

HEALTH ADVISORY

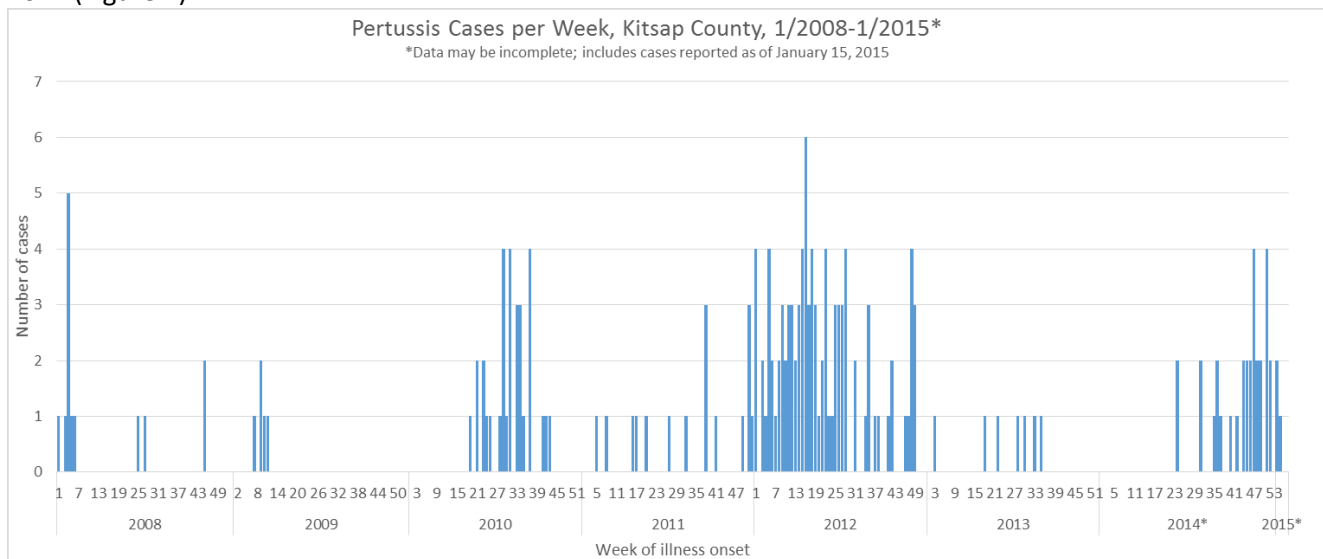
Pertussis “Whooping Cough” Advisory

January 20, 2015

Dear Kitsap County Providers,

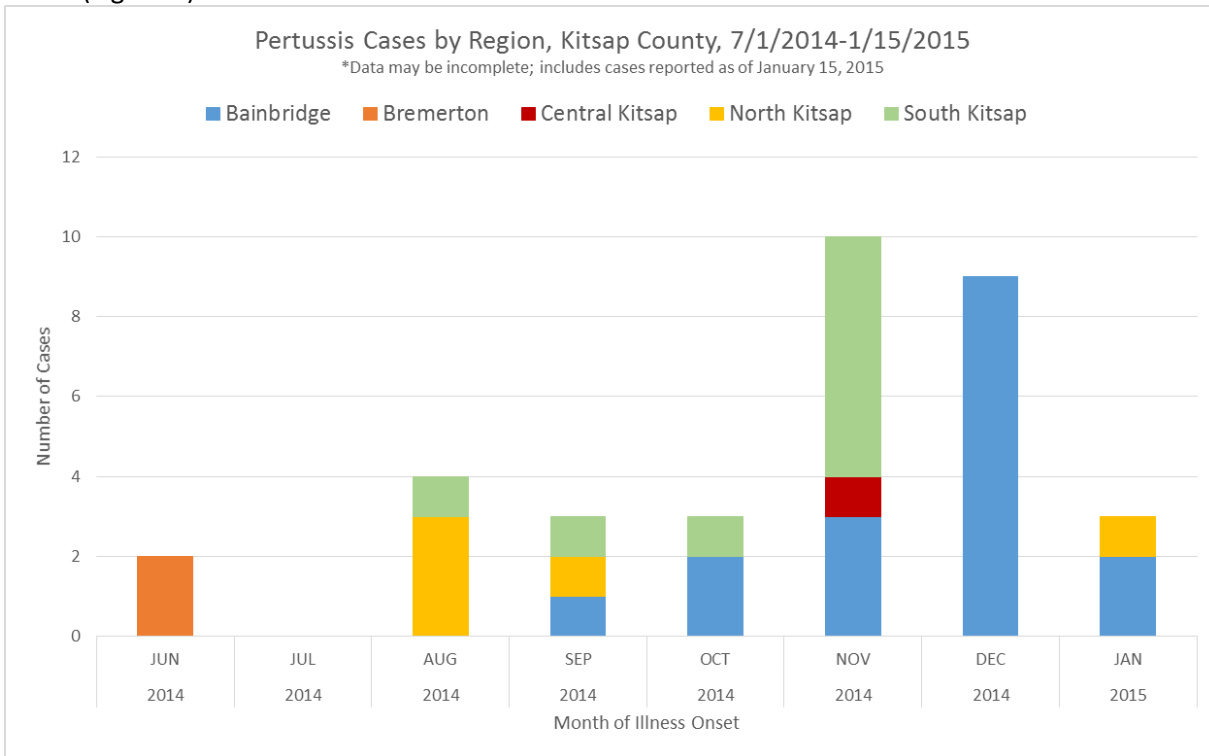
We have had 34 cases of pertussis among Kitsap County residents since July 2014 and currently, several cases are pending. This is an increase in the usual number of reported cases, so we would like to ask that you consider pertussis in your differential diagnosis, especially among young children and school children. Please report cases promptly to the Health District (360-337-5235) so that we can investigate contacts to the case and ensure no additional spread of the infection. Some descriptive data follows, to inform your decisions about testing and treatment. As always, thank you for ensuring the health of your patients and the community overall.

In mid-2010 and in 2012, when the Washington State Secretary of Health declared a pertussis epidemic, Kitsap County also experienced an increase in cases. However, reported cases were down in 2013 and the first half of 2014 (Figure 1).

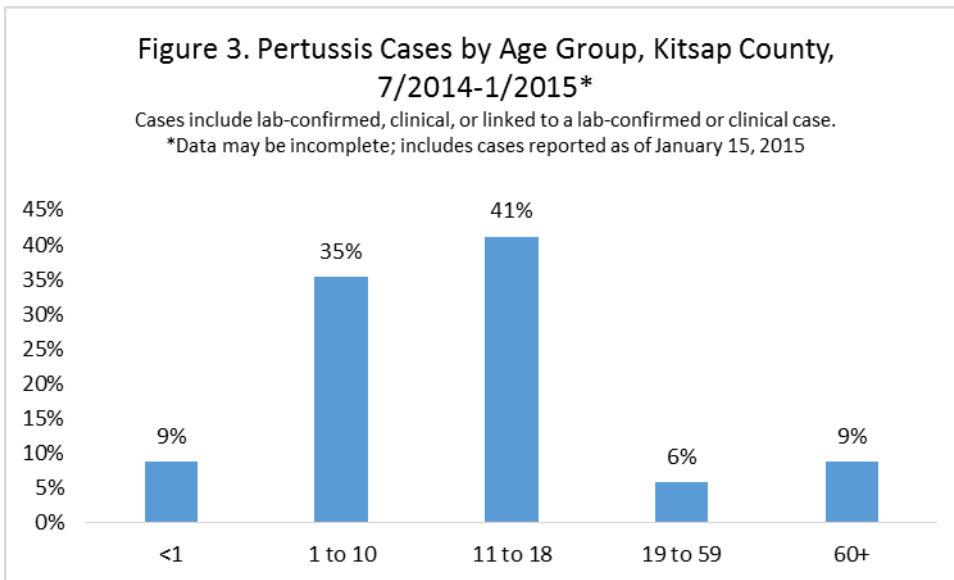


For cases reported since July 2014, two-thirds of those with known vaccination status are up-to-date on their vaccinations. It is a good reminder that even vaccinated persons can become infected with *Bordetella pertussis* and carry the bacteria.

Cases are distributed across Kitsap County, though the majority of recent cases are residents of Bainbridge Island (Figure 2).



Three-quarters of cases are between the ages of 1 and 18 (Figure 3.)



The most critical age for pertussis is within the first year of life, especially if the patient is un-immunized. Pertussis has its highest mortality in this age group. For this reason, we make very aggressive recommendations for the treatment of pertussis in this age group.

There are essentially two strategies for controlling *Bordetella pertussis* in our community: Vaccination and Treatment/Isolation.

The first strategy is herd immunity from vaccination. It is important for us to encourage our patients to start the DTaP at 2 months of age when we have increased activity of pertussis in the community. It is also important to boost adolescents and adults with Tdap when due. We should also prioritize vaccinations for pregnant women and healthcare workers. See Table 1 below.

Table 1

Age/Status	Recommendations
Birth through 6 years	DTaP is routinely recommended at 2, 4, and 6 months, at 15 through 18 months, and at 4 through 6 years.
7 through 10 years	Catch-up Vaccination Persons aged 7 years and older who are not fully immunized with DTaP vaccine should receive Tdap vaccine as one (preferably the first) dose in the catch-up series; if additional doses are needed, use Td vaccine.
11 through 18 years	Tdap is routinely recommended as a single dose for those 11 through 18 years of age with preferred administration at 11 through 12 years of age. If adolescent was not fully vaccinated as a child, check the ACIP recommendations and catch-up schedule to determine what's indicated. If adolescents (13 through 18 years) missed getting Tdap at 11 to 12 years of age, administer at the next patient encounter or sooner if adolescent will have close contact with infants.
All adults over 18 years old	Any adult who has not received a dose of Tdap should get one as soon as feasible. This Tdap can replace one of the 10-year Td booster doses. Tdap can be administered regardless of interval since the previous Td dose.
Pregnant women	Pregnant women should be vaccinated with each pregnancy, preferably after the 20th week of gestation and at least 2 weeks before anticipated delivery.
Health care personnel	Healthcare personnel in hospitals and ambulatory care settings with direct patient contact who have not previously received Tdap should receive a dose regardless of the interval since the most recent Td.

Source: Washington State Department of Health Pertussis Reporting and Surveillance Guidelines, February 2014

The second strategy for the control of pertussis is isolation and treatment. Cases are contagious from symptom onset to 21 or more days after the start of the paroxysmal cough or until completion of 5 days of appropriate antibiotic therapy. **Confirmed or suspected cases should be in respiratory isolation until they have received 5 days of an appropriate antibiotic (see Table 2).** If they refuse treatment, they should be isolated for 21 days total. We do not recommend isolation of all asymptomatic contacts, but high risk close contacts (e.g., infants, pregnant woman, and others who may expose infants and pregnant women) should receive antibiotic therapy (chemoprophylaxis). Additionally, the Health District may recommend chemoprophylaxis to household and other close contacts (day care, churches, etc.), regardless of vaccination status, when our investigation of the active case demonstrates a significant exposure. Of course, exposed persons who are incompletely vaccinated are encouraged to seek vaccination. You will likely hear from patients that have had a recommendation for antibiotics or vaccine as part of a Health District investigation.

Table 2: Recommended antimicrobial treatment and post-exposure prophylaxis for pertussis, by age group

	DRUG	UNDER 1 MONTH	1-5 MONTHS	INFANTS (6 months and older) and CHILDREN	ADULTS
Primary Agents	Azithromycin (3-day course not yet approved for treatment of pertussis)	Recommended agent. 10 mg/kg per day in a single dose for 5 days (only limited safety data available)	10 mg/kg per day in a single dose for 5 days	10 mg/kg in a single dose on day 1 (maximum: 500 mg/day) then 5 mg/kg per day on days 2–5 (maximum: 250 mg/day)	500 mg in a single dose on day 1 then 250 mg per day on days 2–5
	Clarithromycin Not recommended for use in pregnant women	Not recommended (safety data unavailable)	15 mg/kg per day in 2 divided doses for 7 days	15 mg/kg per day in 2 divided doses (maximum: 1 g per day) for 7 days	1 g per day in 2 divided doses for 7 days Pregnancy category C
	Erythromycin	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	40–50 mg/kg per day in 4 divided doses for 14 days	40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days	2 g per day in 4 divided doses for 14 days
Alternate Agent	Trimethoprim-Sulfamethoxazole * For those not able to tolerate macrolides. Not recommended for use in pregnant or nursing women	Contraindicated for infants aged < 2 months (risk for kernicterus)	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	TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days (maximum: adult dose)	TMP 320 mg per day, SMZ 1,600 mg per day in 2 divided doses for 14 days Pregnancy category C

* 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 *B. pertussis*.

Source: MMWR 2005; 54:RR-14 (Note: Recommendations in the 2012 Red Book vary slightly from the table above.)

Pertussis Pearls:

1. Once a patient is colonized with *Bordetella pertussis* regardless of immunization status, they may progress to disease. It is likely less severe if immunized but they may still be infectious. This is one of the reasons for chemoprophylaxis, to cut down the period of communicability.
2. Once colonized, *Bordetella pertussis* releases a toxin. This is the cause of respiratory epithelium damage. If a toxin has already been released, antibiotics will not shorten the clinical course as the damage has already occurred. Make sure patients understand that antibiotics are to shorten communicability. If treatment for pertussis is started early in the course of illness, during the first 1 to 2 weeks before coughing paroxysms occur, symptoms may be lessened.
3. Prioritize all children less than 1 year of age to prevent severe outcomes.

Please report all pertussis cases as promptly as possible to Kitsap Public Health (360-337-5235). Feel free to contact me directly if you have any specific questions.

Sincerely,

Susan Turner MD, MPH, MS
Health Officer
Kitsap Public Health District 360-337-5237 (office)

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