Yakima Health District
BULLETIN

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Revised Mumps Recommendations

Since December 2005, over 600 probable and confirmed mumps cases have been reported to the Iowa Department of Public Health. The majority of cases are occurring among persons 18-25 years of age, many of whom are vaccinated. Additional cases of mumps, possibly linked to the Iowa outbreak, are also under investigation in eight neighboring states, including Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, and Wisconsin. The source of the current US outbreak is unknown. However the mumps strain has been identified as genotype G, the same genotype circulating in the United Kingdom (UK). The outbreak in the UK has been ongoing from 2004 to 2006 and has involved > 70,000 cases. Most UK cases have occurred among unvaccinated young adults. The G genotype is not an unusual or rare genotype and, like the rest of known genotypes of mumps, it has been circulating globally for decades or longer.

Mumps is an acute viral infection characterized by a non-specific prodrome including myalgia, anorexia, malaise, headache and fever, followed by acute onset of unilateral or bilateral tender swelling of parotid or other salivary glands. In unvaccinated populations, an estimated 30-70% of mumps infections are associated with typical acute parotitis. However, as many as 20% of infections are asymptomatic and nearly 50% are associated with non-specific or primarily respiratory symptoms, with or without parotitis. Testing is essential as not all cases of parotitis are mumps, although mumps is the only known cause of epidemic parotitis. Complications of mumps infection can include deafness, orchitis, oophoritis, or mastitis (inflammation of the testicles, ovaries, or breasts respectively), pancreatitis, meningitis/ encephalitis, and spontaneous abortion. With the exception of deafness, these complications are more common among adults than children.

Transmission of mumps virus occurs by direct contact with respiratory droplets, saliva or contact with contaminated fomites. The incubation period is generally 16-18 days (range 12-25 days) from exposure to onset of symptoms. Persons suspected of having mumps should be isolated for five days after symptom onset. In health care settings, the use of respiratory precautions is recommended (5). The principal strategy to prevent mumps is to achieve and maintain high immunization levels. Data from outbreak investigations have shown that the effectiveness of MMR against mumps is approximately 80% after one dose and limited data suggest effectiveness of approximately 90% after two doses. Mumps vaccine has not been shown to be effective in post-exposure prophylaxis.

Evidence of immunity includes physician diagnosis or laboratory evidence of mumps infection, birth before 1957 or one dose of MMR vaccine. Since two doses of MMR vaccine is more effective than one dose for preventing mumps, a second dose of MMR vaccine is recommended for the following groups: health care workers, school-aged children, students at post-high school educational institutions and other groups considered at high risk of exposure.

An acute serum sample should be drawn at the time of clinical diagnosis. If the acute IgM is positive, a convalescent specimen is not necessary. If the acute IgM is negative, a second serum specimen should be collected approximately 2-3 weeks later. The convalescent specimen should be tested for IgM, as well as IgG paired with the acute specimen. In the absence of recent vaccination, a four-fold increase in IgG titer as measured by quantitative assays, or a seroconversion from negative to positive using a standard serologic assay on acute to convalescent serum specimens is considered a positive diagnostic result for mumps. In addition, **buccal swab specimens** should be collected for RT-PCR detection and/or isolation (i.e. viral culture) of mumps virus. The preferred viral specimen is a parotid (or other salivary gland) duct swab, following massage of the salivary glands for 30 seconds. Viral mumps specimens should be collected as close to symptom onset as possible, preferably within 1-3 days of onset of parotitis. In the past, urine and buccal swabs were acceptable, but **we are now discouraging urine samples** due to low yield in favor of only buccal swabs.

If you see a suspected case of mumps, please call (509) 249-6541 to report the case and discuss specimen submission and disease control interventions.
For more information, visit: http://www.cdc.gov/nip/diseases/mumps/.

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IS 2007 THE YEAR FOR WEST NILE ILLNESS IN YAKIMA COUNTY?

By Laura Kramer, Environmental Health Specialist – Yakima Health District

West Nile Virus (WNV) has been found in Yakima County almost every year since it was first identified in Washington in 2002. The first three confirmed human cases of WNV disease in Washington residents, though, occurred only last year. Given trends in other western states (table), where incidence jumps from single or double-digit figures to triple and even quadruple-digit numbers over a two to three year span, it is conceivable that we may experience a significant rise in WNV disease incidence in 2007 (see insert).

Idaho	California	Colorado	Washington
2004-3 cases	2002- 1 case	2001- 0 cases	2005- 0 cases
2005-13 cases	2003- 3 cases	2002- 14 cases	2006- 3 cases
2006-996 cases	2004- 779 cases	2003- 2,947 cases	2007- unknown

WNV is a flavivirus transmitted via infected mosquitoes, primarily *Culex spp*. Related viruses include other arthropod-borne viruses like dengue, yellow fever, St. Louis encephalitis, and eastern equine encephalitis. Rare episodes of parenteral transmission via blood and organ donations and maternal-fetal transmission have been reported, but WNV is otherwise not transmissible from person-to-person.

Onset of symptoms associated with West Nile virus infection is typically 3-12 days post-exposure. Only 20% develop symptoms of illness, including fever, headache, myalgia, with or without rash or lymphadenopathy. Neuroinvasive disease occurs in about 1% of clinically evident cases and can be characterized by headache, high fever, neck stiffness, altered mental status, photophobia, extrapyramidal signs, convulsions, myalgia, weakness, paralysis, coma, and even death. Duration of and recovery from West Nile encephalitis or meningitis is lengthy with residual neurological effects sometimes noted. Most cases of neuroinvasive disease occur among the elderly or immunocompromised.

Diagnosis of WNV is typically based upon clinical suspicion combined with demonstration of anti-WNV IgM in serum collected during days 8-14 or CSF collected during days 3-8 of illness. In general, such testing should be conducted through your clinical reference laboratory. PCR testing is available in some settings but is not generally recommended for clinical use. The Washington State Department of Health's Public Health Laboratories will only conduct testing on specimens collected from cases of neuroinvasive disease or suspected episodes of non-arthropod borne transmission, as well as for confirmation of positive commercial laboratory results.

WNV disease of any form or severity is classified as a notifiable condition under WAC 246-101 and should be reported to YHD by calling (509) 249-6541. Confirmation of clinically suspected cases should be pursued through serologic testing. As with previous years, WNV surveillance of the avian population will continue in 2007. Dead birds found throughout the county should be reported to the Yakima Health District as soon as possible by calling (509) 249-6550 or (509) 249-6508.

For more information:
http://www.co.yakima.wa.us/health/documents/WNVepitrends.pdf

Temporary Requirement for Reporting Mercury Testing

Recently a residential exposure to mercury occurred among several children in a local neighborhood. In the summer of 2006, they had found about one liter of metallic mercury in an abandoned bottle. After several months of playing with the material, one of the children developed behavioral changes, tremor, and hallucinations. A 24-hour urine collection contained elevated mercury (Hg) levels (884 micrograms; normal < 20 ug). He was hospitalized, treated with chelation therapy, and is now rehabilitating.

The other two household members also had markedly elevated 24-hour urine Hg excretion. Six (50%) of 12 persons tested from an adjacent property also had both urine Hg >20 mcg/L (range: 43-226) and blood Hg >10mcg/l (range: 13-29) detected on randomly collected specimens. None reported symptoms and all lived adjacent to or frequented the property of the affected child. Contamination was detected in both properties, the sidewalk, and the street. The United States Environmental Protection Agency and the Washington State Department of Ecology, with assistance from local public health and safety agencies, exercised control, investigation, and remediation of the affected area. Both families have remained away from the site while these efforts have been underway. Total costs of remediation are estimated to have exceeded several hundred thousand dollars. The investigation has not led to discovery of the original source of the mercury.

Although this particular exposure appears to have been interrupted, we are requiring that health care providers report all mercury testing results to YHD until the situation is thoroughly resolved. This is necessary to exclude the existence of other children exposed to this site who have not yet been identified, as well as to reasonably exclude ongoing Hg exposures among other individuals via a common source. Negative results may be faxed to (509-249-6628); we prefer to receive a telephone call (509-249-6541) on elevated results. This temporary reporting requirement remains in effect until further notice, but it is not likely to exceed two months. We appreciate your cooperation.

For information on how to test for mercury exposure, go to http://www.co.yakima.wa.us/health/documents/HgAlertShort.doc. Testing should be limited to those who report exposure in this scenario, plus those who report symptoms suggestive of Hg or who work with mercury in occupational or hobby settings.
For more information: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5406a3.htm

Notice: Wound Botulism Re-visited

Two cases of wound botulism have been diagnosed in Yakima County during the past two months. Both have been associated with injection of black tar heroin. Please maintain a low threshold of suspicion for botulism in drug injectors who present with bulbar weakness or descending flaccid paralysis and report such cases to YHD immediately at (509) 249-6541 (after hours, 509-575-4040, #1 @ prompt). For more information, YHD's recent Health Alert on this matter can be viewed at http://www.co.yakima.wa.us/health/documents/Case_Wound_Bot_May_2007.doc

Revised GC Treatment Guidelines from CDC

During 2005 and 2006, reported cases of gonorrhea in Yakima County totaled 139 and 166, respectively. Through April 30, 2007, 48 cases have been reported.

CDC has recommended single-dose fluoroquinolone regimens for the treatment of gonococcal infections since 1993. Fluoroquinolone-resistant *Neisseria gonorrhoeae* (QRNG) was identified as a problem in Asia in 1991 and was first identified in Hawaii in the same year, but only sporadic occurrences were noted in the continental United States during the 1990s. However, since 1999, increasing resistance of *N. gonorrhoeae* to the fluoroquinolones has been observed, first in Hawaii, then in California and other western states, then among MSM, and now in other populations and regions.

During January--June 2006, QRNG was identified in 25 out of 26 CDC sites that conduct systematic surveillance for gonococcal antimicrobial susceptibility. Increases in the prevalence of QRNG were observed among isolates from heterosexual males and MSM in most regions of the country (see insert). As a result, CDC no longer recommends fluoroquinolones for treatment of gonorrhea in the United States; similarly, CDC no longer recommends fluoroquinolones for treatment of other conditions that might be caused by *N. gonorrhoeae*, such as PID. The options for treating gonococcal infections in the United States are limited (Insert). Some evidence suggests that a single oral dose of cefpodoxime 400 mg or cefuroxime axetil 1 g are reasonable oral alternatives for the treatment of urogenital and anorectal gonorrhea. Alternative parenteral single-dose regimens for urogenital and anorectal gonorrhea include ceftizoxime 500 mg, cefoxitin 2 g with probenecid 1 g orally, or cefotaxime 500 mg. However, these cephalosporin regimens do not offer any advantage over ceftriaxone. Cefixime and spectinomycin are currently not available in the United States. Test of cure is not recommended routinely for patients with uncomplicated gonorrhea who have been treated with recommended or alternative regimens. Persons with persistent symptoms of gonococcal infection or whose symptoms recur shortly after treatment with a recommended or alternative regimen should be reevaluated by culture for *N. gonorrhoeae*; positive isolates should undergo antimicrobial-susceptibility testing. Clinicians and laboratories should notify YHD of all gonorrhea cases by calling 509-249-6541 or faxing 509-249-6628 and should make arrangements for evaluation and chemoprophylaxis of sexual partners (see http://www.co.yakima.wa.us/health/documents/bulletin/bulletin5_6.pdf).

Please, also report to YHD any suspicion of treatment failure or antimicrobial resistance. For more information, visit http://www.cdc.gov/std/gonorrhea/arg.

Labor & Industries Directives for TB

On March 19, the Washington Department of Labor and Industries updated it directives regarding tuberculosis (TB) control in health care settings to include the following CDC guidelines as the reference for enforcement activities:

– *Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings*, MMWR *2005; 54 (No. RR-17, 1-141)*
– *Prevention and Control of Tuberculosis in Correctional and Detention Facilities, MMWR 2006; 55, RR-09.*

These guidelines update and supplant previous Guidelines issued in 1994.

The following health-care settings are required to have a written TB control program:

- Health-care settings where patients with confirmed or suspect TB are treated or to which they are transported
- Health-care settings within correctional institutions
- Long-term care settings for the elderly
- Homeless shelters
- Drug treatment centers

Other health-care settings (e.g. emergency medical services, hospices) may require TB control programs based on the assessment of risk factors such as: the number of patients with suspected or diagnosed TB disease encountered in the last 5 years; the community TB disease profile; and the prevalence of other risk factors in the patient population. It is recommended that a risk assessment be performed on a regular basis using the criteria set forth in the CDC guidelines cited above.

We have posted tools for developing infection control plans in clinical settings on YHD's website http://www.co.yakima.wa.us/health/providersonly/bulletin.htm. Additional information, references, and tools can be found at the following websites: www.cdc.gov/nchstp/tb, www.nationaltbcenter.edu.

Tdap Requirement for 6th Graders

Starting July 1, 2007 children attending 6th grade will be required to show proof of Tdap vaccination if it has been 5 years since receiving a tetanus-containing vaccine. YHD reminds pediatric care providers that all children aged 11-18 should receive one booster dose of tetanus-diphtheria-acellular pertussis vaccine (Tdap). The preferred age for Tdap vaccination is 11--12 years. Adolescents aged 11-18 years who received Td, but not Tdap, are encouraged to receive a single dose of Tdap to provide protection against pertussis if they have completed the recommended childhood DTP/DTaP vaccination series. An interval of at least 5 years between Td and Tdap is encouraged to reduce the risk for local and systemic reactions after Tdap vaccination. However, an interval less than 5 years between Td and Tdap can be used. Vaccine providers should administer Tdap and tetravalent meningococcal conjugate vaccine to adolescents aged 11--18 years during the same visit if both vaccines are indicated and available.

For more information on Tdap, visit http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5503a1.htm?s_cid=rr5503a1_e.

YAKIMA HEALTH DISTRICT

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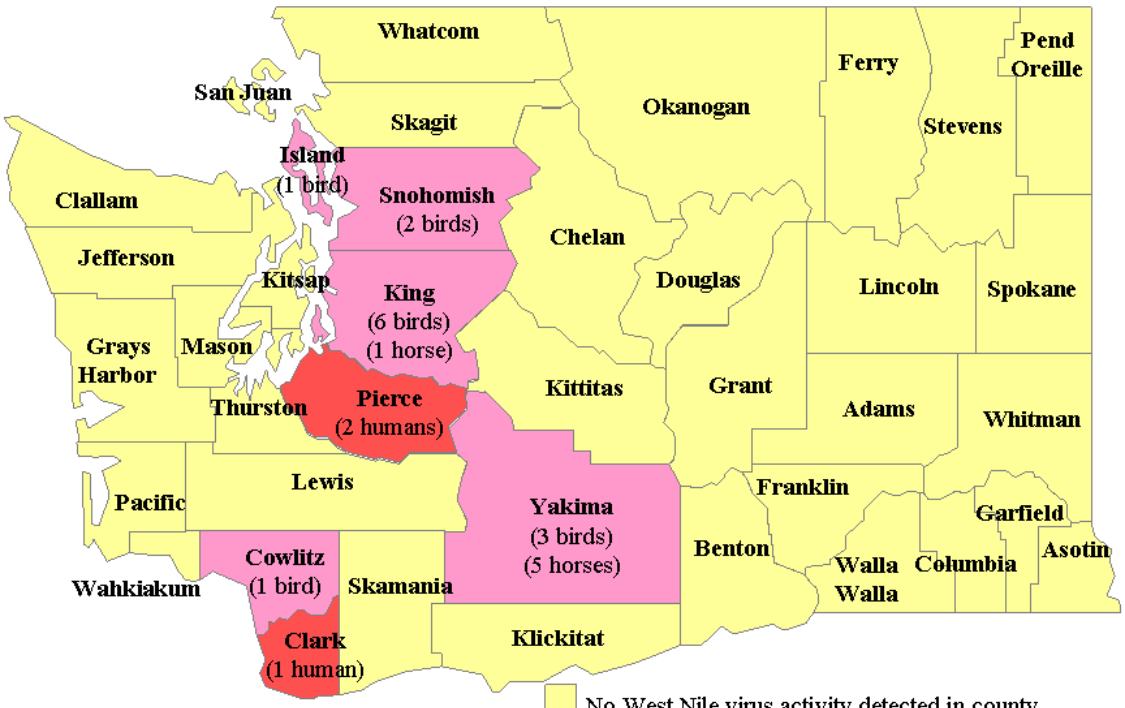
	Cases			Total Cases by Year	
Condition *(includes confirmed and probable cases)*	**Jan-Apr**	**Jan-Apr**	**Jan-Apr**	**Total Cases by Year**	**Total Cases by Year**
	2007	**2006**	**2005**	**2006**	**2005**
Campylobacteriosis	18	68	18	205	113
Cryptosporidiosis	6	1	1	8	7
Enterohemorrhagic E. coli	0	0	0	5	3
Giardiasis	7	5	6	30	28
Salmonellosis	8	5	17	37	49
Shigellosis	5	11	8	36	25
Hepatitis A acute	0	1	1	1	3
Hepatitis B acute	0	3	0	4	1
Hepatitis B chronic	2	4	5	11	14
Hepatitis C acute	1	1	1	2	1
Hepatitis C chronic	69	75	82	176	214
Meningococcal	1	0	0	1	2
Pertussis	6	7	32	22	191
Tuberculosis	3	2	4	16	14
HIV New	8	1	2	3	14
HIV Deaths	1	0	1	0	2
HIV Cumulative Living	144	136	133	137	138
Chlamydia	375	367	329	1120	973
Genital Herpes—Initial	19	24	27	70	99
Gonorrhea	48	56	43	166	138
Primary and Secondary Syphilis	0	3	0	3	2

Notifiable Conditions Summary Jan– Apr, 2007

Washington State West Nile Virus Summary, 2006



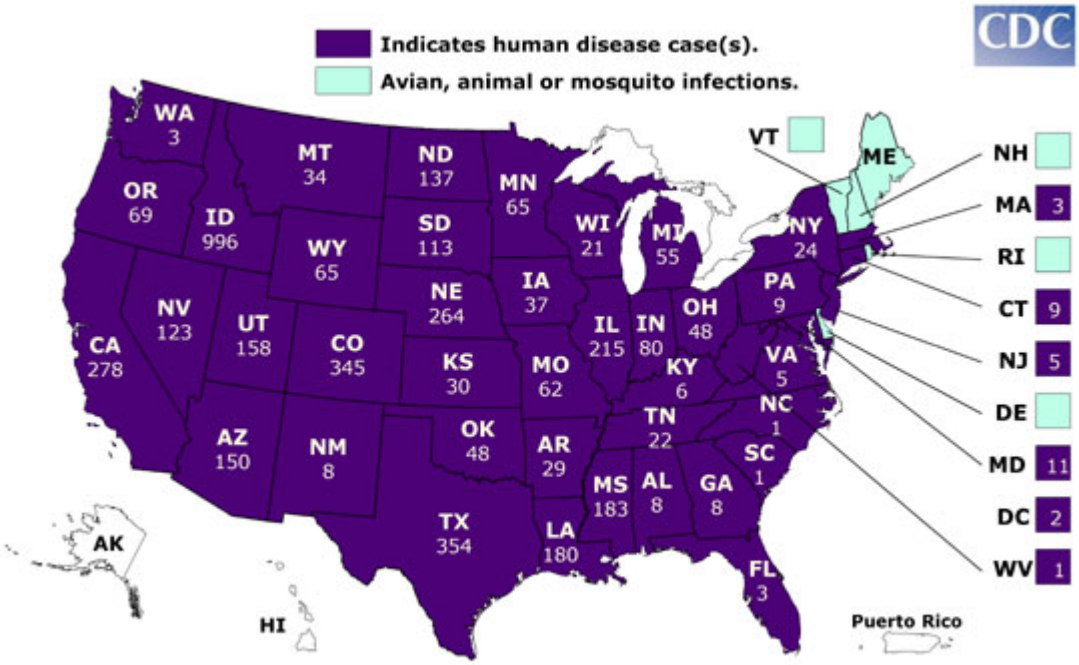
Environmental surveillance data provided by DOH Zoonotic Disease program

No West Nile virus activity detected in county

Human infected with West Nile virus identified in county

Bird/horse infected with West Nile virus identified in county

2006 West Nile Virus Activity in the United States (Reported to CDC as of May 1, 2007*)



*Map shows the distribution of avian, animal, or mosquito infection occurring during 2006 with number of human cases if any, by state. If West Nile virus infection is reported to CDC from any area of a state, that entire state is shaded.

BOX. Updated recommended treatment regimens for gonococcal infections and associated conditions — United States, April 2007

Uncomplicated Gonococcal Infections of the Cervix, Urethra, and Rectum*

Recommended Regimens

Ceftriaxone 125 mg in a single intramuscular (IM) dose

OR

Cefixime† 400 mg in a single oral dose

PLUS

TREATMENT FOR CHLAMYDIA IF CHLAMYDIAL INFECTION IS NOT RULED OUT

Alternative Regimens

Spectinomycin† 2 g in a single IM dose

OR

Cephalosporin single-dose regimens§

Uncomplicated Gonococcal Infections of the Pharynx*

Recommended Regimens

Ceftriaxone 125 mg in a single IM dose

PLUS

TREATMENT FOR CHLAMYDIA IF CHLAMYDIAL INFECTION IS NOT RULED OUT

Disseminated Gonococcal Infection

Updated treatment regimens available at http://www.cdc.gov/std/treatment.

Pelvic Inflammatory Disease

Updated treatment regimens available at http://www.cdc.gov/std/treatment.

Epididymitis

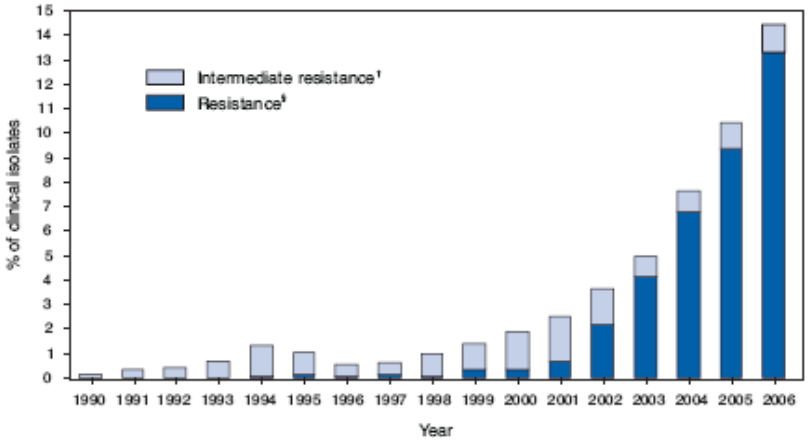
Updated treatment regimens available at http://www.cdc.gov/std/treatment.

* For all adult and adolescent patients, regardless of travel history or sexual behavior. Information regarding management of these infections in patients with documented severe allergic reactions to penicillins or cephalosporins is available at http://www.cdc.gov/std/treatment.

† Not available in the United States.

§ Other single-dose cephalosporin regimens that are considered alternative treatment regimens against uncomplicated urogenital and anorectal gonococcal infections include ceftizoxime 500 mg IM; or cefoxitin 2 g IM, administered with probenecid 1 g orally; or cefotaxime 500 mg IM. Some evidence indicates that cefpodoxime 400 mg and cefuroxime axetil 1 g might be oral alternatives.

FIGURE. Percentage of *Neisseria gonorrhoeae* isolates with intermediate resistance or resistance to ciprofloxacin, by year — Gonococcal Isolate Surveillance Project, United States, 1990–2006*



* Data for 2006 are preliminary (January–June only).

† Demonstrating ciprofloxacin minimum inhibitory concentrations (MICs) of 0.125–0.500 μg/mL.

§ Demonstrating ciprofloxacin MICs of ≥1.0 μg/mL.