Yakima Health District BULLETIN

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Pertussis Vaccine in Older Adults

Rates of Bordetella pertussis (pertussis), also known as "whooping cough" have been on the rise since the 1980s with reports of between 5,000-7,000 cases each year in the United States. In the state of Washington, there were 291 cases of Pertussis in 2009 representing a rate of 4.4 per 100,000. In Yakima, there were 34 cases in 2009, representing a rate of 14.3 per 100,000. In 2005, Yakima experienced a robust case load of pertussis with 189 infections (rate of 82.4) but the trends since that time have shown a leveling off. Overall, however, the rates in Yakima are above that at the state level. See below for a depiction of local trends.

The typical presentation of pertussis in young children consists of an afebrile respiratory illness characterized by an initial catarrhal phase followed after several days by paroxysmal cough and post-tussive phenomena (e.g., vomiting, apnea, cyanosis). This highly communicable disease can result in complications including seizures and encephalopathy, especially in infants. In adolescents and adults, the disease may present only as a persistent cough that is sometimes paroxysmal and may include post-tussive vomiting. It is generally thought that adolescents and young adults, whose immunity from primary childhood immunization has waned, account for the majority of pertussis transmission in the community. The role which older adults play in sustaining transmission is thought to be negligible on a population basis, although transmission to or from an elderly individual is certainly plausible.

Contagion from respiratory secretions can result in upwards of 90% of susceptible members of a household becoming infected. The pertussis vaccine was developed in 1930. In 1991, DTaP, developed to prevent diphtheria, tetanus and pertussis, was licensed for use in children younger than 7 years of age. The lower case "a" in DTaP connotes "acellular," resulting in fewer side effects (e.g., fever, irritability, seizures) than the whole cell vaccine which preceded it. In 2005, another version of the vaccine (Tdap) was developed for use in young adolescents (11-12 years of age) and was also intended for use in the place of a tetanus/diphtheria booster for adults ages 19-64.

Given that the disease has historically had little impact in older populations, relatively little clinical or public health attention has been devoted to documenting pertussis vaccine's safety in those ≥65 years of age. Manufacturers have not thus far sought FDA approval for its use among individuals ≥65 years of age. Public health guidelines addressing outbreaks of pertussis support vaccination among individuals in close contact with those at highest risk (neonates and infants, predominantly). These individuals include unvaccinated children/adolescents, post-partum women, and adults less than 65 years of age.

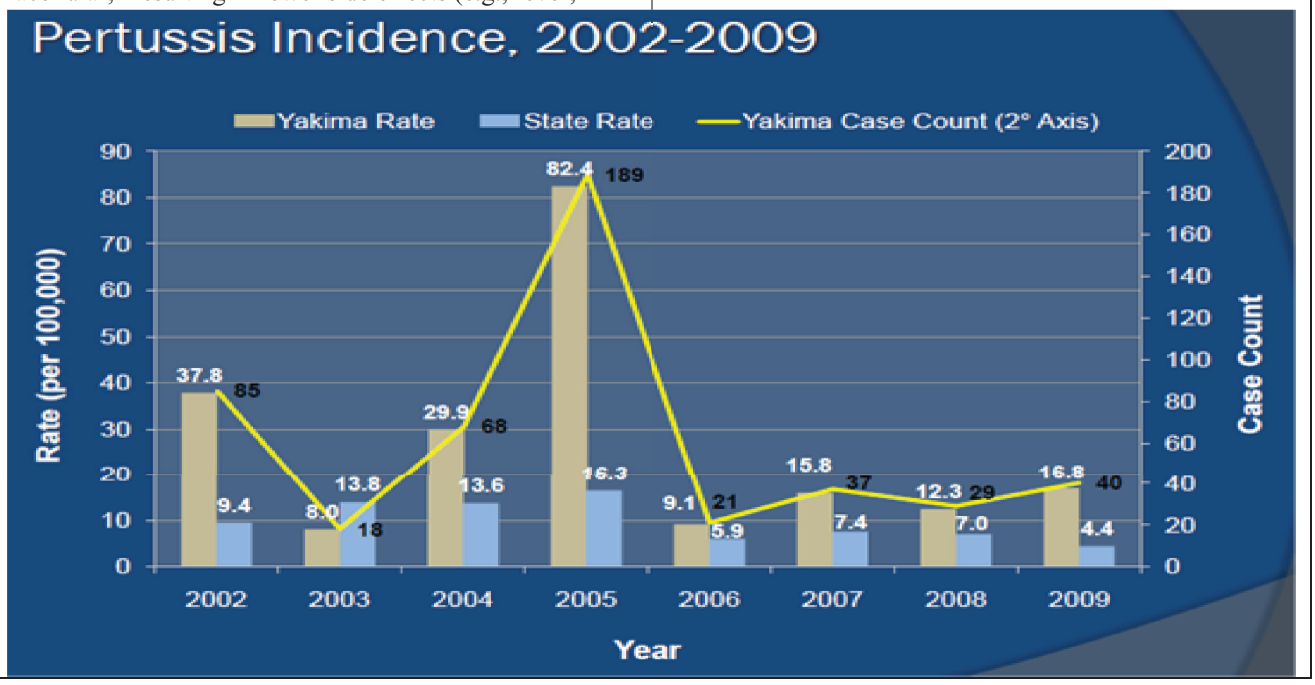
In response to an outbreak of 40 cases of PCR confirmed pertussis in Lewis County since the beginning of 2010, public health officials in Washington state recently debated the off-label use of pertussis vaccine in adults ≥65 years of age to maximize protection to all members of the population.

In response to these discussions, the Communicable Diseases Epidemiology Section of the Washington State Department of Health offered the following guidance based on yet-to-be-published deliberations among pertussis vaccine and epidemiology experts.

Situations in which a physician may consider giving an acellular pertussis vaccine to persons age 65 and older:

1. If an elderly person is in close contact with neonates, infants, children or pregnant women and the elderly person poses a risk of bringing pertussis from the community into the household.

2. If an elderly person is in regular contact with children,



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adolescents, and young adults and is at risk of serious respiratory disease due to pertussis or at risk for intracranial bleeding.

Also, in such cases, physicians must weigh the benefits of pertussis vaccine against the likelihood that an elderly person may not have an immune response or may experience a vaccine-associated adverse event and then act to benefit the patient.

YHD would add to this guidance that the decision to vaccinate an individual ≥65 years of age against pertussis should involve the patient in a full discussion of the anticipated benefits, risks, alternatives, costs, and adverse effects of the intervention, as well as acknowledgement that it is an off-label use of the vaccine.

The Centers for Disease Control and Prevention's (CDC's) Advisory Committee on Immunization Practices (ACIP) has not modified its existing recommendations for use of Tdap among adults, which are as follows:

1) adults aged 19--64 years should receive a single dose of Tdap to replace tetanus and diphtheria toxoids vaccine (Td) for booster immunization against tetanus, diphtheria, and pertussis if they received their last dose of Td ≥10 years earlier and they have not previously received Tdap

2) Intervals shorter than 10 years since the last Td may be used for booster protection against pertussis (e.g., ≥2 years).

3) Adults who have or who anticipate having close contact with an infant aged <12 months (e.g., parents, grandparents aged <65 years, child-care providers, and health-care personnel) should receive a single dose of Tdap to reduce the risk for transmitting pertussis.

4) When possible, women should receive Tdap before becoming pregnant. Women who have not previously received Tdap should receive a dose of Tdap in the immediate postpartum period;

5) Health-care personnel who work in hospitals or ambulatory care settings and have direct patient contact should receive a single dose of Tdap as soon as feasible if they have not previously received Tdap.

YHD will notify health care providers if an outbreak or endemic spread of pertussis locally signals the need for systematic expansion of pertussis immunization beyond the scope set forth in ACIP guidelines.

REFERENCES:

Centers for Disease Control and Prevention. Pertussis (Whooping Cough) Vaccination http://www.cdc.gov/vaccines/vpd-vac/pertussis/

ACIP (CDC). Preventing Tetanus, Diphtheria, and Pertussis Among Adults: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5517a1.htm

Pertussis Vaccine in Elderly Persons (unpublished communication), Anthony Marfin, MD/MPH/MA, Washington State DOH, August 2010.

Cryptococcus gattii Infections

Cryptococcus gattii (*C. gattii*) is a basidiomycetous, encapsulated yeast, once considered confined to tropical and subtropical climates. Endemic in Australia, it causes about 0.9 case per million residents per year. Transmission is thought to occur via inhalation of aerosolized spores. Animal cases have been observed among cats primarily, but also among dogs, horses, llamas, ferrets, pet birds, and porpoise. An outbreak in Vancouver Island, BC, Canada between 1999 and 2003, led to a clinical and public health effort to investigate the relevant characteristics and trends of this emerging infection. Public health officials, using results from polymerase chain reaction fingerprinting techniques obtained from clinical isolates, learned about the specific genetic subtype (molecular type VGIIa/major) causing the vast proportion of cases during that period. *C. gattii* was recovered from a number of samples including Douglas fir, Alder and Garry Oak, as well as surrounding air and soil.

Ultimately, in British Columbia, there were 218 cases of human *C. gattii* infection during 1999-2007 (approximately 5.4 cases per million per year). Since 2006, human and animal cases of *C. gattii* infection have moved beyond the borders of Vancouver Island into other parts of the Pacific Northwest, including Washington and Oregon. In total,15 human cases have been reported in Washington State residents and 23 animal cases. A Yakima County dog, that died in 2008, accounts for one of two animal cases in Washington State that has not occurred in a county on the shores of Puget Sound. Yakima County is not consistent with the typical ecology associated with this organism (Douglas fir and Hemlock forests). This dog was adopted as a stray in 2007; it's geographic history prior to 2007 is unknown. Environmental sampling for *C. gattii* in Yakima County was negative in a 2008 exercise. Nevertheless, at a minimum, travelers returning from endemic areas could be at risk for illness upon return home to Yakima County, warranting consideration of the diagnosis in clinically compatible cases.

Strains recovered in Oregon represent a unique VGIIc genotype. Infections in the Pacific Northwest appear to be caused by several genotypes but the major strain is novel and may be the result of unique mating patterns of the organism in addition to environmental changes, ecological shifts, and possible host factors.

Laboratory diagnosis of cryptococcal infections is based upon culture of appropriate specimens (e.g., bronchoalveolar lavage or cerebrospinal fluid) and cryptococcal antigen testing (e.g. CSF, serum). While antigen testing can help identify cryptococcal infection, it does not distinguish between *C. gattii* and other species of *Cryptococcus*. Culture confirms the specific cryptococcal entity and genotypic analysis generally follows.

Although cryptococcal infections have historically thought to infect predominantly hosts that are immunosuppressed (classically *C. neoformans* among those with HIV), *C. gattii* infections generally occur in immunocompetent hosts. Certainly, those that are immunosuppressed are also at risk of infection, but for reasons that are not entirely clear, this happens more rarely. The most common manifestation of *C. gattii* in humans is pulmonary infection. Patients typically present with cough, dyspnea and chest pain, along with chest radiography demonstrating multi-lobar infiltrates or multiple lung nodules. Other sites of infection, including the central nervous system (CNS), can and often do occur. In those without HIV, CNS infection with *C. gattii* (as compared to *C. neoformans*) is associated with greater neurological complications, a delay in starting therapy, and a higher incidence of neurosurgical interventions. This trend occurs despite similar susceptibility of the two species to typical antifungals.

Prompt recognition and aggressive therapy are the cornerstone to avoiding treatment complications or failures associated with *C. gattii* infections. For CNS and disseminated infections, treatment induction, consolidation and suppressive therapy are the same as for *C. neoformans*. Aggressive follow-up clinical exams must occur to avoid some of the complications due to cryptococcal hydrocephalus but the general management is the same for both *C. gattii* and *C. neoformans*. Among pulmonary *C. gattii* infections, solitary pulmonary cryptococcoma is an indication for oral fluconazole, whereas large or multiple pulmonary cryptococcomas should be treated with a combination of amphotericin B and flucytosine for at least four-to-six weeks (followed by fluconazole for suppression for six-to-18 months).

Health care providers are encouraged to consider the diagnosis when appropriate. If encountered, confirmed *C. gattii* infections diagnosed in either animals or humans should be reported to YHD on the same working day as a rare disease of public health significance (WAC 246 -101-101). Diagnosis and management in humans should be carried out in consultation with an infectious diseases specialist.

Sources:

- Galanis E, MacDougall L, Kidd S, Morshed M, British Columbia *Cryptococcus gattii* Working Group. Epidemiology of *Cryptococcocus gattii*, British Columbia, Canada, 1999–2007. *Emerg Infect Dis*. 2010 Feb. http://www.cdc.gov/EID/content/16/2/251.htm

- MacDougall L, Kidd SE, Galanis E, Mak S, Leslie MJ, Cieslak PR, et al. Spread of *Cryptococcus gattii* in British Columbia, Canada, and detection in the Pacific Northwest, USA. *Emerg Infect Dis*. 2007 Jan. http://www.cdc.gov/ncidod/EID/13/1/42.htm

- IDSA Guidelines: Clinical Practice Guidelines for the Management of Cryptococcal

Disease: 2010 Update by the Infectious Diseases Society of America. *Clinical Infectious Diseases* 2010;50:291–322. http://www.idsociety.org/content.aspx?id=9200#cryp
- Centers for Disease Control and Prevention. Spread of Rare Fungus from Vancouver Island (podcast). http://www2c.cdc.gov/podcasts/player.asp?f=3927

Administrative Consolidation of Community Services for HIV/AIDS Beginning in 2011

In 1988, RCW 70.24.400 established six regional service networks to administer state and federal funding for prevention and care related to the human immunodeficiency virus (HIV) and the acquired immunodeficiency syndrome (AIDS). Since then, YHD has served as the lead agency for Region II, serving Yakima, Benton, Chelan, Douglas, Franklin, Grant, Kittitas and Klickitat Counties.

There are currently an estimated 173 people living with HIV in Yakima County (1.6% of state total). In 2009, 12 new cases of HIV were reported in Yakima County (2% of state total).

After two decades of operating a regionalized system, the 2010 Washington State Legislature unanimously voted to have the Washington State Department of Health (DOH) *directly* distribute such funding to public and private providers in communities. Engrossed House Bill 2360 was signed into law this past March by Governor Gregoire, eliminating Region II and the rest of the regional AIDSNETs, as well as their regional planning councils.

Beginning January 1, 2011, community service providers formerly funded via Region II will apply directly to DOH for funding. The law delegates to DOH the establishment of standards and criteria for awarding such funding.

The intent of this change is to *"reduce administrative costs, find efficiencies in existing systems and maximize service delivery to clients."* DOH has expressed an intent to *"work to make funding follow epidemiological trends in order to reach communities most impacted by HIV in the state, including gay and bisexual men, African Americans and Latinos. DOH will target funding to essential services, such as HIV testing, partner services and case management, so these services are available to individuals across the state."*

As part of its transition to the new system, DOH held a series of meetings throughout the state to get input from regional partners, service providers, and affected individuals. The Region II meeting occurred June 30. Key messages expressed at the encounter included ensuring:

- HIV-infected individuals are represented on the state planning council,
- services and communications reflect the needs of Latino and Native American populations,
- use of appropriate communications technology to involve partners statewide and reduce travel-related barriers to participation,
- training for and communication with case managers, and
- sustained availability of comprehensive sex education.

Concerns were also raised that:

- local service providers and clients could be forgotten or lost in statewide planning and communications processes,
- a statewide approach may lack regional tailoring of services or overlook less visible risk groups (e.g., rural Latino men who have sex with men),
- larger communities with more cases might draw away funding awarded solely on the basis of numbers,
- communities with more extensive infrastructure have more capacity and expertise to succeed in responding to competitive requests for proposals, and
- loss of the AIDSNETs removes an accountability check on DOH transparency and communications.

DOH aims to be responsive to these needs and concerns by focusing on four guiding principles:

- maximizing service delivery to constituents in an era of diminishing resources,
- reframing the governmental public health response to HIV/AIDS to more effectively serve the state's populations,
- reinvigorating efforts to reduce new HIV infections and to ensure persons living with HIV are provided with quality care and treatment services, and
- honoring successes of the past by leveraging effective practices and relationships.

At the local level, it is YHD's intent to continue to support efforts aimed at ensuring access to prevention, care and case management. YHD will also support DOH's efforts to forge partnerships with local medical providers and grassroots community leaders, conduct needs assessments, evaluate program effectiveness, and ensure transparency and accountability. All parties involved seek the same end: reducing the transmission of HIV and promoting equity in access to prevention and care services.

YHD would like to take this opportunity to thank Wendy Doescher for her service as Regional Coordinator. The impact of her passion, effort, and tireless advocacy for HIV prevention and care in Yakima and surrounding counties will long outlast the tenure of the Region II AIDSNET itself. YHD Administrator, Dennis Klukan, has served as Region II AIDSNET Director since 1998, and this year he presided as Chair of the AIDSNET Council. Finally, YHD expresses thanks to the service providers, volunteers, neighboring local health jurisdictions, other community partners, and clients who have been part of Region II.

While this transition may represent an anxiety-provoking change for HIV service providers and infected individuals in Yakima County, Ms. Doescher's recent thoughts on the matter are worth taking stock in: *"While change is difficult, now is the time to make [it]--in this era of substantial cuts in available funding for both prevention and care resources statewide."* The unanimity of the legislature's vote speaks to this reality, while DOH's attention to hearing regional concerns in the transition gives cause for optimism about the ultimate impacts of the change.

References:
- Engrossed House Bill 2360 <link to download>
- DOH EHB 2360 website (http://www.doh.wa.gov/cfh/hiv/prevention/policy/ehb2360.htm)

September is Suicide Prevention

Suicide is the 2nd leading cause of death for Washington State young people between the ages of 10-24. When a young person dies by suicide, as a society we lose what that person would have achieved if they had lived a full life. Suicide prevention is everyone's business.

When suicidal behaviors are detected early, lives can be saved. A person at risk for suicidal behavior will most often exhibit warning signs: IS PATH WARM? ***(Ideation, Substance Abuse / Purposelessness, Anxiety, Trapped, Hopelessness / Withdrawal, Anger, Recklessness, Mood Change)***

These warning signs were derived as a consensus from a meeting of internationally-renowned clinical researchers held under the auspices of the AAS in Wellesley, MA in November 2003.

There are services available in our community for the assessment and treatment of suicidal behaviors. If you are concerned about someone who may be suicidal, get help. Call the Suicide Prevention Lifeline 1-800-273-TALK (8255) or call your local crisis line.

Everyone can do something to help prevent youth suicide, to help youth feel valued and hopeful for their future. Please join the Yakima Youth Suicide Prevention Coalition in supporting suicide prevention. Together we can reduce the number of lives shaken by a needless and tragic death.

To get involved with suicide prevention locally, contact Celisa Hopkins at (509) 833-9631 or celisa@yspp.org.

YAKIMA HEALTH DISTRICT

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Toll Free: (800) 535-5016 x 541

Confidential Fax: (509) 249-6628

http://www.yakimapublichealth.org

	Cases				
Condition *(includes confirmed and probable cases)*	**Jan-July**	**Jan-July**	**Jan-July**	**Total Cases by Year**	**Total Cases by Year**
	2010	**2009**	**2008**	**2009**	**2008**
Campylobacteriosis	73	48	63	101	118
Cryptosporidiosis	1	2	2	3	7
Enterohemorrhagic E. coli	9	9	6	9	12
Giardiasis	15	15	16	26	24
Salmonellosis	27	23	28	40	49
Shigellosis	1	3	2	7	8
Hepatitis A acute	0	2	1	2	2
Hepatitis B acute	0	2	1	1	2
Hepatitis B chronic	6	3	6	9	9
Hepatitis C acute	1	1	0	2	0
Hepatitis C chronic	174	97	98	191	182
Meningococcal	2	1	1	2	1
Pertussis	4	26	12	34	29
Tuberculosis	7	7	10	7	10
HIV New	5	5	4	12	9
HIV Deaths	1	5	2	5	6
HIV Cumulative Living	173	167	154	171	159
Chlamydia	629	685	685	1181	1167
Genital Herpes—Initial	38	25	48	57	66
Gonorrhea	12	25	61	38	85
Primary and Secondary Syphilis	5	2	1	2	1

Notifiable Conditions Summary Jan - July, 2010