Health Department
GRAND TRAVERSE COUNTY

HEALTH DEPARTMENT
2600 LaFranier Rd.
Traverse City, MI 49686
231-995-6111

PUBLIC HEALTH PROVIDER ALERT – 10/1/2024

Health Care Providers:

In the last two weeks, Grand Traverse County has seen an increase in Bortadella *pertussis*, including three unvaccinated siblings, two vaccinated siblings and an unvaccinated elderly individual with no co-morbidities. Although each of these clusters are unrelated at this time, there is one secondary, epidemiologically linked case in a child. This underscores the variation of cases presenting in our jurisdiction and the potential for continued transmission, as several additional test results are pending. Increases in pertussis are being seen across the U.S. and Michigan.

Action Steps:

- Using your clinical suspicion, **consider a pertussis diagnosis in patients with a respiratory illness, particularly with paroxysmal cough**, even if the individual has been vaccinated.
- When **testing for a new pertussis case**, please collect a nasopharyngeal swab.
  ***Note:** This test is sent to Mayo Clinic with an average turnaround time of 5-7 days, but this can be delayed, therefore do not hesitate to Rx PEP based on risk. Advise patients to isolate until they receive a negative test result or until they complete 5 days of appropriate antibiotics.
- **Treat** suspected, symptomatic cases with antibiotics as soon as possible (within 21 days of symptom onset)
  - If an individual is symptomatic *and* exposed to a case, please prioritize PEP ASAP to mitigate community transmission (i.e. household contact).
  - Advise ill individuals to isolate at home until they have had at least 5 days of an appropriate antibiotic course for pertussis.
  - Otherwise, cases must isolate for 21 days without treatment.
- **Risk groups that should receive PEP:**
  - **Household contacts** of a pertussis case
  - **People at high risk** of developing severe pertussis infection
    - <12 months
    - Pre-existing conditions:[1]
      - Asthma and/or COPD
      - Obesity
      - Other Underlying Conditions—potentially immunocompromising conditions, diabetes, cardiac conditions, renal disease, a neurological condition
  - **Those who will have contact** with people at high risk of developing severe disease
    - NICU staff, childcare, maternity wards
- **Please review vaccination status and offer** age-appropriate vaccine to your patients, including adults
- **Report confirmed and suspected** cases of pertussis (including those diagnosed based on symptoms that were not tested) to the Health Department: call 231-995-6125 or fax 231-995-6126

About B. *pertussis*

Pertussis or whooping cough is an acute infectious disease caused by the bacterium Bordetella *pertussis*. Pertussis can cause serious illness in people of all ages but is most dangerous for babies. Pertussis symptoms usually develop within 5 to 10 days after exposure, but sometimes up to 21 days. Transmission is usually person to person through respiratory droplets or contact with airborne droplets. The infectious period is from onset to 3 weeks after start of paroxysmal cough. Pertussis has an insidious onset with catarrhal symptoms that are indistinguish-able from those of minor respiratory tract infections. Next is the paroxysmal stage characterized by numerous, rapid coughs. The final stage is the convalescent stage, which can take from weeks to months to resolve.

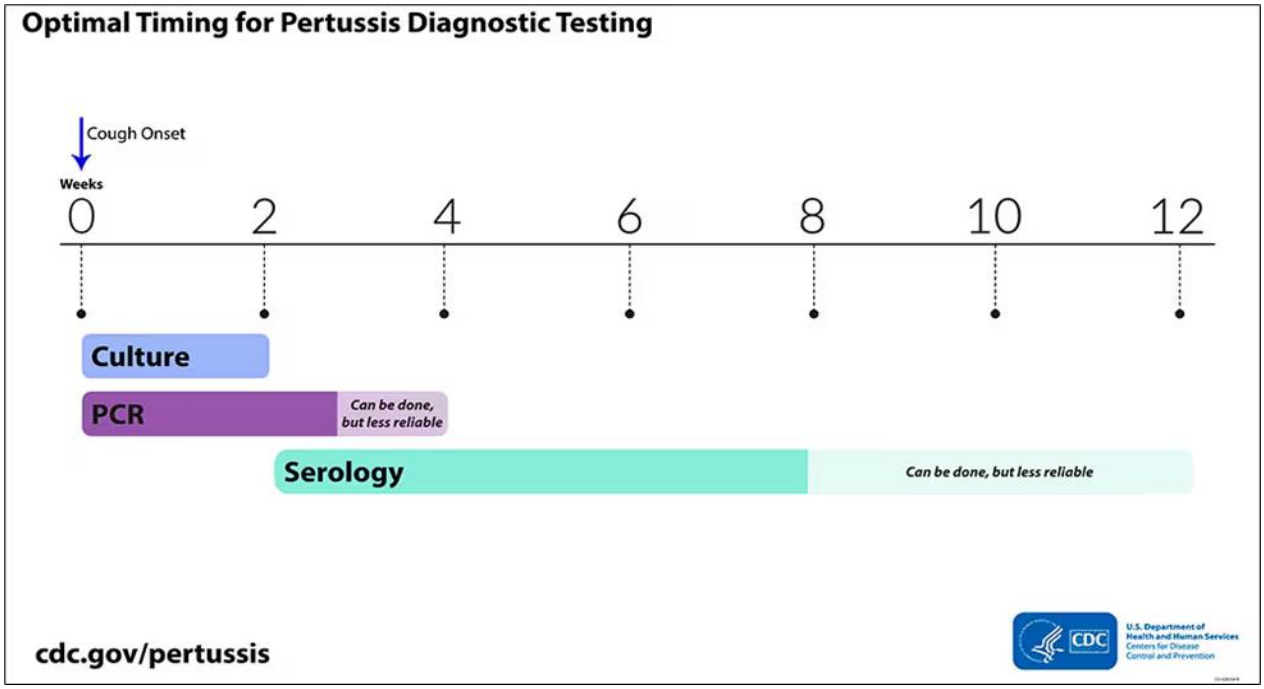
Pertussis in Individuals with Co-morbidities: A Systematic Review (Denis Macina . Keith E. Evans, March 2021)[1]
Pertussis in Individuals with Co-morbidities: A Systematic Review (nih.gov)

Prevention of B. *pertussis*

CDC recommends vaccination, postexposure antimicrobial prophylaxis (PEP), and practicing good hygiene to prevent pertussis. Vaccination is recommended for people of all ages. PEP is recommended for household contacts of a pertussis case, people at high risk of developing severe pertussis infection and those who will have contact with people at high risk of developing severe pertussis infection. Public health professionals can help identify those who need PEP.

Due to potential barriers with surge testing and the current respiratory illness season, we recommend the following considerations for TESTING TRIAGE:

- Consider high risk profiles above for symptomatic individuals
- Determine if the individual was exposed to any confirmed cases
- Assess vaccination status, but this would not preclude testing if you have a high index of suspicion
- **We do not recommend broad testing for asymptomatic groups (i.e., sports teams). These would be individually assessed based on above factors. The individual should self-monitor for 21 days**



ANTIBIOTIC TREATMENT AND PROPHYLAXIS

Note: All three macrolides are now considered equally appropriate as first line agents for the treatment or prophylaxis of pertussis for persons 6 months of age and older. See specifics for infants < 6 months.

Drug	Infant (< 6 months of age)	Child (> 6 months of age)	Adult
Azithromycin [1,4] (3-day course not yet approved for treatment of pertussis)	**1-5 months:** 10 mg/kg/day orally daily for 5 days **<1 month of age:** same as above and is the **preferred** 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 [2,4] 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
Erythromycin [1,3,4]	Estolate preparation preferred if available **1-5 months:** 40-50 mg/kg/day orally divided into 4 doses/day for 14 days (maximum 2 g/day) **<1 month of age**: same as above, but should only be used as an **alternate** drug. Drug use is associated with elevated risk of IHPS	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
Trimethoprim-Sulfamethoxazole [2,4] 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 >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

1. FDA Pregnancy Category B drug
2. FDA Pregnancy Category C drug
3. Some authorities prefer the estolate preparation for children but recommend avoiding its use in adults and pregnant women
4. Source: Centers for Disease and Control. Recommended Antimicrobial Agents for the Treatment and Postexposure Prophylaxis of Pertussis. Centers for Disease Control and Prevention: Atlanta, GA, 2005.