Herpes—Initial	30	15	50	27	82
Gonorrhea	21	13	42	22	107
Primary and Secondary Syphilis	0	0	0	1	2

Thank You!

Thank you very much for returning your provider surveys. Below are some statistics about you and your colleagues in the Yakima Valley:

Total Surveys Sent:
 169 Offices & 582 Providers

Number and Percent of Surveys Returned:
 137 (81%)

Number of Offices that Provided Email Addresses:
 44 Offices

Number of Providers Willing to Help in the Event of an Emergency:
 141

The extremely high return rate combined with providers willingness to help in an emergency demonstrates the dedication to our community and strong relationship with the Yakima Health District. **Thank you for your cooperation!**