

Nantucket Chronic Disease Report 2020





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Acknowledgments

Lead Author, Grace McNeil

Nantucket Health Department

Roberto Santamaria

Health Director

John Hedden
Health Inspector

Artell Crowley
Assistant Health Director

Kathy LaFavre
Health Inspector

Anne Barrett
Administrative Specialist

Intern Staff

Grace McNeil
Syracuse University

Skye Flegg
Nantucket High School

Facilitating Partners

American Cancer Society

Fairwinds Counseling
Center

Nantucket Fire
Department

Alliance for Substance
Abuse Prevention

Mayo Clinic

Nantucket Police
Department

Centers for Disease
Control and Prevention

Massachusetts
Department of Public
Health

Nantucket Public Schools

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Chronic Disease

The CDC defines chronic diseases as “conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both.” Chronic diseases are the leading causes of death and disability in the United States. They are also the majority contributor of the nation’s 3.5 trillion-dollar annual health care costs. In the United States, 6 in 10 adults have a chronic disease and 4 in 10 have two or more chronic diseases according to the CDC. The most common chronic disease is heart disease which is also the leading cause of death in the US. Many chronic diseases are caused by lifestyle factors such as tobacco use, poor nutrition, lack of physical activity, and excessive alcohol use.

There are many factors that contribute to the rise in chronic disease in our country. It can be broken down into two categories: protective factors (those that would prevent chronic disease) and risk factors (those that increase one’s risk of developing chronic diseases). The rise in chronic disease is caused by the decrease in protective factors while risk factors increase. Below are some examples of each.

| Protective Factors | Risk Factors |
|--|--|
| Financial stability | High rates of poverty |
| Easy access to fresh & affordable food | Easy access to cheap and unhealthy foods |
| Safe and accessible recreation space | Lack of safe outdoor space for exercise |
| Safe and affordable housing | High rates of tobacco and alcohol intake |
| Strong sense of community | Limited childcare options |
| Easy access to healthcare | Far away from fresh & affordable food |

In communities where there are more risk factors than protective factors, there is more chronic disease. Many of the risk factors listed above are commonly found in cities across the United States. They are also found in extremely rural areas that are usually far from grocery stores, good schools, and healthcare providers. Most Americans live in areas where a mix of protective and risk factors are present. Nantucket can be considered one of these places. Below are some of the protective and risk factors that are commonly found on Nantucket.

| Nantucket Protective Factors | Nantucket Risk Factors |
|---|---|
| Easy access to healthy & affordable food | Lack of medical specialists |
| Lots of safe space for recreation | High rates of poor mental health |
| Availability of economic opportunity (jobs) | Excessive use of drugs and alcohol among youth and adults |
| Access to public and private schools | Lack of affordable housing |
| Very limited fast food options | High cost of childcare |
| Strong sense of community | Potential need to work multiple jobs |

In communities with a mix of protective and risk factors, lifestyle choices tend to be extremely influential on the development of chronic diseases. A community member has the resources to be healthy, however, they also have the resources to be unhealthy. The choice is then largely up to them. It is also acknowledged that family history and other predetermined factors may play a part in the development of chronic diseases. The combination of genetics, environmental factors, and lifestyle choices all play a vital role in the development of chronic disease.

This chronic disease report provides an in-depth review of chronic diseases on our island. The following chronic diseases are reviewed in this report:

Asthma

Cancer

Cardiovascular Disease

Diabetes

Mental Health

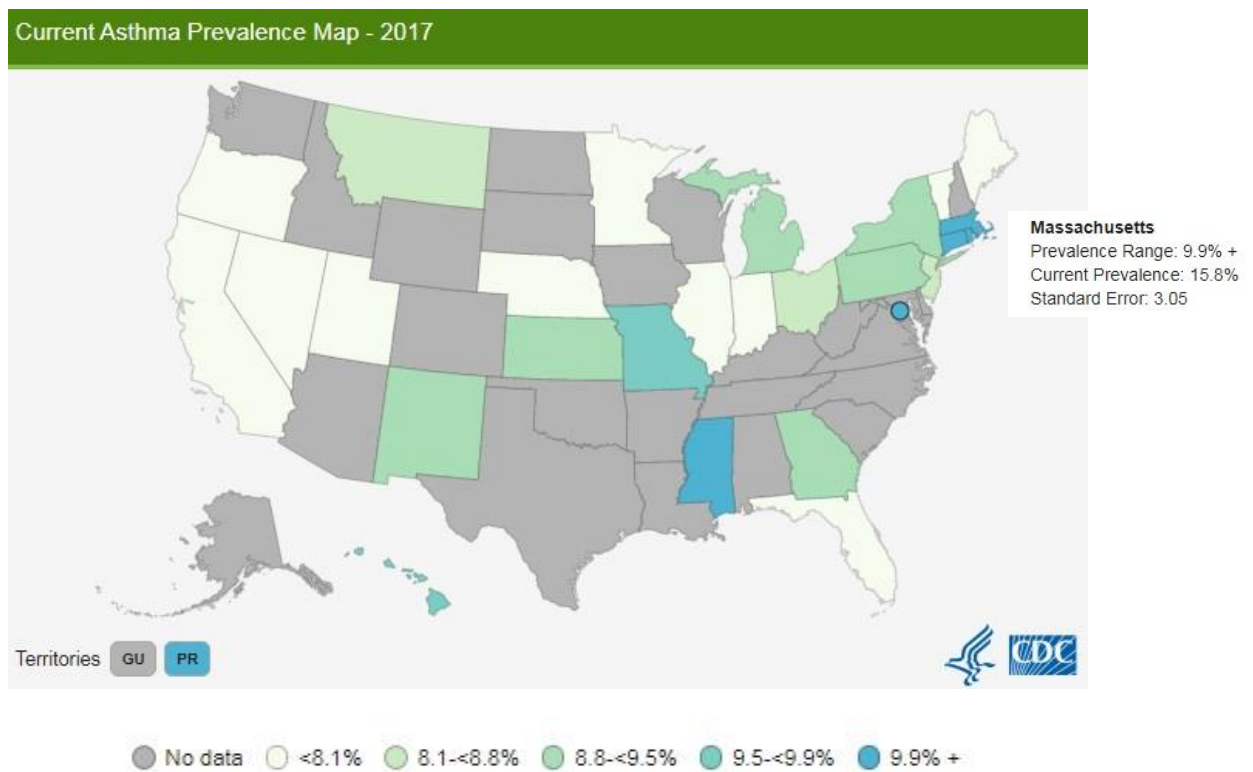
Stroke

Substance Abuse

Asthma

The Massachusetts Department of Public Health defines asthma as “a chronic inflammatory disease of the airways characterized by episodic wheezing, breathlessness, chest tightness, and coughing.” Children in Massachusetts have the highest rate of Emergency Department visits related to asthma and the second highest rate of asthma hospitalizations when compared to all other age groups.

According to the Massachusetts Department of Public Health, an estimated annual average of 15.0% of children in Massachusetts had asthma from 2011-2013. In 2017, the CDC reported that Massachusetts children had the highest prevalence of asthma when compared to all other states with a prevalence of 15.8%. In 2017, 11.5% of Massachusetts adults had asthma. This was comparable to the prevalence in the rest of New England. Children ages 5-11 had a much higher prevalence of asthma when compared to children aged 4 and younger (12.8% compared to 4.7% respectively). There is also an income disparity when it comes to asthma. Children living in homes with a household income of less than \$25,000 experience an asthma prevalence of 17.1% while children living in homes with a household income of \$75,000 or greater experience a prevalence of 8.1%. During the 2013-2014 school year, Nantucket had an asthma prevalence of 7.7-15.3 per 100 students. This was consistent with most communities in the state. From 2008-2012, the rate of asthma-related emergency department visits for children ages 19 and younger was statistically significantly higher on Nantucket than the statewide rate.

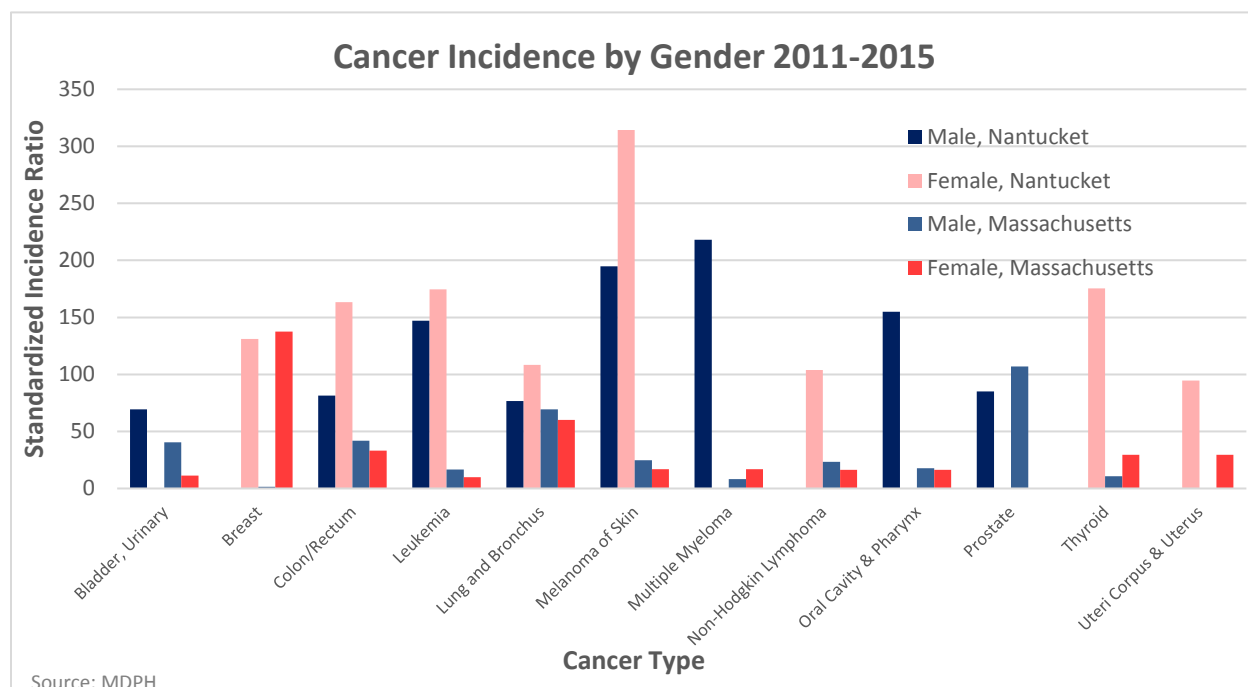


Cancer

From 2012-2016, there were 294 new cases of cancer on Nantucket. For every 100,000 people, 481 new cancer cases were reported. On Nantucket, 79 people died of cancer between 2012-2016. The cancer death rate from 2012-2016 on Nantucket was 130 per 100,000 people.

Females had a higher rate of being diagnosed with cancer when compared to men (555.5 per 100,000 versus 416.4 per 100,000).

The chart below compares the cancer incidence among males and females in Massachusetts and on Nantucket between the years 2011 and 2015.



At the state level, there were 180,609 new cases of cancer reported between 2012-2016. The rate of new cases was 449 per 100,000 people during this time-period. It can be concluded that Nantucket had a higher rate of new cancer cases when compared to the state level during the 5-year time-period (481 per 100,000 compared to 449 per 100,000). At the state level, males had a higher burden of new cancer cases when compared to females. The rate of new cancers for males was 470.8 per 100,000 and 439.5 per 100,000 for females from 2012-2016. This data point suggests that there may be an uncharacteristically high cancer risk for females on Nantucket.

Breast Cancer

According to the CDC, breast cancer was the most commonly diagnosed cancer type in females on Nantucket between 2012 and 2016 with 56 new cases. The following cancer types were the most common among females on Nantucket between 2011 and 2015.

Melanoma of the Skin, 314.3 per 100,000

Thyroid, 175.5 per 100,000

Leukemia, 174.5 per 100,000

Colon/Rectum, 163.5 per 100,000

Breast, 131.2 per 100,000

It can be concluded that while breast cancer was not the most common cancer type among females on Nantucket, it was the most commonly diagnosed within 2012-2016. This means that Nantucket may see the prevalence of breast cancer increase in future years and may even see it surpass prevalence rates of other cancer types. The American Cancer Society makes estimates every year for the number of new cases and deaths they expect, and their 2020 estimates are consistent with the previous prediction. They estimate that in Massachusetts, breast cancer will have the largest number of new cases of any cancer type in 2020 by over 1,000 cases. They are predicting 6,690 new cases of breast cancer (female only) in 2020 followed by 5,150 cases of lung and bronchial cancer (male and female combined). This estimate is consistent with the trends seen on Nantucket from the CDC and the Massachusetts Department of Public Health.

Prostate Cancer

For males, prostate cancer was the most commonly diagnosed cancer type on Nantucket between 2012 and 2016 with a rate of 91.1 per 100,000 and 30 new cases. The American Cancer Society reported that for the state of Massachusetts, prostate cancer had the second highest incidence rate behind breast cancer between 2012 and 2016. This is consistent with Nantucket data which showed breast and prostate cancers as emerging cancer types during the same time-period.

The following cancer types were the most common among males on Nantucket between 2011 and 2015.

Multiple Myeloma, 281.2 per 100,000

Melanoma of the Skin, 194.8 per 100,000

Oral Cavity & Pharynx, 155.0 per 100,000

Leukemia, 147.2 per 100,000

Prostate, 85.0 per 100,000

While prostate cancer was not the most prevalent cancer type in males between 2011-2015, it was the most commonly diagnosed cancer type from 2012-2016 on Nantucket. It can be concluded that the prevalence of prostate cancer may increase on Nantucket in future years based on its' high incidence rate. While breast and prostate cancers are not 100% preventable, there are reliable screening tools commonly available to catch these diseases early enough to increase chances of successful treatment. In 2018, Massachusetts ranked #2 in the country for breast cancer screenings (mammography). It is recommended that women over the age of 45 get yearly mammograms. Men over the age of 50 with average risk of prostate cancer should be screened every year.

Melanoma of the Skin

Melanoma of the skin was the most prevalent cancer type from 2011-2015 for females and it was the second most prevalent cancer type in males on Nantucket. Melanoma has consistently been a concern for Nantucket. From 2009-2013, the incidence rates of melanoma in men and women were significantly higher than the incidence rates at the state level. There are many factors that could contribute to the high rates of melanoma on Nantucket. According to the Nantucket Data Platform, about 14% of the population is over the age of 65 and 89% of the population is white. There is also a high demand for outdoor jobs, especially during the summer months. The combination of older age, light skin, and spending significant time outdoors in the summer could all be potential reasons for the high prevalence of melanoma on Nantucket. It should be noted that when conducting research on small communities, it is difficult to determine exact causation due to the sheer lack of data. According to the Mayo Clinic, the risk factors of Melanoma include having a family member with melanoma, fair skin, excessive UV light exposure, having many moles or unusual moles, and history of sunburns.

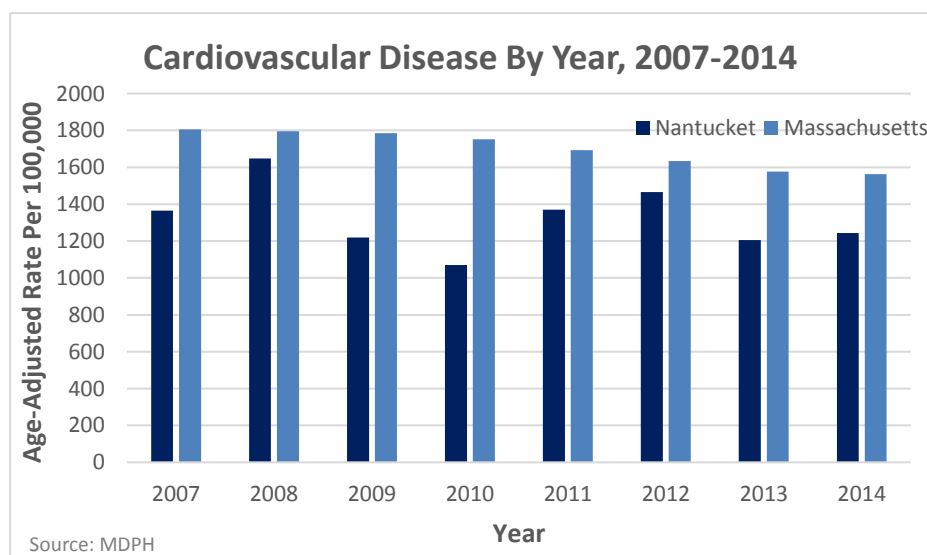
Cardiovascular Disease

Cardiovascular disease is the leading cause of death in the United States. It causes about 1 in 4 deaths according to the CDC. As defined by Mayo Clinic, cardiovascular disease refers to “conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain, or stroke.” It is also commonly referred to as heart disease. Cardiovascular disease can be caused by a combination of lifestyle choices, family history, and environmental factors. When a person makes unhealthy lifestyle choices, they may develop atherosclerosis (a build-up of fatty plaques in your arteries). It is caused by an unhealthy diet, lack of exercise, being overweight, and smoking.

Another type of heart disease, heart arrhythmia, is a condition in which there is an abnormal heart rhythm. This condition can be caused by birth defects, coronary heart disease, high blood pressure, diabetes, smoking, excessive use of alcohol or caffeine, drug abuse, and stress. While not all these conditions are correctable, most of them are lifestyle choices. Much like other chronic diseases, heart disease can be prevented by a healthy and balanced diet, regular exercise, and not smoking.

Cardiovascular Disease by Year

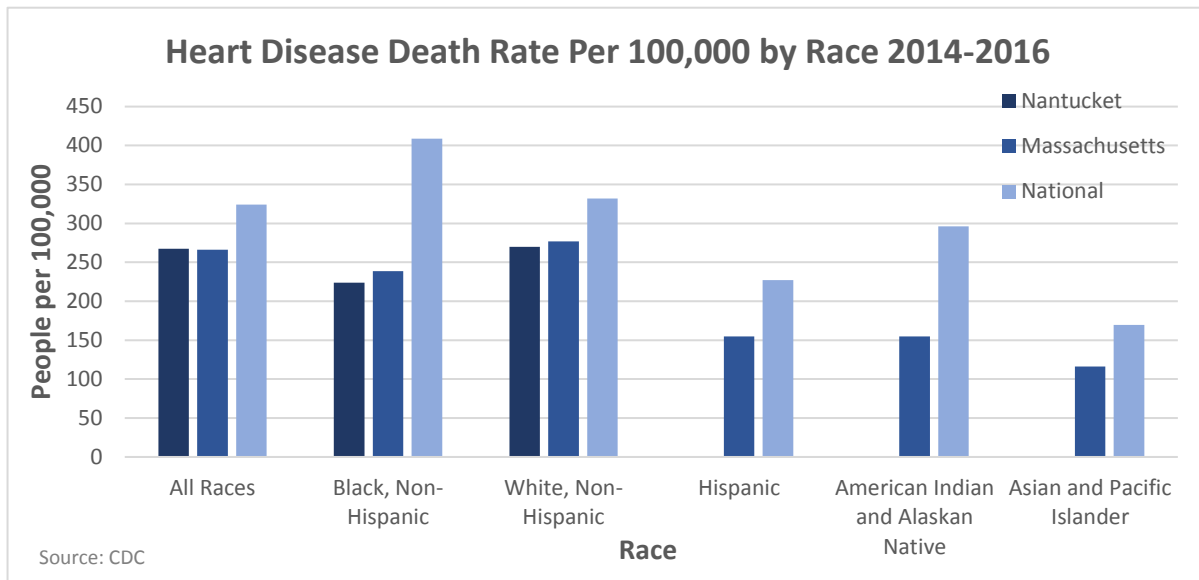
From 2007-2014, Massachusetts had a higher rate of cardiovascular disease (CVD) when compared to Nantucket. The highest rates of CVD occurred in 2008 on Nantucket (1648.8 per 100,000). While the rates of CVD have started to decrease consistently in Massachusetts, the



rates on Nantucket seem to fluctuate. There were three distinct increases in Cardiovascular Disease on Nantucket between 2007 and 2014. Following the highest rate of CVD in 2008, rates reached a low in 2010 at 1070.1 per 100,000. There was an increase in rates again in 2012, a decrease in 2013 and a small increase in 2014. With such a small population on Nantucket, a few new cases can drastically change the data.

Heart Disease Death Rate by Race

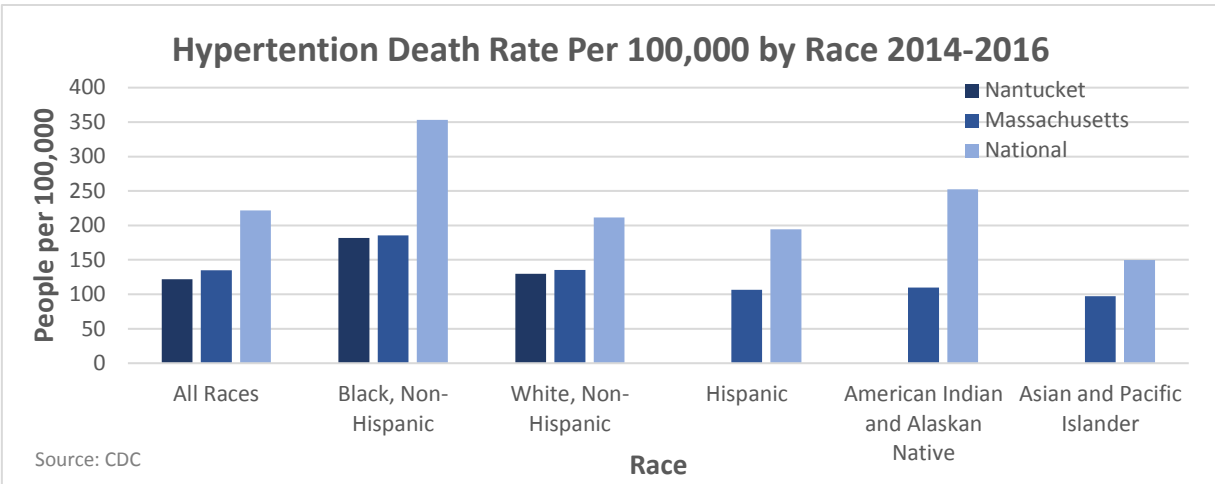
The following graph shows heart disease death rates by race on Nantucket, statewide, and nationwide. The Nantucket and statewide rates are very similar while the nationwide rates differ somewhat drastically. Nationwide, the population with the highest death rate is Black, non-Hispanic. On Nantucket and in the state of Massachusetts, the death rate is higher for White, non-Hispanic people. For the Hispanic, American Indian and Alaskan Native, and Asian and Pacific Islander populations, there were case numbers too small to report for Nantucket. Overall, Nantucket has a lower death rate for every population when compared to the rest of the US.



Hypertension Death Rate by Race

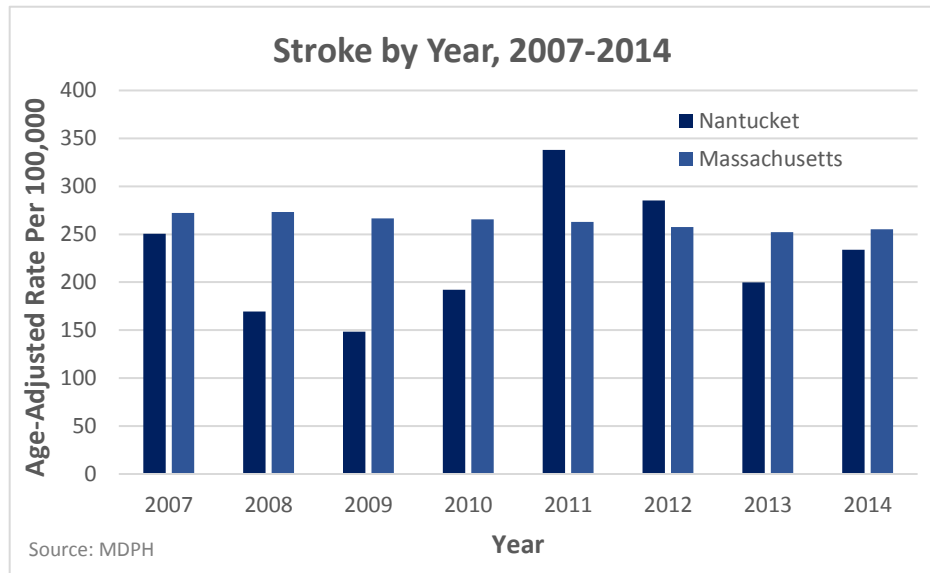
The following chart looks at hypertension death rates per 100,000 people by race in Massachusetts, on Nantucket, and nationwide. Since hypertension is a risk factor for heart disease, it is important to understand the prevalence of it in our community.

Corresponding to the heart disease death rate chart above, the nationwide rates of hypertension deaths are much higher than those of Massachusetts and Nantucket. An interesting point to note is that White, non-Hispanic people in Massachusetts and Nantucket are dying at a higher rate of heart disease when compared to Black, non-Hispanic people, but the opposite is true for hypertension death rates. Black, non-Hispanic people in Massachusetts and Nantucket are dying at a higher rate due to hypertension when compared to White, non-Hispanic people. Again, the case numbers for Hispanic, American Indian and Alaskan Native, and Asian and Pacific Islander people are too small to report.



Stroke by Year

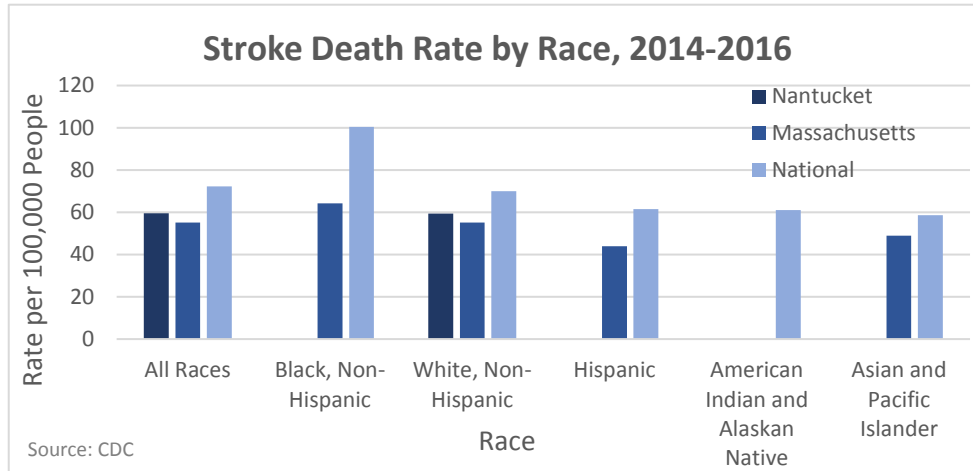
Stroke is a condition that can occur from complications of heart disease. When blood clots block blood vessels in the brain, a stroke occurs. Strokes can be very detrimental to the brain and can even be life threatening. They can be avoided by eating healthy and exercising regularly.



Generally, they can be prevented in the same way cardiovascular disease can. The rate of stroke in Massachusetts has stayed relatively consistent from 2007 to 2014. There has been a slight decrease over time. In 2017, the stroke rate was 272.2 per 100,000 people and it was 255.1 per 100,000 people in 2014. On Nantucket, the rate of stroke has changed a lot between 2007 and 2014. The lowest rate of stroke was in 2009 at 148.6 per 100,000 people. The highest was in 2011 with a rate of 338.1 per 100,000. The rate of stroke decreased on Nantucket in 2012 and 2013, however, it increased in 2014 to 233.8 per 100,000. Between 2007 and 2014, the stroke rate on Nantucket only surpassed the statewide rate twice: in 2011 and 2012.

Stroke Death Rate by Race

For all races, the stroke death rate is relatively similar. Nationwide, the death rate is 72.2 per 100,000 which is larger than both Massachusetts (55.1 per 100,000) and Nantucket (59.5 per 100,000). It should be noted that some data is missing from the chart. Nantucket only had death rates high enough to report for the ‘all races’ category and the White, non-Hispanic population. This means that on Nantucket, the White, non-Hispanic population had the highest number of stroke deaths than any other race. Nationwide and at the state level, the Black, non-Hispanic



population had the highest rate of stroke deaths (64.3 per 100,000 at the state level and 100.5 per 100,000 nationwide). The Black, non-Hispanic population also had the highest heart disease death

rate nationwide and the highest hypertension death rate nationwide, statewide, and on Nantucket.

The data may suggest a health disparity among this population. The CDC defines health disparities as “preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.”

Massachusetts and Nantucket are not as diverse as the rest of the nation which can lead to under reporting. By not being able to get a full picture of the data, we may overlook important trends. Health disparities are everywhere, and it is important for all populations to make a note of them so that we can work together towards health equity.

Diabetes

There are three types of diabetes: Type One, Type Two, and gestational (occurs during pregnancy).

Type One

Over 1.25 million people in the United States have type one diabetes. This type can occur in people of any age, gender, race, and size. For people with type one, their bodies do not produce insulin. Insulin is a hormone that the body needs to transfer sugar from food into the bloodstream to use for energy. Type one diabetics use insulin therapy and other treatments to manage their condition and they can live healthy lives. There is currently no cure for type one diabetes which makes it a chronic condition for those living with it.

Type Two

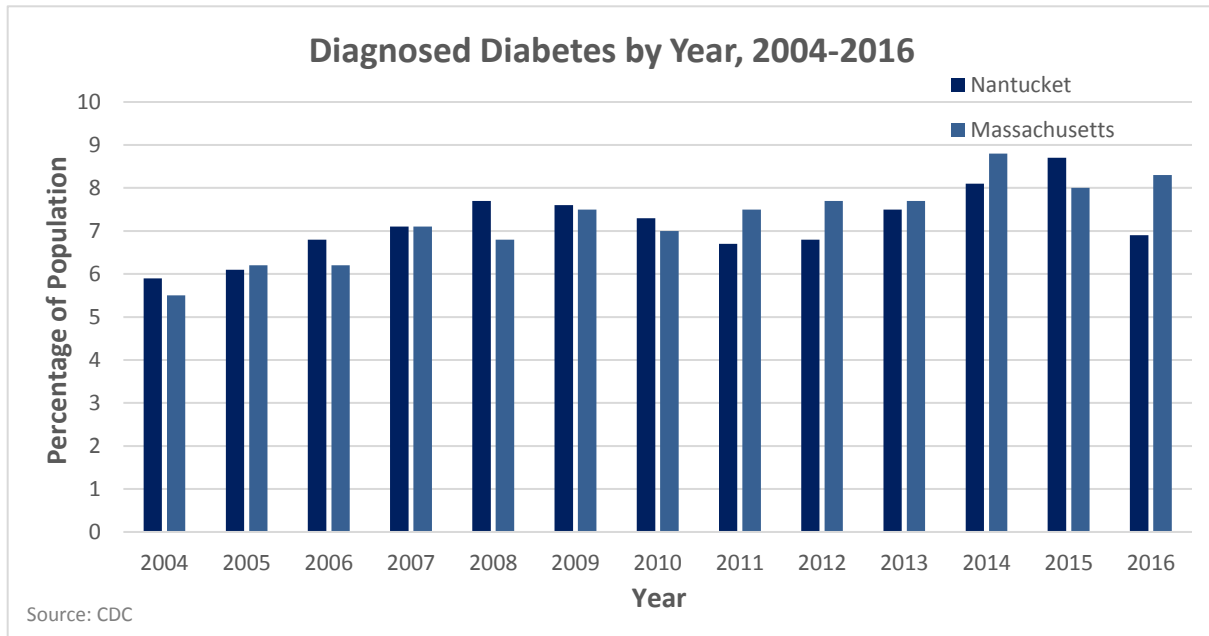
Type two is the most common type of diabetes. For people with this type, their bodies don't use insulin properly, this is called insulin resistance. The pancreas starts making more insulin to combat high intakes of sugar. Eventually, the pancreas can't keep up and a person's blood sugar will rise which leads to prediabetes and then type two diabetes. There is a period of prediabetes before type two is diagnosable. During this period, the condition can be reversed with proper exercise and diet. Over 84 million people in the United States are prediabetic. Since people with type two still produce insulin on their own, this condition can be managed by eating a healthy diet and exercising regularly. If enough damage to the pancreas is done, some people may need medication or insulin support.

Gestational

Some women will develop diabetes during their pregnancy. In most cases, the condition reverses itself when the baby is born. This condition can be treated with a healthy diet to control the mother's blood sugar. Although this condition normally corrects itself soon after delivery, the mother may still be at risk for developing type two diabetes. The mother will then work with their doctors to monitor and manage blood sugar.

Percentage of Population with Diabetes

The following chart looks at the percentage of the population on Nantucket and statewide that had diagnosed diabetes from 2004 through 2016. There has been a slight increase in diabetes for both populations with spikes in 2008 and 2009 as well as in 2014 and 2015. The highest reported percentage of diabetes on Nantucket was in 2015 with a percentage of 8.7. The highest percentage statewide was in 2014 at 8.8%. While the trend on Nantucket seems to be decreasing as of 2016, the statewide percentage increased in 2016. Based on the trends of the data, we can expect to see a slight increase in the percentage of the population with diabetes in the future.



Mental Health

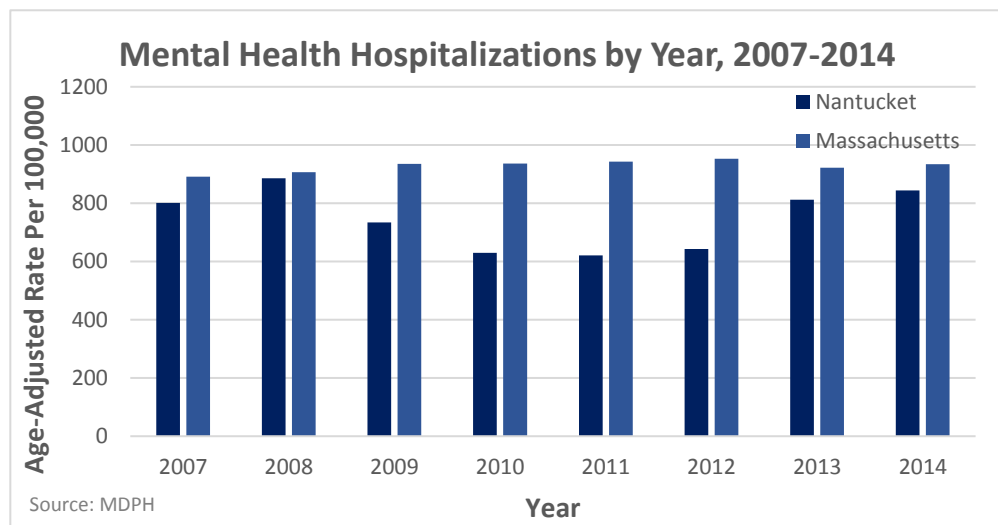
While mental health conditions are not always considered to be chronic, many people may struggle with them for long periods of time throughout their lives. Mental health issues and heightened stress levels have been connected to an increased risk of developing chronic diseases.

Fairwinds Therapy

Fairwinds Counseling Center on island is a valuable resource for individuals and families suffering from mental illness and substance abuse issues. Their therapeutic services range from their walk-in urgent behavioral health clinic, to in-home therapy. In 2017, before the walk-in clinic began, Fairwinds logged 5,960 therapy hours. These hours included evaluations, anger management therapy, individual therapy, family therapy, and in-home therapy. In 2018, Fairwinds introduced their urgent behavioral health clinic and they logged a total of 5,703 therapy hours. This decrease in hours can be generally attributed to a small decrease in the number of in-home therapy hours and outpatient therapy hours. The urgent behavioral health clinic was introduced in 2018 and is fully funded by a grant. Counselors at Fairwinds were available for 736 hours for walk-in patients in 2018. In 2019, Fairwinds continued the walk-in clinic and logged 736 hours of available time for clients for that specific service. There was a slight increase in the number of in-home therapy hours as well as evaluations and outpatient therapy hours. The total of hours Fairwinds spent on therapeutic services was 6,971 hours in 2019.

Mental Health Hospitalizations

For many years, mental health has been expressed as a concern for Nantucket residents. This is largely due to the high rates of suicides and substance abuse on the island. The following chart highlights

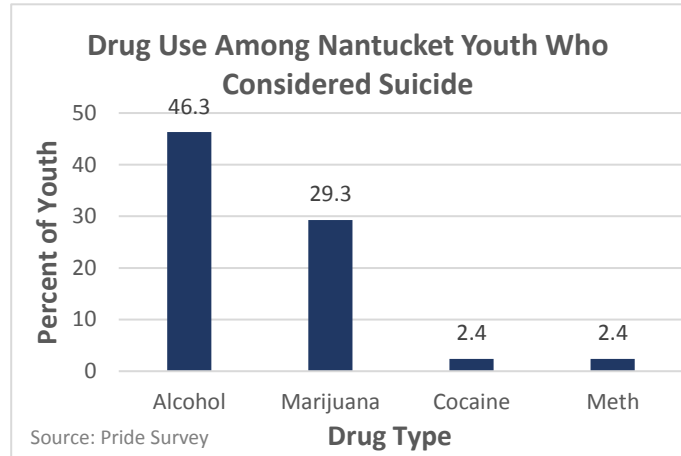


hospitalizations related to mental health on Nantucket and at the state level. From 2007-2014, the statewide mental health hospitalization rate has stayed consistent. On Nantucket, there was a dip in the rate of hospitalizations between 2009 and 2012. Hospitalization rates on Nantucket increased again in 2013 and 2014. The highest reported mental health hospitalization rate on

Nantucket was in 2008 at 886.3 per 100,000 people. At the state level, the highest rate was in 2012 at 953.2 per 100,000.

Our Students

NPR reports that up to 1 in 5 students in public schools across the nation show signs of a mental health disorder. Children who are suffering from mental health disorders are at a disadvantage when it comes to learning and building relationship with their teachers and peers. Of the 5 million students suffering, about 80% of them never receive therapy, medication, or any other form of treatment according to NPR. As part of a grant process for the Alliance for Substance



Abuse Prevention, the students in grades 6-12 at the Nantucket Public Schools participate in a youth risk survey called the Pride Survey, bi-annually. In 2017, 5.3% of students reported thinking about suicide. In 2019, 6.6% of students reported thinking ‘a lot’ or ‘often’ about suicide. While this increase is not large, it is still a step in the wrong direction.

Intentional Self-Harm Deaths

From 1999-2017, Nantucket has reported 24 deaths related to self-inflicted harm. In Massachusetts, there were 9921 deaths related to self-inflicted harm during the same period. When these numbers are adjusted to reflect population, Nantucket had a crude rate of 12.5 per 100,000 while the state had a crude rate of 8 per 100,000. This means that the issue of self-inflicted harm is more prevalent on Nantucket when compared to the state level. Nantucket also had the highest rate of self-inflicted harm deaths of all counties in Massachusetts from 1999-2017. This data supports the ongoing concern for our community’s mental well-being.

Substance Use

Substance use and misuse can often be attributed to peer pressure, social norms, and/or improper coping methods. As stated previously, there are many people on Nantucket struggling with mental health disorders. While there is no doubt that some of our island's substance use stems from mental health disorders, it would be inappropriate to assume there is nothing else contributing to it. It is widely known that the thousands of visitors who travel to Nantucket every year bring with them a culture of partying. In a community where children grow up witnessing the excitement of the summer, it is inevitable that some may wish to partake in the fun which may involve the consumption of alcohol or other drugs.

Alcohol

Based on the results of the Pride survey, there is a large difference in the use of drugs and alcohol between 11th and 12th graders at Nantucket High School. It was reported that 27.8% of 11th graders drink alcohol on the weekends while 62.7% of 12th graders drink alcohol on the weekends. The data showed that alcohol use was higher among females in every grade except 6th, 9th, and 12th.

Fairwinds offers DAE, or Drivers Alcohol Education, which is a court-mandated course for people who have been convicted of a DUI. This course requires each attendee to complete 17 weeks of counseling and education regarding the dangers of driving under the influence. In 2017, Fairwinds spent 513 total hours on their DAE course, 668 hours in 2018, and 1,292 hours in 2019. This increase in total hours can only be caused by an increase in the number of clients in these courses since each client is required to complete a standard number of hours per their mandate. While it is not ideal that more people are seeking DAE services, it is comforting to know that Nantucket has the necessary resources to support our community's needs.

Marijuana

Since 2017, Marijuana has been legal for recreational use in Massachusetts. Nantucket opened its first dispensary, The Green Lady, in August of 2019. It should be noted that although recreation use of marijuana is legal, it is only legal for people age 21 and over. According to the Substance Abuse and Mental Health Administration, smoking marijuana is not any less dangerous than smoking cigarettes. While they are both harmful, more long-term research needs to be done on the effects of marijuana. Tetrahydrocannabinol (THC), "the chemical responsible for most of marijuana's psychological effects," affects brain cells in circuits related to learning and memory, coordination, and addiction. Since marijuana affects your sense of time and coordination, it can affect things like driving. This is concerning since 5.4% of students reported using marijuana in a car.

Since marijuana is a natural substance, an extremely high dose of THC would be needed to overdose. It has been estimated that an individual would have to smoke the equivalent of 2,000 joints to ingest a lethal amount of THC. It is very easy for suppliers to lace their product with other substances without your knowledge. Many times, marijuana is laced with crack cocaine or spice

(a synthetic form of marijuana, also known as K2). When these chemical substances are introduced, people are at risk for overdose and even death.

Marijuana Use Among Youth

The following data is all from the 2019 Pride survey conducted by ASAP per a grant approval. 628 students in grades 6-12 were surveyed. Of the 628 students surveyed, 15.2% of them reported using marijuana during the past year. Most students reported using marijuana at a friend's house, including 41.2% of 12th graders who smoke marijuana. Of the high schoolers who reported using marijuana, an average of 20% of them use it at a friend's house. In terms of when students use marijuana, the most common answer was 'on the weekends' with 41.2% of 12th graders and 19% of 11th graders using on the weekends. The percent of 12th graders using marijuana was much higher than any other grade. Of those that use marijuana, 23% of 12th graders reported using after school and 11.8% report using during school. Marijuana use was higher among males in grades 9-12 and higher among females in grades 6-8.

E-Cigarettes

E-cigarettes, also known as vapes, are becoming one of the most popular drugs of choice for young people in the US. E-cigarettes can be tobacco or marijuana and their small size and subtle smell makes them easy to hide from teachers and parents. While only 3.5% of students in grades 6-12 reported using e-cigarettes on Nantucket, 4.9% of middle schoolers and 20.8% of high schoolers nationwide report using them. The legal age to buy e-cigarettes is 21 in Massachusetts.

Of the students that reported using e-cigarettes, 13.7% of 12th graders reported using them at school, 66.7% of students in grades 6-8 reported getting them from a friend and 75.9% of high schoolers go theirs from a friend. E-cigarette use was higher among females in every grade except 6th and 11th.

Other Drugs

Inhalants

The use of inhalants was highest among 12th grade males however, middle schoolers (grades 6-8) had rates much higher than students in grades 10-11.

Heroin

Some students in grades 8, 9, 11, and 12 reported using heroin at least once in the past year.

Steroids

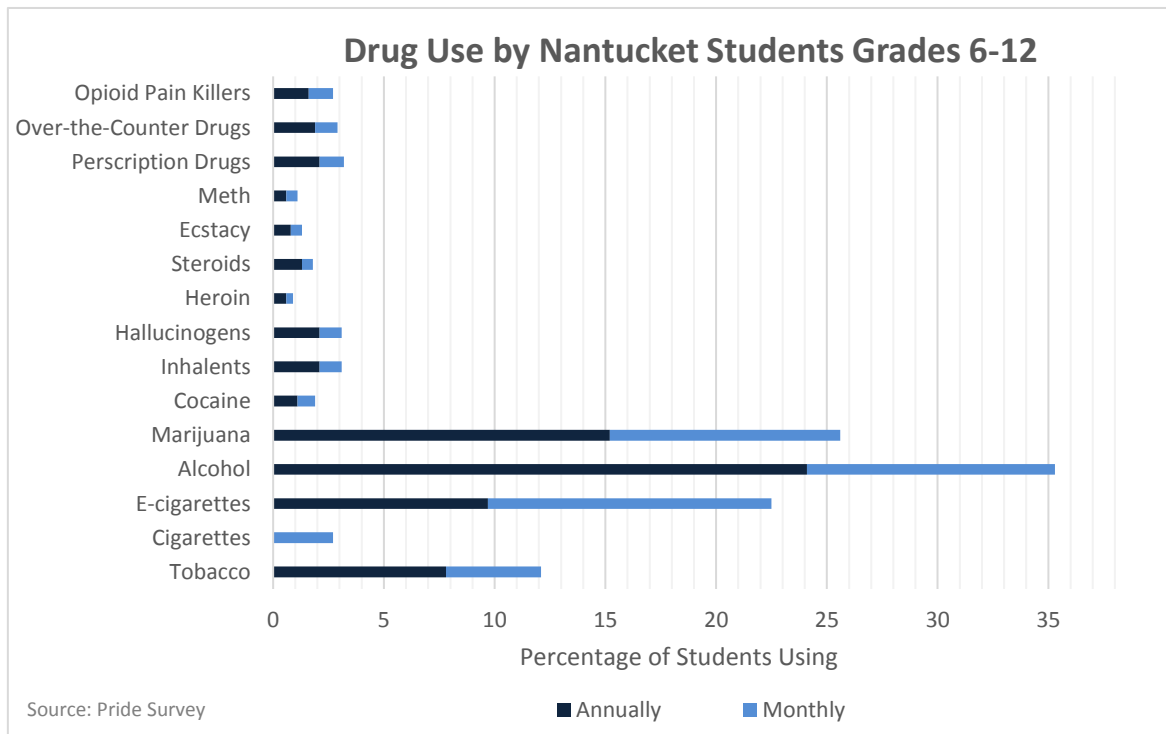
Steroids were reportedly used by some students in grades 8, 9, 11, and 12 at least once in the past year.

Ecstasy

Some students in grades 7, 9, 11, and 12 reported that they had used ecstasy at least once in the past year.

Meth

Meth use was reported at least once in the past year in grades 7, 8, 9 and 12 by some students.



Narcan

When we think about overdoses, many of us may assume that this tragedy mostly affects adults. The results of the 2019 Pride survey showed that students in grades 8,9,11, and 12 reported using heroin. Heroin is extremely addictive and caused 2,343 overdose deaths in 2015 among people aged 15-24 according to the Substance Abuse and Mental Health Services Administration. Naloxone, or Narcan, is an FDA approved medication that is used to prevent overdose by opioids such as heroin, morphine, and oxycodone. Narcan blocks opioid receptor sites to reverse symptoms of overdose to hopefully prevent permanent brain damage or death.

The following data was reported by the Nantucket Fire Department and the Nantucket Police Department:

| Year | # of Responses to Overdoses | # of Uses of Narcan |
|------|-----------------------------|---------------------|
| 2012 | 10 | Not Recorded |
| 2013 | 12 | Not Recorded |
| 2014 | 13 | Not Recorded |
| 2015 | 15 | Not Recorded |
| 2016 | 17 | 11 |
| 2017 | 9 | 7 |
| 2018 | 15 | 8 |
| 2019 | 6 | 6 |

In recent years, there has been a decrease in the number of times Narcan was administered. Since Narcan is now available to the public, the Fire and Police Departments have not needed to use Narcan as frequently. In 2017 and 2019, the number of responses to cases that were classified as overdoses were significantly less than other years. This may also be attributed to the increased availability of Narcan. If people are regularly using drugs, chances are they have Narcan available, so a friend or family member can reverse their overdose which may deter them from ever calling for help. It should be noted that there is no evidence regarding the reasoning behind the decrease in overdoses and uses of Narcan, this is just an educated guess.