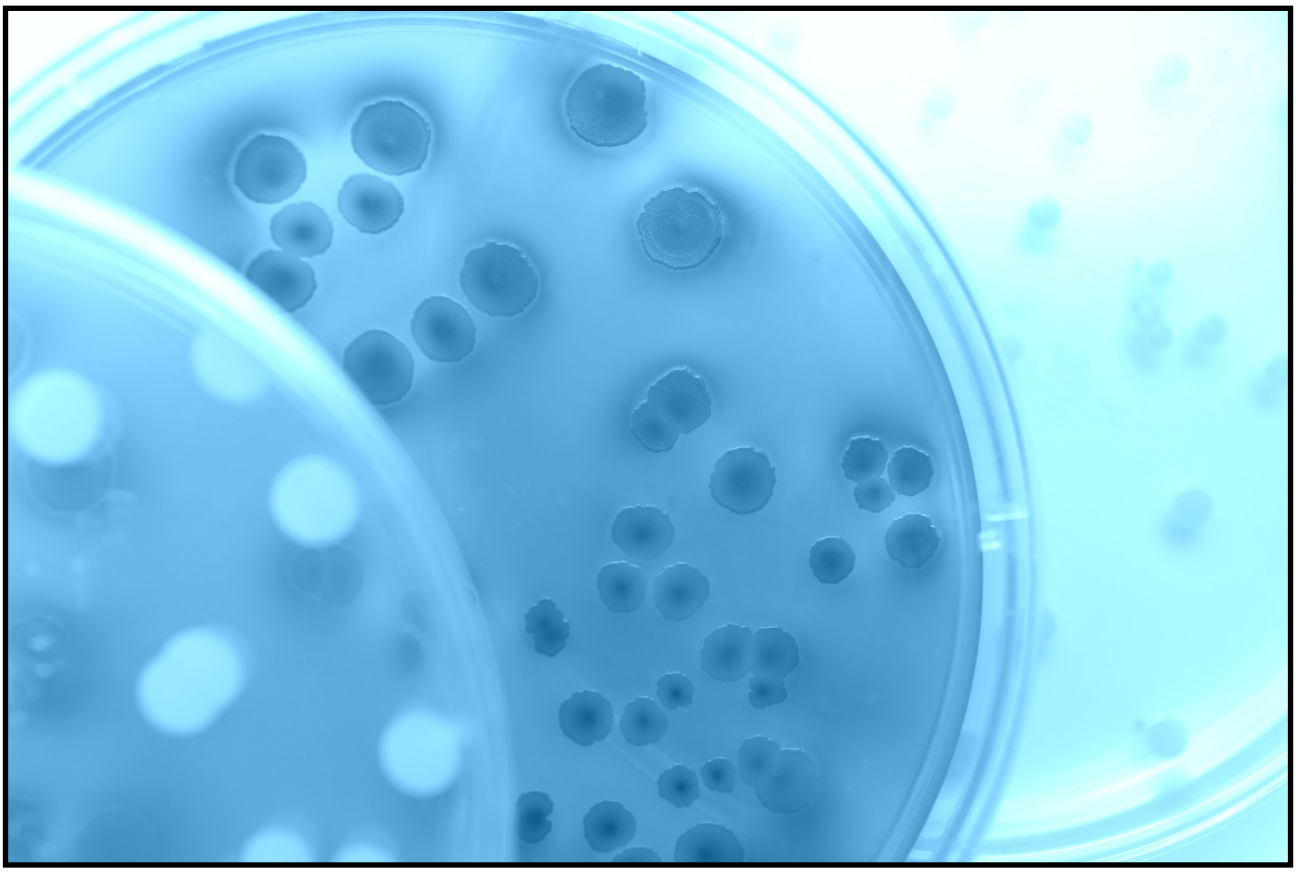
GNR PUBLIC HEALTH

Annual Report

Epidemiology & Infectious Disease

2019



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GWINNETT, NEWTON, AND ROCKDALE COUNTIES EPIDEMIOLOGY & INFECTIOUS DISEASE 2019 ANNUAL REPORT

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Executive Summary

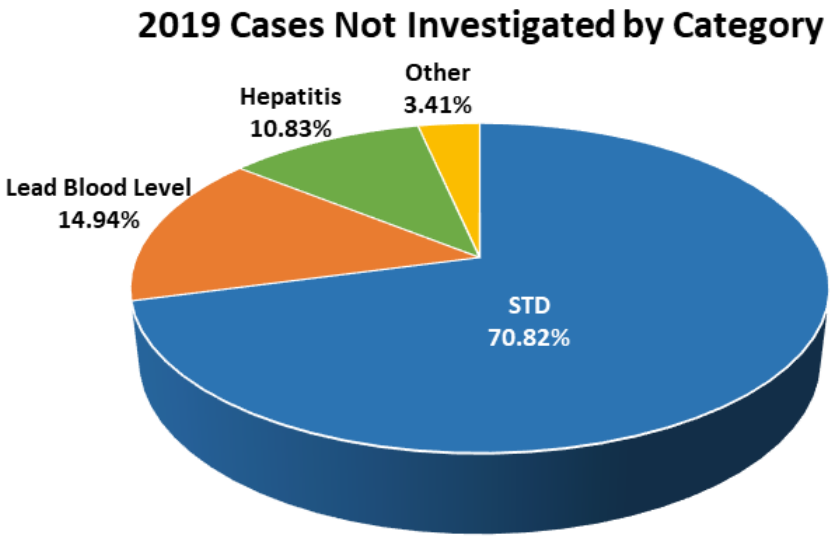
The Gwinnett, Newton, Rockdale County Health Departments (GNR), Division of Epidemiology and Infectious Disease serves the population of Gwinnett, Newton, and Rockdale Counties in metropolitan Atlanta, Georgia. The division is responsible for disease investigation and control for over one million residents. The division also participates in emergency-preparedness activities. Funding for all activities is secured through county, state, and federal grant-in-aid. The division consists of three distinct programs: Epidemiology, Sexually Transmitted Diseases (STD) and Tuberculosis. These programs operate as a team to meet local, state, and federal goals and deliverables.

In 2019, a total of 13,369 notifiable conditions including 8,180 STD/HIV cases, 3,399 general notifiable disease cases, 1,742 animal bites, and 45 tuberculosis cases were reported in the three-county health district. Notifiable conditions have increased by 180% since the first annual reports published in 2013. This increase is due in large part to increased reporting of viral hepatitis, *Chlamydia*, Gonorrhea, animal bites, and lead blood level results. Of all non-STD, non-TB notifiable diseases that require an investigation by epidemiology or a public health intervention, 71.3% were investigated.

This report encompasses data that is collected at the local and state level. All data is verified at the state level before confirmation. As such, a time delay exists allowing for verification of cases according to CDC case definitions and reporting requirements. The publication of this report encompasses all confirmed 2019 Notifiable Disease data as of February 27, 2023.

A total of 2,846 (55.4%) of all non-STD, non-TB notifiable diseases reported were investigated per district protocols, and this is due to several factors. 1,148 (22.3%) of non-STD, non-TB diseases that were reported in 2019 did not require an investigation based on statewide disease protocols, and an additional 1,042 (20.3%) diseases did not require an investigation based on district protocols. *Chlamydia* and Gonorrhea make up the largest proportion of uninvestigated cases due to how the data is processed and reported at the state level. Reports for these STDs will only be made accessible to the local health district if they meet priority status, per the district's custom Partner Services Priority Grid, or if the individual was diagnosed at a public health center. Hepatitis C cases over 30 years old, who have ALTs of less than 200 usually indicate that the individual is a chronic Hepatitis C case, or is not a true case; therefore, these cases are not investigated per GNR's protocol. Educational letters are sent with information and next steps should individuals have any questions. Though all lead blood level test results are reportable to public health, per GNR protocol, Epidemiology only investigates cases in children who meet the threshold for public health intervention (10 µg/dL or higher). In 2019, program staff investigated 159 foodborne illness complaints and 56 outbreak of illness; 100% of these instances were investigated.

2019 Cases Not Investigated		
Reportable Disease	**Number of Cases**	**Percentage of Cases**
Campylobacteriosis (>30 days)	5	0.08%
Cholera (>30 days)	<5	0.02%
Cryptosporidiosis (>30 days)	<5	0.05%
Giardiasis (>30 days)	6	0.09%
Hepatitis C (>30 years old, low/ no ALT)	696	10.83%
Salmonellosis (>30 days)	7	0.11%
STEC (>30 days)	<5	0.06%
Shigellosis (>30 days)	<5	0.03%
Yersinia (>30 days)	<5	0.02%
***Chlamydia* & Gonorrhea**	4,550	70.82%
Haemophilus *Influenzae* (Invasive)	15	0.23%
Lead Blood Level (<10 ug/mL)	960	14.94%
Legionellosis (>30 days)	<5	0.02%
Streptococcal Disease, Group A (Invasive)	30	0.47%
Streptococcal Disease, Group B (Invasive)	74	1.15%
Streptococcal Toxic Shock Syndrome	<5	0.03%
Streptococcus Pneumoniae (Invasive)	67	1.04%
Vibrios (>30 days)	<5	0.02%
Typhoid (>30 days)	<5	0.02%
Total	**6,426**	**100%**



Program Descriptions

The GNR Division of Epidemiology and Infectious Disease is comprised of 3 distinct programs: Epidemiology, Sexually Transmitted Disease (STD), and Tuberculosis. The District serves over 1.1 million residents of Gwinnett (N=936,250), Newton (N=111,744) and Rockdale (N=90,896) counties in metropolitan Atlanta, GA. Funding for each of the programs is secured through county, state and federal grant-in-aid.

The program is directed by the Chief Clinical Officer, and is supported by two Administrative Operations staff members.

Epidemiology Program

Program Responsibilities:

The Epidemiology program staff are responsible for investigation of cases, clusters, outbreaks and suspected cases of reported diseases including those which may not be captured in traditional surveillance systems, such as syndromic surveillance triggers. Staff are also responsible for tracking and reporting nearly 70 notifiable diseases to the Georgia Division of Public Health Acute Disease Epidemiology Section Branch and implementing control measures to limit the spread of disease in the community. The Epidemiology program staff complete data requests and provide health guidance and education to other public health staff, hospital staff, physicians and other health care providers, school and child care center staff, and other members of the community. Additionally, epidemiology provides trainings and outreach to community members and partners. The Epidemiology team are often responsible for publishing internal and external reports and participate other district public health programs as needed.

Sexually Transmitted Diseases (STD) and HIV Programs

Program Responsibilities:

The STD/ HIV team investigates sexually-transmitted infections (STI), such as HIV/AIDS, syphilis, gonorrhea, and chlamydia. Program staff investigate, track, and report to the Georgia Department of Public Health, and provide community outreach and education. The team is responsible for ensuring that cases are reported, diagnosed, treated, and that partners are referred for testing and treatment as appropriate. The team also serves as a nonclinical consultation resource for internal and external clinicians regarding CDC STD treatment guidance. These are the key components of STI control and prevention programs. Although there are many sexually transmitted infections, the STD/ HIV Program provides case management and intervention services for reportable bacterial and viral STIs. Communicable Disease Specialists (CDS) provide surveillance, technical support, and intervention services for these diseases. Using the State Electronic Notifiable Disease Surveillance System (SendSS), CDS evaluate the medical records of positive syphilis and HIV test results for accuracy and completion. The STD/ HIV Program also work with clinicians to coordinate essential examination and treatment. Patients identified during an infectious stage of an STI receive partner services, as appropriate, to intervene in the spread of the disease.

Tuberculosis Control Program

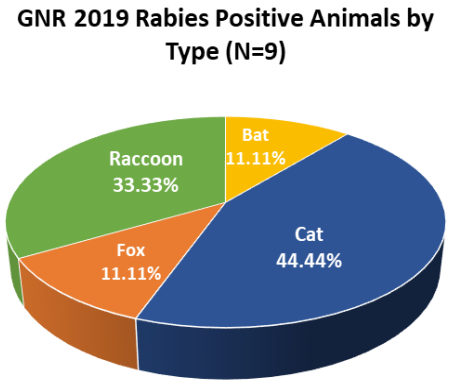
Program Responsibilities:

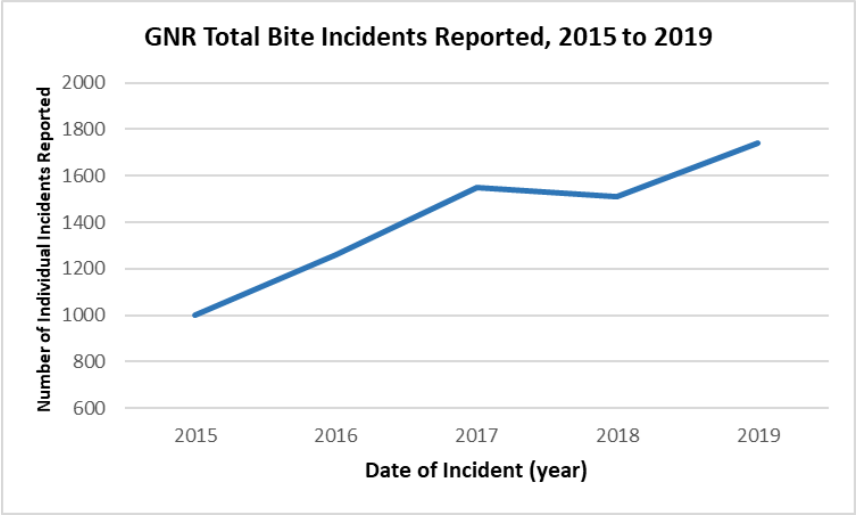
The Tuberculosis program is responsible for investigating and managing all cases of active TB disease and certain latent tuberculosis infections in the District. Program staff provide source, case and contact investigations for the identification of active pulmonary and extrapulmonary tuberculosis. Timely identification of contacts provides the opportunity to limit the spread of disease and prevent future cases. Program staff provide case management of most cases and provide co-management of some cases with private health care providers. Case management services are designed to assure adequate treatment, diagnostic follow-up, monitoring for drug toxicity, and patient adherence to treatment. Services include monthly clinic visits, home-visits, family-centered case management, directly observed therapy (DOT), and appropriate use of incentives. In addition to direct services to patients, the TB program staff provide outreach, consultation, and education to health care professionals, facilities, the local school systems, correctional facilities, and community members.

Animal Bites

Rabies is a fatal viral infection transmitted through the saliva of infected mammals. Although all mammals are susceptible to rabies, only certain species act as reservoirs for rabies disease in the community. These species include raccoons, skunks, foxes, bats, and coyotes as well as domestic dogs, cats, and ferrets. Rabies in humans can be prevented by prohibiting exposure to rabid animals, by providing appropriate post-exposure prophylaxis, and by offering pre-exposure vaccinations to high-risk populations who might encounter rabid animals in their daily lives (veterinarians, animal control personnel, etc.).

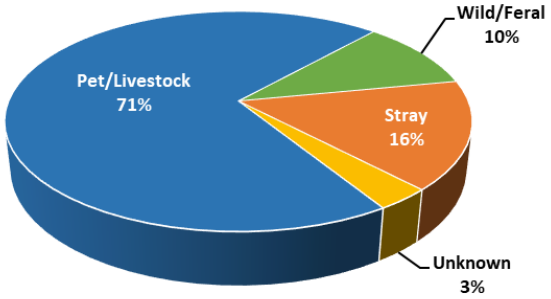
Animal bites/exposures are a notifiable condition, and are reported to Epidemiology by animal control, medical facilities, and private citizens. All reports are investigated to determine the risk for rabies transmission and to make recommendations regarding the need for rabies prophylaxis.





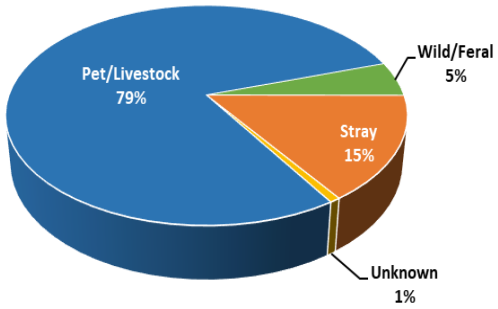
In 2019, of the 1,742 de-duplicated individual reports of animal bites involving residents in Gwinnett (N=1,514), Newton (N=135), and Rockdale (N=93) counties, post-exposure prophylaxis (PEP) was recommended to 268 human victims following an animal exposure/bite. Of those, 79 (29%) human victims who received PEP recommendations by epidemiology completed the full course of treatment, and 6 victims (2%) refused PEP during the interview. In 2019, cats and raccoons represented the majority of rabies-positive animals.

Gwinnett Animals Assessed* in 2019 by Classification (N=1,450)



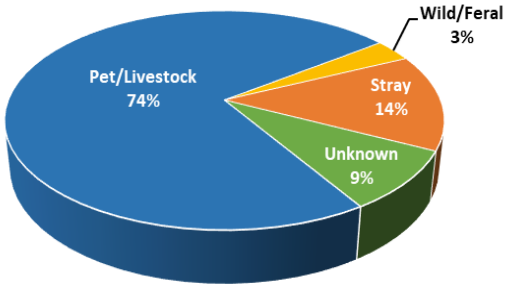
Gwinnett 2019	Animal Bites reported	Animals assessed
Pet/Livestock	1,043	1,023
Wild/Feral	208	149
Stray	218	231
Unknown	45	47
Total	**1,514**	**1,450**

Newton Animals Assessed* in 2019 by Classification (N=137)



Newton 2019	Animal Bites reported	Animals assessed
Pet/Livestock	105	108
Wild/Feral	9	7
Stray	20	21
Unknown	<5	<5
Total	**135**	**137**

Rockdale Animals Assessed* in 2019 by Classification (N=91)



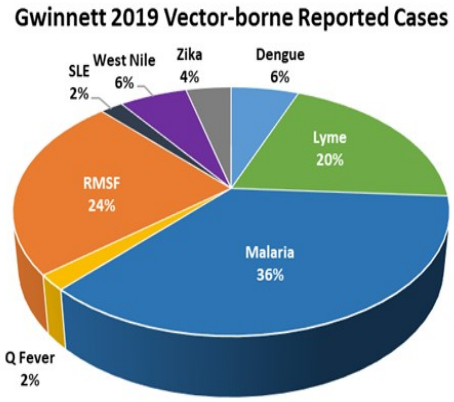
Rockdale 2019	Animal Bites reported	Animals assessed
Pet/Livestock	66	67
Wild/Feral	<5	<5
Stray	16	13
Unknown	8	8
Total	**93**	**91**

*The total number of animals assessed corresponds to attacking animals reported to GNR Public Health, Animal Control, Georgia Poison Control, and ER visits.

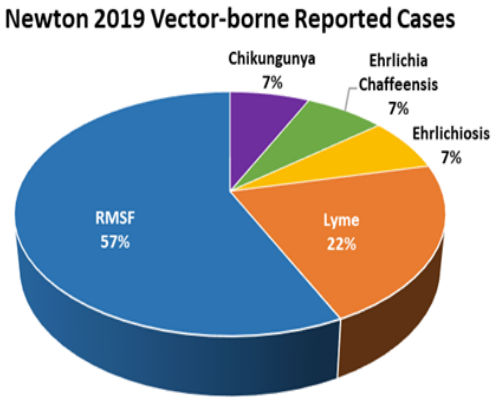
Nationally, wild animals represent the majority (92.7%) of animal rabies cases. (2) Bats, raccoons, skunks, and foxes were the most commonly reported rabies-positive animals. (3) Even though the common reservoir of rabies in Georgia is the raccoon, more than half (58%) of rabies virus was associated with bats. (3) Human rabies cases remain rare and with 0 confirmed human rabies cases in 2019. During September 2019 - November 2021, the Advisory Committee on Immunization Practices Rabies Work Group considered updates to their 2008 human rabies prevention recommendations such as redefining risk categories and modifying vaccine dosing schedule. (4)

Vector-borne and Zoonotic Diseases

Vector-borne diseases are illnesses that are transmitted to humans or other animals by an insect or other arthropod such as mosquitoes and ticks. Many individuals infected with vector-borne diseases have no symptoms; however, a small percentage of people may develop serious illness such as encephalitis and meningitis that can result in irreversible neurological damage, paralysis, coma, or death. A combination of factors continues to define vector-borne disease epidemiology in the United States. These factors include the importation of pathogens and disease vectors from other countries, the evolution of pathogens currently impacting the U.S., and identification of novel pathogens already endemic to the U.S. but as yet uncharacterized.

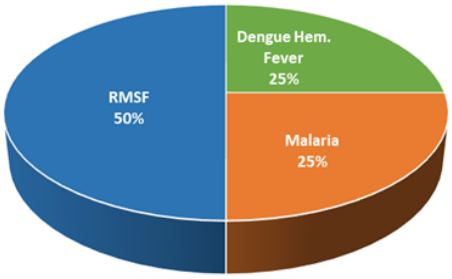


Gwinnett 2019	Reported Cases	Investigated Cases	True Cases
Malaria	18	16	16
RMSF	12	<5	<5
West Nile	<5	<5	<5
Q Fever (Chronic)	<5	0	0
SLE	<5	0	0
Dengue	<5	<5	<5
Zika	<5	<5	0
Lyme	10	<5	<5
Total	**50**	**23**	**21**



Newton 2019	Reported Cases	Investigated Cases	True Cases
Lyme	<5	<5	<5
Ehrlichia Chaffeensis	<5	<5	<5
RMSF	8	<5	<5
Chikungu-nya	<5	0	0
Ehrlichiosis	<5	0	0
Total	**14**	**6**	**6**

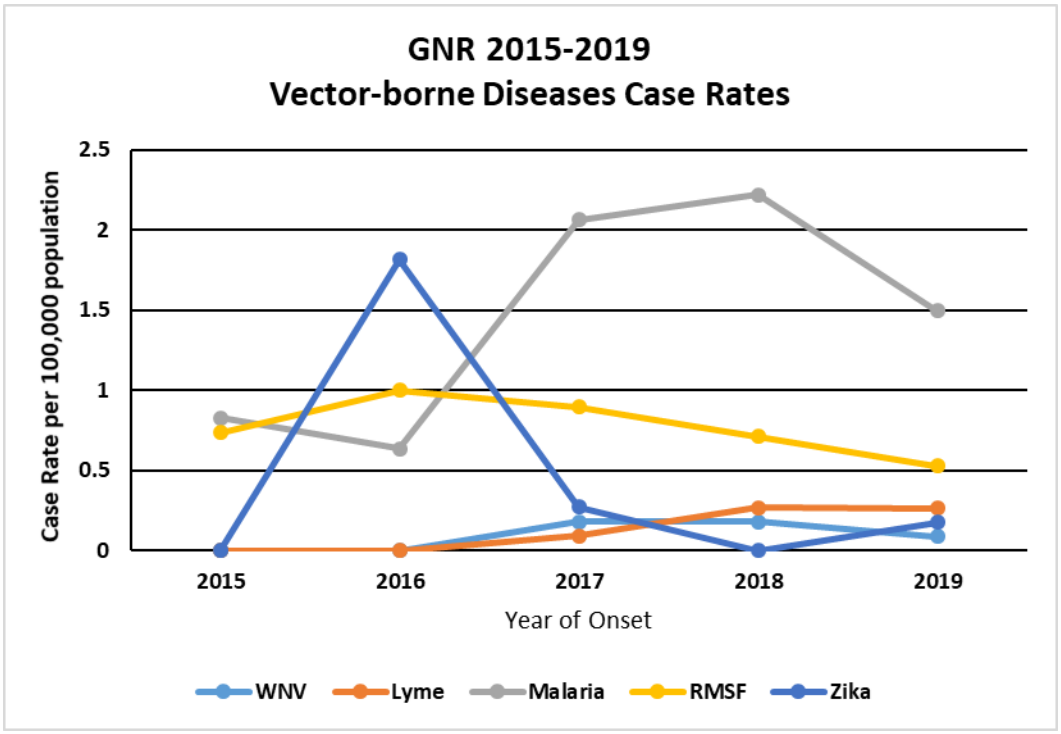
Rockdale 2019 Vector-borne Reported Cases



Rockdale 2019	Reported Cases	Investigated Cases	True Cases
Malaria	<5	<5	<5
RMSF	<5	<5	<5
Dengue Hem. Fever	<5	0	0
Total	**<5**	**<5**	**<5**

The Georgia Department of Public Health requires immediate reporting of all acute arboviral (arthropod-borne virus) infections. Vector-borne diseases that require reporting within 7 days include Malaria, Rocky Mountain Spotted Fever (RMSF), Ehrlichiosis, Anaplasmosis , and Lyme disease. In 2019, the most common vector-borne diseases reported in Georgia were Malaria, Spotted Fever Rickettsiosis, and Lyme disease. There are currently three arboviral diseases that are currently endemic in Georgia: Eastern Equine Encephalitis (EEE), LaCrosse Encephalitis, and West Nile Encephalitis (WNV).

A zoonotic disease is an illness that can be passed from animals such as livestock, pets, and wild animals to humans. Brucellosis, Q fever, and tularemia are examples of zoonoses and must be reported immediately because they are classified as potential bioterrorism agents. Zoonotic diseases that require reporting within 7 days include leptospirosis, Hansen's disease, psittacosis, and toxoplasmosis.



In 2019, a total of 68 vector-borne and zoonotic illnesses were reported to GNR. These illnesses consisted of Malaria, Rocky Mountain Spotted Fever (RMSF), Lyme Disease, West Nile Virus, Dengue, Chikungunya, and Ehrlichiosis. RMSF represented 32% of all vector-borne and zoonotic illness reported in 2019. Case reported and investigated cases can be different due to the case definitions of specific vector-borne diseases.

Epidemiology program staff attempted to investigate all cases of vector-borne disease; however, the interview process is complicated by language barriers, refusal to participate, and loss-to-follow-up. Confirmation of disease also requires extensive laboratory testing. As a result many likely cases are not confirmed due to refusal to follow up with requested laboratory testing.

Malaria is a serious disease caused by a parasite that infects a certain type of mosquito. Malaria can be a deadly disease if not diagnosed and treated quickly. Starting treatment as soon as possible can often prevent severe illness and death. The risk of malaria in the United States is very low. Malaria occurs mostly in poor tropical and subtropical areas of the world. In many of the countries affected by malaria, it is a leading cause of illness and death. In areas with high transmission, the most vulnerable groups are young children, who have not developed immunity to malaria yet, and pregnant women, whose immunity has been decreased by pregnancy. (*Malaria Disease Basics,* CDC)

A 24% decrease in reported Malaria cases was observed between 2018 and 2019. Also, two Zika cases were reported in 2019, while none were reported in 2018. The CDC reports that Zika cases have declined beginning in 2017; in 2017, there were 445 reported Zika cases, and in 2019, there were 28 reported Zika cases. Since 2019, there have been no confirmed Zika virus disease cases reported from US territories.

Of note, all GNR cases of Malaria, and Zika were travel-associated. In 2018, there were no reports of Zika transmission within the United States. GNR Malaria patients most commonly reported recent travel to Africa where Malaria is endemic.

Countries Visited by GNR Malaria Cases—2019	
Ivory Coast	India
Congo	Liberia
Gabon	Nigeria
Ghana	

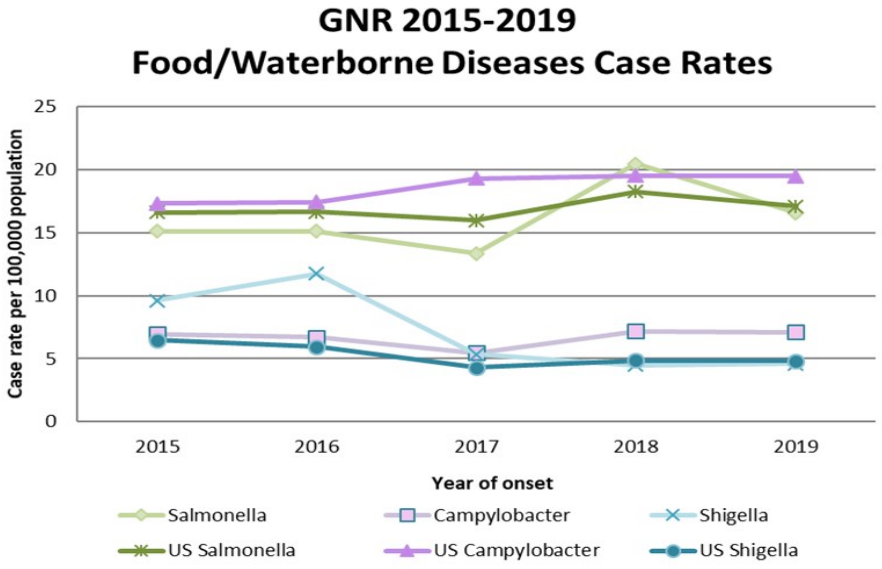
Food and Waterborne Diseases

Enteric Diseases are most commonly caused by bacteria, viruses, or parasites, which are transmitted through the fecal-oral route or, frequently, through contaminated food and water, and enter the body through the gastrointestinal system. These microbes can also be spread through animal or person-to-person contact. There are over 250 identified foodborne diseases. The most common are caused by *Campylobacter*, *Salmonella*, *Shigella*, and *Escherichia coli* O157:H7 or shiga toxin-producing *E. coli* (STEC), and the calicivirus group of viruses known as Norwalk or Norwalk-like viruses. Other less common culprits include Hepatitis A, *Giardia lamblia*, *Yersinia*, *Listeria monocytogenes*, and *Cryptosporidium*. The incubation period varies widely from hours up to one month depending on the pathogen causing the illness.

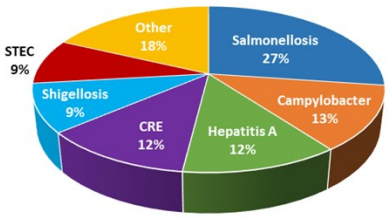
The Epidemiology program partnered with Environmental Health to investigate potential and reported outbreaks and prevent enteric diseases caused by contaminated food or water as well as those spread person -to-person. Epidemiology staff conducted surveillance activities, investigations and community education to identify sources of infection and prevent further transmission of disease.

Particular attention was given to outbreaks in facilities serving highly susceptible populations such as in-home and institutional day care centers and pre-schools. These settings are of particular concern because of the high potential for transmission due to the frequency of diapering and toileting, as well as food preparation and feeding of young children in the classroom setting. In younger children, frequent hand-to-mouth activity also increases the potential for transmission. The Epidemiology staff worked closely with employees from these settings to dispense information on the appropriate measures to prevent transmission of enteric diseases.

The current Georgia State Law (OGGA) requires reporting of all cases of *Campylobacter*, *Cryptosporidium*, *Cyclospora*, *E. coli* O157:H7 or Shiga Toxin-producing *E. coli*, *Giardia*, Hemolytic Uremic Syndrome, *Listeria*, *Salmonella*, *Shigella*, *Yersinia* and *Vibrio*. In community settings, follow-up is required for any cluster in person, place, or time. Case investigation with possible special follow-up is required for cases of *C. botulinum*, *Cyclospora*, *E. coli* O157:H7 (*STEC*), Hemolytic Uremic Syndrome, *Listeria*, Typhoid fever, and *Vibrio*.

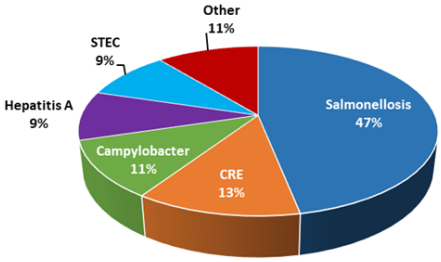


Gwinnett 2019 Common Food/Waterborne Disease Reported



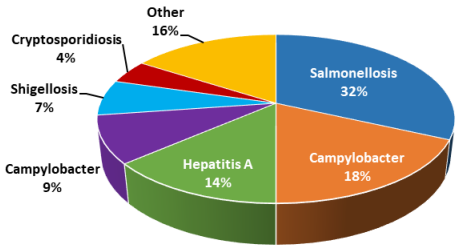
Gwinnett 2019	Reported Cases	Investigated Cases	True Cases
Campylobacter	67	63	63
CRE	63	14	12
Cholera	<5	<5	<1
Cryptosporidiosis	26	23	22
Cyclosporiasis	<5	<5	<5
Giardia	27	24	23
Hepatitis A	65	65	19
Legionellosis	16	15	15
Listeriosis	<5	<5	<5
Salmonellosis	145	139	136
STEC	48	43	42
Shigellosis	50	50	46
Typhoid	<5	<5	<5
Vibrios	6	6	6
Yersinia	11	10	9
Total	**534**	**461**	**401**

Newton 2019 Common Food/Waterborne Disease Reported



Newton 2019	Reported Cases	Investigated Cases	True Cases
Campylobacter	7	7	7
CRE	8	<5	<5
Cryptosporidiosis	<5	<5	<5
Giardia	<5	<5	<5
Hepatitis A	6	6	<5
Legionellosis	<5	<5	<5
Salmonellosis	30	27	27
STEC	6	6	6
Shigellosis	<5	<5	<5
Vibrios	<5	<5	<5
Yersinia	<5	<5	<5
Total	**68**	**54**	**48**

Rockdale 2019 Common Food/Waterborne Disease Reported



Rockdale 2019	Reported Cases	Investigated Cases	True Cases
Campylobacter	<5	<5	<5
CRE	8	<5	<5
Cholera	<5	0	0
Cryptosporidiosis	<5	<5	<5
Cyclosporiasis	<5	<5	<5
Giardia	<5	<5	<5
Hepatitis A	6	6	<5
Legionellosis	<5	<5	<5
Salmonellosis	14	14	13
STEC	<5	<5	<5
Shigellosis	<5	<5	<5
Total	**44**	**35**	**30**

The most frequently reported enteric diseases in the GNR District were *Salmonella*, *Carbapenem Resistant Enterobacteriaceae* (CRE), *Campylobacter,* and *Hepatitis A* which together accounted for about 65% all reported enteric illnesses reported in 2019. *Shigellosis, STEC, and Giardia* together accounted for about 22% of the total number of reported cases in 2019. Limitations in staff capacity required prioritization of case investigations of foodborne or enteric illness, and staff limitations at the state resulted in late reporting of certain enteric illnesses, primarily Giardiasis, which represented 24% of uninvestigated enteric illness cases. Additionally, GNR epidemiology investigates enterics received within 30 days of lab date. In 2019, the district received 645 reports of enteric illness of which staff investigated 85.3%.

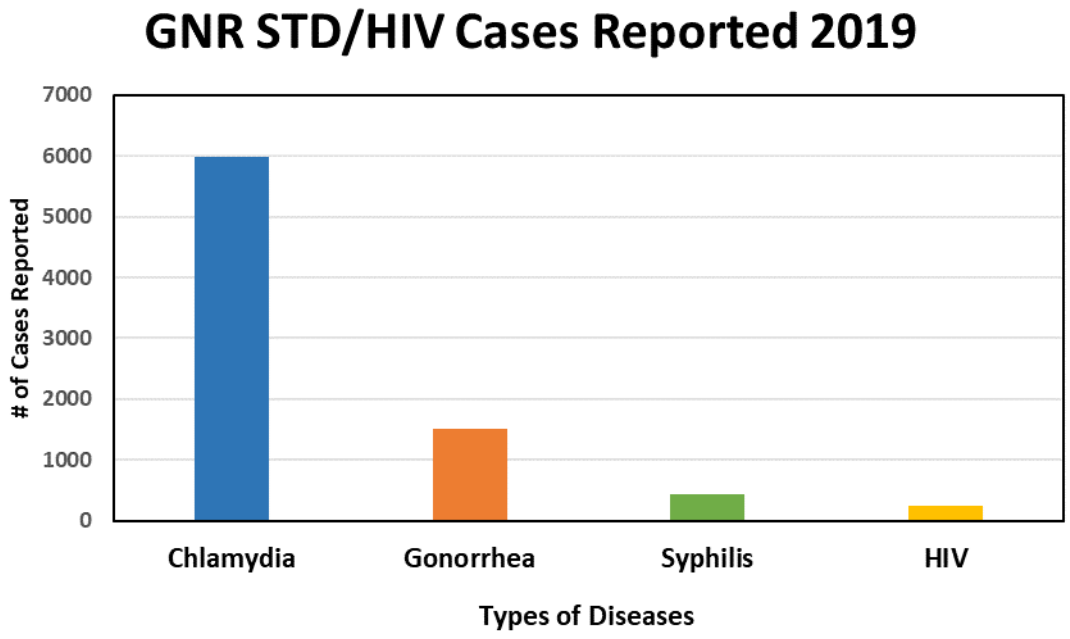
Salmonella reporting decreased by 19% from 2018 to 2019, which reflects national rates. New Shiga-Toxin Producing E. coli (STEC) cases between 2018-2019 remained about the same. According to preliminary findings from CDC's FoodNet Data 2019, culture-independent testing (CIDT) continues to drive increases in Campylobacter, Cyclospora, Yersinia, Vibrio, and Shiga-Toxin Producing E.coli (STEC), while Listeria, Salmonella, and Shigella remained unchanged. (7) This indicates that there is still more progress to be made in developing prevention measures to reduce foodborne illnesses.

CIDTs help detect the presence of a specific antigen or genetic sequence of an organism, such as *Salmonella*. Since these tests do not require labs to grow living organisms, this type of testing helps produce quicker results than culturing an organism, but does not identify the specific variation of the organism. STEC infections increased by 34% compared to 2016-2018 national incident cases due to the increase number of non-O157 infections diagnosed detected by the increased use of CIDTs. Overall, STEC O157 appears to be decreasing. National outbreaks reported by CDC in 2019 were associated with leafy greens, flour, bison and beef. but the outbreaks associated to leafy greens continue. Widespread vaccination to chickens helped decline *Salmonella Typhimurium* infections, but targeting other variations of Salmonella through poultry vaccination can help reduce illness as well.

Sexually Transmitted Infections (STIs)

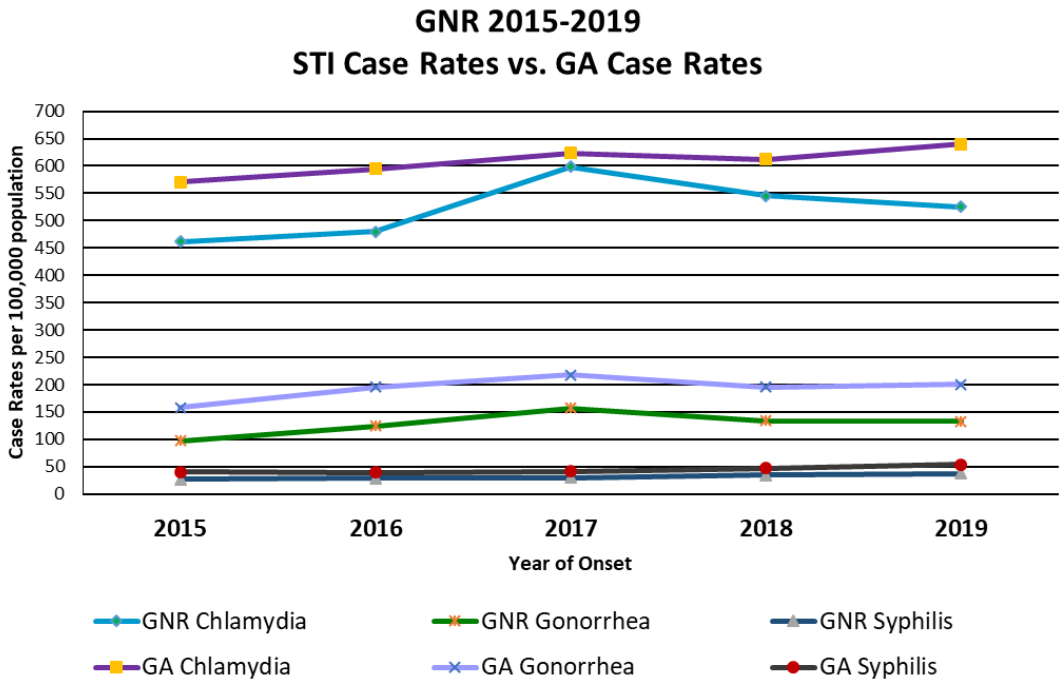
The STD team of the GNR District received 7,927 reports of sexually-transmitted infections in 2019. Sexually-transmitted infections are a significant cause of morbidity and mortality in the GNR District and, generally, in the State of Georgia. Sexually-transmitted infections are both preventable and often curable with appropriate diagnosis and treatment. Without treatment, these infections can lead to sterility, dementia, and death. Investigations were prioritized based on factors such as age, pregnancy, clustering, and provider request; syphilis and HIV (when reported to GNR directly) are always investigated.

Chlamydia accounted for 75.5% of the total number of cases of sexually-transmitted infections reported in 2019. The next most frequently reported sexually-transmitted infection was Gonorrhea, which accounted for 19% of total cases reported in 2019. These two diseases represent a substantial percentage of the total burden of disease from STI in the GNR District.



There are many challenges to reporting STD and HIV data, and there are a variety of limitations that result in differences between the total number of cases reported by state epidemiologists and the total number of investigations completed by GNR staff. Testing and education of identified sexual partners of reported cases are also considered investigations. The Georgia HIV/ Syphilis Pregnancy Screening Act of 2015 requires every provider who assumes responsibility for the prenatal care of pregnant women to require a HIV and syphilis test, resulting in a larger number of partner investigations for these illnesses.

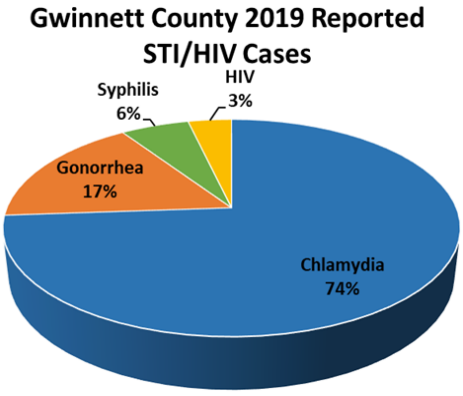
STI Investigations include provider record searches, patient follow up and/or interviews, and contact tracing. A provider record search is usually conducted when insufficient data is presented to the health department and additional information (i.e. demographics, signs/symptoms, labs, treatment, etc.) is required from the health provider. Positive chlamydia and gonorrhea cases warrant an investigation under certain circumstances. A field investigation is initiated on patients requiring treatment that are diagnosed at public health department clinics. Syphilis and HIV cases reported by private and public entities are investigated for epidemiologic data and to implement control measures. Individuals are educated about their infection, linked to care if necessary, and interviewed to identify their sexual and needle sharing partners. Contact tracing is also a very important public health function as STI staff are able to prevent the spread of STDs by offering testing and treatment to Syphilis and HIV contacts.

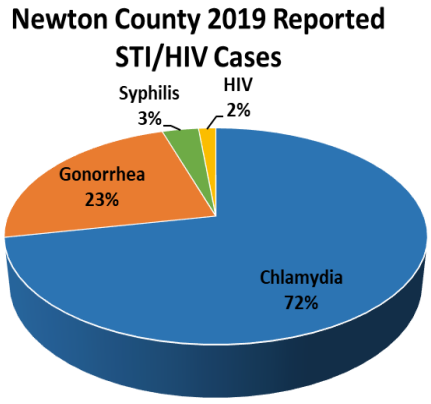


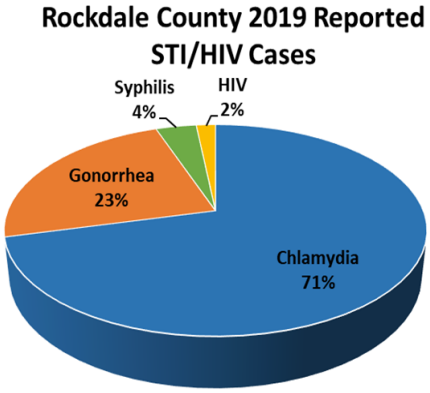
Diseases spread primarily by sexual contact are quite common. In fact, in the United States there were estimated to be 20 million new cases of sexually transmitted diseases every year with rates continuing to soar. Georgia was ranked in the top twenty for Chlamydia, Gonorrhea, and Syphilis in 2019. Syphilis rankings nationally and district-wide were especially concerning because Georgia had the eighth-highest number of cases of Primary and Secondary syphilis in the nation. Primary and secondary syphilis are the most infectious stages.

Gwinnett, Newton, and Rockdale Counties (District 3-4), as a district consistently ranked in the top four highest number of STI cases in 2019. District 3-4 ranked second for Chlamydia, shared third place ranking for Gonorrhea, and fourth for Primary and Secondary syphilis.

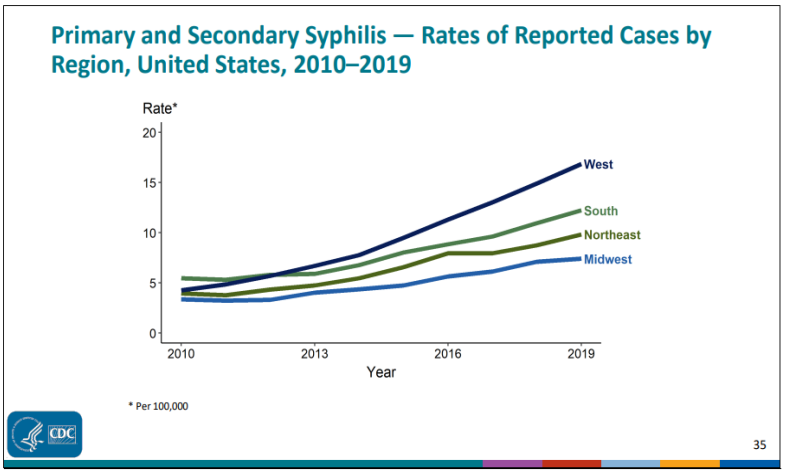
There is an STI epidemic in the nation that is going largely unnoticed. When thinking about the number of documented cases, remember that number does not include the potential spread to sexual partners and possibly their offspring. STIs can cause negative, irreversible health outcomes over decades. Human Papillomavirus (HPV) can cause numerous forms of cancer and untreated STIs can facilitate the acquisition of HIV. Syphilis, a lesser-known disease, can cause a range of health issues including permanent damage to the heart, brain, muscles, bones, and eyes.



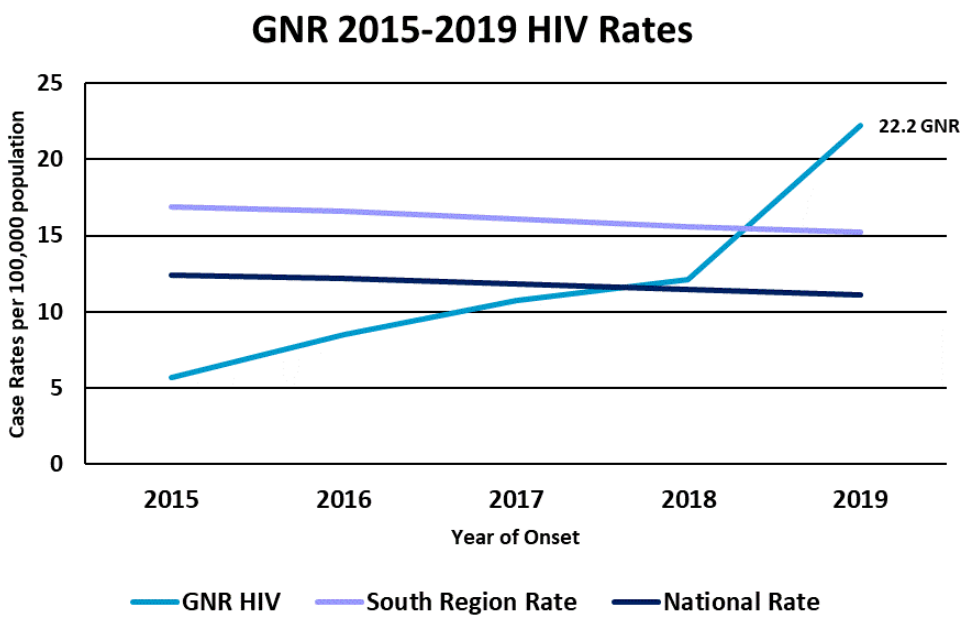




Primary and Secondary Syphilis — Rates of Reported Cases by Region, United States, 2010–2019



In 2019, rates of reported cases of primary and secondary syphilis were highest in the West (16.9 cases per 100,000 population; 13.4% per 100,000 increase from 2018), followed by the South (12.2 per 100,000; 10.9% increase from 2018), Northeast (9.8 per 100,000; 12.6% increase from 2018), and Midwest (7.4 per 100,000; 4.2% increase from 2018). During 2015–2019, the largest increase occurred in the West (9.5 to 16.9 cases per 100,000 population; 77.9% increase).



Currently, the HIV program includes the Ending the HIV Epidemic (EHE) program staff and Comprehensive HIV program staff. The program is responsible for conducting partner notification and linkage service for all patients diagnosed with HIV that are reported directly to GNR. The HIV department is responsible for linking newly diagnosed patients to a Ryan White center for their HIV care. The department is also responsible for having at least six HIV outreach events a year. The department is responsible for disseminating over 200,000 condoms to patients within Gwinnett, Newton, and Rockdale counties. This is accomplished through a condom subscription program and condom distribution to community partners. The department conducts outreach HIV testing through Gwinnett, Newton, and Rockdale counties. The department is also responsible for providing PrEP for individuals within the district. The department is currently administering PrEP through all Health center clinics including Lawrenceville, Norcross, Newton and Rockdale.

Gwinnett County is one of the four jurisdictions in GA participating in the Ending the Epidemic initiative (EHE). With this initiative, the HIV department has increased in size and functionality in association with the EHE designation and the associated funding. The four EHE pillars are to:

- **Diagnose**: Diagnose all people with HIV as early as possible by making HIV testing accessible, collaborating with partners to expand HIV testing, and distribution of self-testing kits to communities.
- **Treat**: Treat people with HIV rapidly and effectively to reach sustained viral suppression. The team has EHE linkage coordinator that works to ensure newly diagnosed and those out of care are successfully and rapidly linked to care
- **Prevent**: Prevent new HIV transmissions by using proven interventions , including PrEP. We have PrEP coordinator on board to help with patient navigation and follow-up
- **Respond**: Respond quickly to potential HIV outbreak to get vital prevention and treatment services to people who need them. Partnering with other EHE jurisdictions in GA, we participate in cluster detection response within our three counties and both CDS and linkage coordinators follow-up with these patients for partner services.

The HIV program also participates in quarterly Community Advisory Board meetings (CAB) to gain community feedback and buy-in on HIV prevention services and activities in the communities they serve.

Tuberculosis (TB)

Tuberculosis (TB) continues to present a major threat to population health in the GNR Health District. The goal of the Tuberculosis (TB) Program is to eliminate tuberculosis in the district. Until eradication can occur, the program staff strives to reduce the burden of disease, limit transmission, and prevent new cases. The staff provides diagnostic, treatment, and case management services to all identified persons with active TB disease. The TB program staff also conducts contact investigations for the identification of individuals with latent TB infection (LTBI) in order to prevent future cases of active disease and further transmission.

The TB program staff investigated all suspected and confirmed cases of tuberculosis disease in the district in 2019. There were 45 reports of active TB disease; 66.7% of these were pulmonary TB , characterized as TB disease occurring in the lungs. The remaining cases were reported as extra-pulmonary TB, or a combination of both tuberculosis presentations. Extra-pulmonary TB is TB disease occurring in any part of the body other than the lungs (CDC). Co-infection with HIV occurred in 3 of the 45 active TB cases. TB is one of the leading causes of death among people living with HIV and an individual who has both HIV infection and TB disease has an AIDS defining condition (CDC). An average of 8-12 weeks is spent investigating suspect cases. All suspect cases are fully evaluated and investigated pending negative culture results which can take up to 12 weeks to complete.

Prompt diagnosis and treatment completion by individuals with active disease, timely investigation for identification of contacts with latent TB infection, and assurance of adherence to treatment are essential functions of TB control and prevention. Limited resources have required prioritization of services in order to assure the continuation of core TB activities that provide the highest yield. Directly Observed Therapy (DOT) is the gold standard for treatment of active tuberculosis and is used for all cases and LTB clients at highest risk of conversion to active disease.

The TB program staff utilizes current CDC recommendations for a concentric circle approach to contact investigations in order to achieve the highest yield while conserving resources. As resources allow, TB program staff prioritize outreach, education, and screening efforts. Contact investigations are the gold standard for secondary prevention in individuals exposed to cases of pulmonary and laryngeal tuberculosis and for preventing future cases of active disease from untreated latent tuberculosis infections. For these reasons, investigations are a critical component of the TB program, but one which requires an extensive commitment of human and financial resources.

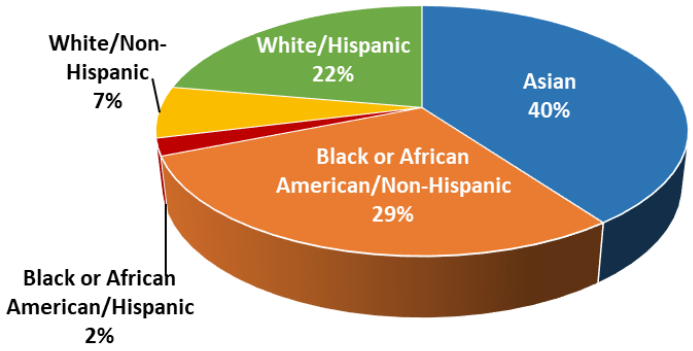
GNR TB Cases by Country of Birth		
USA	Philippines	Ghana
Vietnam	Haiti	Pakistan
Mexico	Ivory Coast	Nigeria
Korea	Ethiopia	Guatemala
China	Burma	Zimbabwe
India	Equatorial Guinea	Bangladesh
Peru	Honduras	

In 2019, TB program staff investigated 3,997 identified contacts of the 45 reported cases of active TB. Compared to 2018 (414), there was a significant increase in contacts identified in 2019 (3,583 increase). This increase was due to an extensive TB investigation in a Gwinnett County school in 2019. All 3,997 identified contacts were screened, which meet the GNR TB Control Program contact evaluation goal of 100%. Contact elicitation is a core objective in the National TB Program Objectives & Performance Targets for 2020. Performance against national standards is measured each year through a cohort review of investigation and management of TB cases and contacts in each Public Health district.

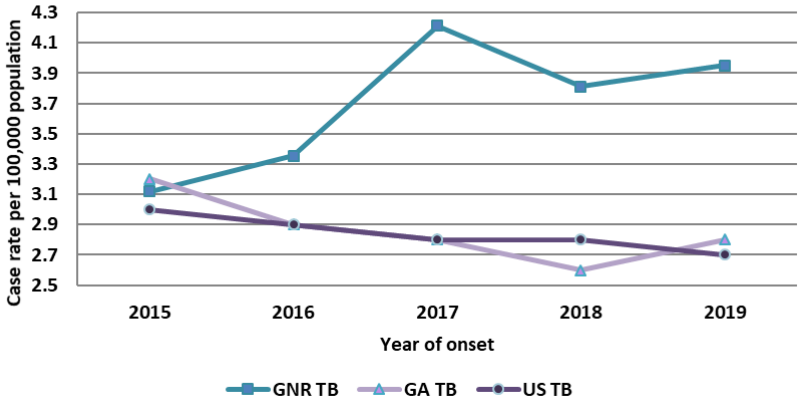
Although contact investigations typically involve close contacts such as members of the case's household and close social contacts, large scale investigations in the public school and work settings are often conducted due to the calculated exposure. The number of cases in 2019 (45) increased from 2018's 41 cases. Case rates for the district and the state of Georgia have slightly increased, while the national rate slightly decreased from 2018 to 2019.

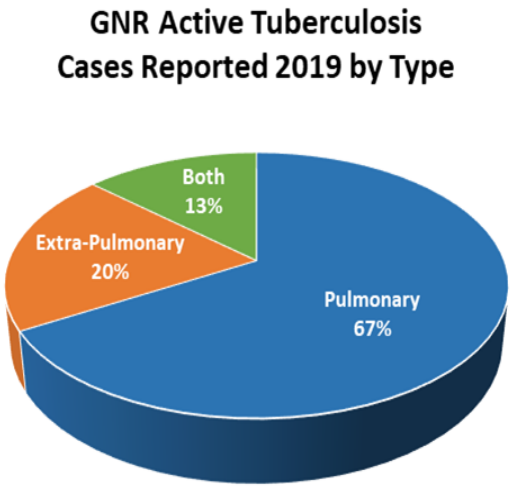
Case management services were provided to all active patients and to latent TB infection (LTBI) patients including Directly Observed Therapy (DOT), monthly contact for monitoring adherence to treatment, efficacy of treatment, and signs of drug toxicity. It is the preferred treatment method for cases of Tuberculosis as well as certain individuals with LTBI (HIV infected, children ≤5 years of age, etc.). DOT is provided in GNR clinic sites and at the homes/worksites of patients as necessary. Program staff also worked closely with staff at the public schools for DOT in the school setting whenever possible. The Program staff are closely monitoring this change for impact on adherence to treatment.

Active Tuberculosis Cases Reported 2019 by Race & Ethnicity



GNR 2015-2019 TB Case Rates





Gwinnett 2019	Cases Reported
PTB	26
EPTB	9
BOTH	6
Total	**41**

Newton 2019	Cases Reported
PTB	<5
EPTB	0
BOTH	0
Total	**<5**

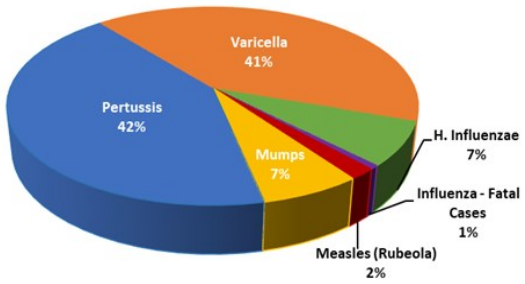
Rockdale 2019	Cases Reported
PTB	<5
EPTB	0
BOTH	0
Total	**<5**

PTB = Pulmonary TB
EPTB = Extra-Pulmonary TB
BOTH = Pulmonary and Extra-Pulmonary TB
Other sites include: Ovary, Lymph Node, Pancreas, Testicles, Eye, Psoas, Skin

Vaccine Preventable Diseases

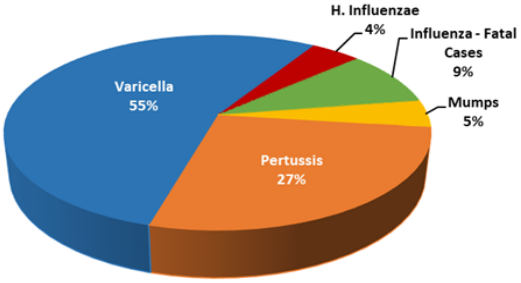
Vaccine preventable diseases are immediately notifiable in the state of Georgia. In the early 2000s, vaccine preventable illnesses were declining in Georgia and in the GNR Health District. Pertussis cases were decreasing in conjunction with a 2005 innovation in adolescent and adult formulations of the Tdap vaccine. Over the past 20 years, anti- vaccination movements have played a role in outbreaks across the country. Outbreaks of measles and pertussis are showing up across the United States. Luckily, measles has not entered the GNR Health District in almost 20 years. Despite no confirmed cases being reported, epidemiology staff facilitate testing of suspect cases and participate in investigating contacts to cases in other districts.

Gwinnett 2019 VPD Cases Reported



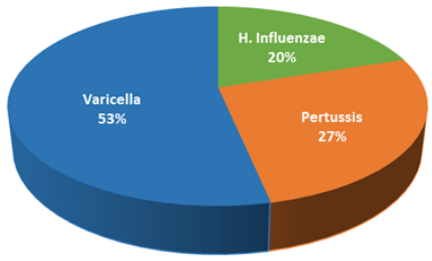
Gwinnett 2019	Reported Cases	Investigated Cases	True Cases
H. *Influenzae* (Invasive)	12	11	11
Influenza - Fatal Cases	<5	<5	<5
Measles (Rubeola)	<5	0	0
Mumps	11	9	9
Pertussis	70	52	52
Varicella	68	30	30
Total	**165**	**103**	**103**

Newton 2019 VPD Cases Reported



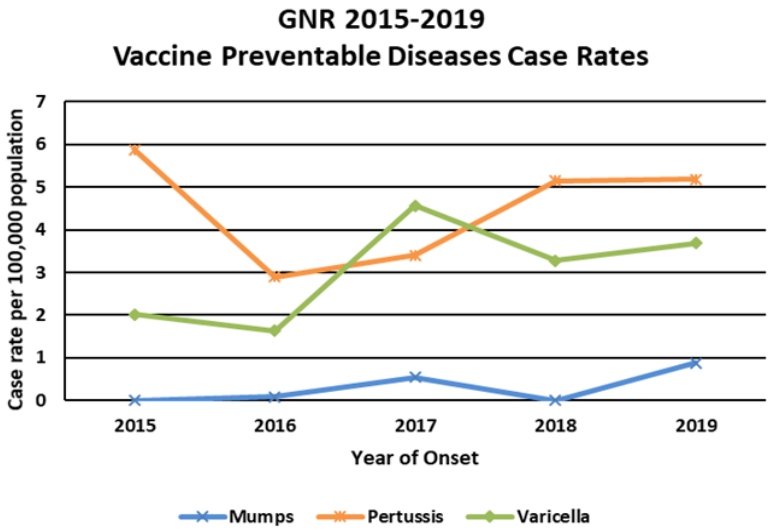
Newton 2019	Reported Cases	Investigated Cases	True Cases
H. *Influenzae* (Invasive)	<5	<5	<5
Influenza - Fatal Cases	<5	<5	<5
Mumps	<5	<5	<5
Pertussis	6	<5	<5
Varicella	12	10	10
Total	**22**	**18**	**18**

Rockdale 2019 VPD Cases Reported



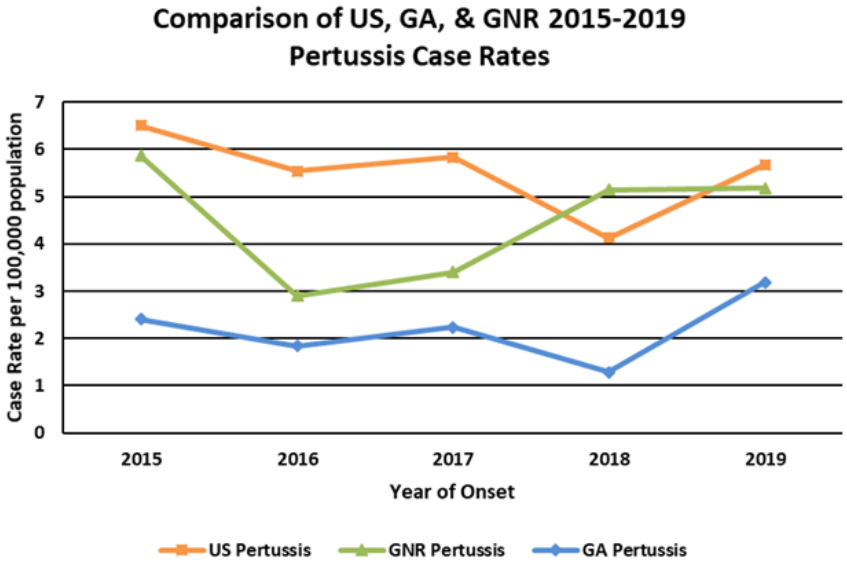
Rockdale 2019	Reported Cases	Investigated Cases	True Cases
H. *Influenzae* (Invasive)	<5	<5	<5
Pertussis	<5	<5	<5
Varicella	8	<5	<5
Total	**15**	**8**	**8**

*Though all invasive *H. influenzae* cases are reviewed, only Type B requires public health intervention. *H. influenzae* cases aren't required to be investigated per DPH protocol, but GNR will still investigate the case if it is reported.



The graph above shows a comparison with a Mumps, Pertussis, and Varicella at the district. From 2016-2017, there was a increase with all three diseases, with Varicella increasing more than doubling within the year. From 2017-2018, Varicella and Mumps decreased, while Pertussis case rates increased. From 2018-2019, Mumps and Varicella case rates increased, while Pertussis rates remained relatively constant.

The graph below provides a comparison of GNR Pertussis case rates to Georgia and National Pertussis case rates from 2015-2019. The GNR Pertussis case rates are trending above Georgia case rates, and from 2015-2017 were below the National case rates. From 2018-2019, GNR case rates remained relatively constant, while the national rates increased. From 2017 to 2018, Pertussis rates declined at the State and National level, but increased in the district. Overall vaccination rates for children under 24 months have declined since 2013.[10] As of 2019, 80.4% of children were immunized with the Diptheria, Tetanus, and Pertussis vaccine by age 24 months; 90.8% of children were immunized with the Mealses, Mumps, and Rubella vaccine by age 24 months; 90.3% were immunized with Varicella vaccine by age 24 months.



Viral Hepatitis

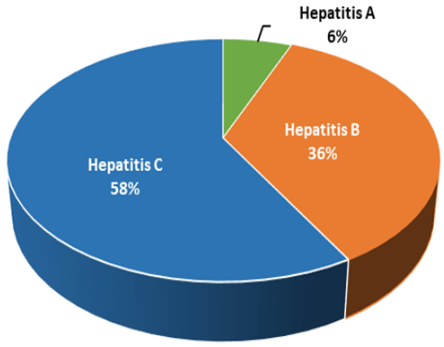
In 2019, 1,346 viral hepatitis cases were reported and GNR staff investigated 616 (45.7%); 94 (15.3%) of the investigated cases were acute or probable acute, 354 (57.5%) were chronic or probable chronic and 168 (27.3%) were neither classified acute nor chronic. All reported viral hepatitis cases are evaluated for acute illness symptomology by GNR epidemiology staff. Preventative medication can be given to close contacts of Hepatitis A and B cases to prevent illness. There is no preventative medication for Hepatitis C.

The majority of the viral hepatitis reports were Hepatitis C, a trend that was identified in 2014 when previous years were predominantly Hepatitis B. Hepatitis A cases accounted for only 5.7% of the total number of viral hepatitis cases which is about 14 times more than in 2018 (0.4%). Chronic Hepatitis B is found predominately among the Asian population. Asian and Pacific Islanders (APIs) make up less than 6% of the total population in the United States but have a 18.9 incidence case rate per 100,000 persons with chronic Hepatitis B compared to the White, non-Hispanic incidence case rate of 1.8 (9). 12.5% (n= 117,464) of residents in Gwinnett County are Asian according to 2019 population statistics.

Hepatitis A is of significant concern to epidemiology staff due to the potential for outbreaks within the community. Unlike Hepatitis B and C that are spread through contact with blood and other bodily fluids, Hepatitis A is spread through the fecal-oral route, and can be easily transmitted person-to-person or through food or water that has been contaminated with the virus. Epidemiology staff members work closely with Environmental Health to ensure that the risk for exposure to Hepatitis A is minimized in all local food service establishments, and to quickly respond to any reports of Hepatitis A to prevent transmission from food or waterborne sources. In 2019, there was a significant increase in Hepatitis A infections throughout the nation. Details of its impact will be discussed in the Emerging Pathogens section (pg. 32).

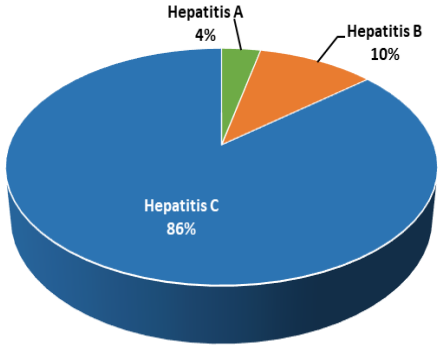
Testing guidance for Hepatitis C has changed in the past five years which has impacted the number of cases reported to GNR. In 1998, testing was recommended for asymptomatic persons with specific risk factors. In 2009 Hepatitis C testing became recommended in HIV infected persons were added, and in 2012 all adults born from 1945 to 1965 were included into the routine testing group. The US Centers for Disease Control and Prevention and US Preventive Services Task Force (USPSTF) recommend a one-time hepatitis C virus (HCV) screening for adults born between 1945 and 1965 (a birth cohort known as “baby boomers”). Approximately three-quarters of persons chronically infected with HCV are baby boomers, many of whom are unaware of their infection.[11] As of April 2020, the CDC recommends primary care providers screen all patients 18 years and older at least once in their lifetime for Hepatitis C and patients with recognized exposures (injecting drugs).[21] These recommendation were implemented in an effort to increase case identification and linkage to care. These changes in testing guidance resulted in an increase in reporting of Hepatitis C cases over the past 10 years, without an increase in funding or staffing. To ensure that high priority acute cases are being investigated promptly, epidemiology now investigates only cases thirty years old or younger, unless the patient is experiencing symptoms or elevated liver enzymes.

Gwinnett 2019 Viral Hepatitis Cases Reported



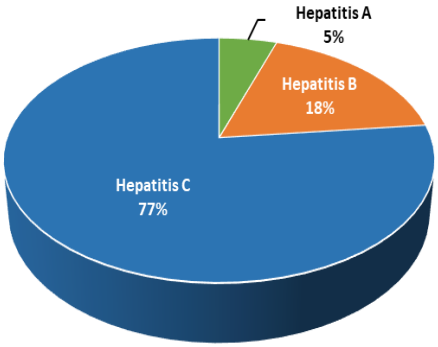
Gwinnett 2019	Reported Cases	Investigated Cases	True Cases
Hep A (Acute)	65	65	20
Hep B	124	124	60
Hep B Acute	6	6	6
Hep B Chronic	247	247	242
Hep C	47	18	1
Hep C Acute	<5	<5	<5
Hep C Probable Acute	<5	<5	<5
Hep C Chronic	200	24	24
Hep C Probable Chronic	363	57	55
Total	**1058**	**547**	**414**

Newton 2019 Viral Hepatitis Cases Reported



Newton 2019	Reported Cases	Investigated Cases	True Cases
Hep A (Acute)	6	6	<5
Hep B	11	11	<5
Hep B Chronic	7	7	7
Hep C	8	<5	0
Hep C Acute	<5	<5	<5
Hep C Probable Acute	<5	<5	<5
Hep C Chronic	67	5	5
Hep C Probable Chronic	71	<5	<5
Total	**172**	**37**	**19**

Rockdale 2019 Viral Hepatitis Cases Reported



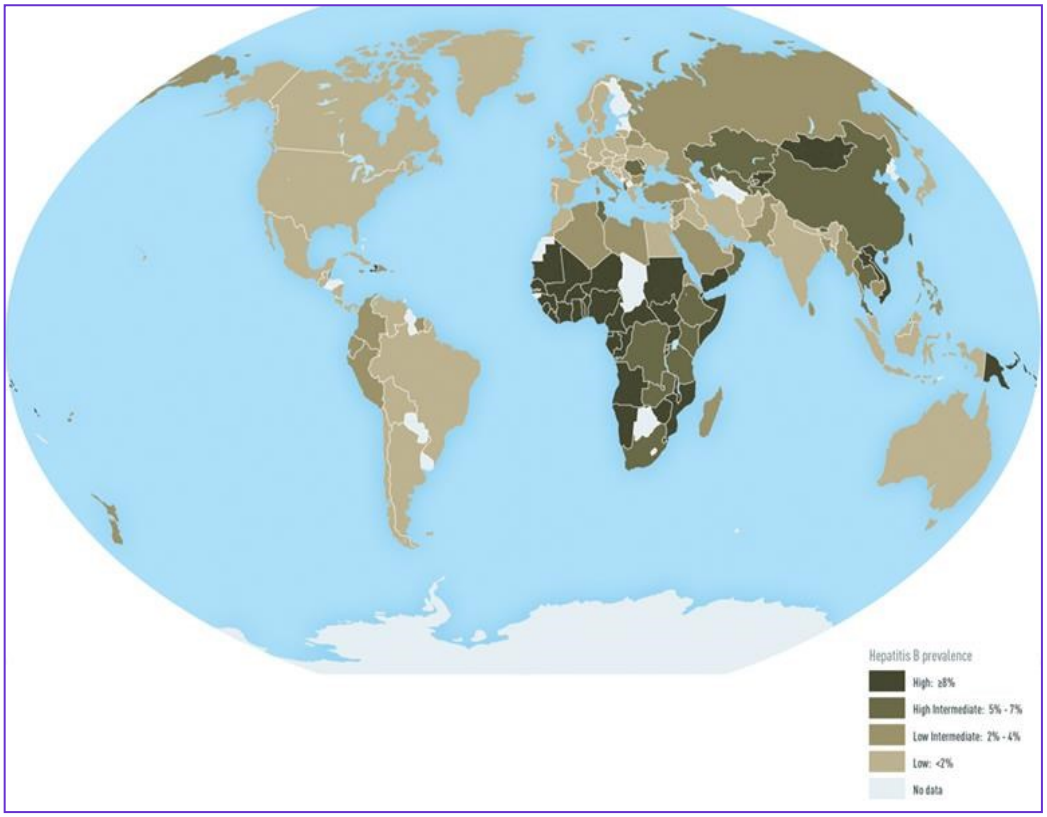
Rockdale 2019	Reported Cases	Investigated Cases	True Cases
Hep A (Acute)	6	6	<5
Hep B	12	12	<5
Hep B Acute	<5	<5	<5
Hep B Chronic	7	7	7
Hep C	<5	0	0
Hep C Acute	<5	<5	<5
Hep C Chronic	35	0	0
Hep C Probable Chronic	51	<5	<5
Total	**116**	**32**	**22**

Perinatal Hepatitis B

A risk of having an adult population with chronic Hepatitis B is the possibility of transmission of the virus to newborns through child birth. Regardless of the delivery method, babies are exposed to the virus when their mother is infected. Transmission of perinatal Hepatitis B infection can be prevented in approximately 95% of infants born to Hepatitis B positive mothers by early active immunoprophylaxis through immunoglobulin administration and vaccination. The Perinatal Hepatitis B Prevention Program (PHBPP) is funded through the CDC's National Center for Immunization and Respiratory Disease, Immunization Services Division, with technical support from CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.

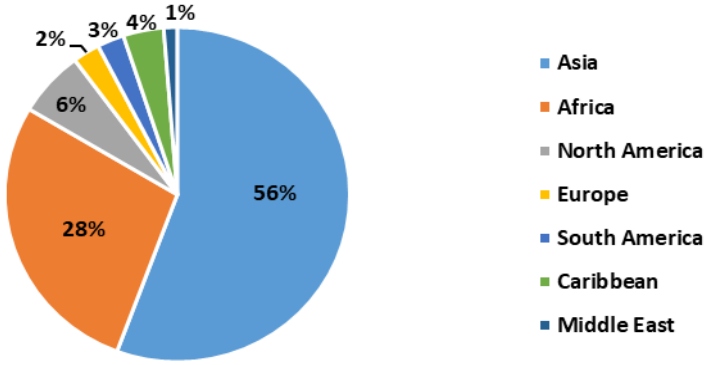
GNR Epidemiology staff work closely with hospitals and pediatricians to ensure babies born to Hepatitis B infected mothers receive needed preventative medication and scheduled vaccinations. Post vaccination testing is also conducted to ensure immunity. GNR has had the largest caseload of babies in the state of Georgia for the last seven years. In 2019, there were 283 case managed newborn babies in Georgia's PHBPP with 29% (n=82) from the GNR district. Of the PHBPP babies born in the GNR district where mother's country of birth is known, 94% (n=77) were born outside of the United States. The countries of birth for the majority of GNR PHBPP mothers are countries where there is a high prevalence of chronic Hepatitis B.

Prevalence of Chronic Hepatitis B among adults worldwide in 2020

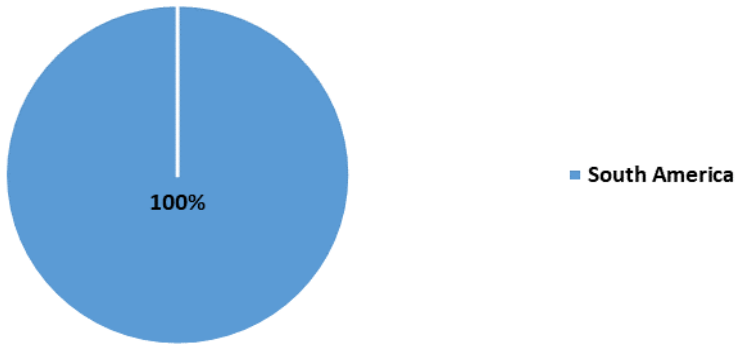


Source: https://wwwnc.cdc.gov/travel/yellowbook/2020/travel-related-infectious-diseases/hepatitis-b

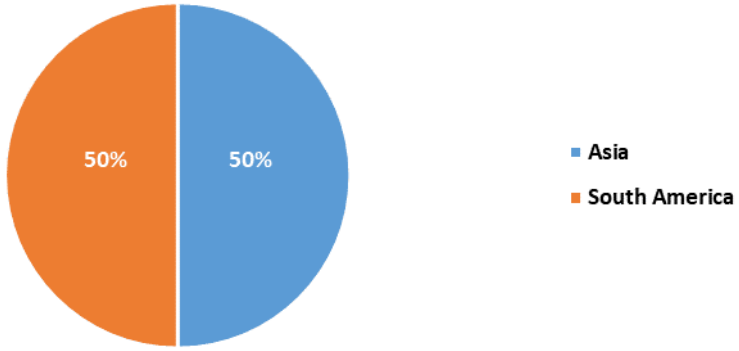
Gwinnett County 2019 Perinatal Hepatitis B Cases by Mother's Region of Birth

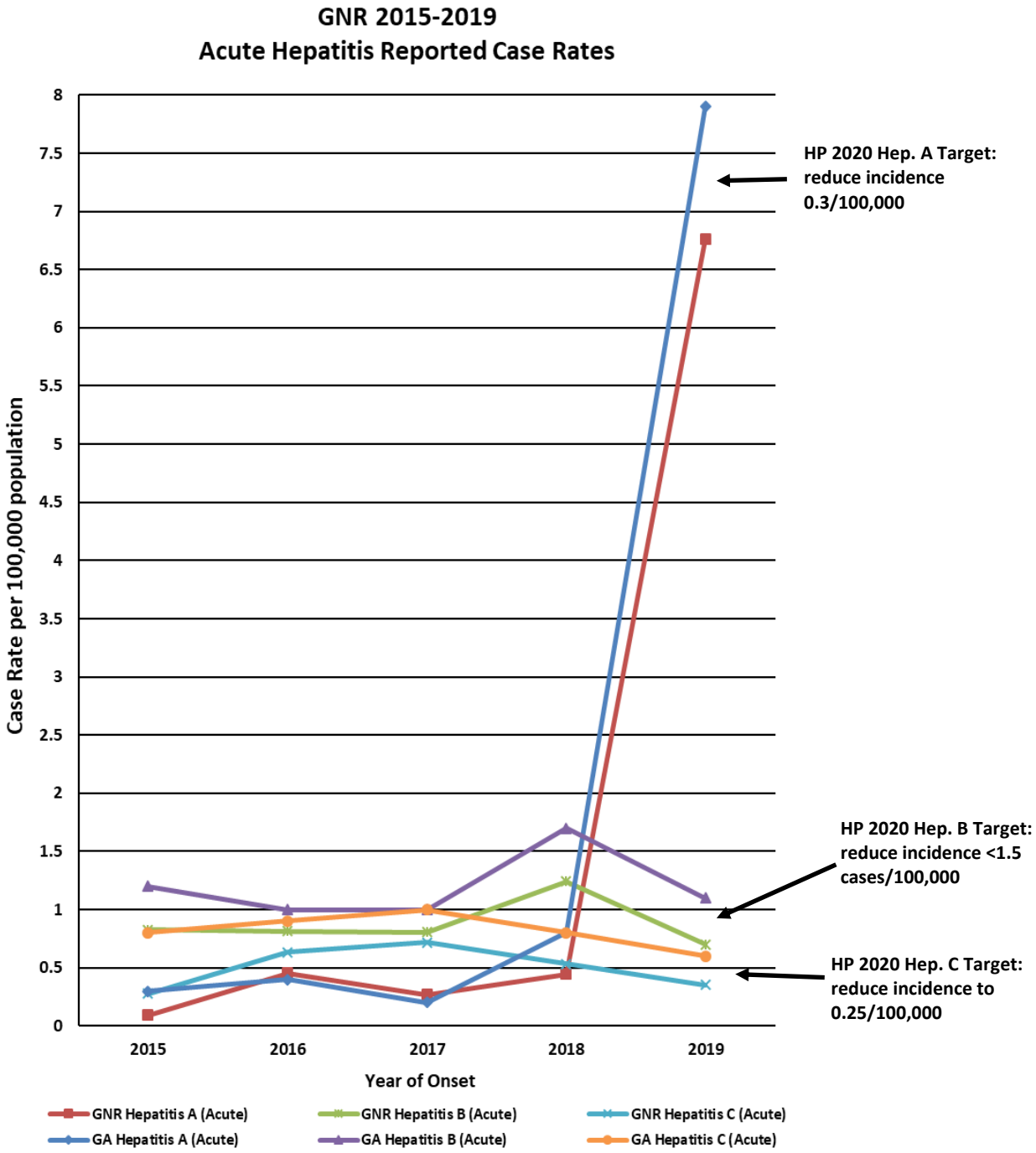


Newton County 2019 Perinatal Hepatitis B Cases by Mother's Region of Birth

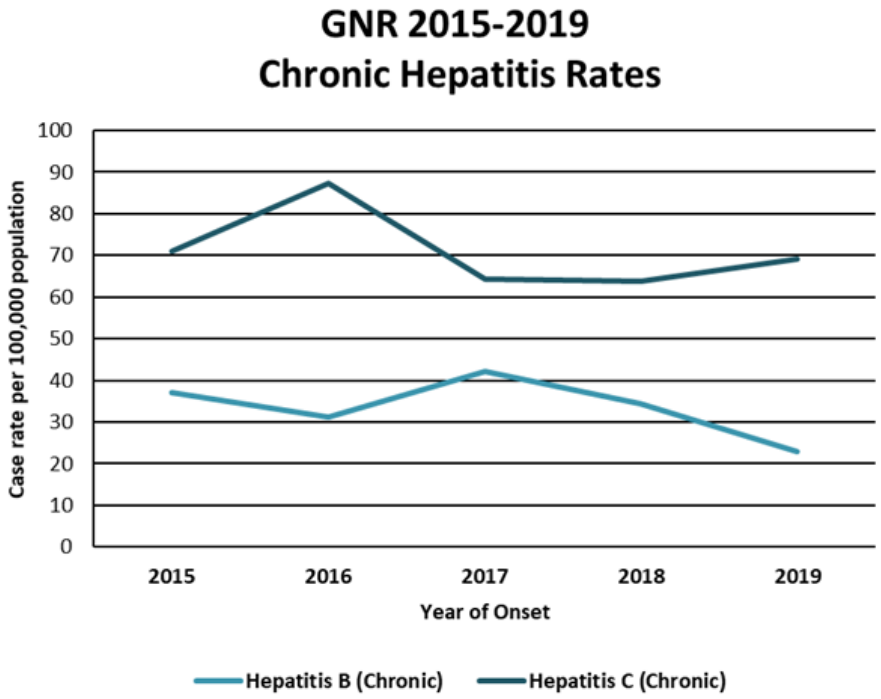


Rockdale County 2019 Perinatal Hepatitis B Cases by Mother's Region of Birth





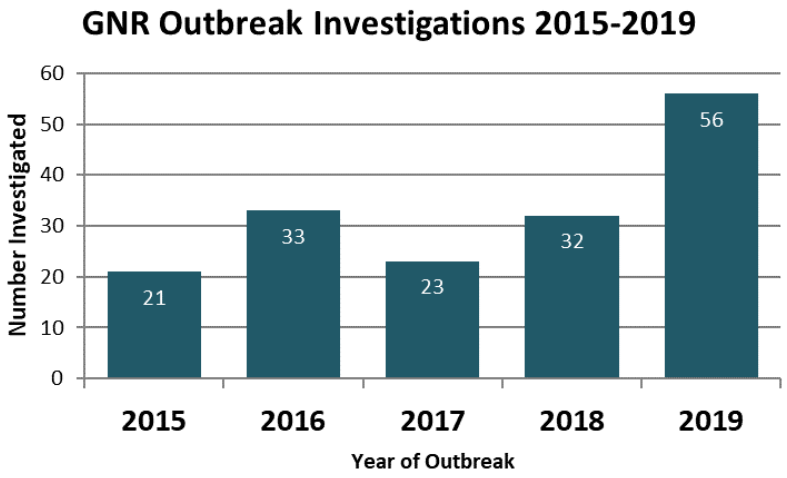
The above graph shows the GNR acute hepatitis case rates by hepatitis type. In addition, the graph compares GNR case rates to the Georgia case rates and Healthy People (HP) 2020 goals, a set of evidence-based 10-year national health benchmarks. The increase of Hepatitis A cases occurred throughout the nation, based on a nation-wide outbreak. National incidence cases increased 1,325% from 2015 through 2019 because of unprecedented person-to-person outbreaks.

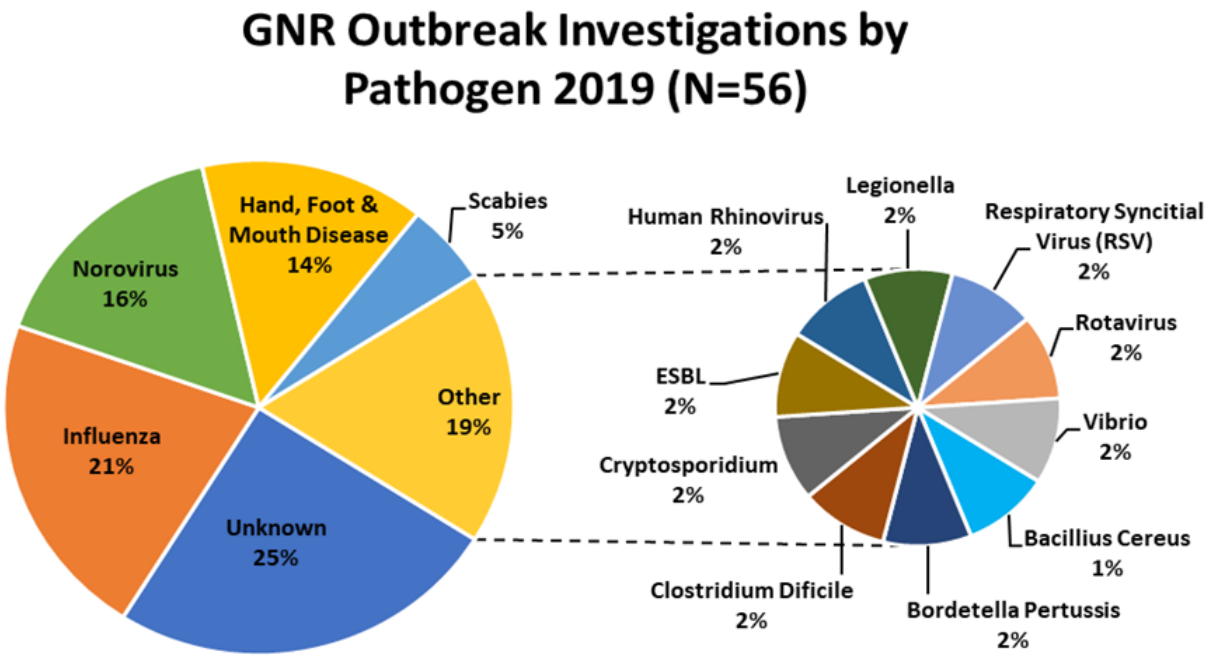


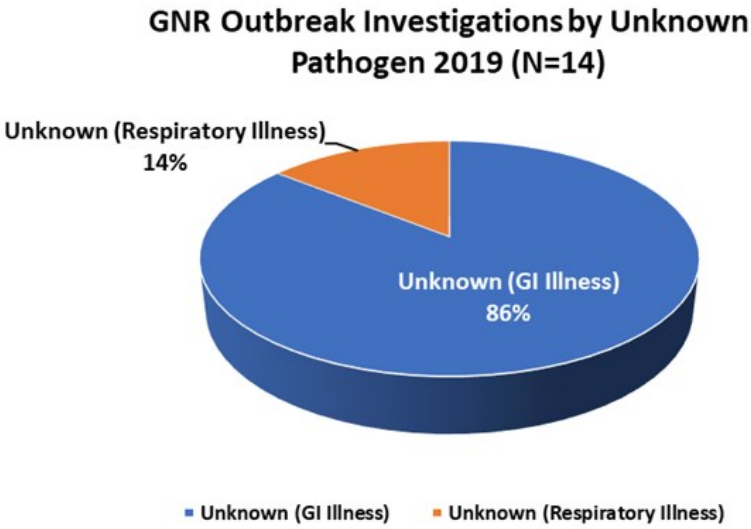
In the graph above, both chronic hepatitis B and C cases include cases that are considered "Probable Chronic" and "Chronic." The majority of newly reported cases of chronic hepatitis B in 2019 occurred in Georgia and 5 other U.S. states. Although chronic hepatitis B case rates have decreased from 2017 through 2019, the district's case rate per 100,000 persons (22.9) still remains higher than Georgia's 2019 newly reported chronic hepatitis B case rates per 100,000 persons (12.0). GNR chronic hepatitis C infections have increased slightly from 2018 to 2019. Half of people infected with hepatitis C will develop a chronic infection. Universal hepatitis C testing is recommended for woman who are pregnant and people who use injection drugs, especially when people can be infected with the virus more than once.

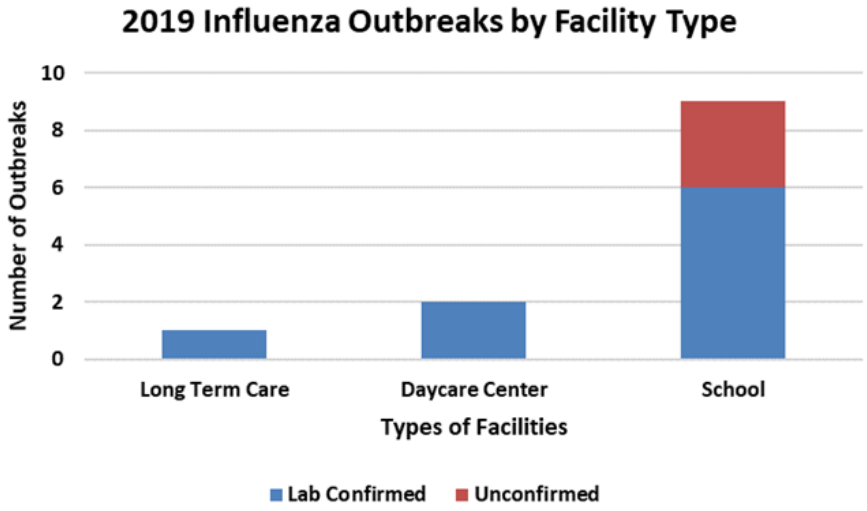
Outbreak Summary

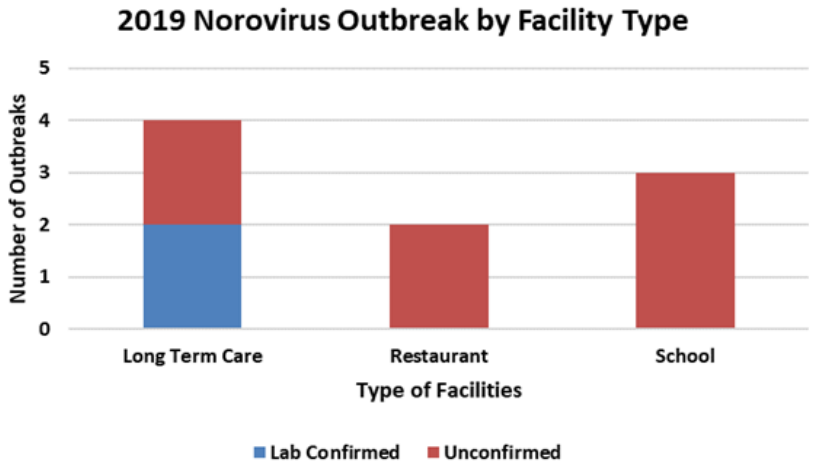
The number of notifiable disease case investigations did not include clusters or other non-notifiable disease investigations. Priority was given to investigation of reported outbreaks (N=56) of both notifiable and non-notifiable communicable diseases. One hundred percent of these reported outbreaks of illnesses were investigated. In 2019, influenza or suspected influenza was the predominately known pathogen for illness, causing 12 (21%) of the outbreaks investigated. A total of 14 (25%) outbreaks investigated were associated with GI and respiratory illnesses, but had an unknown/ unconfirmed etiology. The bar graph below show outbreaks reported and investigated from 2015-2019. As described above, not all pathogens were lab-confirmed.






GNR Outbreak Investigations by Unknown Pathogen 2019 (N=14)
Unknown (Respiratory Illness) 14%
Unknown (GI Illness) 86%
Unknown (GI Illness)
Unknown (Respiratory Illness)


2019 Influenza Outbreaks by Facility Type
Number of Outbreaks
10
8
6
4
2
0
Long Term Care
Daycare Center
School
Types of Facilities
Lab Confirmed
Unconfirmed


2019 Norovirus Outbreak by Facility Type
Number of Outbreaks
5
4
3
2
1
0
Long Term Care
Restaurant
School
Type of Facilities
Lab Confirmed
Unconfirmed

Emerging Pathogens

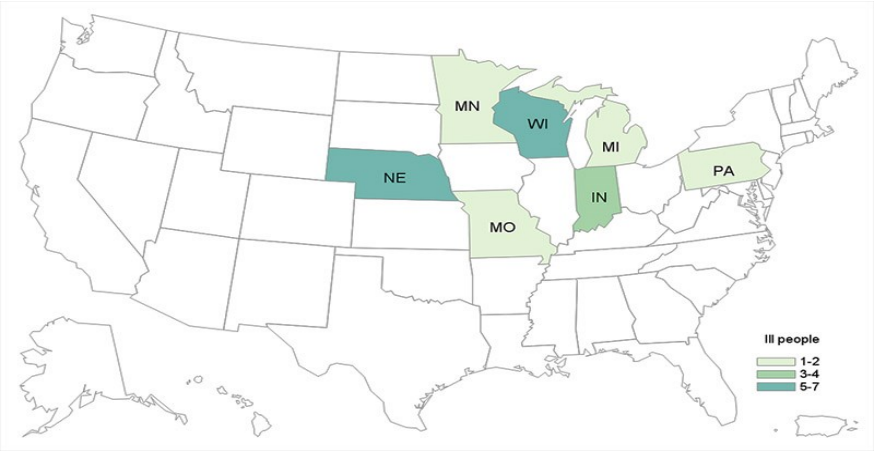
All emerging pathogen updates are as of December 31, 2019. Epidemiology works closely with emergency planners to prepare an evidence-based response to emerging pathogens. Epidemiology investigates all reported and suspect cases of emerging pathogens and utilizes surveillance data to inform GNR's public health actions. Epidemiology distributes pathogen-specific information on illness prevention to internal and external partners and works with these partners to implement control measures.

Hepatitis A Virus (HAV)

Hepatitis A is a very contagious, vaccine-preventable liver infection caused by the Hepatitis A virus. It is found in stool and blood of an infected person and can be spread through person-to-person contact (sexual contact, injectable drug use, caring for someone who is infected), fecal-oral route and eating contaminated foods or drinks. Contamination can occur when growing, harvesting, processing, handling, and even after cooking food. Hepatitis A cases are only acute; infections will not become chronic conditions like Hepatitis B and C. According to the CDC, people at an increased risk of contracting Hepatitis A are international travelers, people who use or inject drugs (IDU), people with occupational risk for exposure, men who have sex with men (MSM), people who anticipate close personal contact with an international adoptee, and people experiencing homelessness.

New Hepatitis A cases have been on the rise since 2015, but in 2018 and 2019, the cases significantly increased. Cases from 2017, 2018, and 2019 rose from 3,366 to 12,474 to 18,846 respectively in the United States. (14) As of February 19, 2020, 20 Hepatitis A outbreaks were reported from seven states; Georgia was not one of those seven states. Many of the outbreaks were associated to people eating fresh blackberries that were purchased from certain farmer's markets and other suppliers. In GNR, a total of 77 cases were reported (Gwinnett = 65; Newton = 6; Rockdale = 6) in 2019. In 2018, there were a total of five Hepatitis A reported, which shows a 1,540% increase in case counts in one year. The district had a higher case rate than the national case rate (6.7 vs. 5.7).

Outbreak-associated cases, by state of residence, as of February 19, 2020 (n=20)

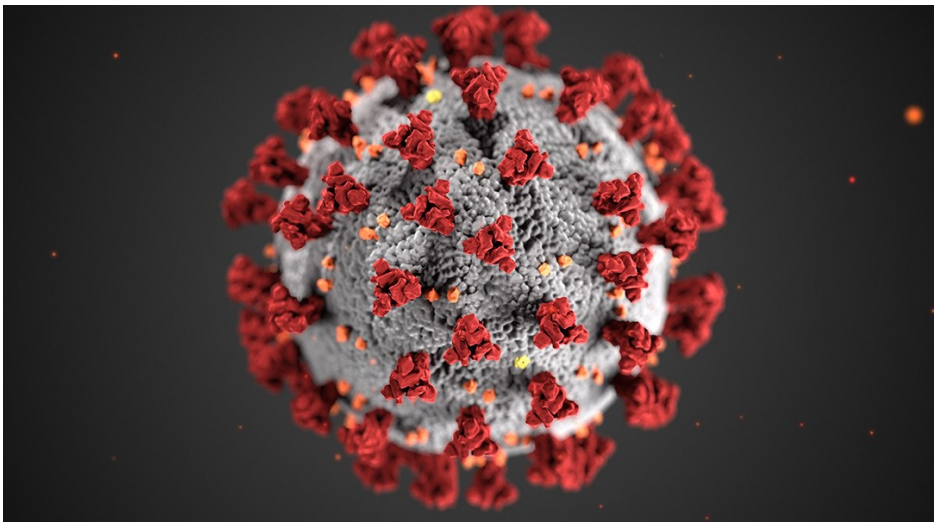


Source: https://www.cdc.gov/hepatitis/outbreaks/2019/hav-berries/map.htm

SARS-CoV-2 (Coronavirus)

COVID-19 (coronavirus disease 2019) is a very contagious respiratory disease caused by a virus called SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). The virus mainly causes respiratory symptoms that can resemble a cold, the flu or pneumonia. Most people that are infected will develop mild to moderate respiratory illness (fever, fatigue, cough, runny nose) and can recover without special treatment. Other symptoms may included loss of taste or smell, shortness of breath, nausea, or diarrhea. Older adults, those who are immunocompromised, or those with underlying health conditions could become severely ill and require immediate medical attention if infected. COVID-19 spreads when an infected person releases small droplets and particles that contain the virus while they are breathing, coughing, sneezing or speaking. Other people can be exposed to those droplets and particles by inhalation or contaminated surfaces. One of the most prominent characteristics of COVID-19 is that it can spread whether or not an infected person exhibits symptoms.

With the first human coronavirus discovered in the mid-1960s, human coronaviruses are not new viruses. Since the 1960s, we have seen a total of seven different types of coronaviruses, including SARS-CoV-2. The novel coronavirus, SARS-CoV-2, was first discovered late 2019 when a cluster of patients in Wuhan, China began experiencing symptoms of atypical pneumonia-like illness that responded poorly to standard treatments for this type of illness. The World Health Organization (WHO) took heed of all of the cases of a pneumonia of unknown etiology with symptoms of shortness of breath and fever from Wuhan. All of these cases were believed to be connected to the Huanan Seafood Wholesale Market. The live wildlife trade at the Huanan market may have contributed to the occurrence of SARS-CoV-2. The Huanan market was shutdown January 1, 2020, and by January 2, 2020, 41 people were hospitalized with an unknown pneumonia and 27 of them had direct contact with market. The United States reported its first laboratory-confirmed case January 20, 2020 in Washington state. By March 11, 2020, the WHO declares COVID-19 as a pandemic after having more than 118,000 cases in 114 countries and 4,291 deaths.



Other Activities

Public Health Associate Program (PHAP)

GNR Epidemiology has been a host site for the Public Health Associate Program managed by CDC's Office for State, Tribal, Local and Territorial Support (OSTLTS) since August 2012. The program is designed for entry-level public health professionals with either a bachelor's or master's degree to obtain real world public health experience by working at a host site for two years. GNR is hosting two 2019 associates, working a two year assignment in Communicable Disease. The current associates have been a great addition to our staff by providing education, routine surveillance and investigations, and linking patients to testing and treatment for STD's, HIV, TB disease, and latent TB infections.

Emergency Preparedness

GNR Emergency Preparedness is tasked under the Georgia Emergency Operations plan to lead efforts related to Emergency Support Function 8 (Health and Medical) and support Emergency Support Function 6 (Mass Care). GNR Epidemiology provides technical assistance and guidance as well as assists in emergencies as members of Public Health Action Support Team (PHAST). GNR Epidemiology works in conjunction with GNR Emergency Preparedness to plan, facilitate, and participate in public health emergency exercises, drills, and trainings. The Epidemiology staff also monitor surveillance data and reports any unusual activity or bioterrorism agents to Emergency Preparedness. GNR Epidemiology participates in shelter inspections and provides pre-emergency inspections as well as opening inspections and daily surveillance and clinic checks during an emergency. GNR epidemiology coordinated Emergency Preparedness with a Gwinnett County hurricane evacuation shelter in 2016. Shelter teams that included epidemiologists were sent to other locations in Georgia for hurricanes in 2017 and 2018. Epidemiology and Emergency Preparedness worked very closely together through the Incident Command System to coordinate the complex COVID-19 response from early 2020 into 2021. This extremely complex operation included setting up COVID-19 testing locations, resulting operations, contact tracing, case investigations, elevated levels of partner communications, preparation for and delivery of vaccine, media outreach, and much more. The fact that these teams had worked together for years smoothed the edges of a very challenging response.

Public Health Accreditation Board (PHAB)

GNR Health District completed a two day site visit as part of the national accreditation process through the Public Health Accreditation Board (PHAB) in April 2016 and earned accreditation. The accreditation process seeks to improve the standards of quality and performance within public health departments across the county. GNR Epidemiology has been a vital part of the district's accreditation application process. Epidemiology staff have been involved with the Community Health Assessment, Community Health Improvement Plan and the District's Strategic Plan as well as compiling the documentation for the Standards and Measures in the twelve domains of the application. Reaccreditation will be due in 2022.

Attachment 1: Notifiable Disease Reporting Poster

NOTIFIABLE DISEASE
CONDITION REPORTING

All Georgia physicians, laboratories, and other health care providers are required by law to report patients with the following conditions.

REPORT IMMEDIATELY

To Report Immediately | **Call:** District Health Office or **1-866-PUB-HLTH (1-866-782-4584)**

- any cluster of illness
- animal bites
- ▸ anthrax
- all acute arboviral infections*
- ▸ botulism
- ▸ brucellosis
- cholera
- diphtheria
- *E. coli 0157*
- *Haemophilus influenzae* (invasive)+
- hantavirus pulmonary syndrome
- hemolytic uremic syndrome (HUS)
- hepatitis A (acute)
- measles (rubeola)
- ▸ melioidosis
- meningitis (specify agent)
- meningococcal disease (invasive)
- novel influenza A virus infections
- novel respiratory viruses (SARS, MERS, etc.) positive lab results
- ▸ orthopoxviruses (smallpox, monkeypox)
- pertussis
- ▸ plague
- poliomyelitis
- ▸ Q fever
- rabies (human + animal)
- SARS-CoV-2 (COVID-19)
  positive lab results from point of care (rapid) antigen or molecular tests
  positive lab results nucleic acid amplification test (e.g., RT-PCR, etc.) results from laboratories certified under CLIA to perform moderate- or high-complexity tests
- shiga toxin positive test
- *S. aureus* with vancomycin MIC ≥ 4 mcg / mL
- syphilis (adult)
- syphilis during pregnancy
- tuberculosis
- latent TB infection in children < 5 years old
- ▸ tularemia
- ▸ viral hemorrhagic fevers

▸ *Potential agent of bioterrorism.*
\+ *Invasive = isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid.*

REPORT WITHIN 1 MONTH

Birth Defects, including fetal deaths of at least 20 weeks gestational age and children under age 6. Information for reporting birth defects is available at **dph.georgia.gov/birth-defects-reporting**.

Healthcare-associated Infections (HAIs) For facilities required to report HAI data to CMS via NHSN. Report in accordance with the NHSN protocol. Reporting requirements and information available at **dph.georgia.gov/notifiable-hai-reporting**.

Neonatal Abstinence Syndrome (NAS) Information for reporting NAS is available at **dph.georgia.gov/nas**.

REPORT WITHIN 6 MONTHS

Benign brain and central nervous system tumors

Cancer

Report forms and reporting information for tumors and cancer is available at **dph.georgia.gov/georgia-comprehensive-cancer-registry**.

REPORT WITHIN 7 DAYS

- AIDS#
- acute flaccid myelitis
- anaplasmosis
- aseptic meningitis
- babesiosis
- blood lead level (all)
- campylobacteriosis
- Carbapenem-resistant Enterobacteriaceae (CRE): Enterobacter species, Escherichia coli, and Klebsiella species
- chancroid
- Chlamydia trachomatis (genital infection)
- Creutzfeldt-Jakob Disease (CJD), suspected cases, under age 55
- cryptosporidiosis
- cyclosporiasis
- ehrlichiosis
- giardiasis
- gonorrhea
- HIV infection#
- Perinatal HIV exposure#
- hearing impairment (permanent under age 5)##
- hepatitis B
  - acute hepatitis B
  - chronic HBsAg(+) or HBV DNA detected infections
  - HBsAg(+) pregnant women
  - Perinatal HBV exposure
- hepatitis C (past or present)
  - anti-HCV(+)
  - HCV RNA detected
  - HCV genotype detected
  - anti-HCV(+) or HCV RNA detected pregnant women
  - anti-HCV(+) or HCV RNA detected children ages <3 years
- hepatitis D (Delta virus present with HBsAg); acute and chronic
- hepatitis E (acute)
- influenza-associated death (all ages)
- legionellosis
- leptospirosis
- listeriosis***
- leprosy or Hansen's disease (Mycobacterium leprae)
- Lyme disease
- lymphogranuloma venereum
- malaria
- maternal deaths (during pregnancy or within 1 year of end of pregnancy)##
- MIS-C (multi-system inflammatory syndrome in children)
- mumps
- psittacosis
- Rocky Mountain spotted fever
- rubella (including congenital)
- salmonellosis
- shigellosis
- streptococcal disease, Group A or B (invasive)**
- Streptococcus pneumoniae (invasive)**
  - report with antibiotic-resistance information
- tetanus
- toxic shock syndrome
- typhoid
- Varicella (Chickenpox)
- Vibrio infections
- yersiniosis

REPORT CASES ELECTRONICALLY THROUGH THE STATE ELECTRONIC NOTIFIABLE DISEASE SURVEILLANCE SYSTEM AT http://sendss.state.ga.us

* California serogroup virus diseases (including: California encephalitis, Jamestown Canyon, Keystone, La Crosse, Snowshoe hare, Trivittatus virus), Chikungunya Virus Disease, Eastern equine encephalitis virus disease, Powassan virus disease, St. Louis encephalitis virus disease, West Nile virus disease, Western equine encephalitis virus disease, Zika Virus Disease

** Invasive = isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid.

*** L. monocytogenes isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid, or other normally sterile site; or from placenta or products of conception in conjunction with fetal death or illness. Infant mortality is reportable to Vital Records.

REPORTING FOR OTHER CONDITIONS:

\# Report forms and reporting information for HIV/AIDS available by phone (**1-800-827-9769**) OR online (**dph.georgia.gov/georgias-hivaids-epidemiology-surveillance-section**).
For mailing HIV/AIDS reports, please use double envelopes marked "confidential", addressed to Georgia Department of Public Health Epidemiology Section, P.O. Box 2107, Atlanta, GA 30301

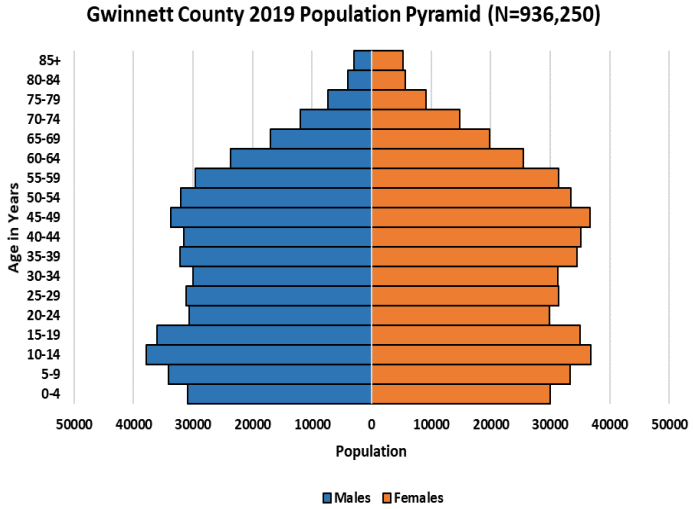
\## Report forms and reporting information for maternal deaths and hearing impairment (permanent, under age 5) available at **dph.georgia.gov/documents/forms-surveys-and-documents**.

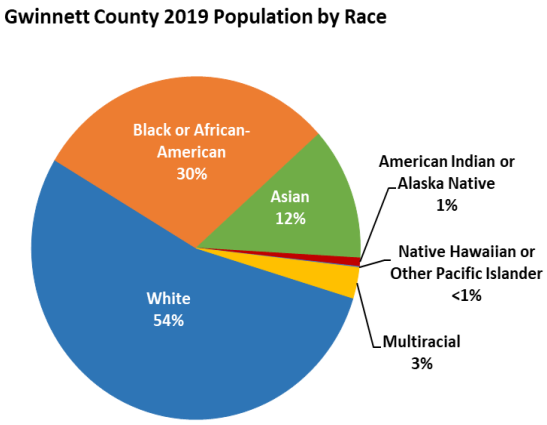
For more information:
www.dph.ga.gov/disease-reporting

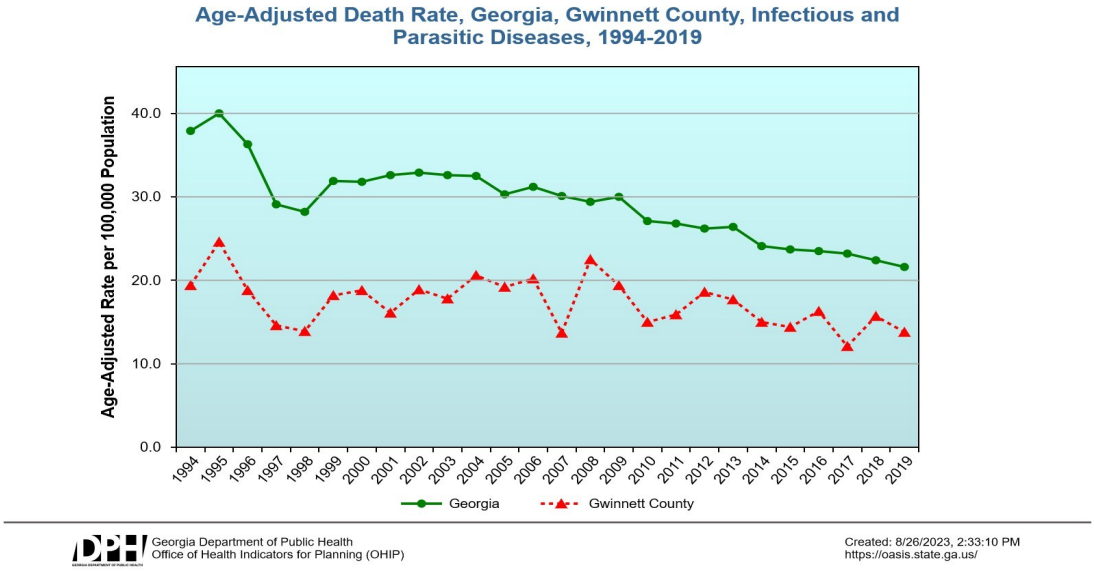
DPH GEORGIA DEPARTMENT OF PUBLIC HEALTH

Revised May 2023 | Georgia Department of Public Health

Gwinnett County Population at a Glance







Top 10 Causes of Hospitalizations in Gwinnett County for 2019 by Age-Adjusted Deduplicated Hospital Discharge Rate
Total Discharges: 70,494
(rates per 100,000 population)

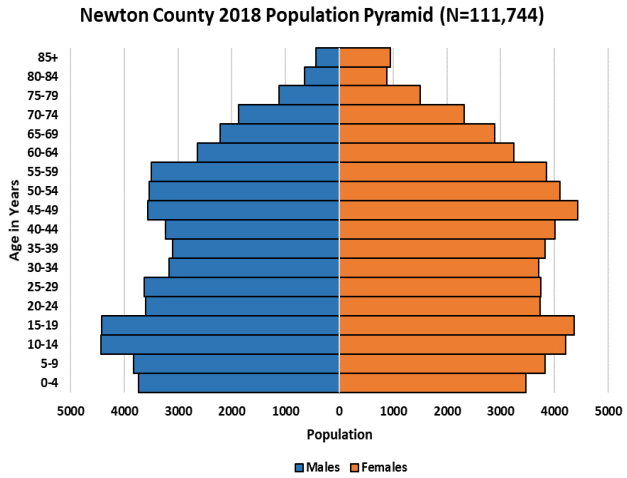
1	Septicemia	429.9
2	Cardiovascular Diseases	387.1
3	Bone & Muscle Diseases	305.9
4	Mental and Behavioral Disorders	207.5
5	Falls	205.5
6	Cerebrovascular Disease	161.9
7	Nervous System Diseases	138.9
8	Genitourinary System Diseases	137.8
9	Endocrine, Nutritional & Metabolic Diseases	134.4
10	Pneumonia	130.9

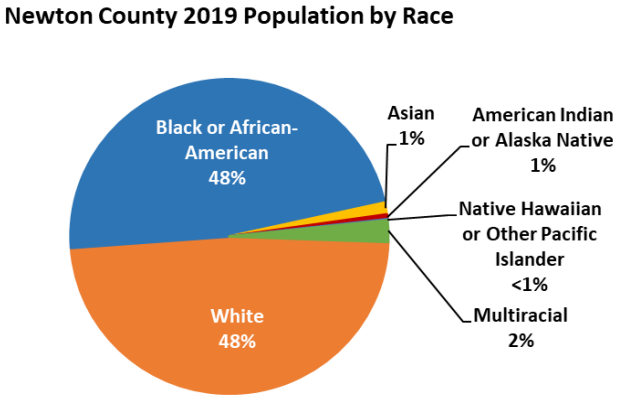
Select Population Based Statistics:

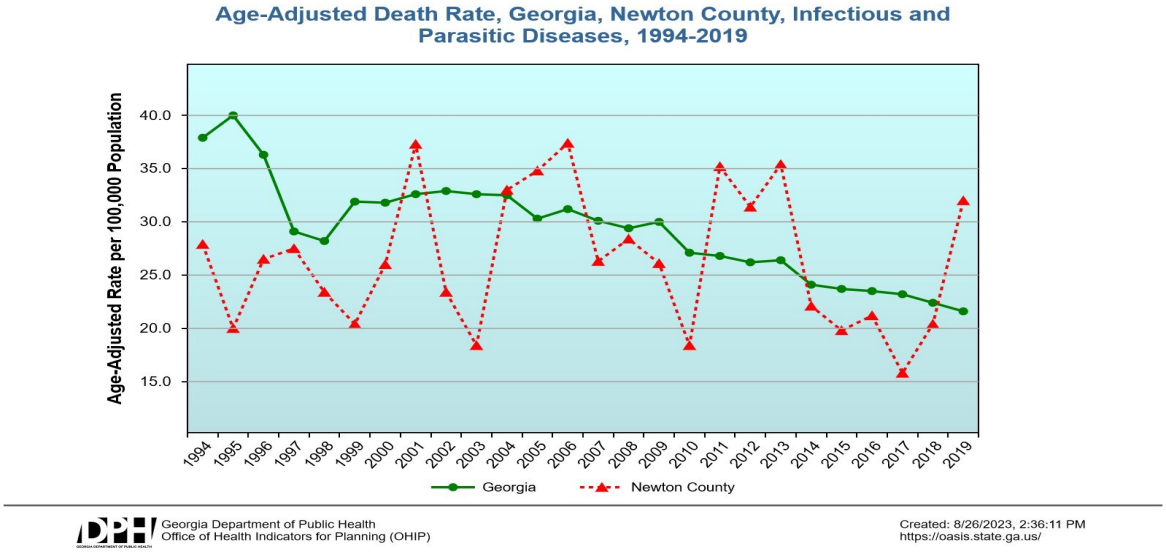
2019 Pregnancy Rate: 74.8 per 1,000 females 15 - 55 years
2019 Birth Rate: 36.8 per 1,000 females
2019: Infant Mortality Rate: 7.4 per 1,000 births

Source: www.oasis.state.ga.us

Newton County Population at a Glance







Top 10 Causes of Hospitalizations in Newton County for 2019 by Age-Adjusted Deduplicated Hospital Discharge Rate
Total Discharges: 12,171
(rates per 100,000 population)

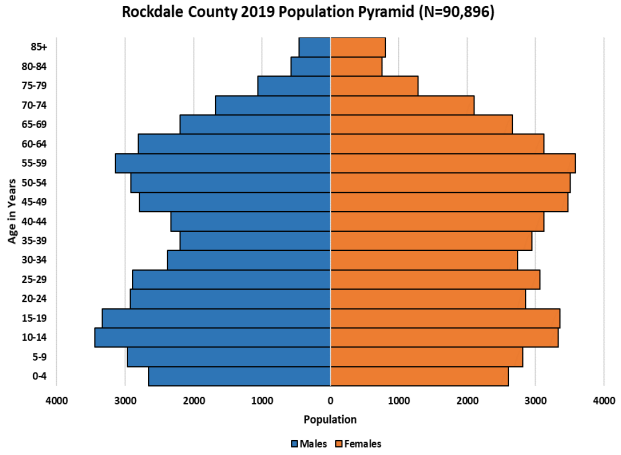
1	Cardiovascular Diseases	734.8
2	Septicemia	690.9
3	Bone & Muscle Diseases	420.2
4	Cerebrovascular Disease	232.7
5	Falls	231.2
6	Pneumonia	208.3
7	Endocrine, Nutritional & Metabolic Diseases	200.5
8	Nervous System Diseases	182.9
9	Kidney Diseases	168
10	Mental and Behavioral Issues	167.4

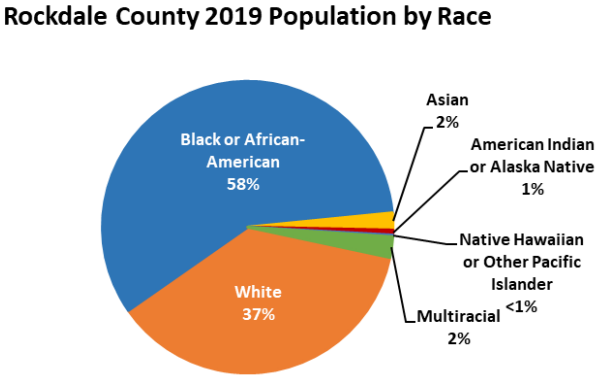
Select Population Based Statistics:

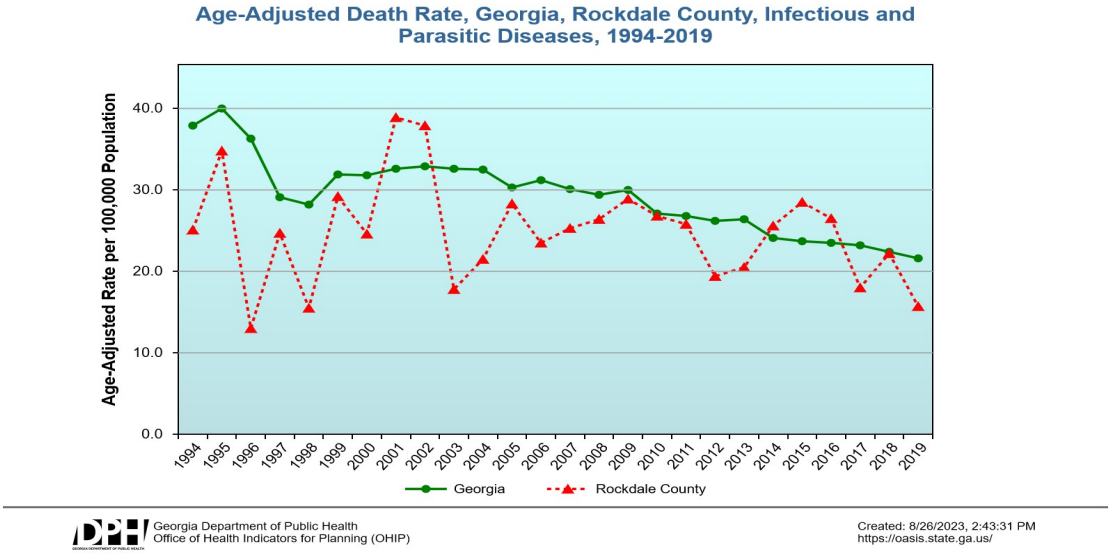
2019 Pregnancy Rate: 53.9 per 1,000 females 15-55 years
2019 Birth Rate: 41.8 per 1,000 females 15-55 years
2019 Infant Mortality Rate: 8 per 1,000 births

Source: www.oasis.state.ga.us

Rockdale County Population at a Glance







Top 10 Causes of Hospitalizations in Rockdale County for 2019 by Age-Adjusted Deduplicated Hospital Discharge Rate
Total Discharges: 9,417
(rates per 100,000 population)

1	Septicemia	645.1
2	Cardiovascular Diseases	630.4
3	Bone & Muscle Diseases	334.6
4	Cerebrovascular Disease	232.8
5	Stroke	202.6
6	Endocrine, Nutritional & Metabolic Diseases	207.9
7	Pneumonia	204.6
8	Mental & Behavioral Diseases	203.8
9	Nervous System Diseases	199
10	Falls	178.3

Select Population Based Statistics:

2019 Pregnancy Rate: 57.2 per 1,000 females 15-55 years
2019 Birth Rate: 36.9 per 1,000 females 15-55 years
2019 Infant Mortality Rate: 12.6 per 1,000 births

Source: www.oasis.state.ga.us

For additional copies of this report visit
www.gnrhealth.com
or call Epidemiology at
770-339-4260

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