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In Partnership with the People of Yakima County, the Public Health District Provides Prevention, Education,and Disease Control Services to Promote, Protect, and Enhance the Health and Safety of all.

YHD BULLETIN

Volume 11, Issue 1 | March / April 2012

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Perinatal Hepatitis B Prevention Program

Background/Epidemiology

The Centers for Disease Control and Prevention (CDC) estimates that 200,000-300,000 new hepatitis B virus (HBV) infections occur each year in the U.S. Most cases of HBV in the U.S. occur among individuals from groups at high-risk for unprotected exposure to blood and other infectious body fluids: injection drug users, men who have sex with men, Alaska natives, and immigrants from regions of the world where HBV is endemic (Africa, Asia, Pacific Islands).

Perinatal transmission is a common route of infection among children of HBV-infected mothers. Of the approximately four million births in the U.S. each year, an estimated 19,000 (0.5%) occur to HBV-infected women. Unless these infants receive appropriate prophylaxis, transmission of HBV from their mothers results in up to 90% of these infants becoming infected and close to 90-95% will become chronic carriers. Up to 25% of the infants who become chronically infected will die from primary liver cancer or develop cirrhosis of the liver, usually as adults. Although chronic hepatitis B infection is now a treatable condition, this is yet another arena where prevention is the preferred option.

HBV post-exposure prophylaxis for infants born to HBsAg-positive women consists of hepatitis B immune globulin (HBIG) and hepatitis B vaccine shortly after birth, followed by additional doses of vaccine at one-to-two months and six months of age. Such children are then followed serologically to determine whether they are have become either immune or infected. CDC recommends testing all pregnant women for HBV early in each pregnancy to ensure that this simple and effective intervention can be implemented.

The Program

Immunization with hepatitis B vaccine is the most effective way to prevent HBV infection.

Beginning in 1989, the Washington State Department of Health (DOH) received grant funds from CDC to establish a perinatal HBV prevention program. The overall goal of the program is ***to reduce the incidence of HBV in babies born to HBsAg-positive mothers.***

This involves identifying HBsAg-positive pregnant women, identifying their household and sexual contacts, establishing an effective follow-up system to assure that infants born to HBsAg-positive mothers receive appropriate post-exposure prophylaxis, and ensuring that susceptible household and sexual contacts receive a three-dose series of hepatitis B vaccine.

Specific objectives outlined by DOH to attain this goal include assuring that:

- 100 percent of all pregnant women who deliver are screened for HBsAg prenatally or at delivery.
- 95 percent of expected births to HBsAg-positive mothers are identified.
- at least 95 percent of infants born to identified HBsAg-positive mothers receive HBIG and first dose of hepatitis B vaccine within seven days of birth and complete the 3-dose hepatitis B vaccine series by six-to-eight months of age.
- at least 90 percent of susceptible sexual partner(s) and household contacts of identified HBsAg-positive pregnant women complete the three-dose hepatitis B vaccine series.

YHD's local grant-funded activity in perinatal hepatitis B prevention includes the following:

- Surveillance for HBsAg-positive mothers and their infants.
- Case management and tracking of infants to assure that they receive the first dose of HBIG and hepatitis B vaccine shortly after birth, the second dose at one-to-two months

of age, the third dose at six months of age, and post-vaccination testing at 9-to-15 months of age.
- Identification and tracking of susceptible household and sexual contacts to assure that they receive HBIG and/or hepatitis B vaccine (and post-vaccination testing if appropriate).
- Maintenance of a HBsAg-positive registry

During 2010 in Washington State, 332 infants were born to surface antigen positive women and 3 perinatal infections were reported. During 2006-2011 in Yakima County, of 15 HBsAg-positive pregnancies reported to and case managed by Yakima Health District's (YHD) Perinatal Hepatitis B Prevention Program, 12 yielded a live birth. Of these 12, 11 were confirmed to be immune to HBV. The outcome of the other three is unknown because the infants moved out of Yakima County before their follow-up was complete.

Perinatal Hepatitis B Yakima County 2006-2011

Year	Mothers' Reported	# infants born	# of Infants Immune	# of Perinatal Infections	Infant Outcomes unknown
2011	0	1	1	0	0
2010	1	1	1	0	0
2009	1	3	2	0	0
2008	4	2	2	0	1
2007	4	2	2	0	1
2006	5	3	3	0	1
Total	**15**	**12**	**11**	**0**	**3**

*3 cases moved out of county

Provider and Laboratory Reporting

Because this activity depends upon a passive surveillance system to trigger intervention, participation by health care providers and laboratories is both essential for success and also is mandated by state law (WAC 246-101). Reporting requirements are summarized in the table below.

These overlapping but complementary reporting requirements for health care providers, facilities, and laboratories were intentionally established by the State Board of Health when it drafted these regulations. Redundancy reduces system failures. For both clinical care, legal compliance, and risk management purposes, one party should never assume that the other is taking care of reporting a case.

Please report such cases to YHD by calling (509) 249-6541 or faxing a report to (509) 249-6628.

References

Hepatitis B, Immunization & Child Profile Office, DOH
http://www.doh.wa.gov/cfh/Immunize/diseases/hepatitis_b

Hepatitis B, CDC
http://www.cdc.gov/hepatitis/ChooseB.htm

Department of Health/State Board of Health Rules, Washington Administrative Code, Office of the Code Reviser
http://apps.leg.wa.gov/wac/default.aspx?cite=246-101

World Tuberculosis Day

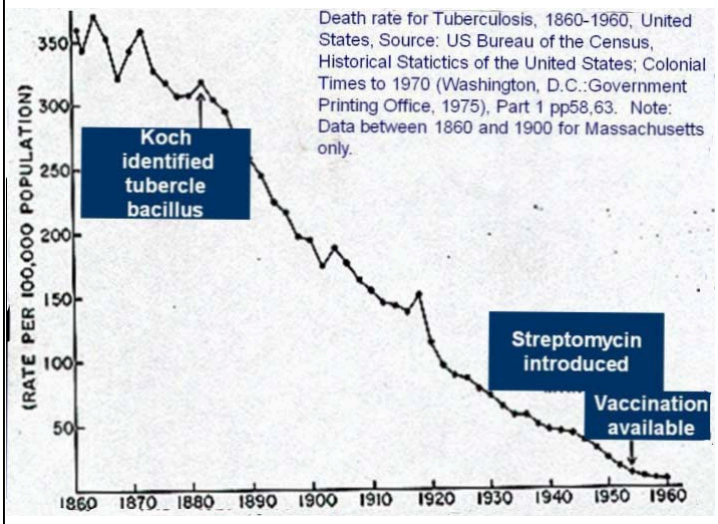
March 24 marked the annual passage of World TB Day, which commemorates the same date in 1882 when German physician Robert Koch announced that he had identified the organism that causes tuberculosis. At that time, TB was a leading cause of death. As the graph on page 3 shows, it was during Koch's era that TB rates began their steady and long decline in the West. The specific determinants of that century-long trend are somewhat debated, but their concurrent timing with overall welfare improvements and the demographic transition of wealthy nations suggests a major role for improved living standards, including housing and nutrition.[1,2]

Washington State Reporting Requirements for Hepatitis B

Notifiable Condition	Providers and Health Care Facilities	Laboratories
Acute hepatitis B	Within 24 hours to YHD	
HBsAg+ pregnant woman	Within 3 days to YHD	
Other HBsAg+	Monthly (i.e., within 30 days) to YHD	
• First detection or		
• Previously unreported		
Anti-HBc IgM+		Within 24 hours to YHD
HBsAg+		Monthly to YHD
HBeAg+		Monthly to YHD
HBV DNA +		Monthly to YHD

Removal of infectious patients from the general population, carried out through the sanatorium movement, tended to occur after significant transmission had already occurred during the period of illness leading up to a patient's diagnosis; consequently, isolation probably only played a secondary role. Chemotherapy entered the scene in the mid-20th century, when nearly 90 percent of the decline from TB's peak incidence had already been witnessed. Thus dates alone exclude therapy's role in contributing to the vast majority of the decline.

Tuberculosis Mortality, United States, 1860-1960



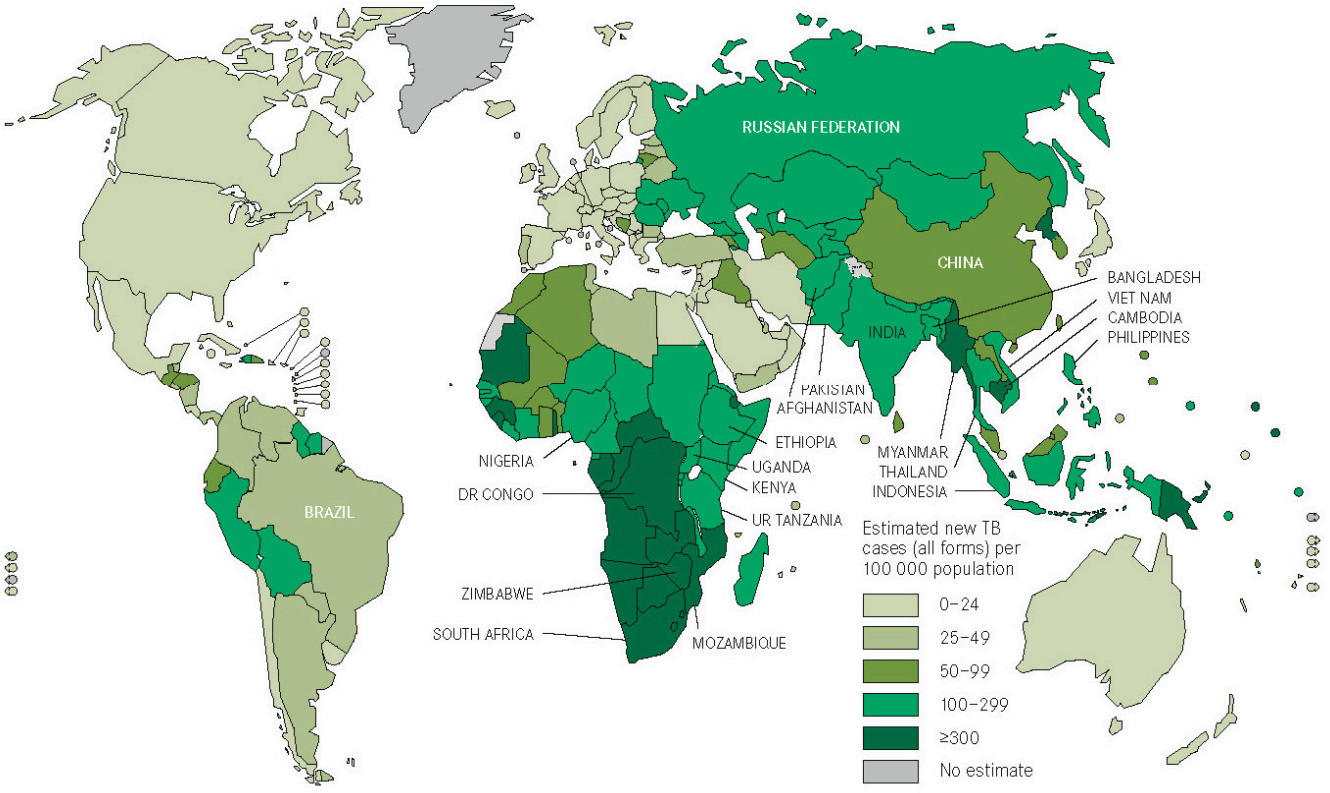
United States Bureau of the Census, 1975

In the current era, however, clinical and disease control interventions--diagnosis, chemotherapy, temporary isolation, and contact investigations--probably play a much larger role in the control of what—at least in historical terms--is our society's residual burden of TB. With TB rates among US-born individuals at less than one percent of their 19th century peak (i.e., 2 versus 300 cases per 100,000 population annually), the TB which we do see tends to be associated with one or more of the following factors: (1) human migration from poorer nations of the world where rates are similar to what North America and Europe experienced in the 19th century and in whose émigrés the prevalence of latent infection is high, (2) acquired and iatrogenic immunodeficiency, and (3) pockets of residual poverty and crowding. The often-quoted statement that "tuberculosis is a social disease with medical aspects" may be even more applicable today than it was in the era when William Osler uttered it.[3]

Tuberculosis, Yakima County, 2005-2011

Year	Cases	Incidence*
2005	14	6.0
2006	14	6.0
2007	12	5.1
2008	10	4.2
2009	7	2.9
2010	9	3.7
2011	6	2.5
*per 100,000		

Estimated TB incidence rates, 2010



A comprehensive review of the epidemiology of TB in Yakima County during the past two decades will be presented in a subsequent edition of the Bulletin. At the present time, however, YHD would like to highlight the following TB surveillance observation: since May 2011, only two confirmed cases of active tuberculosis have been reported. On one hand, this information might generate some sense of relief or accomplishment. Yet, in a county that has averaged about 10 reported cases per year over the last decade, cautious skepticism seems warranted over celebration. In addition to the remote possibility that true incidence has suddenly plummeted, other possibilities include gaps in health care provider or laboratory reporting or (more likely) delays in care seeking and diagnosis.

The latter has been postulated by the Centers for Disease Control and Prevention (CDC) as a possible explanation for the unexpected decline in TB despite the recent economic downturn and reduced access to health care (i.e., poor or uninsured patients with indolent illness deferring care seeking).[4] To the extent that this is true, we should expect to see rebounding TB rates both locally and nationally as the consequences of delayed care seeking over the past few years unfold.[5]

Meanwhile, YHD asks clinicians to do the following:

- Consider the diagnosis of TB in patients with a compatible clinical syndrome (e.g., cough, weight loss, fever, and/or night sweats of greater than two-to-three weeks' duration). The core initial evaluation includes imaging and specimen collection from the suspected site of disease. For most patients with suspected pulmonary TB, plain chest radiography is the best start. Among such patients with radiographic findings suggestive of TB (as well as among those who are immunosuppressed—regardless of the appearance of the chest radiograph), collect three early morning sputum specimens for AFB smear and culture (plus nucleic acid amplification on one or two specimens). If these studies are non-diagnostic and an alternative diagnosis is not found, please consider pulmonary or infectious disease specialty consultation for further evaluation. YHD is available to advise and facilitate with respect to patients for whom there is a high suspicion of active TB but in whom financial or behavioral factors present a barrier to completion of the evaluation.
- Although tuberculin skin testing (TST)[6] or collection of blood for interferon gamma release assays (e.g., Quantiferon [QFT]) offer the two options for detection of latent TB, they are only ancillary tests in the evaluation for active TB. Up to 25% of all active TB cases will have negative TST and/or QFT results.[7, 8] A negative TST or QFT result should never halt a complete evaluation for active disease in patients with a clinically compatible syndrome. Neither TST nor QFT testing assist in the differentiation between active and latent TB.
- Recall that fluoroquinolones have antimycobacterial activity and therefore, when used in patients with undiagnosed TB, can cause a transient improvement that can delay a TB diagnosis or induce fluoroquinolone resistance. When treating community-acquired pneumonia, consider the alternative of using non-tuberculostatic agents (e.g., macrolides, beta-lactams) in patients with clinical and epidemiologic risk factors for TB.[9]
- Please notify YHD TB Control at (509) 249-6532 upon suspicion of active TB when the first of any of the following events occurs:
  - you intend to treat for active disease, OR
  - a patient for whom there is a high clinical suspicion of active TB has failed to complete the initial evaluation, OR
  - a laboratory reports to you a positive AFB smear, growth of *M. tuberculosis* in culture, or detection of *M. tuberculosis* nucleic acid by molecular techniques.

References & Notes

[1] Selgelid M. Ethics, Tuberculosis and Globalization. *Public Health Ethics* 2008; 1(1):10-20.

[2] McKeown T. *(1988) The Origins of Human Disease (Basil Blackwell, Oxford, UK).*

[3] Raviglione M, Krech R. Tuberculosis: still a social disease. *Int J Tuberc Lung Dis* 2011;15(6):S6-S8.

[4] Winston CA, et. al. Unexpected decline of tuberculosis cases coincident with economic recession—United States, 2009. *BMC Public Health* 2011;11:846.

[5] Reichman LB. The U-shaped Curve of Concern *Am J Respir Crit Care Med 1991; 144: 741-742.*

[6] YHD wants to correct some antiquated training about TST application: older training modules recommended against use of alcohol wipes to prepare the skin because it was believed that the alcohol would cause false negative TST results. This was incorrect. Alcohol disinfection of the skin definitely SHOULD be performed to prepare the skin prior to TST placement, similar as to pre-phlebotomy skin preparation. Prior to administering the PPD solution intradermally, the residual alcohol on the skin surface should be permitted to evaporate (e.g., wait 15-20 seconds).

[7] CDC generally discourages dual testing with both TST and QFT except in situations where the consequences of a false negative result could be severe (e.g., immunosuppression or suspicion of active disease). Although United Kingdom guidelines promote use of QFT to confirm positive TST results, this practice is generally discouraged by CDC except in limited circumstances (e.g., low pretest probability of infection, healthy adult with low risk for progression, additional confirmation needed to motivate patient to consider treatment options).[8] For the vast majority of patients for whom latent TB testing is indicated, it is fine to proceed directly to QFT testing without placing a TST.

[8] CDC. Updated Guidelines for Using Interferon Gamma Release Assays to Detect Mycobacterium tuberculosis Infection — United States, 2010. *MMWR* 2010;59(RR-5):11.

[9] Yew WW, Bernardo J. How Are We Creating Fluoroquinolone-resistant Tuberculosis? *Am J Resp Crit Care Med* 2009;180:288-289.

Additional TB Resources for Clinicians

Division of Tuberculosis Elimination, CDC
http://www.cdc.gov/tb/education/provider_edmaterials.htm
Web-based and downloadable continuing education

Curry International Tuberculosis Center
CDC's Regional TB Training Center
http://www.currytbcenter.ucsf.edu/products/a-z_list.cfm
Useful web-based and downloadable continuing education

TB Basics and Skin Testing Class

The Yakima Health District is offering a class on TB Basics and Skin Testing on May 23rd, 2012. Please refer to the flyer available on page 12.

Pertussis Update

Pertussis (whooping cough) transmission is presenting an increasing disease control problem. Projected annual morbidity for Washington State is at its highest level in many decades. Although Yakima County had initially escaped involvement in the problem, that time has passed. In late March, an update from YHD went out to clinicians via fax alerting them to a recent local surge in cases and giving reminders about diagnosis and treatment.

The Washington State Department of Health (DOH) has sent similar information out to licensed physicians statewide. The general principles and recommendations set forth in those transmissions remain in effect: a combination of prompt diagnosis, testing, and treatment, chemoprophylaxis for close contacts, and good immunization coverage in all appropriate age groups (including adolescents and adults) will be necessary to bring the situation back under control. Because of the vaccines imperfect efficacy, however, a swift decline in transmission is not anticipated.
A copy of YHD's March Health Care Providers Alert and recommendations, a letter from the State Health Officer, and a press release from DOH, can be found in the inserts at the end of this bulletin.
The most current case count for pertussis in Yakima County and statewide are as follows:

Pertussis Cases, Yakima County & Washington State, 2012

Time Period	Yakima	Washington
Jan-Dec 2011	10	965
Jan 2012	3	180
Feb 2012	1	289
Mar 2012	13	365
Apr 2012	2	19

(includes confirmed and probable cases as of April 12, 2012)

To report a case of pertussis, obtain technical consultation in the evaluation or management of a patient, or for guidance in managing close contacts of a case, please call the YHD Communicable Disease Program at (509) 249-6541.

Additional Pertussis Resources

http://www.doh.wa.gov/cfh/immunize/documents/pertupdate.pdf

http://www.cdc.gov/pertussis/clinical/index.html

National Public Health Week: April 2-8, 2012

At the risk of distracting from the continuous efforts that occur during all 52 weeks of the year or of falling prey to the "Weeks habit" dubiously portrayed in Sinclair Lewis' Pulitzer Prize-winning account of an overzealous, sloganeering local public health official with an exhausting string of this-and-that "Weeks",[1] the Yakima Health District (YHD) would like to acknowledge that April 2-8 is indeed National Public Health Week. In addition to recognizing the hard-working staff at YHD and their vocational commitment to public health, YHD wants to draw attention to all those elements in Yakima County government and civil society whose daily work contributes implicitly to public health: educators; health and human service providers and facilities; laboratories; public works, sanitation, and civil engineering professionals; plumbers and septic system contractors; food producers and distributors; builders and operators of our transportation infrastructure; and law enforcement—to name just a few and leave out too many. These are some of the day-to-day activities that make our community safe and healthy in ways that we now take for granted, but without which no amount of intervention by YHD alone would suffice.

YHD is proud to be a key and central coordinating force for public health in Yakima County, but it is by no means the only organization engaged in activity critical to public health. So, if you know a YHD employee, try to remember them this week—or any week. But also try to think of all the others in our community who are part of the public health team and thank them, too.

[1]Lewis S. *Arrowsmith.* 1925.

YAKIMA HEALTH DISTRICT

1210 Ahtanum Ridge Drive
Union Gap, WA 98903

Reporting Line: (509) 249-6541
After hours Emergency: (509) 575-4040 #1
Toll Free: (800) 535-5016 x 541

Confidential Fax: (509) 249-6628

http://www.yakimapublichealth.org

New Administrator, *(as of May 2012)*
Christopher Spitters, MD, MPH, *Health Officer*
Devika Singh, MD, MPH *Deputy Health Officer*
Sheryl Di Pietro, *Director of Community Health*
Gordon Kelly, *Director of Environmental Health*
Marianne Patnode, *Supervisor of Communicable Disease Services*

Notifiable Condition *(includes confirmed and probable cases)*	Cases Jan-Mar 2012	Cases Jan-Mar 2011	Cases Jan-Mar 2010	Total Cases by Year 2011	Total Cases by Year 2010	Total Cases by Year 2009
Campylobacteriosis	11	15	22	122	128	95
Chlamydia	316	318	299	1222	1111	1181
Cryptosporidiosis	1	0	0	1	4	3
Genital Herpes - Initial	10	24	11	74	51	57
Giardiasis	4	3	3	16	27	30
Gonorrhea	18	20	4	99	33	39
Hepatitis A acute	0	0	0	0	0	3
Hepatitis B acute	0	0	0	0	0	2
Hepatitis B chronic	0	2	1	8	4	9
Hepatitis C acute	0	0	1	0	1	1
Hepatitis C chronic	49	45	71	205	230	191
HIV/AIDS Cumulative Living	183	173	167	182	173	171
HIV/AIDS Deaths	0	0	4	4	6	5
HIV/AIDS New	1	0	0	12	11	17
Meningococcal	0	0	2	0	2	2
Pertussis	17	1	0	10	11	40
Salmonellosis	2	4	7	18	54	39
Shigellosis	0	1	0	11	2	7
STEC (enterohemorrhagic E. coli)	0	0	0	10	10	10
Syphilis - Primary and Secondary	3	3	1	9	6	2
Tuberculosis	2	2	2	6	8	6

Notifiable Conditions Summary Jan - Dec, 2009-2011 & Jan-Mar 2012

Yakima Health District
1210 Ahtanum Ridge Drive
Union Gap, WA 98903
Phone (509) 575-4040
Fax (509) 575-7894

March 21, 2012

TO: YAKIMA COUNTY HEALTH CARE PROVIDERS

SUBJECT: INCREASE IN PERTUSSIS CASES IN YAKIMA COUNTY

Background

The Washington State Department of Health (DOH) has reported a nearly fourfold increase in the number of pertussis cases reported in 2012. According to DOH, nearly 300 cases have been reported to-date in 2012, compared to 69 cases for the same period in 2011. Yakima County reported single cases in January and February of this year but has had twelve cases reported since March 1, 2012.

The Yakima Health District (YHD) is urging health care providers to increase their vigilance by testing and treating early when seeing patients with a compatible respiratory illness, particularly among infants for whom the disease is most severe and in whom it can cause death. Because vaccine-acquired immunity is imperfect in protecting against disease (especially in adolescents and adults), having completed the immunization series should NOT dissuade health care providers from pursuing diagnosis or empiric treatment for pertussis. Many, if not most, cases of pediatric pertussis have indeed been vaccinated.

Epidemiology

Pertussis is transmitted by respiratory droplets. The incubation period from exposure to onset of symptoms is usually 1-2 weeks (range 5-21 days). Infectiousness begins with the onset of the catarrhal stage and ends approximately two weeks after the onset of cough. Older siblings, parents or caregivers who might not even know they have the disease infect many infants. Pertussis transmission typically undergoes cyclic peaks every several years followed by low-morbidity years when the susceptible population has been exhausted. Yakima County's last high transmission year was 2005 (189 reported cases).

Clinical Features

Pertussis usually starts with an afebrile catarrhal illness that lasts for several days to a week. Then a cough develops, progressing within a few days to paroxysms that may be accompanied by post-tussive phenomena including an inspiratory "whoop", apnea and cyanosis, and/or post-tussive vomiting. The whoop is uncommon in infants, in whom the illness may present primarily with gagging, gasping, and apnea. Complications in infants include pneumonia (~20%), encephalopathy (~1%), and death (0.5-1%). Most cases in adolescents and adults lack the post-tussive phenomena, but coughing paroxysms are common. Complications in older children and adults can include pneumonia, rib fracture, syncope, and incontinence. Duration of cough is typically 6-10 weeks.

Diagnostic Testing

Laboratory testing should consist of collection of nasopharyngeal swabs or aspirate for both culture of *Bordetella pertussis* (*B. pertussis*) and polymerase chain reaction (PCR) to detect *B. pertussis* DNA (one swab for each assay). Note that nasopharyngeal swab collection calls for placing the swab on the floor of the nasal cavity, advancing it slowly while rotating so that the tip reaches the nasopharynx, waiting several seconds, then withdrawing the swab while rotating.

Treatment

The macrolide agents, azithromycin and clarithromycin, are preferred for the treatment of pertussis in persons aged ≥1 month. The alternative agent for macrolide-intolerant patients is trimethoprim-sulfamethoxazole. Empiric therapy should not await laboratory results, nor should negative results cause interruption of therapy in clinically compatible cases.

TABLE 4. Recommended antimicrobial treatment and postexposure prophylaxis for pertussis, by age group

	Primary agents			Alternate agent*
Age group	**Azithromycin**	**Erythromycin**	**Clarithromycin**	**TMP-SMZ**
<1 month	Recommended agent. 10 mg/kg per day in a single dose for 5 days (only limited safety data available.)	Not preferred. Erythromycin is associated with infantile hypertrophic pyloric stenosis. Use if azithromycin is unavailable; 40–50 mg/kg per day in 4 divided doses for 14 days	Not recommended (safety data unavailable)	Contraindicated for infants aged <2 months (risk for kernicterus)
1–5 months	10 mg/kg per day in a single dose for 5 days	40–50 mg/kg per day in 4 divided doses for 14 days	15 mg/kg per day in 2 divided doses for 7 days	Contraindicated at age <2 months. For infants aged ≥2 months, TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days
Infants (aged ≥6 months) and children	10 mg/kg in a single dose on day 1 then 5 mg/kg per day (maximum: 500 mg) on days 2–5	40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days	15 mg/kg per day in 2 divided doses (maximum: 1 g per day) for 7 days	TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days
Adults	500 mg in a single dose on day 1 then 250 mg per day on days 2–5	2 g per day in 4 divided doses for 14 days	1 g per day in 2 divided doses for 7 days	TMP 320 mg per day, SMZ 1,600 mg per day in 2 divided doses for 14 days

* Trimethoprim sulfamethoxazole (TMP–SMZ) can be used as an alternative agent to macrolides in patients aged ≥2 months who are allergic to macrolides, who cannot tolerate macrolides, or who are infected with a rare macrolide-resistant strain of *Bordetella pertussis*.

Source: MMWR 2005: 54(RR14);1-16

Management of Contacts

Household and other close contacts should also be treated with a course of macrolide therapy. Casual contacts are not *generally* priority candidates for chemoprophylaxis, but pregnant women, infants, staff and attendees in child care settings, and other select close contacts should be considered for such. To discuss such a case or situation, call YHD at 509-249-6541.

Prevention

All children should have completed a primary series of acellular pertussis vaccine and, if applicable, be up-to-date with a booster. All adolescents and adults, *including health care workers*, should have an acellular pertussis booster (Tdap).

Yakima Health District: Reporting and Consultation

Staff members in the Communicable Disease Program at YHD are available for consultation to providers with questions regarding testing and treatment. In addition, public health nurses interview all reported cases, pursue contact investigation and, when applicable, provide recommendations regarding post-exposure prophylaxis, to susceptible persons closely exposed to pertussis. **Please report all suspected and confirmed cases of pertussis to our Communicable Disease Information and Reporting line @ 509-249-6541.**

For more information on pertussis, please visit the following website:

http://www.cdc.gov/pertussis/clinical/index.html

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
PO Box 47890 • Olympia, Washington 98504-7890
Tel: (360) 236-4501 • FAX: (360) 586-7424 • TDD Relay Service: 1-800-833-6388

April 2, 2012

Dear Colleague:

Pertussis (whooping cough) is reaching epidemic levels in our state. So far in 2012 more than 600 cases have been reported, compared to fewer than 100 cases in the same time period in 2011. This puts us on track to have the highest number of cases in decades.

The disease affects people of all ages, but is most serious in infants. The rate of pertussis in infants in our state is nearly five times the overall rate of disease for all ages. Most infants get this disease from their parents or other family members.

We need your help in reducing the spread of this disease. Most people get a series of pertussis vaccines when they're kids, but protection wears off over time. Vaccination is the key to stopping the spread of this disease. As a healthcare provider, your advice plays a vital role in your patients' choice to get vaccinated. Help us protect infants from pertussis by:

- **Vaccinating all women of childbearing age, including pregnant women, with a one-time dose of pertussis (Tdap) vaccine** – A new recommendation from the Advisory Committee on Immunization Practices (ACIP) calls for pregnant women to get pertussis vaccine during in pregnancy (after 20 weeks gestation). Women who get Tdap before or during pregnancy pass on extra protection against pertussis to their babies rather than just the typical maternal antibodies transferred during pregnancy. For women who were not previously vaccinated with Tdap, vaccination during pregnancy is preferred, but it may also be given post-partum before discharge.
- **Checking the immunization status of all your patients and vaccinate them if they are not up-to-date for pertussis** – It's especially important for anyone who has or anticipates close contact with babies to be current on their pertussis vaccine. This includes siblings of infants who should be up-to-date on DTaP. All adults should receive one dose of Tdap as well. Senior citizens who have close contact with children should also receive a dose of Tdap.
- **Testing and treating suspected pertussis cases** – Delays in recognizing and treating this disease can lead to increased spread and worse clinical outcomes. Report pertussis cases promptly to your local public health agency.
- **Making sure your practice has a system in place to assure your staff and patients are up-to-date on all their immunizations** – Be sure all your staff members get a Tdap. You can easily track all your young and adult patients' vaccination status by using the Child Profile Immunization Registry. For more information or to register, call the Child Profile Help Desk at 1-800-325-5599/206-205-4141 or online (www.childprofile.org).

For more pertussis information, please see the enclosed Key Information about Pertussis document or the Washington State Department of Health website (www.doh.wa.gov).

Find immunization training and information for professionals like us (www.cdc.gov/vaccines/ed/).

Sincerely,

Maxine Hayes, MD, MPH
State Health Officer

Enclosure

Key information about pertussis for health care providers in Washington State

April 2, 2012

Action requested

- ✓ Be aware of a marked increase in pertussis reports during 2012, particularly among infants.
- ✓ Fully immunize all children against pertussis, and provide a single dose of Tdap for all adolescents and adults as recommended by national guidelines (see the table below for current pertussis vaccine recommendations).
- ✓ Give Tdap to all pregnant women after 20 weeks gestation if they were not previously vaccinated. Vaccination during pregnancy is preferred, but post-partum vaccination is acceptable.
- ✓ Recommend vaccination to household members and other close contacts of infants.
- ✓ Consider the diagnosis of pertussis in the following situations, even if the patient has been immunized:
  - Respiratory symptoms of any duration in infants <12 months.
  - Cough illness that is paroxysmal, accompanied by gagging, post-tussive emesis or inspiratory whoop, or any cough that is > 2 weeks duration (in patients of any age).
  - Respiratory illness of any duration in patients who have had contact with someone known to have pertussis or who has symptoms consistent with pertussis.
- ✓ To confirm pertussis, send a nasopharyngeal specimen for pertussis polymerase chain reaction (PCR) or culture. PCR is more sensitive and rapid than culture, but culture is the gold standard.
- ✓ Report pertussis cases within 24 hours to your local health agency.

Background

Last year, 965 cases of pertussis were reported to the Washington State Department of Health; this was a 59 percent increase over the number reported in 2010. Thirty-eight infants were hospitalized and two infants died in 2011. Already in the first 12 weeks of 2012, more than 600 cases have been reported, including 37 infants. Many counties in Washington are now seeing epidemic levels of pertussis. Information regarding current pertussis activity in Washington can be found online.

Persons considered "high risk" from pertussis

- Infants <1 year old (greatest risk for severe disease and death)
- Pregnant women in the last trimester (who will expose infants)
- Healthcare workers with direct patient contact (who may expose infants, pregnant women, or others who have contact with infants or pregnant women)
- Anyone who may expose infants < 1 year old or pregnant women (e.g., childbirth educators , child care workers, members of a household with infants)

Vaccination

Although most children have been vaccinated for pertussis, protection from the vaccine wears off over time. Some who are fully vaccinated may still become infected. Vaccinated children and adults with pertussis are likely to present with milder symptoms. School-aged children and adults are now the major reservoir for pertussis. The most effective strategy to interrupt pertussis transmission in the community and protect infants who are most at risk for severe pertussis disease is to vaccinate all children on time and give a booster dose to adolescents and adults. (See Table 1 below).

In addition to vaccination, rapid identification of pertussis cases, appropriate treatment, and isolation are the most effective measures to prevent ongoing transmission.

Treatment & prophylaxis

If you suspect pertussis:

1. Treat the patient whether or not you test. Do not wait for test results. Negative test results do not rule out pertussis.
2. Exclude the patient from work, school, or child care until the patient completes five full days of appropriate antibiotics. Consult with your local health agency if you have questions about exclusion.
3. Give preventive antibiotics to the entire household.

Testing

Pertussis should be considered in anyone with a severe or persistent cough, especially those who are contacts of a known pertussis case. Testing is appropriate until at least three weeks after onset of paroxysmal coughing. After three weeks of cough, infectiousness and test accuracy decrease significantly. **Testing is most critical for symptomatic high risk persons and their contacts.**

- Infants <1 year old (greatest risk for severe disease and death)
- Pregnant women in the last trimester (who will expose infants)
- Health care workers with direct patient contact (who may expose infants, pregnant women, or others who have contact with infants or pregnant women)
- Anyone who may expose infants < 1 year old or pregnant women (e.g., childbirth educators , child care workers, members of a household with infants)

If one member of a household has tested positive, it is not necessary to test other family members who are presenting with symptoms. If multiple members of a household present at the same time with symptoms, it is sufficient to test just one person (preferably the person with most recent onset of symptoms).

If you have a high risk, uninsured patient who you think should be tested, contact your local health agency to discuss possible testing at the Washington State Public Health Laboratories.

Reporting

Report to your local health jurisdiction all cases that meet the clinical case definition for pertussis:

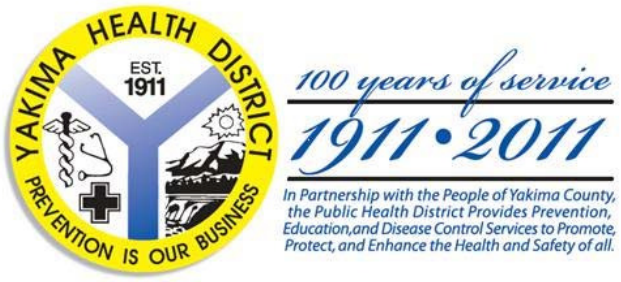
- A cough illness lasting two or more weeks with ONE of the following: paroxysms of coughing, inspiratory "whoop," or vomiting associated with coughing.

Table 1. Pertussis Vaccine Recommendations by Age*

Birth - 6 years	•DTaP routinely recommended at 2, 4, and 6 months, at 15 through 18 months, and at 4 through 6 years.
7 - 10 years	•Tdap recommended for those not fully vaccinated with 5 doses of DTaP before age 6 years. •Vaccinate according to the ACIP catch-up schedule, with Tdap preferred as the first dose.
11 - 18 years	•Tdap routinely recommended as a single dose with preferred administration at 11- 12 years of age. •If not fully vaccinated as a child, refer to the ACIP catch-up schedule to determine what vaccines are indicated. •If no Tdap at 11 to 12 years of age, Tdap recommended at the next patient encounter, or sooner if close contact with infants.
19 years and older **	•Tdap recommended to replace the next 10-year Td booster for any adult who has not received a dose. •Tdap can be administered regardless of interval since the previous Td dose, especially if adult has close contact with infants.
Pregnant women and close contacts of infants	•Tdap recommended after 20 weeks gestation for those who have not previously received a dose (or if vaccination status is unknown) •Tdap recommended in the immediate postpartum period before discharge if not vaccinated prior to or during pregnancy. •DTaP or Tdap (depending on age) recommended for all family members and caregivers if not up to date – at least two weeks before coming into close contact with the infant.
Health care personnel	•Tdap recommended for those who have not previously received a dose and who have direct patient contact. •This is essential for those who have direct contact with babies younger than 12 months of age.

* Information in Table 1 is based on 2012 ACIP recommendations.
** New ACIP recommendation to combine 19-64 years and >65 years age groups; not yet published.

YAKIMA HEALTH DISTRICT



TB Basics & Skin Testing

Wednesday, May 23rd 10AM-12:30PM
1210 Ahtanum Ridge Drive
Union Gap, WA 98903

This class is for those who are responsible for administering TB skin tests. You will learn the basics of tuberculosis infection and disease. We will discuss who needs skin testing and why, as well as how to administer, read, and interpret a TB skin test. We will discuss the limitations of the current TB tests and cover recommended follow up after a positive test. This class will include hands on practice of TB skin tests, so be prepared to administer and receive saline injections. Class size will be limited. Please send me a fax/e-mail with completed registration form by May 11th. Fax: (509) 249-6632 Email: David.Miller@co.yakima.wa.us There is no fee for this class.

Want to have a class at your facility? If your facility is in Yakima County and you have at least 8 people who can commit to participating, then we can come to you. Call/E-mail David Miller for details.

TB Skin Testing Class Registration

Name:

Degree or license (RN, MSN, MD):

E-Mail:

Phone:

Address:

Job Title:

Company:

You will sign in at the beginning of class. Those who sign in and complete the entire class will have a certificate e-mailed to them after the class.

Please complete this form and fax/e-mail back to me at (509)249-6632. If you have any questions call David Miller at (509)249-6532.