

## Hot Tips: Public Health Advisory #133 Date: 6/16/2023

Please copy and distribute to ALL physicians at your location.

### ***Respiratory Illness in Infants and Children***

#### **Key Messages**

- Over recent weeks, there has been an uptick in reports of respiratory illness observed in infants and children throughout Ventura County.
- The number of emergency room visits and records reported has exceeded the baseline for this age group.
- Several pathogens have been implicated, with *Bordetella parapertussis* and Adenovirus being most widely reported.
- Prompt and proper testing is urged in order to isolate and treat each patient.

#### **Situation**

Ventura County officials have identified increasing reports of infants and children presenting to local emergency rooms and clinics with complaints of respiratory illness. Among the various signs and symptoms reported, fever has been the most common, along with cough, congestion, otitis, and emesis. Through the county's syndromic surveillance capabilities as well as electronic laboratory reporting systems, our staff have linked several of these reports to *Bordetella parapertussis* and adenovirus infections. Co-infections with other pathogens have also been noted.

Physicians and other healthcare providers are encouraged to provide early and proper testing for patients presenting with similar respiratory illness of unknown etiology. These pathogens can be detected through respiratory viral panels or multi-target PCR assays, which are able to test for various pathogens at once. Early identification of the pathogen in question can allow for proper isolation and/or treatment of this vulnerable population and prevent spread to others.

Pertussis, also known as "whooping cough", is a highly contagious respiratory infection that is commonly caused by *Bordetella pertussis*. A similar, often milder, illness can also be caused by a different species of the bacteria, *B. parapertussis*. Individuals infected with *B. parapertussis* are known to experience symptoms such as prolonged paroxysmal cough, inspiratory whoop, and post-tussive emesis. Younger infants are at higher risk of developing severe illness from *B. parapertussis* infection which could potentially lead to hospitalization, or in rare cases, death.

There is currently no vaccine available to protect against *B. parapertussis* infection as vaccination against *B. pertussis* provides limited to no protection against *B. parapertussis* species. This pathogen is transmitted through the inhalation of respiratory droplets from an infected individual. An infected person is most contagious during the early stages of illness but could remain contagious for up to three weeks in the absence of proper treatment. After receiving appropriate antibiotic treatment for 5 days, the period of communicability is known to end. Early diagnosis, isolation, and proper treatment of infected individuals is essential to prevent the spread of *B. parapertussis* illness among susceptible populations.

*B. parapertussis* is less susceptible to antibiotics than *B. pertussis* but macrolides, trimethoprim-sulfamethoxazole and ciprofloxacin are generally effective. Treatment during the catarrhal stage may ameliorate the disease. Treat before test results are received if the clinical history is suggestive. A 5-day course of azithromycin is the first-line course of treatment. After the establishment of a paroxysmal cough, antibiotics have little effect on disease course but are recommended to limit further spread.

Adenoviruses are common viruses that can cause influenza-like illness among those infected. Infected persons often report experiencing fever, sore throat, conjunctivitis, acute bronchitis, pneumonia, and acute gastroenteritis. People with immunocompromising conditions are also at higher risk for developing severe illness. Adenoviruses can be transmitted from person to person through close physical contact, aerosolized respiratory droplets, fomites, or through an infected person's stool. It is also possible for an infected person to shed viral particles for a prolonged period after recovering from the illness. There are currently no designated treatments or vaccines against adenoviruses. It is recommended that infected persons stay home while sick, refrain from kissing and from sharing drinking cups and eating utensils with others. Frequent handwashing and proper cough etiquette are also important in limiting transmission and preventing outbreaks in high-risk settings.

For further resources and information on *Bordetella parapertussis* please reference the following: [CDPH | Pertussis](#).

Additional information on adenoviruses can be found by visiting [Adenovirus | CDC](#).

This bulletin is intended to improve the public health in our county by keeping physicians and nurses informed of noteworthy diagnoses, disease trends, and other events of medical interest. Another goal of a public health department is to educate. We hope that you will use this information to increase your awareness. Please allow us to continue in our role of speaking to the press so that we may maximize the educational message to the benefit of all citizens of Ventura County.