

# 2018-2022 Communicable Disease Summary

## Calhoun County Public Health Department

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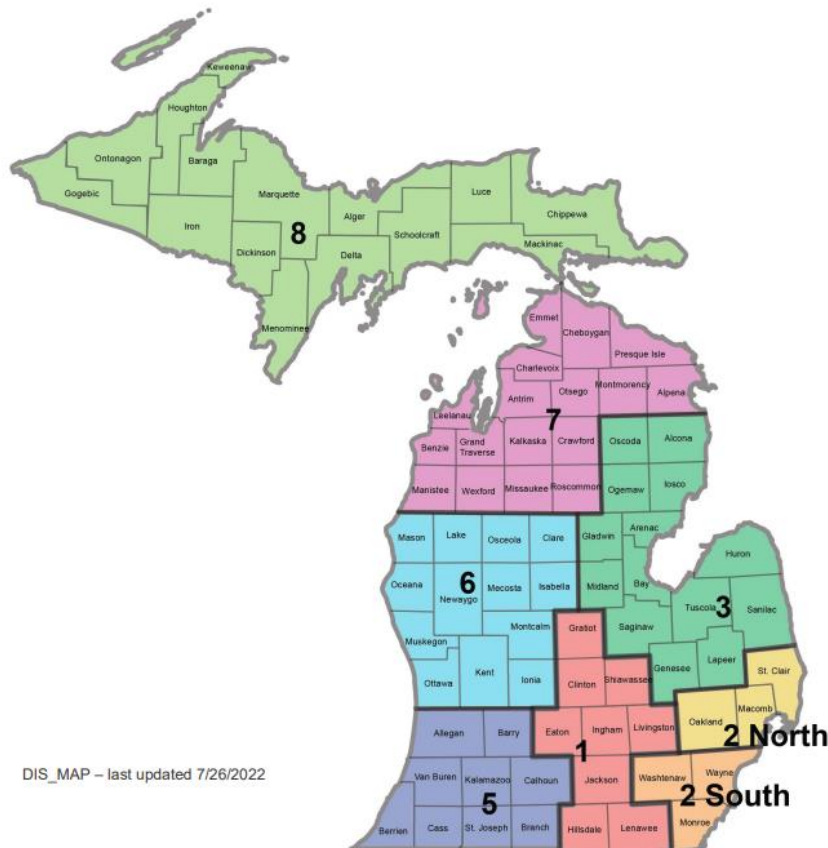
## Introduction

Prevention and control of communicable disease is a necessary aspect of community health. Calhoun County Public Health Department (CCPHD) monitors for disease through public health surveillance. Public health surveillance is an important aspect of public health because prompt reporting helps health departments to identify outbreaks, provide treatment, and perform contact tracing in a timely manner. The surveillance areas included in this report are, Calhoun County, Region 5 (Allegan, Barry, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren counties) and the state of Michigan. To accurately compare population health data, population-based rates per 100,000 persons were used to portray disease incidence.

CCPHD continually monitors for reportable diseases, as these pathogens can impact the health of the public. The Michigan Public Health Code mandates healthcare providers and/or laboratories that suspect or diagnose any of the 80 reportable diseases, to contact the local health department for further investigation and monitoring. This report provides surveillance data on the top 17 diagnosed communicable diseases in Calhoun County.

All data presented in this report was obtained from the Michigan Disease Surveillance System (MDSS) and Michigan Syndromic Surveillance System (MSSS). MDSS and MSSS are web-based communicable disease reporting systems that facilitates coordination among local and state public health agencies during communicable disease investigations.

**Figure 1.** Map of Preparedness Regions in Michigan

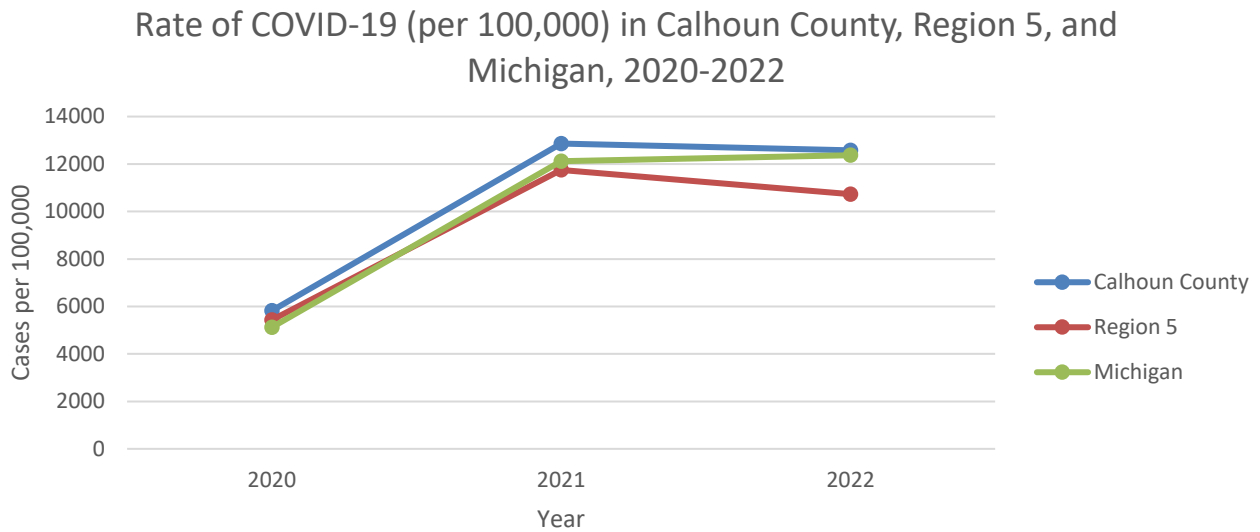


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# Respiratory Diseases

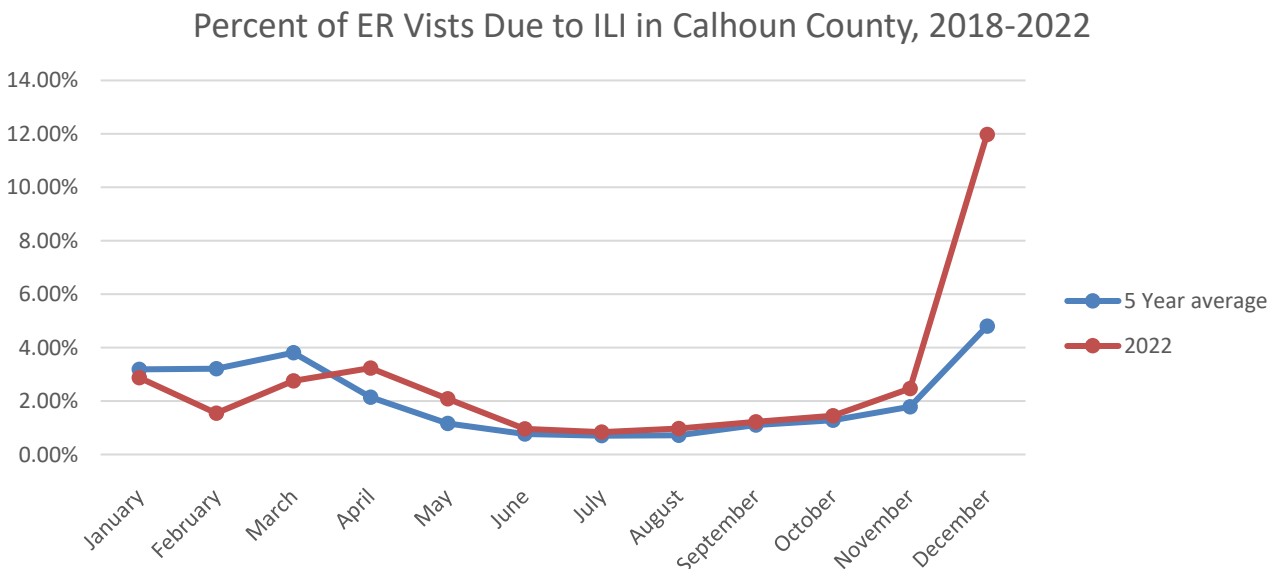
## COVID-19

COVID-19 is a respiratory disease that was first seen in Calhoun County in March 2020. Common symptoms include cough, shortness of breath, congestion, and fatigue. Calhoun County has seen higher rates of COVID-19 than Michigan and Region 5 over the last three years. In 2022, Calhoun County had a rate of 12,578 cases per 100,000, Michigan had 12,370 cases per 100,000, and Region 5 had 10,731 cases per 100,000. All three areas saw a slight decrease in case rates from 2021 to 2022. In Calhoun County, the age group with the highest rate of cases in 2022 was 30-34 year-olds.



## Influenza

Influenza cases are tracked differently compared to others in this report. Instead of rates of cases seen in the county, the percentage of emergency department or urgent care visits for an influenza-like illness (ILI) is used to track influenza in the community. The graph below compares 2022 data to an average from 2018-2022. During the 2022-2023 flu season, there was a sharp increase in ILI visits from November 2022 to December 2022. Older adults and children are more susceptible to severe illness and complications from an influenza infection.

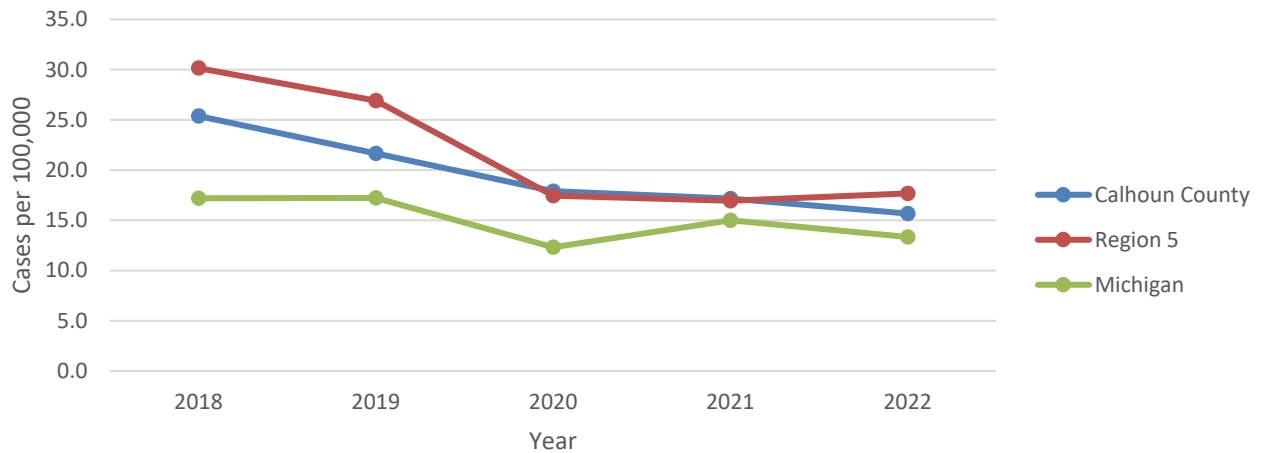


## Foodborne Illness

### Campylobacteriosis

Campylobacteriosis is caused by a bacteria called *Campylobacter* and is one of the most common causes of diarrheal disease in the United States. It is also known to cause Guillain-Barré syndrome (GBS), an autoimmune disease that attacks a person's nerves. As seen in the graph below, rates of Campylobacteriosis in Calhoun County have been falling for the past 5 years. It is most commonly seen in older adults (age 60+). Calhoun County saw 15.7 cases per 100,000 in 2022 which is down from 17.2 cases per 100,000 seen in 2018.

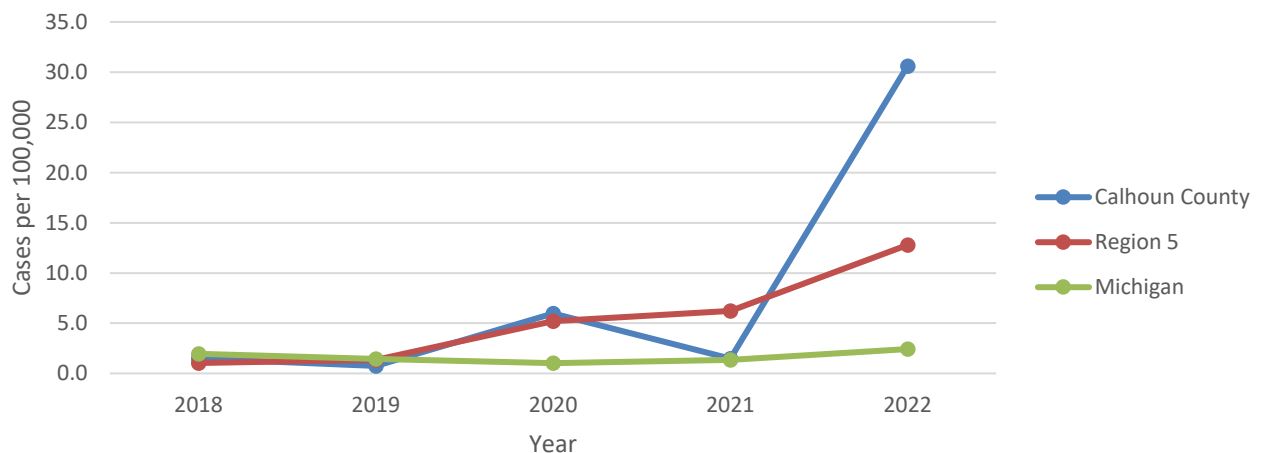
Rate of Campylobacteriosis (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



### Norovirus

Norovirus is the most common cause of gastroenteritis (inflammation of the stomach and intestines) in the United States and is often referred to as the stomach flu. Symptoms usually begin 24-28 hours after exposure and last 1-3 days. Rates of norovirus have jumped dramatically in Calhoun County from 2021 to 2022, from 1.5 to 30.6 cases per 100,000. Due to the highly contagious nature, it's easy to spread the disease once it's seen in a specific community, such as a school or nursing home. In 2022, the majority of cases were seen in adults aged 50 and older.

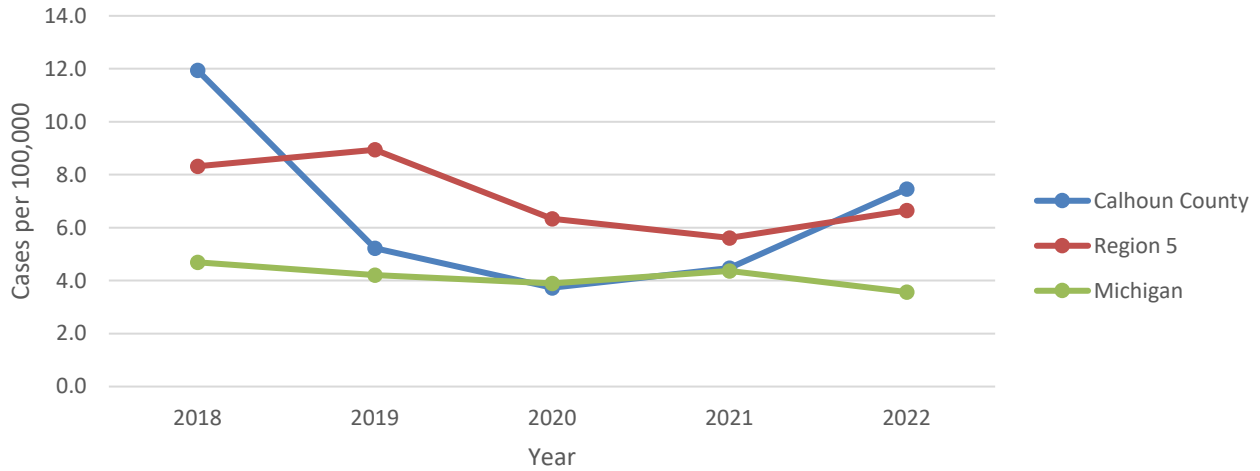
Rate of Norovirus (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



### Giardiasis

Giardiasis is a diarrheal illness caused by a parasite called *Giardia lamblia*. Symptoms usually appear 1-3 weeks after exposure and will last 2-6 weeks. While rates of giardiasis are higher than they have been in recent years, Calhoun County has seen an overall drop in cases since 2018, with 7.47 cases per 100,000 in 2022. While risk is equal between males and females, Calhoun County has recently seen more cases in males. Rates of Giardia are also consistently higher in Region 5 than Michigan as a whole.

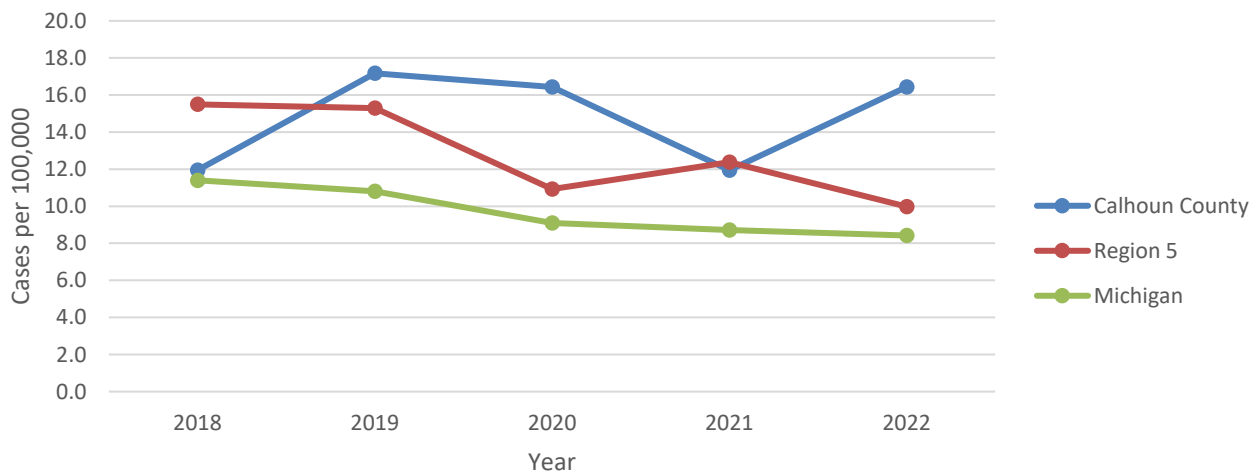
Rate of Giardiasis (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



### Salmonellosis

Another foodborne disease commonly seen in Calhoun County and Michigan is Salmonellosis. The illness is caused by *Salmonella* bacteria, which can be found in the intestines of both animals and humans. Severe infection is more common among young children and adults older than 65. Cases in Calhoun County are seen mainly in adults aged 45 and older and equally in males and females. In Calhoun County, the rate of Salmonellosis in 2022 rose compared to 2021, from 11.9 cases to 16.4 cases per 100,000.

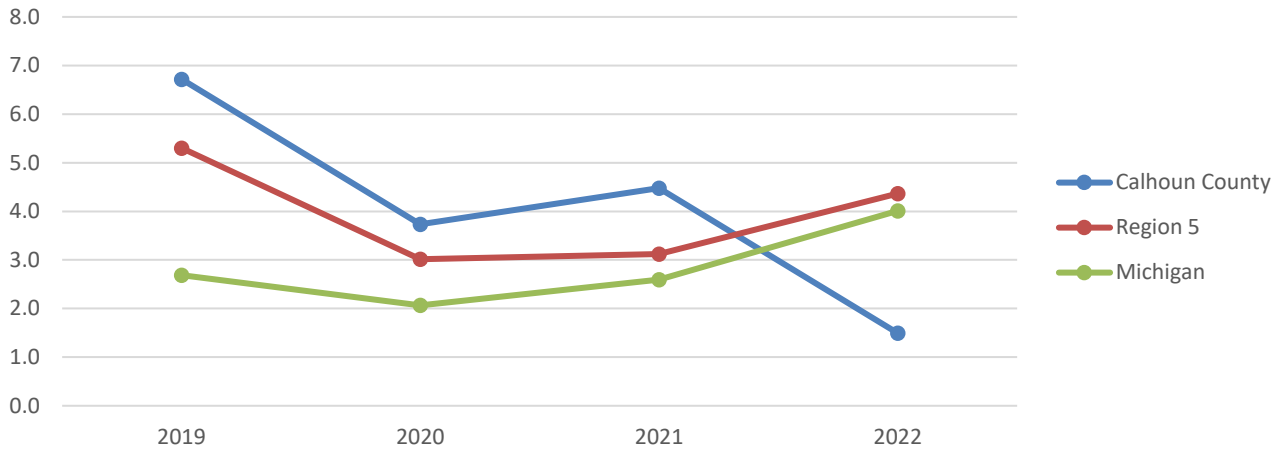
Rate of Salmonellosis (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



### Shiga Toxin Producing *E. coli*

*Escherichia coli* (*E. coli*) is a type of bacteria that can be found naturally in the intestines of both humans and animals. One strain of this bacteria, Shiga Toxin Producing *E. coli* (STEC), causes the most severe illness in humans. STEC is most commonly spread through the consumption of contaminated foods, meat in particular. Calhoun County has seen a decrease in STEC cases over the last 5 years, contrary to the rise in Region 5 and Michigan. The majority of cases in Calhoun County were seen in adults over the age of 50.

Rates of STEC (per 100,000) in Calhoun County, Region 5, and Michigan, 2019-2022

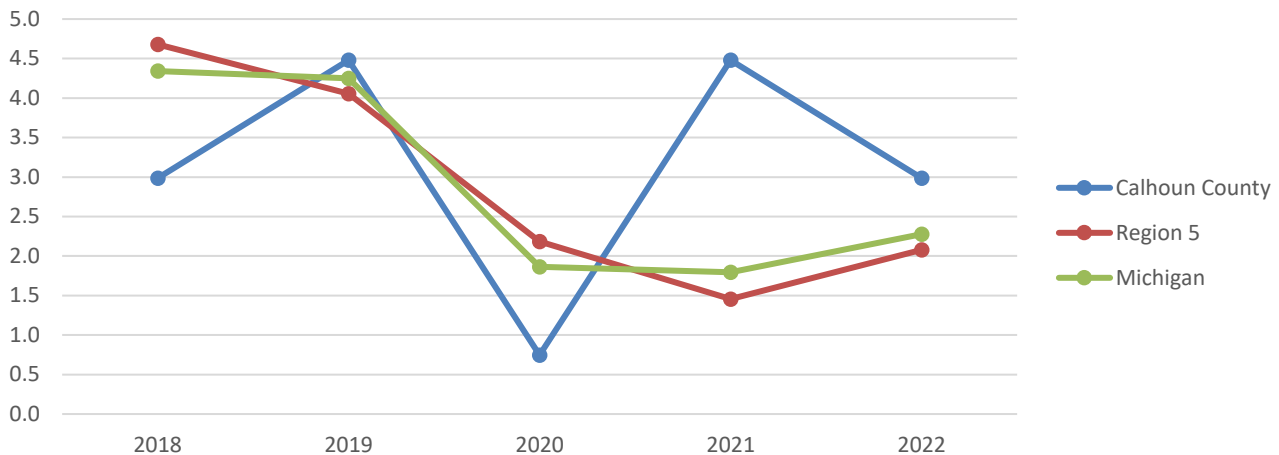


## Vaccine Preventable Diseases

### Chickenpox

Chickenpox is a highly contagious viral disease that causes a rash and a low fever, however, there is a vaccine that helps to prevent the spread of the disease. The case rate has varied over the last few years in Calhoun County from 4.5 cases per 100,00 at the highest (2019 and 2021) to 0.7 cases per 100,000 at the lowest in 2020. Overall Rates in Region 5 and Michigan have decreased from 2018-2022. Chickenpox is more common in children than adults in Calhoun County, where 71% of cases were in people 19 years and younger. These cases were seen equally across males and females.

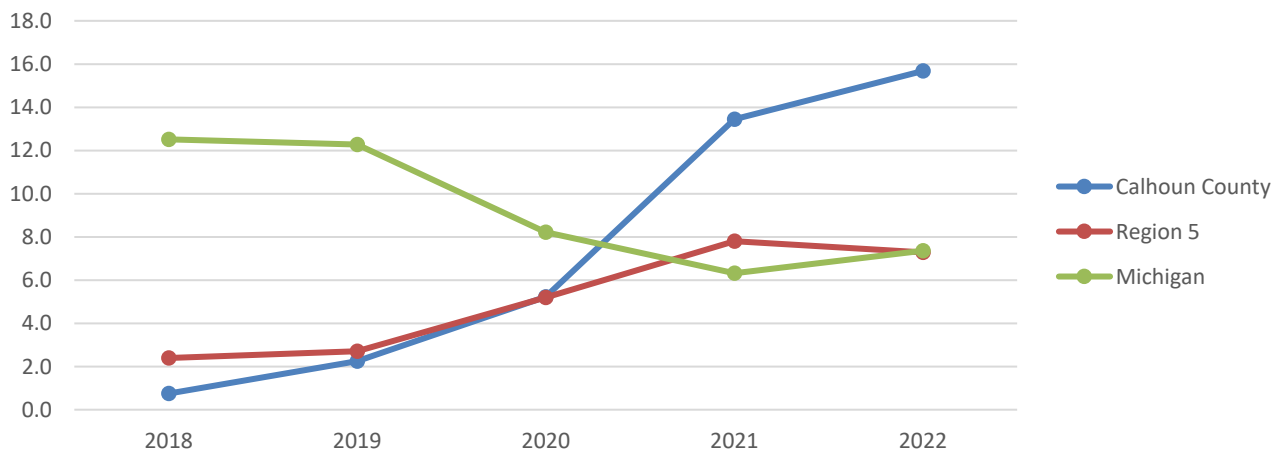
Rates of Chickenpox (per 100,000), in Calhoun County, Region 5, and Michigan, 2018-2022



### Shingles

Shingles is an illness caused by the same virus that as chickenpox and is typically seen in older adults or young children with a weakened immune system. The rate of shingles has been consistently increasing in Calhoun County going from 0.7 cases per 100,000 in 2018 to 15.7 cases per 100,000 in 2022. This increase is also seen in Region 5 from 2.4 cases per 100,000 in 2018 to 7.4 cases per 100,000 in 2022, but the state of Michigan has seen an overall decrease in this time period from 12.5 cases per 100,000 in 2018 to 7.4 cases per 100,000 in 2022.

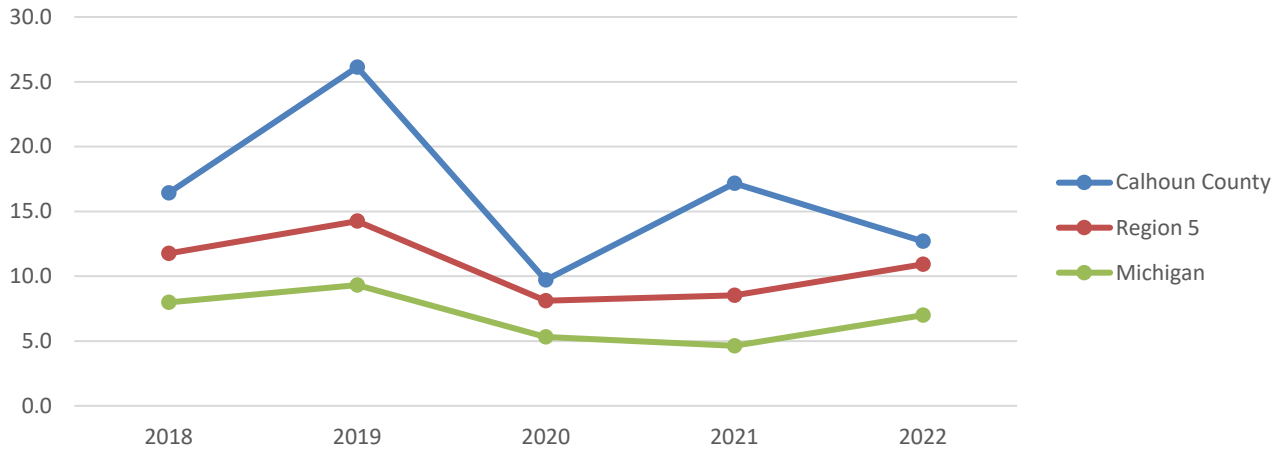
Rate of Shingles (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



### **Invasive *Streptococcus pneumoniae***

*Streptococcus pneumoniae* can cause both pneumococcal pneumonia and meningitis, and is considered invasive when it enters the bloodstream, spinal fluids, or other sites where the bacteria are not normally seen. Calhoun County has seen a decrease in cases from a peak in 2019, 26.1 cases per 100,000, to 12.7 cases per 100,000 in 2022. The majority of cases (69.1%) in Calhoun County are in adults 55 years and older. Michigan and Region 5 have seen a slight increase over the last couple years; however, both are lower than Calhoun County in 2022, with rates of 7.0 cases per 100,000 and 10.9 cases per 100,000, respectively.

Rate of Invasive *Streptococcus pneumoniae* (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022





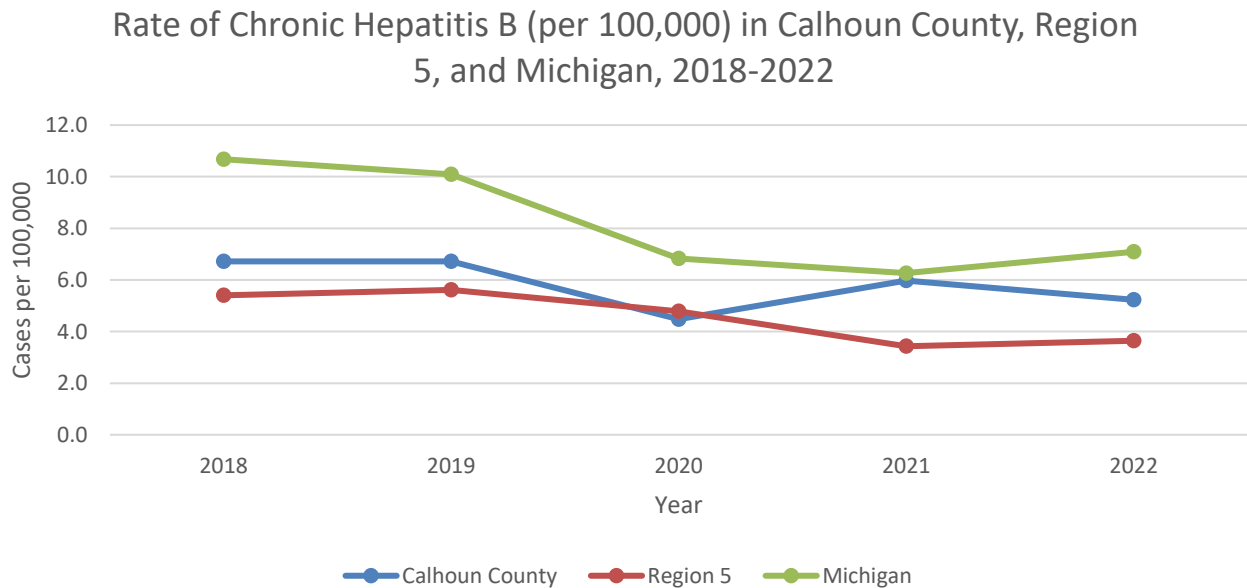
## Hepatitis

Hepatitis is a general term used to describe inflammation of the liver and is often caused by a virus. In Calhoun County, the most common types of viral hepatitis are hepatitis B and hepatitis C.

A hepatitis B or C infection can be an acute or chronic illness. An acute hepatitis B or acute hepatitis C infection is a short-term illness that occurs within the first 6 months after someone is exposed to hepatitis B or C virus. An acute infection can lead to a chronic infection. Chronic hepatitis B or C infection is a long-term illness that occurs when hepatitis B or C virus remains in a person's body. Hepatitis B and C are spread by direct contact with infected blood or bodily fluids. The most common ways the virus is spread are through unprotected sexual contact and sharing needles used for injecting drugs or medication.

### Chronic Hepatitis B

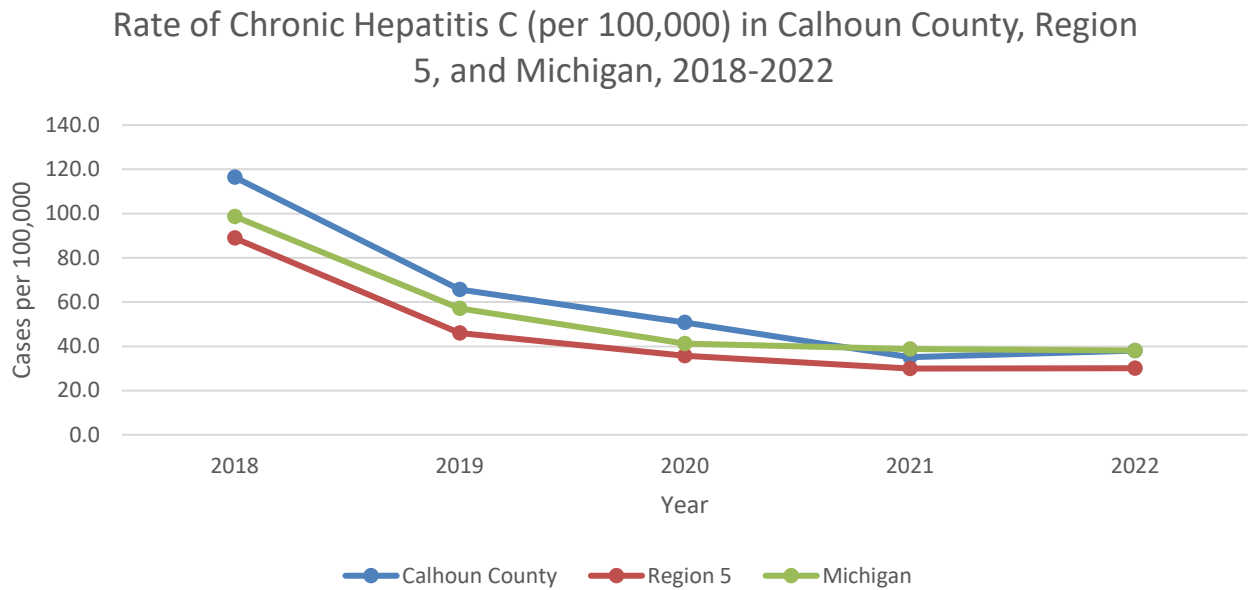
In Calhoun County, the rate of hepatitis B has declined slightly from 6.7 cases per 100,000 people in 2018 to 5.2 cases per 100,000 in 2022. Hepatitis B cases are more commonly found in males, 66.6% of cases, compared to females, 33.3% of cases. Most hepatitis B cases were found to occur in adults aged 35–60 years old. Hepatitis B is spread through blood and body fluids. A vaccine is available to prevent hepatitis B.



## Chronic Hepatitis C

Hepatitis C is only spread through blood. There is no vaccine available to prevent it, however it is treatable through oral medications (pills) in 8-24 weeks. Treatment is available through providers in the community, including at the CCPHD Clinic.

From 2018 to 2022, chronic hepatitis C rates have decreased significantly in Calhoun County, Region 5, and Michigan. In 2022, Calhoun County and Michigan had the same rate of hepatitis C at 38.1 per 100,000 people, which was slightly higher than Region 5, at 30.2 per 100,000 people. In Calhoun County, hepatitis C is seen equally in females and males, and is most common in adults aged 30–39 years old.



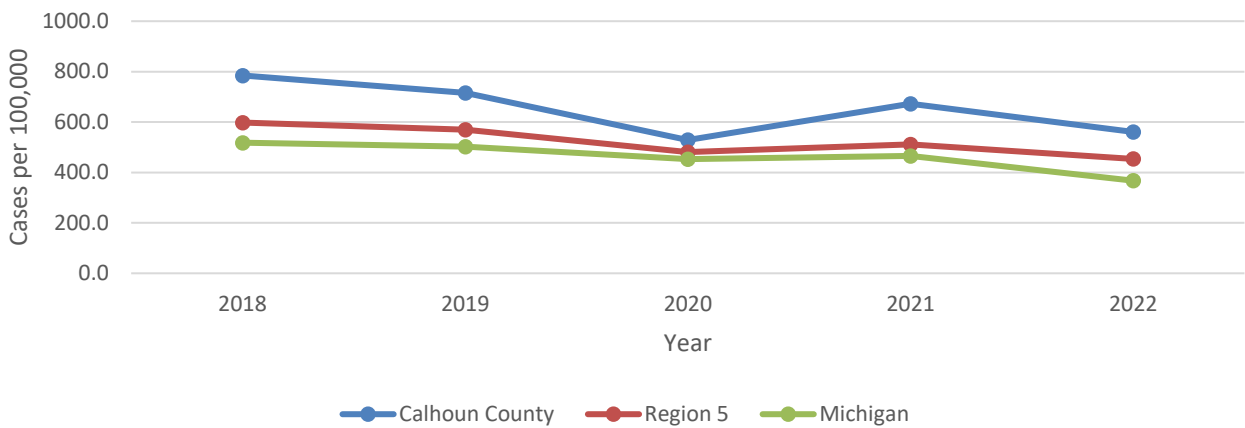
## Sexually Transmitted Infections (STIs)

CCPHD offers counseling, testing and treatment for chlamydia and gonorrhea. In addition to testing, the department aids in contacting partners of individuals that have been diagnosed with these infections.

### Chlamydia

From 2018 to 2022, there has been a decrease in chlamydia cases across Calhoun County, Region 5, and Michigan. Calhoun County saw a decrease in cases from 716.0 per 100,000 people in 2019 to 528.6 per 100,000 people in 2020. The decrease is likely due to the COVID-19 pandemic, as cases increased to 672.7 per 100,000 in 2021. In Calhoun County, females (66.9% of cases) had a higher prevalence of chlamydia compared to males (33.1%). Chlamydia is most frequently seen in Calhoun County residents aged 15-24 years old.

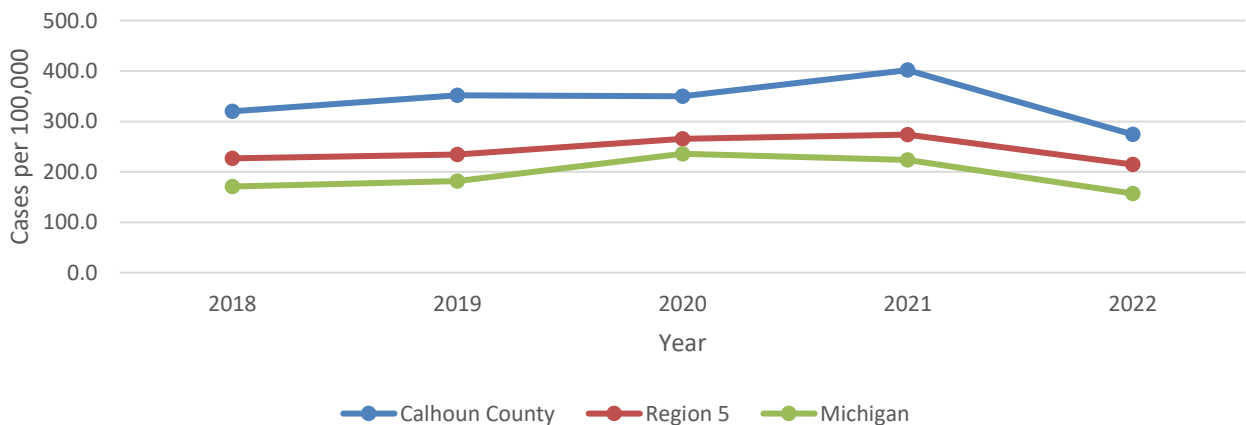
Rate of Chlamydia (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



### Gonorrhea

From 2018-2021, Calhoun County, Region 5, and Michigan saw an increase in gonorrhea rates. All three entities saw a decrease in 2022. In 2021, Calhoun County gonorrhea cases peaked at 401.7 per 100,000 people. Comparatively, Region 5 (273.8 per 10,000) and Michigan (223.3 per 100,000) cases were much lower in 2021 compared to Calhoun's. Gonorrhea cases are seen equally between females and males, and adults aged 20-29 years old has the highest number of cases in Calhoun County.

Rate of Gonorrhea (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022

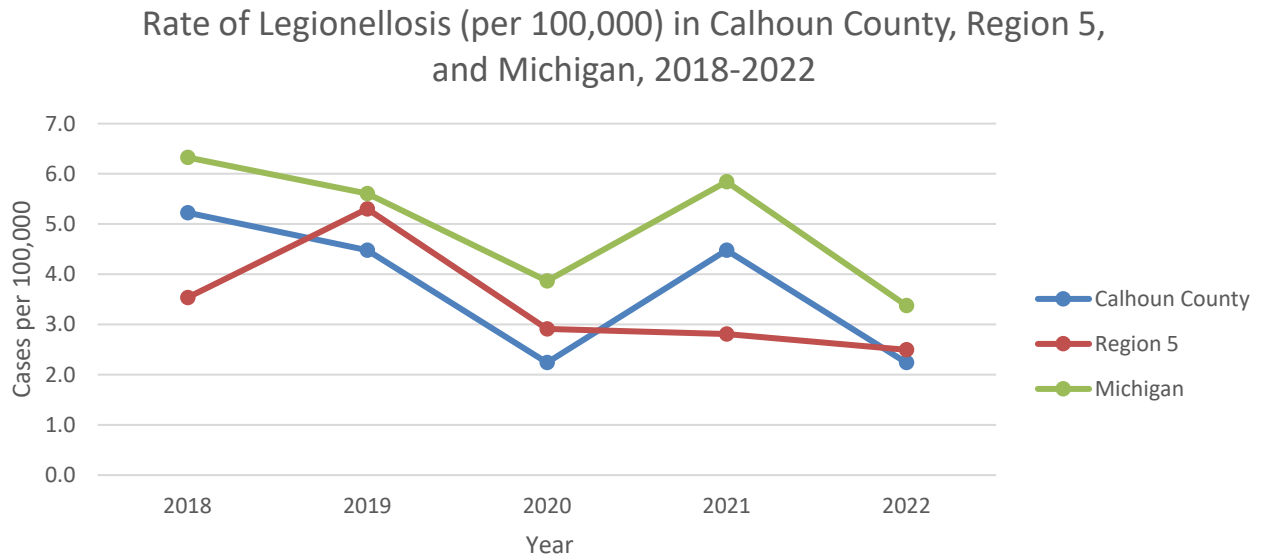


## Other Diseases Seen in Calhoun County

### Legionellosis

People who get sick after being exposed to *Legionella* can develop two different illnesses, collectively known as legionellosis, Legionnaires' disease, and Pontiac fever. Legionnaires' disease is very similar to other types of pneumonia (lung infection), and symptoms include cough, shortness of breath, fever, and muscle aches. Pontiac fever is a milder infection than Legionnaires' disease. Symptoms are primarily fever and muscle aches, and do not include lung infection. *Legionella* bacteria is found naturally in freshwater environments such as, lakes and streams. The bacteria can become a health concern when it grows and spreads in human-made building water systems such as, showerheads, sink faucets, hot tubs, hot water tanks, etc. Legionnaires' disease and Pontiac fever is spread by inhaling small droplets of water that contain the bacteria and is rarely spread from person-to-person.

The rate of Legionellosis diseases varied from 2018 to 2022. Calhoun County and Michigan rates followed the same pattern, with rates being the highest in 2018, and lowest in 2020 and 2022. Region 5 had the highest rate in 2019 and then decreased from 2020 to 2022. In Calhoun County, the majority of Legionellosis cases are in individuals over 45 years old, with the highest concentration of cases being in adults aged 70 years and older. Males made up 68% of Legionellosis cases in Calhoun County.

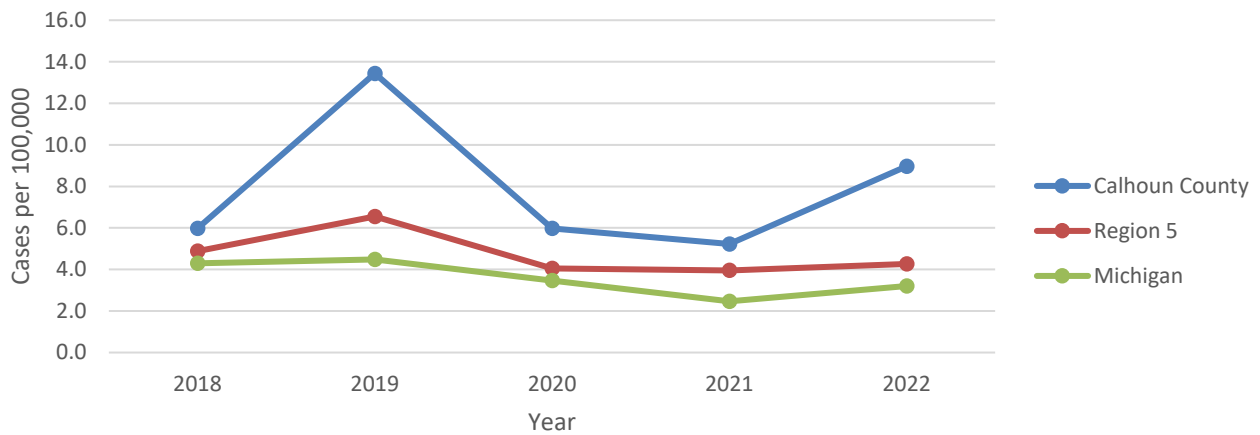


### Group A Streptococcal (GAS) Diseases

Group A streptococcus (group A strep) is a type of bacteria that can be found in the upper respiratory tract. Group A strep can be present and not cause any illness, or it can infect different parts of the body and cause disease that ranges from mild to severe. Group A strep can cause a variety of infections such as strep throat, scarlet fever, impetigo, necrotizing fasciitis, and streptococcal toxic shock syndrome. Transmission occurs by direct contact with body fluids, such as secretions from the nose and throat, or wound drainage from an infected person.

Calhoun County has higher rates of group A strep compared to Region 5 and Michigan. Calhoun County had an increase in cases from 6.0 per 100,000 people in 2018 to 13.4 per 100,000 in 2019. Rates in 2020 and 2021 decreased closer to the rate of cases in 2019, but there was increase in 2022 to 9.0 per 100,000 people. Almost half of the group A strep cases were in adults aged 70 years and older.

Rate of GAS (per 100,000) in Calhoun County, Region 5, and Michigan, 2018-2022



## Lyme Disease

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and is transmitted to humans through the bite of infected black-legged ticks. Lyme disease can spread to joints, the heart, and the nervous system. Early symptoms of Lyme disease are similar to symptoms of the flu such as headache, fatigue, fever, stiff neck, or a slowly expanding “bull’s eye” rash (erythema migrans). Effects that may result from chronic or long-term exposure are meningitis, facial palsy, heart abnormalities or arthritis.

Region 5 and Calhoun County have higher rates of Lyme disease than Michigan. Since 2020, Lyme disease cases have been increasing annually in Calhoun County. The rate of Lyme disease in Calhoun nearly tripled from 6.7 per 100,000 people in 2018 to 26.1 per 100,000 in 2022. In Calhoun County, Lyme disease is seen equally in males and females, and is seen in all age groups.

