

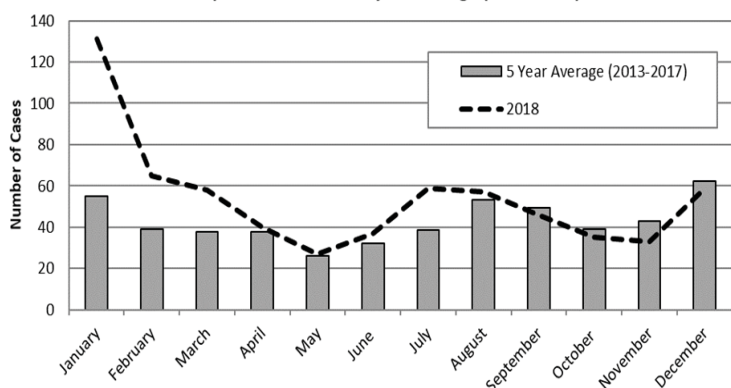
epiConnections

A BIMONTHLY NEWSLETTER OF THE COMMUNICABLE DISEASE AND EMERGENCY MANAGEMENT DIVISION OF BOULDER COUNTY PUBLIC HEALTH

Increase in Gastrointestinal Disease, Hepatitis A, Influenza, and Rabid Pets

In 2018, there were 647 diseases or conditions reported in Boulder County. While there was a slight decrease of 0.5% compared to 2017, cases increased by 19.6% in 2018 when compared to the previous 5-year (2013-2017) average.

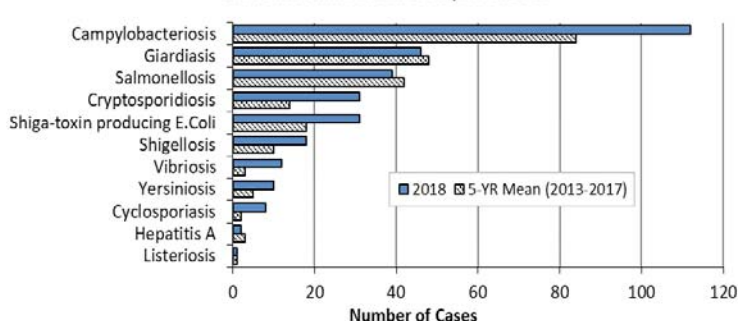
Total Number of Disease Cases Reported by Month in 2018 Compared to Previous 5-year Average (2013-2017)



Note: Numbers include Influenza and exclude animal bites and reportable diseases/conditions for which Boulder County Public Health does not conduct routine surveillance and/or individual case investigations.

Gastrointestinal Illnesses: Among the 647 reportable diseases, 48% (310 cases) were due to gastrointestinal diseases. Compared to the prior five-year (2013-2017) average, there was a 70% or greater increase in cryptosporidiosis, shiga toxin-producing *E.coli*, shigellosis, vibriosis, yersiniosis, and cyclosporiasis. The increases appear to be driven by both an increase in travel-related illness and reporting of cases where culture-independent diagnostic testing was used to confirm the diagnosis.

Gastrointestinal Diseases Reported 2018



Vaccine-preventable Illnesses: Vaccine-preventable diseases also accounted for 48% (309 cases) of reportable diseases in 2018. Of all vaccine-preventable diseases reported among Boulder County residents, 67% (208 cases) were hospitalizations due to influenza in 2018. In total, during the 2017-2018 influenza season, 261 residents were hospitalized, representing a 180% increase compared to the average number of residents hospitalized in the

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TB Treatment & Elimination Updates

World TB Day, March 24, commemorated the date in 1882 when Dr. Robert Koch announced his discovery of *Mycobacterium tuberculosis*, the bacillus that causes tuberculosis (TB). Here are a few TB updates:

The Colorado TB Elimination Plan, developed in December 2016, is a 10-year roadmap of strategies and tactics to reduce rates of TB to 1 case per million individuals; the definition of TB elimination. The 2018 accomplishments include: creating Colorado TB risk assessments (<https://www.colorado.gov/pacific/cdphe/tb-providers>); partnering with Salud Clinics statewide to increase screening, testing, and treatment; conducting training in rural counties; building relationships with organizations who serve individuals at high risk updating testing and treatment protocols; and systematically recording country of birth for all patients, which is currently the most likely predictor of TB risk in Colorado. The full plan is available at <https://drive.google.com/file/d/0B2o0lwpCuPw7MlpSVIVxd2JGQ2M/view>

Free TB continuing education is available at:

- American Journal of Nursing: *Tuberculosis, A New Screening Recommendation and an Expanded Approach to Elimination in the United States*: https://journals.lww.com/ajnonline/FullText/2017/08000/CE_Tuberculosis_A_New_Screening_Recommendation.24.aspx
- CDC: *TB 101 For Health Care Workers*: <https://www.train.org/cdctrain/course/1063693/>

TB Technical Instructions for Civil Surgeons were updated in October 2018 to include:

- All applicants two years old or older must have an interferon gamma release assay (IGRA). Tuberculin skin testing (TST) cannot be used as a substitute for IGRA testing.
- All applicants with a positive IGRA, known human immunodeficiency virus (HIV) infection, or signs or symptoms of TB disease must have a chest x-ray.
- Civil surgeons must refer applicants with abnormal chest x-ray suggestive of TB disease to local public health for further evaluation. Public health will determine if the applicant has TB disease and needs

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previous five influenza seasons. This is not surprising, as the 2017-2018 influenza season was an extremely high severity season - the greatest number of influenza-associated hospitalizations reported in any season to date in the state.

Pertussis and varicella (chickenpox) also remained prevalent among school-aged children. Of the pertussis cases reported in 2018, 71% were among school- and child care-aged children in Boulder County. Thirteen schools in the county reported at least one case of pertussis, and six schools reported multiple cases. There were 17 cases of varicella reported in school-aged children; however, this illness is often under-reported since many people do not seek health care and/or a diagnosis is made without confirmatory testing.

In 2018, one Boulder County resident was diagnosed with invasive meningococcal disease. This was the first identified case of meningococcal disease in a Boulder County resident since 2011. Although meningococcal disease is a vaccine-preventable disease, the identified serogroup in this case (serogroup E) is not covered by the current meningococcal vaccines. In Colorado, meningococcal disease is rare, with an average of 5-6 cases reported per year since 2013.

Outbreaks: In 2018, Boulder County Public Health staff investigated 26 outbreaks, compared to an average of 20 outbreaks per year during the previous five-year (2013-2017) period. The majority of these outbreaks occurred in assisted living and long-term care settings and were caused by influenza and viral gastroenteritis (e.g. norovirus). Of the 11 influenza outbreaks reported in assisted and long-term care settings, all occurred during the 2017-2018 influenza season. More than 1,000 residents were at risk in these settings, and more than 100 residents became ill with influenza, representing an average attack rate of 9.5% among residents. During 2018, hospitalizations occurred at a rate of approximately 12 per 1,000 people at risk in these settings.

An outbreak of hepatitis A was identified in the state in October 2018. As of February 14, 2019, there have been 16 people diagnosed with hepatitis A who are considered part of this ongoing outbreak. Most of these cases (88%) reported experiencing substance use issues and/or experiencing homelessness (69%), risk factors that have been identified in large, ongoing outbreaks across the country since 2016. Two cases of hepatitis A were reported in Boulder County during 2018; however they are not currently considered part of the ongoing outbreak. Health care providers caring for patients with symptoms consistent with hepatitis A should promptly report suspect cases to public health so that a timely investigation can occur.

Zoonosis: Rabies is regularly found in wildlife in Colorado. While it is typical to see an increase in the number of cases in warmer months when animals are more active, there were more rabid animals identified in Colorado in 2018 than in any other year. Although there was a decrease in the number of rabid animals identified in Boulder County compared to previous years and compared to other counties along the Front Range, post-exposure prophylaxis was still recommended for 34 Boulder County residents who had exposure to animals that may have been infected with rabies. (See the rabies article in this edition.)

There was also a decrease in the number of West Nile virus (WNV) infections in Boulder County residents during 2018 compared to the previous 5-year average (2013-2017). Neuroinvasive WNV disease was documented in four of the 12 people infected with the virus, with the remaining 8 people presenting with uncomplicated fevers. Across the state, 96 people (54% neuroinvasive; 46% non-neuroinvasive) were reported to have WNV, including 3 people who died from the illness, one of which was from Boulder County.

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

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treatment. For any applicant requiring referral, the civil surgeon must not classify, issue medical clearance for TB, or sign the I-693 form until the applicant returns with documentation of the results of their TB disease evaluation.

- Civil Surgeons may sign the I-693 form if there is no evidence of active TB disease; however, all applicants diagnosed with latent tuberculosis infection (LTBI) must be reported to local public health.
- Any applicant diagnosed with TB disease who needs treatment must receive a classification of Class A TB and is not cleared until successful completion of treatment, regardless of the diagnostic criteria. Applicants undergoing TB disease treatment may petition for a Class A waiver.
- All chest x-ray images (in a DICOM format) should be sent with the patient to the public health TB clinic.

Review the full updates at <https://www.cdc.gov/immigrantrefugeehealth/exams/ti/civil/technical-instructions-civil-surgeons.html>

Contact Carolyn Bargman at 303-413-7516 or 303-602-7240 for more information.

Remind Patients to Vaccinate Pets and Horses Against Rabies

As the weather warms up, it is more likely that people, pets, and livestock will come in contact with wildlife that may be infected with rabies. Rabies is an infectious and deadly viral disease usually passed on through the bite of an infected animal. The disease affects the nervous system in humans and many mammals and is fatal unless it is treated before symptoms appear.

In 2018, nine pets in Colorado, including two dogs, six cats, and an alpaca tested positive for rabies. In each of these situations, every person who came in contact with the pet had to receive the rabies post-exposure vaccination series. In the same year, 325 animals throughout the state tested positive for rabies, including 234 skunks, 78 bats, and 4 other wildlife species.

Vaccinating dogs, cats, horses, and livestock against rabies is the most effective way to protect both animals and humans from contracting the disease. Kittens and puppies too young to receive their first rabies vaccinations should be monitored closely and kept away from wildlife until 30 days after their first rabies vaccination.

Residents can view Boulder County rabies activity during summer months on the interactive map at BoulderCountyRabies.org. Additional data and guidance about rabies is available on the Colorado Department of Public Health and Environment website at <https://www.colorado.gov/pacific/cdphe/rabies>

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