Pertussis continues to occur at higher rates in Boulder County

Pertussis, also known as whooping cough, occurs worldwide and remains endemic in the United States. Although there is no distinct seasonality, pertussis is cyclical and peaks have historically occurred every 3-5 years. While reports of pertussis have been lower in recent years, pertussis continues to occur at higher rates in Boulder County compared to Colorado rates, and Colorado rates are consistently higher than national rates.

County, State, and National Rates
During the last epidemic year in 2012, Boulder County rates were nearly double the Colorado rates. Additionally, during five of the six years following the epidemic year, Boulder County continued to experience higher rates of the disease when compared to the rest of the state. During 2013, Boulder County followed up on 215 cases of pertussis; a rate greater than 2.5 times the state rate.

Outbreaks in Long-Term Care Facilities Impact Residents and Staff

Although it’s still warmer than usual for September, it’s important to take time now to prepare for outbreak season in long-term care facilities. Most of the outbreaks occur in the winter months, with influenza and gastrointestinal illness (including norovirus being the most common).

Gastroenteritis: In 2018, there were seven gastroenteritis (GI) outbreaks in long-term care facilities in Boulder County. So far this year there have been eight. All of the outbreaks were determined to be transmitted person-to-person. Norovirus was the suspected or confirmed etiology in 7 of 15 outbreaks, while the etiology for the remaining 8 was undetermined. In 12 of the outbreaks (25%), at least 1 resident was hospitalized. During the outbreaks, 5-37% of residents became ill, with a median attack rate of 22% (10). Of staff, 0-30% became ill, with a median attack rate of 8% (10).

Influenza: During the 2018-2019 season, 18 influenza outbreaks occurred in long-term care facilities in Boulder County. At least 1 resident was hospitalized in 69% (16) of the outbreaks. During an outbreak, 2-25% of residents became ill, with a median attack rate of 12%; and 0-8% of staff became ill, with a median attack rate of 2% (16).

Please report outbreaks in long-term care facilities to Boulder County Public Health at 303-413-7500.

Resources
Infectious disease guidelines for health care settings can be found at:

Submitted by Heather Marshall, MPH, Communicable Disease Epidemiologist, hmarshall@bouldercounty.org
Pertussis continues to occur, continued from page 1

**Recommendations**

- **Vaccinate.** To reduce the risk of pertussis in new parents and their infants, the CDC recommends that pregnant women receive Tdap vaccine during each pregnancy between the 27th and 36th weeks.

- **Test.** With respiratory season headed our way, remember to test patients with symptoms compatible with pertussis to prevent illness to those at increased risk of severe or complicated illness. Test if your patient:
  - Is a close contact to a confirmed case and has a cough of any duration.
  - Has had a cough of at least five days and either paroxysms or post-tussive vomiting.
  - Has a cough of at least 14 days.
  - Is an infant with apnea or gasping.

**Optimal Timing for Diagnostic Testing (weeks)**

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Source: [https://www.cdc.gov/pertussis/clinical/diagnostic-testing/diagnosis-confirmation.html](https://www.cdc.gov/pertussis/clinical/diagnostic-testing/diagnosis-confirmation.html)

**Flu season is just around the corner!**

Boulder County Public Health (BCPH) will monitor and update influenza like illness (ILI) syndromic surveillance data weekly throughout the 2019-2020 influenza season to provide timely updates from the Colorado North Central Region (CO-NCR) Syndromic Surveillance system.

Starting in late September, weekly ILI data will be posted on the BCPH communicable disease webpage: www.bouldercountydiseasecontrol.org. Additionally, if you would like to sign up to receive periodical ILI information through email, please contact kstinson@bouldercounty.org.

Submitted by Kaylan Stinson, Regional Epidemiologist, kstinson@bouldercounty.org

**Outbreak of Severe Pulmonary Disease Associated with Vaping**

As of September 17, 2019, over 530 possible cases of lung illness associated with using e-cigarettes or vaping have been reported from 38 states and the U.S. Virgin Islands. Seven deaths have been confirmed in six states. Of these cases almost 3/4 were male (72%). Two-thirds of the cases (67%) were between the ages of 18-34 years, 16% were under the age of 18, and 17% were 35 years or older. All confirmed cases reported vaping within 90 days of developing symptoms, and most reported using tetrahydrocannabinol (THC). Many patients have reported using both THC and nicotine, while a smaller group reported only nicotine use.

As of September 18, 2019, six cases have been identified in Colorado, including two Boulder County residents. Four cases have been hospitalized. Three of these cases reported nicotine use, two reported marijuana use, and one reported using both. Colorado currently has the highest vaping rates in the nation among teens and an unusually high rate of nicotine vaping in young adults. Colorado clinicians, parents, and people who vape should be aware of this outbreak and look-out for symptoms, which include:

- cough, shortness of breath, or chest pain
- nausea, vomiting, or diarrhea
- fatigue, fever, or weight loss

No evidence of infectious diseases has been identified in these cases, and antibiotic treatment alone has not improved symptoms. The CDC suggests that these lung illnesses are likely associated with a chemical exposure, although no single product has been linked to all cases.

Clinicians who become aware of potential cases should report them to the Colorado Department of Public Health and Environment (CDPHE) at 303-692-2700 or 303-370-9395 (after hours).

Submitted by Heather Marshall, MPH, Communicable Disease Epidemiologist, hmarshall@bouldercounty.org