

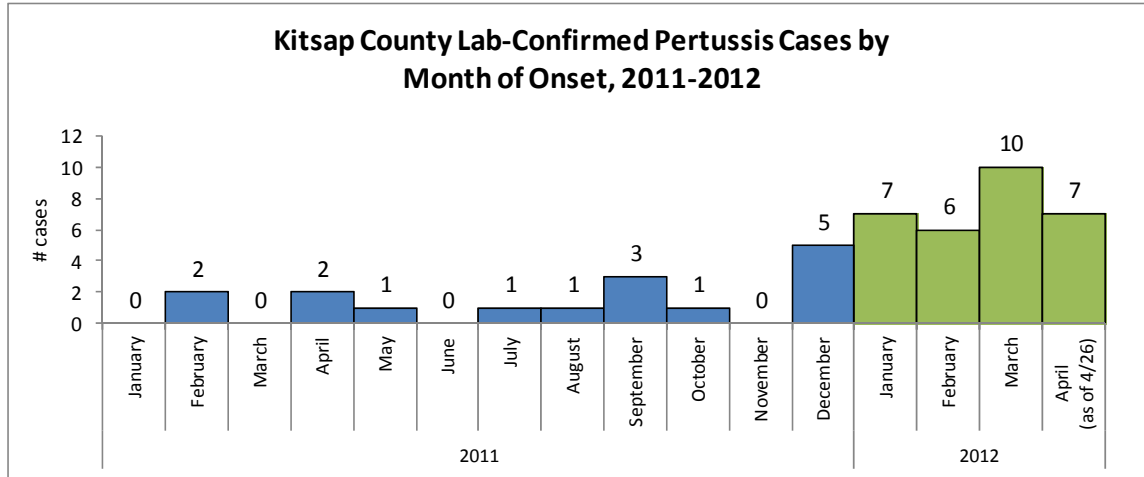
# Pertussis “Whooping Cough” Update

May 3, 2012

Dear Kitsap County Providers,

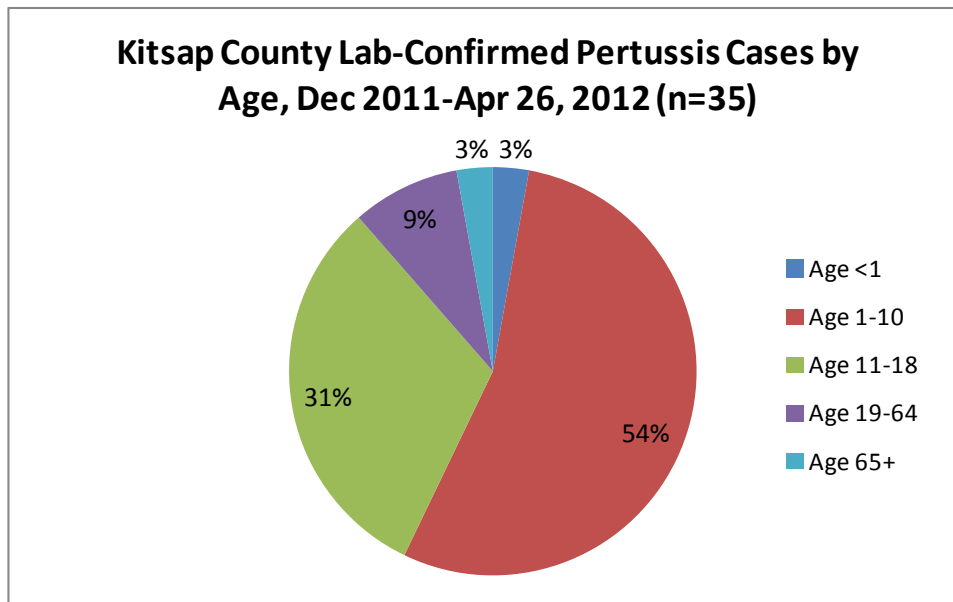
This is an update about our current status of pertussis cases here in Kitsap County. We currently have 35 cases as outlined below. See the epidemiology curve (**Figure 1**).

**FIGURE 1**



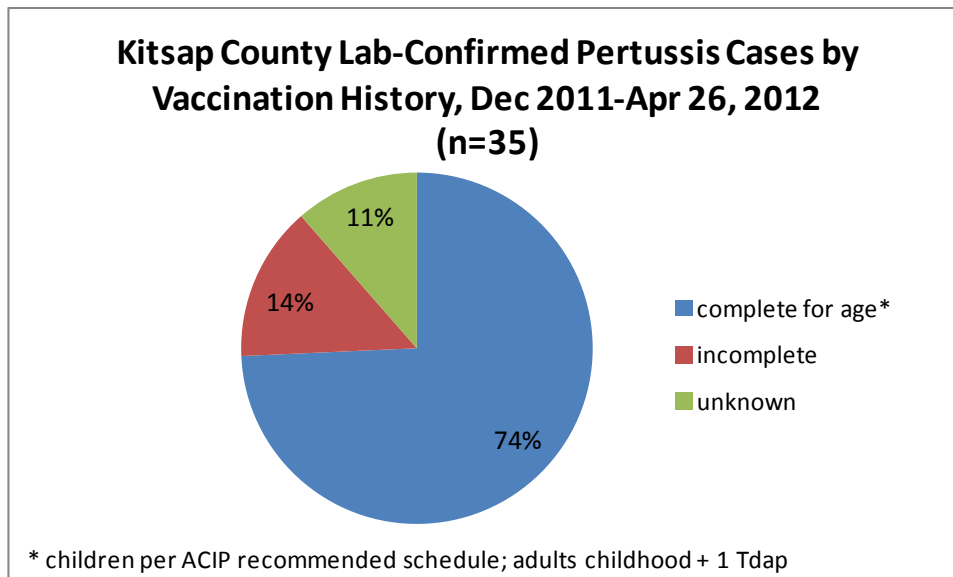
Initially, many of these cases were vaccinated teens with a positive PCR test. The recent cases have shifted to a younger age group with over half of the cases in kids under 10 years of age (see **Figure 2**).

**FIGURE 2**



Thanks to all of you who obtained cultures in addition to PCR tests. We have several positive cultures demonstrating that this is not just false positivity from PCR testing. Clearly this is a national trend and may be associated with waning immunity. See **Figure 3** that outlines the number of cases that are fully vaccinated. In these fully (and recently) vaccinated cases, I am saving these isolates to see if the CDC is interested at looking at these strains. At this point I do not need any further cultures in patients if a PCR result is available. Choosing a diagnostic test such as PCR or culture is dependent on available resources and clinical judgment. Either test is adequate for diagnosis in a clinical setting at this time.

**FIGURE 3**



Public Health Officials in Washington State met to prioritize our actions during this outbreak. We are focusing our isolation and control resources on children under 1 year of age as well as pregnant women (especially in the third trimester). High-risk individuals are defined as:

- Infants under 1 year of age
- Pregnant women in their third trimester
- Close contacts of the above (including health care workers)

While the Kitsap Public Health District will focus our isolation and control efforts in situations where there is a potential for infection of infants and pregnant women, I realize many of you are dealing with high volumes of patients with cough illness. This is a difficult time to clinically differentiate pertussis from influenza A, influenza B, RSV, Adenovirus, and parainfluenza virus, all which are circulating in the community.

Here are my recommendations for whom to prioritize for testing and treatment. This is not a replacement for your clinical judgment, and if you have a strong clinical suspicion for pertussis, then you should test, treat, and the patient should be held out of community settings until they have completed 5 days of recommended antibiotics. There will be situations where testing is not

available and I would encourage you to treat empirically.

**Suspect pertussis in infants and children under 1 year of age if any of the following:**

- Cough illness of any duration that is paroxysmal, associated with vomiting, cyanosis, post-tussive “whoop”, apnea, or seizures.
- Uncomplicated cough illness lasting more than 7 days (with or without fever).
- Any symptomatic infant of any duration that has been exposed to a confirmed or suspect case of pertussis.

**Recommendations:**

- Obtain a nasal swab for PCR (may obtain cultures if available).
- Treat according to **Table 1** Treatment Guidelines while awaiting results.
- Infants should be held out of community settings (childcare etc) until they have completed 5 days of recommended antibiotics. If not treated they should be excluded from community settings for 21 days from the onset of cough.
- The Kitsap Public Health District will work with you to identify any high risk settings (daycare, etc.) that will need investigation and antibiotic treatment recommendations.

We recommend post-exposure prophylaxis of close contacts such as family members, especially persons that are less than 1 year of age, pregnant, health care workers or anyone of these contacts that will be around high-risk individuals defined above.

**Suspect pertussis in children and adults older than 1 year of age if any of the following:**

- Cough illness of any duration that is paroxysmal, associated with vomiting, cyanosis, or inspiratory “whoop”.
- Uncomplicated cough illness lasting more than 14 days.
- Any symptomatic patient of any duration that has been exposed to a confirmed or suspect case of pertussis.

**Recommendations:**

- Obtain a nasal swab for PCR (may obtain cultures if available).
- Treat according to **Table 1** Treatment Guidelines while awaiting results.
- Patients should be out of community settings (daycare, school, church, or workplace) until they have completed 5 days of recommended antibiotics. If not treated they should be excluded from community settings for 21 days from the onset of cough.
- The Kitsap Public Health District will work with you to identify any high risk settings (daycare, school, church, workplace) that will need investigation and antibiotic treatment recommendations.

We recommend post-exposure prophylaxis of close contacts such as family members, especially persons that are less than 1 year of age, pregnant, health care workers or anyone of these contacts that will be around high-risk individuals defined above.

**Treatment:**

The antimicrobial agents of choice for treatment or chemoprophylaxis of pertussis are azithromycin, clarithromycin and erythromycin. For infants <1 month of age, azithromycin is preferred for post-exposure prophylaxis and treatment because azithromycin has not been associated with infantile hypertrophic pyloric stenosis (IHPS), whereas erythromycin has. For infants <1 month of age, the risk of developing severe pertussis and life-threatening complications outweighs the potential risk of IHPS that has been associated with macrolide use.

**Table 1. Antibiotic Treatment and Prophylaxis**

<b>DRUG</b>	<b>INFANT (&lt; 6 months of age)</b>	<b>CHILD (≥ 6 months of age)</b>	<b>ADULT</b>
<b>Azithromycin</b> (3-day course not yet approved for treatment of pertussis)	<b>1-5 months:</b> 10 mg/kg/day orally daily for 5 days  <b>&lt;1 month of age:</b> same as above and is the <b>preferred</b> choice for infants <1 month old	10 mg/kg/day orally on the first day (maximum 500 mg), 5 mg/kg once daily on days 2-5 (maximum 250 mg/day)	500 mg orally on the first day, 250 mg once daily on days 2-5
Clarithromycin Not recommended for use in pregnant women	not recommended for use in infants < 6 months of age; see child dose for infants ≥ 6 months of age	15 mg/kg/day orally divided into 2 doses/day for 7 days (maximum 1 g/day)	500 mg twice daily for 7 days
<b>Erythromycin</b>	Estolate preparation preferred if available  <b>1-5 months:</b> 40-50 mg/kg/day orally divided into 4 doses/day for 14 days (maximum 2 g/day)  <b>&lt;1 month of age:</b> same as above, but should only be used as an <b>alternate</b> drug. Drug use is associated	40-50 mg/kg/day orally divided into 4 doses/day for 14 days (maximum 2 g/day)	2 g/day orally divided into 4 doses/day for 14 days

	with elevated risk of IHPS		
<b>Trimethoprim-Sulfamethoxazole</b> For those not able to tolerate macrolides. Not recommended for use in pregnant or nursing women	not recommended for use in children < 2 months of age; see child dose for infants $\geq$ 2 months of age	8 mg TMP/40 mg SMX/kg/day orally divided into 2 doses/day for 14 days (maximum 320mg TMP/1600mg SMX/day)	320 mg TMP/1600 mg SMX per day orally divided into 2 doses/day for 14 days

Sincerely,

Scott

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