



REPORTABLE DISEASE SURVEILLANCE IN VIRGINIA 2021



**Office of Epidemiology
Virginia Department of Health**

Table of Contents

Table of Contents	1
Introduction	4
Surveillance Data Notes	4
Amebiasis	5
Anthrax	6
Arboviral infection (Dengue)	7
Arboviral infection (Other)	8
Arboviral infection (West Nile Virus).....	9
Arboviral infection (Zika)	10
Babesiosis	11
Botulism	12
Brucellosis	13
Campylobacteriosis.....	14
Chancroid	15
Chickenpox (Varicella)	16
Chlamydia trachomatis infection	17
Cholera	18
Cryptosporidiosis	19
Cyclosporiasis.....	20
Diphtheria	21
Ehrlichiosis/Anaplasmosis	22
Giardiasis.....	23
Gonorrhea.....	24
Granuloma inguinale.....	25
Haemophilus influenzae.....	26
Hantavirus Pulmonary Syndrome	27
Hemolytic Uremic Syndrome.....	28
Hepatitis A.....	29
Hepatitis B, Acute.....	30
Hepatitis B, Chronic	31
Hepatitis B, Perinatal	32
Hepatitis C, Acute	33
Hepatitis C, Chronic.....	34
Hepatitis C, Perinatal	35

REPORTABLE DISEASE SURVEILLANCE IN VIRGINIA 2021

Human immunodeficiency virus (HIV).....	36
Influenza A, Novel Virus	37
Influenza-Associated Death (less than 18 years of age).....	38
Legionellosis	39
Leprosy/Hansen’s Disease	40
Leptospirosis.....	41
Listeriosis	42
Lyme	43
Lymphogranuloma Venereum	44
Malaria	45
Measles (Rubeola).....	46
Meningococcal Disease (<i>Neisseria meningitidis</i>).....	47
Mumps	48
Paratyphoid infection	49
Pertussis (Whooping Cough)	50
Plague.....	51
Poliovirus Infection.....	52
Psittacosis.....	53
Q Fever	54
Rabies (Human).....	55
Rubella.....	56
Salmonellosis.....	57
E. coli Infection, Shiga Toxin-Producing (STEC).....	58
Shigellosis.....	59
Smallpox	60
Spotted Fever Rickettsiosis	61
Streptococcal Disease, Group A, Invasive or Toxic Shock.....	62
Streptococcus pneumoniae, Invasive (less than 5 years of age)	63
Syphilis, Early	64
Tetanus	65
Trichinosis (Trichinellosis).....	66
Tuberculosis.....	67
Tularemia	68
Typhoid Infection.....	69
Vaccinia Adverse Event Following Vaccination	70

REPORTABLE DISEASE SURVEILLANCE IN VIRGINIA 2021

Vancomycin-intermediate Staphylococcus aureus (VISA)	71
Vancomycin-resistant Staphylococcus aureus (VRSA).....	72
Vibriosis, Non-Cholera	73
Viral Hemorrhagic Fever	74
Yellow Fever	75
Yersiniosis.....	76

Introduction

The Virginia Department of Health, Office of Epidemiology is pleased to present its 2021 annual report of disease surveillance activities. The Office of Epidemiology, in partnership with health departments throughout Virginia, is responsible for the statewide surveillance of reportable diseases. Disease surveillance is the collection, analysis, interpretation, and dissemination of health-related data that is used to inform public health actions to reduce illness.

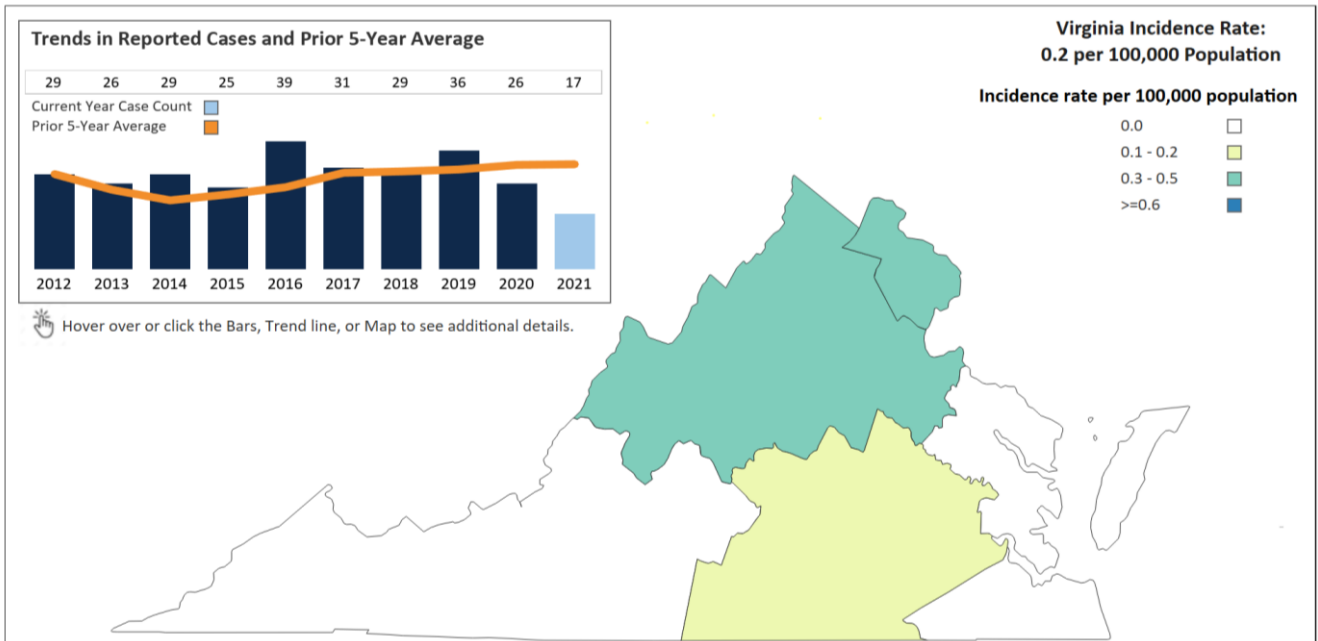
This report summarizes surveillance data for diseases and conditions listed as reportable in the Virginia Regulations for Disease Reporting and Control and reported to the Centers for Disease Control and Prevention (CDC) each year. Included in this report is a brief description of each disease, a map of disease incidence rate by locality or region, and a graph of reported cases each year for up to ten years and the 5-year averages. Additional visualizations show disease data by age group, sex, and race for the year.

For more information on disease reporting in Virginia, see the [Disease Reporting and Control Regulations webpage](#). A [web-based version](#) with downloadable datasets is also available.

Surveillance Data Notes

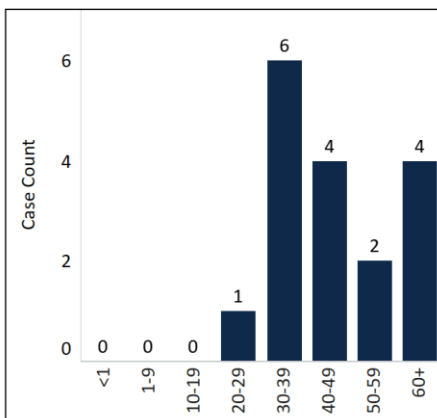
- The [Geography Locator Tool](#) can be used to identify Virginia's localities, health districts, and health planning regions.
- Conditions with an annual case count fewer than 20 are mapped at the region level to preserve patient anonymity.
- If available data is insufficient to calculate a 5-year average, the 5-year average is not shown.
- Population data have been adjusted to represent the specific population under surveillance when data are restricted to certain age groups, including invasive *Streptococcus pneumoniae* infection (less than 5 years of age).
- Population-based incidence rates are presented to provide a measure of disease frequency in the population and to allow for comparisons between groups. When calculating incidence rates, population data prepared by the United States Census Bureau for the state's localities (cities and counties) were used. The population data used to calculate incidence rates are based on [bridged race population estimates from the National Center for Health Statistics](#) using the prior year's population (e.g., 2021 surveillance data uses 2020 NCHS population data).
- Race is presented in this report as Black, White, or Other. The "Other" race category includes persons reported as Asian/Pacific Islanders, American Indians, Alaskan Natives, or multi-racial persons.
- Patient Sex is reported as Female, Male or Unknown, as reported to VDH.
- Patient race and sex are displayed at the most granular level consistently available based on historical reporting processes. Future reports might offer expanded data on patient race, ethnicity, and gender or sex.
- Report date reflects the CDC MMWR year (i.e., the date the case was reported to the health department). This may be different than the date of illness onset or diagnosis.
- Rates by locality are calculated based on residence of the patient, when known. When the address of the patient is neither reported by the health care provider nor ascertained by the health department, the location of the reporting source, such as the physician, hospital, or laboratory, is used.

Amebiasis

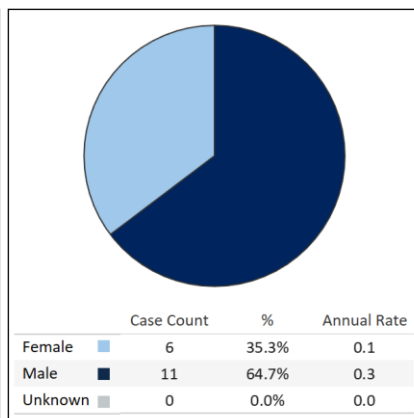


Amebiasis is an intestinal illness caused by the parasite *Entamoeba histolytica*. The condition is most common in tropical countries with poor sanitary conditions. In the United States, it is mainly identified in people who travel to or emigrate from these areas. Amebiasis can be spread through food or water that has been contaminated with feces from an infected person. Infected people are the only sources of the parasite. A person exposed to this parasite might experience mild or severe symptoms or no symptoms at all. Symptoms of amebiasis include diarrhea, stomach pain, and stomach cramping. During 2021, 17 amebiasis cases were reported which was a 35% decrease from the 26 cases reported in 2020. Sixty-five percent of cases reported their sex as male, and the statewide incidence rate was 0.2 per 100,000.

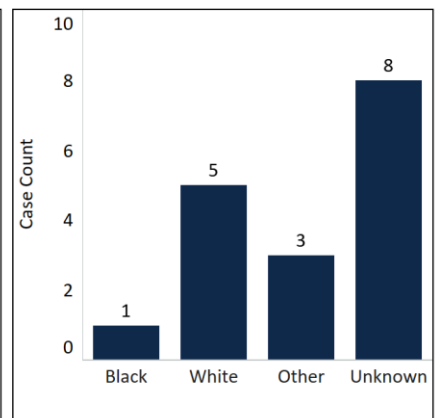
Age Group, 2021



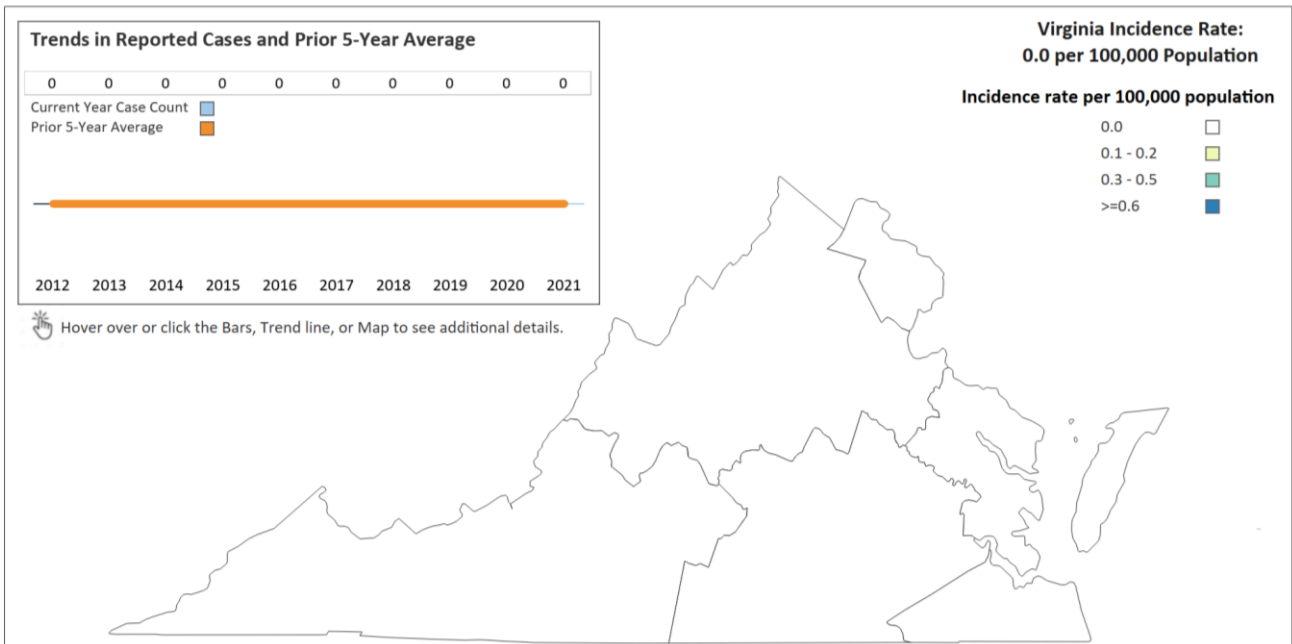
Sex, 2021



Race, 2021

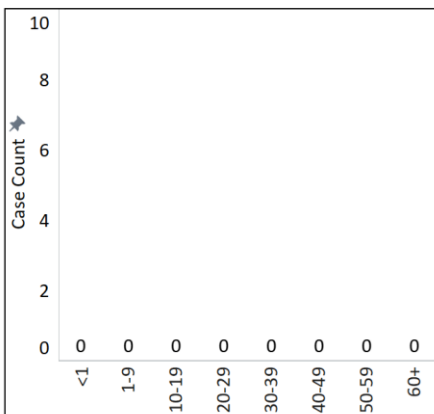


Anthrax

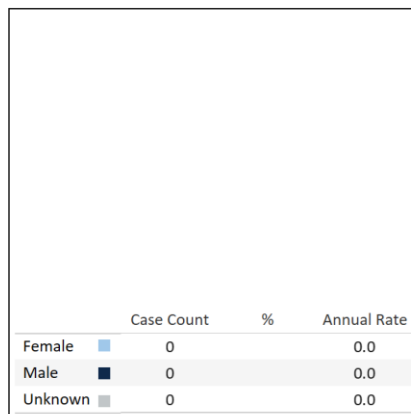


Anthrax is a serious infectious disease caused by bacteria known as *Bacillus anthracis*. It occurs naturally in soil and commonly affects domestic and wild animals around the world. People can get sick with anthrax if they come in contact with infected animals or contaminated animal products. A person may be exposed to anthrax through inhalation, consuming contaminated food, or getting the bacteria on their skin. Depending on how a person was exposed, symptoms might include shortness of breath, sore throat, diarrhea, vomiting, headache, or skin sores. Anthrax is rare in the United States. However, sporadic outbreaks do occur in wild and domestic grazing animals, such as cattle or deer. Visitors to areas where anthrax is common or where an outbreak is occurring in animals should not eat raw or undercooked meat and should avoid contact with livestock, animal products, and animal carcasses. No cases of anthrax were reported in Virginia in 2021.

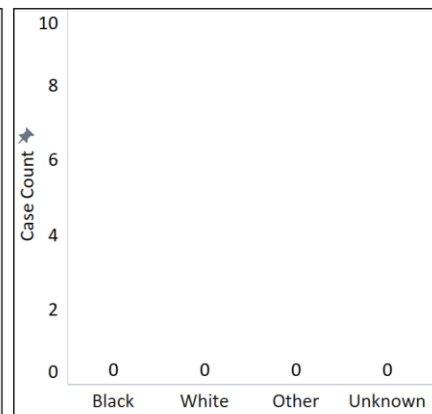
Age Group, 2021



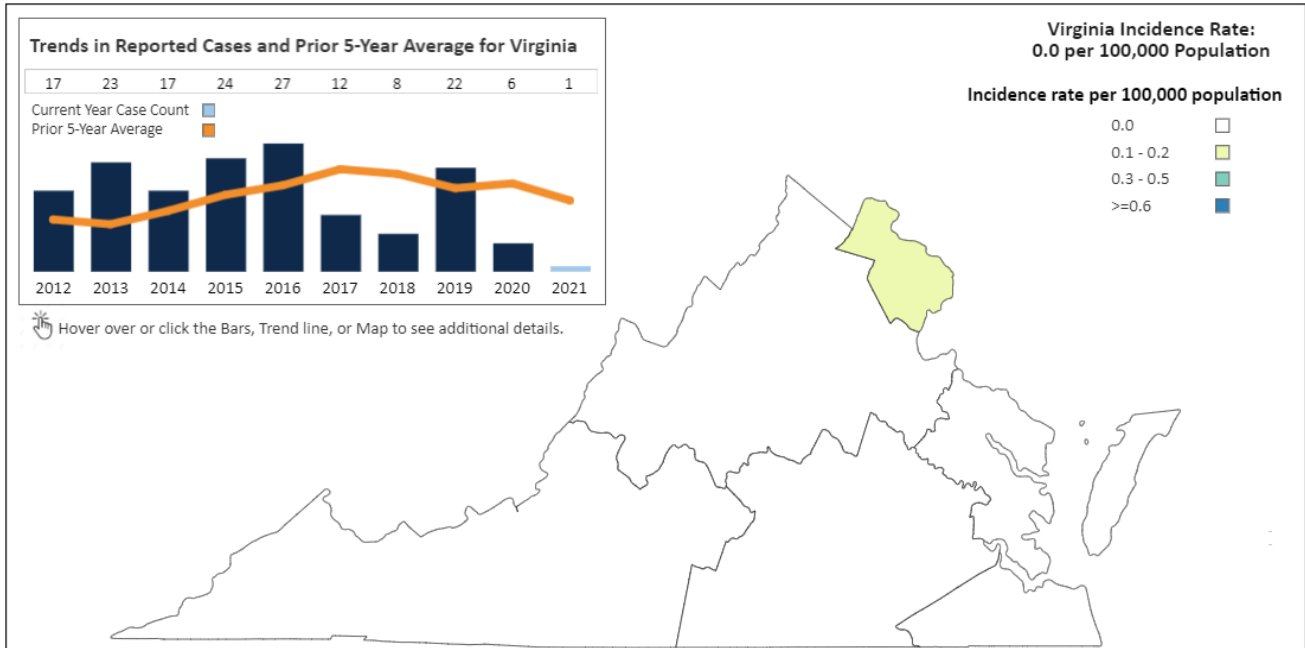
Sex, 2021



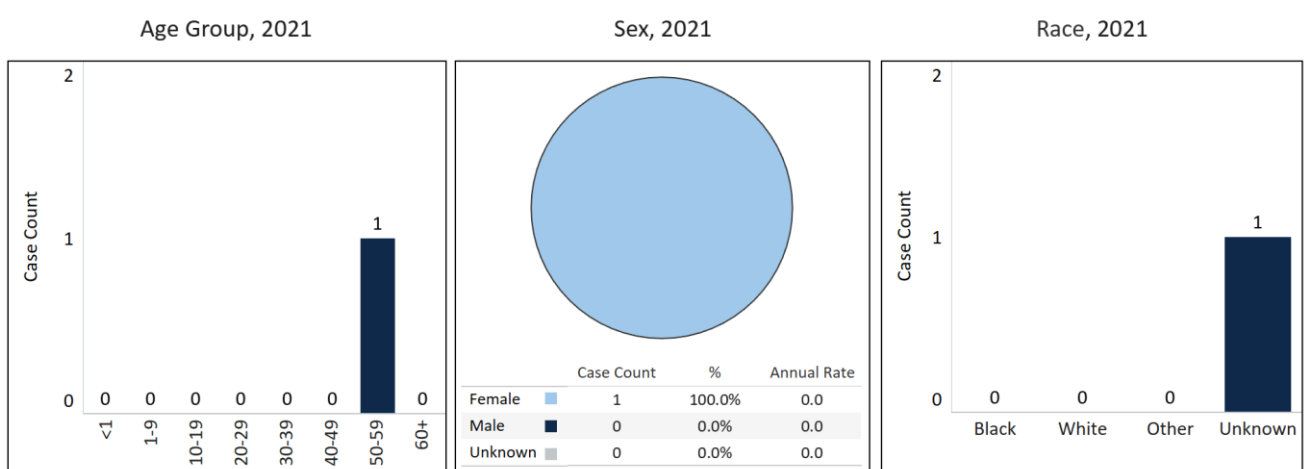
Race, 2021



Arboviral infection (Dengue)

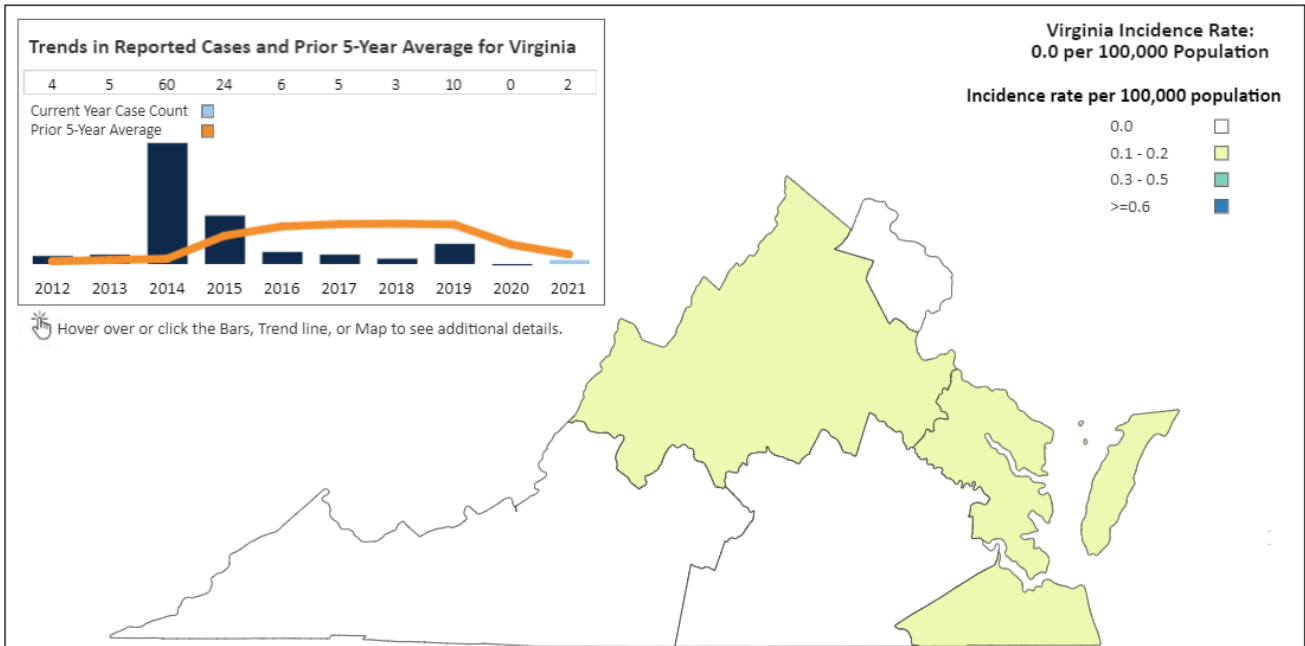


Dengue is an arboviral illness that is transmitted by the bite of infected *Aedes aegypti* and *Aedes albopictus* mosquitoes. Cases are typically imported from tropical and subtropical countries, but transmission is increasingly common in certain parts of the US including Florida and Texas. There are four subtypes of illness: Dengue-1, Dengue-2, Dengue-3, and Dengue-4. While most individuals will have an asymptomatic infection, approximately one in four will develop symptoms. Five percent of those infected experience severe dengue, a potentially fatal illness. Symptoms of dengue include fever, nausea/vomiting, rash, and aches and pains. Severe dengue may present with severe bleeding, plasma leakage, and organ involvement. In 2021, Virginia had one reported case of dengue, which was acquired in Central America. This is a sharp decline when compared to the 5-year average, which is likely related to decreased travel associated with the COVID-19 pandemic.

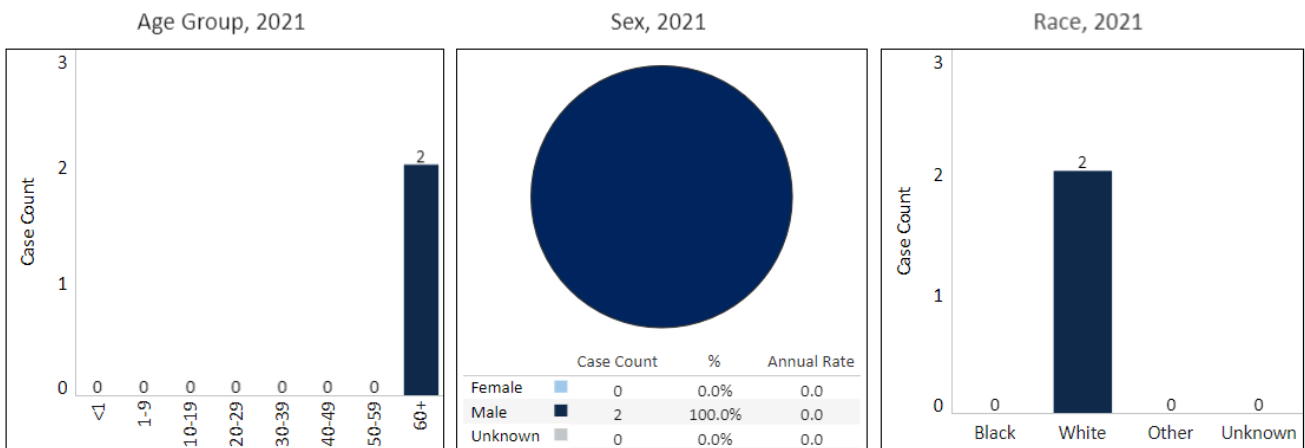


Arboviral infection (Other)

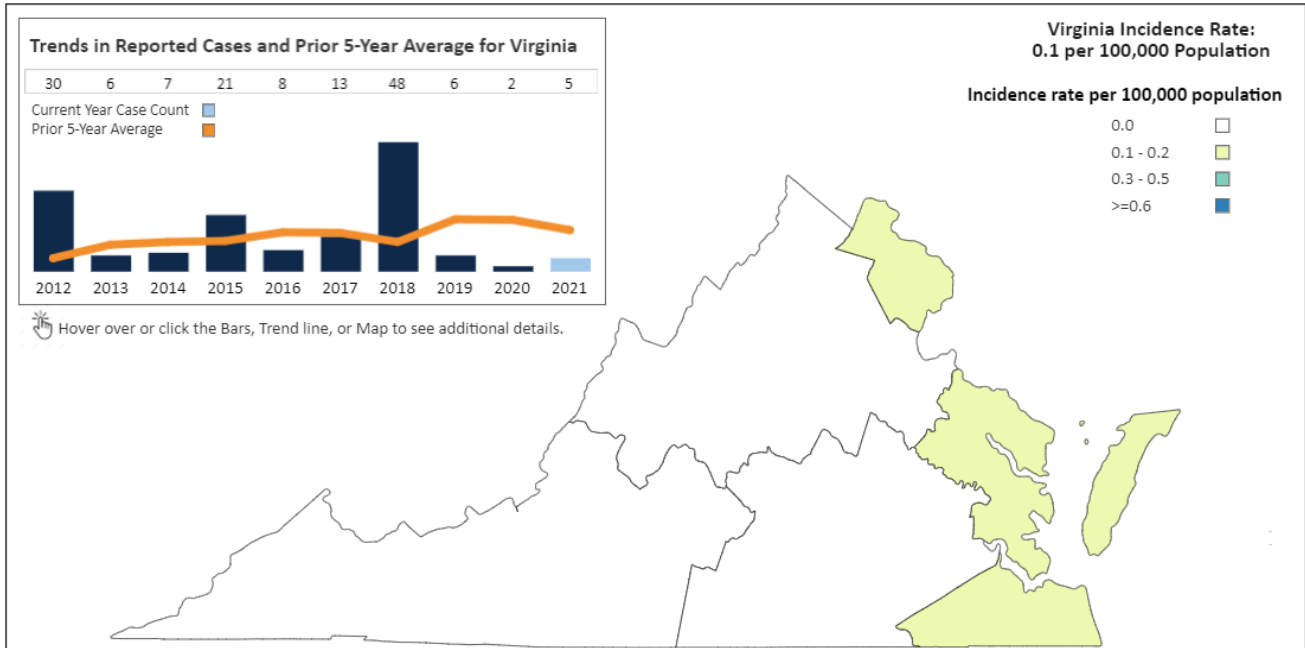
Excludes West Nile Virus, Dengue, and Zika



This category of arboviral infections is comprised of arboviral illnesses other than West Nile virus, dengue, and Zika, and includes both endemic and non-endemic conditions. Arboviral infections are illnesses caused by arboviruses and are primarily transmitted to people by the bite of an infected mosquito, tick, or sandfly. Globally, there are over one hundred species of arboviruses that can cause disease in people. Due to ecologic, climatic, and cultural/economic factors, transmission of arboviral diseases have historically been limited in Virginia. Novel arboviral illnesses could emerge as ecologic conditions become more favorable for non-native vectors and reservoirs. In 2021, Virginia reported one case of neuroinvasive California serogroup virus which was acquired in Virginia, as well as one fatal case of Heartland virus that was acquired in either Virginia or Maryland. This was the first case of Heartland virus to be identified in the Mid-Atlantic.

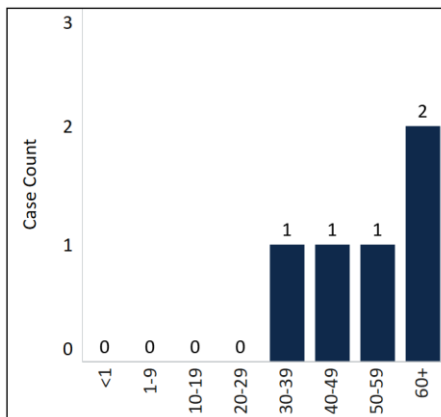


Arboviral infection (West Nile Virus)

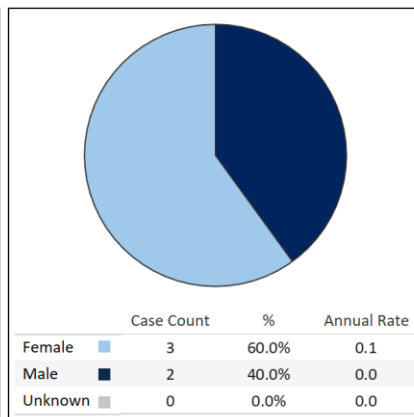


West Nile virus (WNV) is an arboviral illness that is transmitted by the bite of an infected mosquito. In Virginia, the primary vector is the mosquito *Culex pipiens*, also known as the “common house mosquito.” Transmission typically occurs during the summer and into the fall when the mosquito is most active. Most infected people do not display symptoms, but one in five will become ill with symptoms that include fever, headache, body ache, nausea/vomiting, and rash. Approximately one out of every 150 infected people develop neuroinvasive infection with severe symptoms including high fever, disorientation, altered mental status, muscle weakness, and paralysis. Neuroinvasive infection may result in long term disability, and one in ten patients with neuroinvasive WNV infection will die from the illness. In 2021, five cases of WNV were reported in Virginia. Four cases were non-neuroinvasive and one case was neuroinvasive.

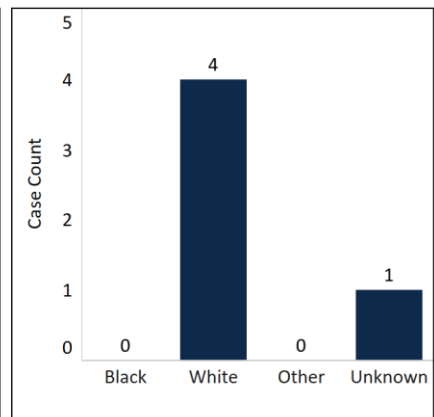
Age Group, 2021



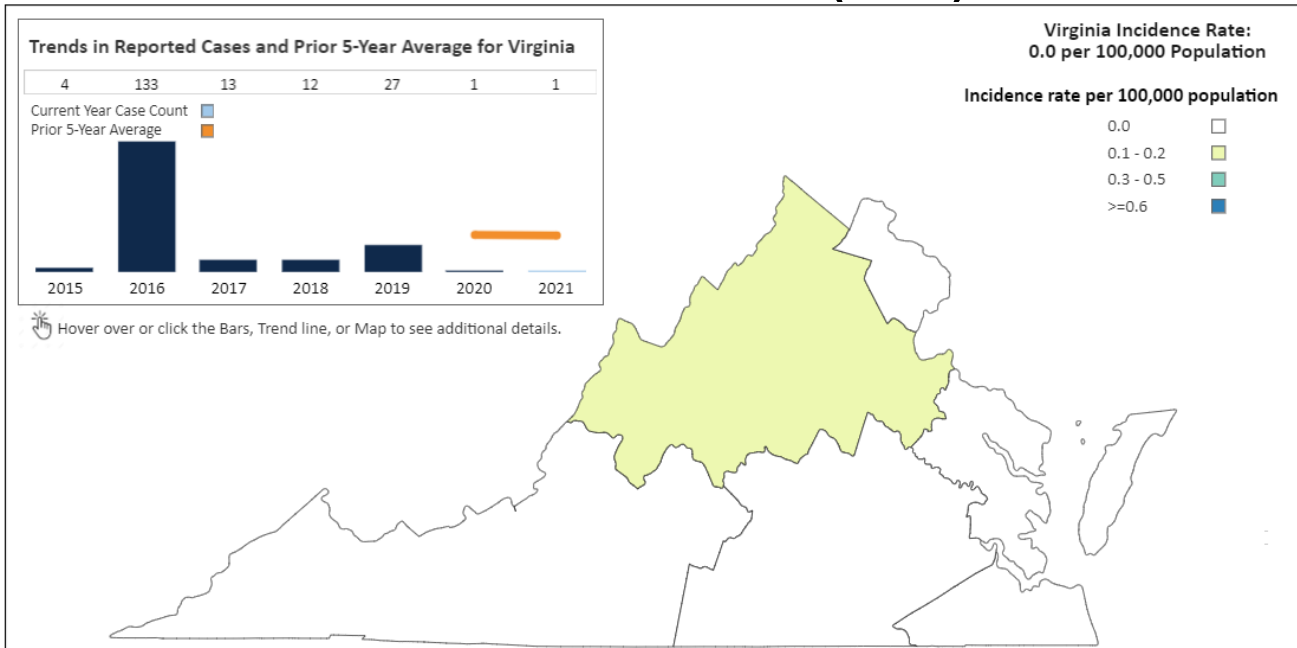
Sex, 2021



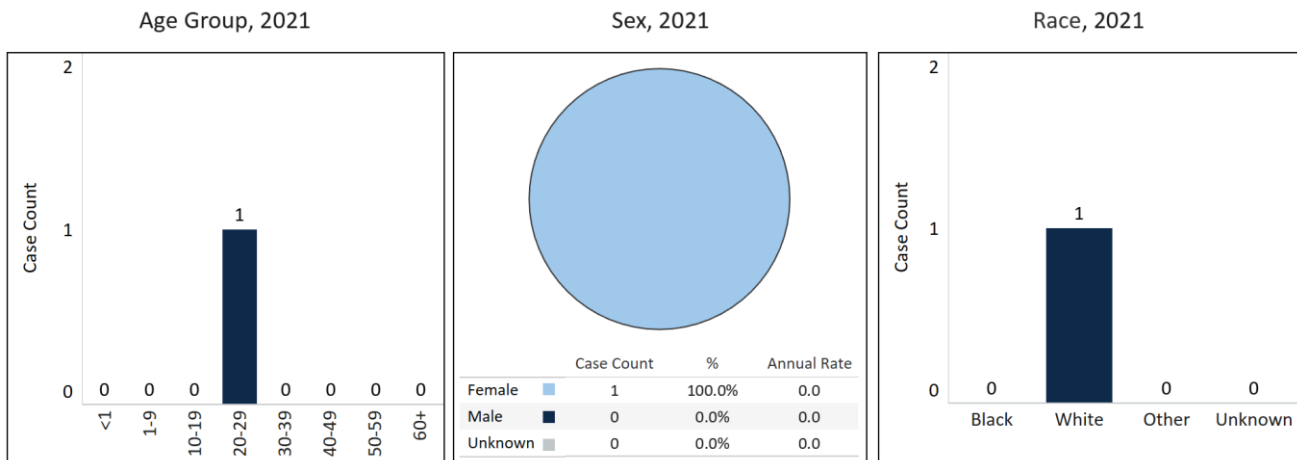
Race, 2021



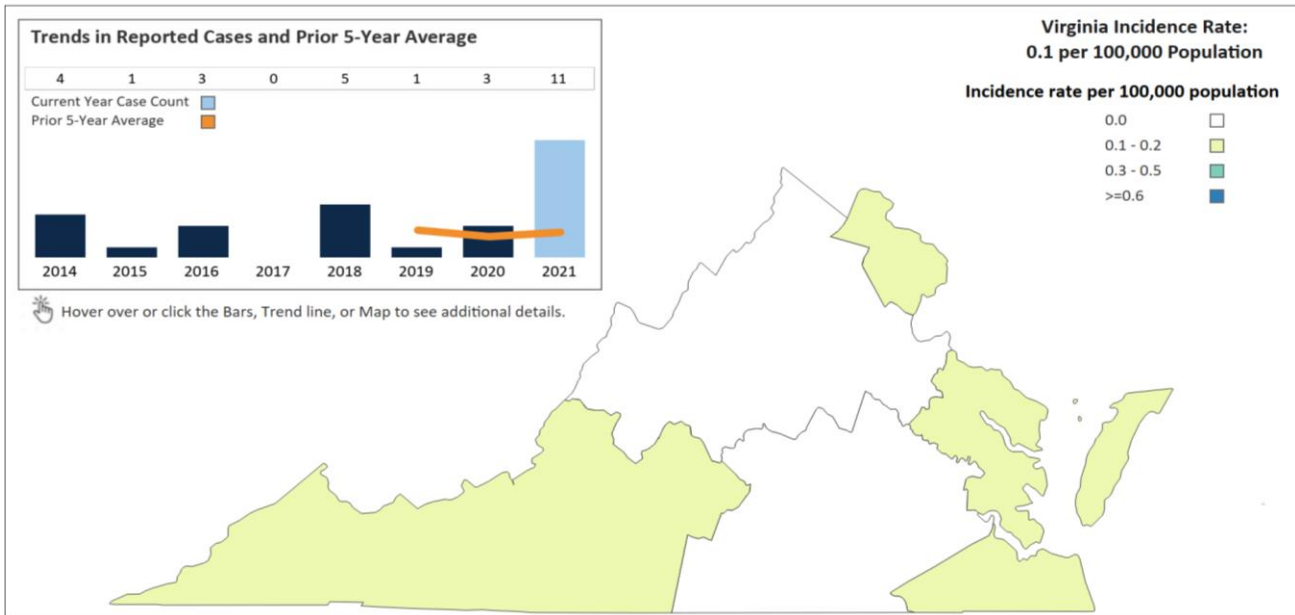
Arboviral infection (Zika)



Zika is a relatively new arbovirus of public health concern. Although it was discovered in 1948, transmission was extremely rare, and/or isolated geographically, until the epidemic of 2015-2016. Since 2017, local transmission of Zika has occurred in 89 countries globally. Zika is primarily transmitted by the bite of infected *Aedes* mosquitoes, but it can also spread human to human through sex or during pregnancy from mother to fetus. Zika generally has milder symptoms than dengue and West Nile virus. Twenty percent of those infected will have clinical symptoms such as fever, maculopapular rash, conjunctivitis, myalgia, arthralgia, and headache. Congenitally acquired infection is much more severe; symptom in infants include central nervous system birth defects and microcephaly. There have been no reported human cases transmitted by mosquito in the continental US since 2018. Virginia reported one case in 2021, which was acquired during travel to Mexico.

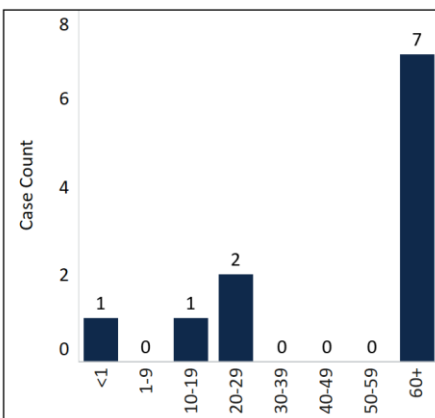


Babesiosis

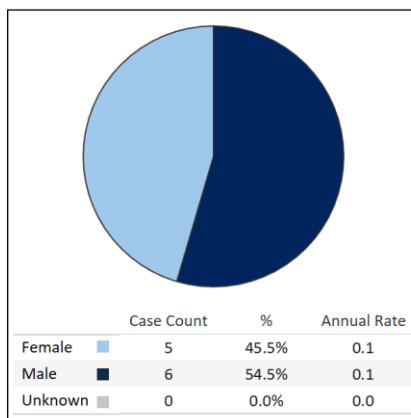


Babesiosis is a disease caused by the protozoa, *Babesia*. There are two species that cause illness in humans in the US, including *Babesia microti* and *Babesia duncani*, with the former causing more than ninety-nine percent of human cases. Babesiosis is most often acquired from the bite of infected blacklegged ticks, but blood transfusion and transplacental/perinatal transmission are also possible. Symptoms can begin up to two months after tick bite and range from flu-like symptoms (fever, chills, headache, myalgia) to life-threatening conditions, such as disseminated intravascular coagulation, acute respiratory distress, and myocardial infarction. Illness usually occurs from late spring to early fall. The elderly and immunocompromised are most susceptible. There were 11 cases in 2021, which is the highest number since surveillance began. Ten cases were acquired out of state, and one was acquired within the commonwealth. The 5-year average is 2.4 cases/year.

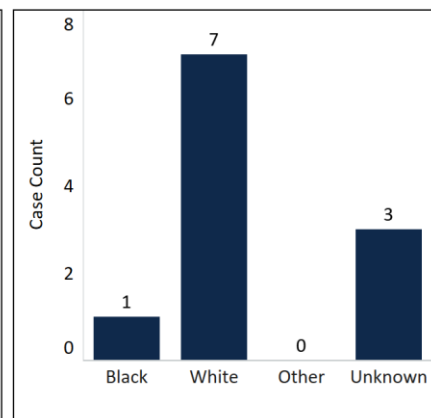
Age Group, 2021



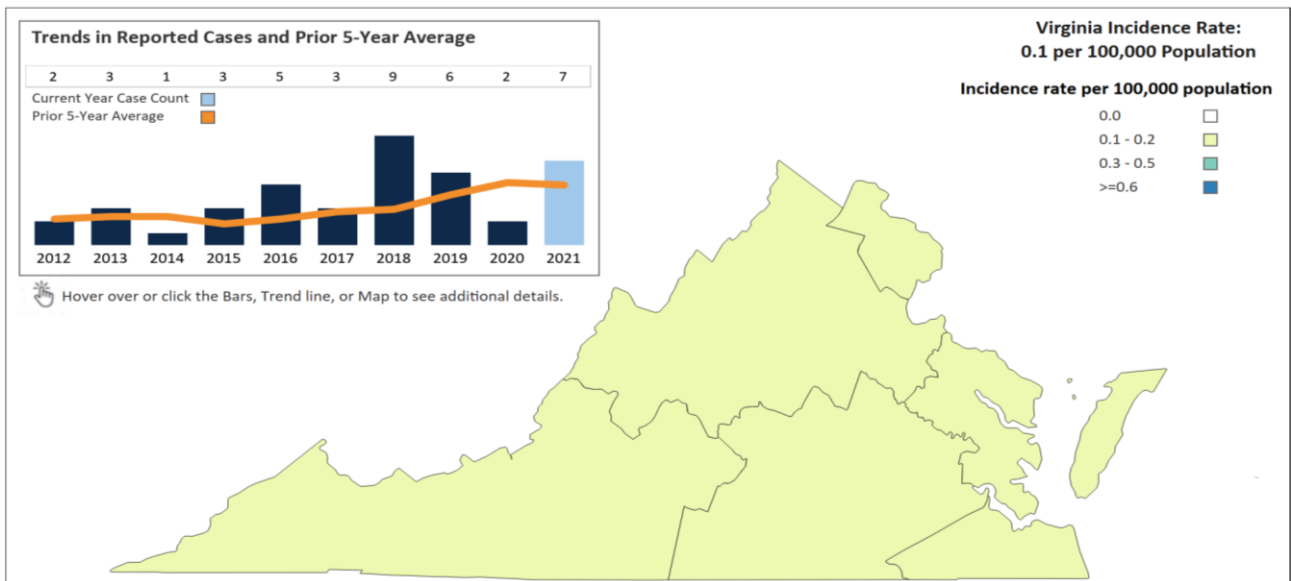
Sex, 2021



Race, 2021

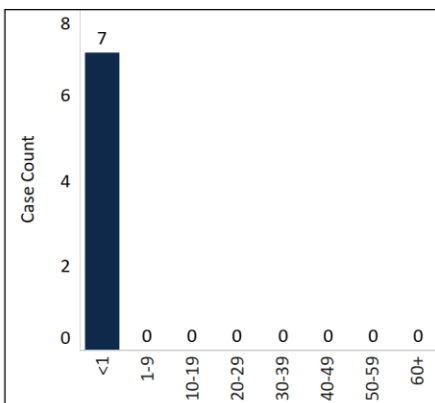


Botulism

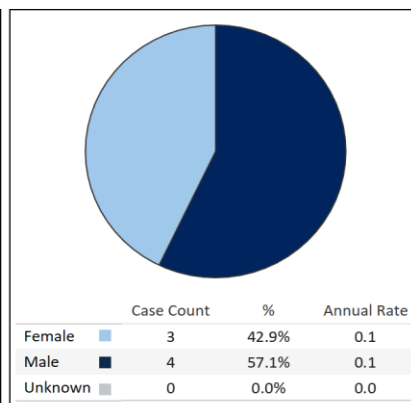


Botulism is a rare but serious illness caused by a toxin produced by the spore-forming bacteria, *Clostridium botulinum*. The bacteria that make the toxins is found in the soil, and sometimes in water. The disease is classified as foodborne when resulting from ingestion of food contaminated with the toxin, or non-foodborne (infant or wound botulism) when resulting from ingestion of food contaminated with spores that form toxin in the intestine, or contamination of an open wound with soil containing spores. Symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, and muscle weakness. Infants with botulism appear very tired, feed poorly, are constipated, and have a weak cry and poor muscle tone. Seven cases of botulism were reported in Virginia in 2021, and all seven cases were classified as non-foodborne infant botulism. Fifty-seven percent of cases reported their sex as male, and the statewide incidence rate was 0.1 per 100,000.

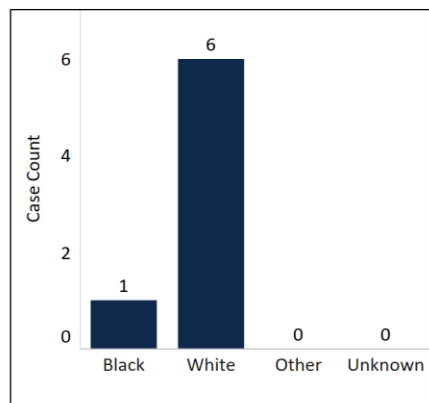
Age Group, 2021



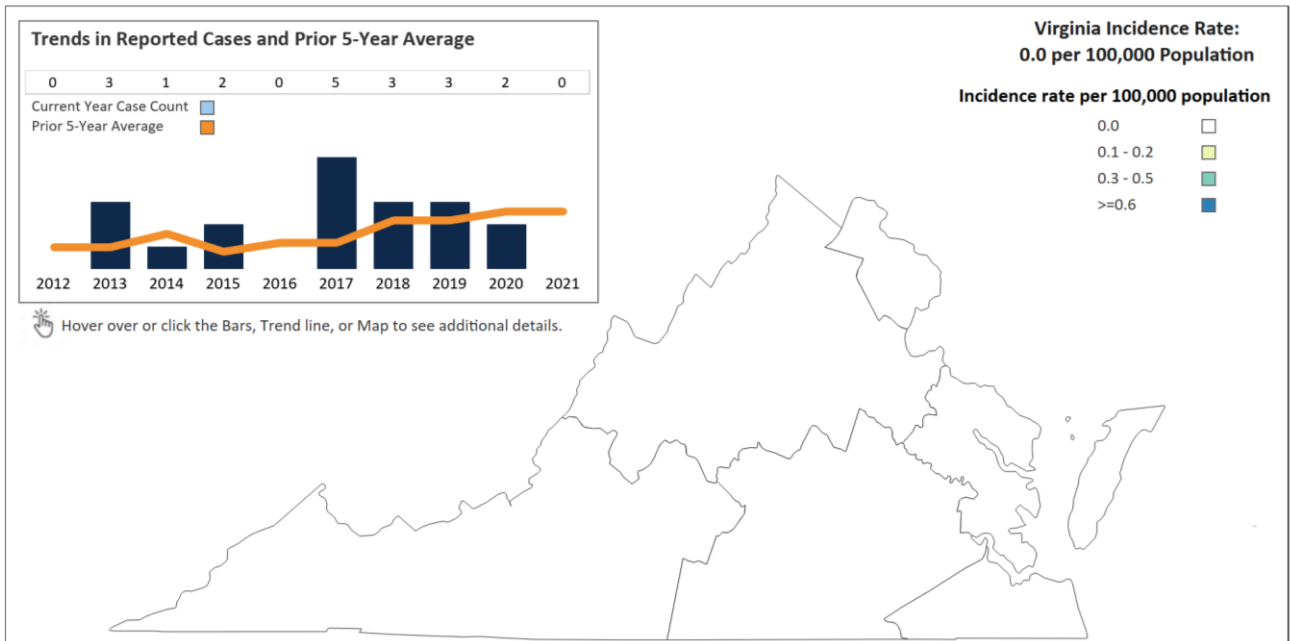
Sex, 2021



Race, 2021

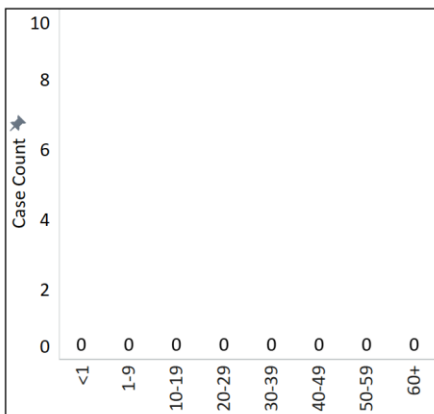


Brucellosis



Brucellosis is a disease caused by the bacteria, *Brucella*. This bacterium is most commonly transmitted through ingestion of unpasteurized milk or milk products from infected animals. It can also be transmitted by contamination of skin wounds with infected animal tissue or body fluids and by inhalation of the organism. Symptoms include intermittent or irregular fever, headache, chills, sweating, and muscle pain. Some signs and symptoms may persist for longer periods of time, while others may never resolve. Preventing infection includes not consuming unpasteurized dairy products and using barrier precautions, such as wearing rubber gloves, when handling animal tissue. Laboratory workers should take proper infection control precautions when handling samples known to contain or suspected of containing *Brucella*. No cases of brucellosis were reported in 2021. Virginia typically reports fewer than 5 cases of brucellosis each year.

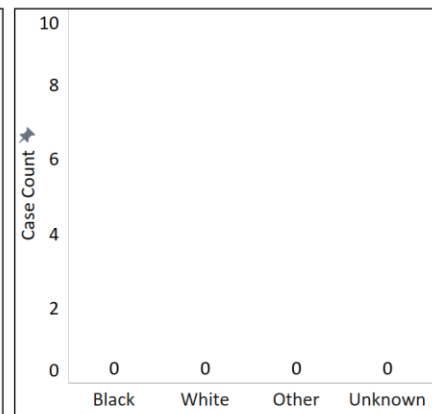
Age Group, 2021



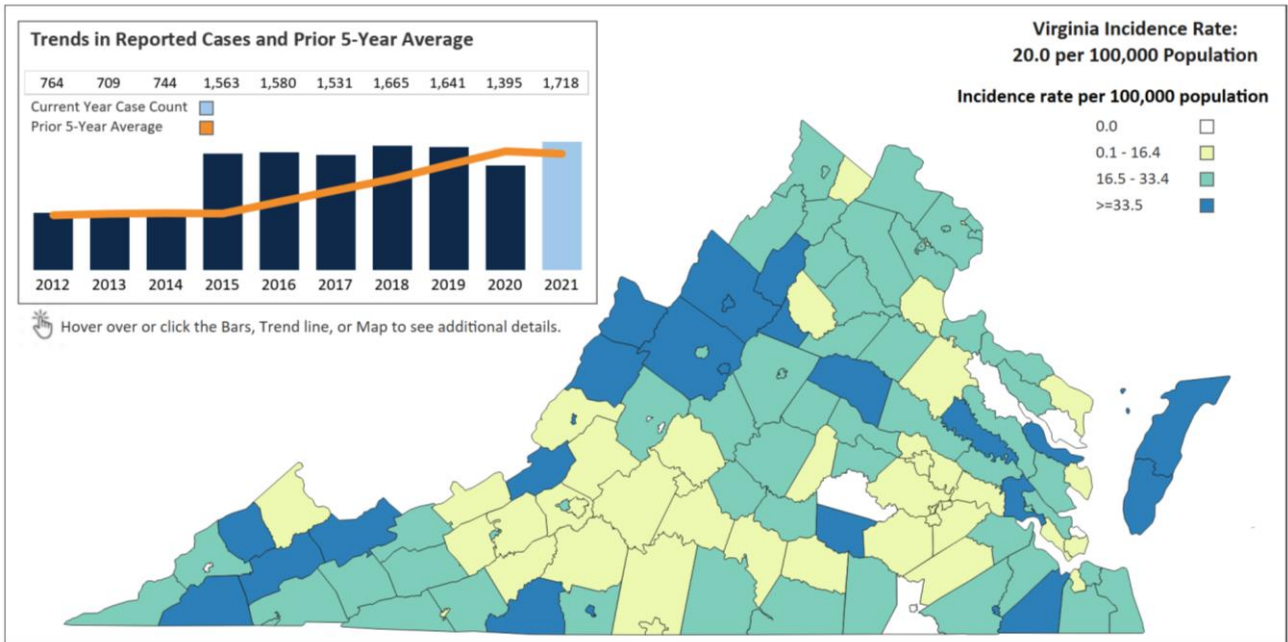
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

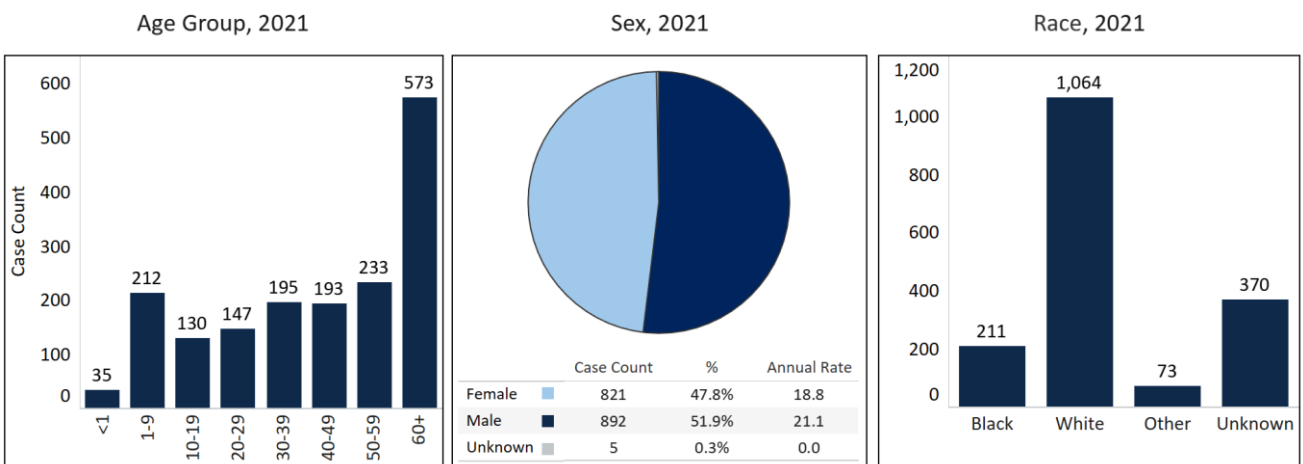
Race, 2021



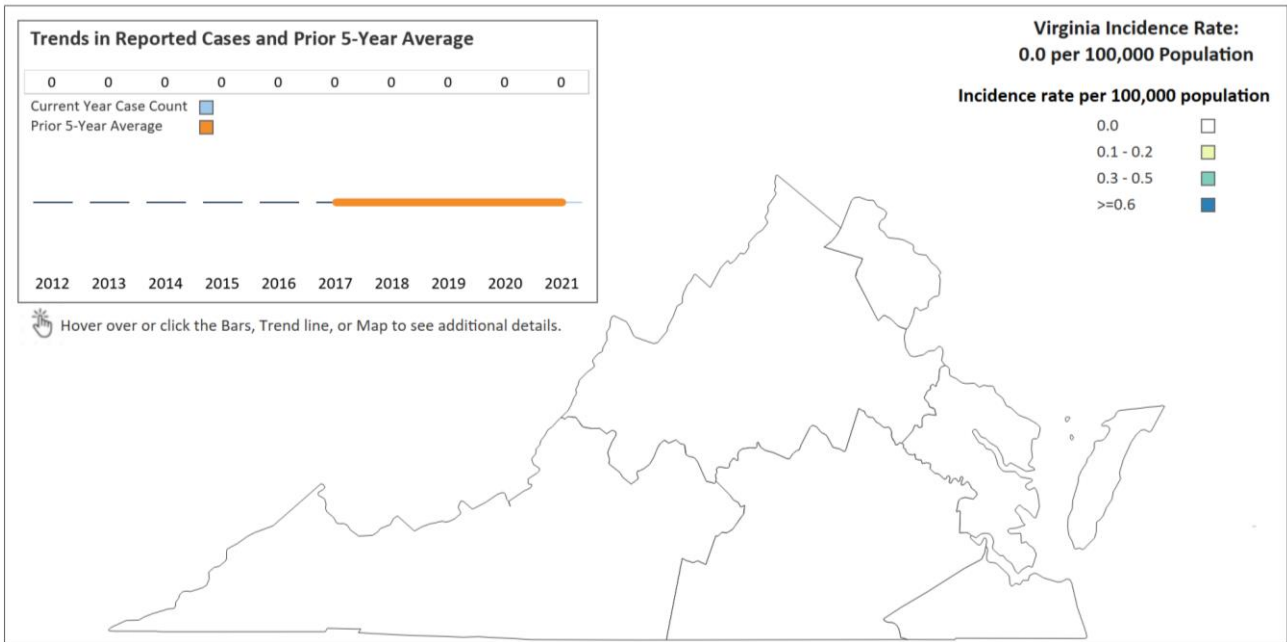
Campylobacteriosis



Campylobacteriosis is an infection caused by the bacteria *Campylobacter*, which affects the intestinal tract and causes diarrhea. The bacteria are commonly found in the gut of animals and birds, which carry the bacteria without becoming ill. It can be transmitted to people by drinking unpasteurized (raw) milk or dairy products or contaminated water, or eating undercooked meats, especially chicken. Symptoms of campylobacteriosis can include mild to severe diarrhea, fever, and stomach cramping. Campylobacteriosis is one of the most common causes of diarrheal illness in the United States. In 2021, 1,718 campylobacteriosis cases were reported in Virginia, with a statewide incidence rate of 20 per 100,000 population. Adults 60 years of age and older represented 33% of all cases and a rate of 29.6 cases per 100,000 population. Transmission of this condition can be reduced through proper hand washing, consuming pasteurized dairy products, and ensuring poultry is cooked to appropriate temperatures.

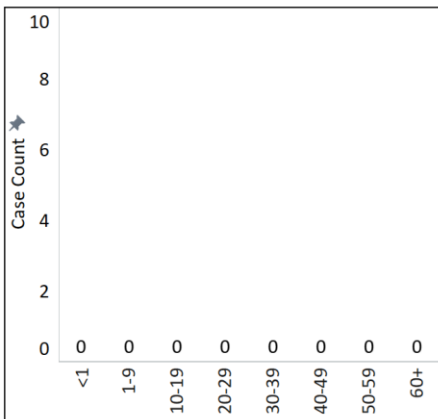


Chancroid



Chancroid is caused by the bacterium *Haemophilus ducreyi*. It is transmitted through sexual skin-to-skin contact with open sores. Symptoms usually occur five to ten days after exposure. Chancroid is characterized by multiple lesions or sores on the genitals which become purulent and eventually rupture. Additional symptoms include inguinal adenopathy (swollen lymph nodes), painful urination, vaginal discharge, rectal bleeding, pain with bowel movements, and dyspareunia. Chancroid became a nationally notifiable condition in 1944, and the case definition has not changed since 1996, but is not reportable in all United States jurisdictions. It remains common in tropical countries, but rare in other parts of the world. Since 2012, there have only been 70 reported cases of chancroid in the US. In 2021, there were no reported cases of chancroid in Virginia. Only two cases have been reported in Virginia since 2005.

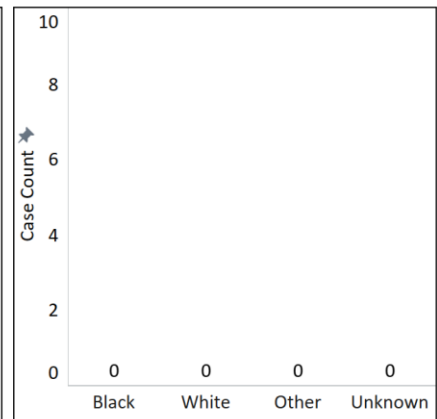
Age Group, 2021



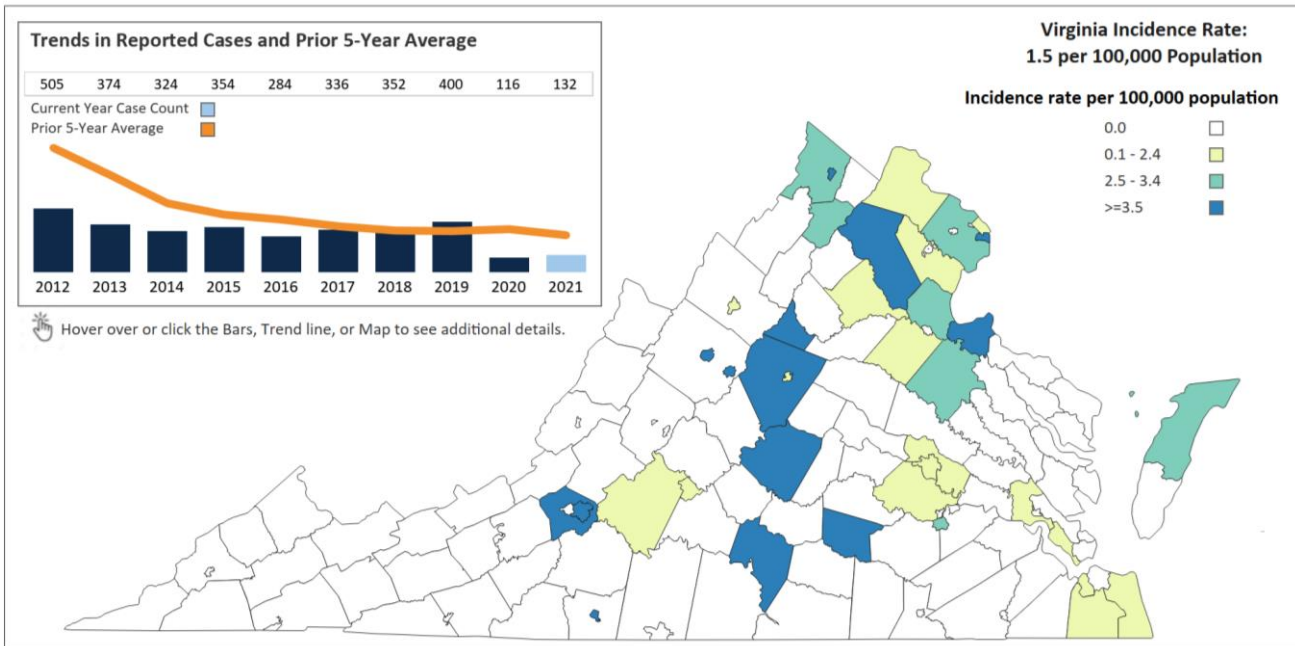
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

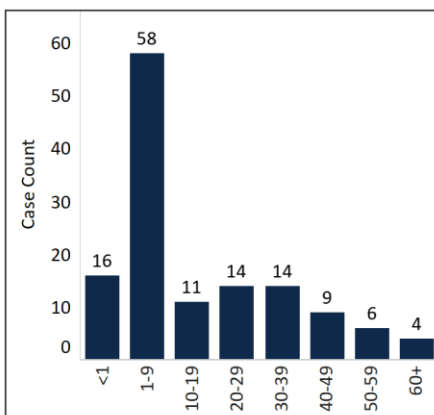


Chickenpox (Varicella)

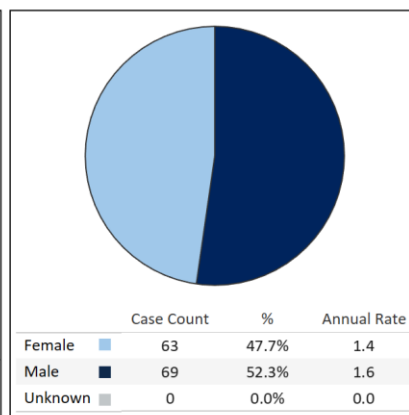


Chickenpox is a highly contagious disease caused by the varicella-zoster virus (VZV). The virus can be spread in the air when a person coughs or sneezes, or by direct contact with either the chickenpox or shingles rash before a scab forms. Initial symptoms include sudden onset of fever, headache, and fatigue. An itchy, blister-like rash, usually starting on the face, chest, or back, follows 1-2 days later. In the United States, most cases occur in young, school-aged children. However, the risk of chickenpox is low in persons who have received two doses of vaccine. In Virginia, cases of chickenpox peaked in 2012 and 2019 due to outbreaks in K-12 schools, correctional facilities, colleges, daycares, and workplaces. The case definition was revised in 2010 to expand criteria for confirmed cases.

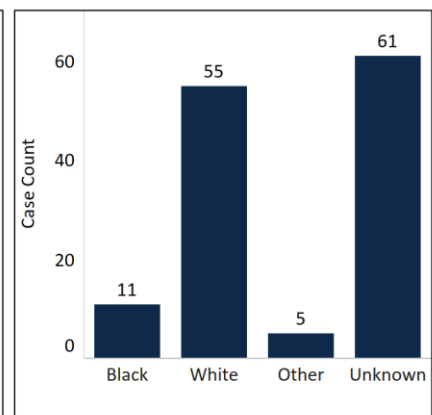
Age Group, 2021



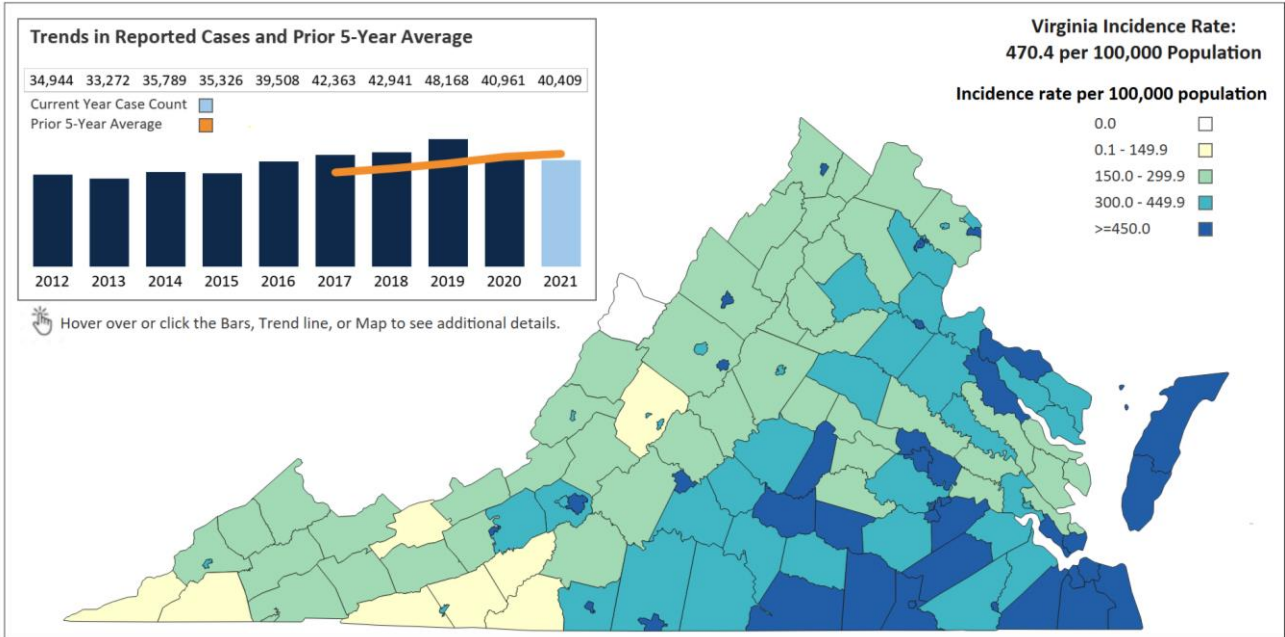
Sex, 2021



Race, 2021

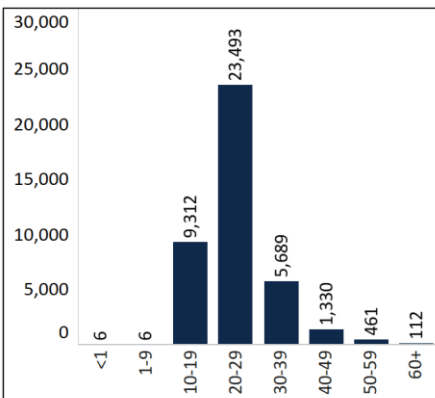


Chlamydia trachomatis infection

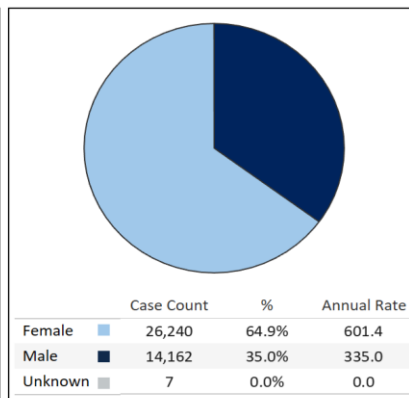


Chlamydia is a common sexually transmitted disease caused by *Chlamydia trachomatis*. It is the most frequently reported bacterial infection in the United States, particularly among women and young people ages 15-24. Anyone can get chlamydia through vaginal, oral, or anal sex with someone who has the infection. It may also be transmitted to infants from the genital tract of an infected mother during delivery. Asymptomatic infection is common, so many people are unaware of their infection. Symptoms may include vaginal, penile, or rectal discharge and/or burning during urination. Chlamydial infection in women can result in serious sequelae, including pelvic inflammatory disease (PID), ectopic pregnancy, and infertility. In 2021, there were 40,409 chlamydia cases reported in Virginia, representing a 5% decrease from 2017. Transmission of this disease can be mitigated by regularly screening and prompt treatment for sexually active individuals.

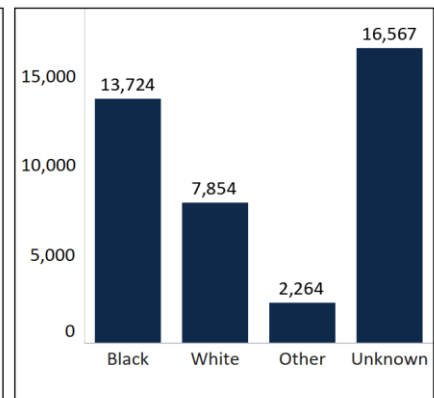
Age Group, 2021



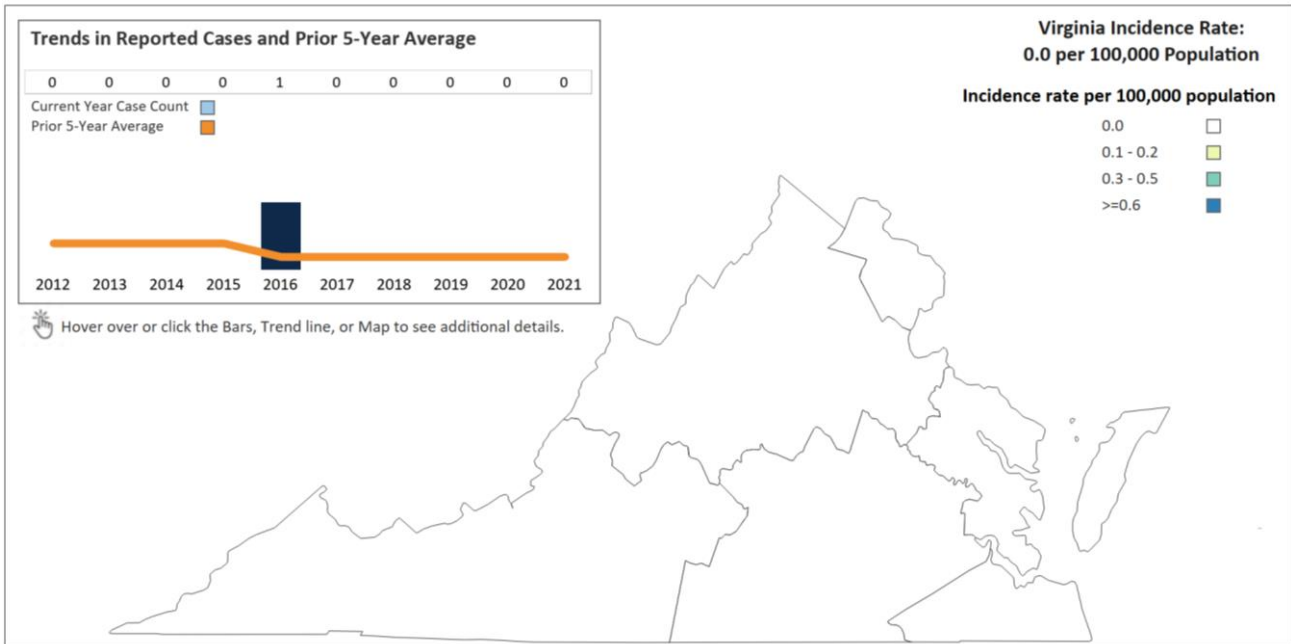
Sex, 2021



Race, 2021

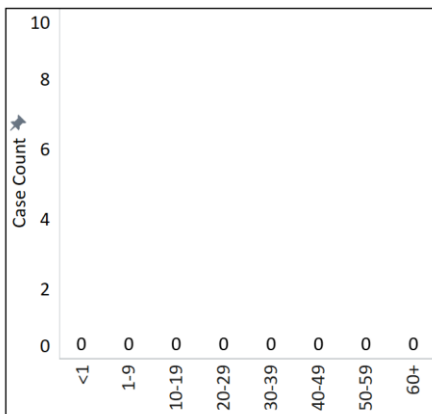


Cholera



Cholera is an acute diarrheal illness caused by certain strains of the bacterium *Vibrio cholerae*. People with cholera shed the bacteria in their feces (stool). It is transmitted when feces from a person with cholera gets into the water and people get sick from swallowing the contaminated water. Food can also become contaminated if it is washed with unclean water or fertilized with sewage or contaminated soil. Shellfish harvested from water that has been contaminated can cause people to get sick if the shellfish are eaten raw or undercooked. Symptoms can range from mild to severe and commonly include profuse watery diarrhea, vomiting, and weakness. Cholera is not a threat in the United States and other countries with advanced water and sanitation systems. No cases of cholera were reported in Virginia in 2021. The last reported case of cholera occurred in 2016 and was associated with international travel.

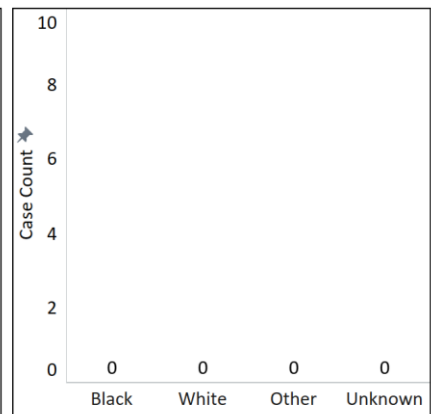
Age Group, 2021



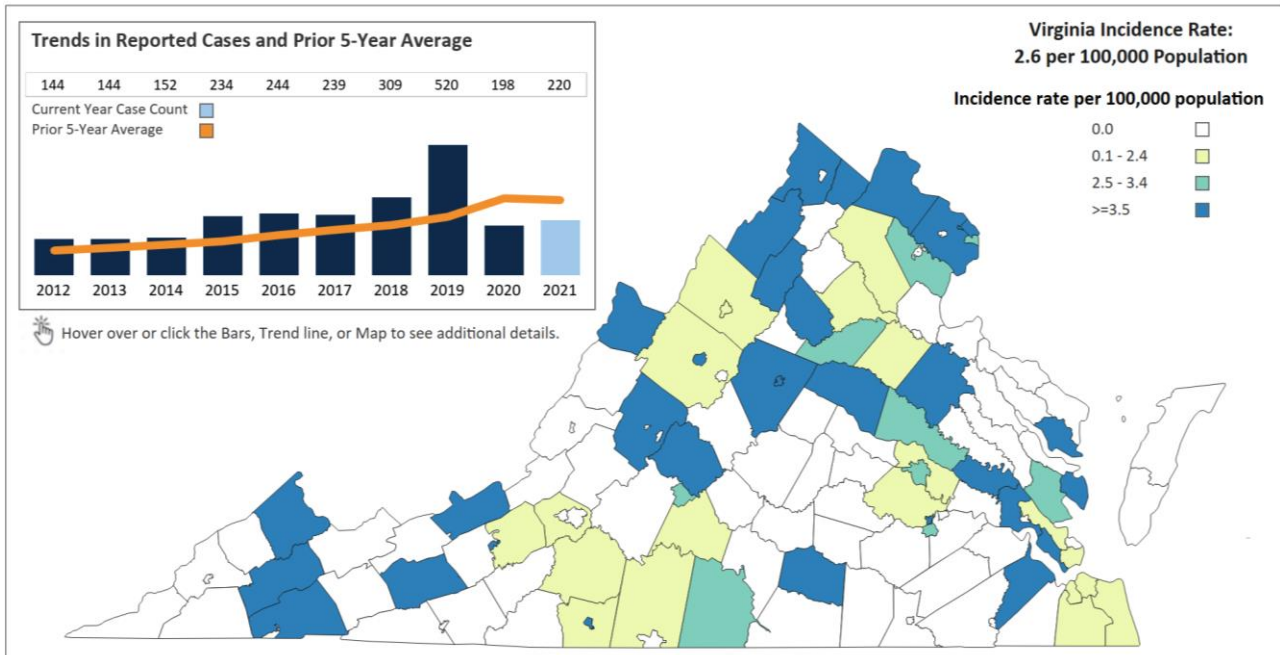
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

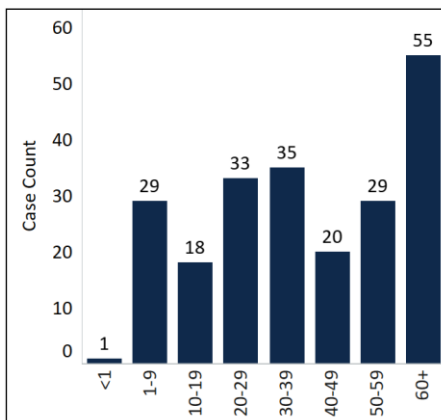


Cryptosporidiosis

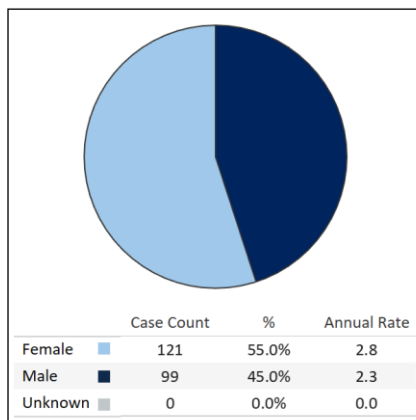


Cryptosporidiosis is a diarrheal disease caused by the parasite *Cryptosporidium parvum*. The parasite is found in the intestines of infected humans and animals and is shed in feces. People become infected by eating food or drinking water contaminated with the parasite, or by swimming in contaminated lakes, streams, rivers, or swimming pools. The parasite is protected by an outer shell and is very resistant to chlorine disinfection. Cryptosporidiosis causes watery diarrhea and abdominal cramping, and sometimes vomiting and low-grade fever. In 2021, 220 cases of cryptosporidiosis were reported in Virginia with a statewide incidence rate of 2.6 cases per 100,000 population. Transmission of cryptosporidiosis can be reduced through proper hand washing, not using public swimming facilities while ill with diarrhea, and avoiding drinking water directly from streams, lakes, springs, or any unknown water source.

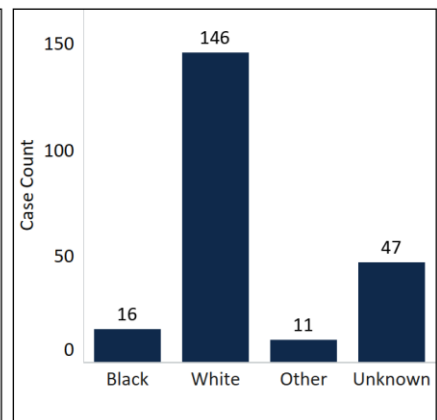
Age Group, 2021



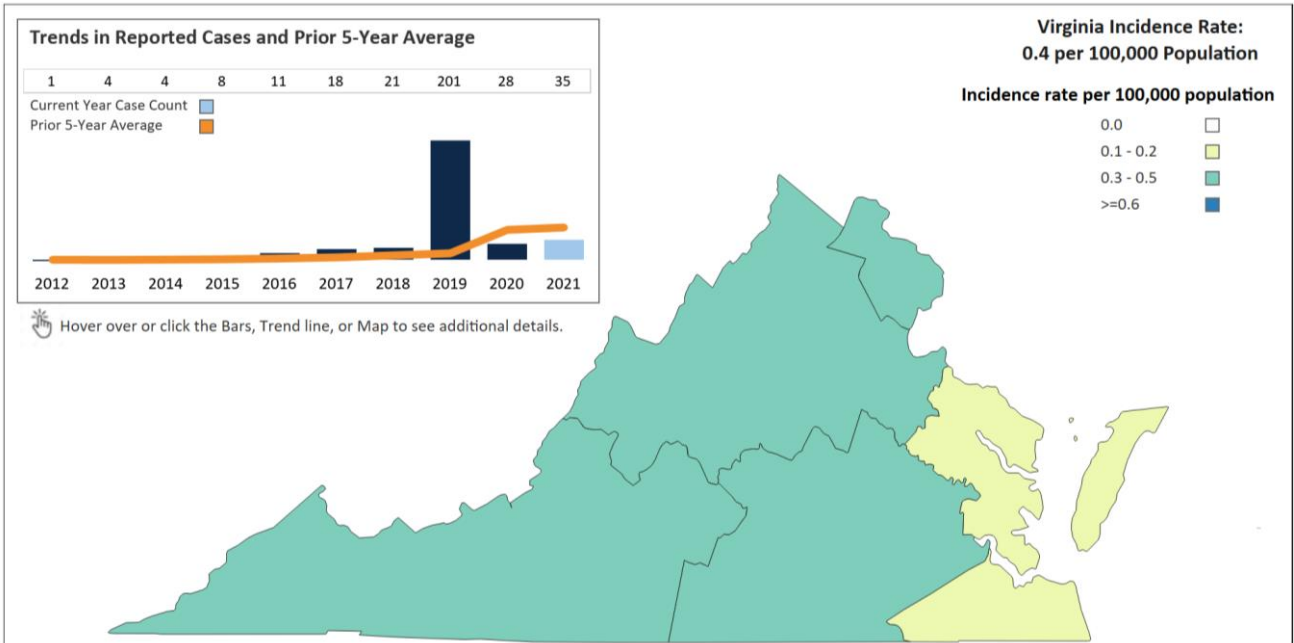
Sex, 2021



Race, 2021

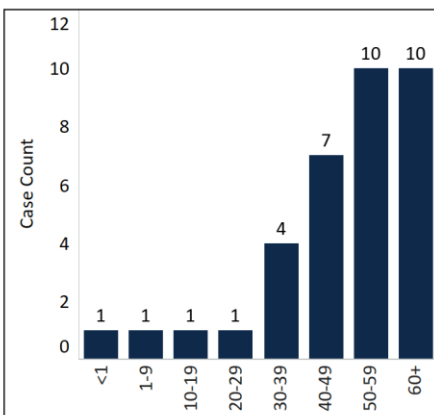


Cyclosporiasis

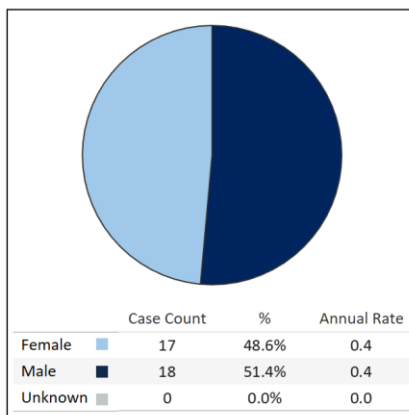


Cyclosporiasis is an infection of the intestine caused by the parasite *Cyclospora*. Cyclosporiasis is transmitted through feces and people become infected by eating food or drinking water contaminated with the parasite. The infection can occur in many countries, including the United States, but it is more common in tropical areas. Outbreaks of cyclosporiasis in the United States have been linked to imported fresh produce, such as berries, lettuce, and fresh herbs. Most cases and outbreaks are reported during the summer months, although infections can occur throughout the year. Cyclosporiasis can cause watery diarrhea, stomach cramps, loss of appetite, and weight loss, and some people who are infected do not have any symptoms. In 2021, 35 cases of cyclosporiasis were reported in Virginia with a statewide incidence rate of 0.4 per 100,000.

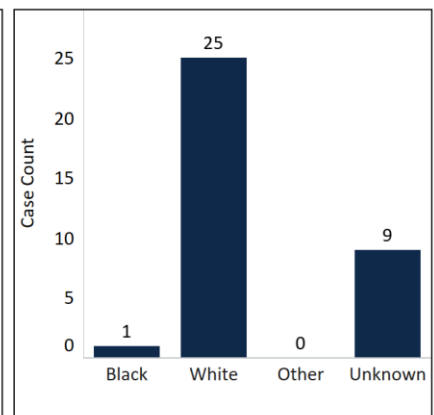
Age Group, 2021



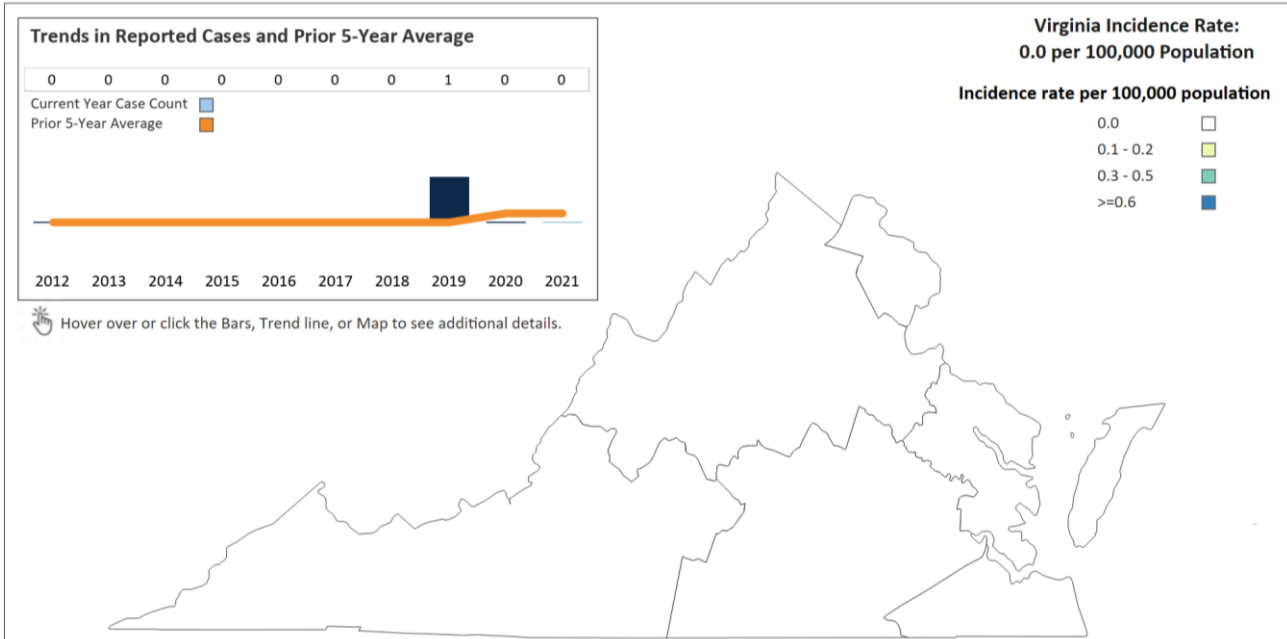
Sex, 2021



Race, 2021

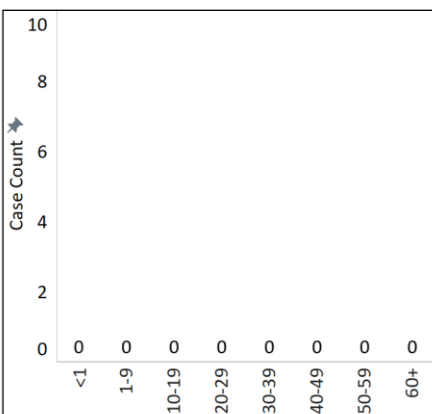


Diphtheria



Diphtheria is a serious disease caused by a toxin produced by the bacterium *Corynebacterium diphtheriae*. Diphtheria can infect the nose, throat, or skin, and can be deadly. Signs and symptoms include weakness, sore throat, mild fever, swollen glands in the neck, and open sores or ulcers. The overall case-fatality rate for diphtheria is 5-10%, with higher death rates (up to 20%) among persons younger than 5 and older than 40 years of age. In the U.S., cases gradually declined after the vaccine became routinely used in the 1940s, and cases remain rare today. In the last ten years, Virginia has reported 1 case of diphtheria. The case definition for diphtheria was revised in 2019 to include additional lab criteria for confirmed cases.

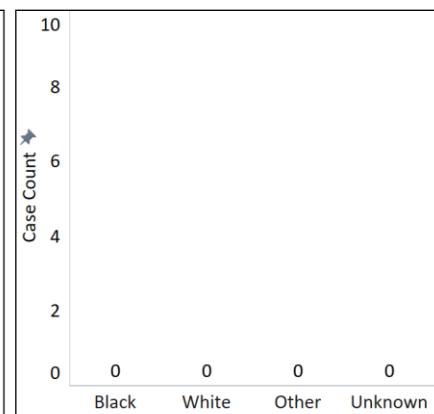
Age Group, 2021



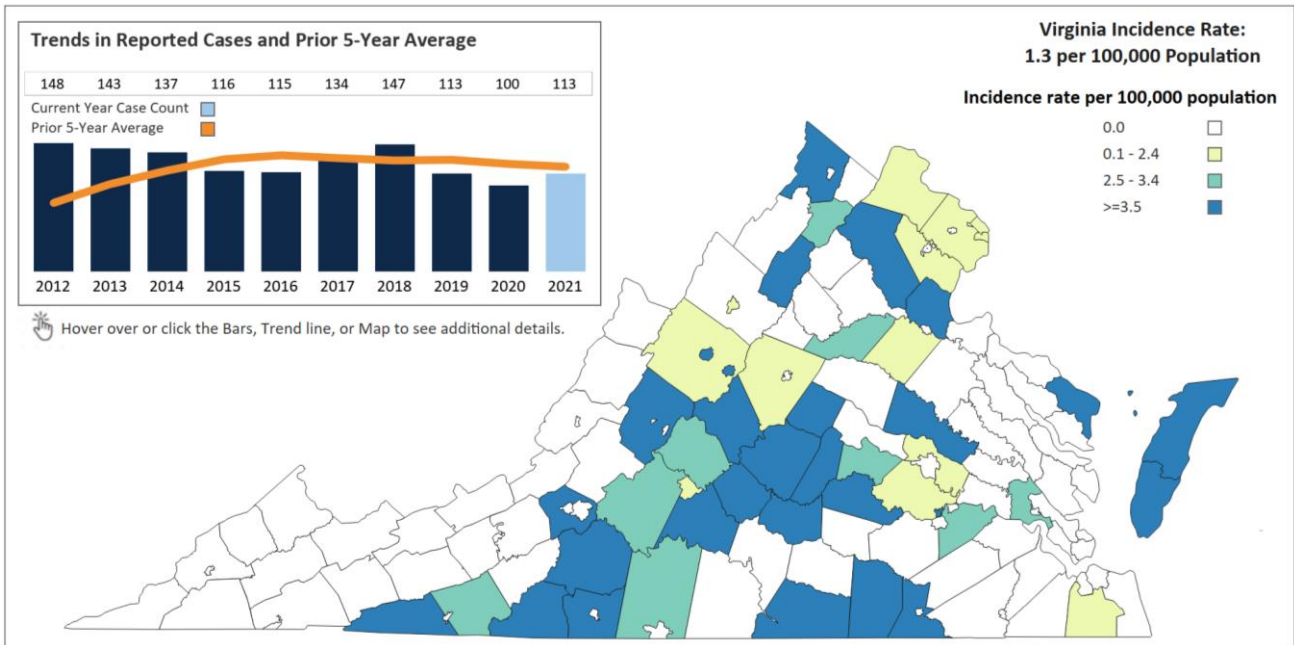
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

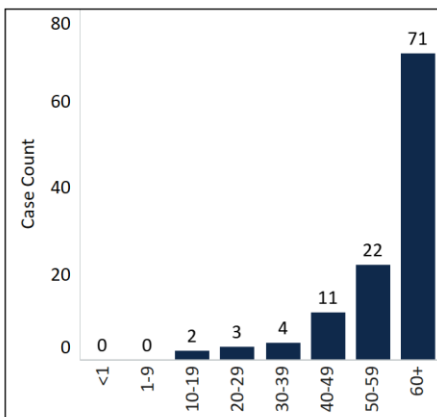


Ehrlichiosis/Anaplasmosis

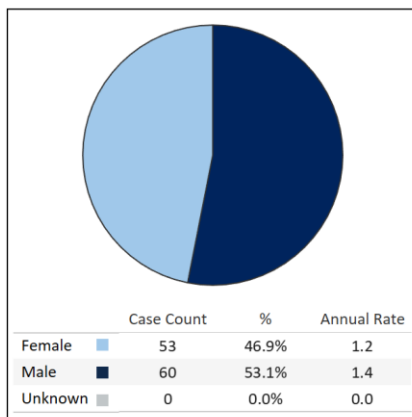


Ehrlichiosis and Anaplasmosis are bacterial diseases transmitted by the bite of an infected tick. The four subtypes which cause illness are *Ehrlichia chaffeensis*, *Ehrlichia ewingii*, *Anaplasma phagocytophilum* and Undetermined human ehrlichiosis/anaplasmosis. Both *E. chaffeensis* and *E. ewingii* are transmitted by the lone star tick, while *A. phagocytophilum* is transmitted by the blacklegged tick. Symptoms include fever, headache, myalgia, anemia, leukopenia, thrombocytopenia, and elevated liver enzymes. Severe cases can present with organ failure, altered mental status, and encephalopathy. In general, ehrlichiosis cases are more severe than anaplasmosis cases. There were 89 cases of *E. chaffeensis* infection and 24 cases of *A. phagocytophilum* in 2021. This is lower than the previous 5-year average. The best way to prevent this infection is to limit tick exposure.

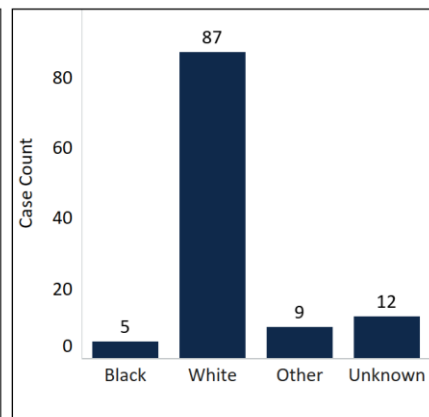
Age Group, 2021



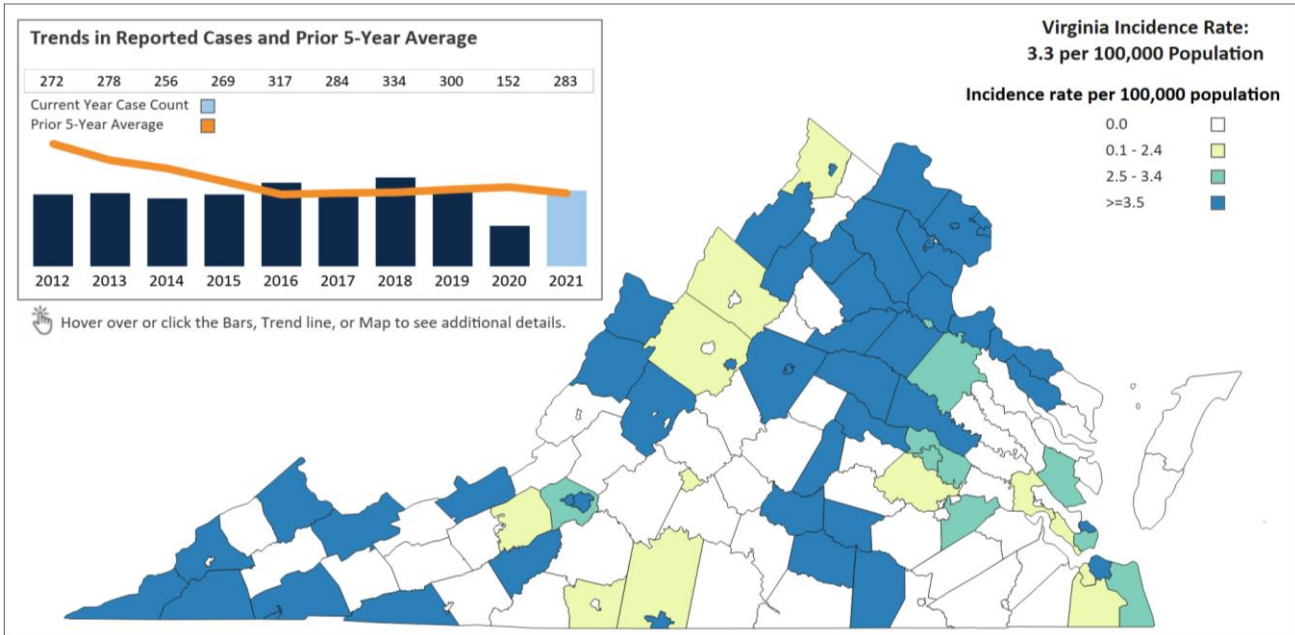
Sex, 2021



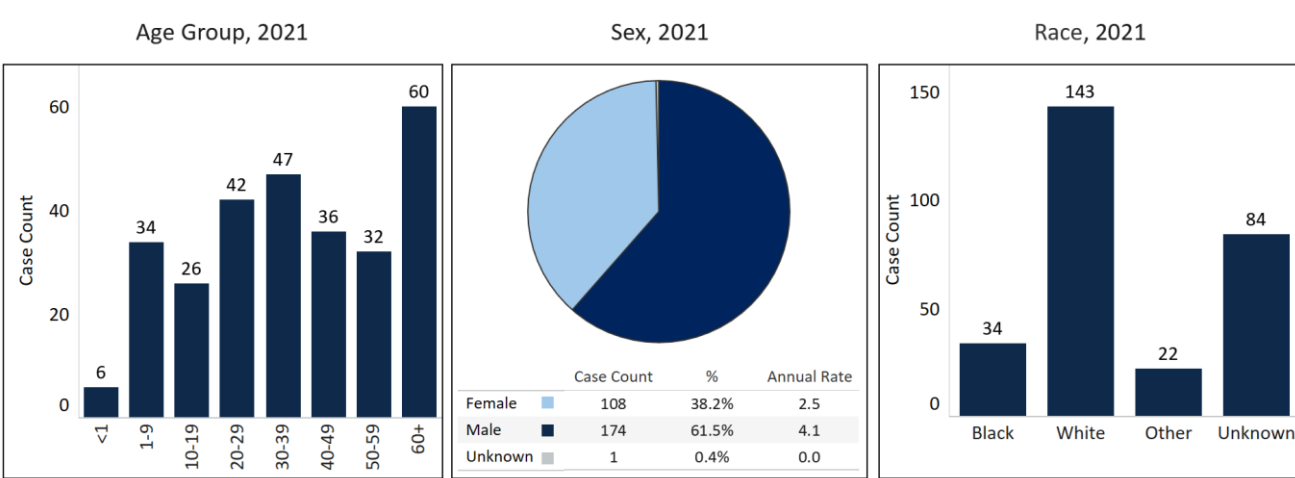
Race, 2021



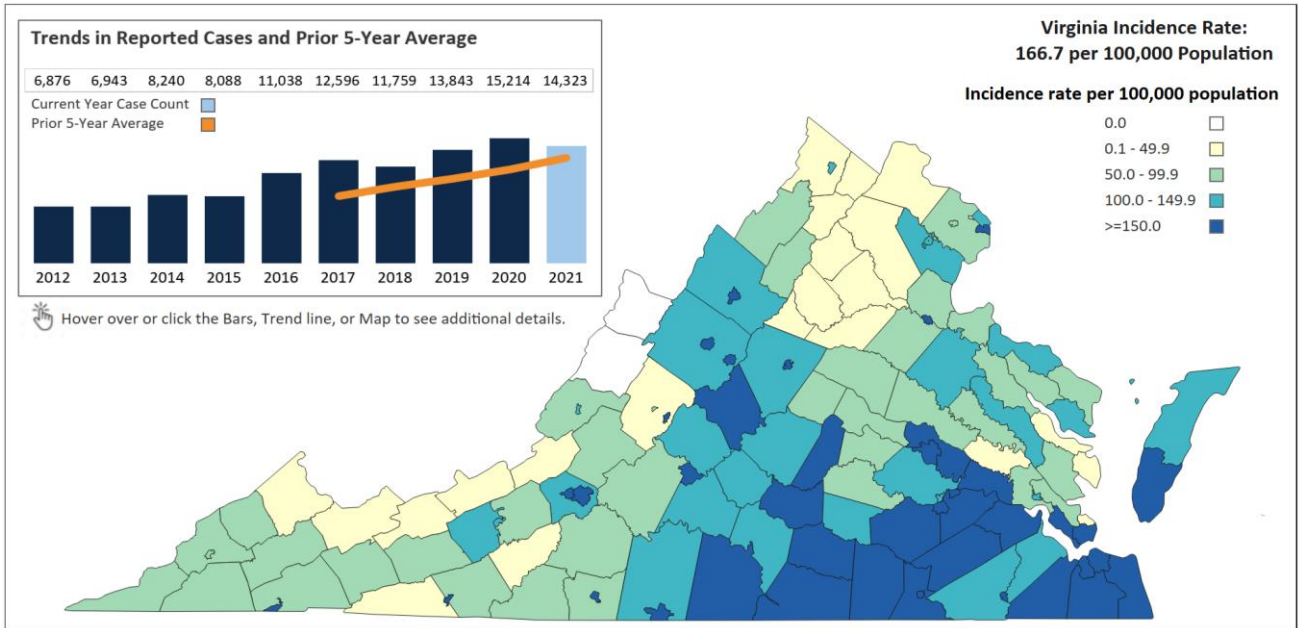
Giardiasis



Giardiasis is a diarrheal illness caused by the microscopic parasite *Giardia*. The parasite can be found in the feces (stool) of infected people and animals, which can further contaminate soil, food, water, or any surface which comes in contact with the feces. People get sick by swallowing contaminated food or water or by putting their hands in their mouths after touching contaminated surfaces. Anyone can get giardiasis, but it tends to occur more often in international travelers, and persons who drink improperly treated surface water (such as hikers drinking from a stream or people swallowing water while swimming in a river or lake). In 2021, 283 cases of giardiasis were reported in Virginia with a statewide incidence rate of 3.3 per 100,000 population. Sixty-one percent of cases in 2021 reported their sex as male. Transmission of giardiasis can be reduced through proper hand washing, and avoiding drinking water directly from streams, lakes, springs, or any unknown water source.

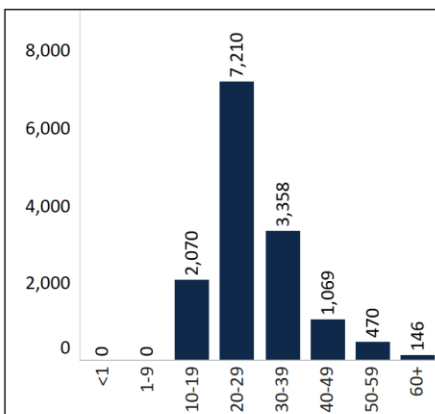


Gonorrhea

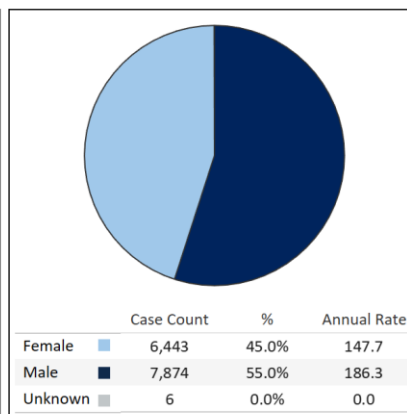


Gonorrhea, caused by the bacterium *Neisseria gonorrhoeae*, is the second most commonly reported bacterial disease. It is primarily transmitted through sexual contact but can also be passed perinatally from mother to baby during childbirth. Many infections are asymptomatic; however, symptoms may occur within 7 to 30 days of exposure. Symptoms include painful urination, penile/vaginal discharge, intermenstrual bleeding, painful bowel movements, and dyspareunia. Among women, untreated gonococcal infections can result in pelvic inflammatory disease (PID), tubal scarring, and infertility or ectopic pregnancy. Gonorrhea is curable, but proper antibiotic treatment has become more difficult over time due to increases in drug-resistant strains. Populations at a higher risk for gonorrhea include males, non-Hispanic black persons, and those 20-39 years of age. In 2021, a total of 14,323 cases were reported in Virginia, representing a 14% increase over the last 5 years.

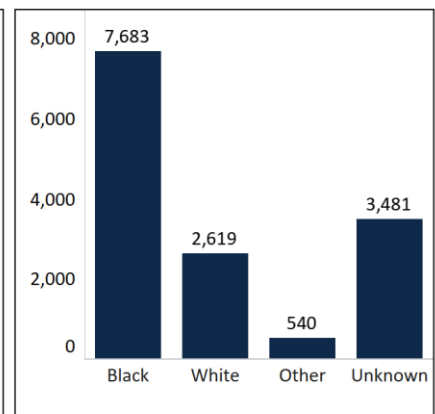
Age Group, 2021



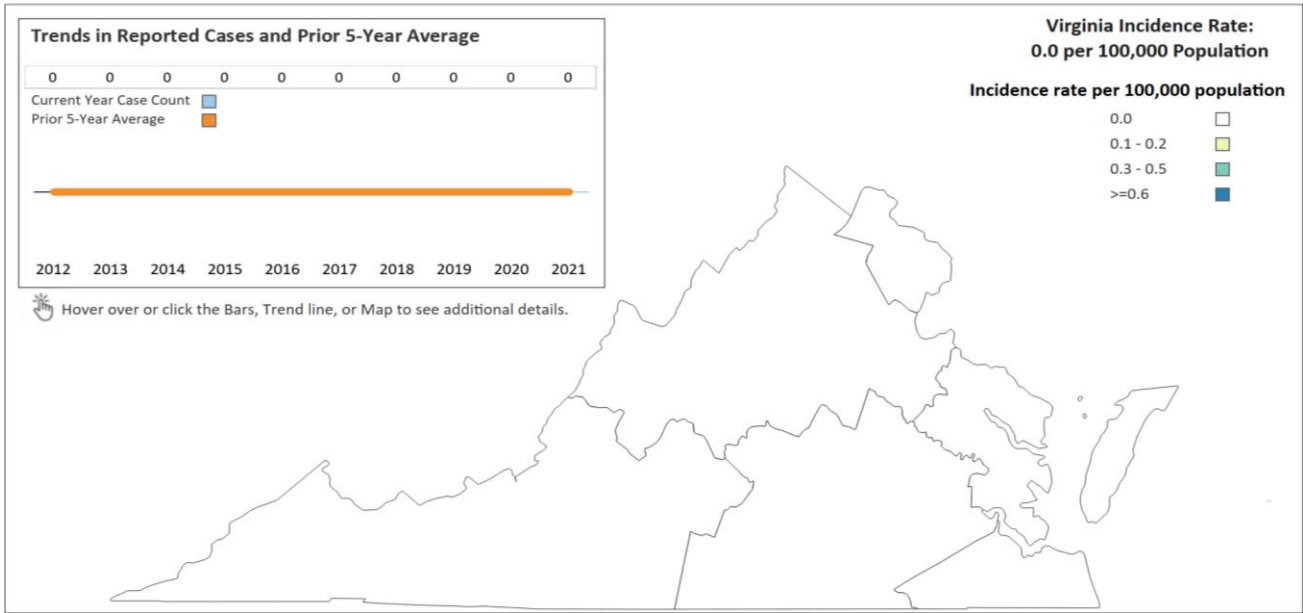
Sex, 2021



Race, 2021

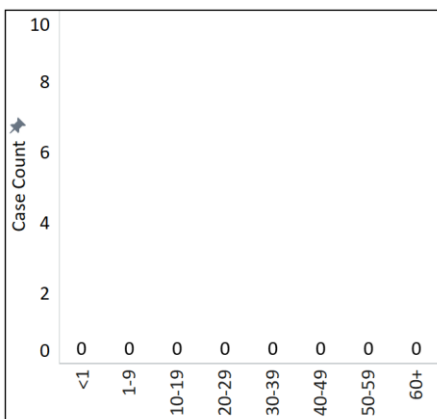


Granuloma inguinale



Granuloma inguinale (donovanosis) is a chronic, relapsing, granulomatous anogenital infection caused by the bacterium *Klebsiella granulomatis* (formerly known as *Calymmatobacterium granulomatis*). Granuloma inguinale occurs sporadically in some tropical and developing countries but is rare in other parts of the world. It can be transmitted through sexual contact with open sores. Usually, symptoms occur one to twelve weeks after exposure. Clinically, the disease is characterized by painless, slowly progressive nodules that break down into shallow, sharply demarcated ulcers. Lesions may occur on the skin, genitalia, or perineal areas and slowly spread to the lower abdomen and thighs. Treatment has been reported to halt the progression of lesions. Granuloma inguinale became nationally notifiable in 1942, and the case definition has remained the same since 1990. In 2021, there were no reported cases of granuloma inguinale in Virginia. The last reported case occurred in 2001.

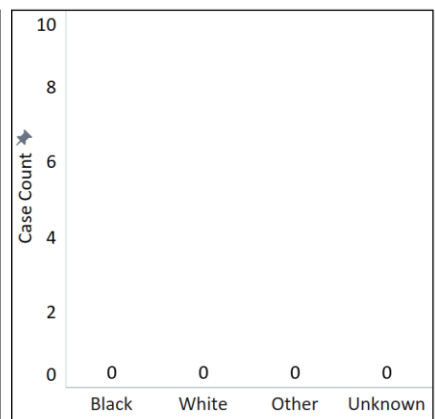
Age Group, 2021



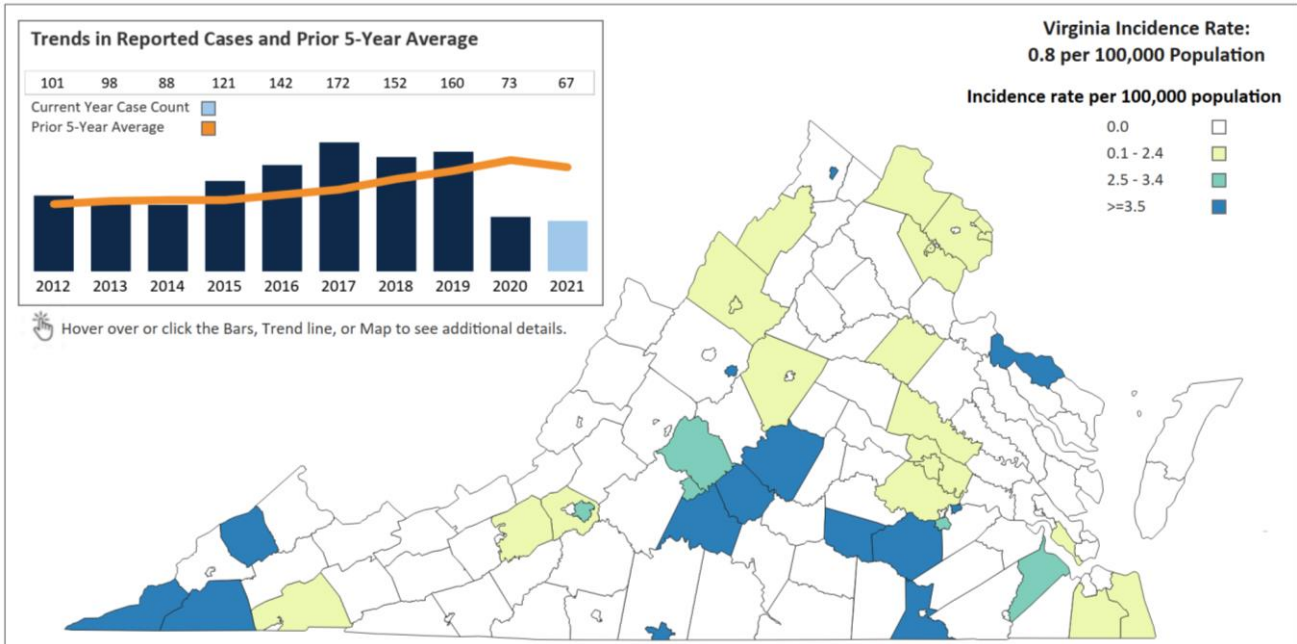
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

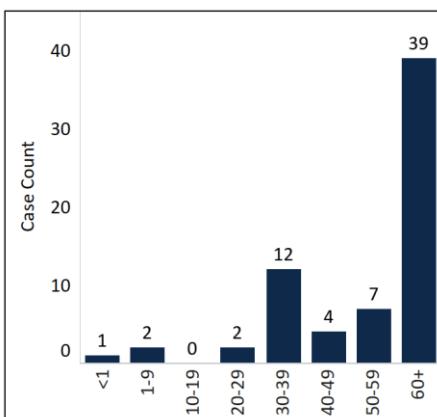


Haemophilus influenzae

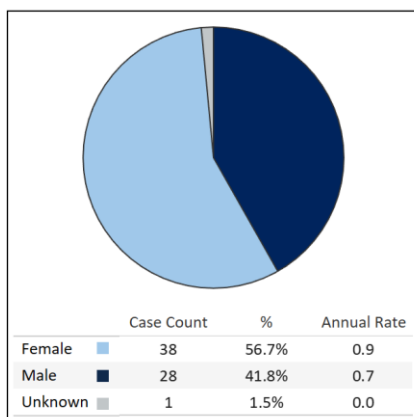


Haemophilus influenzae is a type of bacteria commonly found in the nose and throat. The bacteria are transmitted through respiratory droplets and can invade the body to cause serious infections including pneumonia and meningitis. Symptoms of meningitis may include fever, headache, neck stiffness, vomiting, and nausea. Pneumonia symptoms may include shortness of breath, fever, chest pain, and cough. *Haemophilus influenzae* type B (Hib) was once the leading cause of bacterial meningitis among young children. Since 1991, cases in children under 5 years of age have decreased 99% due to widespread use of the Hib vaccine. In 2015, the case definition was revised to expand laboratory criteria for confirmed cases. Virginia reported an increase in *Haemophilus influenzae* cases in 2017 and 2019 due to outbreaks in long-term care facilities.

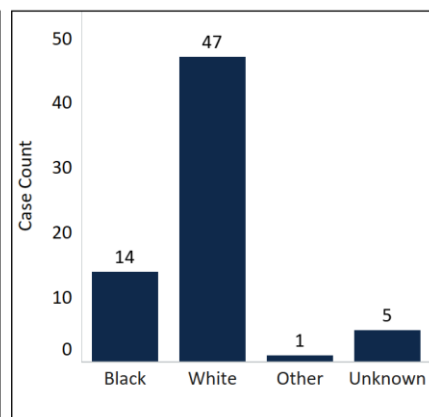
Age Group, 2021



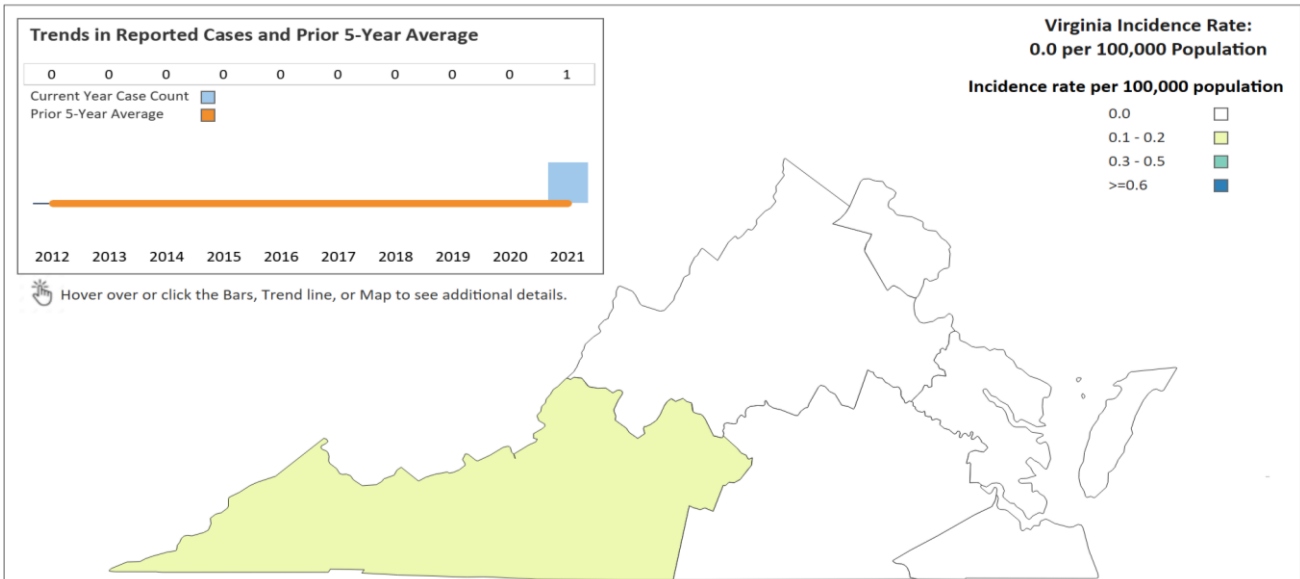
Sex, 2021



Race, 2021

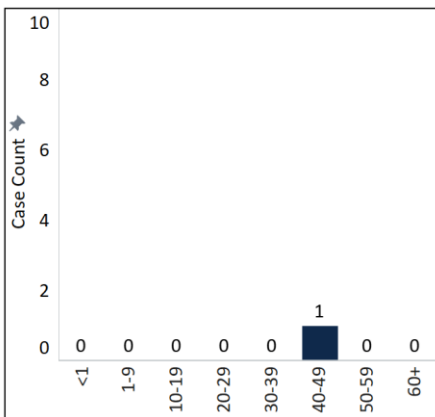


Hantavirus Pulmonary Syndrome

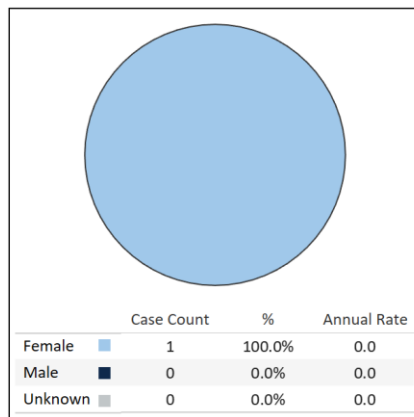


Hantaviruses are a family of viruses that are mainly spread by rodents and can cause varied disease syndromes in people worldwide. Infection with any hantavirus can produce hantavirus disease in people. Hantaviruses in the Americas are known as “New World” hantaviruses and may cause hantavirus pulmonary syndrome (HPS). Early symptoms include fever and muscle pain, gastrointestinal complaints, headaches, and dizziness. These symptoms may be accompanied by or followed by an abrupt onset of respiratory distress and decreased blood pressure, which can be fatal. Hantavirus infections can be prevented by excluding rodents from houses and other buildings. Protective measures include disinfecting rodent-contaminated areas with a spray disinfectant solution prior to cleaning. Contaminated areas should be cleaned with a wet mop and not be vacuumed or swept to decrease the likelihood of creating an aerosol containing the virus. Virginia reported one case of Hantavirus in 2021.

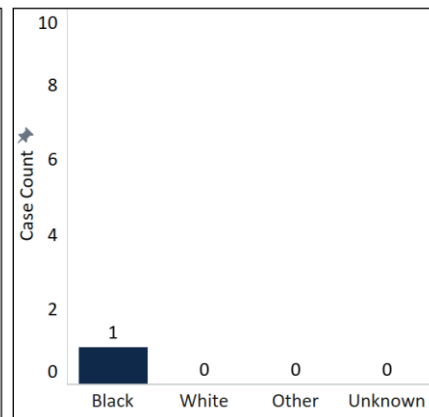
Age Group, 2021



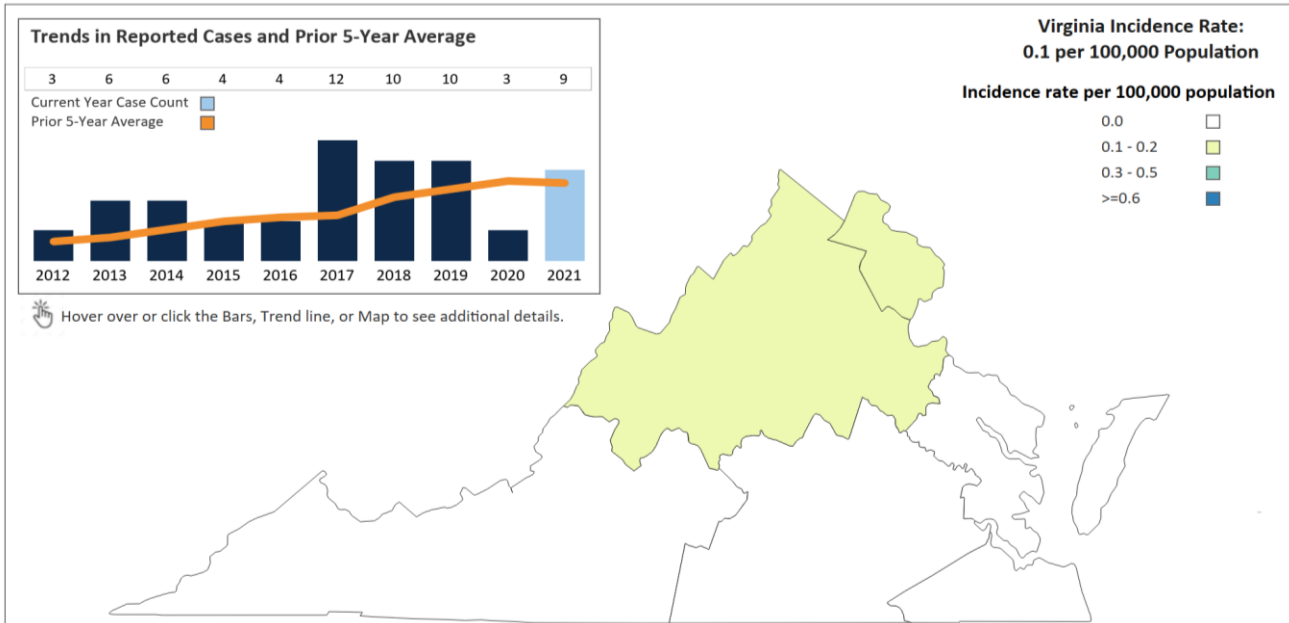
Sex, 2021



Race, 2021

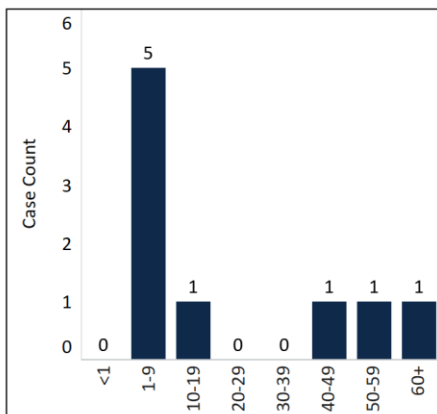


Hemolytic Uremic Syndrome

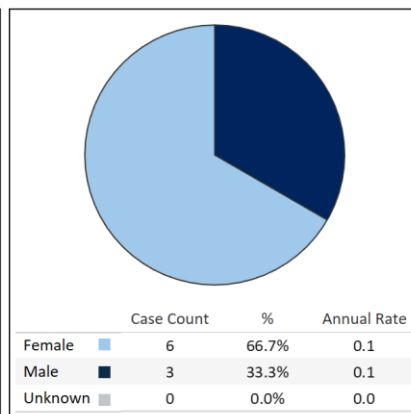


Hemolytic Uremic Syndrome (HUS) is a serious disease that affects the kidneys and blood clotting system, which can cause the sudden development of kidney failure and damage to other organs. Most cases of HUS occur as a rare complication of infection with a diarrheal illness caused by a toxin-producing bacterium such as E. coli. People become infected with E. coli by touching contaminated surfaces and then putting their hands in their mouths, being in contact with cattle and other farm animals, or by eating or drinking contaminated food or water. Early symptoms of HUS include decreased urine output, diarrhea, and feeling slow and tired (lethargy). Anyone can get HUS, but it is more common in children than adults, especially children less than five years of age. During 2021, 9 cases of HUS were reported in Virginia, which represented an 11.6% increase over the previous 5-year average. Children ages one to nine represented 56% of all cases reported.

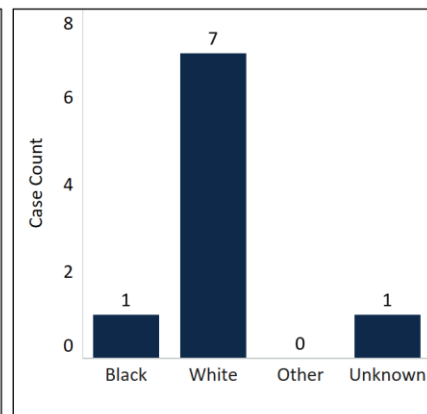
Age Group, 2021



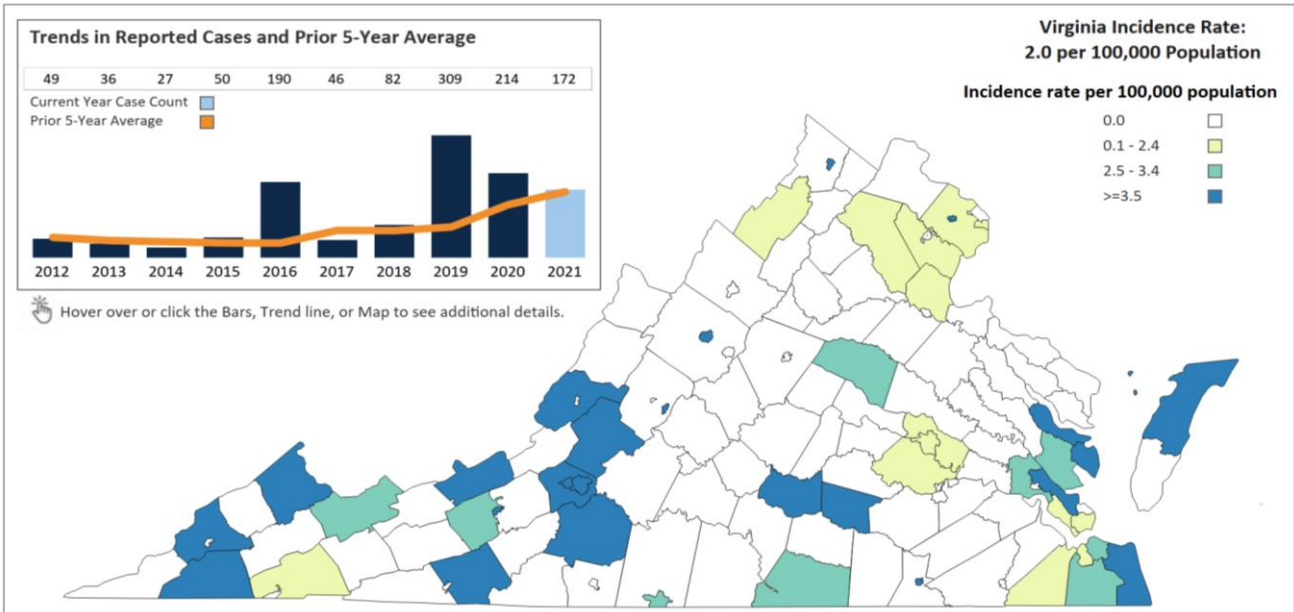
Sex, 2021



Race, 2021

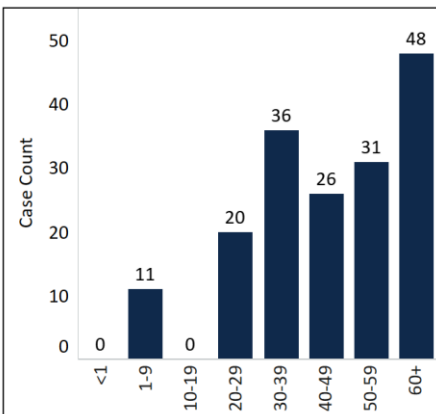


Hepatitis A

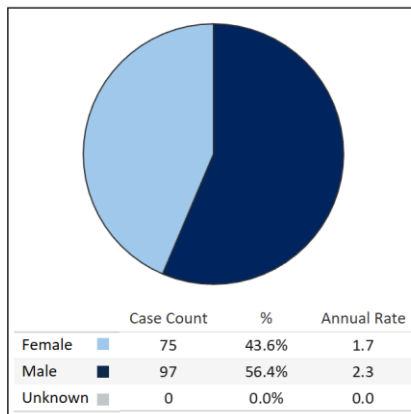


Acute Hepatitis A is contagious liver disease caused by infection with the hepatitis A virus (HAV). Hepatitis A ranges in severity from a mild disease lasting several weeks to a severe disease lasting several months. HAV is found in the feces of infected people, whose feces can contaminate surfaces, objects, food, or water. HAV is spread by consuming contaminated food or water, or through person to person contact through sexual activities and sharing contaminated needles. An increase in hepatitis A in many states across the country was identified in 2016 among adults of high-risk groups. Virginia was considered an "outbreak state" in 2019 and has been experiencing an increased number of cases statewide since. In 2021, 172 cases of hepatitis A were reported in Virginia, a 20% decrease from 2020. The best way to prevent hepatitis A is to get vaccinated, and wash hands with soap and water after using the bathroom, changing diapers, and before preparing and eating food.

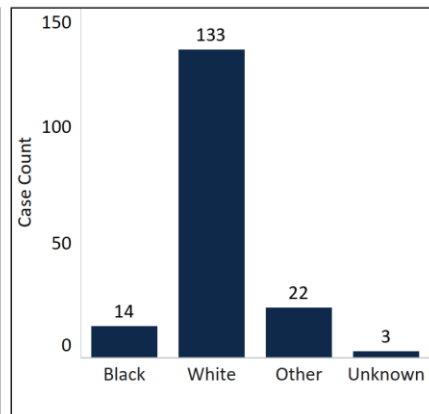
Age Group, 2021



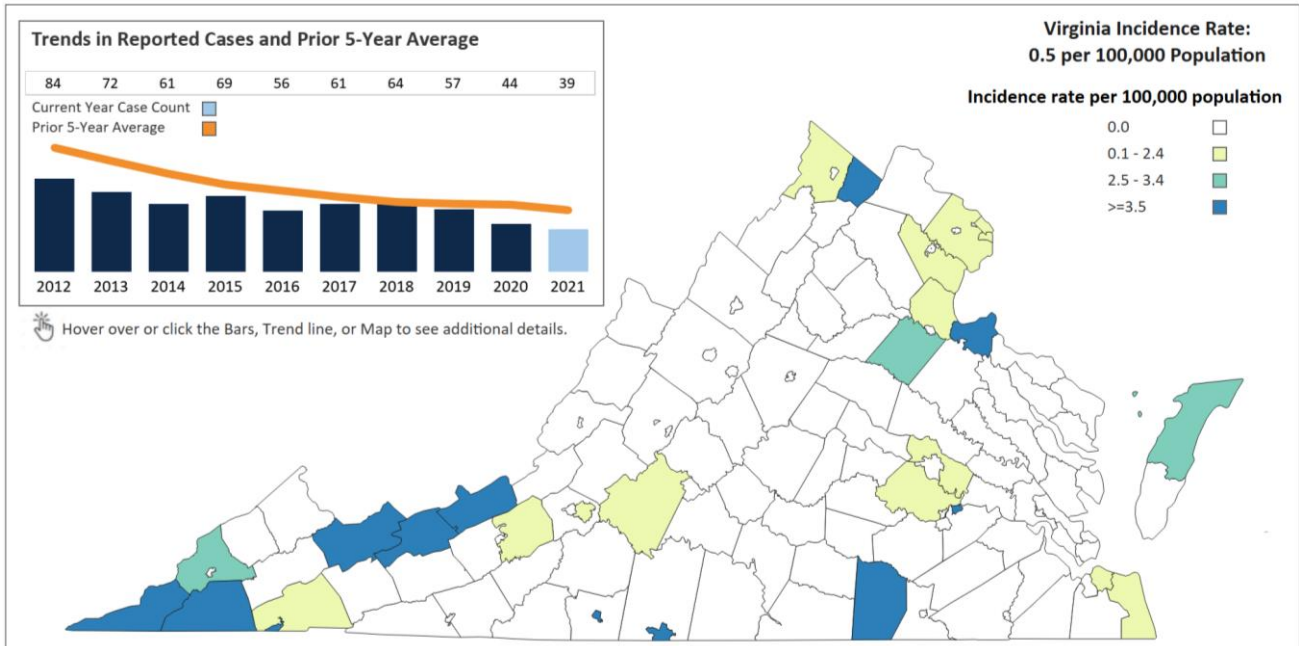
Sex, 2021



Race, 2021

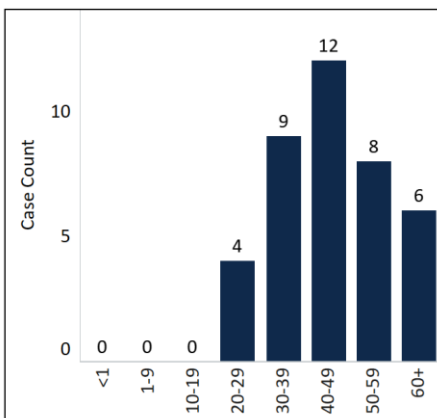


Hepatitis B, Acute

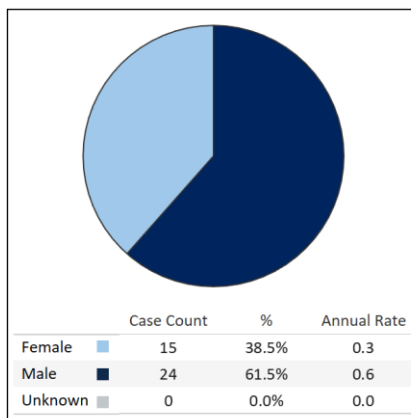


Hepatitis B virus (HBV) is a hepadnavirus that can cause acute (short-term) or chronic (long-term) infection. The acute hepatitis B case definition was last revised in 2012. The statistics included in this report represent newly identified, confirmed acute hepatitis B cases. Since 2012, reported cases steadily decreased. In 2021, 39 cases were reported compared to 84 in 2012 (54% decrease). The reduction of acute hepatitis B cases over the past decade is attributed to ongoing, widespread HBV vaccination, especially among children. Further decreases since 2020 may also be attributed to healthcare service disruptions during the COVID-19 pandemic. In 2021, 39 newly identified acute hepatitis B cases were reported, representing an 11% decrease compared to 2020. No outbreaks associated with HBV were reported in 2021.

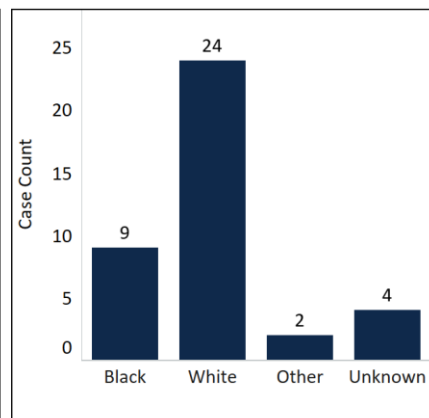
Age Group, 2021



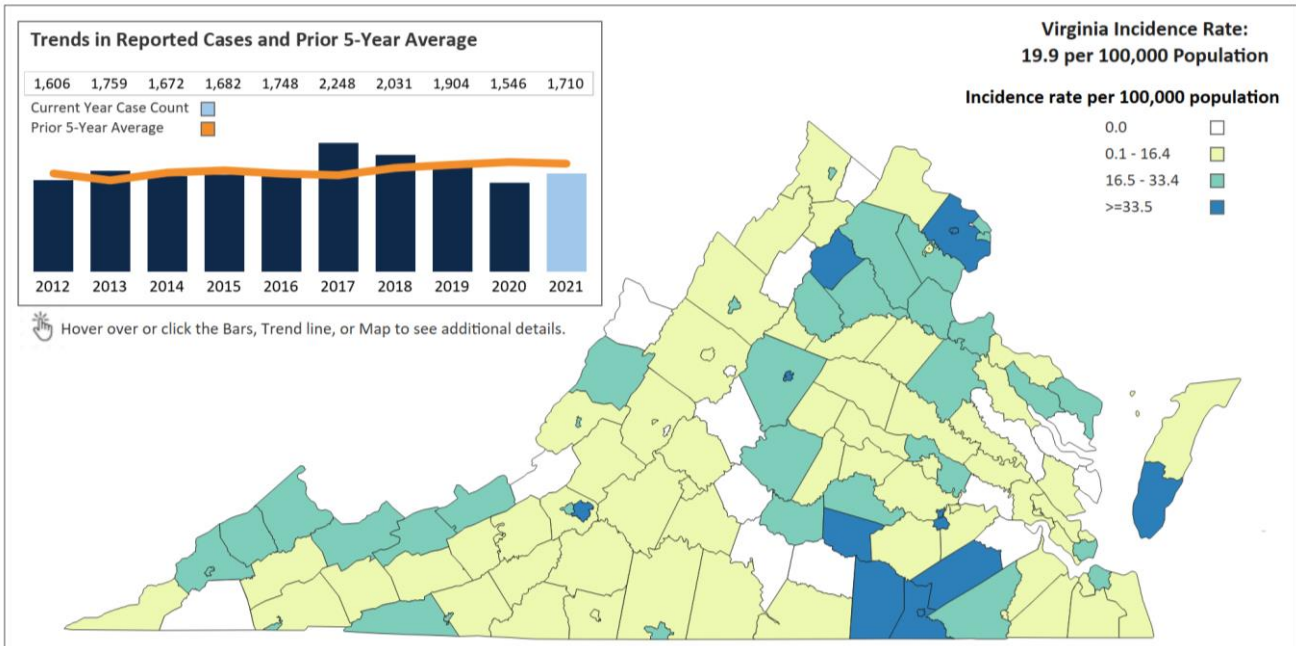
Sex, 2021



Race, 2021

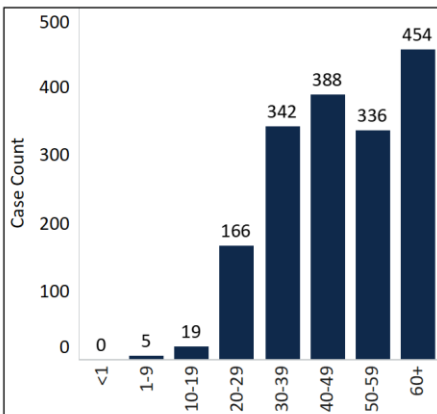


Hepatitis B, Chronic

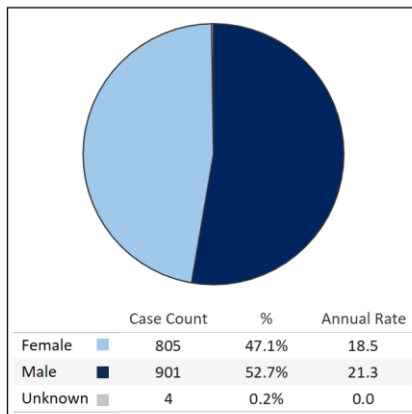


Hepatitis B virus (HBV) is a hepadnavirus that can cause acute (short-term) or chronic (long-term) infection. The chronic hepatitis B case definition was revised in 2012. This report represents newly identified probable and confirmed chronic hepatitis B cases in Virginia. In 2020, 1,551 cases were reported which represented a 20% decrease compared to 2019. This decline in cases was likely attributed to disruptions in healthcare services during the COVID-19 pandemic. In 2021, 1,714 newly identified chronic hepatitis B cases were reported, representing a 11% increase compared to 2020 and signaling a return to almost baseline levels observed prior to the COVID-19 pandemic. No outbreaks associated with HBV were reported in 2021.

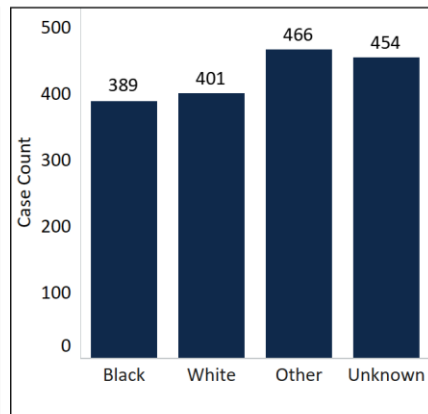
Age Group, 2021



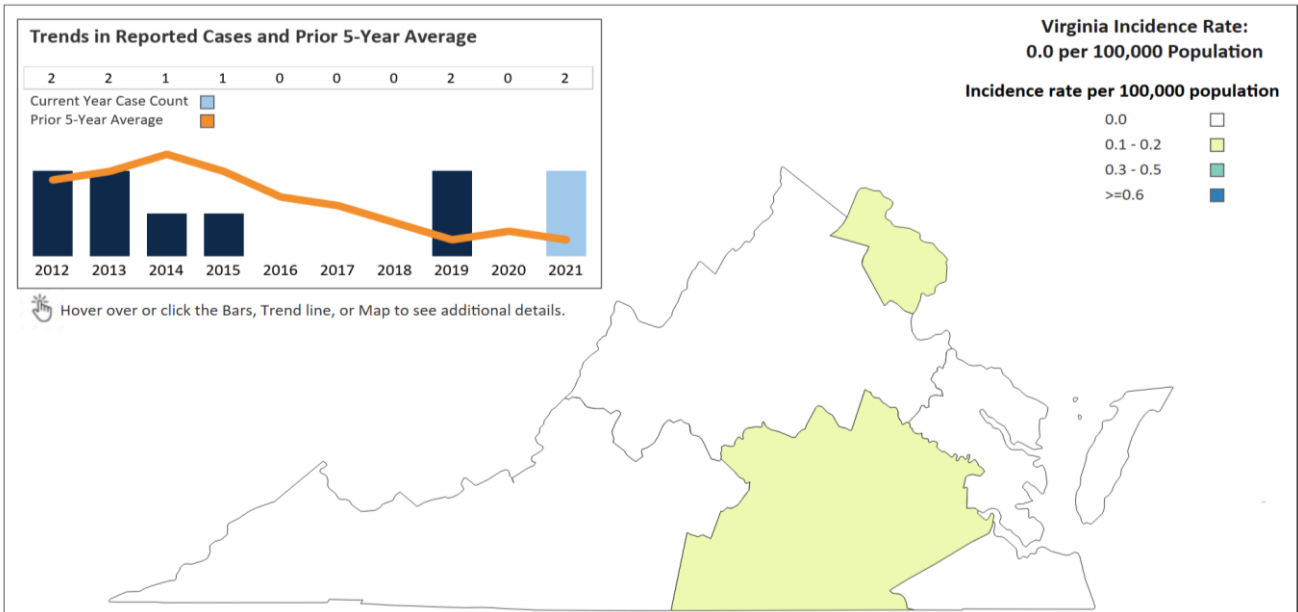
Sex, 2021



Race, 2021

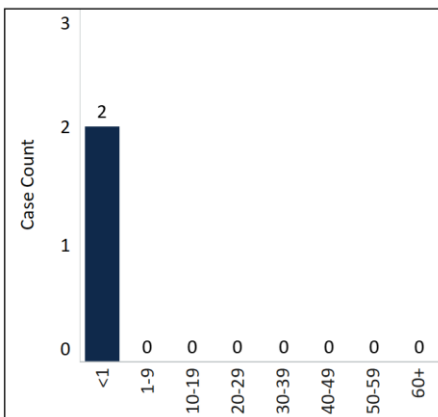


Hepatitis B, Perinatal

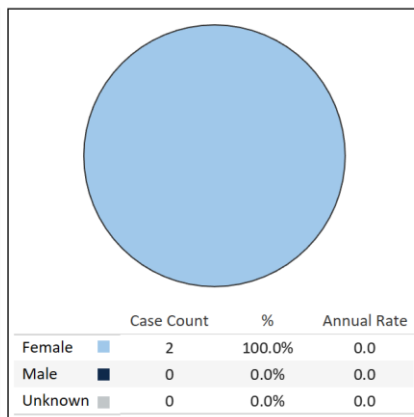


Perinatal hepatitis B (HBV) transmission can occur at birth when a pregnant HBV-infected woman delivers her infant. Transmission is preventable by identifying HBV-infected pregnant women and providing post exposure prophylaxis (PEP), consisting of hepatitis B immune globulin (HBIG) and hepatitis B (HepB) vaccine to their infants within 12 hours of birth. Without administration of PEP, at birth, approximately 40% of infants born to HBV-infected mothers in the United States will develop chronic HBV infection. 0.7%-1.1% of infants will develop infection when PEP is given within 12 hours of birth and the HepB vaccine series is completed. Infants at greatest risk to infection, even when PEP is given, are born to mothers with high viral loads. In Virginia, an average of 217 infants are identified annually as being born to HBV-infected women. In 2021, 2 cases of perinatal hepatitis B cases were identified, and 100% of these cases received the recommended PEP and completed the HepB vaccine series.

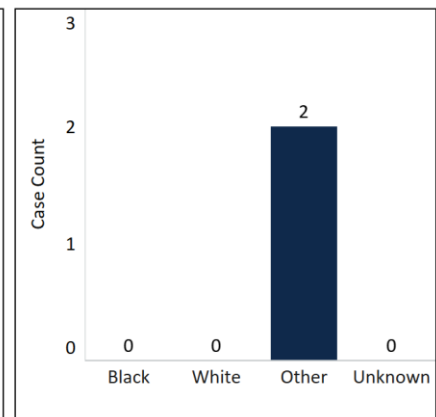
Age Group, 2021



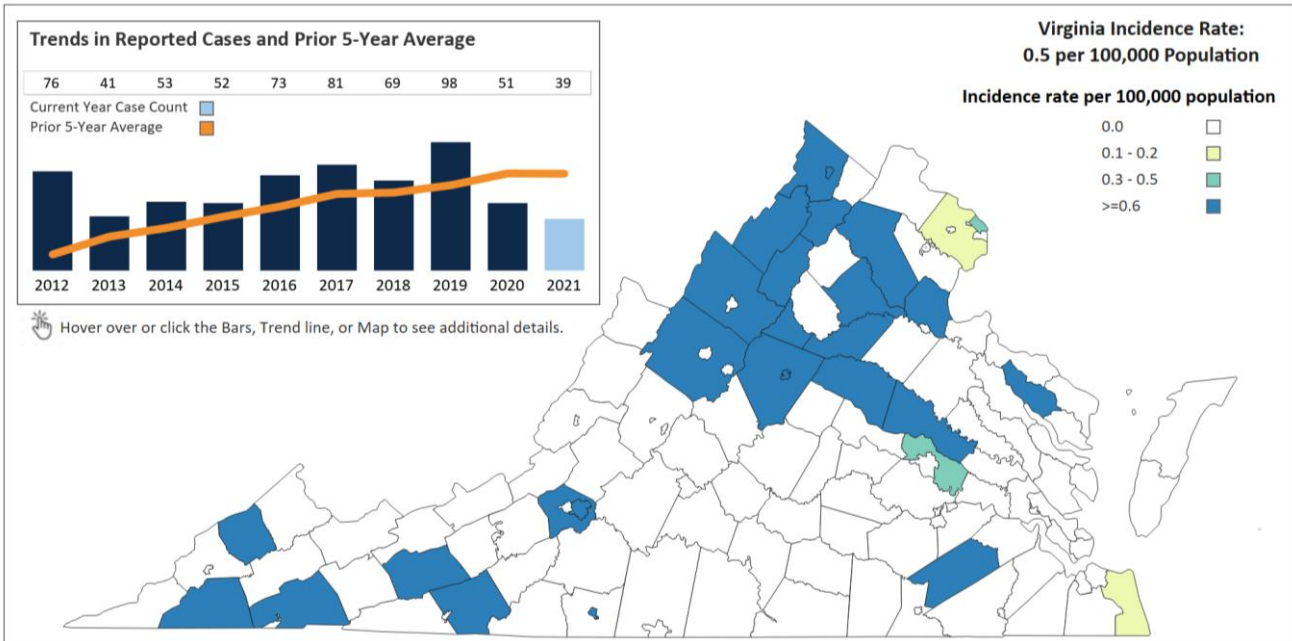
Sex, 2021



Race, 2021

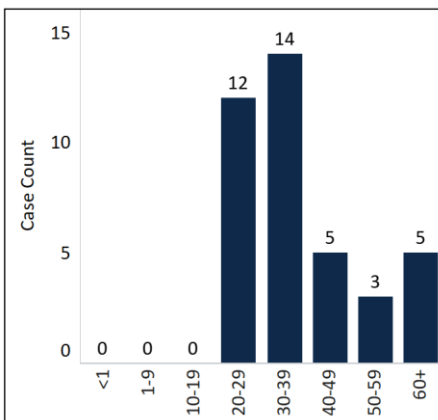


Hepatitis C, Acute

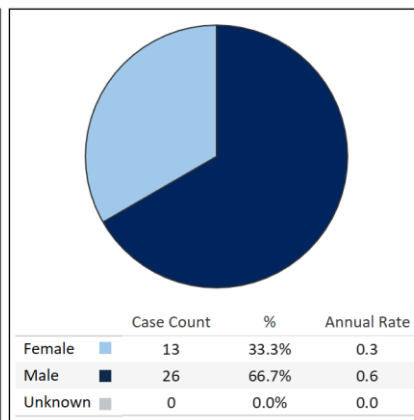


Hepatitis C virus (HCV) is the most common blood-borne infection in the United States and can cause acute (short-term) or chronic (long-term) infection. The acute hepatitis C case definition was last updated in 2020. The statistics in this report represent newly identified probable and confirmed acute hepatitis C cases. The number of newly identified cases increased substantially from 41 in 2013 to 98 in 2019. In 2020, 51 cases were reported; a 48% decrease compared to 2019. This decline is likely attributed, in part, to disruptions in healthcare services during the COVID-19 pandemic. In 2021, 39 newly identified acute hepatitis C cases were reported, representing a 24% decrease compared to 2020. No outbreaks associated with HCV were reported in 2021.

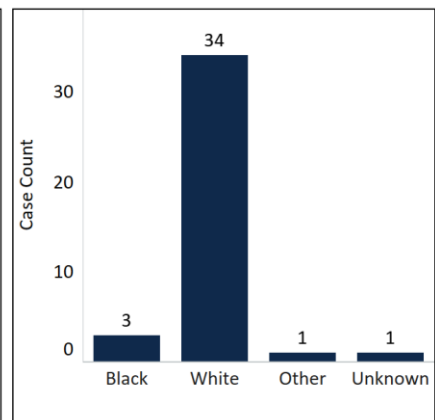
Age Group, 2021



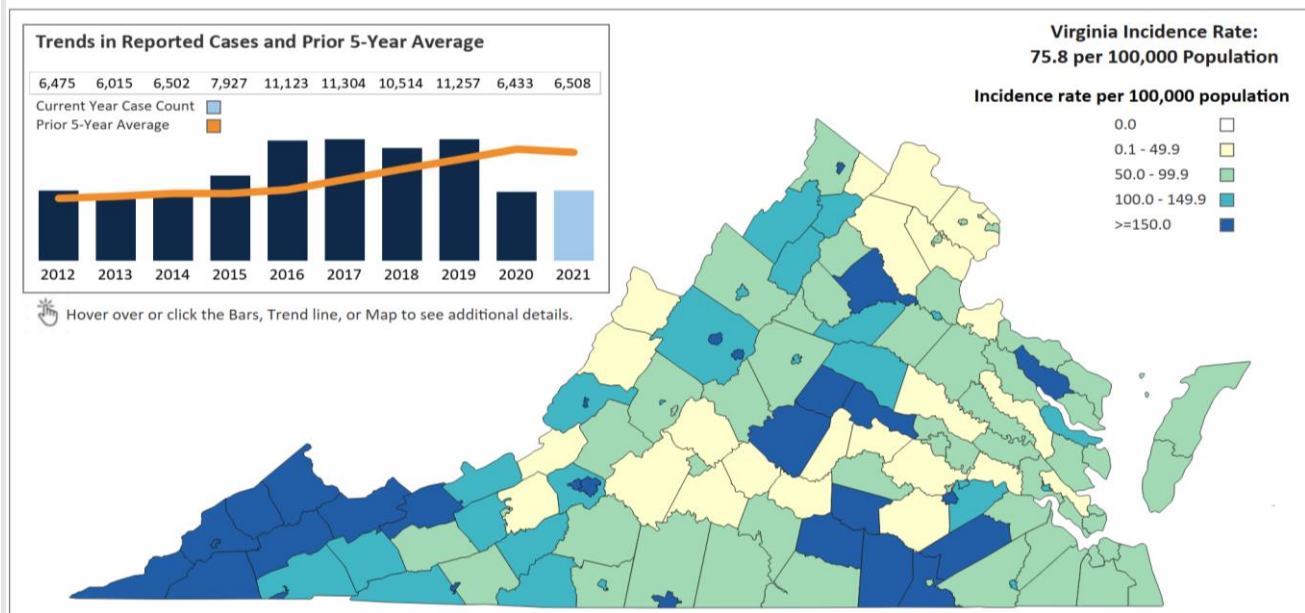
Sex, 2021



Race, 2021

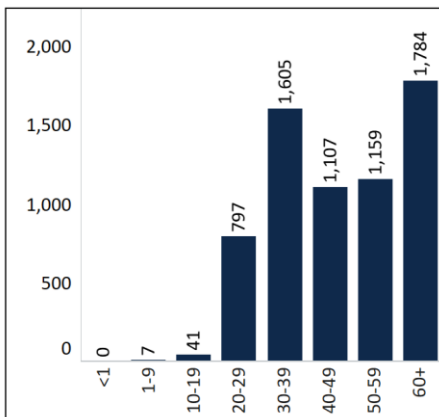


Hepatitis C, Chronic

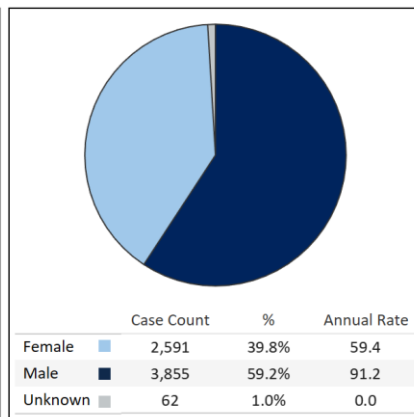


Hepatitis C virus (HCV) is the most common blood-borne infection in the United States and can cause acute (short-term) or chronic (long-term) infection. The chronic hepatitis C case definition was last updated in 2020. The statistics included in this report represent newly identified probable and confirmed chronic hepatitis C cases. The number of newly identified cases increased substantially from 6,016 in 2013 to 11,278 in 2019. In 2020, 6,537 cases were reported which represented a 42% decrease compared to 2019. This decline in cases is likely attributed, in part, to disruptions in healthcare services during the COVID-19 pandemic and more likely, because of a case definition change in 2020 which led to sharp reductions in the number of probable hepatitis C cases. In 2021, 6,631 newly identified chronic hepatitis C cases were reported, representing a 1% increase compared to 2020. No outbreaks associated with HCV were reported in 2021.

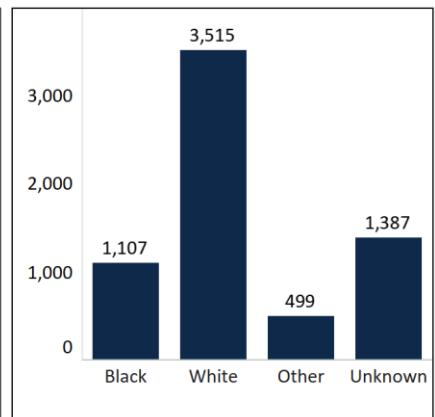
Age Group, 2021



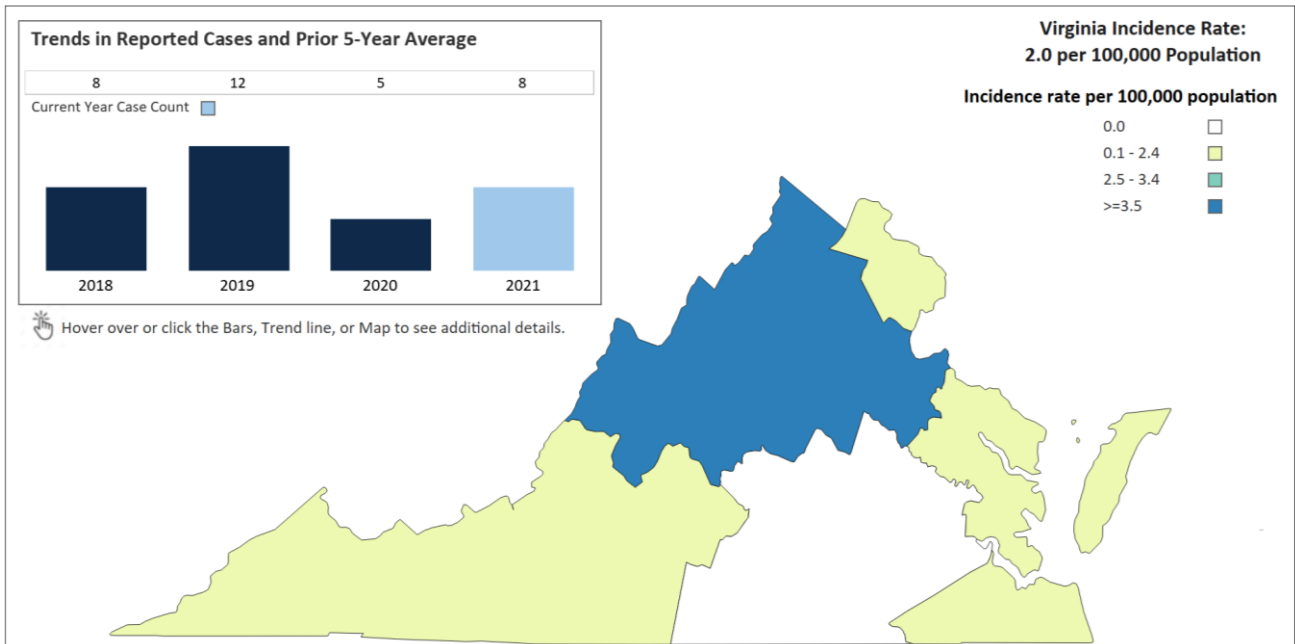
Sex, 2021



Race, 2021

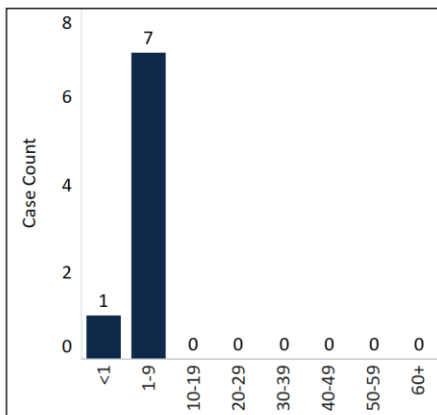


Hepatitis C, Perinatal

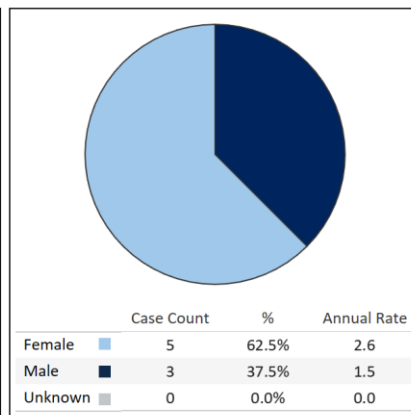


Hepatitis C virus (HCV) is the most common blood-borne infection in the United States and can cause acute (short-term) or chronic (long-term) infection. Perinatal hepatitis C became reportable in Virginia in 2018. The statistics included in this report represent newly identified confirmed perinatal hepatitis C cases. Infants with a positive HCV RNA nucleic acid test or with a detectable HCV genotype at ≥ 2 months and ≤ 36 months of age, and not known to have been exposed to HCV via a mechanism other than perinatal exposure, are classified as perinatal hepatitis C cases. The number of newly identified cases varies with a high of 12 cases reported in 2019 to a low of 5 cases reported in 2020. In 2021, 8 newly identified perinatal hepatitis C cases were reported, representing a 60% increase compared to 2020. No outbreaks associated with HCV were reported in 2021.

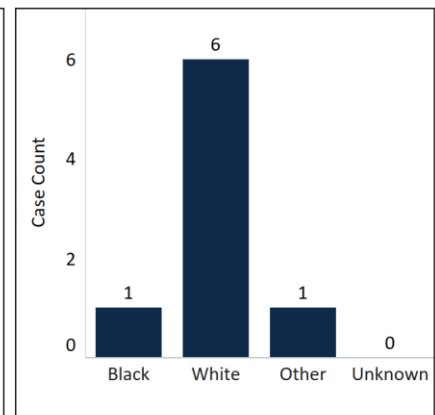
Age Group, 2021



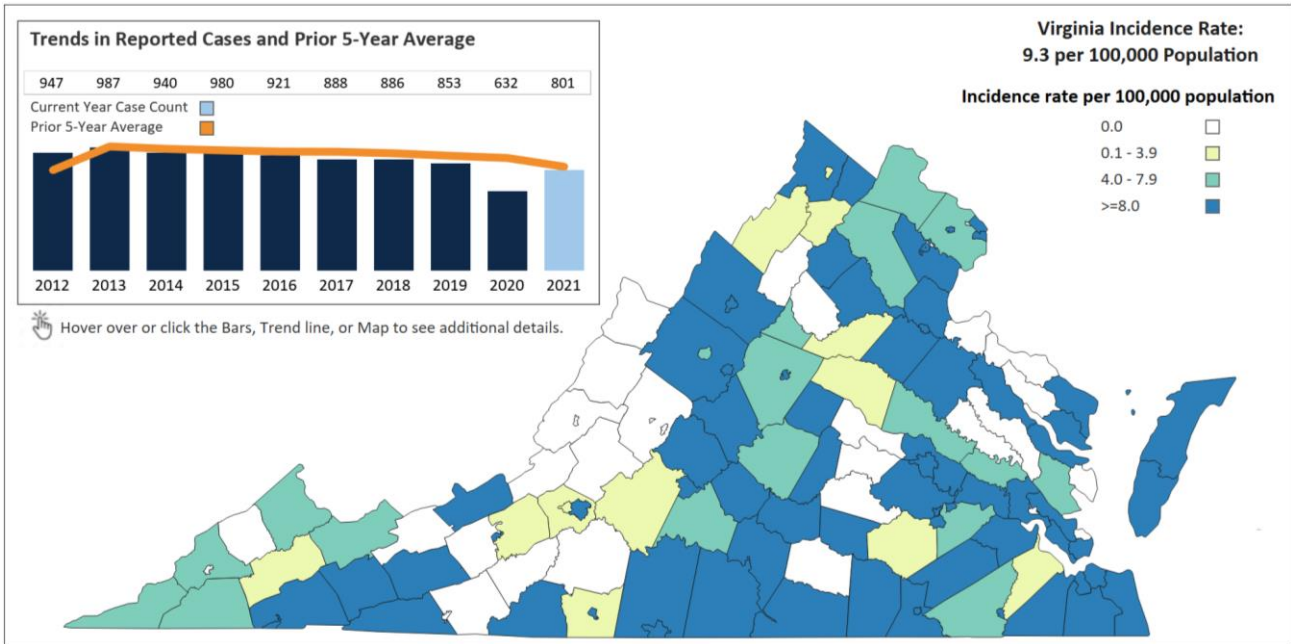
Sex, 2021



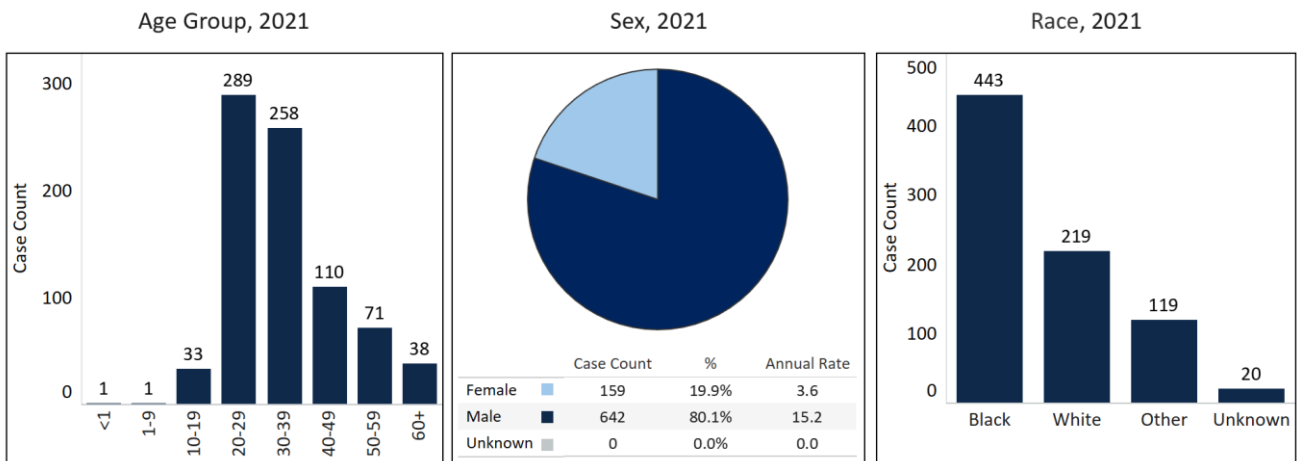
Race, 2021



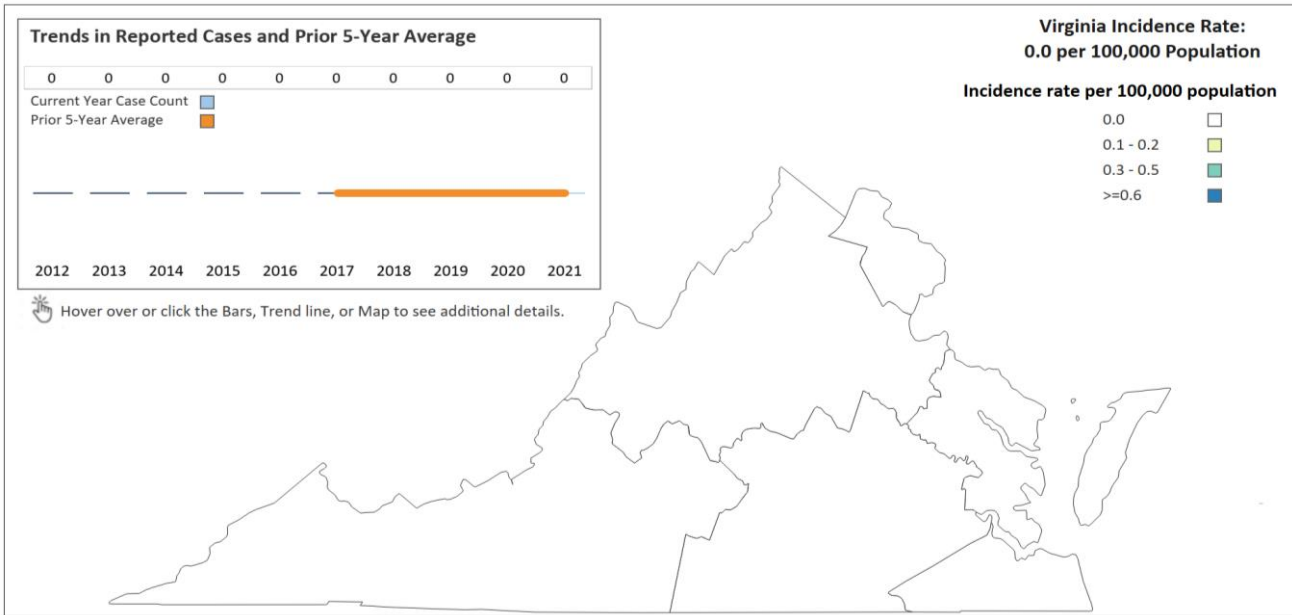
Human immunodeficiency virus (HIV)



Human immunodeficiency virus, more commonly known as HIV, is a preventable virus that attacks the body’s immune system and can lead to acquired immunodeficiency syndrome (AIDS). There is no current cure for HIV, but people who appropriately take their antiretroviral treatment (ART) as prescribed by their physician can become undetectable, making them unable to pass the virus on to others. In 2021, there was a significant increase in cases from 2020, which may be due to a potential return to normal testing numbers and seeking care after the 2020 COVID-19 pandemic. People aged 20-39 had the highest rates of HIV, and 642 men and 159 women were infected in 2021. People who reported Black or African American race were more likely to be infected with HIV than other races.

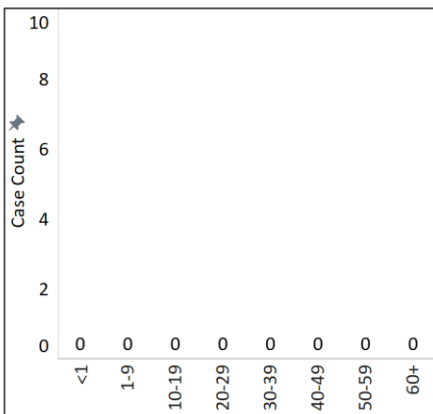


Influenza A, Novel Virus



A novel influenza virus is an influenza A virus (IAV) with a subtype that is different from the flu viruses that usually spread in people (H3N2 and H1N1). Some examples include H7N9 and H5N1. Occasionally, strains of influenza that normally affect birds, pigs, and other animals can infect humans. When flu viruses that normally affect pigs (swine flu viruses) cause infections in humans, these viruses are called variant influenza viruses. Sometimes, human infections with novel or variant flu viruses occur because of the close contact between humans and animals. Other times, the infections occur because of changes in the influenza virus. Human infection with a novel IAV became nationally notifiable in the U.S. in 2007, and the case definition was last updated in 2014. Novel IAVs are of concern because of the potential impact they could have on public health if they gain the ability to spread easily from person to person. The best way to prevent infection is to avoid sources of exposure whenever possible.

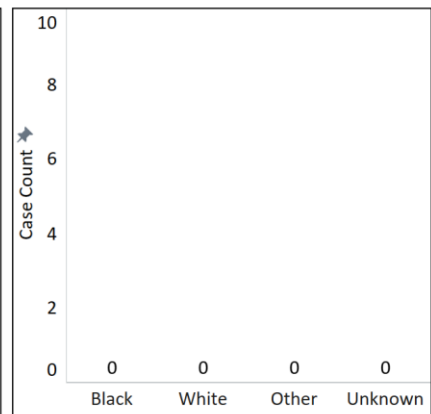
Age Group, 2021



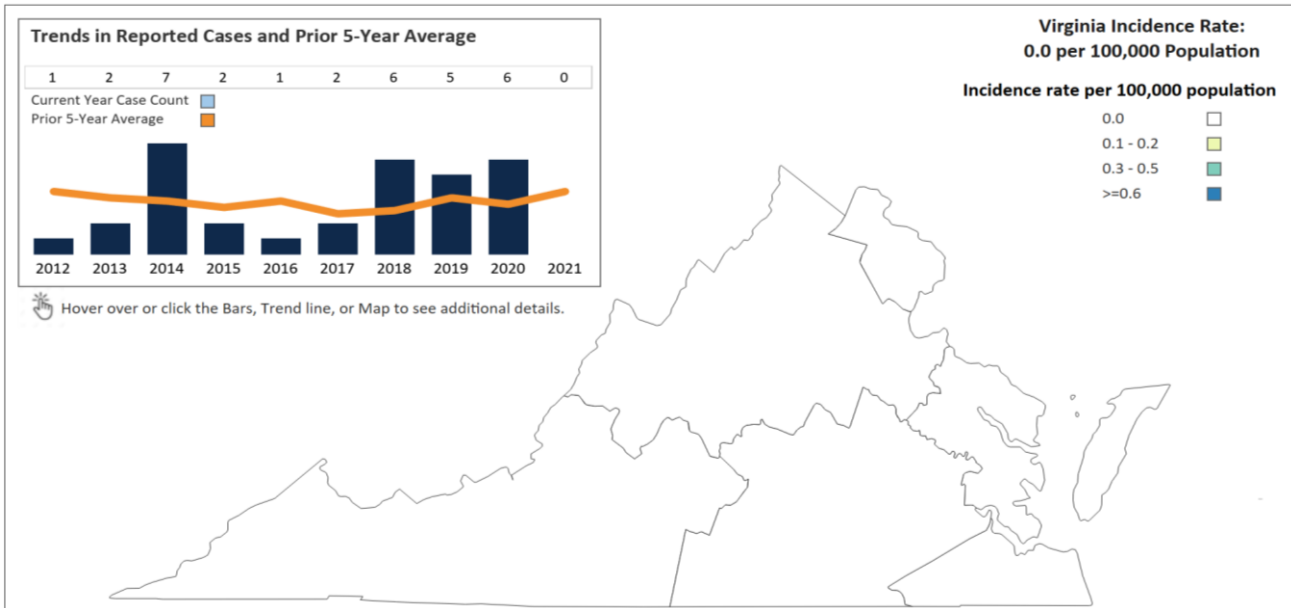
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

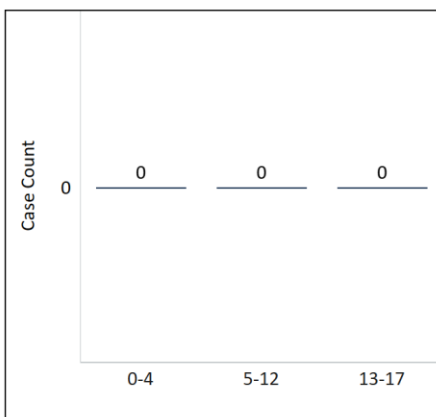


Influenza-Associated Death (less than 18 years of age)



Influenza (“flu”) is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and sometimes the lungs. Flu can cause mild to severe illness and at times can lead to death. On average, about 8% of the U.S. population gets sick from flu each season (October – May). For surveillance purposes, an influenza-associated pediatric death is defined as a death in a person <18 years old, resulting from a clinically compatible illness that was confirmed to be flu, without a period of complete recovery between the illness and death. Virginia has been monitoring flu-associated pediatric deaths since 2003, with reporting required by law in May 2007. Surveillance of flu deaths is one component used to measure the severity and impact of flu illness. While no flu-associated pediatric deaths were reported in 2021, on average, three are reported each year in VA. The best way to reduce risk from seasonal flu and its potentially serious complications is to receive an annual flu vaccine.

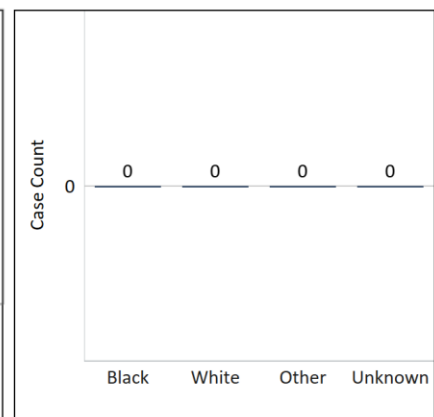
Age Group, 2021



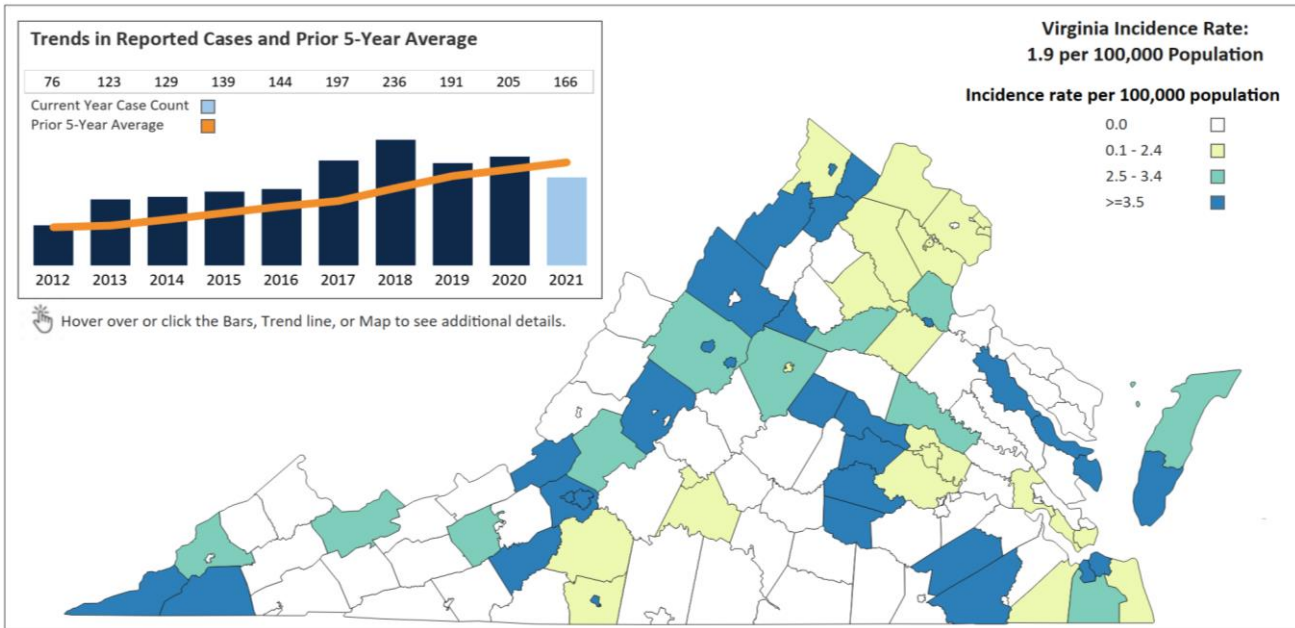
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

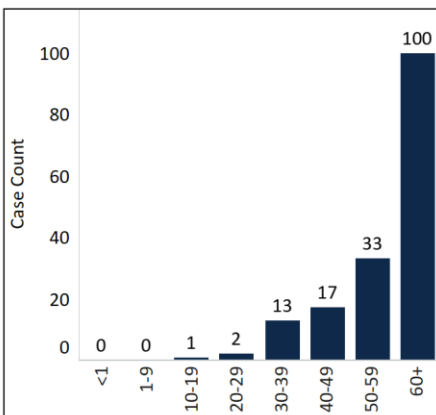


Legionellosis

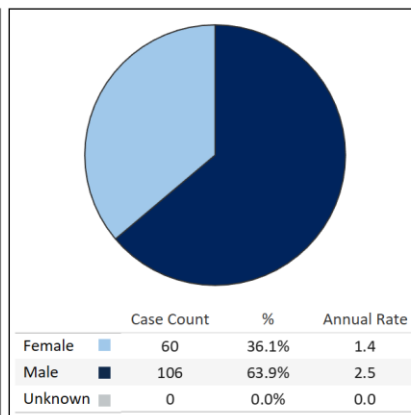


Legionnaires' disease, Pontiac fever, and extrapulmonary legionellosis, collectively known as legionellosis, are bacterial diseases caused by breathing in aerosolized water from a *Legionella* contaminated source. Legionnaires' Disease is the most common and serious of the three and can cause death in about 1 in 10 people. In 2020, the case definition was revised to include all three legionellosis illnesses. Anyone can get legionellosis, but it is more common and severe in older people, those who are immunocompromised, or those with underlying lung disease. In Virginia, the 5-year average for legionellosis has been increasing steadily over the last 10 years. An increasing trend is also being reported nationwide. During 2021, the incidence rate for legionellosis (5.2 per 100,000 population) was highest for people over 60 years of age in Virginia.

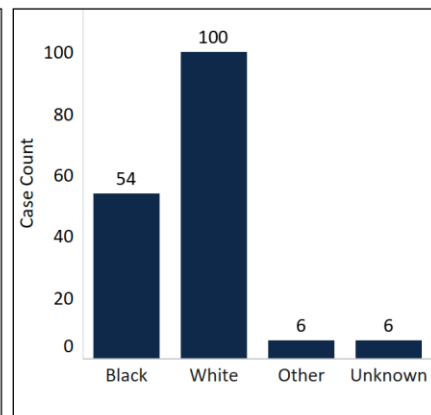
Age Group, 2021



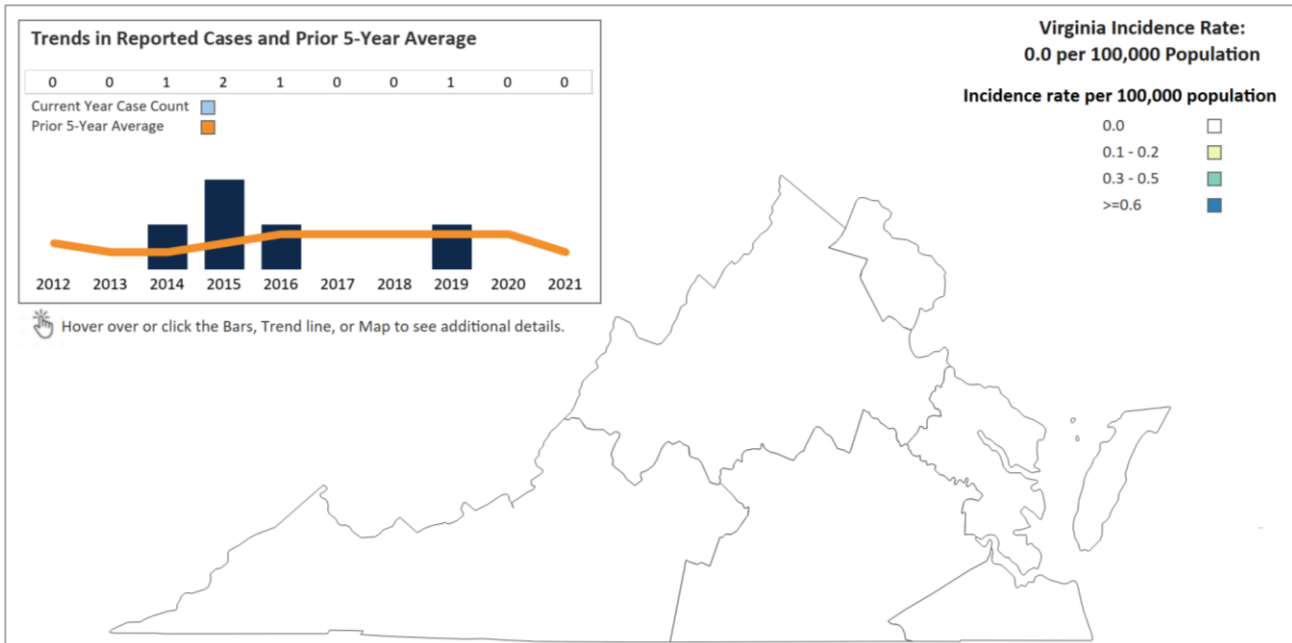
Sex, 2021



Race, 2021

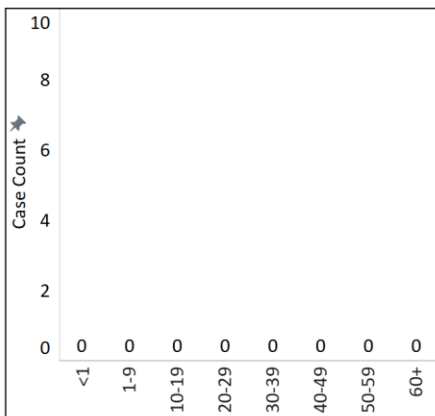


Leprosy/Hansen's Disease



Hansen's disease (also known as leprosy) is an infection caused by slow-growing bacteria called *Mycobacterium leprae*. It can affect the nerves, skin, eyes, and lining of the nose (nasal mucosa). It is not known exactly how Hansen's disease spreads between people. Scientists currently think it may happen when a person with Hansen's disease coughs or sneezes, and a healthy person breathes in the droplets containing the bacteria. However, prolonged, close contact with someone with untreated leprosy over many months is needed to catch the disease. In the southern United States, some armadillos are naturally infected with this bacterium. For general health reasons, avoid contact with armadillos whenever possible. No cases of Hansen's disease were reported in 2021. The last case of Hansen's disease reported in Virginia was in 2019.

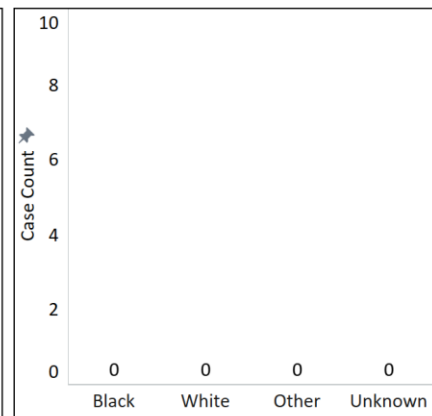
Age Group, 2021



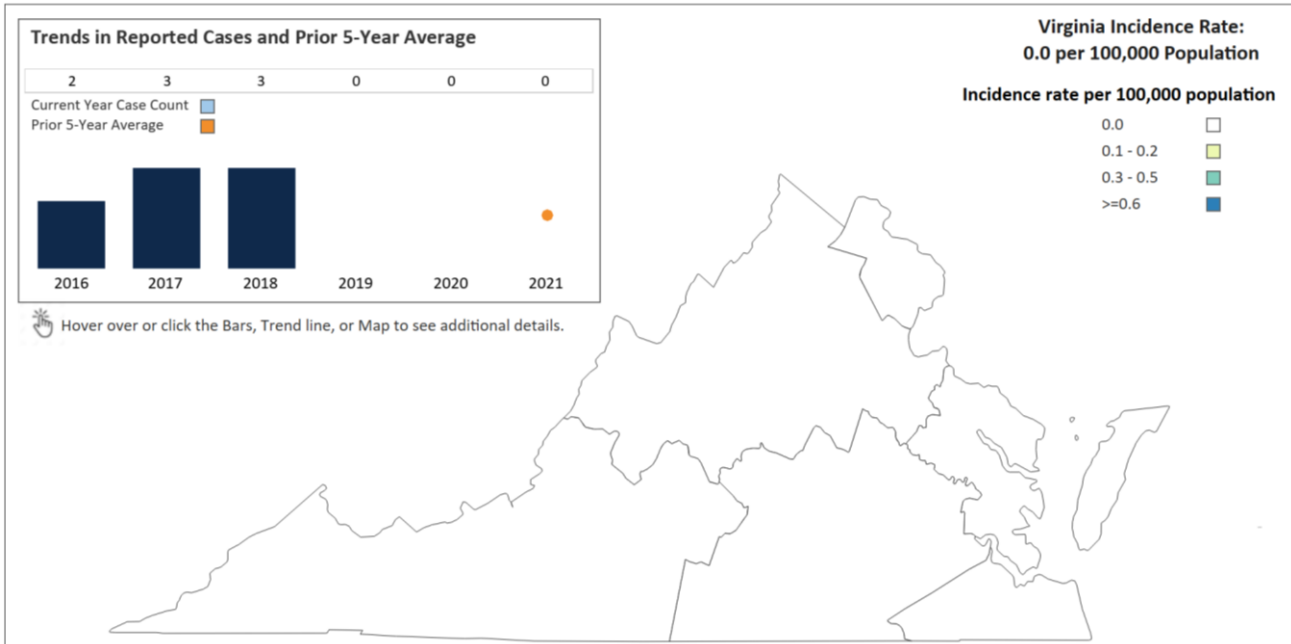
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

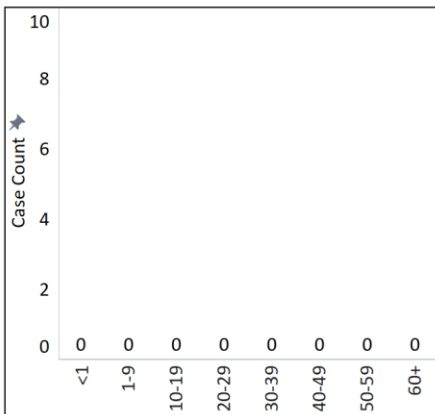


Leptospirosis

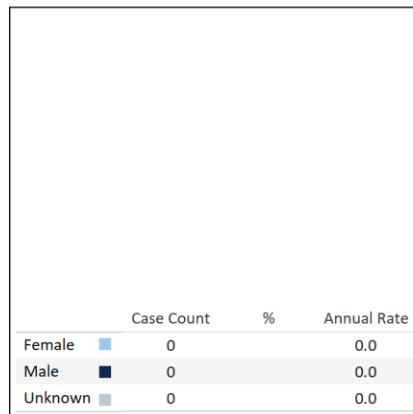


Leptospirosis is a disease that affects humans and animals caused by bacteria *Leptospira*. In humans, it can cause a wide range of symptoms, such as fever, muscle aches, headache, and vomiting, which may be mistaken for other diseases. Some infected persons, however, may have no symptoms at all. People may become infected through contact with urine of infected animals, or water, soil, or food contaminated with the urine of infected animals. The risk of acquiring leptospirosis can be greatly reduced by not swimming or wading in water that might be contaminated with animal urine or eliminating contact with potentially infected animals. Protective clothing or footwear should be worn by those exposed to contaminated water or soil because of their job or recreational activities. Virginia did not report any leptospirosis cases in 2021. Virginia typically reports no more than 3 leptospirosis cases per year. The last time Virginia reported any case of leptospirosis was 2018.

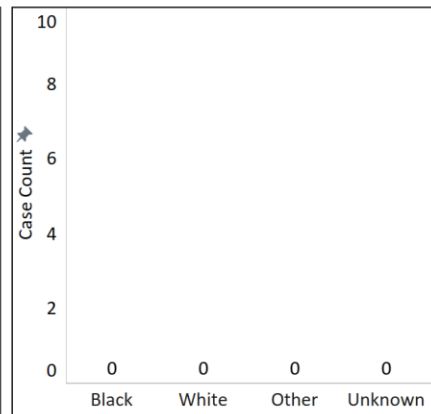
Age Group, 2021



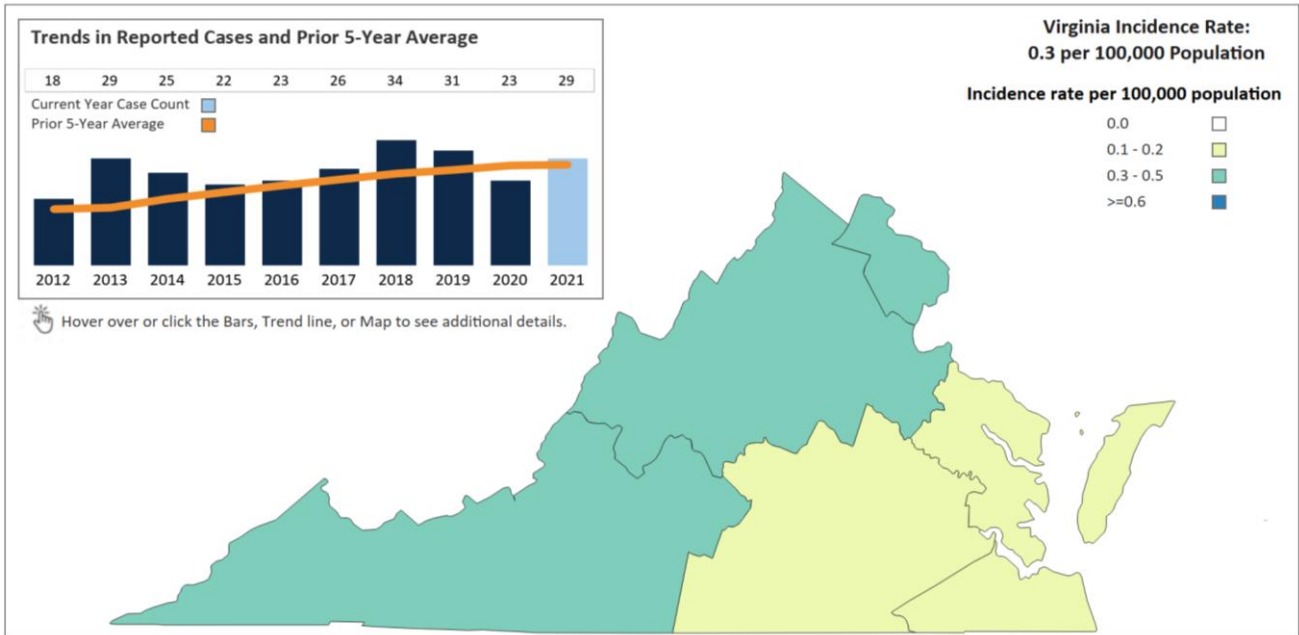
Sex, 2021



Race, 2021

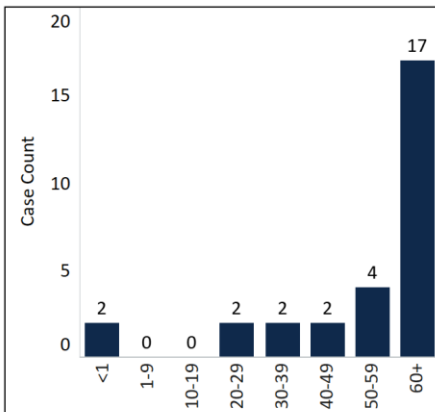


Listeriosis

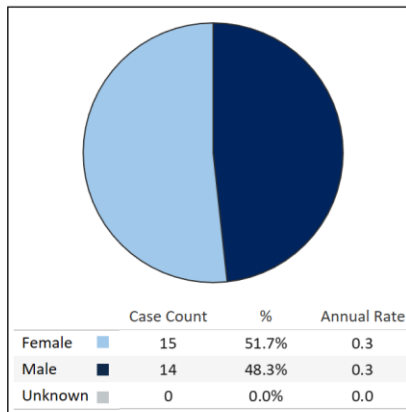


Listeriosis is a serious disease usually caused by eating food contaminated with the bacterium *Listeria monocytogenes*. Illness develops when the bacteria get into sterile body sites. Listeriosis mainly affects pregnant women, newborns, adults aged 65 years or older, and people with weakened immune systems. Serious illness in people without these risk factors is rare. Listeria bacteria are commonly found in the environment, including in soil and water. Contaminated foods (unwashed raw fruits and vegetables, raw milk, soft cheeses, deli meats) may cause infection. Pregnant women with listeriosis typically experience fever and mild flu-like symptoms such as fatigue and muscle aches. Older adults and people with weakened immune systems might experience fever, muscle aches, headache, stiff neck, confusion, loss of balance, and convulsions. During 2021, 29 listeriosis cases were reported in Virginia. Adults over 60 years of age represented 59% of all cases reported.

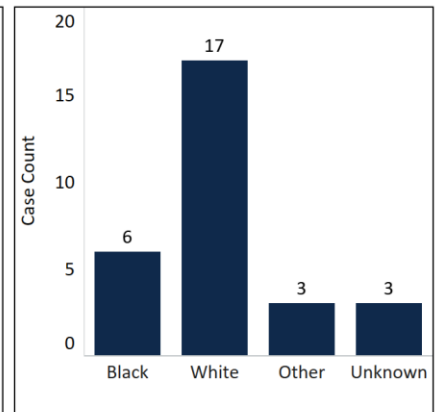
Age Group, 2021



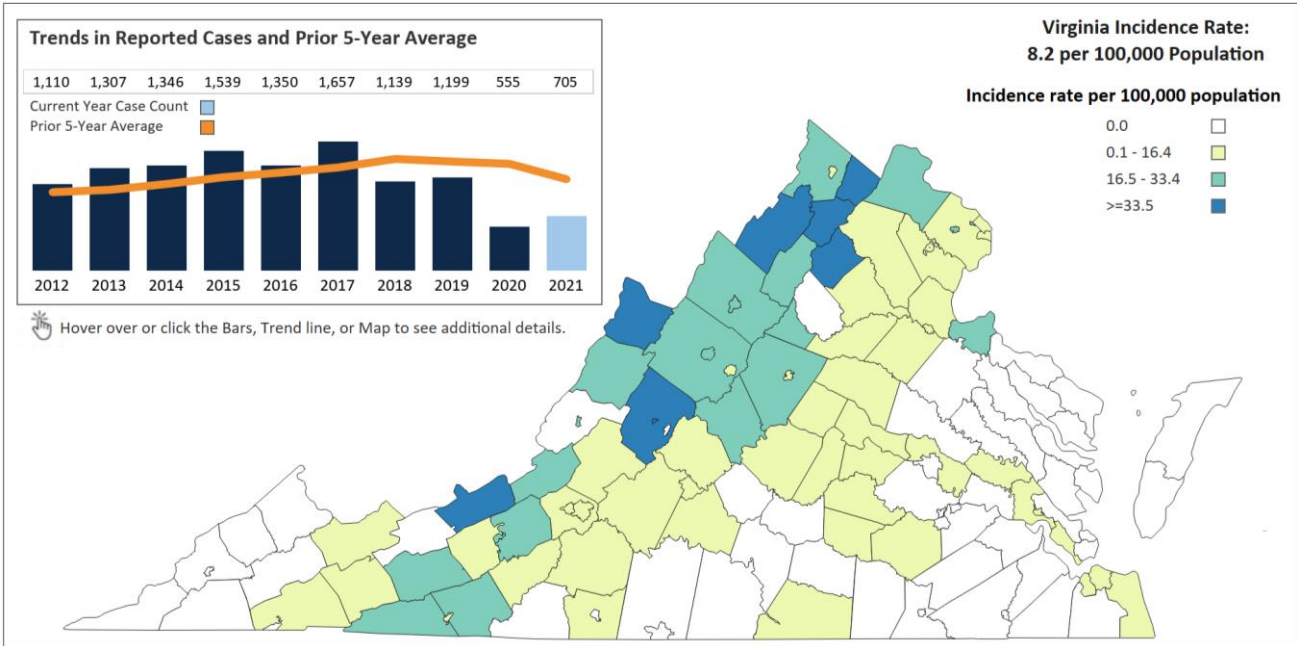
Sex, 2021



Race, 2021

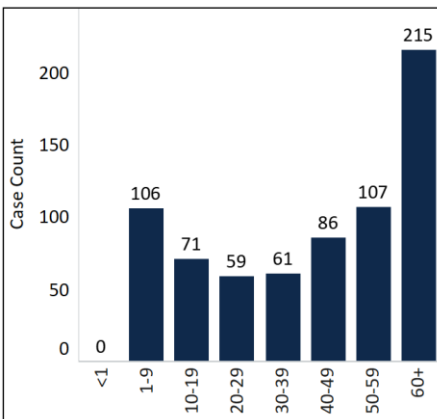


Lyme

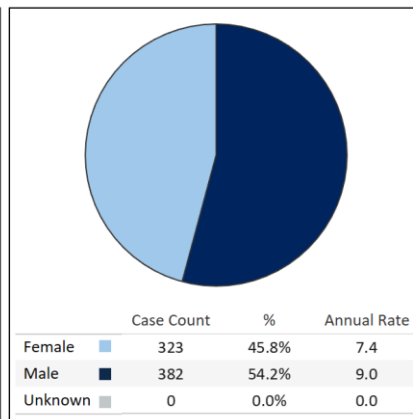


Lyme disease is an illness caused by the bacteria *Borrelia burgdorferi*, and less commonly, *Borrelia mayonii*. It is transmitted by the bite of an infected blacklegged tick. Symptoms usually appear within 30 days of tick bite, often beginning with an erythema migrans rash. If untreated, illness can present as joint pain, headache, fatigue, and swollen lymph nodes. Advanced untreated illness can cause facial palsy, severe arthritis, irregular heartbeat, meningitis, and nerve pain. Some patients may develop the condition Post-Treatment Lyme Disease Syndrome and continue to have symptoms even after completing prescribed antibiotic regimen. In 2021, children aged 1-9 and those 60 and older had the highest disease burden among age groups. Virginia reported 704 cases of illness. This is a -11% change from the previous year. The previous 5-year average was 1,178 cases. The national case definition was updated in 2022, with updates to the laboratory criteria and case classification sections.

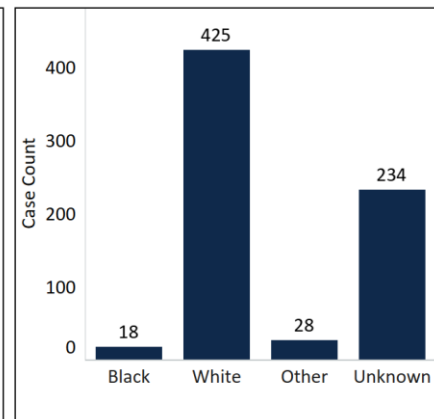
Age Group, 2021



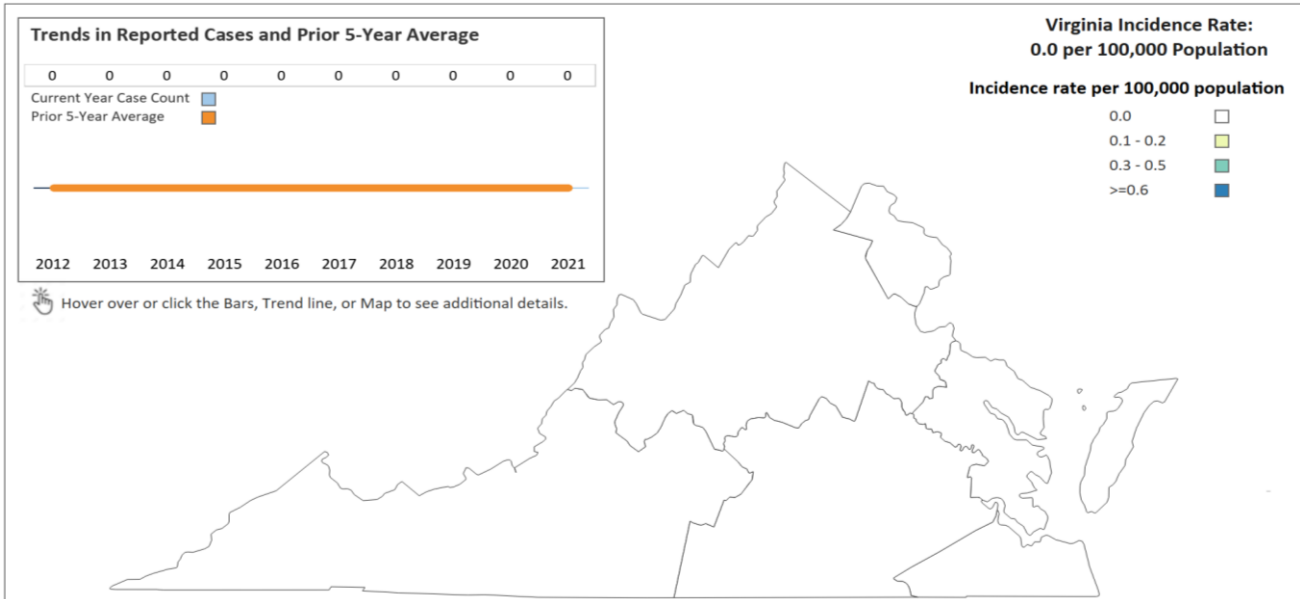
Sex, 2021



Race, 2021

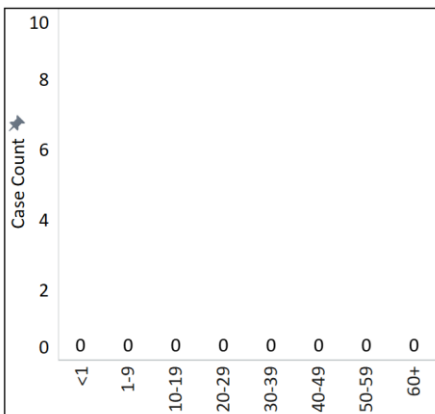


Lymphogranuloma Venereum



Lymphogranuloma venereum (LGV) is a sexually transmitted infection caused by the bacterium *Chlamydia trachomatis*, specifically serovars L1, L2, or L3. It can cause severe inflammation and invasive infection. Common presentations of LGV infection include proctocolitis (after rectal exposure) and inflammation of the lymph nodes in the genital area. Sometimes a self-limited genital ulcer or papule can occur at the site of inoculation. Some infections may be asymptomatic. LGV became nationally notifiable in 1941 but was removed as a separate notifiable condition in 1995 when chlamydia was added. However, in 2022 the case definition for chlamydia was updated to distinguish LGV from other infections due to chlamydia. LGV has historically been rare in developed countries, with only occasional outbreaks primarily occurring among men who have sex with men. In 2021, there were no reported cases of LGV in Virginia. The last two reported cases of LGV in Virginia occurred in 2005.

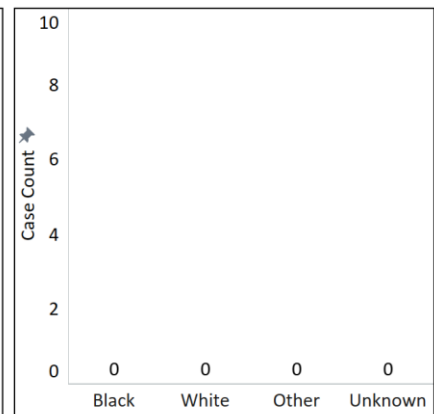
Age Group, 2021



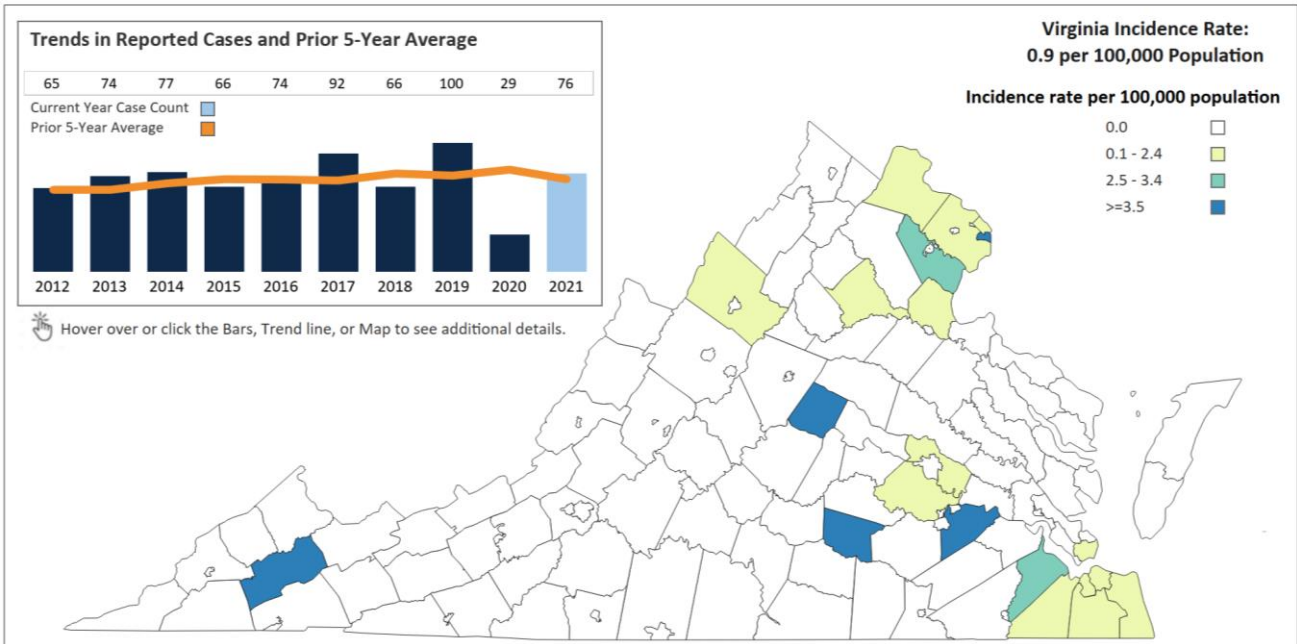
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

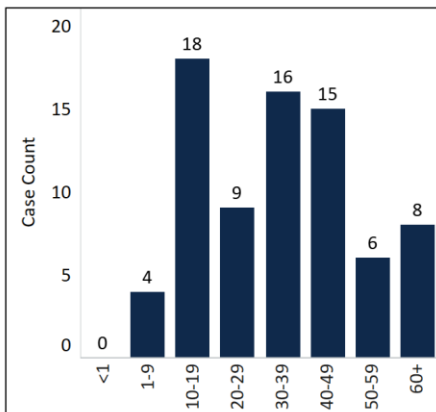


Malaria

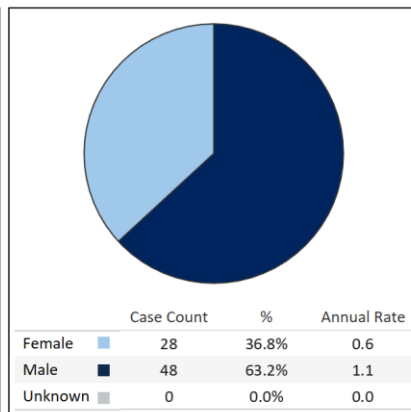


Malaria is a mosquito-transmitted illness caused by several species of parasitic plasmodium. Clinical presentation can range from flu-like to severe, and symptoms include fever, muscle pain, chills, sweats, headache, nausea, vomiting, anemia, and jaundice. The vast majority of cases reported in the United States are travel-related; endemic regions with ongoing transmission include Africa, Central/South America, and Southern Asia. However, locally acquired cases have occurred in the Commonwealth in both Westmoreland County in 1998 and Loudoun County in 2002. It is recommended that travelers to malaria-endemic regions take anti-malaria drugs; the specific drug regimen is determined by the area of travel. There were 76 cases of malaria reported in Virginia in 2021. All cases were acquired outside of the United States.

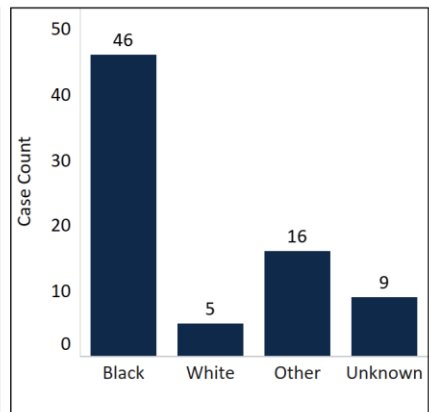
Age Group, 2021



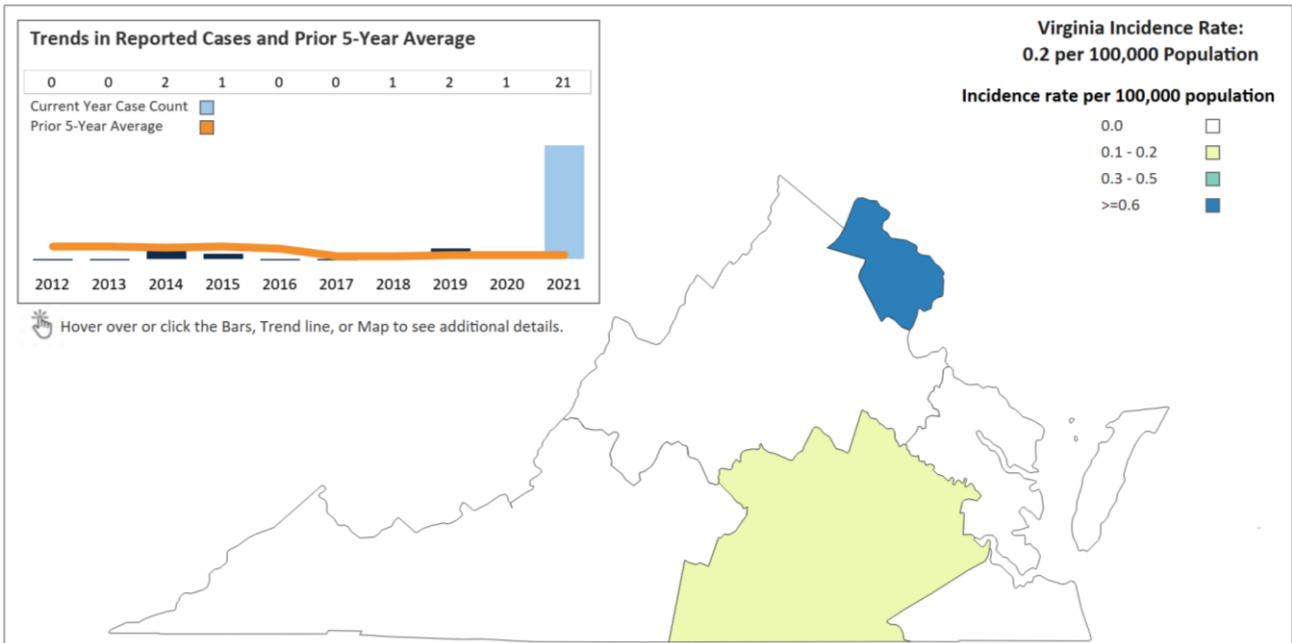
Sex, 2021



Race, 2021

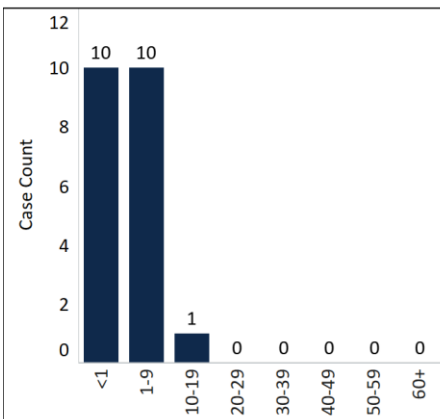


Measles (Rubeola)

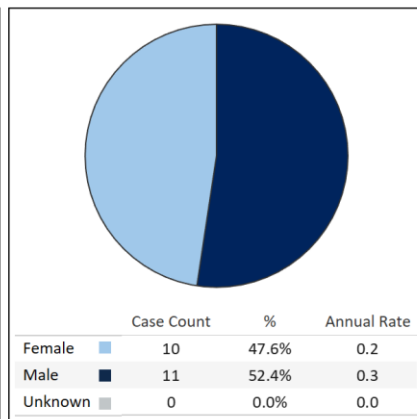


Measles (Rubeola) is a highly contagious acute viral respiratory illness spread by direct contact with infectious droplets or by airborne spread when an infected person breathes, coughs, or sneezes. Symptoms include fever and a rash that starts on the face and spreads to the neck, trunk, arms, and legs. A cough, runny nose, or red, itchy eyes might also be present. Measles cases declined significantly in the United States after the live measles vaccine was licensed in 1963, and measles was declared eliminated from the U.S. in 2000. In 2013, the case definition was revised to remove suspect cases and refine the clinical criteria for confirmed cases. Virginia reported a large outbreak in 2021 among people who had recently traveled from Afghanistan as part of the United States government's emergency evacuation efforts.

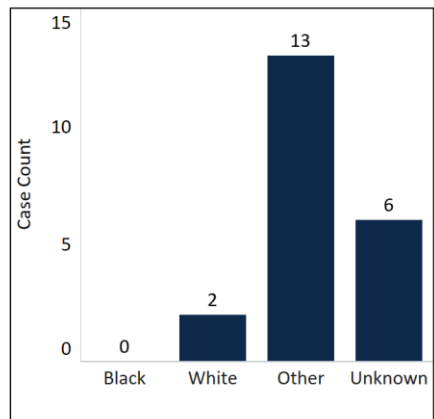
Age Group, 2021



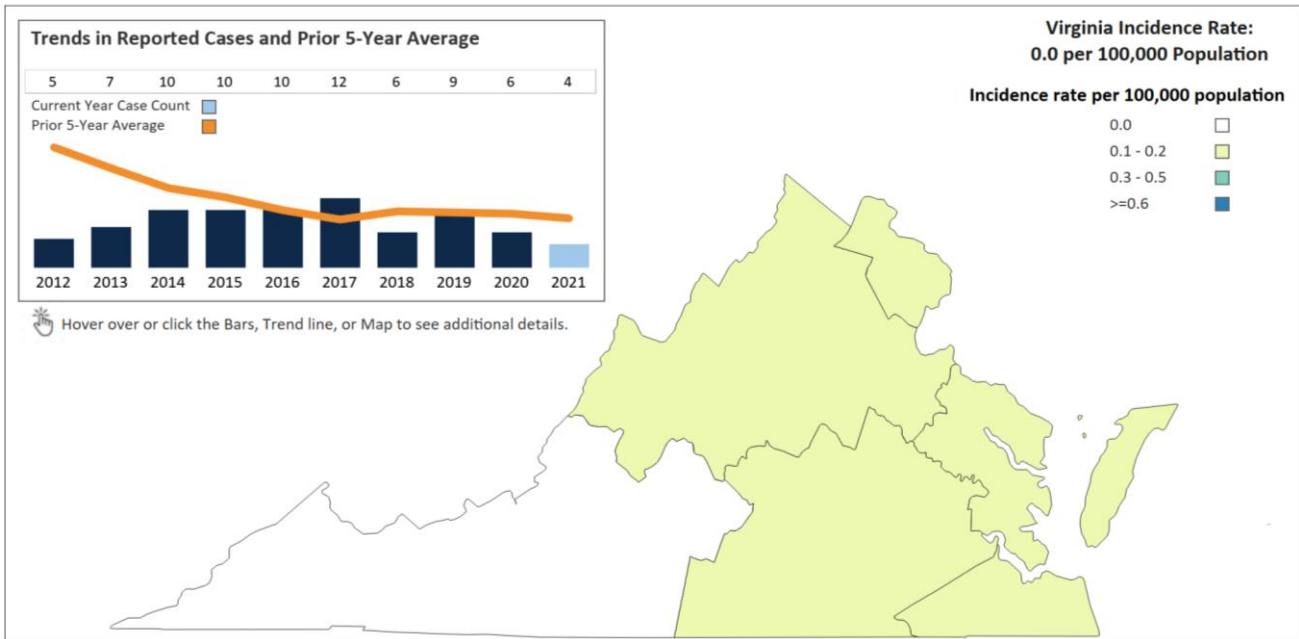
Sex, 2021



Race, 2021

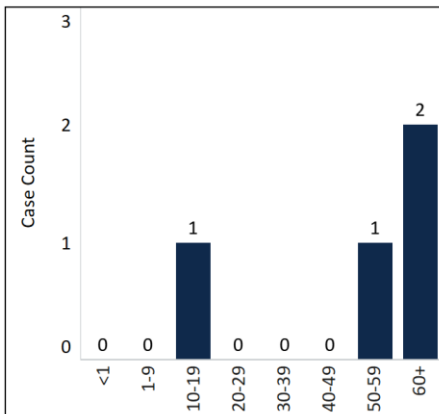


Meningococcal Disease (*Neisseria meningitidis*)

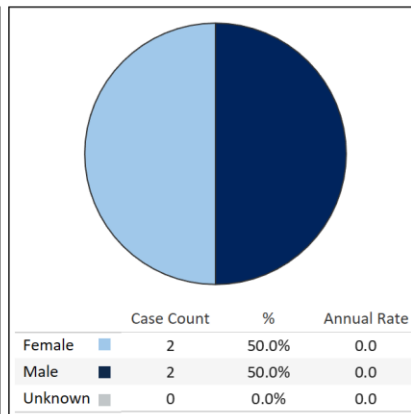


Meningococcal disease is a serious illness caused by the bacterium *Neisseria meningitidis*, which are spread from person to person through respiratory and throat secretions. Some people may develop a serious form of illness, such as meningitis (inflammation of the lining of the brain and spinal cord) or a bloodstream infection. Signs and symptoms include fever, headache, stiff neck, nausea, vomiting, photophobia, and altered mental status. It is most common in infants, children, adolescents, and young adults. In Virginia, cases have increased every year since 2012, and peaked in 2017 due to an outbreak in a K-12 school. In 2015, the case definition was changed to expand the lab criteria for confirmed cases. Keeping up to date with recommended vaccines (for preteens and teens and those with certain immunocompromising conditions) is the best way to protect against meningococcal disease.

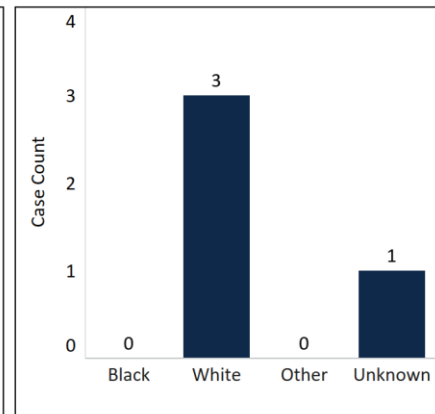
Age Group, 2021



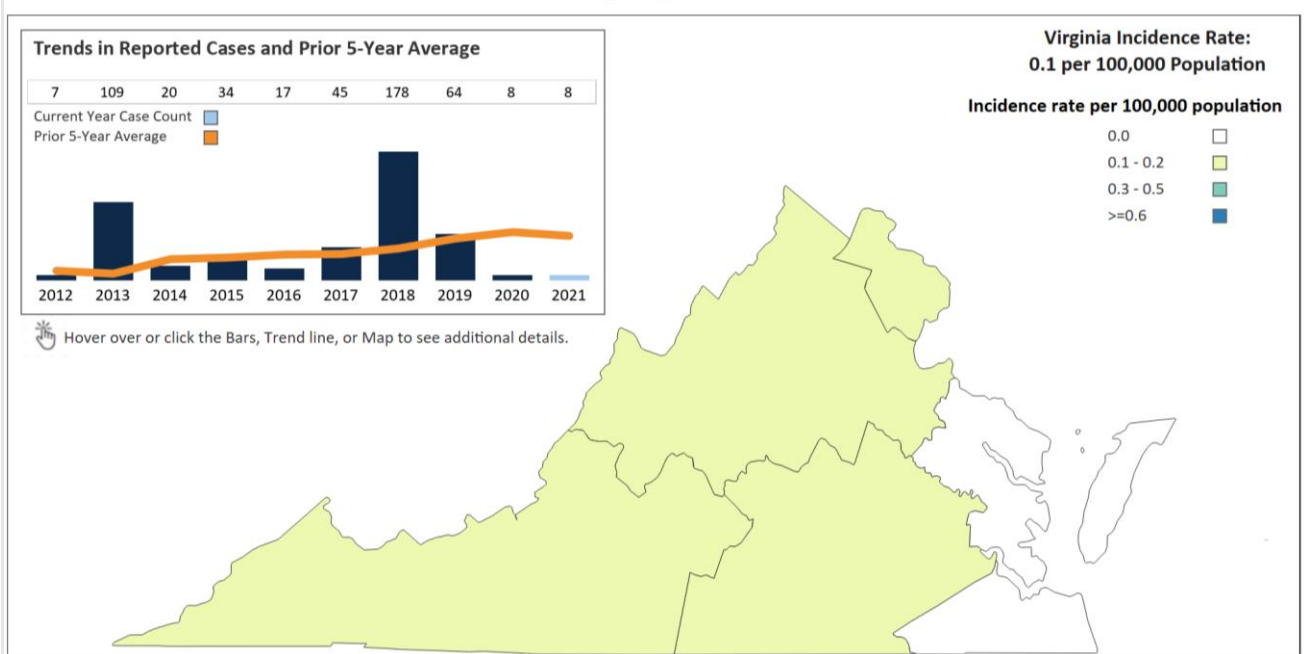
Sex, 2021



Race, 2021

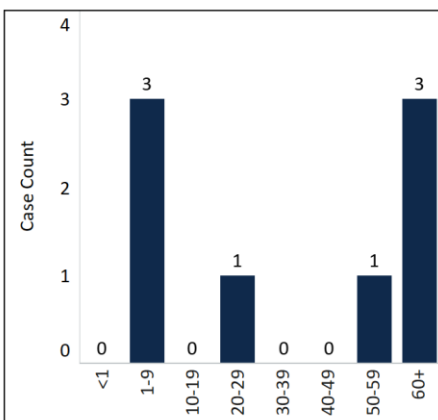


Mumps

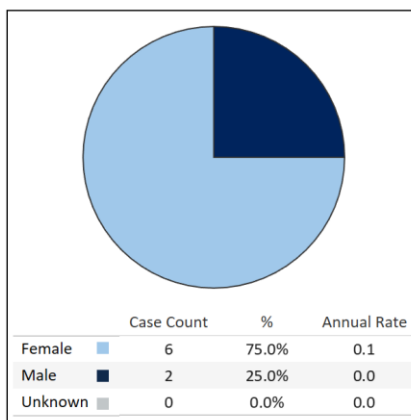


Mumps is a contagious disease caused by a paramyxovirus. It can be transmitted person to person through direct contact with saliva or respiratory droplets of a person infected with mumps. Signs and symptoms include fever, headache, muscle aches, fatigue, and swelling of salivary glands under the ears on one or both sides (parotitis). Significant outbreaks have happened in settings where people have intense or frequent close contact (e.g., college campuses). In 2012, the case definition for mumps was revised to refine the laboratory criteria for confirmed cases. Virginia reported increases in mumps cases in 2013 and 2018 related to multiple higher education-related outbreaks. Respiratory precautions implemented to mitigate COVID-19 might have contributed to the decline in cases in 2020 and 2021.

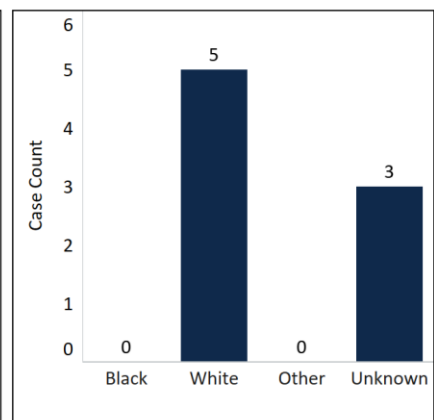
Age Group, 2021



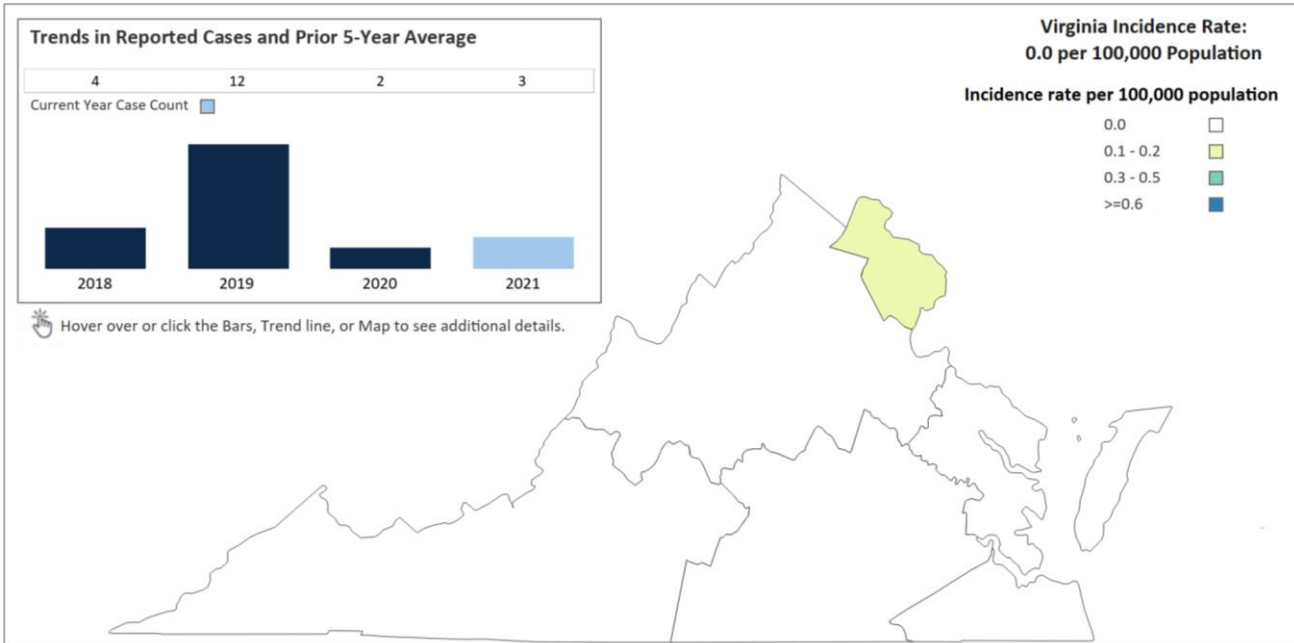
Sex, 2021



Race, 2021

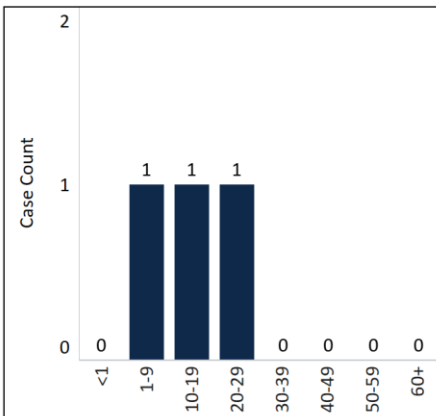


Paratyphoid infection

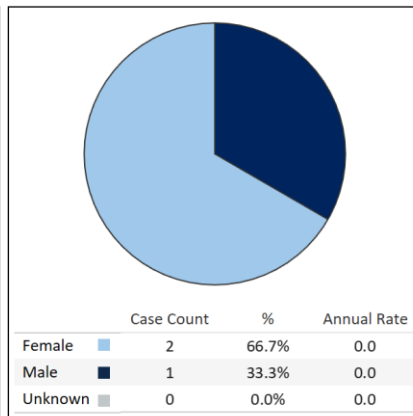


Paratyphoid infection is a disease caused by the bacterium *Salmonella Paratyphi*. Anyone can get paratyphoid infection, but it occurs more often in people who travel to developing countries in Asia, Africa, and South and Central America, where the disease is common. It can be transmitted by eating or drinking food or water that has been contaminated with feces or urine of people with the disease or by direct contact with a person who has the disease. Paratyphoid infection can cause high fever, headaches, weakness, loss of appetite, and diarrhea, or constipation. In 2021, 3 paratyphoid infection cases were reported in Virginia. When traveling, particularly to areas where paratyphoid infection is common, it is important to practice safe food and water habits. These include eating food that has been fully cooked, drinking water (and ice) from a safe source, avoiding raw or undercooked food, and avoiding tap or well water (or ice made with tap or well water).

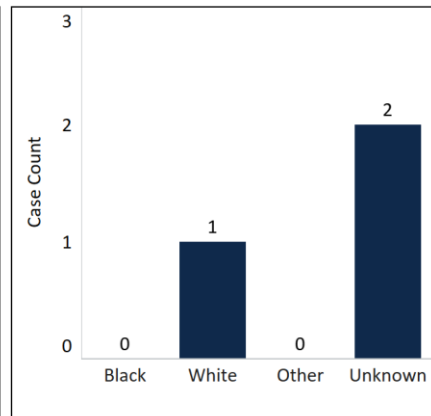
Age Group, 2021



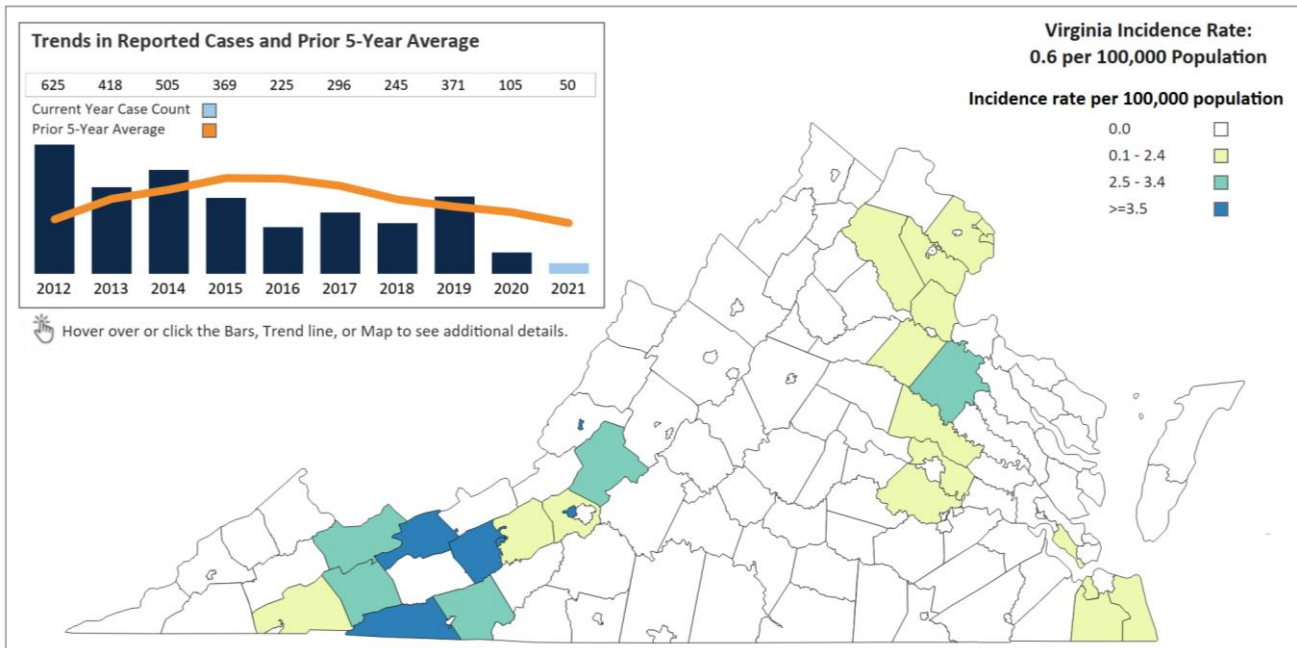
Sex, 2021



Race, 2021

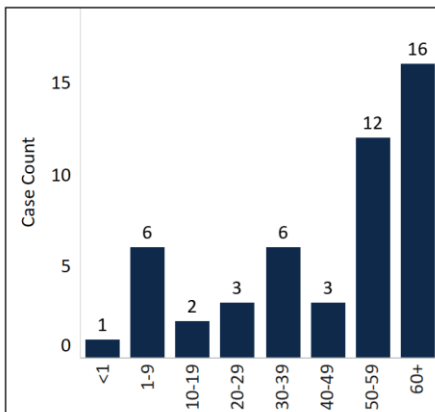


Pertussis (Whooping Cough)

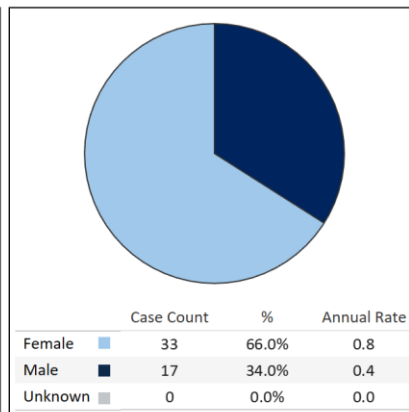


Pertussis (whooping cough) is a very contagious disease caused by the bacteria *Bordetella pertussis*. These bacteria spread through the air in droplets produced when someone sneezes or coughs. The illness begins with cold-like symptoms, including runny nose, mild fever, and cough. The cough lasts 1-2 weeks and gradually worsens to include apnea, post-tussive vomiting, or a high-pitched intake of breath that sounds like "whoop." It most commonly occurs in very young children who have not been vaccinated. Cases of pertussis peaked in Virginia in 2014 and 2019 due to outbreaks in colleges, schools, places of worship, daycares, and camps. Cases declined in 2020 and 2021 in response to respiratory precautions implemented to mitigate COVID-19. The case definition was revised in 2020 to eliminate the minimum cough duration for PCR-positive cases."

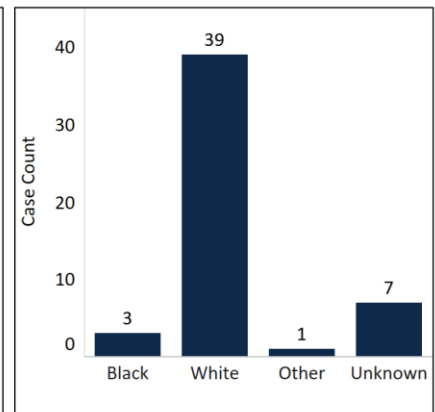
Age Group, 2021



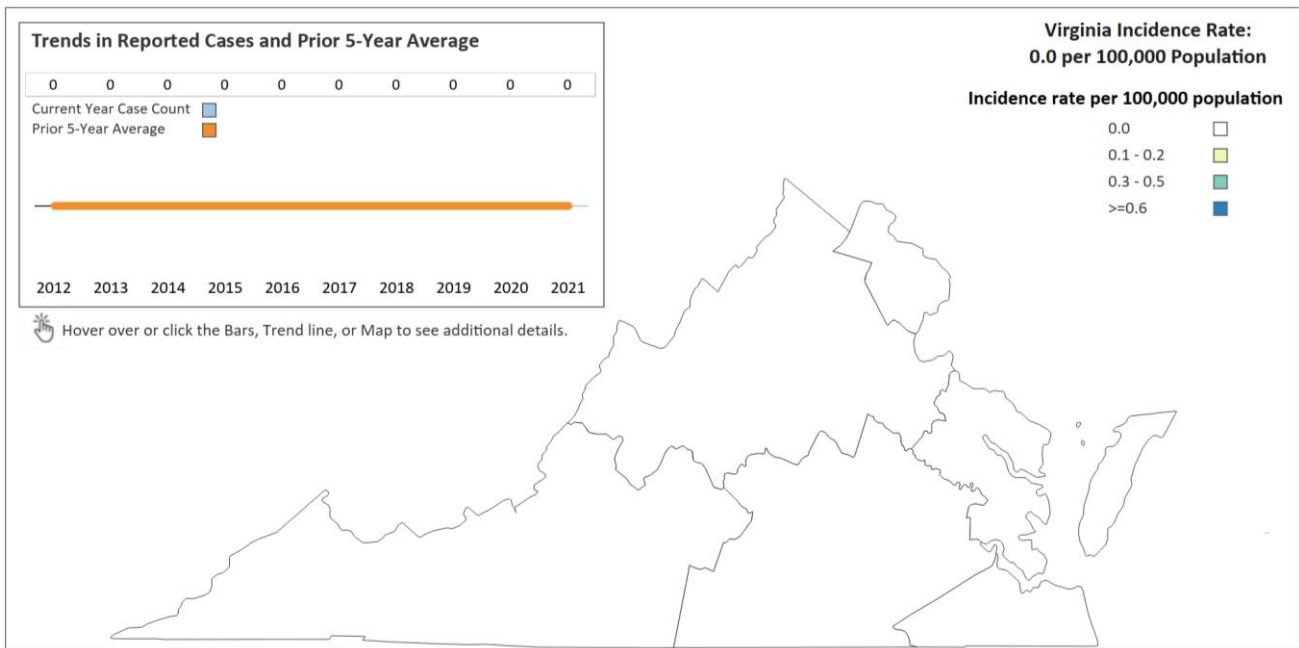
Sex, 2021



Race, 2021

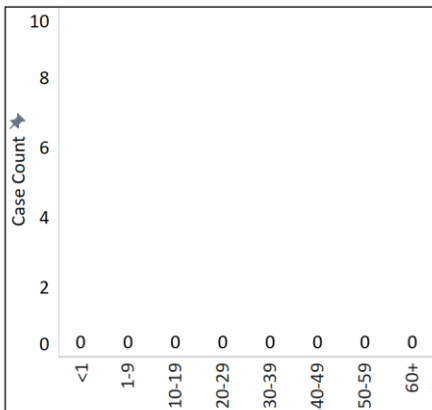


Plague



Plague is caused by the bacteria *Yersinia pestis*. It can be transmitted to humans through the bite of infected fleas or through handling tissue or body fluids of a plague-infected animal. If the disease attacks the lungs, it may be spread from person-to-person by respiratory droplets released when coughing. Clinical symptoms in people include fever, chills, nausea, headache, and body aches. Other clinical presentations include swollen lymph nodes (“buboes”), bloodstream infections, and pneumonia. In areas where plague occurs, travelers should avoid contact with rodents and fleas and avoid handling stray animals. Presently, human plague infections occur rarely in rural areas in the western United States, but many more cases occur in parts of Africa and Asia. Modern antibiotics are effective in treating plague. Typically, fewer than 20 people in the United States are diagnosed with plague every year. No cases of plague have been reported in Virginia since the nineteenth century.

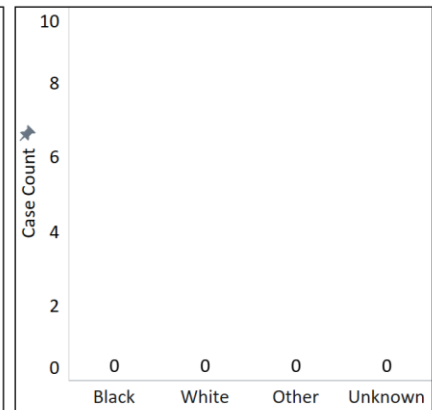
Age Group, 2021



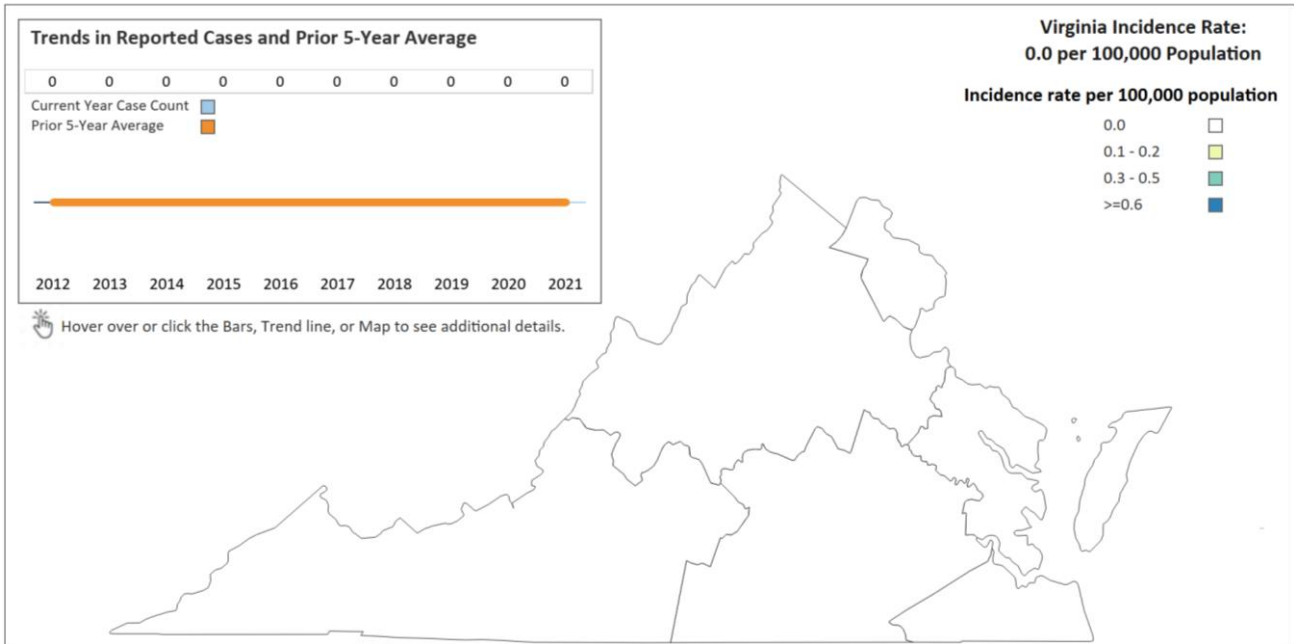
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

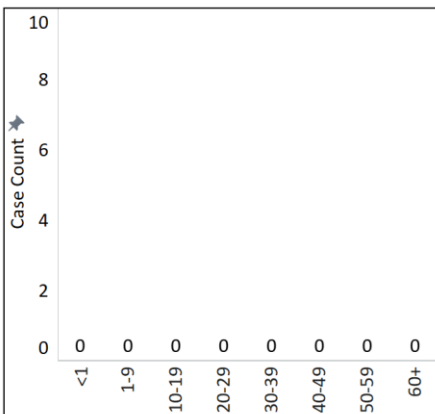


Poliovirus Infection

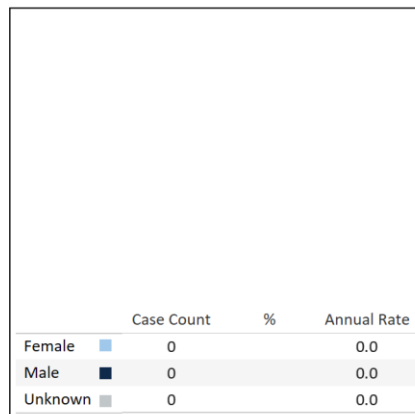


Polio, or poliomyelitis, is a disabling and life-threatening disease caused by the poliovirus. Poliovirus is very contagious and spreads through contact with the feces of an infected person or contact with droplets from a sneeze or cough of an infected person (less common). Most people who are infected with poliovirus will not have any visible symptoms; however, a small portion of people will develop serious symptoms that affect the brain and spinal cord, including meningitis or paralysis. Following the introduction of inactivated polio vaccine (IPV) in 1955 and oral polio vaccine (OPV) in 1961, the reported incidence of poliomyelitis in the United States declined dramatically, with under 100 cases in 1965 and to under 10 cases in 1973. The last reported case of poliomyelitis in Virginia occurred in 1978.

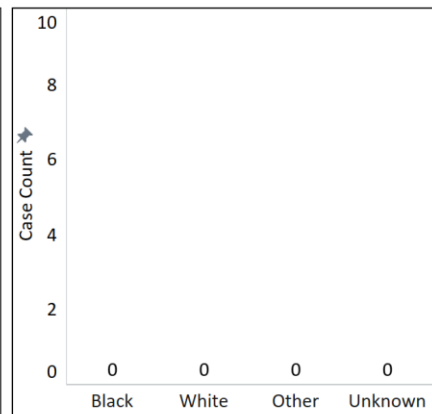
Age Group, 2021



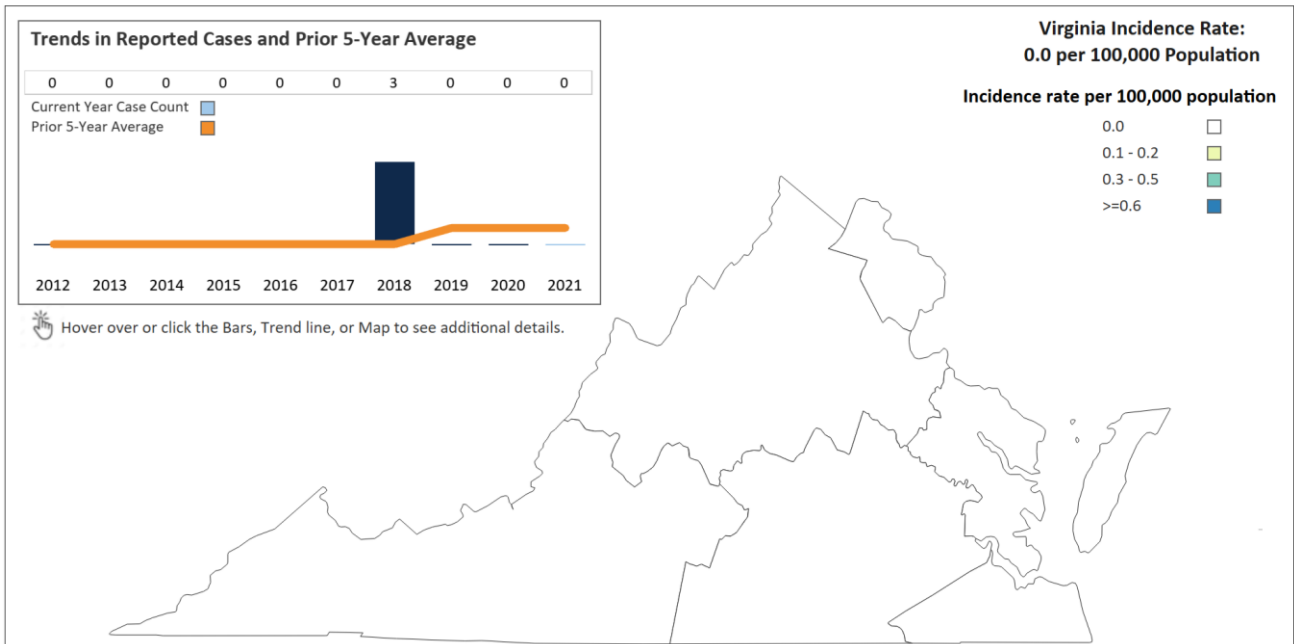
Sex, 2021



Race, 2021

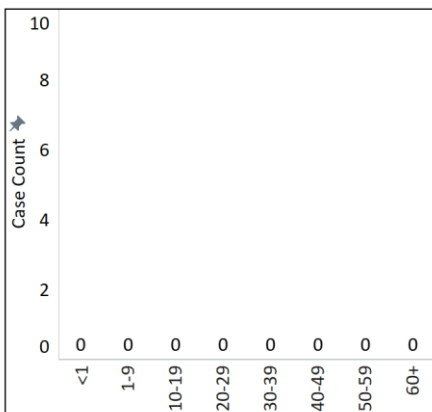


Psittacosis



Psittacosis is a disease caused by the bacteria *Chlamydia psittaci*. It can be transmitted when a person inhales organisms that have been aerosolized from dried feces or respiratory tract secretions from infected birds. Infected birds might not show signs of illness. Clinical symptoms in people usually consist of fever, headache, weakness, muscle aches, chills, and nonproductive cough. The severity of the disease ranges from a mild, non-specific influenza-like illness to a systemic illness with severe pneumonia. People who own or work with birds should follow precautions when handling and cleaning birds and cages. Psittacosis is rarely reported in Virginia and no cases of psittacosis were reported in Virginia during 2021. Three cases of psittacosis were reported in 2018 in association with a poultry slaughter plant outbreak.

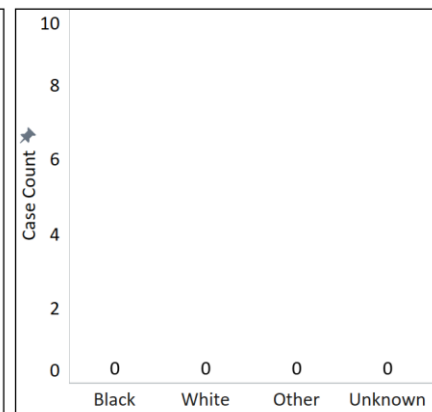
Age Group, 2021



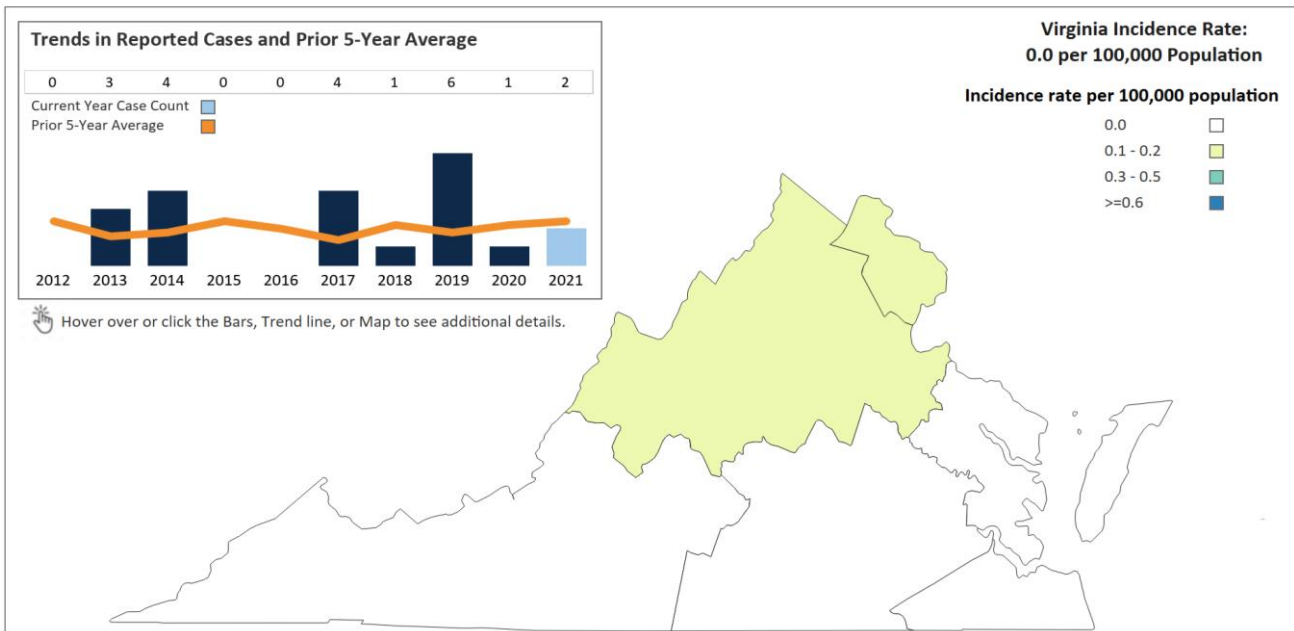
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

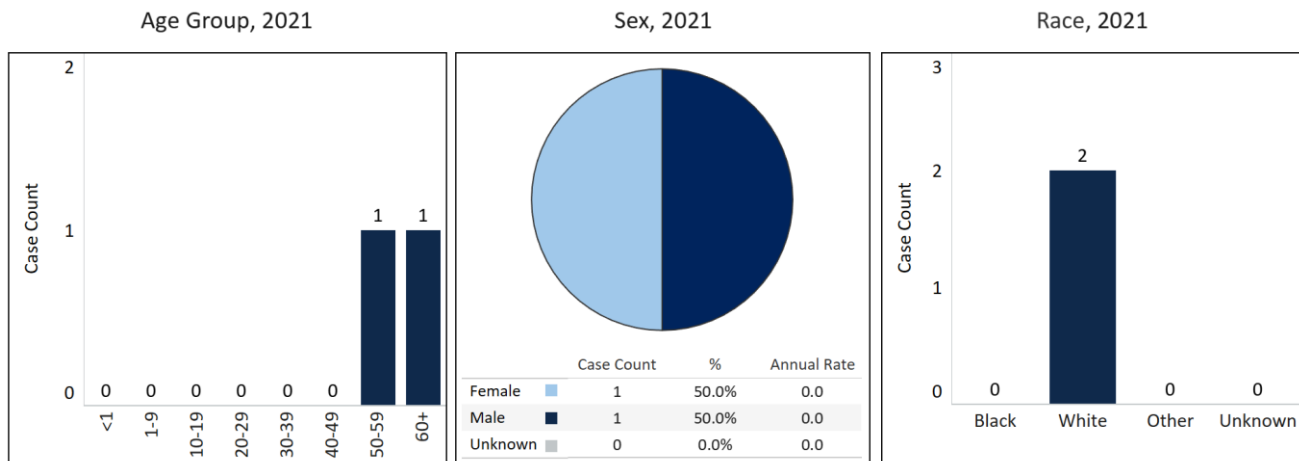
Race, 2021



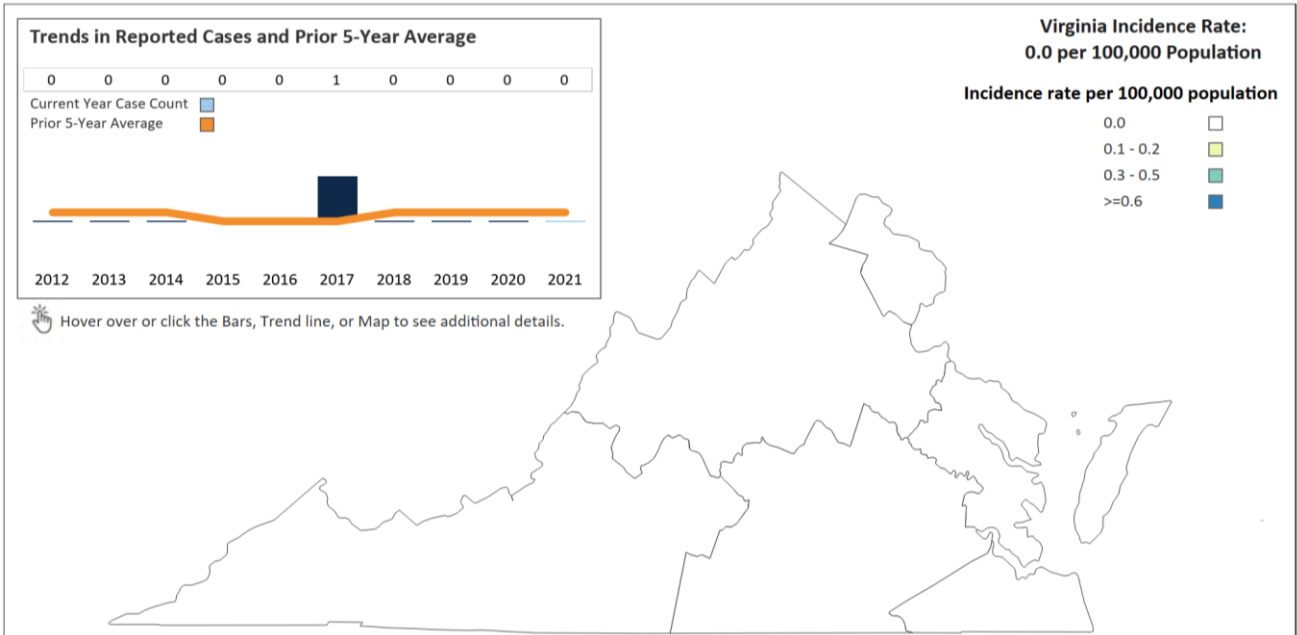
Q Fever



Q Fever is caused by the bacteria *Coxiella burnetii*. People get infected by breathing in dust that has been contaminated by infected animal feces, urine, milk, and birth products that contain *Coxiella burnetii*. Most commonly, people are exposed to this organism via inhalation of infectious aerosols directly from birth fluids of infected animals or via inhalation of dust contaminated with dried birth fluids or tissues. Approximately 50% of people exposed to Q fever will develop the acute form of illness, which is characterized by high fever, severe headache, fatigue, chills, and muscles aches. Chronic Q fever is a severe disease developing in less than 5% of patients exposed. Endocarditis is the major form of chronic disease. Preventive measures include appropriate disposal of potentially infectious tissues and proper hygiene when handling animal birth material. Two cases of Q fever were reported in Virginia in 2021. Virginia typically reports fewer than five Q Fever cases each year.

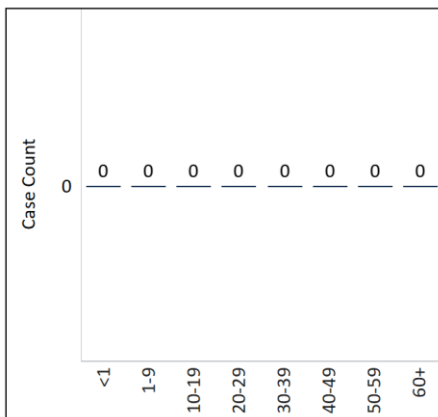


Rabies (Human)

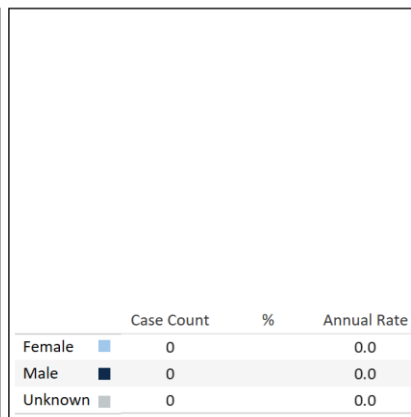


Rabies is a rhabdovirus of the genus *Lyssavirus*. Rabies infections are most commonly diagnosed in wildlife, especially in certain wild animals such as raccoons, skunks, and foxes. Wildlife is the reservoir of rabies in the United States and any domestic animal cases are a result of spillover from infections in wildlife. Transmission occurs most commonly through the bite of an infected animal but may be transmitted through any method by which virus-infected saliva or central nervous system tissue enters the body. Important prevention methods include vaccinating domestic animals, using animal control to remove stray animals, and avoiding handling wildlife. In 2021, 283 animals were laboratory-confirmed with rabies, with 90% of those confirmed in wildlife species. Virginia has reported an average of 409 animal cases of rabies per year since 2012. No human cases of rabies were reported from Virginia in 2021.

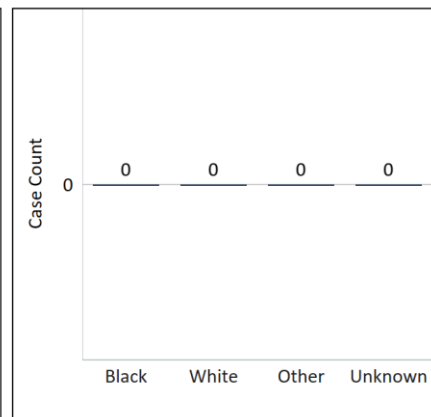
Age Group, 2021



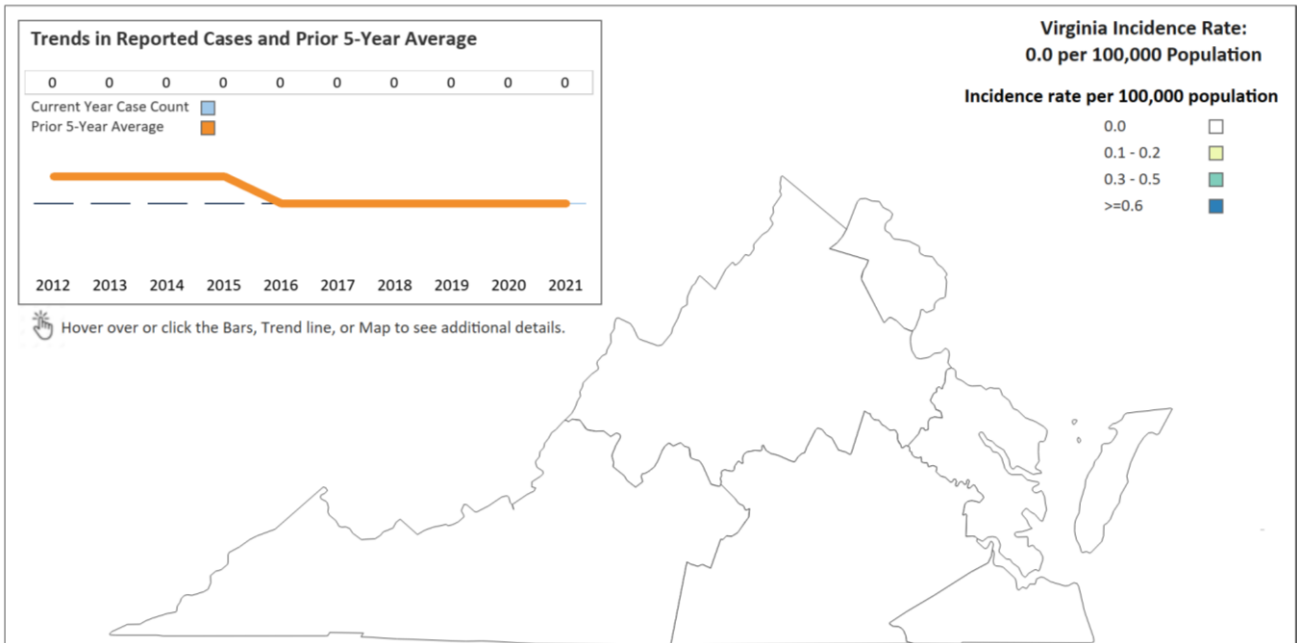
Sex, 2021



Race, 2021

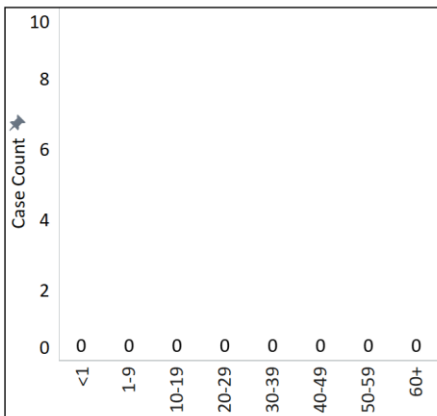


Rubella



Rubella is a mild febrile rash illness caused by rubella virus. The virus can be found in nose and throat secretions, such as saliva or nasal mucus, and is spread through sneezing or coughing. Symptoms can include a low-grade fever, sore throat, and a rash that starts on the face and spreads to the rest of the body. In pregnant women, rubella infection can lead to congenital rubella syndrome (CRS) causing miscarriage or serious birth defects in a developing baby. Cases of rubella in the United States decreased dramatically following the initiation of the rubella vaccination program in 1969. Rubella and CRS were declared eliminated from the U.S. in 2004. Rarely, cases are reported in individuals infected during international travel. In the last 10 years, no cases of rubella have been detected in Virginia.

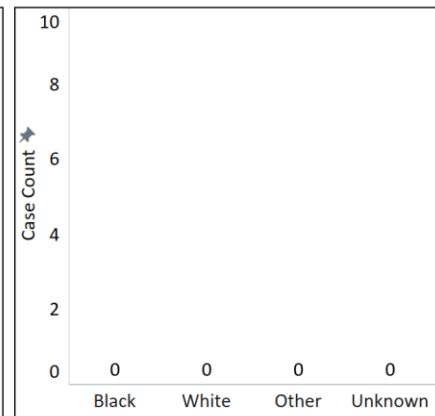
Age Group, 2021



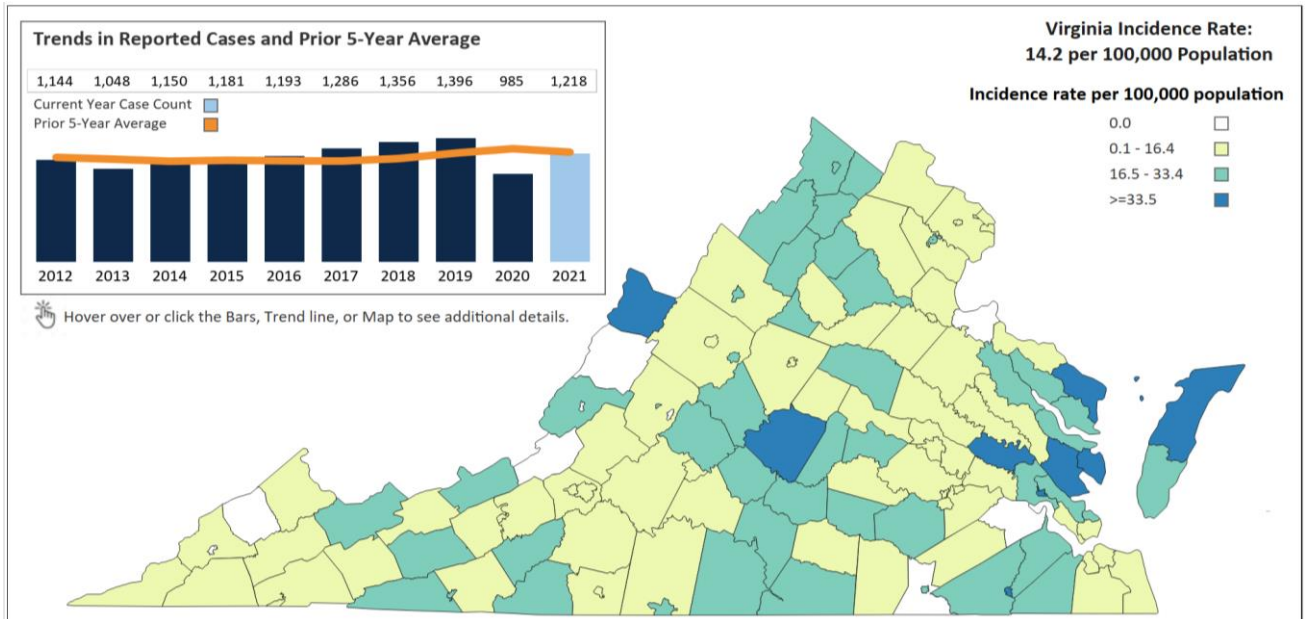
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

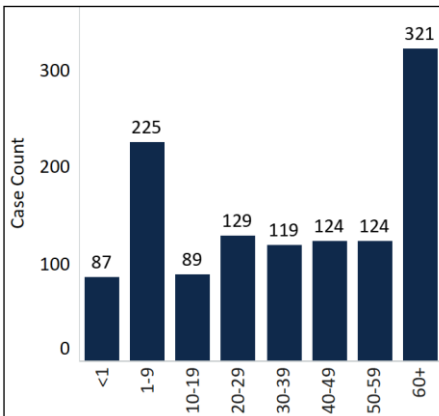


Salmonellosis

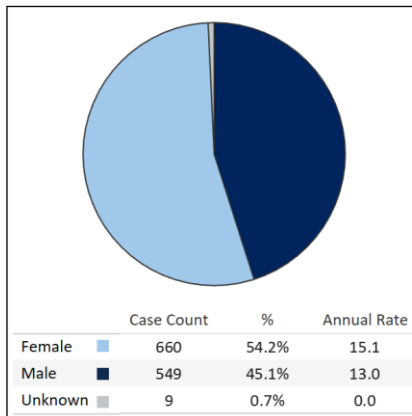


Salmonellosis is an infection caused by the bacteria *Salmonella*. It is commonly found in the feces of animals raised for food or kept as pets and infected people. The feces can then contaminate raw meats, chicken, eggs, unpasteurized milk and cheese products and other foods, and people can get sick from eating these contaminated foods. Infected persons can spread the bacteria if they do not wash their hands well after using the bathroom or after handling animals and then touching something that other people put in their mouth. Symptoms of salmonellosis include diarrhea, abdominal cramps, headache, fever, and sometimes vomiting. In 2021, 1,218 cases of salmonellosis were reported, with a statewide incidence rate of 14.2 per 100,000 population. Spread of salmonellosis can be reduced through proper hand washing before and after preparing foods, after using the bathroom or changing diapers, and after handling animals, and ensuring poultry and meats are cooked to appropriate temperatures.

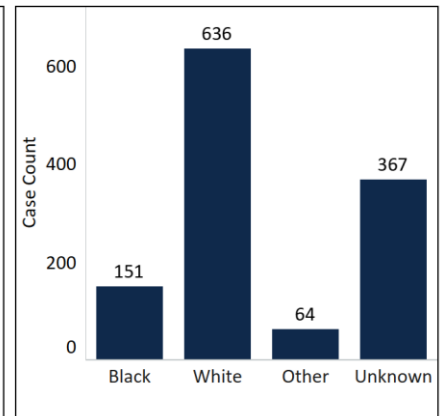
Age Group, 2021



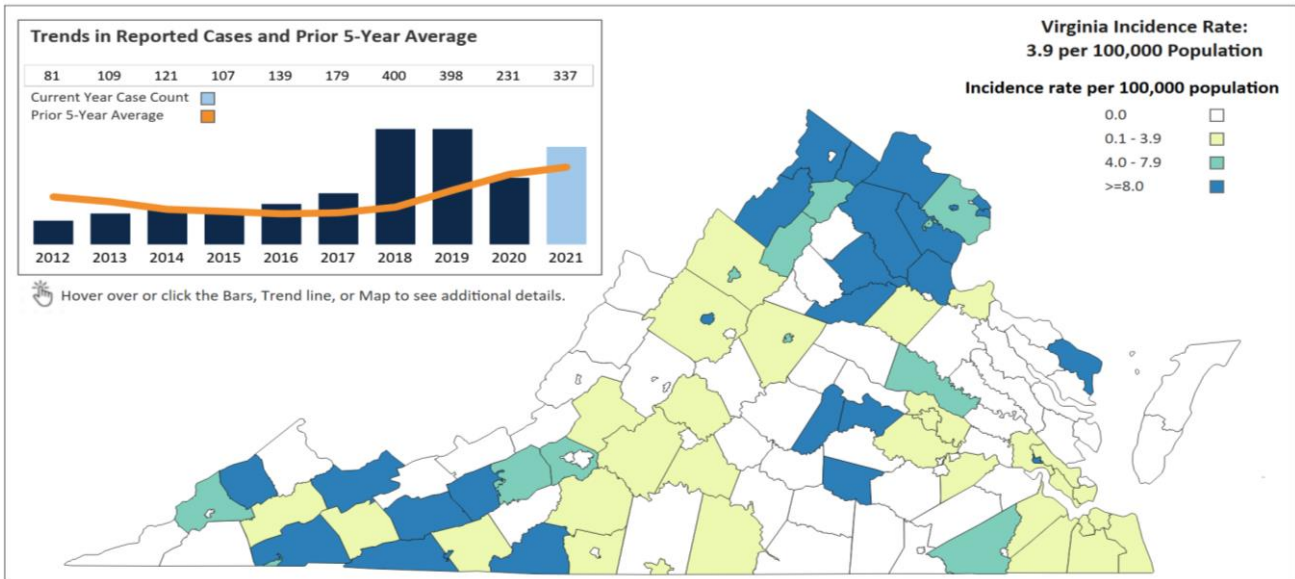
Sex, 2021



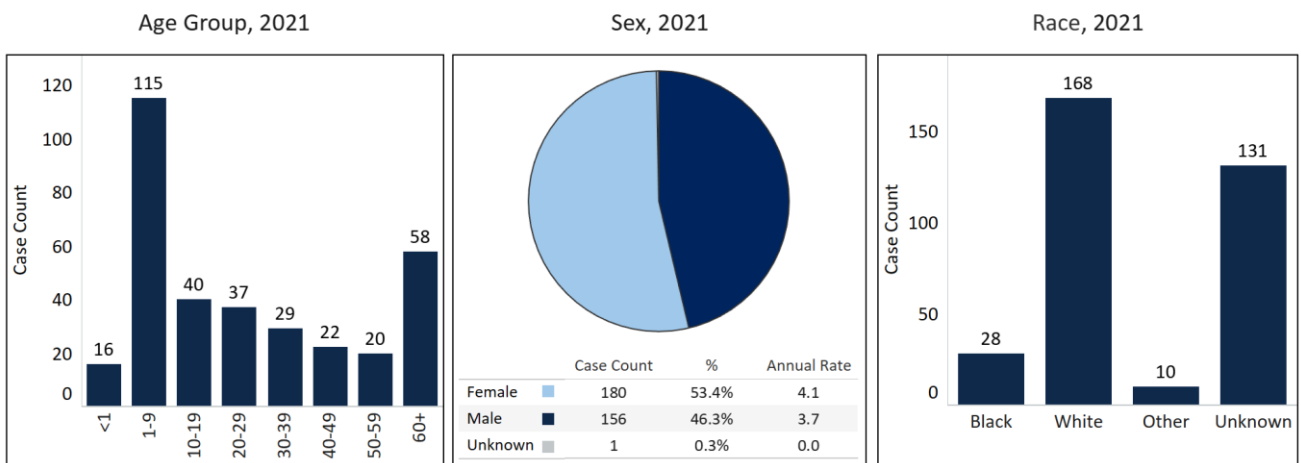
Race, 2021



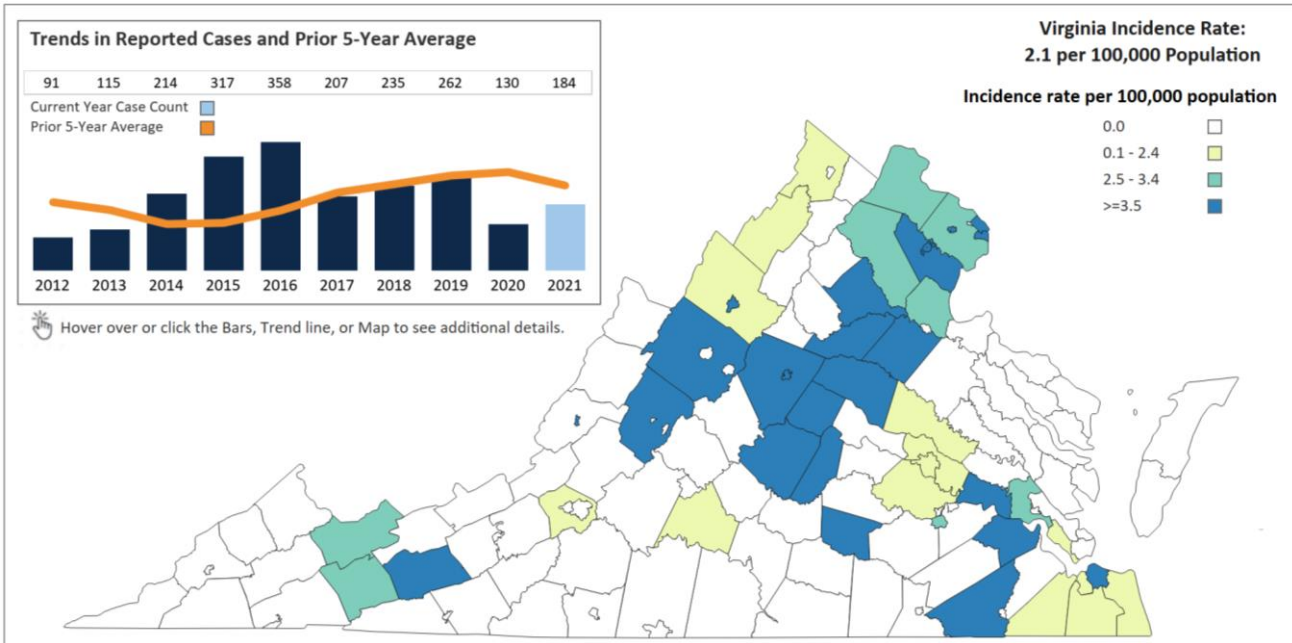
E. coli Infection, Shiga Toxin-Producing (STEC)



Escherichia coli (E. Coli) are bacteria that normally live in the intestines of humans and animals. Most strains do not cause illness; however, strains that produce toxins, such as Shiga toxin-producing *Escherichia coli* (STEC), can lead to diarrheal illness. People and animals infected with STEC shed the bacteria in their feces (stool) which can contaminate surfaces, food, or water. Most people become infected by touching contaminated surfaces and then putting their hands in their mouths, being in contact with farm animals, or by eating or drinking contaminated food. STEC has been associated with people eating contaminated foods, such as undercooked ground beef, raw produce (e.g., leafy greens), raw dough or batter, or drinking unpasteurized (raw) milk or juice. In 2021, 337 cases of STEC were reported in Virginia. Transmission of this illness can be reduced through proper hand washing, ensuring beef products are thoroughly cooked, and consuming properly pasteurized dairy and juice products.

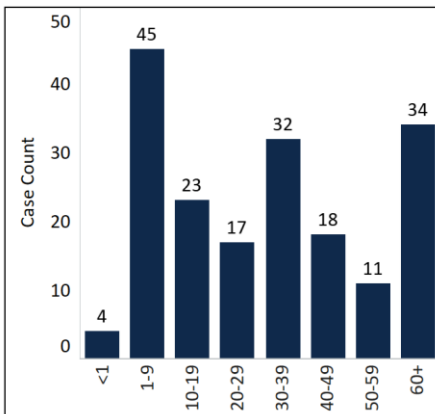


Shigellosis

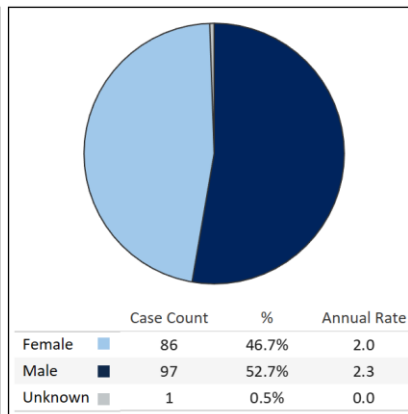


Shigellosis is an infection of the intestines caused by a bacterium called *Shigella*. It is easily spread from person to person and sometimes results in outbreaks. People infected with *Shigella* shed the bacteria in their feces (stool). The feces can then contaminate surfaces, food, or water. People can become infected by touching contaminated surfaces, getting the bacteria on their hands and then putting their hands in their mouths, or by eating contaminated food or drinking contaminated water. Symptoms of shigellosis can include mild or severe diarrhea, often with fever and traces of blood in the stool. In 2021, 184 cases of shigellosis were reported in Virginia, and children ages one through nine represented 24% of all cases. Transmission of shigellosis can be prevented by careful handwashing with soap and warm water after using the bathroom or changing diapers, and before or after preparing food.

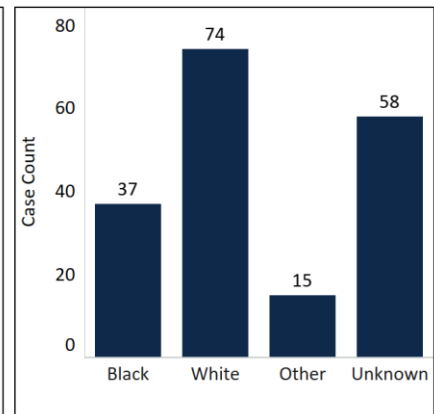
Age Group, 2021



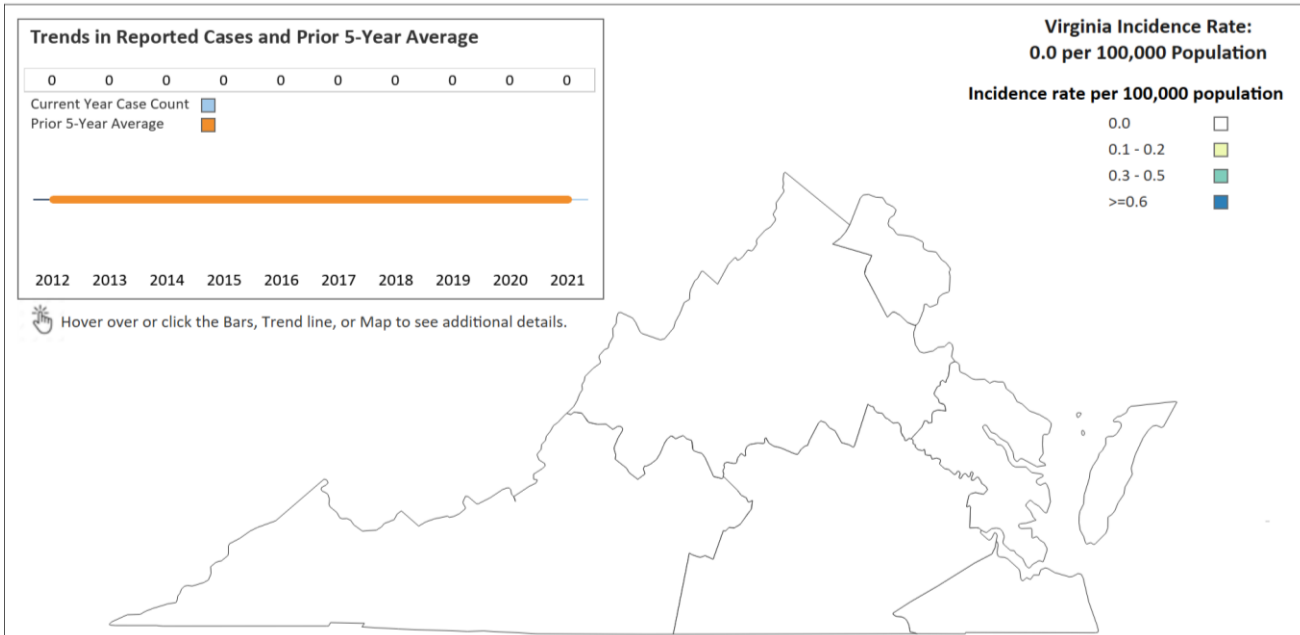
Sex, 2021



Race, 2021

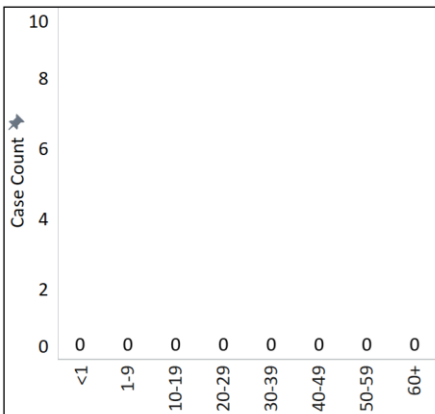


Smallpox



Smallpox was a serious, contagious, and deadly disease caused by the variola virus. In 1980, the World Health Assembly declared smallpox eradicated (eliminated), and no cases of naturally occurring smallpox have happened since. The virus spread from person to person through direct contact with respiratory droplets from a cough or sneeze, secretions, or skin lesions of an infected person. People with smallpox had a fever and distinctive skin rash. One of the first methods for controlling smallpox was variolation, a process during which people were exposed to material from smallpox sores by scratching the material into their arm or inhaling it through the nose. In the 1800s, smallpox vaccination became widely accepted and gradually replaced the practice of variolation. Due to the success of smallpox vaccination campaigns, the last natural outbreak of smallpox in the United States occurred in 1949. Many people consider smallpox eradication to be the biggest achievement in international public health.

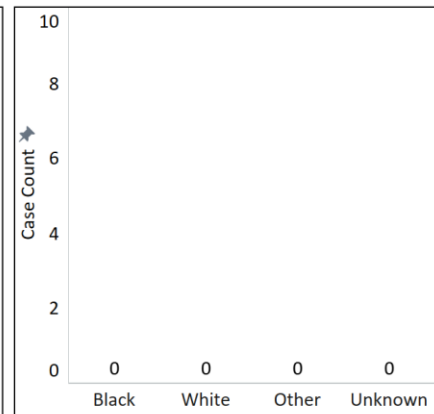
Age Group, 2021



Sex, 2021

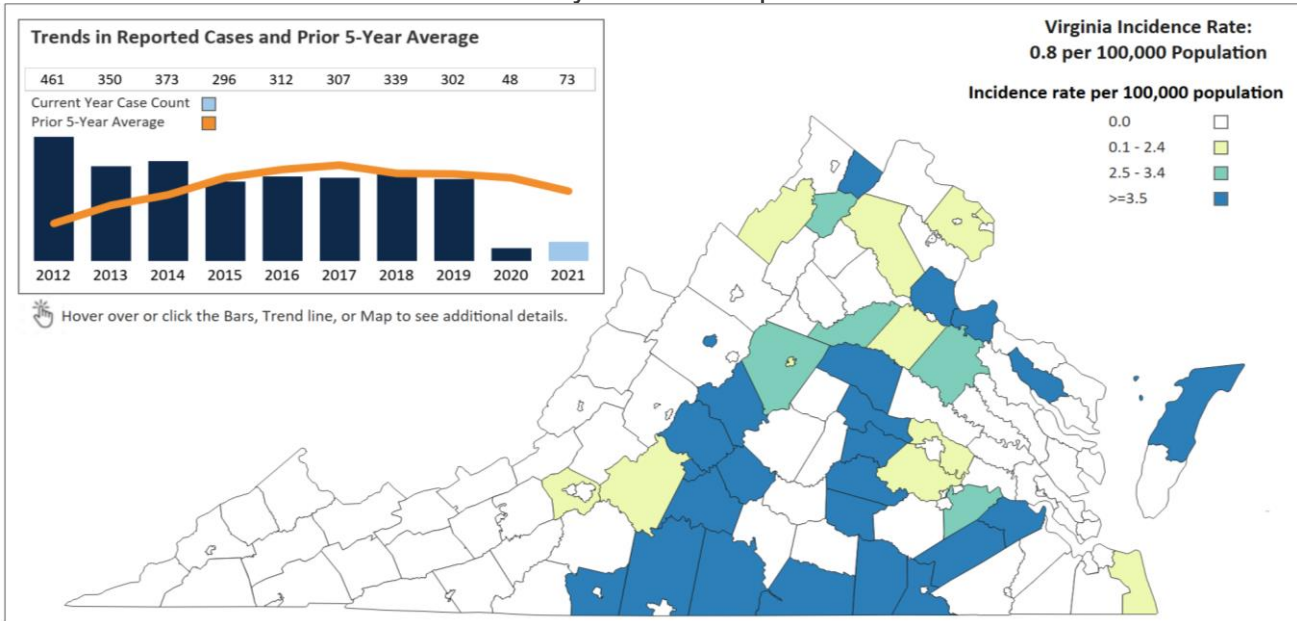
	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021



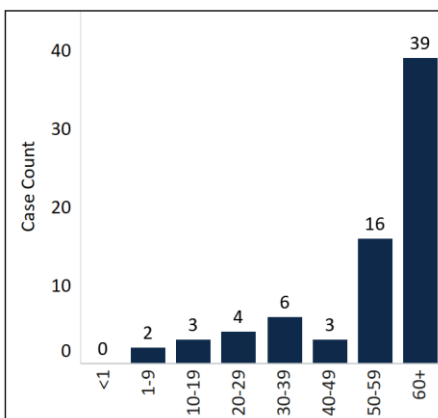
Spotted Fever Rickettsiosis

Includes Rocky Mountain Spotted Fever

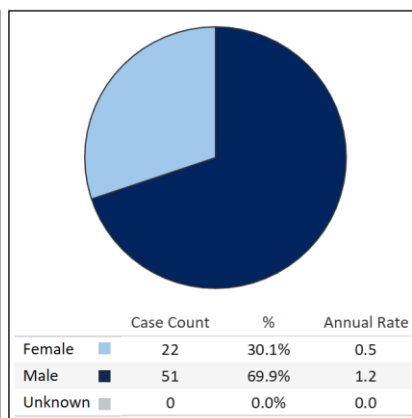


Spotted fever rickettsiosis (SFR) is a tick-borne illness that may be caused by several different bacteria in the Rickettsia, including *Rickettsia rickettsia*, the cause of Rocky Mountain spotted fever (RMSF), and *Rickettsia parkeri*, the cause of Tidewater spotted fever. In Virginia, RMSF, the most serious SFR, may be transmitted by either the brown dog tick or the American dog tick. *Rickettsia parkeri* is transmitted primarily by the Gulf Coast tick. RMSF positive laboratory results may also be caused by other tick-borne species of *Rickettsia* due to cross-reactivity. RMSF is a severe illness with symptoms including fever, rash, headache, and organ failure. If untreated, cases have up to a 25% mortality rate. *Rickettsia parkeri* is less severe, and cases often present with an eschar (dry, dead wound tissue) at the site of tick bite. In 2021, 73 cases of SFR were reported in Virginia, and 53% occurred in patients 60 years of age and older. The national case definition was updated in 2020.

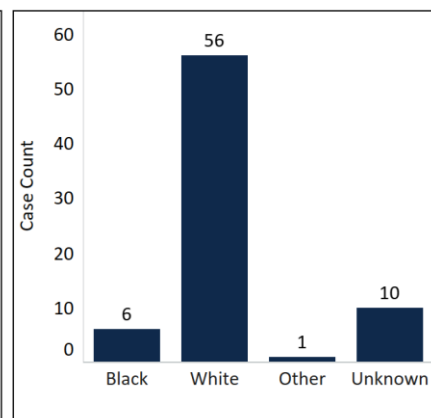
Age Group, 2021



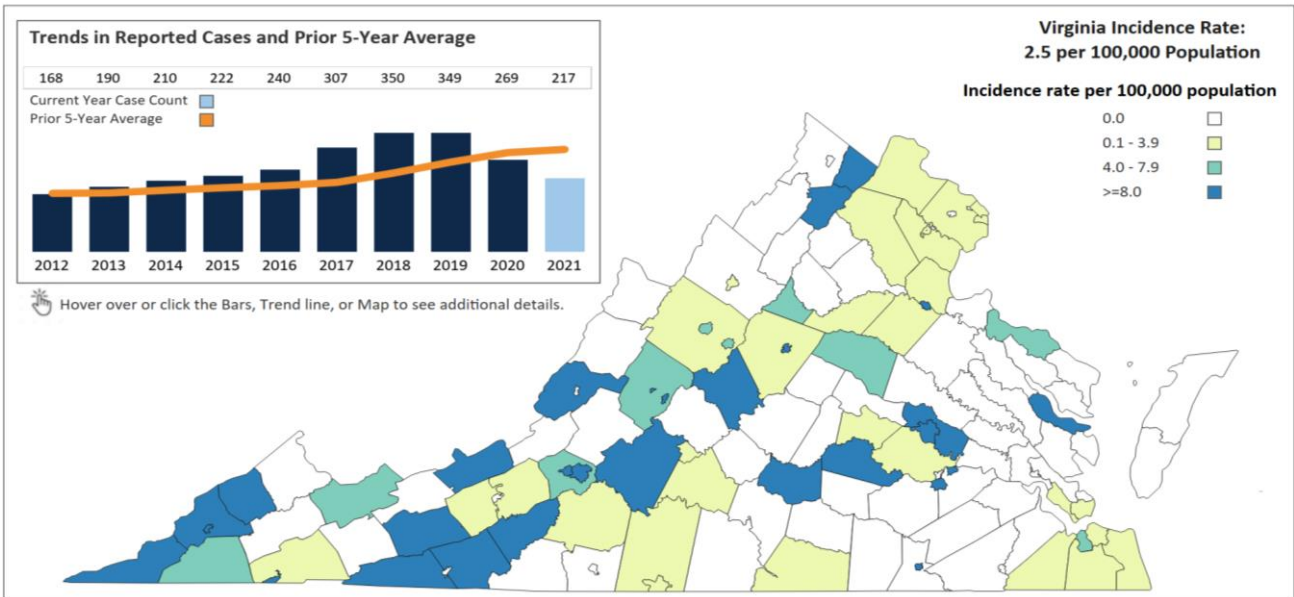
Sex, 2021



Race, 2021

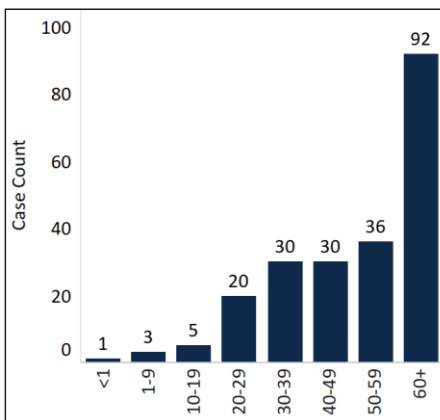


Streptococcal Disease, Group A, Invasive or Toxic Shock

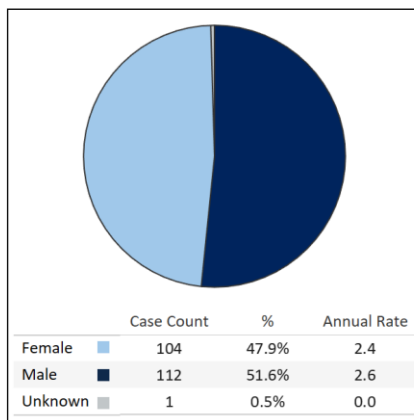


Group A streptococcal (GAS) infections, caused by *Streptococcus pyogenes*, can range from minor illnesses to very serious and deadly conditions. Severe and invasive GAS infections occur when bacteria spread to sterile parts of the body, such as the blood or deep muscle tissue. Invasive group A streptococcal disease (iGAS) and streptococcal toxic shock syndrome (STSS) are reportable conditions in Virginia. STSS can progress rapidly to cause low blood pressure, multiple organ failure, and even death. Rates of iGAS/STSS are highest in those aged 60 and older (4.8 cases per 100,000 population). Outbreaks of iGAS occur periodically in long-term care facilities, such as nursing homes. Virginia reported a steady increase in iGAS/STSS cases beginning in 2012, with cases appearing to decline starting in 2019. Practicing good hand hygiene and proper wound care is the best prevention for GAS illnesses.

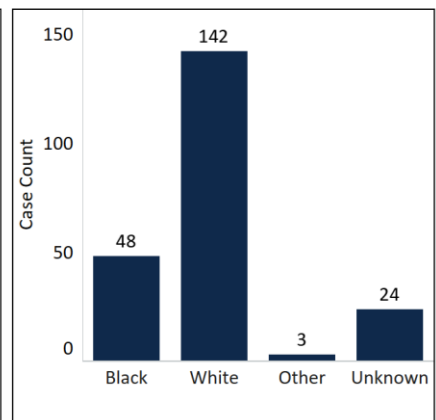
Age Group, 2021



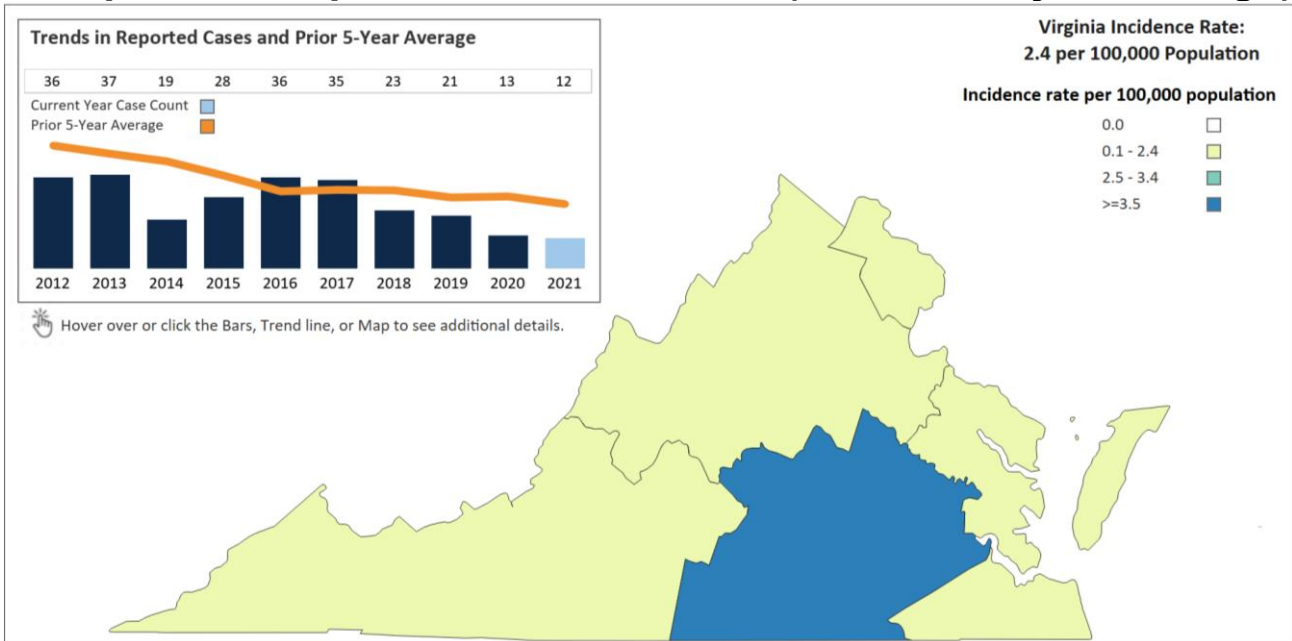
Sex, 2021



Race, 2021

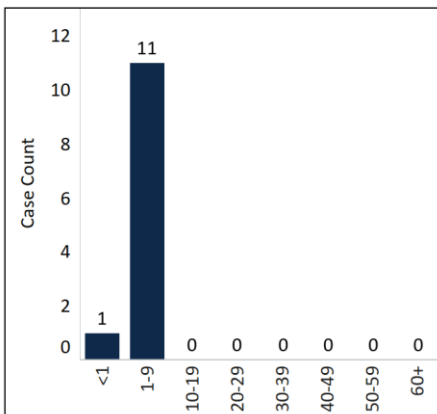


Streptococcus pneumoniae, Invasive (less than 5 years of age)

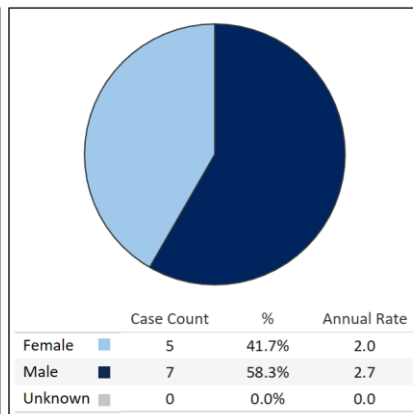


Invasive pneumococcal disease (IPD) is caused by the bacteria *Streptococcus pneumoniae* and is spread from person to person when an infected person coughs or sneezes. The bacteria can cause infections in many parts of the body, including the blood, lungs (pneumonia), sinuses, and lining of the brain and spinal cord (meningitis). Symptoms depend on the part of the body affected, and can include fever, cough, shortness of breath, chest pain, stiff neck, joint pain, and chills. Unvaccinated children, the elderly, and people with weakened immune systems are the most at risk for invasive infection. From 1998 to 2019, cases in children under 5 years of age decreased by 93%, in part due to widespread vaccination. IPD cases are only reported in Virginia in children under 5 years of age, and cases have declined each year since 2017.

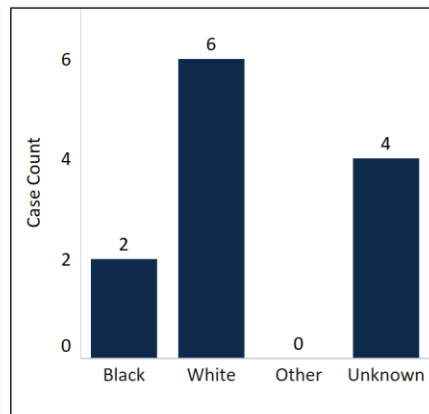
Age Group, 2021



Sex, 2021

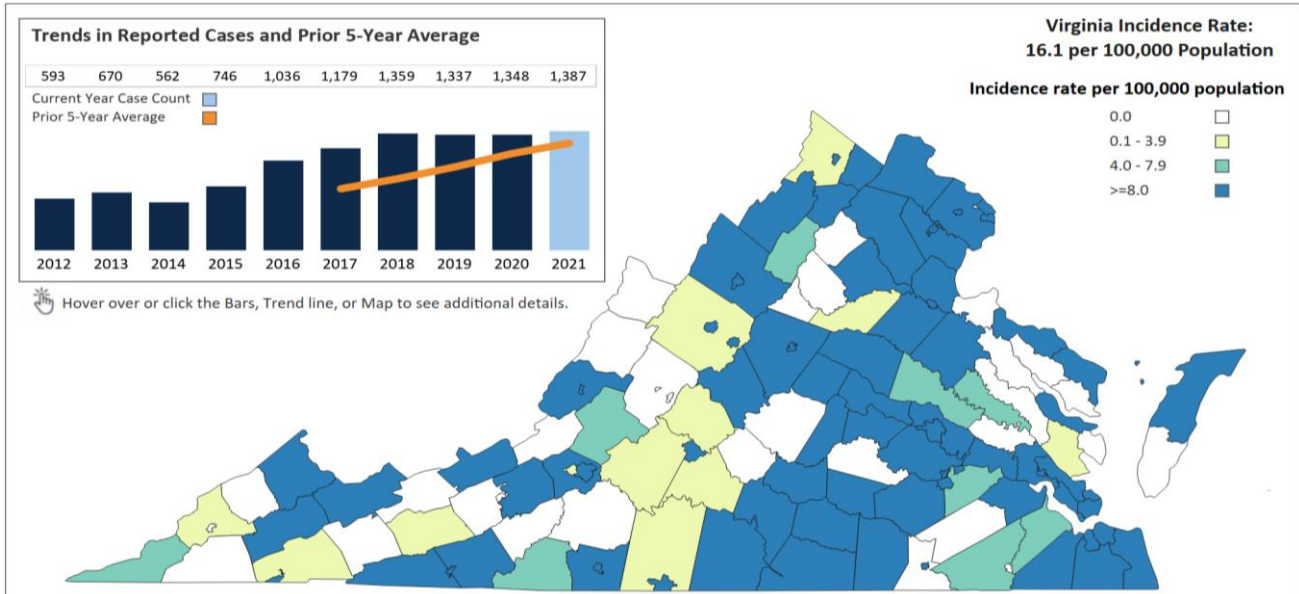


Race, 2021



Syphilis, Early

Includes Primary, Secondary, and Early Non-Primary, Non-Secondary Syphilis

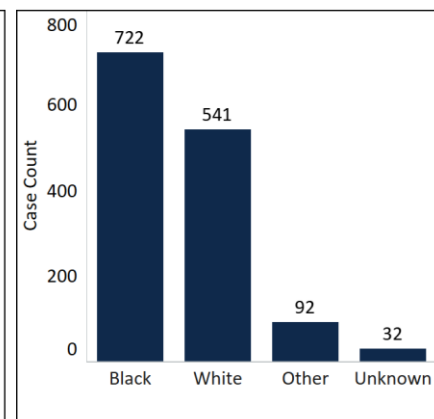
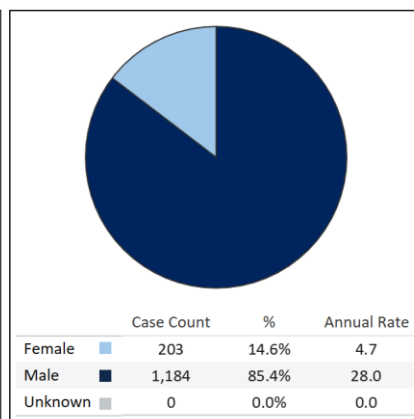
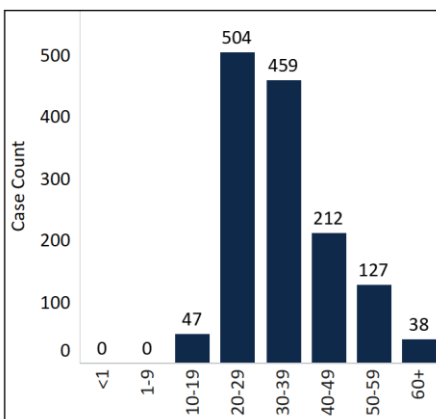


Syphilis is a systemic disease caused by the bacterium *Treponema pallidum*. It can be transmitted through vaginal, oral, or anal sex. It can also be prenatally transmitted from a mother to their unborn child. Syphilis is called the “great imitator” as its many possible symptoms can mimic other diseases. Early symptoms may appear 21 days after exposure (range 10-90 days). If left untreated, syphilis can progress to more severe disease. Syphilis infections disproportionately affect men who have sex with men (MSM), non-Hispanic black persons, and those 20-39 years of age. This report includes all cases of early syphilis (primary, secondary, and early non-primary, non-secondary stages) reported in Virginia. In 2021, 1,387 early syphilis cases were reported, which is an increase of 18% from 2017. Transmission of this disease can be mitigated by condom use, routine screening for sexually active persons, and ensuring adequate treatment for both infected individuals and their sex partners.

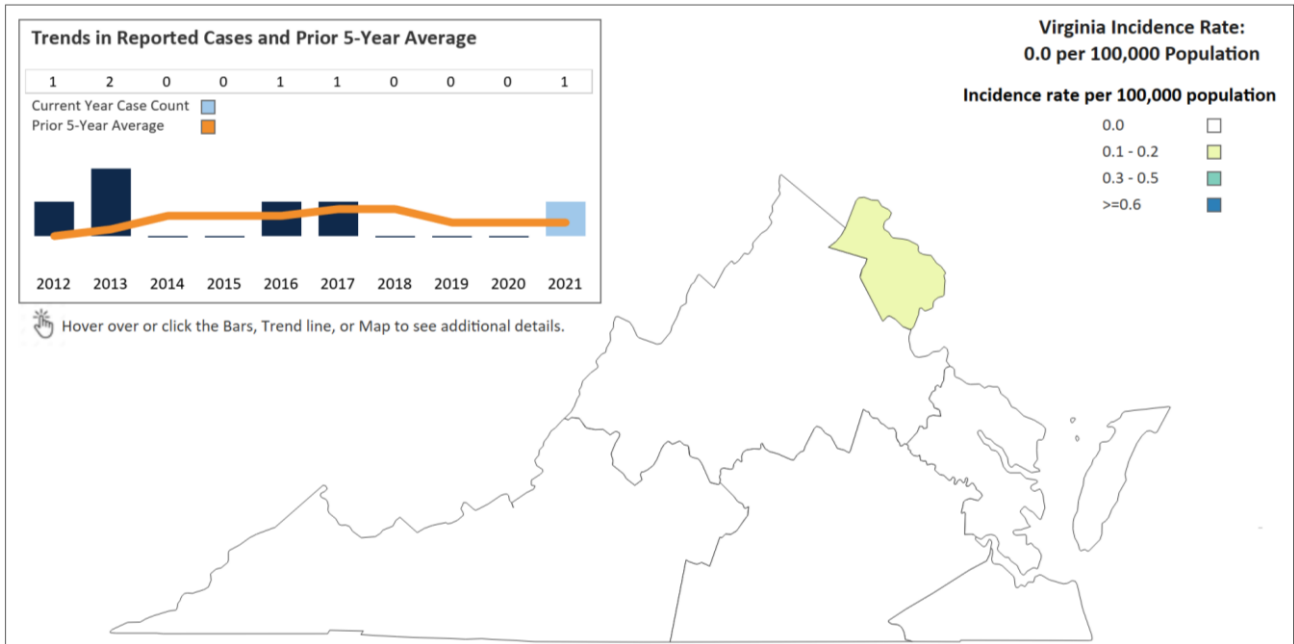
Age Group, 2021

Sex, 2021

Race, 2021

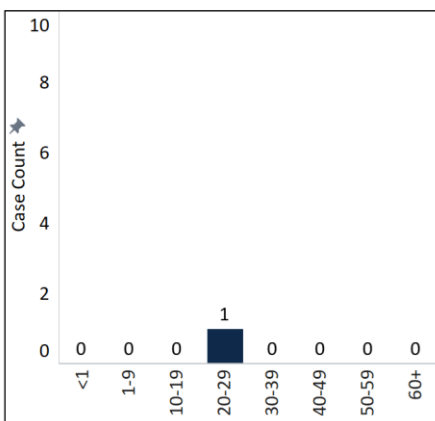


Tetanus

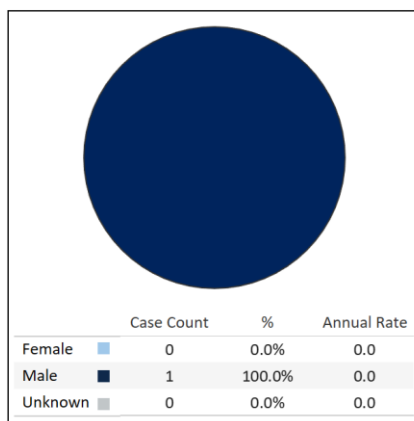


Tetanus, commonly known as lockjaw, is a disease caused by *Clostridium tetani* bacteria that affects the nervous system. The bacteria can enter the body through a break in the skin, primarily a wound, and produce a toxin that causes painful muscle contractions. Signs and symptoms can include jaw cramping, muscle spasms, trouble swallowing, seizures, headache, and fever. The risk of death from tetanus is highest among people 60 years of age or older. Since 1947, reported cases of tetanus have declined more than 95% in the United States due to widespread use of the tetanus vaccine. To this day, cases of tetanus remain rare in Virginia.

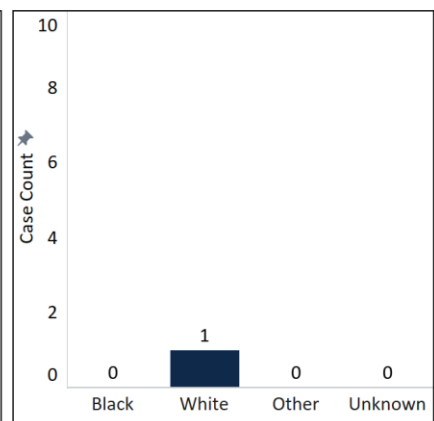
Age Group, 2021



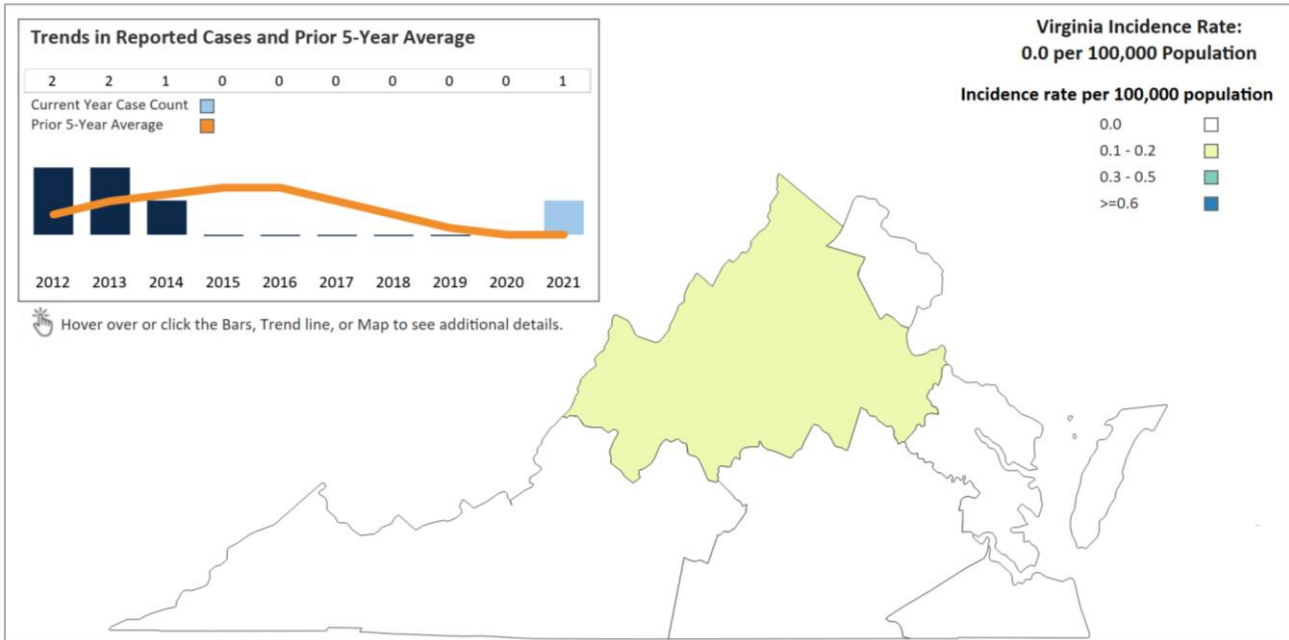
Sex, 2021



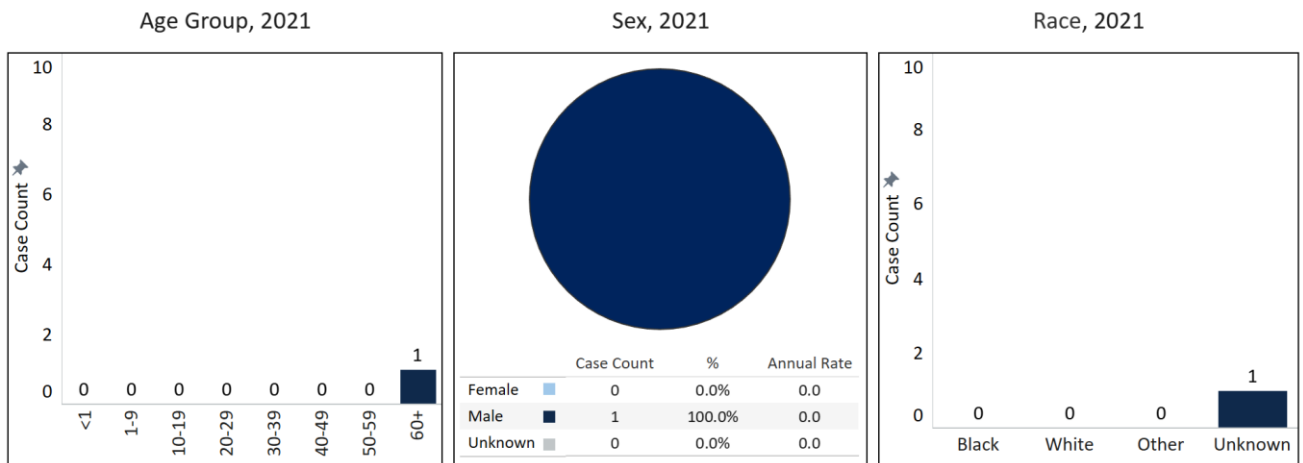
Race, 2021



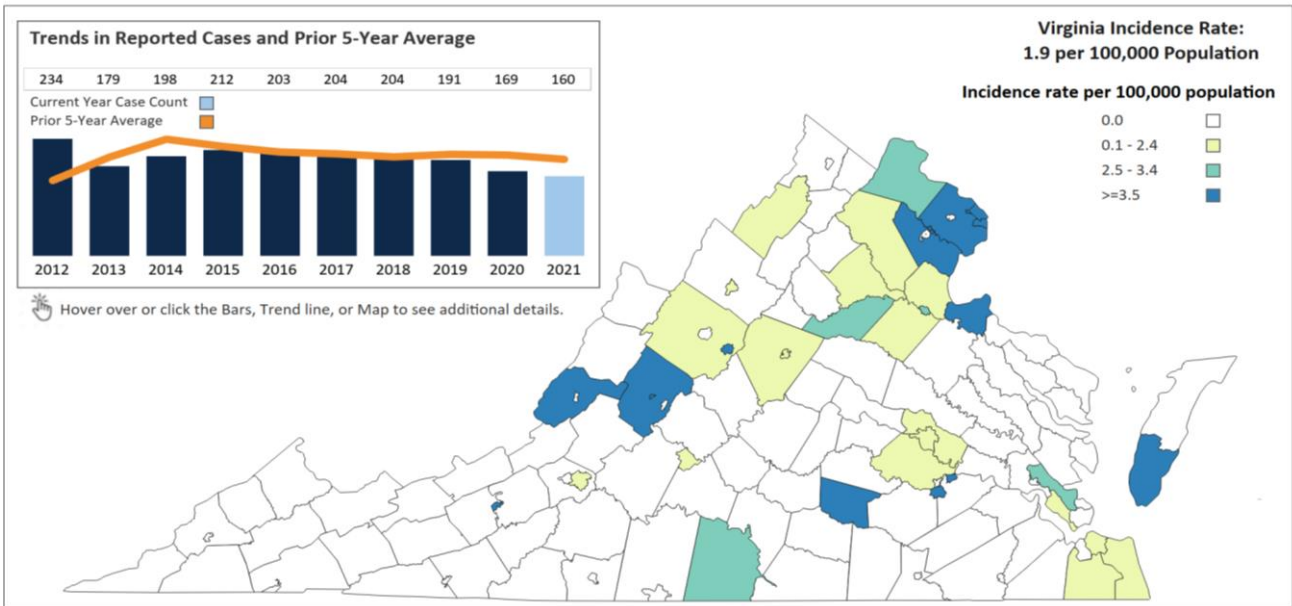
Trichinosis (Trichinellosis)



Trichinellosis, also known as trichinosis, is caused by eating raw or undercooked meat that contains the early, immature form (larvae) of a worm called *Trichinella*. It occurs worldwide, most often in wild animals, but it is not common in the United States. People who eat raw or undercooked meat from animals infected with the *Trichinella* worm are at higher risk for developing trichinellosis. Meats of concern include bear, pork, wild feline (such as cougar), fox, dog, wolf, horse, seal, and walrus. The disease is not spread from person to person. Initial symptoms of trichinellosis include abdominal discomfort, nausea, vomiting, diarrhea, fatigue, and fever. Aching joints, muscle pain, swelling of the face and eyes, sweating, chills, headaches, cough, itchy skin, and sometimes constipation can occur later. One case of trichinosis was reported in 2021.

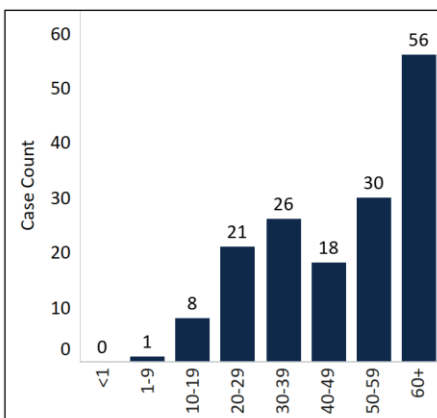


Tuberculosis

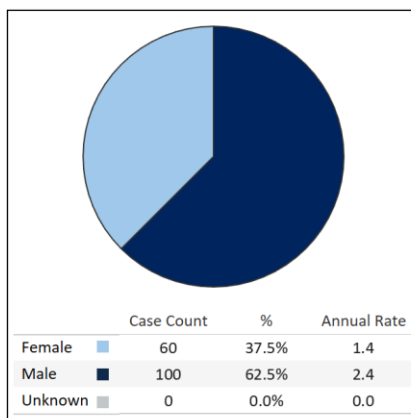


Tuberculosis (TB) is a disease caused by the bacterium *Mycobacterium tuberculosis*. TB most often affects the lungs, but can occur anywhere in the body. There are two TB-related conditions: TB disease and latent TB infection (LTBI). People with TB disease usually feel sick, have symptoms, and can spread TB to others, depending on the site of disease. Virginia’s TB disease counts and rates plateaued prior to the COVID-19 pandemic, after years of gradual decline, but Virginia’s TB rate stayed below the national rate. Similar to national trends, Virginia saw decreased counts and rates in 2020 (11.5% decrease in cases from 2019) and 2021 (5.3% decrease in cases from 2020), attributed to impacts from the pandemic. A return to pre-pandemic numbers is expected by 2023. Over 80% of people with TB in Virginia are born outside of the United States, and international humanitarian crises and global migration impacts TB burden. Prompt initiation of treatment and contact investigations reduces transmission.

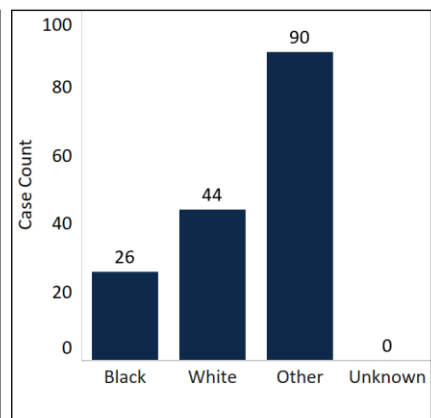
Age Group, 2021



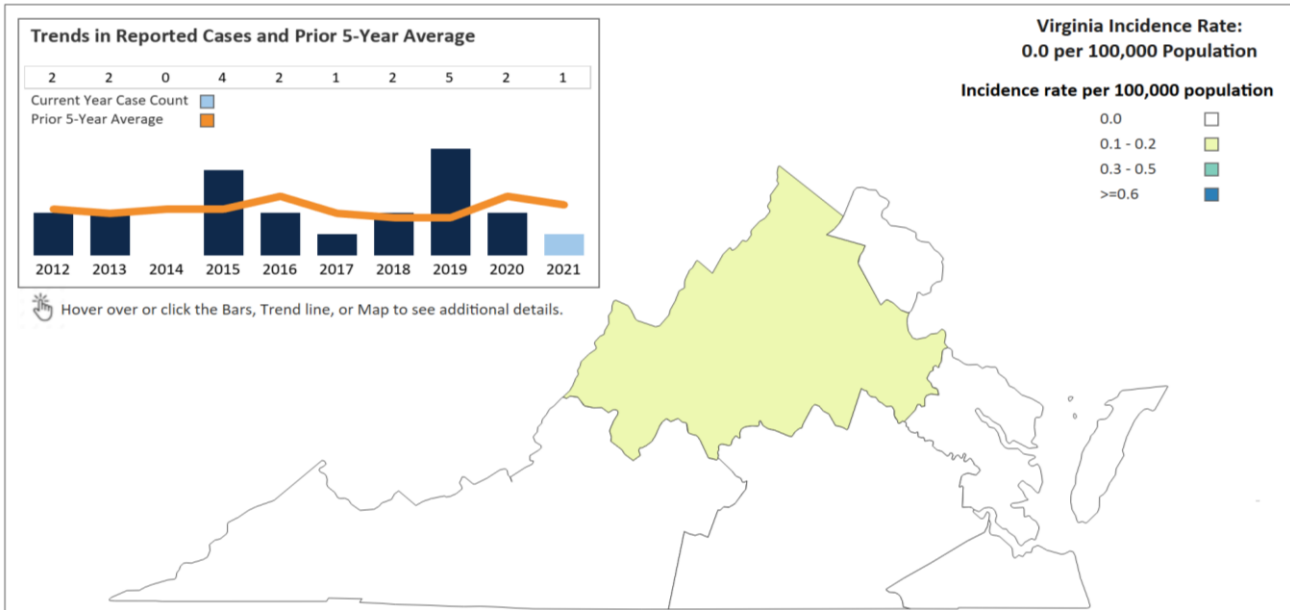
Sex, 2021



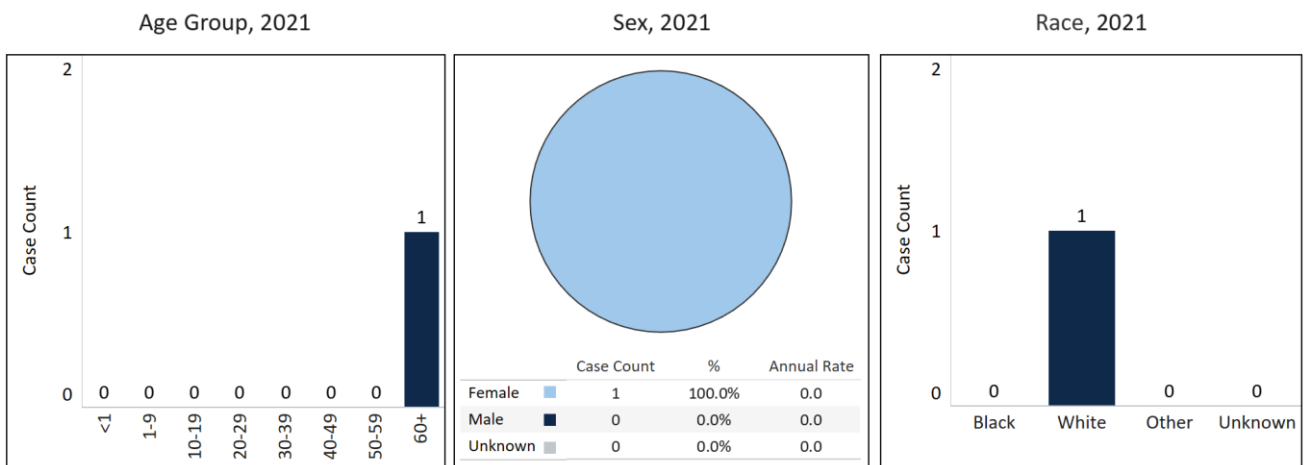
Race, 2021



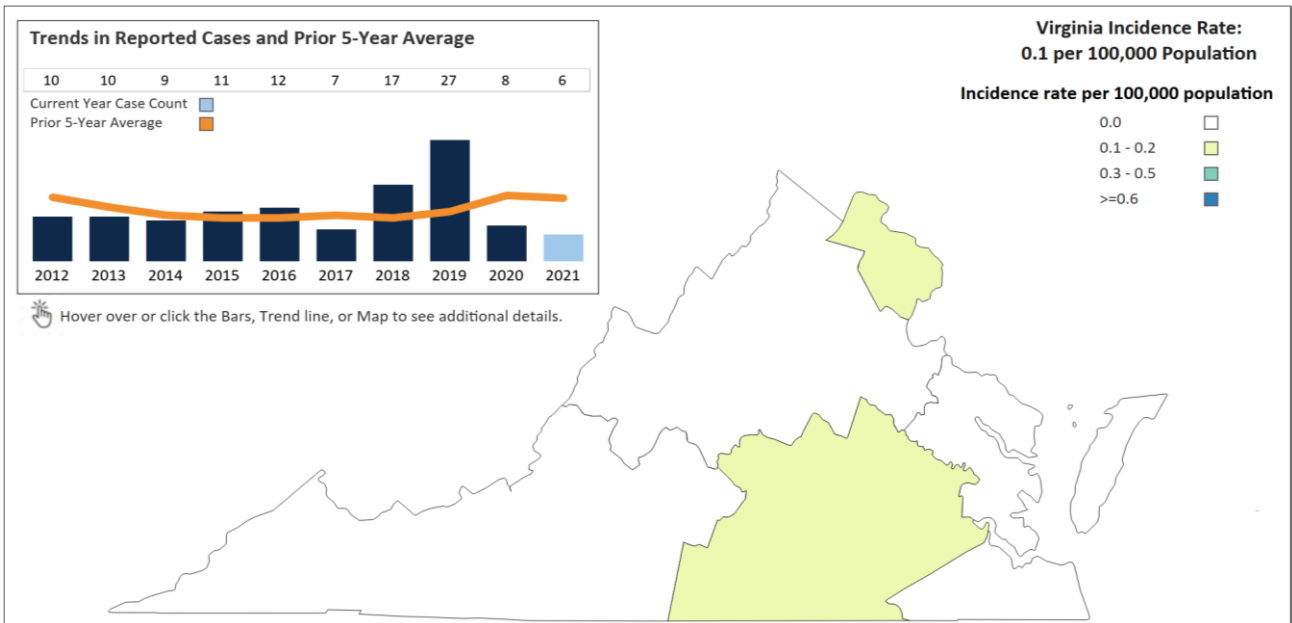
Tularemia



Tularemia is a disease caused by the bacteria *Francisella tularensis*. Tularemia can be transmitted in a number of ways, including tick bites, handling an infected animal, consuming contaminated water, and laboratory exposure. Symptoms can vary depending on the mode of transmission, but usually include sudden onset of high fever, chills, fatigue, general body aches, headache, and nausea. Preventive measures include minimizing the risk of tick bites by the use of both appropriate dress and insect repellants when recreating or working in tick habitats and avoiding the consumption of untreated water. Impervious protective gloves should be used when skinning rabbits and other wild game. Utensils used for preparing meat from game should not be used to prepare other food items. Undercooked meat should not be consumed. Mowing over dead animals should be avoided to lower the risk of aerosolizing infectious particles. One case of tularemia was reported in 2021 and, typically, Virginia reports fewer than 5 cases per year.

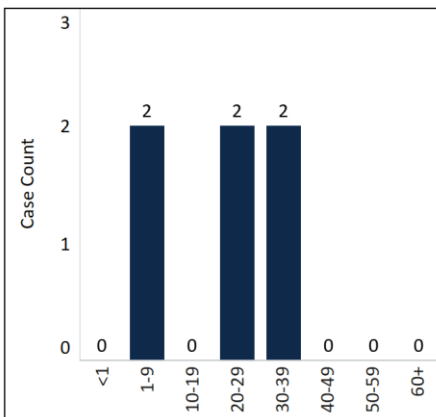


Typhoid Infection

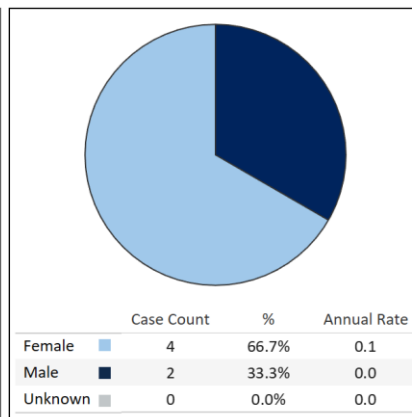


Typhoid infection is a serious disease caused by the bacterium *Salmonella Typhi*. Most cases diagnosed in the U.S. are acquired during travel to other countries in Asia, Africa, and South and Central America, where the disease is common. It can be transmitted by eating or drinking food or water that has been contaminated with feces or urine of people with the disease or by direct contact with a person who has the disease. Typhoid infection can cause high fever, headaches, weakness, loss of appetite, diarrhea, or constipation, and some people get “rose spots” on the trunk of the body. In 2021, 6 cases of typhoid infection were reported in Virginia. Typhoid infection can be prevented by proper hand washing after using a toilet or changing a diaper and before preparing or eating food. A vaccine is available that provides some protection for persons traveling to areas where the disease is common. Even if vaccinated, persons traveling to these areas still need to be careful about what food and water they consume.

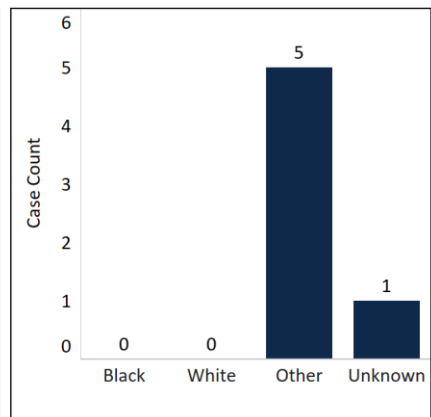
Age Group, 2021



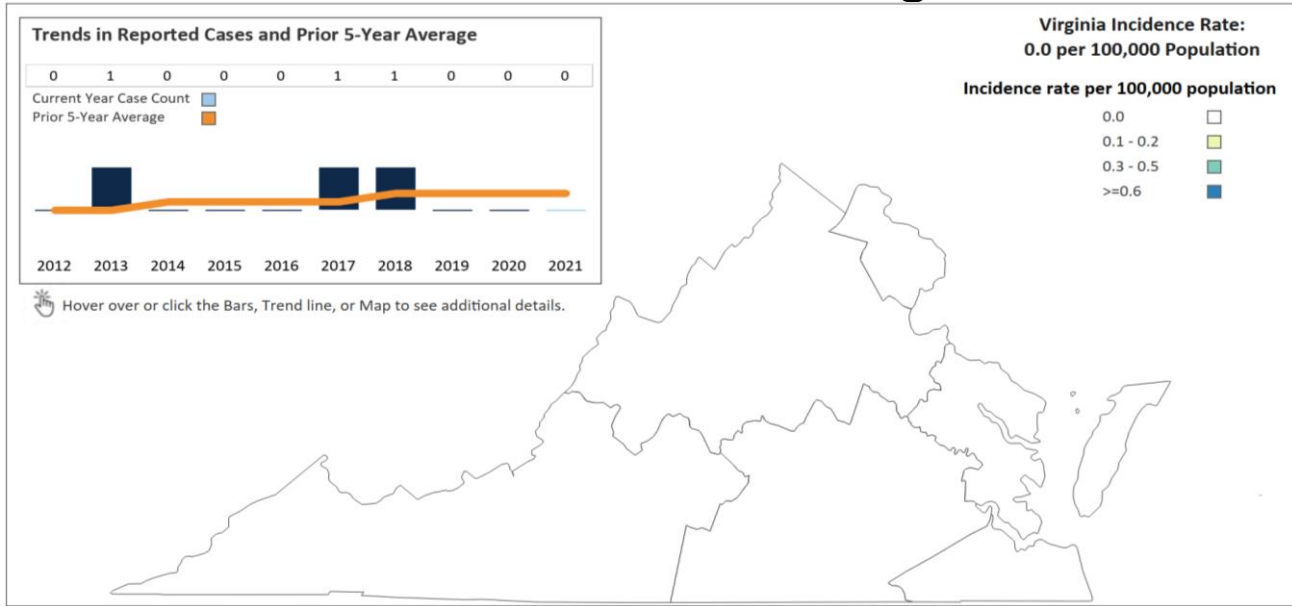
Sex, 2021



Race, 2021

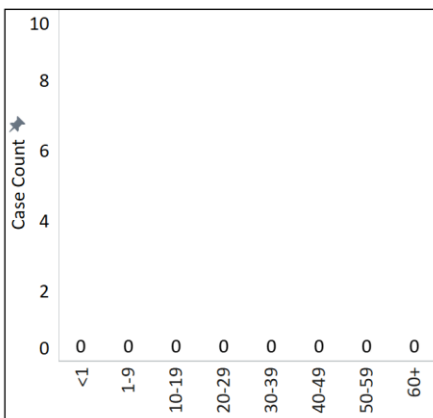


Vaccinia Adverse Event Following Vaccination



The smallpox vaccine is made from a live virus called vaccinia, which is similar to smallpox but less harmful. Routine smallpox vaccination stopped after the disease was eradicated. Vaccination is still recommended for people who are at high risk of occupational exposure, such as laboratory staff who handle smallpox virus and other orthopoxviruses. Most vaccinated people will have a mild reaction, such as a sore arm, fever, swollen glands, and body aches. More severe reactions can occur and must be reported to public health, including dermatologic complications or cardiac adverse events. Also, vaccinia infection can occur in close contacts exposed to the fluid or crust material from the lesion of someone who was recently vaccinated; people who are recently vaccinated must take precautions to prevent vaccinia virus from spreading. Since 2012, three cases of vaccinia have been reported in Virginia in people who were recently vaccinated or were a close contact of a vaccine recipient.

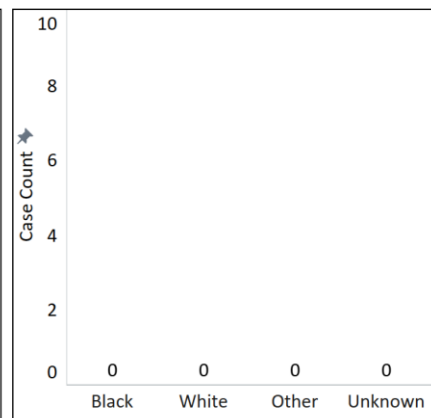
Age Group, 2021



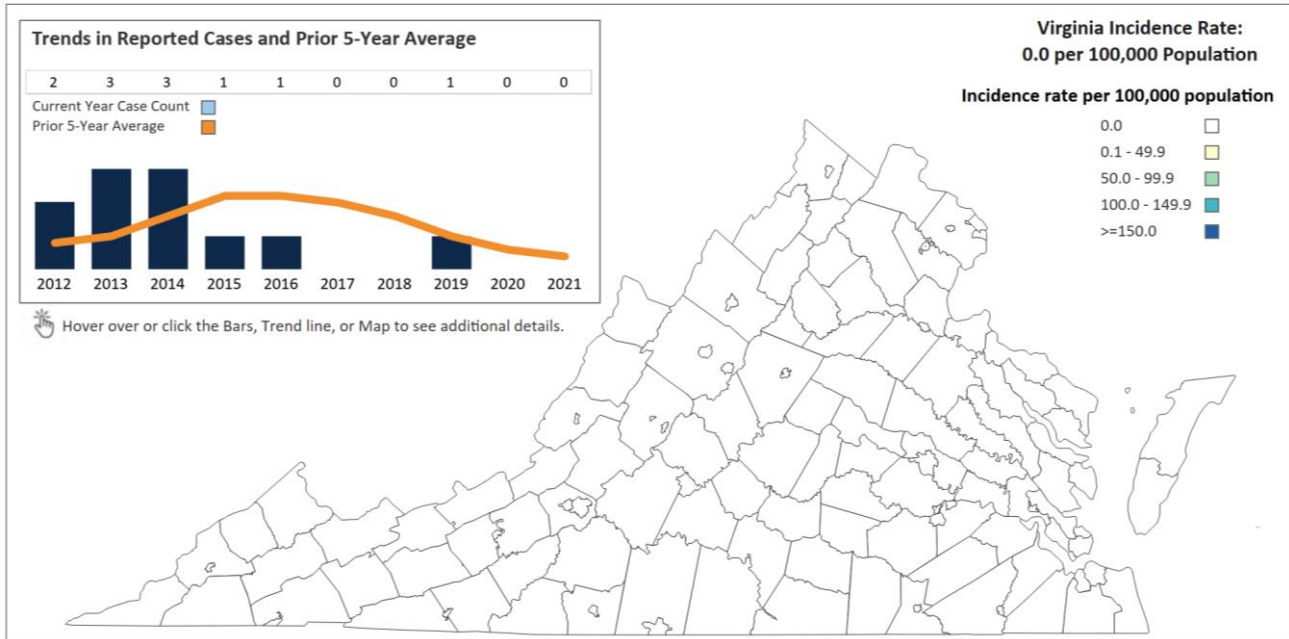
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

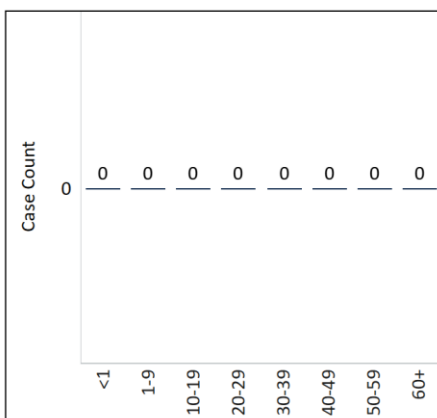


Vancomycin-intermediate *Staphylococcus aureus* (VISA)



Staphylococcus aureus is a bacterium commonly found on the skin and in the nose. Spread occurs among people having close physical contact with infected patients or contaminated material, such as bandages. Early detection and implementation of infection prevention and control strategies are necessary to prevent the spread. Sometimes these bacteria can get into the bloodstream and cause serious infections which can be fatal. Vancomycin-intermediate *Staphylococcus aureus* is a type of staph infection that was found to have intermediate resistance to a drug called Vancomycin. Vancomycin is a common treatment option for staph infections. Persons who develop this type of staph infection may have underlying health conditions, tubes going into their bodies, previous infections with methicillin-resistant *Staphylococcus aureus* (MRSA), and recent exposure to vancomycin and other antimicrobial agents. VISA is rare in Virginia with no cases reported in 2021.

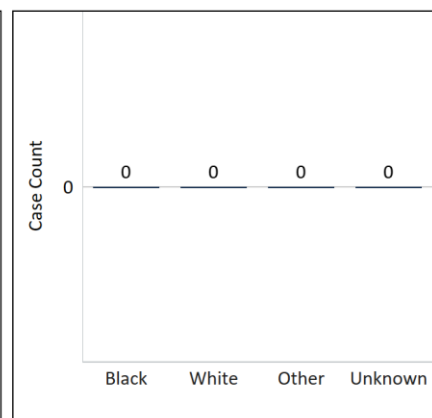
Age Group, 2021



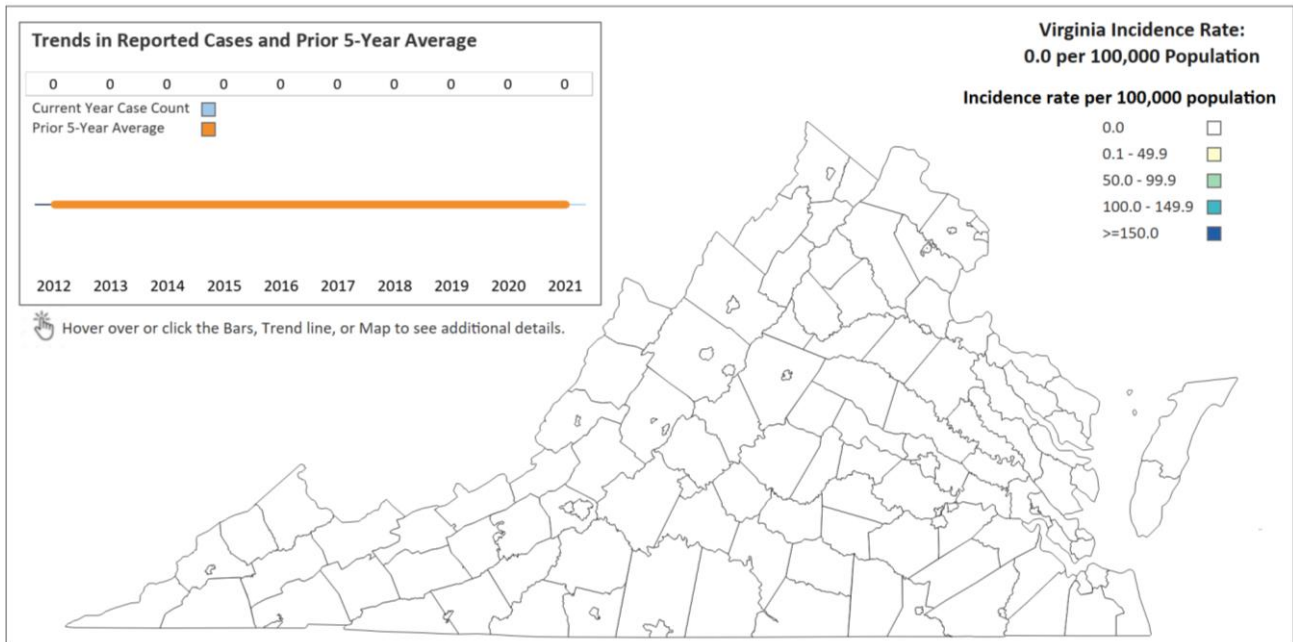
Sex, 2021

	Case Count	%	Annual Rate
Female	0	0.0	0.0
Male	0	0.0	0.0
Unknown	0	0.0	0.0

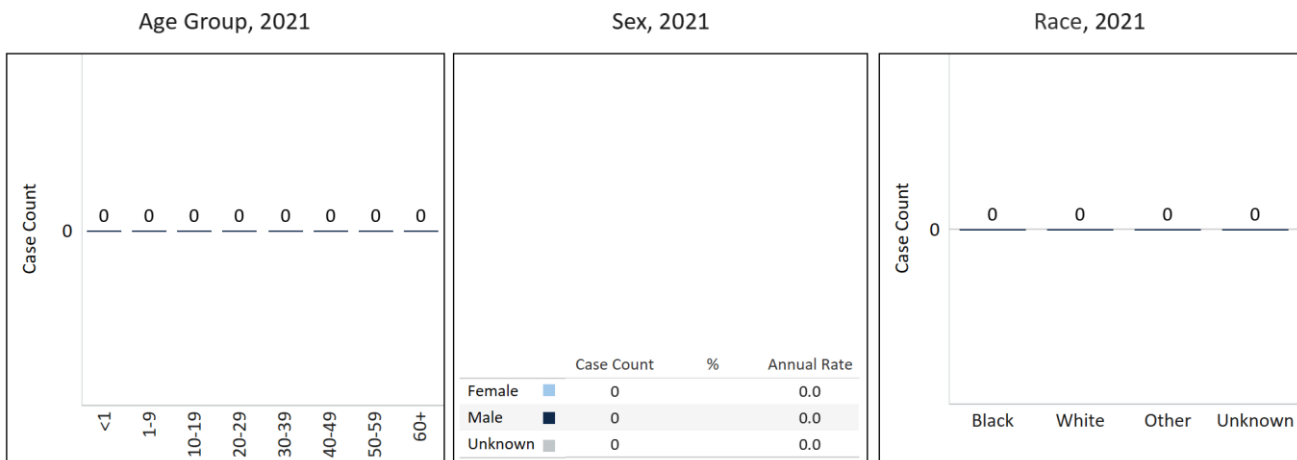
Race, 2021



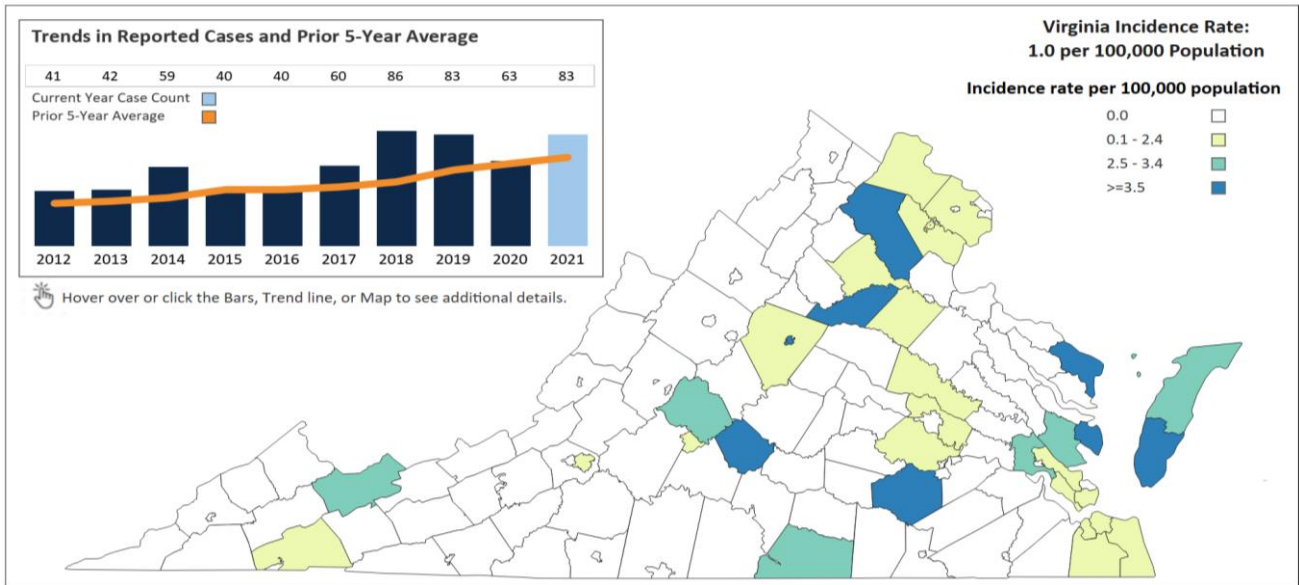
Vancomycin-resistant *Staphylococcus aureus* (VRSA)



Staphylococcus aureus is a bacterium commonly found on the skin and in the nose. Spread occurs among people having close physical contact with infected patients or contaminated material, such as bandages. Early detection and implementation of infection prevention and control strategies are necessary to prevent the spread. Sometimes these bacteria can get into the bloodstream and cause serious infections which can be fatal. Vancomycin-resistant *Staphylococcus aureus* is a type of staph infection that was found to have resistance to a drug called Vancomycin. Vancomycin is a common treatment option for staph infections. Persons who develop this type of staph infection may have underlying health conditions, tubes going into their bodies, previous infections with methicillin-resistant *Staphylococcus aureus* (MRSA), and recent exposure to vancomycin and other antimicrobial agents. VRSA is extremely rare in the United States and Virginia has not identified a case of VRSA.

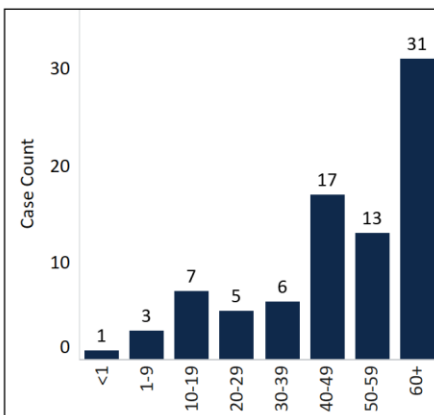


Vibriosis, Non-Cholera

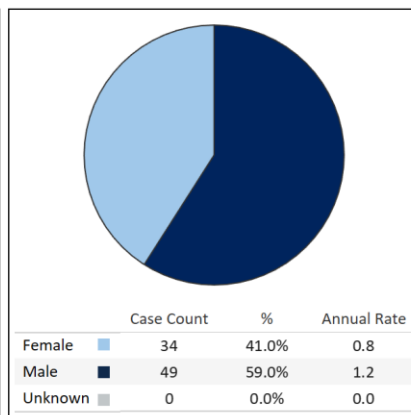


Vibriosis is a potentially serious illness caused by a group of bacteria called *Vibrio*. Anyone can become infected with *Vibrio*, but people with weakened immune systems and conditions that damage the liver are more likely to experience severe illness. *Vibrio* bacteria can cause different types of infection including gastrointestinal, wound, and blood. Most people become infected through eating raw or undercooked seafood and shellfish or when the *Vibrio* bacteria enter the body through a break in the skin while a person is in salt or brackish waters. Vibriosis is most common during the summer months when waters are warmer. During 2021, 83 vibriosis cases were reported, representing an increase from 2020 (possibly due to the COVID-19 pandemic) and an 11% increase over the previous 5-year average. This condition continues to affect adults over 59 years of age and 59% of vibriosis cases reported their sex as male. The statewide incidence rate of vibriosis in 2021 was 1.0 per 100,000.

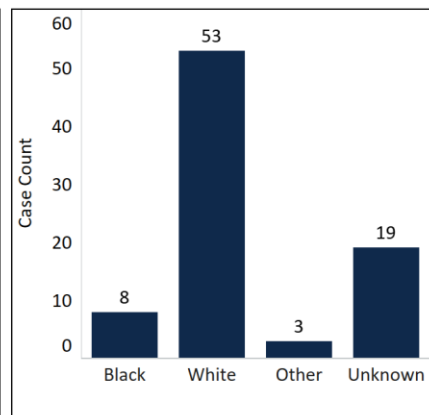
Age Group, 2021



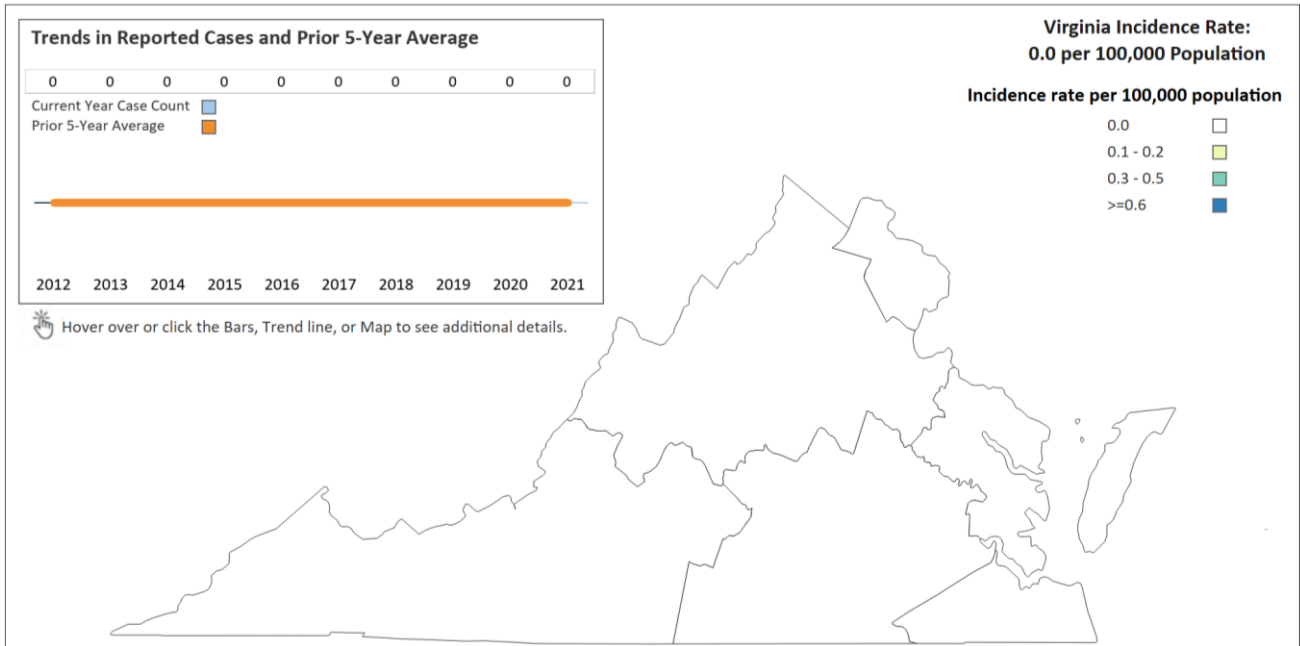
Sex, 2021



Race, 2021

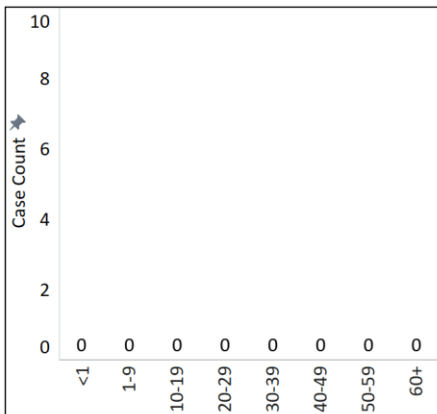


Viral Hemorrhagic Fever



Viral hemorrhagic fevers (VHFs) are a group of diseases that are caused by several distinct families of viruses. The term “viral hemorrhagic fever” refers to a condition that affects many organ systems of the body, damages the overall cardiovascular system, and reduces the body’s ability to function on its own. Symptoms vary but often include bleeding or hemorrhaging. Illness severity is wide ranging, from relatively mild illness to severe, life-threatening disease. Most VHFs have no known cure or vaccine. VHF viruses can spread to people when they come in contact with infected animals or insects. For many VHFs, person-to-person transmission can then continue. Outbreaks of VHFs occur sporadically and irregularly, and their occurrence can be difficult to predict. Prevention is more difficult when the animal host is unknown or challenging to control (such as rodents or ticks). No cases of viral hemorrhagic fever, of any type, were reported in Virginia during 2021.

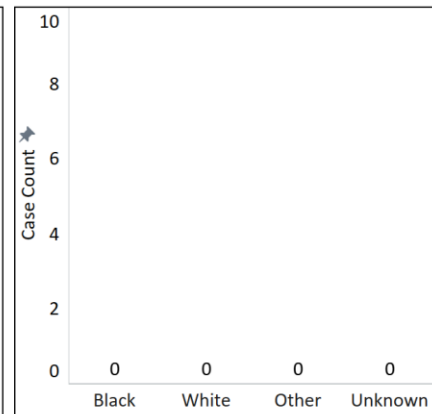
Age Group, 2021



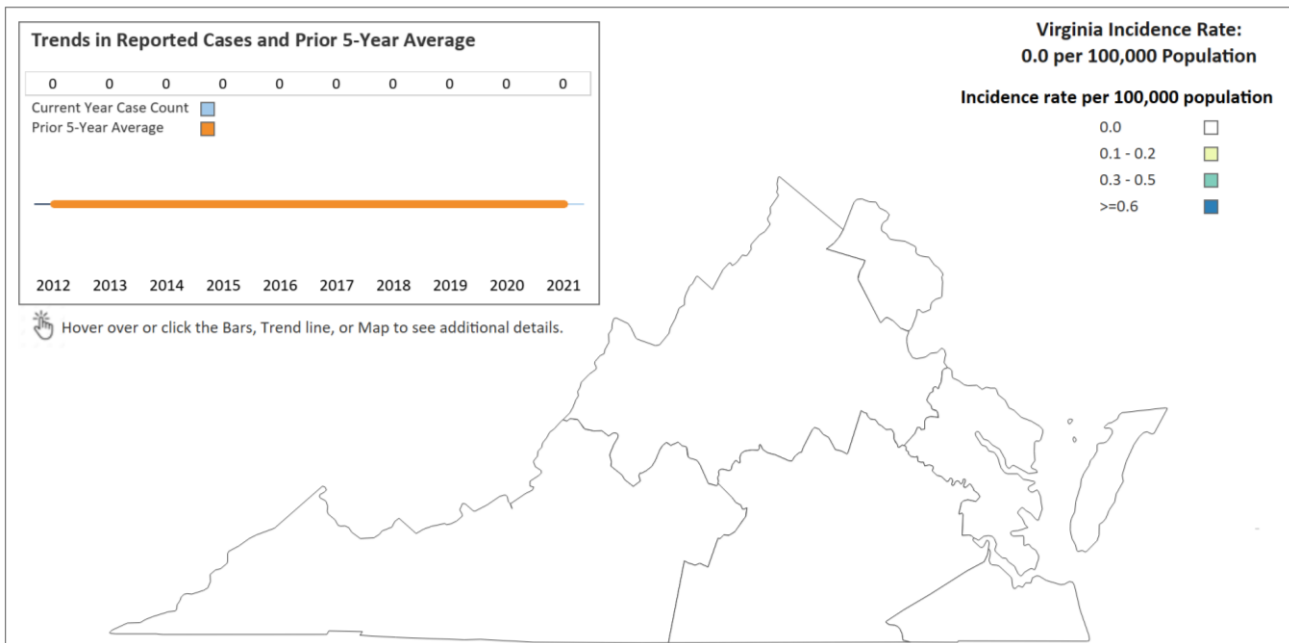
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

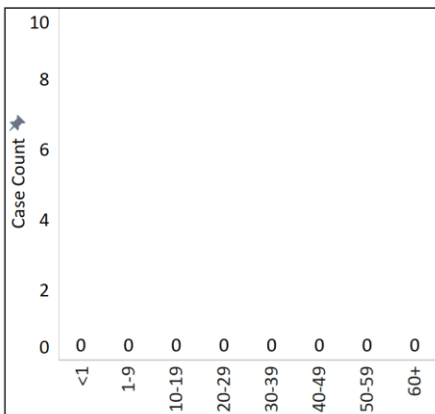


Yellow Fever



Yellow fever is caused by a virus and is found in tropical and subtropical areas of Africa and South America. The virus is transmitted through the bites of several species of infected *Aedes* mosquitoes, most notably the yellow fever mosquito (*Aedes aegypti*), which breeds in containers of water occurring around human habitats. Yellow fever mosquitoes occur in Virginia but have become rare after being displaced from their container breeding habitats by the arrival of the closely related Asian tiger mosquito (*Aedes albopictus*) in 1992. Yellow fever is a very rare cause of illness in U.S. travelers. Illness ranges from a fever with aches and pains to severe liver disease with bleeding and yellowing skin (jaundice). Vaccination against the yellow fever virus before traveling to endemic regions and avoidance of mosquito bites while traveling in these regions can help prevent infections. No cases of yellow fever were reported from Virginia in 2021.

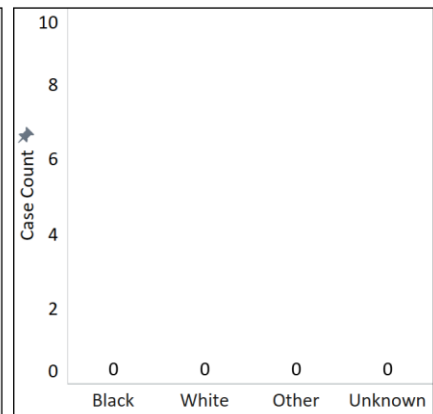
Age Group, 2021



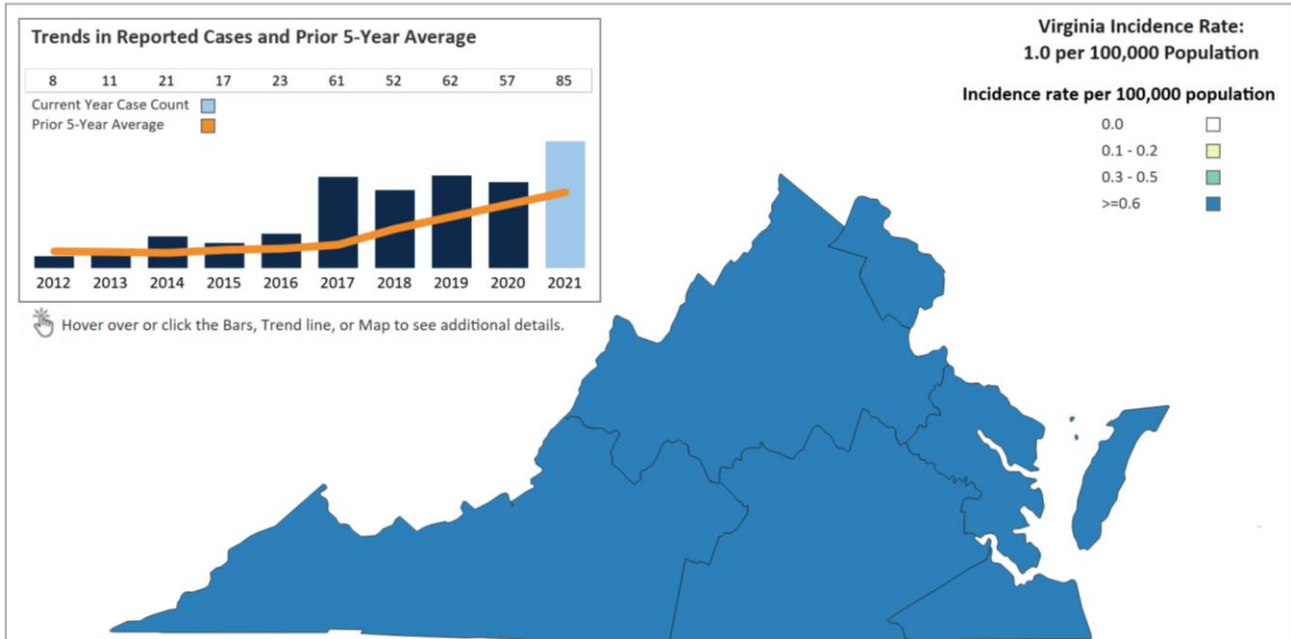
Sex, 2021

	Case Count	%	Annual Rate
Female	0		0.0
Male	0		0.0
Unknown	0		0.0

Race, 2021

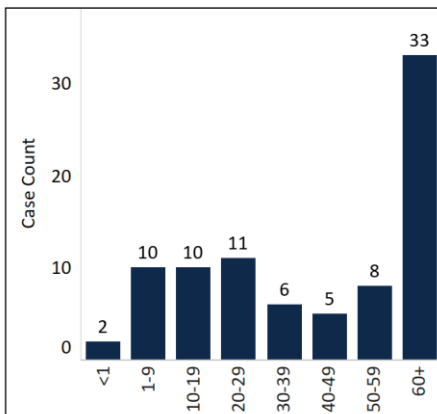


Yersiniosis

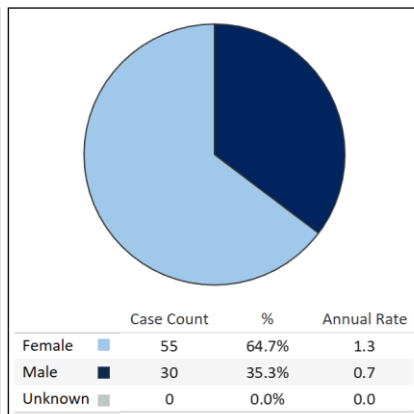


Yersiniosis is a gastrointestinal disease caused by the bacteria *Yersinia*. The bacteria can be found in live animals, particularly pigs. It can be transmitted by eating contaminated food, especially raw or undercooked pork products. Surfaces can become contaminated with *Yersinia* when preparing raw pork. If another food item or hands touch those surfaces and enter someone’s mouth, the person can become infected with the bacteria. Yersiniosis can cause fever, abdominal pain, and diarrhea. In 2021, 85 yersiniosis cases were reported, representing a 49% increase from 2020 (possibly due to the COVID-19 pandemic) and a 25% increase over the previous 5-year average. This condition disproportionately affects adults 60 years of age and older and 65% of yersiniosis cases reported their sex as female. Transmission of this condition can be reduced through proper hand washing and ensuring pork and pork products are cooked to appropriate temperatures.

Age Group, 2021



Sex, 2021



Race, 2021

