



KENT COUNTY

**Health
Department**

COMMUNICABLE
DISEASE SUMMARY
2019-2022

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INTRODUCTION

The prevention and control of communicable disease is a critical aspect of ensuring community health. The Kent County Health Department (KCHD) monitors the occurrence of communicable diseases on a community-wide basis.¹ Disease surveillance is a vital component of the communicable disease unit, as it allows local health departments to identify potential outbreaks and epidemics, educate the community on prevention practices and treatments, evaluate the success of prevention efforts, and assist with disease surveillance on a national level.²

This edition of the Communicable Disease Summary provides surveillance data on the following diseases of public interest: campylobacteriosis, giardiasis, salmonellosis, chlamydia, gonorrhea, HIV/AIDS, pertussis, Lyme disease, West Nile Virus, legionellosis, tuberculosis, COVID-19, and influenza.

WHAT ARE REPORTABLE DISEASES?

A reportable disease is any disease, condition, infection, or suspect occurrence of disease that is required under Michigan State Law (Section 5111 of Act. No. 368 of the Public Acts of 1978, as amended, being 333.511 of the Michigan Compiled laws) to be reported by physicians, laboratories, schools, daycare centers, and camps to the local health department.³

The list of reportable diseases, along with details on how to report to the local health department, can be found in the [Health Care Professional's Guide to Disease Reporting in Michigan](#).

MICHIGAN DISEASE SURVEILLANCE SYSTEM (MDSS)

The Michigan Disease Surveillance System (MDSS) is a web-based communicable disease reporting system that facilitates coordination among local, state, and federal public health agencies during follow-up investigations of communicable disease events⁴. This tool is used in conjunction with the Michigan Syndromic Surveillance System (MSSS), a web-based surveillance system that rapidly detects unusual outbreaks or illness that pose potential public health threats and emergencies. MDSS and MSSS provide health departments with real-time access for data entry and analysis to improve the timeliness of public health interventions.

All data presented in this report were obtained from the MDSS and MSSS, unless noted otherwise.

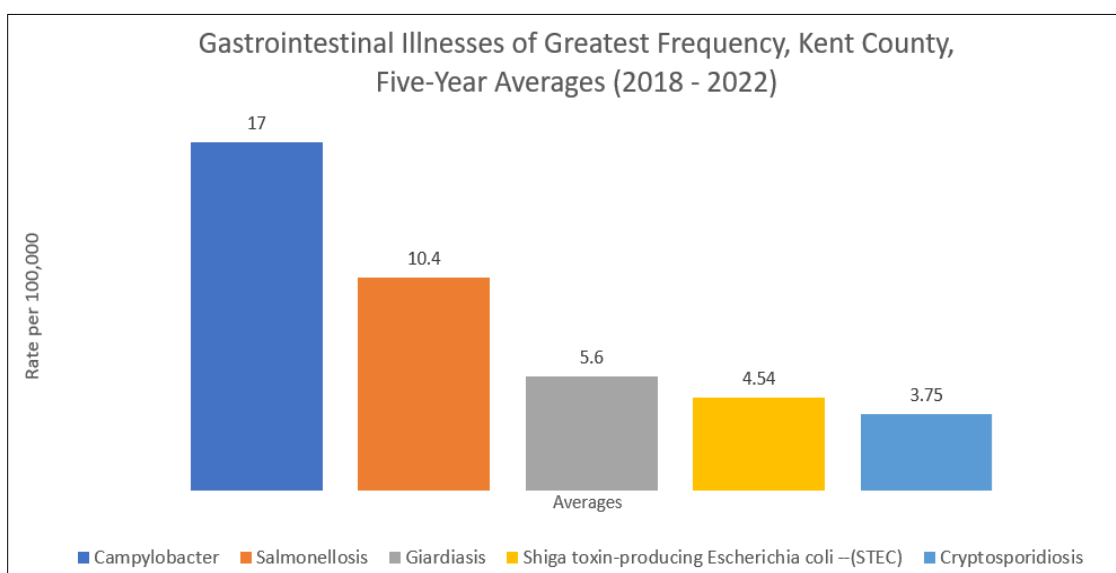
IMPACT OF COVID-19 ON REPORTABLE DISEASES

The COVID-19 pandemic had significant impacts on daily life throughout the United States and around the world. Research has found that during the pandemic, reporting of communicable diseases other than COVID-19 experienced a significant decrease across the United States. Based on data from the Nationally Notifiable Disease Surveillance System (NDSS) maintained by the Centers for Disease Control and Prevention (CDC), the greatest reduction was found among reportable respiratory conditions (not including COVID-19), followed by vector-borne, foodborne/waterborne, and STIs compared to pre-pandemic years.⁵ Although these marked decreases are clear, it is unknown if they represent true reductions in diseases or if this is a result of inadequate reporting during the pandemic.

GASTROINTESTINAL ILLNESSES

A variety of infectious agents can cause gastrointestinal illnesses, and testing does not always identify the cause. Once a report of gastrointestinal illness is received by KCHD, Communicable Disease and Epidemiology (CD/Epi) Unit staff initiate an investigation into potential exposures that may have caused the patient's illness. The goal of these investigations is to identify community risks that threaten the public's health. These threats can be localized, such as *Cryptosporidium* contaminated water at a park, or widespread, such as food products contaminated with *Salmonella* at a processing facility. Once the source of infection is identified, KCHD works with other public health partners at the local, state, and federal level to prevent further spread.

The following graph shows the frequency of common gastrointestinal illnesses in Kent County. These trends are consistent with data collected over the past decade.



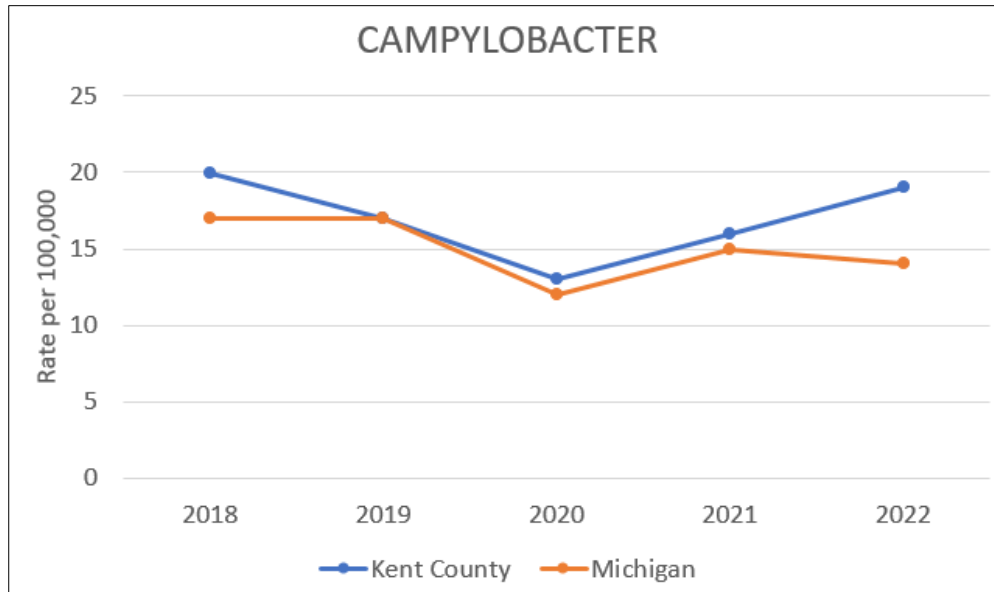
CAMPYLOBACTER

Campylobacter is an infectious bacterium typically transmitted through eating contaminated food, drinking contaminated water, or having contact with the feces of an infected animal. Undercooked poultry, seafood, eggs, and meat are common sources of infection. Additionally, *Campylobacter* bacteria is frequently found in raw or unpasteurized milk. The CDC reports that *Campylobacter* is the most common bacteria causing diarrheal illness in the United States, affecting up to 1.5 million people each year.⁶

Symptoms of *Campylobacter* include diarrhea (often bloody), nausea, vomiting, fever, and stomach cramps. The symptoms begin 2 to 5 days following ingestion of the bacteria and typically last 7 days. There are possibilities for *Campylobacter* to cause life-threatening illnesses in those who are immunocompromised, including individuals with blood disorders, AIDS, or receiving chemotherapy.⁶

Simple prevention measures exist for reducing the probability of campylobacter infection, including proper hand hygiene practices before eating, during food preparation, after using the restroom or changing diapers, after caring for someone ill, and many other instances.⁷ To reduce other modes of transmission, it is important to keep raw poultry away from other foods during food preparation, cook foods to the recommended temperatures, and avoid drinking unpasteurized milk or untreated water.⁷

For more information on the prevention of *Campylobacter* please visit the CDC's website:
<https://www.cdc.gov/campylobacter/prevention.html>



In 2022, 116 cases of *Campylobacter* were reported. Among people with *Campylobacter* infections in 2022, individuals in the 45 to 54 years and 65 years and older age groups accounted for half of the reported cases. The most impacted race and ethnicity groups among reported cases were individuals who were Caucasian and Non-Hispanic/Latino. In all race and ethnicity groups, the percentage of reported cases were equally split between males and females.

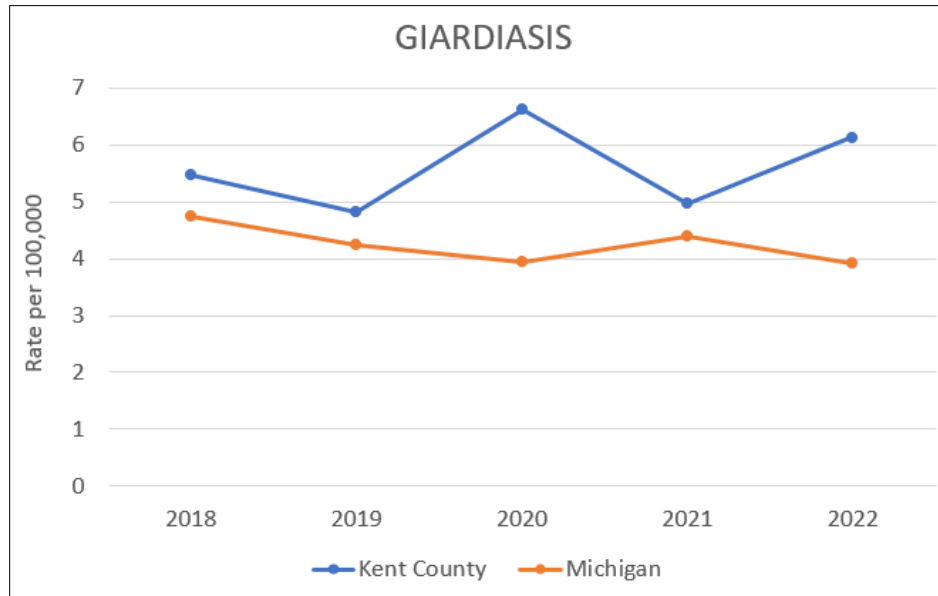
Per MDSS, 27 of the 116 cases had out-of-state or international travel history in the month preceding their illness. It should be noted that travel history is not always obtained, and this data may not fully capture this variable.

GIARDIASIS

Giardiasis is a diarrheal disease caused by the parasite *Giardia* which is transmitted via the fecal-oral route. It is typically spread by consuming contaminated food or water, traveling to regions with poor sanitation, having contact with infected animals' fecal matter or fecal contaminated environments, or by oral-anal sexual conduct.¹⁰ It is important to note that *Giardia* can survive for weeks and even months once outside the body.¹⁰ This parasite is endemic to all regions of the United States, and can also be found throughout the world.¹⁰

Symptoms of giardiasis include diarrhea, gas, stomach cramps and pain, upset stomach, nausea, dehydration, and, most notably, foul-smelling, greasy stools that float. Giardiasis can also result in weight loss and malabsorption over time.¹⁰ It is also possible to be infected with *Giardia* without showing any symptoms. Symptomatic individuals typically begin to display symptoms 1 to 2 weeks after ingestion of the parasite. At the onset, symptoms usually include 2 to 5 loose stools per day and increasing fatigue. These symptoms can last from 2 to 6 weeks but can be longer for individuals who are immunocompromised.¹⁰

To best prevent giardiasis, it is important to practice proper hand hygiene techniques, especially after having contact with soil and/or animals. Other prevention practices include avoiding swallowing recreational water, avoiding water and food that may be contaminated, practicing safe sex, and disinfecting objects and surfaces properly.¹⁰



In 2022, Kent County experienced an increase in cases compared to 2021. According to the CDC, *Giardia* is the most common intestinal parasitic disease affected humans.¹¹

The CDC also reports that children tend to have higher infection rates and a higher risk for giardiasis,¹¹ but children accounted for only 16% of Kent County cases in 2022. Instead, the highest number of cases in Kent County occurred in the 65 years and older age group, which accounted for 27% of total *Giardia* infections for the year.

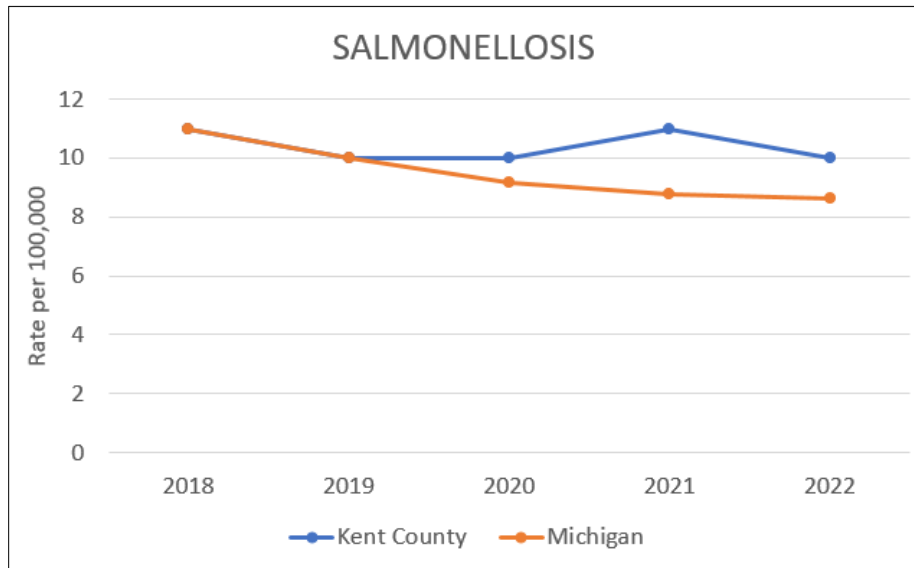
SALMONELLOSIS

Salmonellosis is a gastrointestinal illness caused by the bacteria *Salmonella*, which the CDC estimates causes roughly 1.35 million illnesses, over 20,000 hospitalizations, and hundreds of deaths in the United States each year.¹² *Salmonella* can be spread through various food sources, including ingestion of common foods, such as chicken, turkey, beef, pork, eggs, fruit, and vegetables, as well as some processed foods. It can also be spread through contaminated water, or by having contact with infected animals, animal feces, and environments where infected animals reside.¹³

Symptoms of a *Salmonella* infection include diarrhea (possibly bloody), fever, and stomach cramps. Some lesser common symptoms include nausea, vomiting, and headache. The onset of symptoms can range from 6 hours to 6 days following exposure to *Salmonella* and will last from 4 to 7 days for most people

Food safety tips are key in preventing *Salmonella* infection. It is important to practice proper hand hygiene when handling food (among other instances), clean food preparation surfaces thoroughly, rinse fresh produce, avoid cross-contaminating foods, and use a food thermometer to ensure foods are thoroughly cooked. *Salmonella* infections typically increase during the summer, so it is also important to refrigerate foods promptly.¹³ Additionally, safety guidelines recommend washing hands after using the restroom, changing diapers, and touching animals.¹⁴

For more detail on food safety practices, please visit the CDC's website: <https://www.cdc.gov/foodsafety/keep-food-safe.html>



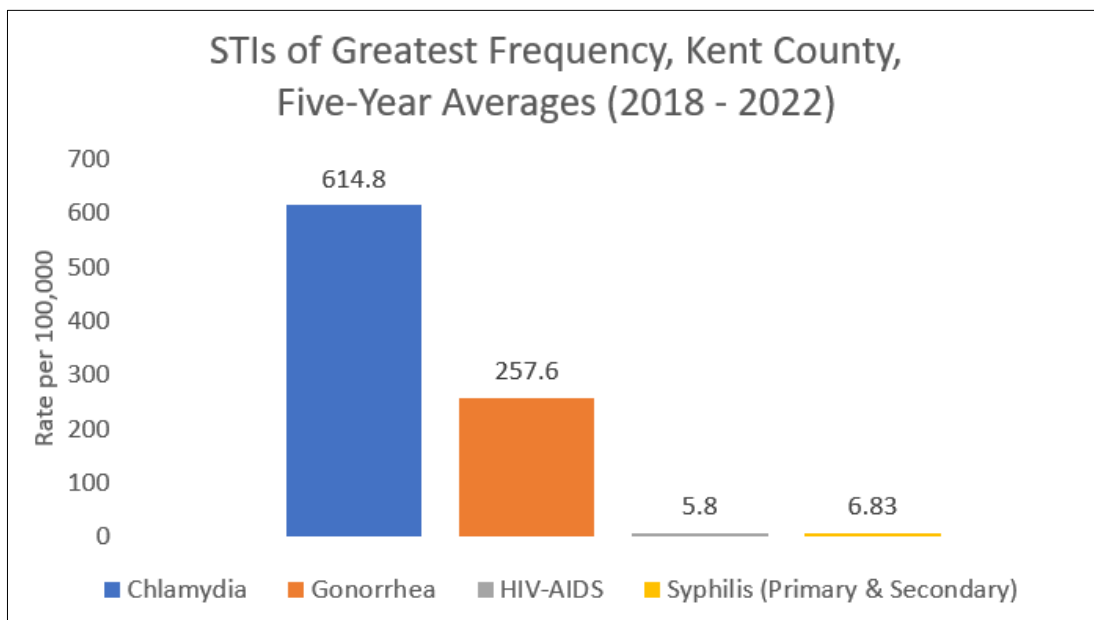
The 2018-2022 Kent County incidence rates of reported cases are typical with data collected over the past decade. A slight uptick in Kent County cases was observed when comparing data collected statewide in the summer of 2021.

The age groups often at risk for severe infection include children under 5 years old and adults 65 years and older. Among cases in Kent County, approximately 19% of cases pertained to these populations.

SEXUALLY TRANSMITTED INFECTIONS

As highlighted throughout the section on sexually transmitted infections (STIs), early testing and treatment are essential to prevent the further spread of infection and reduce potential long-term side effects. The highest rates of these illnesses come from young people, most notably, those under the age of 34. Due to infection trends in younger age groups and their potentially risky behaviors, it is essential to provide prevention strategies and education around these illnesses to aid in reducing the overall burden of STIs, as well as the stigma that accompanies them. KCHD offers counseling and testing for the included STIs in this section, as well as PrEP (pre-exposure prophylaxis) and PEP (post-exposure prophylaxis) for HIV.

The following graph displays the frequency of common sexually transmitted infections in Kent County.

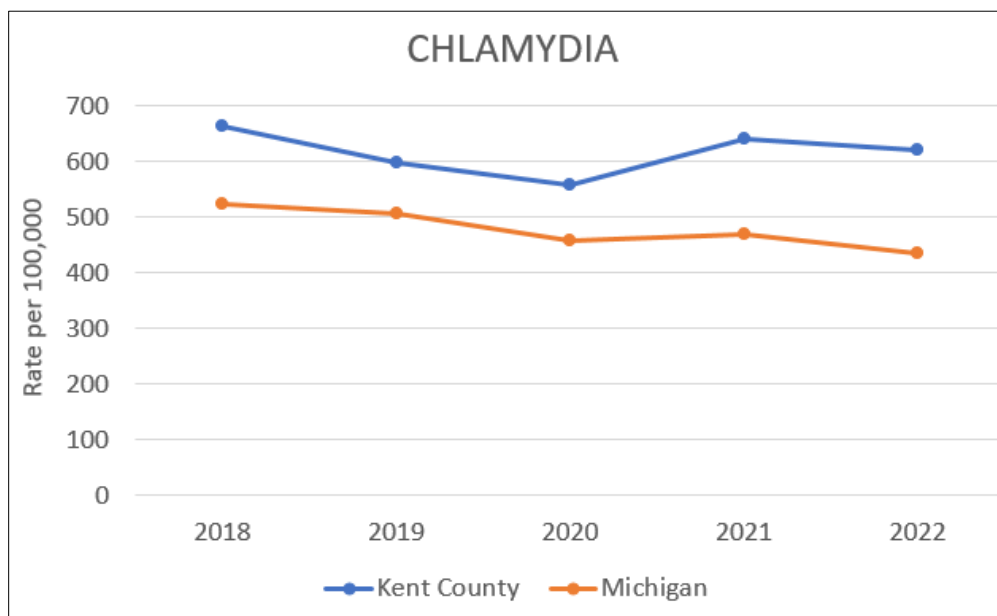


CHLAMYDIA

Chlamydia is a sexually transmitted infection (STI) caused by the bacteria *Chlamydia trachomatis*, and it is also the most reported bacterial STI in the United States. According to the CDC, millions of cases occur annually, however, reported cases may not capture the full amount of this illness within the community, as individuals may not seek medical attention or may have no symptoms at all.¹⁷ A chlamydia infection is spread through oral, vaginal, or anal sexual conduct, but can also be spread from a mother to an infant during childbirth.¹⁷

Individuals with a *Chlamydia* infection may not have any symptoms if they are infected. If symptoms are present, they often are nonspecific and present as abnormal physical findings.¹⁷ In women, these symptoms may be vaginal discharge, bleeding, pain or difficulty urinating, increased urinary frequency, or Pelvic Inflammatory Disease (PID). Men may present with pain or difficulty urinating, discharge from the penis, or testicular pain, swelling, and tenderness.¹⁷

Prevention of *Chlamydia* infection can be done through proper condom use or abstaining from sexual conduct of any kind. Screening is an essential part of identifying infection in the community, and it is recommended to be done annually for women under the age of 25, women and men with other risk factors, and men who have sex with men (MSM).¹⁸



As seen above in the 5-year incidence graph, Kent County has maintained significantly higher rates of chlamydia infection when compared to the state of Michigan; however, infection rates have maintained relatively stable between 2021 and 2022.

Demographic data indicates that Black/African American and Caucasian populations have the highest rate of infection, similar to the trends among gonorrhea cases. The CDC reports that 15–24-year-olds typically experience the highest number of infections among all age groups.¹⁶ However, the trends among Kent County portray slightly older age groups with the most infections; this is seen among 18 to 24- and 25 to 34-year-olds.

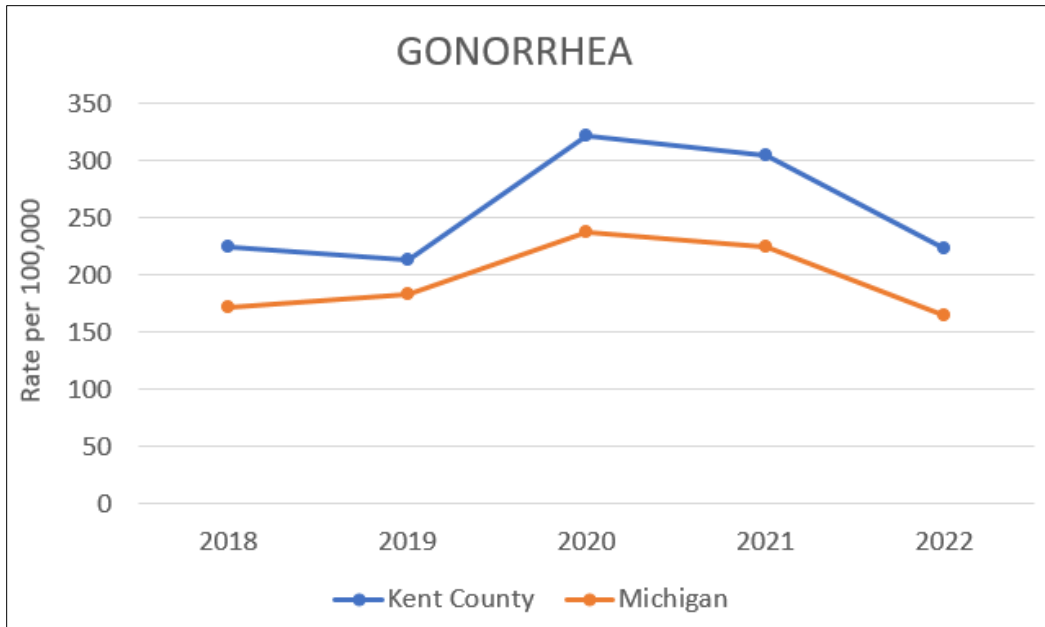
GONORRHEA

Gonorrhea is another common sexually transmitted infection, with over one million infections occurring annually in the United States, making it the second most reported bacterial STI in the country.¹⁸ Gonorrhea is caused by the bacteria *Neisseria gonorrhoeae* which, like chlamydia, is transmitted by oral, anal, and vaginal sexual contact or to an infant during childbirth. Gonorrhea infection is another STI that may be asymptomatic, leaving the true number of cases underreported.¹⁸

Symptoms are similar between women and men. Women's symptoms include pain/burning with urination, increased vaginal discharge, and vaginal bleeding. Men's symptoms include burning sensations with urination, white, yellow, or green discharge from the penis, and painful or swollen testicles. Rectal symptoms can occur in both men and women and may include discharge, anal itching, soreness, bleeding, and painful bowel movements.¹⁸

Untreated gonorrhea has the potential to cause lifelong health issues, such as pelvic inflammatory disease in women, which can impact a woman's ability to become pregnant and cause long term pelvic and abdominal pain. Men may also experience long term health impacts that can occasionally lead to infertility.¹⁸

Like other STIs, condom use (or other barrier methods) is a key behavior to reducing transmission of gonorrhea, but the only way to fully prevent any STI is abstaining from sexual conduct. Gonorrhea is another infection that should be tested for regularly, the CDC recommends at least yearly for women under the age of 25, the MSM population, as well as women and men who engage in activities that put that at a higher risk for STIs.¹⁹



The incidence rate of gonorrhea in Kent County closely follows statewide trends. When breaking down the annual cases of gonorrhea in Kent County by race/ethnicity and age, the data indicates that Black/African American and Caucasian populations make up majority of cases. Underlying social and economic factors, higher rates of poverty, limited access to healthcare, and substance abuse may increase risk of infection in some communities.

For age, the highest incidence occurs among individuals in the 18-24- and 25–34-year-old age groups, which only partially aligns with the national incidence trends. According to the CDC, typically individuals aged 15-24 are at the highest risk for gonorrhea infection. Overall, in the 5-year trend graph on gonorrhea infections, both Kent County and the state of Michigan show a downward trend.

HIV/AIDS

HIV (Human Immunodeficiency Virus) is a viral infection which can be transmitted during vaginal or anal sex; from a mother to her baby during pregnancy, birth, or breastfeeding; or when needles/syringes are shared amongst people who inject drugs (PWID)²⁰. It is important to understand that HIV is **not** typically transmitted during oral sex, from food, touching, or kissing. Transmission only occurs through exposure to certain bodily fluids which include blood, semen, pre-seminal fluids, vaginal fluids, breastmilk, and rectal fluids. Additionally, fluids transmitting HIV must have contact with a mucous membrane, damaged tissue, or be injected into the bloodstream for transmission to occur.²⁰

Prevention of HIV is now more possible than it has been historically due to antiretroviral therapy (ART), a medication taken by individuals who have HIV. ART reduces the viral load (amount of HIV in the blood) and can even make the viral load undetectable, greatly reducing the possibility of transmitting HIV to others. However, ART is not a cure for HIV; there is currently no known cure, and those infected with HIV will have it for their span of their life.²⁰

Prevention measures for people who do not have HIV but may be at an increased risk of transmission can be taken. These options include pre-exposure prophylaxis (PrEP), a preventative medication taken orally or injected by a medical provider that reduces the chances of getting HIV during sex by 99% if taken as prescribed. PrEP can also reduce the risk of getting HIV among people who inject drugs (PWID) by roughly 74% when taken as prescribed. Post-exposure prophylaxis (PEP) is also available following a possible exposure and should be taken within 72 hours of the possible exposure.²⁰ Other prevention methods include using condoms, abstaining from sexual activity, and avoiding shared use of drug injection equipment.

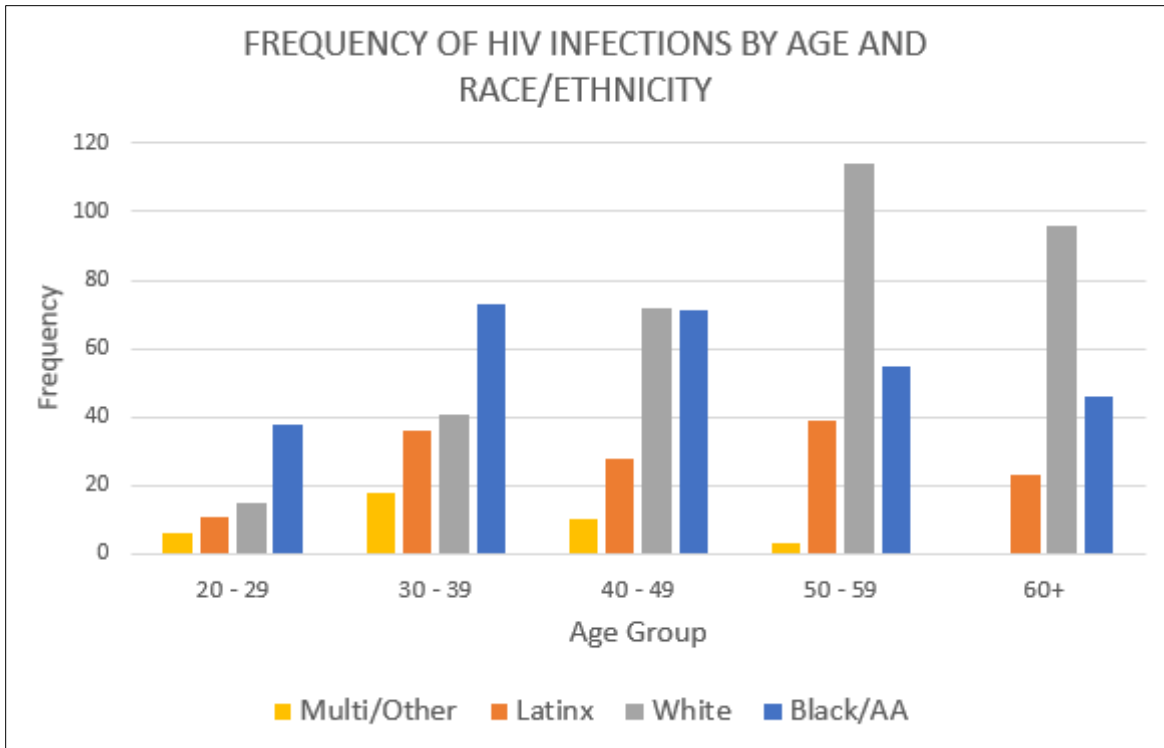
Symptoms of an HIV infection occur in most people and may resemble symptoms of a flu-like illness. These may include sore throat, fever, swollen lymph nodes, a rash, muscle aches, night sweats, ulcers in the mouth, chills, and fatigue. However, some people may not experience any symptoms.²⁰ The CDC recommends everyone test for HIV at least once in their life, but yearly testing is suggested for those who engage in certain activities or have other risk factors.

The CDC describes high risk behaviors as people who have had more than one sexual partner since their last test, people who inject drugs (PWID), men who have sex with men, or people diagnosed with another STI, hepatitis, or tuberculosis, among other activities.²⁰

To find available testing and prevention services you may use this CDC tool:

<https://www.cdc.gov/hiv/basics/hiv-testing/test-types.html>

To see if you're eligible for a free HIV home testing kit, please visit: <https://together.takemehome.org/>
(Together TakeMeHome is a collaboration between Emory University, Building Healthy Online Communities, the U.S. Centers for Disease Control and Prevention, NASTAD, OraSure, and Signal.)



The chart depicts the frequency (number) of all HIV infections in Kent County, broken down by age and race/ethnicity. The data indicates that individuals over the age of 50 years old have the highest infection rates, which is most likely due to PrEP not being available until 2012.

New rates of HIV infections in Kent County have remained relatively stable for the last decade. The incidence (new infections) rate in Kent County in 2022 was 5.6 per 100,000 people, while in comparison, the rate for Michigan overall is 6.3 per 100,000 people.

Note: Data for age groups 0-14 and 15-19 is collected but will not be shared in this report due to low case counts and to protect individual privacy.

Note: Data provided by the STI/HIV Operations and Resource System (SHOARS) of the Bureau of HIV and STI Programs (BHSP) of Michigan Department of Health and Human Services (MDHHS).

VACCINE PREVENTABLE ILLNESSES

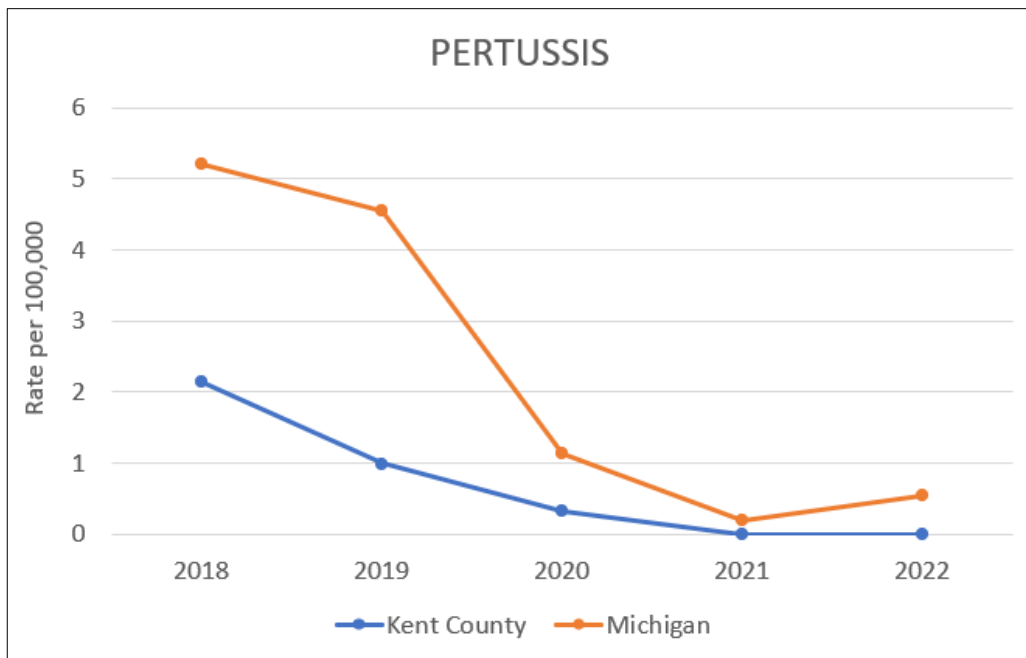
Control and mitigation of vaccine preventable diseases occurs through immunization and post-exposure prophylaxis of individuals identified as contacts of confirmed cases. When KCHD receives a confirmed report of pertussis, meningococcal disease, *Haemophilus influenzae* type B infection, mumps, measles or hepatitis A, an investigation will be initiated to determine contacts at risk of becoming infected. Once identified, KCHD arranges for the appropriate form of prophylaxis (antibiotics, immunoglobulin, and/or vaccination).

PERTUSSIS

Pertussis, also known as whooping cough, is a vaccine-preventable respiratory illness that is highly contagious and caused by the bacteria *Bordetella pertussis*. Pertussis is spread by respiratory droplets in the air from a person sneezing or coughing, allowing these droplets to enter the airway of another person.²⁴ Pertussis causes serious and deadly complications for babies under a year old, but complications are possible in a person of any age. Babies are at highest risk for developing pertussis because they are not able to receive the vaccination. The CDC reports that one third of babies under one that develop pertussis are hospitalized for care.²⁵

Symptoms can be mild, so a person may be unaware of their infection and spreading it to others. Symptoms of pertussis are typically seen in three stages; the early stage occurs 5 to 10 days, but up to 3 weeks following exposure to the bacteria. This stage consists of cold-like symptoms including runny or stuffy nose, low-grade fever, mild occasional cough (not present in babies), pauses in breathing (apnea), and turning blue or purple (cyanosis) in babies and young children.²² The second stage of symptoms include coughing fits, lasting from 1 up to 10 weeks; these can be violent and uncontrolled, resulting in vomiting (during or after), tiredness, and difficulty breathing.²⁶

The best prevention method is to get vaccinated against pertussis. Vaccination is recommended for all ages and includes protection against tetanus, diphtheria, and pertussis. Five shots are recommended between the ages of 2 months and 6 years old; children should receive another shot between the ages of 11 and 12 years old, and adults who have never been vaccinated should receive one shot.²⁷ Additionally, it is recommended for all women to receive the pertussis vaccine during their third trimester of pregnancy for all pregnancies; this will allow babies to receive passive immunity against pertussis, tetanus, and diphtheria from their mother as well as prevent illness in the mother, further reducing potential transmission to the baby.²⁸



Over the last decade, Kent County and Michigan experienced a steady climb in reported cases until 2020, when incidence rates dropped during the pandemic due to increased masking and remote work and school. The number of reported cases remained low in 2021 and 2022.

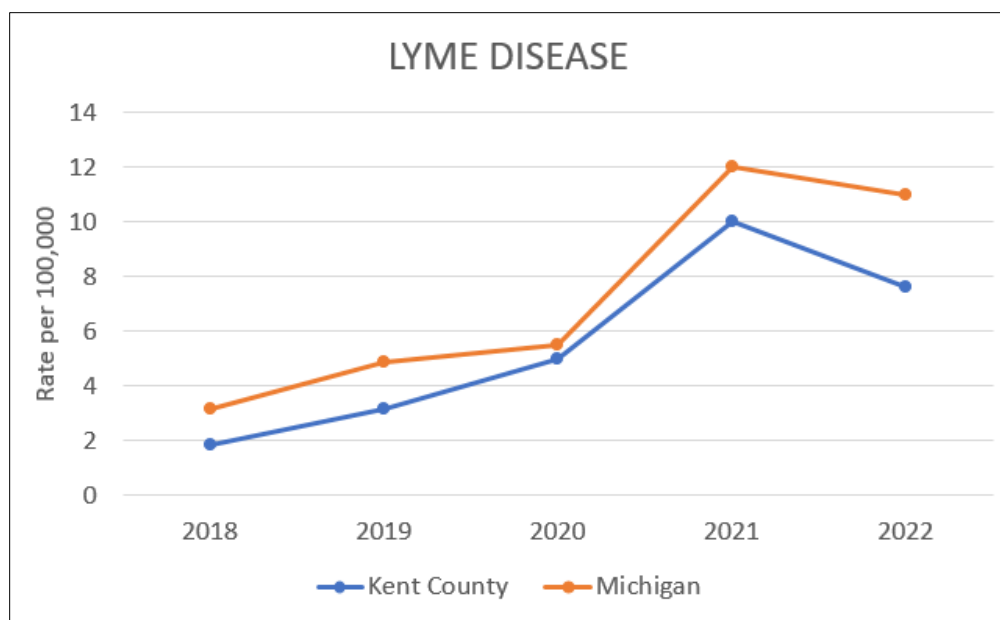
VECTOR-BORNE DISEASES

LYME DISEASE

Vector-borne diseases are transmitted from the bite of an infected insect, such as a tick or mosquito. Lyme disease is transmitted through the prolonged bite of a tick and is reported to be the most common vector-borne disease in the United States.²⁹ Lyme disease is caused by the bacteria *Borrelia burgdorferi* and sometimes (but more rarely) *Borrelia mayonii*, which is transmitted to humans when they receive a tick bite from a black-legged tick. Oftentimes, if a tick is removed from its attachment to a body within 24 hours, the risk of getting Lyme disease is much lower.³⁰

Symptoms of Lyme disease include a characteristic “bullseye” rash called an erythema migrans (EM) rash, which occurs in 70% - 80% of people. This rash will appear 3 to 30 days following the tick bite. Other symptoms may occur in the days (or months) following a tick bite, including headache, fatigue, and fever, neck stiffness, among others.³¹

In addition to prompt tick removal following a bite, prevention of tick bites is another key factor in reducing the risk of Lyme disease. Best practices for tick bite prevention include avoiding areas where there is known to be a high population of ticks, using proper repellents on clothing and yourself, and checking your body, clothing, and pets after being outdoors.³²



The above Lyme Disease 5-year trend graph includes confirmed, probable, and suspect cases of Lyme disease reported to MDSS to reflect the most accurate rates due to an updated case definition introduced by the Council of State and Territorial Epidemiologists (CSTE) in 2022.

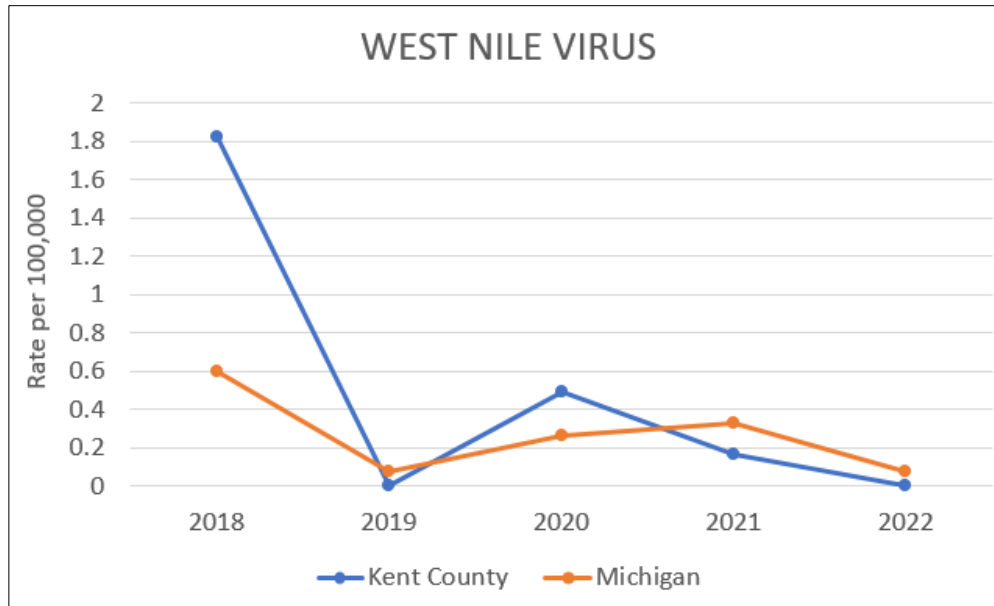
Most tick activity occurs in Michigan between the months of April and September. The data for Kent County in 2022 matches that trend; however, there was not an uptick in cases until June. Of the total cases that occurred in 2022, 50% of those experienced an erythema migrans rash, with only 15% of those with a rash recalling a recent tick bite.

Travel history was also obtained from case reports. However, it is not always collected. Of reports containing this data, 34% of the total cases had recent travel, with all but one individual traveling within the state of Michigan.

WEST NILE VIRUS

West Nile Virus (WNV) is a mosquito-borne disease, and per the CDC, it is also the leading cause of mosquito-borne disease in the United States. The spread of WNV in the U.S. is typically due to the *Culex* species of mosquito; however, others can carry and transmit WNV as well.³³

Mosquitos become infected with WNV when they have a blood-meal from an infected bird. Following this, the mosquito can transmit the virus to other animals and humans by biting them. However, in very rare events WNV has spread from exposure in a laboratory, by blood transfusions and organ donations, and from a mother to her baby during pregnancy, childbirth, or breastfeeding.³⁴



Note: Kent County reported no cases of West Nile Virus during the 2022 season; therefore, no demographic information is available.

Approximately 8 out of 10 people who become infected have no symptoms. Some people will experience mild illness, which may include fever, headache, body aches, rash, joint pain, vomiting and diarrhea. In contrast, about 1 in 150 people will experience a severe illness that can cause inflammation of the brain and the membranes around the brain and spinal cord. In some cases, this illness may lead to death.³⁵

Populations with a higher risk for severe disease include those over 60 years old, people with cancer, diabetes, hypertension, kidney disease, and people who have received an organ transplant. There are no current treatments for WNV as it is mostly a self-limiting disease; however, those with severe cases may require hospitalization.³⁵

Prevention of WNV falls to avoiding mosquito bites in general, which can be done using insect repellents, wearing loose clothing, draining any items that may hold water outdoors, and preventing mosquitoes from entering your home by having screens on open windows, or by using air conditioning. Other precautionary methods should be used when traveling overseas or to countries with high WNV prevalence and mosquito populations, such as sleeping with the windows closed or sleeping under mosquito netting.³⁶

RESPIRATORY INFECTIONS

LEGIONELLOSIS

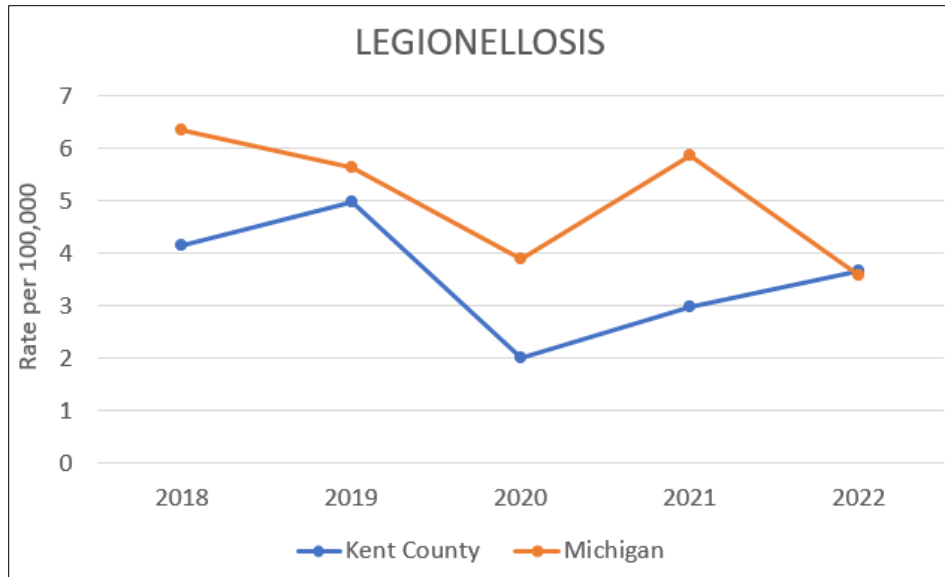
Legionella bacteria is the causative agent behind Legionellosis. This bacterium can be found in freshwater sources such as streams and lakes and, when spread to man-made water systems, can become a source for concern. Water systems at risk for *Legionella* growth include showerheads and faucets, hot tubs, hot water tanks/heaters, fountains, other water features, cooling towers (that hold water and contain a fan as part of a cooling system), and large/complex plumbing systems. *Legionella* bacteria is spread by inhaling water droplets. Under normal circumstances, drinking water is not a risk for become infected with *Legionella*.⁴⁴

There are certain populations who are at a higher risk of experiencing illness from *Legionella* bacteria, which include those over the age of 50, smokers (former and current), those who are immunocompromised, and people with chronic lung diseases, cancer, or with conditions such as diabetes, and kidney or liver failure.⁴⁴ Most healthy people will not experience symptoms, but those who do can expect headaches, cough, shortness of breath, fever, and muscle aches; these typically appear 2 to 14 days following exposure. Other, less common symptoms can include diarrhea, nausea, and confusion.⁴⁵

Due to the modes of transmission of *Legionella* bacteria, the best prevention practice is to implement and maintain a water treatment plan; this is key for those who own or manage buildings.⁴⁶

To view more on this topic, see the CDC's water management program toolkit:

<https://www.cdc.gov/legionella/wmp/toolkit/index.html>



Over the last two decade, the incidence rate of legionellosis has steadily increased in the United States. This trend was reflected in Kent County and Michigan data, apart from a decrease in reported cases during the height of the pandemic. Incidence rates can be attributed to environmental factors, including rainfall and temperature, and increased reporting.

Among reported cases in 2022 in Kent County, 41% reported spending nights away from home in the 14 days preceding their illness, which is a key question in the investigation process. The CD team also collects sources of possible exposure, as seen in the chart to the left. Of the possible exposures, the most common were using a pool or a shower outside their home.

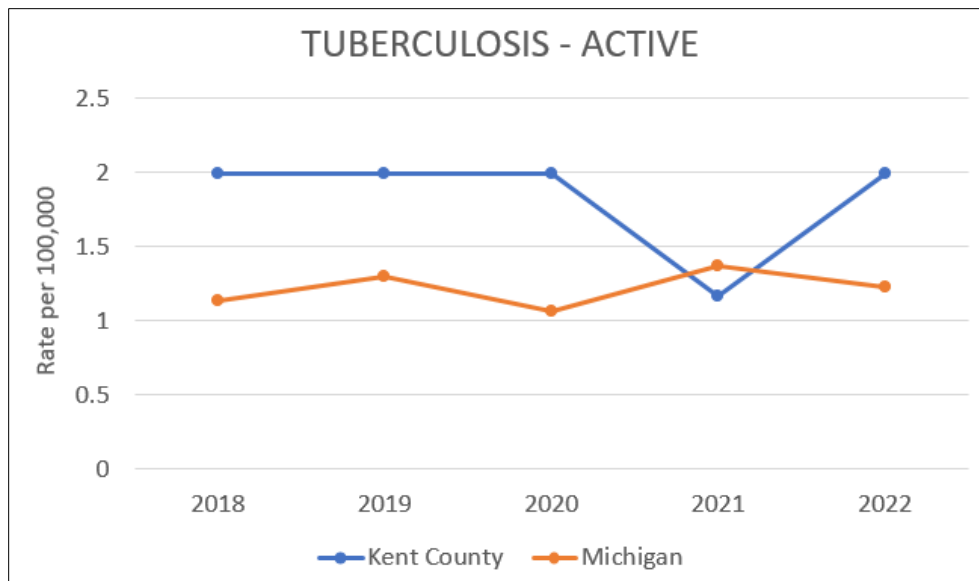
Additional trends were seen in cases as well, with 82% of cases reported being among Caucasian adults, as well as 77% of the cases being in individuals over the age of 50 years. The average age of reported cases was found to be 62 years old.

TUBERCULOSIS

Tuberculosis (TB) is caused by the bacteria *Mycobacterium tuberculosis* and is spread in the air by someone infected with TB. The bacteria enter the air and remain in droplets, allowing another person to breathe them in and making them susceptible to infection. A person with active TB disease has an immune system that cannot stop the bacteria from developing, allowing symptoms to occur and the chance for infection to be spread to others.⁴⁷

Symptoms of an active TB infection include a severe cough lasting 3 weeks or more, chest pain, and coughing up blood or phlegm from deep inside the lungs (sputum). Other symptoms can include weakness and fatigue, weight loss, loss of appetite, chills, fever, and night sweats.⁴⁸ Extrapulmonary TB is also possible and occurs when the bacteria affect other parts of the body. Examples include the brain, spine, and kidneys. TB can become active within weeks of exposure or years after one's immune system has weakened. Individuals may also have latent TB infection, meaning that they have no symptoms and cannot infect others.⁴⁸

Prevention of active TB infection includes avoiding long-term, close contact with a person who is infected. Persons who have latent TB should follow healthcare treatments by medical providers to reduce their risk of developing active disease. Persons at high risk for developing active TB (if they have latent TB) include those living with HIV, elderly people, babies and young children, people who inject drugs (PWID), those who are immunocompromised, and those who were not adequately treated for TB previously.⁴⁹

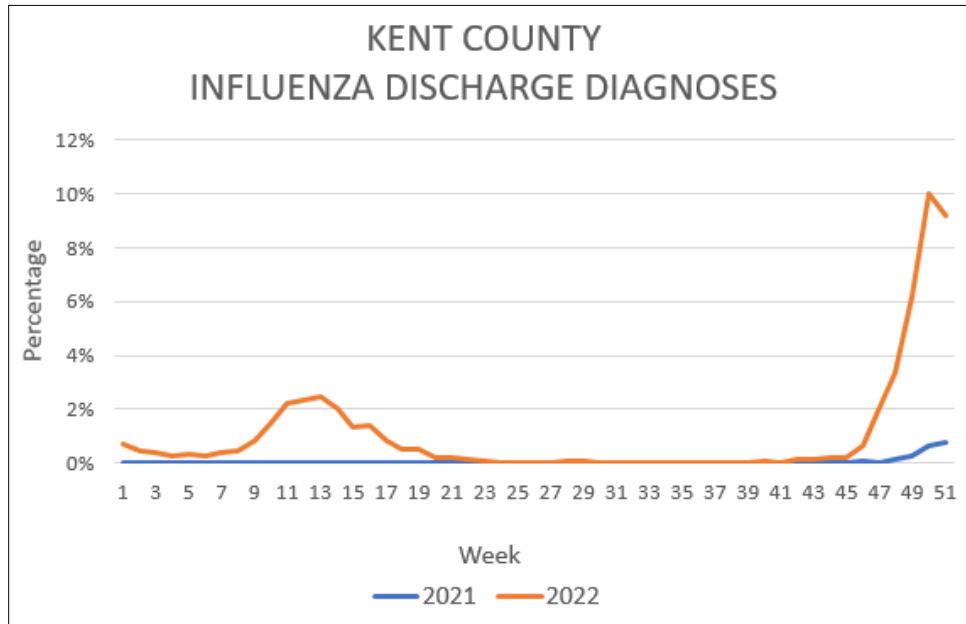


The rate of TB infection in Kent County has followed state trends, apart from an uptick in cases in 2022. Reported cases were highest among non-U.S.-born individuals in Kent County, which is consistent with state and national trends.

INFLUENZA

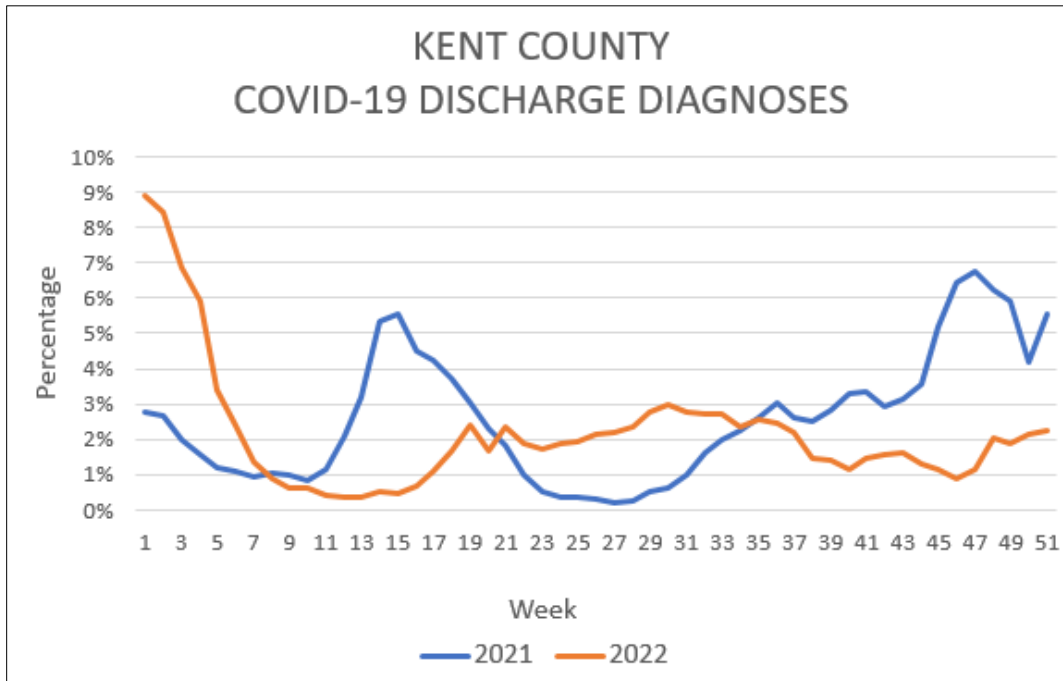
Influenza (flu) is a year-round illness, and in the United States, there is usually an overall increase in flu activity during the months of October through (up to) May, with the most illnesses occurring from December to February. The CDC collects influenza data regularly, and it is made available for the public on the CDC’s FluView Interactive platform found [here](#).

The 2021-2022 flu season had lower rates compared to pre-COVID-19 years with the overall burden estimated at 9.4 million infections, 100,000 hospitalizations, and 4,900 flu-related deaths. The 2021-2022 season also had two distinct waves of activity, one from November to January and a second from March until mid-June.⁵⁰ However, Kent County had little flu activity reported during 2021, as seen by the chart depicting influenza discharge diagnoses. It is unclear if there was underreporting during this time, or if the data showcase the true community levels. Reporting to Michigan Syndromic Surveillance System (MSSS) is voluntary, so the discharge diagnosis data visualized in the chart below may not wholly reflect community influenza levels.



COVID-19

The emergence of COVID-19 and its impact on our communities has been significant from the start, and this holds true through 2021 and 2022. National trends during this time demonstrate a large surge of cases and hospitalizations starting in November 2021 through mid-February, with another smaller surge at the end of July lasting until the beginning of September.⁵¹



The chart portrays trends in emergency department discharge diagnoses for Kent County on a weekly basis for 2021 and 2022. On a local level, our hospital systems saw a similar surge in COVID-19 infections during late 2021 through early 2022, with another smaller increase in the late summer.

[STAY UP TO DATE ON LOCAL DATA](#)

Additional reports on communicable diseases in Kent County can be found at the following web site: <https://accesskent.com/Health/CommDisease/reports.htm>

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