Farmington Valley Health District

Community Health Assessment

SEPTEMBER 2022

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INTRODUCTION

The Farmington Valley Health District (FVHD) is the local health department serving the towns of Avon, Barkhamsted, Canton, Colebrook, East Granby, Farmington, Granby, Hartland, New Hartford, and Simsbury in the state of Connecticut. Monitoring the health status and health needs of our community is an essential function of a local health department.

A Community Health Assessment (CHA) is an invaluable tool in helping to better understand the current health status of persons who live, learn, work, and play in our towns and the factors that affect their health. It is also an opportunity to work collaboratively with our community partners to identify gaps in services and the resources available to fill these gaps.

As the product of these efforts, the CHA serves as the basis to guide decision making in the forthcoming FVHD Community Health Improvement Plan (CHIP).

METHODS

Community Health Assessment Advisory Group

In May 2019, the FVHD convened a CHA Advisory Group comprised of community members with subject matter expertise who share the mission of enhancing and improving the health of our communities. Members represent diverse sectors of the public health system and community including senior and social services, academia, mental health, food insecurity, community health nursing, environmental health, youth health, and women's health. A full membership listing of the Advisory Group can be found in Appendix A.

The roles of the Advisory Group included:

- Provide subject matter expertise on public health issues
- Advise FVHD on public health issues of importance within the community
- Assist in the prioritization of health issues
- Identify organizations, individuals, and agencies that can bring additional context and value to the CHA and CHIP processes
- Assist in the collection of data
- Participate in the identification of data gaps
- Identify community assets and resources to inform the CHA and CHIP
- Assist in the dissemination of the final CHA report to the community

The Advisory Group met monthly from June 2019 through February 2020. During this time, the Advisory Group developed a vision and core values, established data selection criteria, reviewed secondary data summaries, and assisted in identifying key data gaps and primary data needs. Due to the demands on the FVHD during the COVID-19 pandemic, the CHA was placed on hold. In June 2022, the Advisory Group was reconvened. At this time, the group reviewed updated secondary data, reviewed previously identified data gaps and identified additional data gaps, brainstormed populations at greatest risk for poor outcomes to target for focus groups, and identified assets within our communities that enhance community well-being. A complete timeline of their decision-making process can be found in Appendix B.

Secondary Data Collection

To produce a comprehensive community health profile of the FVHD, existing quantitative data was collected and analyzed from national, state, and local sources. This process enabled the development of a community health profile that included social, environmental, and economic characteristics of the communities served by the FVHD as well as health behaviors and health outcomes of FVHD residents. Data sources include but are not limited to the United States Census Bureau, the Centers for Disease Control and Prevention, the Connecticut Department of Public Health, the Connecticut Department of Mental Health and Addiction Services, and the Connecticut Data Collaborative. Types of data collected included self-report of health behaviors from large, population-based surveys such as the Connecticut Behavioral Risk Factor Surveillance System (BRFSS) and the Connecticut School Health Survey (CSHS) as well as public health disease surveillance data and vital statistics from birth and death records. When available, quantitative FVHD-specific data is compared to the corresponding *Healthy People 2030* objective. *Healthy People 2030* is an initiative of the United States Department of Health and Human Services that sets data-driven ten-year national objectives to improve the health and wellbeing of the nation. In this way, the *Healthy People 2030* objective serves as a benchmark for FVHD-level data.

Primary Data Collection

Secondary data collection allowed for a big picture analysis of the health status of FVHD residents. However, the use of town-level and FVHD-level data can mask disparities among sub-populations in our communities. In particular, we were interested in exploring issues associated with health equity including conditions, factors, and policies that disproportionately impact certain populations and may have a negative impact on health status. As this information would be difficult to ascertain from existing quantitative data sources, a focus group consisting of the Social Services Directors of many towns in the FVHD was convened. The Social Services Directors are on the front-line of interacting with and providing aid to vulnerable populations in our communities and were thus able to speak specifically to health inequities that exist within the FVHD. Themes that emerged from this focus group are included throughout the CHA.

Limitations

The FVHD CHA represents a comprehensive profile of the health status of residents and the factors that enable or impede achieving optimal health. However, there are limitations to the overall report. This assessment presents data analysis on a subset of indicators identified by the CHA Advisory Group as health priorities. Prioritization of health issues included considerations that included but were not limited to access to FVHD-specific data, magnitude and seriousness of the health issue, and whether prevention of the issue was actionable by the FHVD. In this way, the data presented in this CHA is not all encompassing. In addition, certain data was not available at the FVHD-level and thus state data was used. Furthermore, it is important to note that the vast majority of data presented in this report are from before the COVID-19 pandemic and thus the health impacts of the pandemic are largely not represented in this report. However, as the focus group with the Social Services Directors took place after the pandemic, the themes that emerged from this group reflect the effect of the pandemic on our communities and thus may tell a different story than data collected before the pandemic. Limitations of specific data sources are noted throughout the report.

FINDINGS

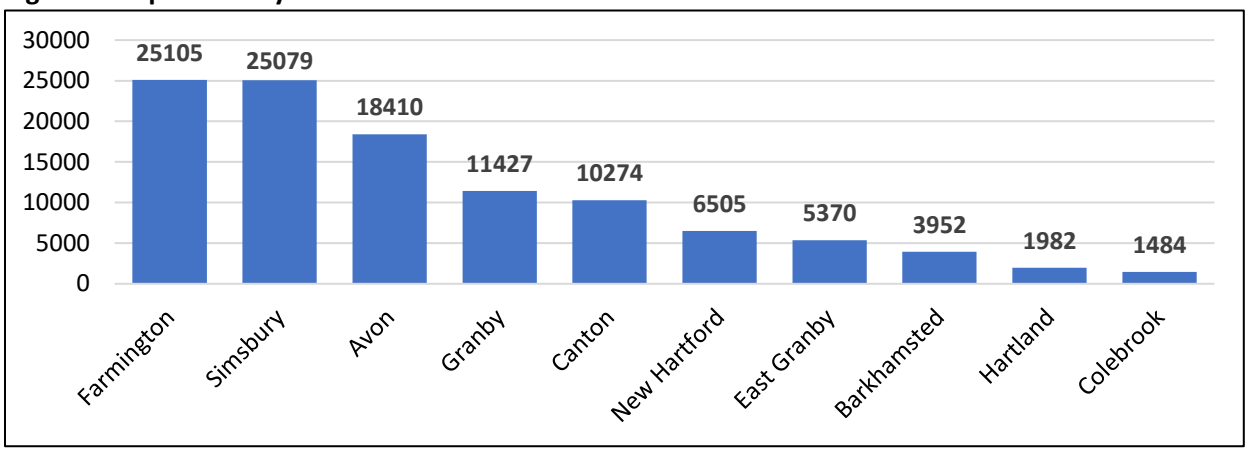
Demographics

The demographic characteristics of a community, including the distribution of age, race, and ethnicity, influence health outcomes at both the community and individual level. This is because the composition of the community influences the type and availability of resources and services within the community to protect against health risks and promote positive health outcomes. The following section provides an overview of the communities served by the FVHD.

Population

The FVHD serves approximately 109,588 residents in the ten towns served by the district. As shown in Figure 1, the FVHD consists of three very small towns with fewer than 4,000 residents each (Barkhamsted, Colebrook, and Hartland), four medium towns with populations of 5,000 residents to slightly more than 11,000 residents each (East Granby, New Hartford, Canton, and Granby) and three larger towns each with greater than 18,000 residents (Avon, Farmington, and Simsbury).

Figure 1: Population by FVHD Town

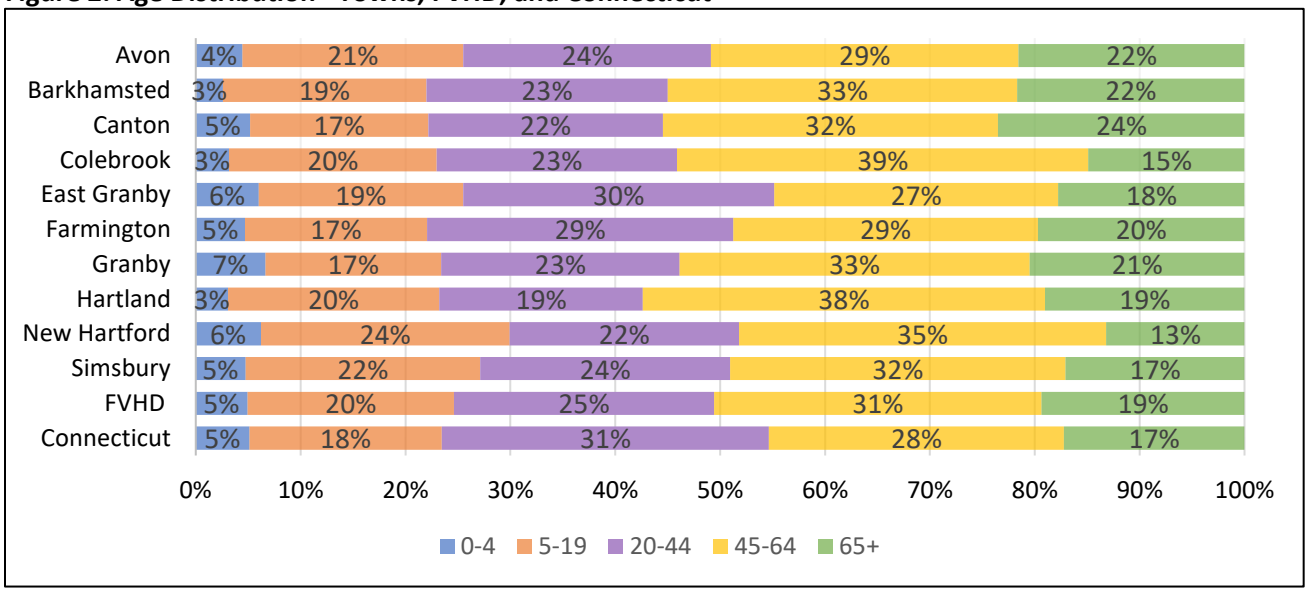


Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Age Distribution

Figure 2 displays the percentage of each town's population by age group as well as the total age distribution in the FVHD and in Connecticut. 50% of the population in the FVHD are individuals ages 45 and older. The FVHD has a higher percentage of residents ages 65 and older (19%) compared to Connecticut (17%), most notably in Canton (24%), Avon (22%), Barkhamsted (22%), and Granby (21%).

Figure 2: Age Distribution - Towns, FVHD, and Connecticut

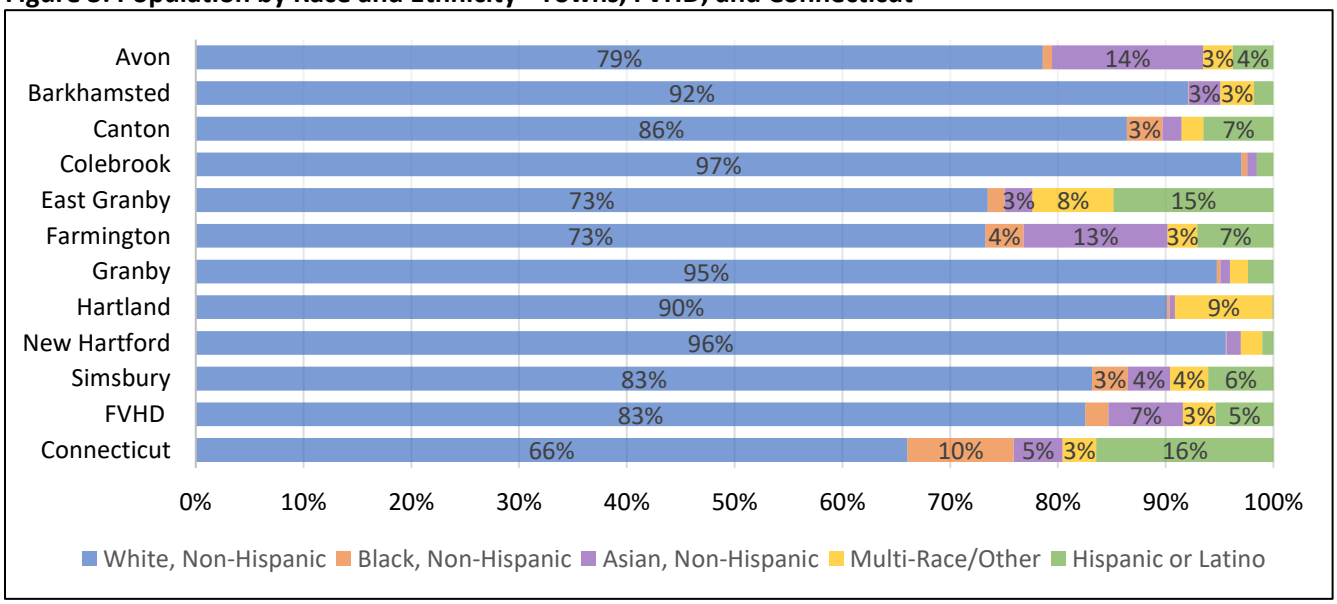


Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Racial and Ethnic Diversity

As shown in Figure 3, the FVHD has a larger percentage of the population that is White (83%) compared to Connecticut (66%). The most racially diverse towns in the FVHD are Avon, East Granby, and Farmington. Avon (14%) and Farmington (13%) have a higher percentage of individuals identifying as Asian compared to Connecticut (5%) while East Granby has a higher percentage of individuals identifying as Hispanic or Latino (15%) compared to other towns in the FVHD.

Figure 3: Population by Race and Ethnicity - Towns, FVHD, and Connecticut



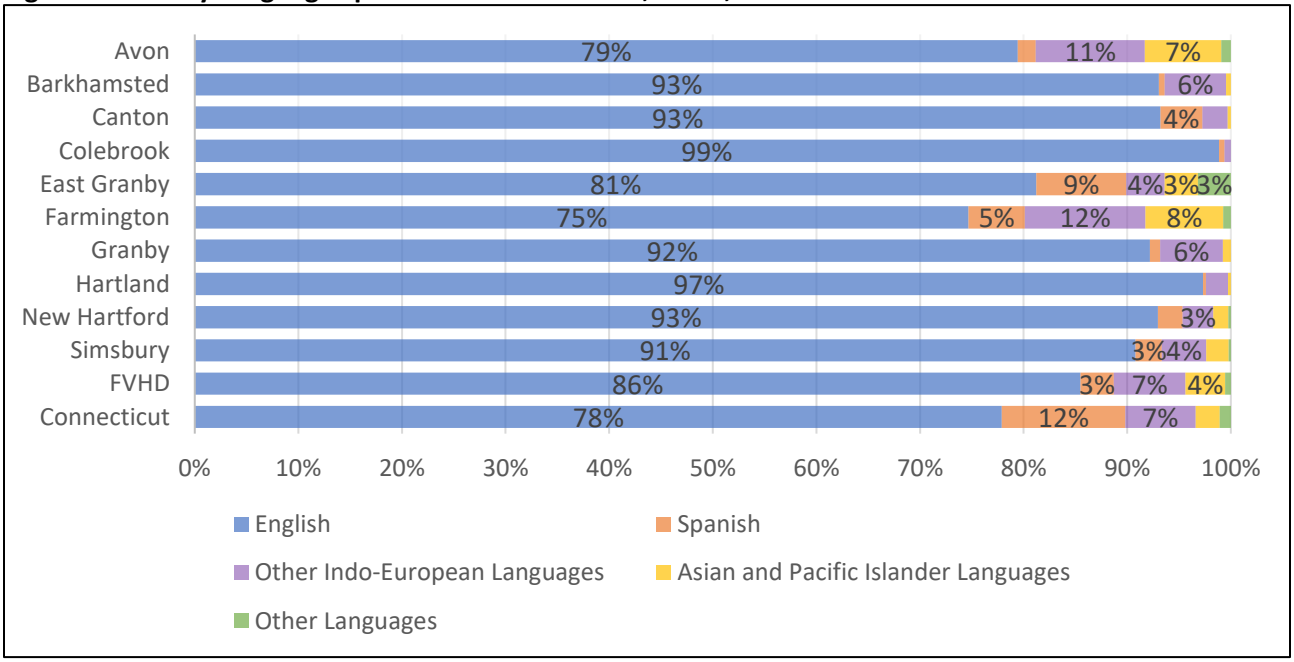
Source: U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates

Note: Segments with no percentage shown are 2% or less.

Language

Figure 4 demonstrates that while English is the primary language spoken in most homes in the FVHD (86%), in Avon and Farmington, other Indo-European languages account for the primary language spoken at home in 11% and 12% of homes, respectively. Spanish is the primary language spoken at home in 9% of homes in East Granby.

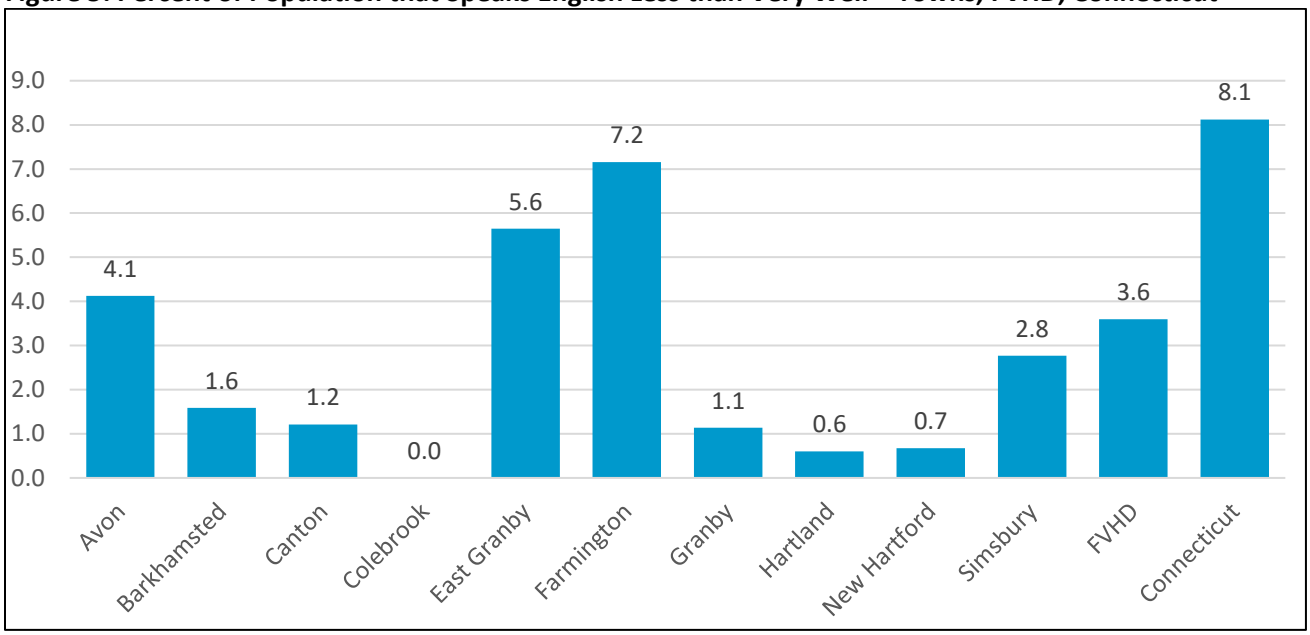
Figure 4: Primary Language Spoken at Home - Towns, FVHD, Connecticut



Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*
Note: Segments with no percentage shown are 2% or less.

As depicted in Figure 5, 3.6% of people in the FVHD self-identify as being able to speak English less than "very well" compared to 8.1% in Connecticut. The towns with higher percentages of people whose primary language at home is a language other than English also have higher percentages of people who speak English less than "very well", as seen in Farmington (7.2%), East Granby (5.6%), and Avon (4.1%).

Figure 5: Percent of Population that Speaks English Less than Very Well – Towns, FVHD, Connecticut



Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Summary

Compared to Connecticut, the FVHD has an aging population with 19% of residents 65 years and older, with most residents identifying as White (83%) and are primarily English speakers (86%). The most racially diverse towns in the FVHD are Avon, East Granby, and Farmington.

Social Determinants of Health

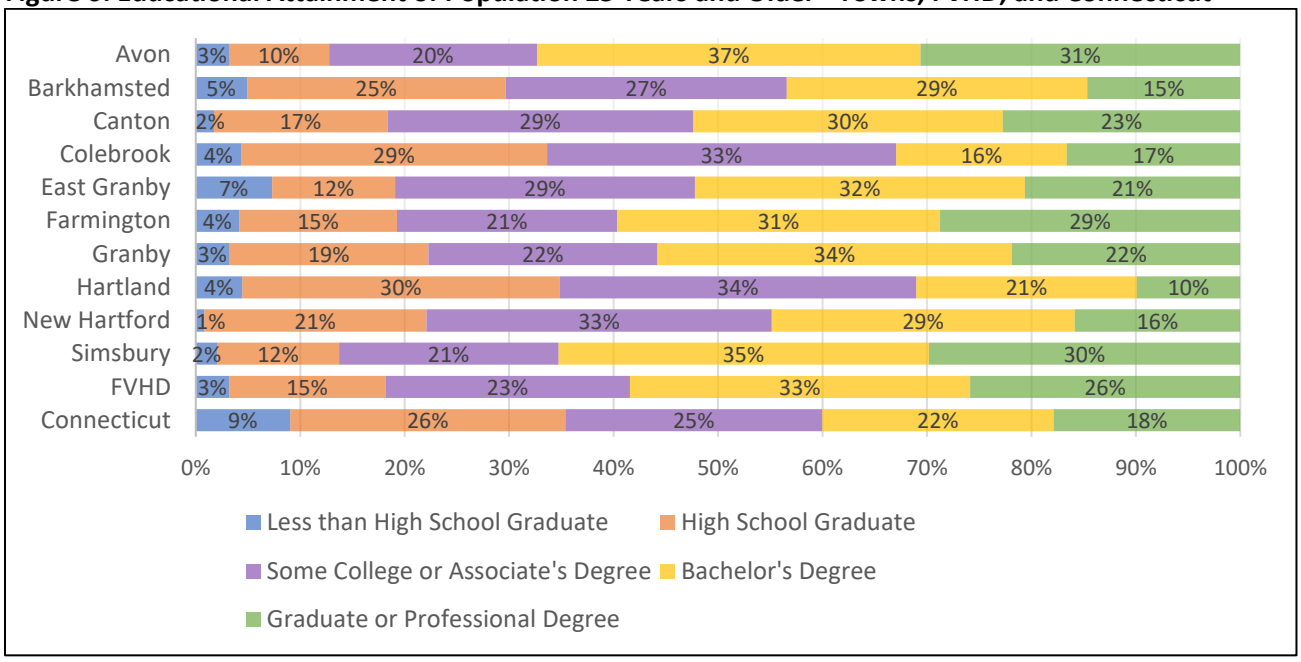
Social determinants of health are non-healthcare conditions in our communities that impact the ability of individuals to live healthy lives. These include, but are not limited to, conditions such as educational attainment, employment and income, and housing conditions. The social determinants of health demonstrate that an individual's health is affected by not only their genetics and lifestyle behaviors, but also by the environment in which they work, live, learn, and play. Therefore, it is crucial to analyze the social determinants of health when assessing the health status of a community.

Educational Attainment

Individuals with higher levels of educational attainment are more likely to live healthy lives compared to those with lower levels of education.[1] Education affords individuals greater employment opportunities, as well as upward mobility during their careers, which is likely to result in more stable financial security. Stable financial security allows individuals to afford not only quality healthcare and health insurance but also better access to other things that promote healthy lifestyles, such as nutritious food, safe housing conditions, or gym memberships.

As presented in Figure 6, in the FVHD, 59% of the population 25 years and older have earned a bachelor's degree or graduate degree compared to 40% in Connecticut. Eight of ten towns in the FVHD have a higher percentage of the population 25 years and older that have attained a bachelor's degree or graduate degree than in Connecticut.

Figure 6: Educational Attainment of Population 25 Years and Older - Towns, FVHD, and Connecticut



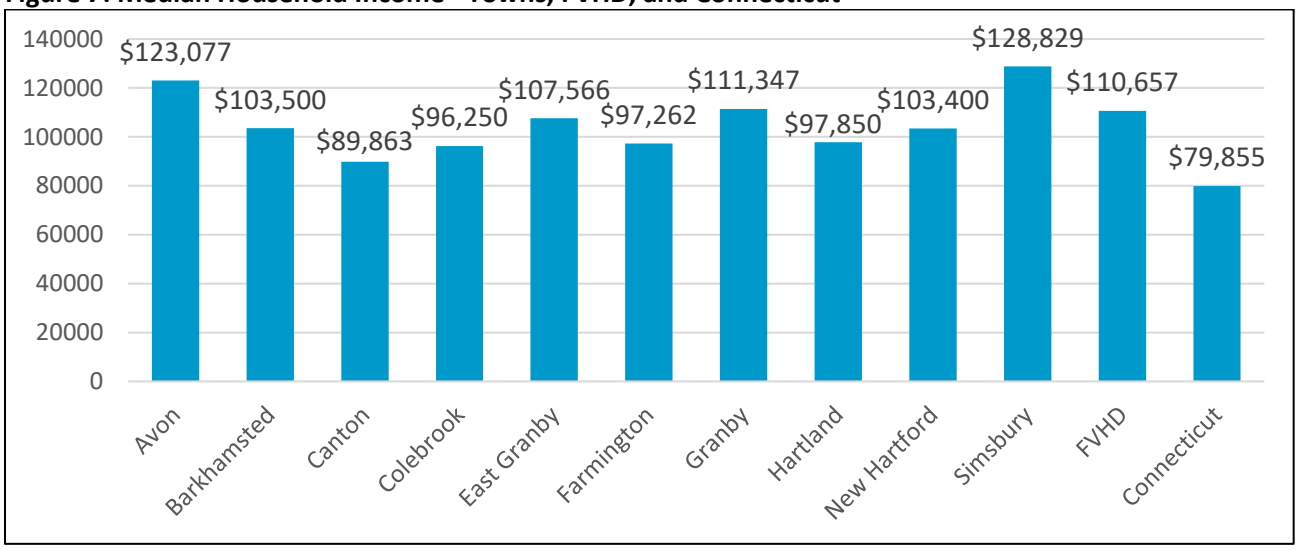
Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Income and Poverty

Income

For many residents, the optimal, healthy choice may not be financially feasible. Income levels often shape health behaviors and decisions which ultimately influence our health status. Income levels impact an individual's ability to afford the costs associated with seeking quality healthcare, nutritious foods, early childhood education and care for their children, safe and affordable housing, and the means to promote physical activity. As Figure 7 shows, all towns in the FVHD have a higher median income than the median income in Connecticut, with a range from $89,863 in Canton to $128,829 in Simsbury.

Figure 7: Median Household Income - Towns, FVHD, and Connecticut



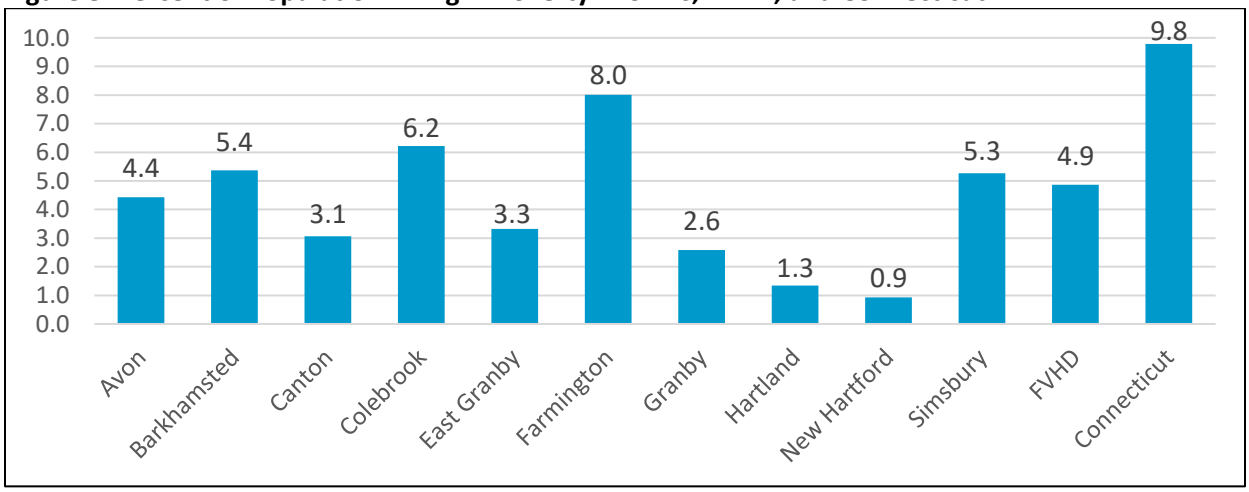
Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Poverty

Just as individuals with higher income levels generally experience better health outcomes, individuals living in poverty are at an increased risk of suffering from chronic disease and mental illness, which contribute to higher mortality rates and ultimately leads to shorter life expectancy.[2]

Figure 8 shows that all towns in the FVHD have a lower percentage of the population living in poverty than in Connecticut (9.8%). Overall, 4.9% of the population in the FVHD is living in poverty with the highest percentage in Farmington (8%).

Figure 8: Percent of Population Living in Poverty - Towns, FVHD, and Connecticut



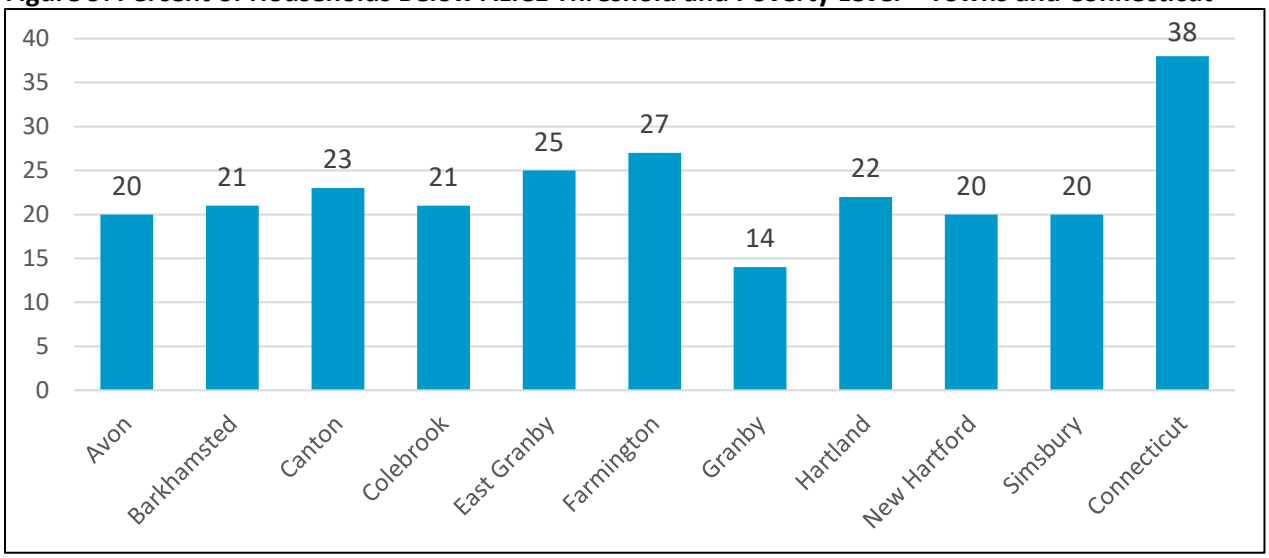
Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

ALICE

ALICE, which stands for Asset Limited Income Constrained Employed, is a measure of households that earn more than the federal poverty level but less than the basic cost of living for the area. Taken together, the number of households that fall below the ALICE-level and poverty-level represent the total population struggling to afford basic needs including housing, food, and healthcare.

As illustrated in Figure 9, in all FVHD towns, the percentage of the population below the ALICE threshold and the poverty level range from 14% to 27%, which is less than in Connecticut (38%). While the towns in the FVHD are not at the level of Connecticut, it is still concerning that in nine of ten towns, at least one in five households fall below this threshold. The Social Services Directors discussed how the high ALICE levels in their towns juxtaposed with relatively low poverty levels mean that there are many residents whose income falls just above the level of qualifying for state or federal aid programs but are still below the cost of living in the FVHD.

Figure 9: Percent of Households Below ALICE Threshold and Poverty Level – Towns and Connecticut



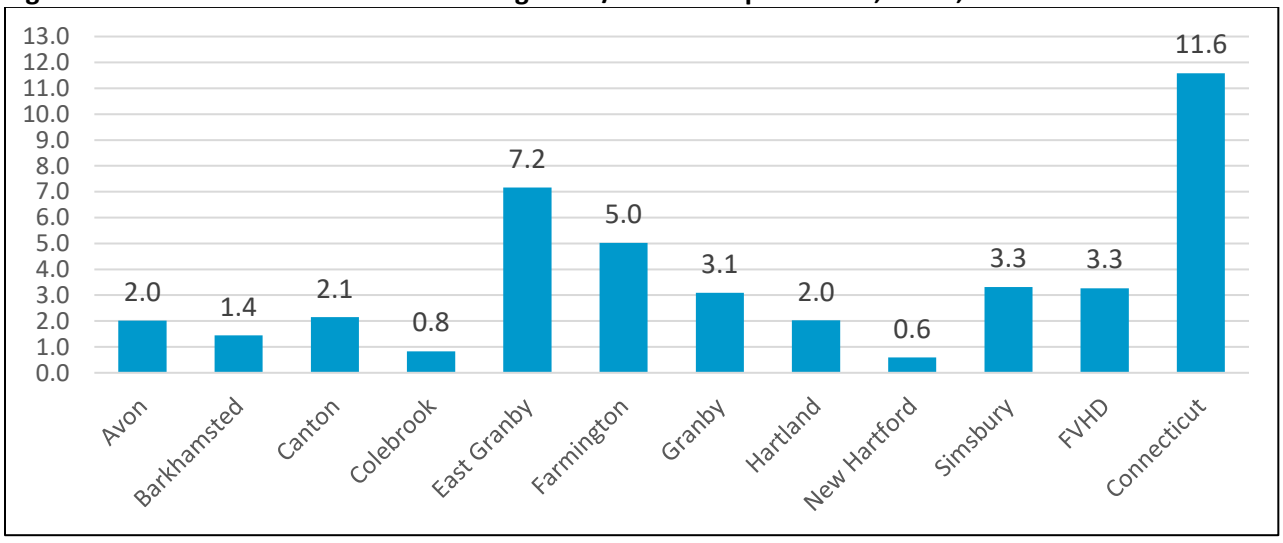
Source: *Connecticut United Way, 2020 ALICE Report*

Food Insecurity

Individuals experiencing food insecurity, defined as the state in which households do not have access to adequate food due to limited money or other resources, often have no other option than to consume a nutrient-poor diet due to the relative inexpensive cost of such foods as compared to nutrient-dense foods.[3] Nutrient-poor diets may contribute to the development of chronic diseases and associated poor health outcomes such as obesity, heart disease, hypertension, and diabetes. [3] The Supplemental Nutrition Assistance Program (SNAP) and other food and nutrition programs have been found to reduce the prevalence of food insecurity in recipients.[4]

In Figure 10, the percentage of households in the FVHD (3.3%) receiving SNAP benefits is relatively low compared to Connecticut (11.6%). East Granby and Farmington are slightly higher than the FVHD at 7.2% and 5%, respectively.

Figure 10: Percent of Households Receiving SNAP/Food Stamps - Towns, FVHD, and Connecticut



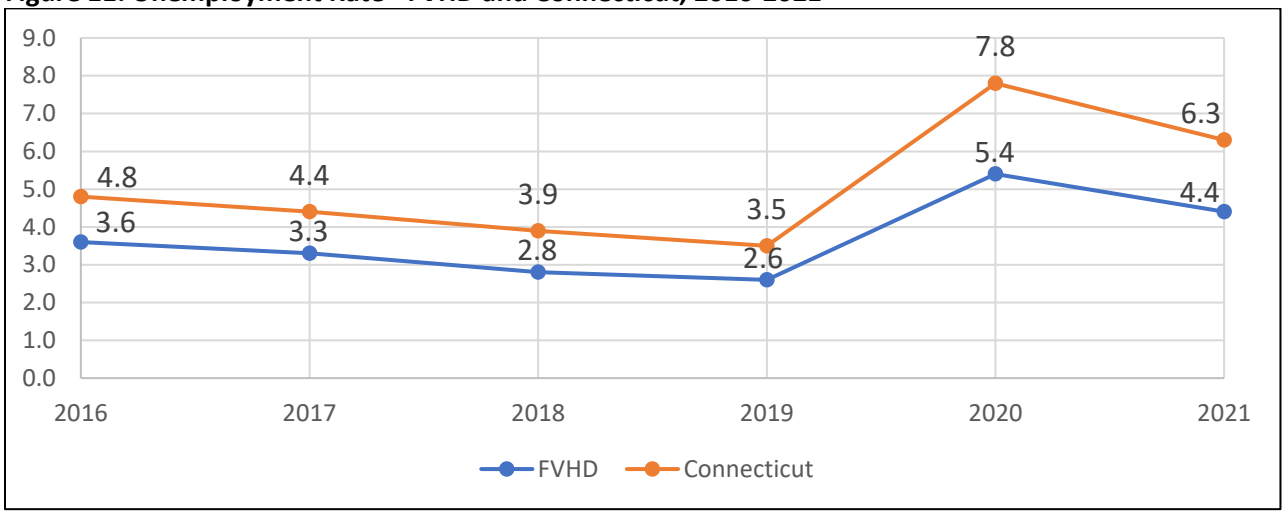
Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Employment

Employment status impacts health in multiple ways. Not only does employment provide income and thus, in many instances, serves as a pathway out of poverty, but many employers provide benefits, such as health insurance and paid sick leave.[10] The combination of both benefits allows individuals to access quality, prompt medical care from routine, preventative care to care for acute illness and injury, to care in medical emergencies. Unemployed individuals report higher rates of negative health outcomes as compared to employed individuals, including physical health conditions, such as high blood pressure, stroke, and heart attack, as well as mental health conditions, including depression and anxiety.[5]

As demonstrated in Figure 11, the unemployment rate in the FVHD has historically been lower than in Connecticut. Likely due to the COVID-19 pandemic, the unemployment rate more than doubled in both the FVHD and in Connecticut between 2019 and 2020 and remained at a higher level in 2021 as compared to previous years.

Figure 11: Unemployment Rate - FVHD and Connecticut, 2016-2021



Source: *Connecticut Department of Labor, Local Area Unemployment Statistics*

Housing

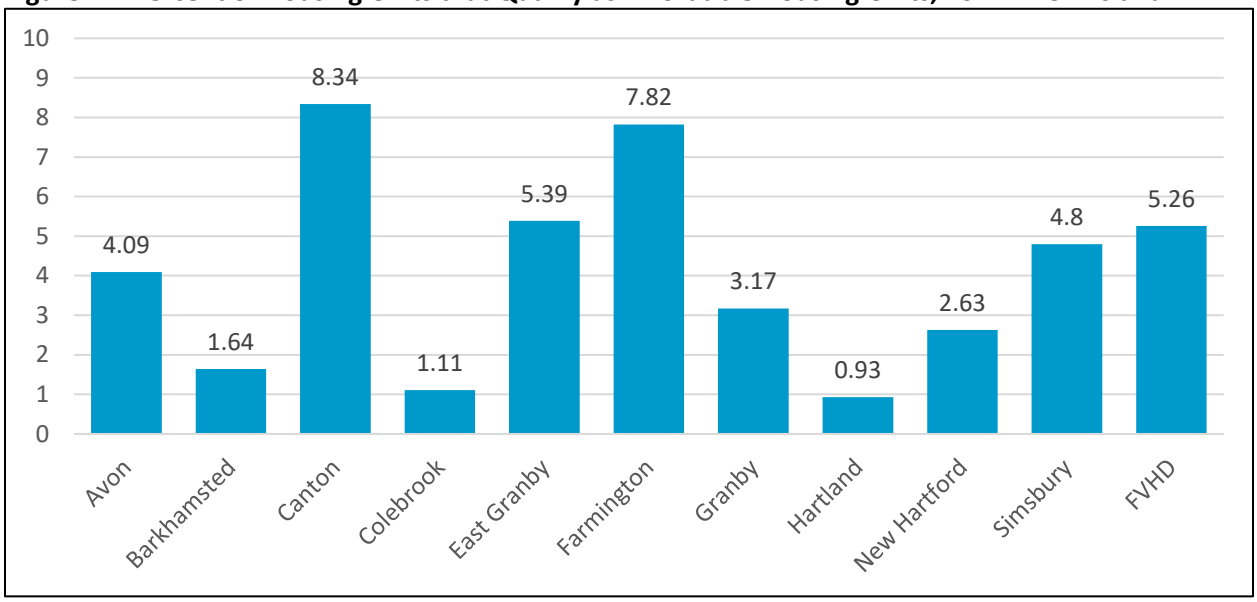
Affordable Housing

Research has shown that having access to quality, affordable housing is associated with positive health outcomes.[6] Quality housing includes homes that have healthy air quality, enough rooms for the number of individuals living in the home, adequate plumbing and heating, and an absence of mold, asbestos, and lead.[7] Individuals living in poor-quality housing are at an increased risk for multiple negative health outcomes, including chronic disease and injury.[7] In addition, affordable housing allows individuals to spend a reasonable amount of their income on the home, through either mortgage or rent, as well as any utilities and necessary maintenance while not straining the individual's budget for other resources, such as nutritious food and healthcare costs.[6]

In Connecticut, a housing unit is deemed affordable if it costs an occupant no more than one third of the area median income for the municipality where the housing unit is located, as determined by the United States Department of Housing and Urban Development.[8] The data for affordable housing comes from federal, state, and local programs as well as a local administrative review by each municipality, so responses vary widely from each municipality. Figure 12 displays the percentage of housing units in each FVHD town that qualify as affordable housing in 2021. Canton (8.34%), Farmington (7.82%), and East

Granby (5.39%) have the highest percentage of affordable housing units; however, just 5.26% of all housing units in the FVHD qualify as affordable housing units.

Figure 12: Percent of Housing Units that Qualify as Affordable Housing Units, 2021 – Towns and FVHD



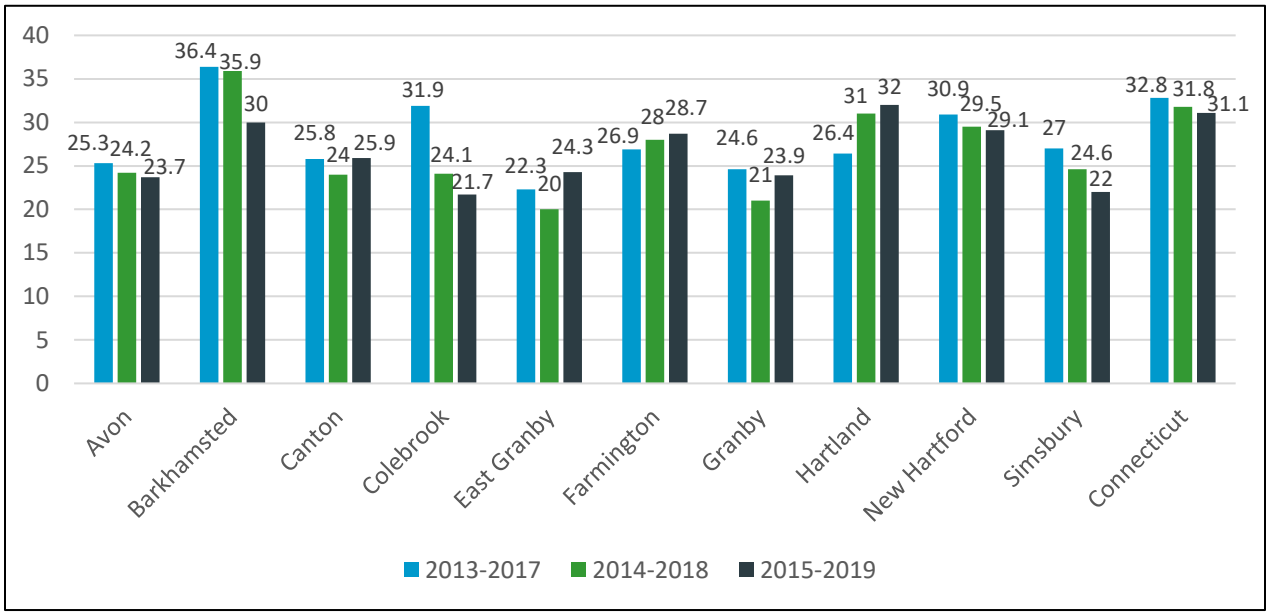
Source: *Department of Housing, Connecticut Data Portal*

In line with the data in Figure 12, by far the greatest theme that emerged from the focus group with town Social Services Directors was the lack of affordable housing in all towns across the FVHD. In particular, the Social Services Directors spoke of apartment complexes previously owned by small private businesses that are being sold to large property management companies who are increasing rent without improving living conditions within the apartment complexes. These increases in monthly rent are in combination with significant price increases across other sectors, including food and gas. The Social Services Directors reported increases in evictions and homelessness post-COVID-19 pandemic that are far above levels seen before the pandemic. There are currently no homeless shelters in the FVHD. As a result, the Social Services Directors reported that residents have resorted to living in spaces that are not traditional living spaces - garages, attics, automobiles, and camping tents. The cold winter months experienced in the FVHD pose major health risks to individuals living in these spaces.

Cost-Burdened Households

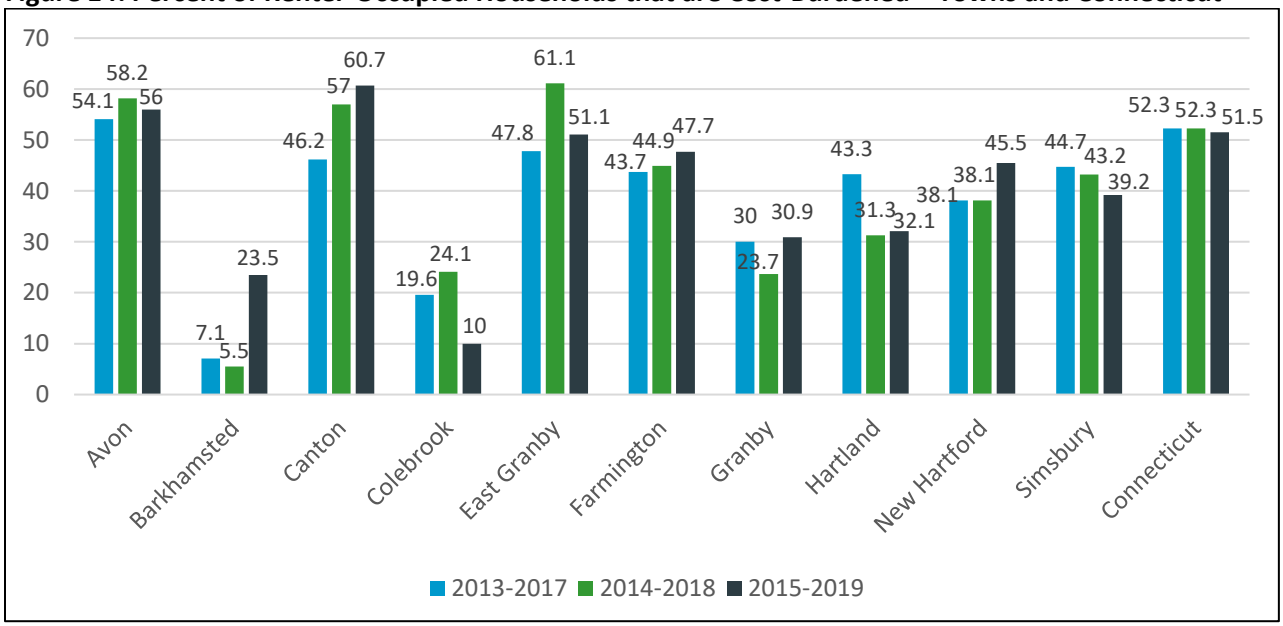
Expanding on the lack of affordable housing in the FVHD is the percentage of residents who are cost-burdened homeowners or renters. A household is considered cost-burdened if it spends at least 30% of its annual household income on housing costs.[9] The *Healthy People 2030* objective for the percentage of homeowner-occupied households and renter-occupied households that are cost-burdened is 25.5% or lower.[10] As shown in Figure 13 and Figure 14, from 2015 to 2019, there were multiple towns that exceeded the *Healthy People 2030* objective.

Figure 13: Percent of Homeowner-Occupied Households that are Cost-Burdened - Towns and Connecticut



Source: *U.S. Census, Connecticut Data Collaborative*

Figure 14: Percent of Renter-Occupied Households that are Cost-Burdened – Towns and Connecticut

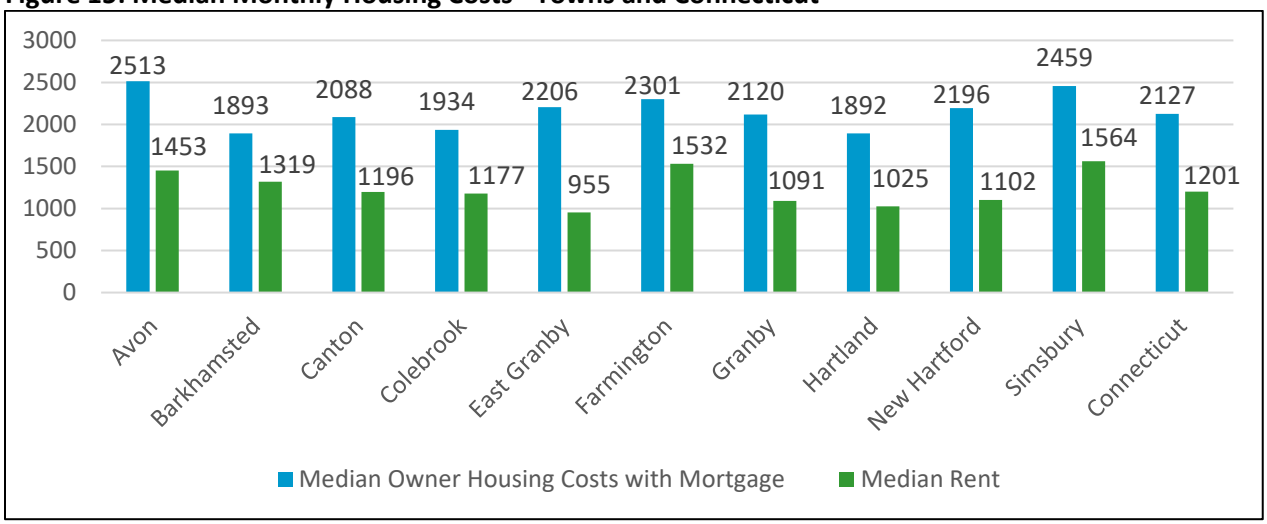


Source: *U.S. Census, Connecticut Data Collaborative*

Monthly Housing Costs

In addition to affordable housing and cost-burdened households, as depicted in Figure 15, the median monthly housing costs with mortgage are higher in five FVHD towns as compared to Connecticut while median rent is higher in four towns when compared to Connecticut.

Figure 15: Median Monthly Housing Costs - Towns and Connecticut



Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Environmental Conditions

Air Quality

The quality of the air we breathe influences health status. Although there are many pollutants that affect air quality, ozone and fine particulate matter are of particular public health concern due to their health risks.

Ozone is created when pollutants emitted from cars, power plants, industrial boilers, and chemical plants react in the presence of sunlight.[11] Therefore, ozone levels are most likely to reach unhealthy levels on hot, sunny days. Exposure to unhealthy levels of ozone causes respiratory tract irritation and inflammation and aggravates lung diseases, including emphysema, chronic bronchitis, and asthma.[12] In particular, ozone aggravates existing asthma while long-term exposure to ozone is a known cause of developing asthma.[12] Based on National Ambient Air Quality Standards (NAAQS), Connecticut has averaged 22 days of unhealthy ozone levels annually since 2016.[13] Although the annual number of days with unhealthy ozone levels has decreased in Connecticut since 1990, ozone levels continue to pose a health risk across the state as the American Lung Association gave all eight Connecticut counties an "F" grade for ozone pollution in their *2020 State of the Air Report*.[14] In addition, as global temperatures increase as a result of climate change, it is expected that the number of days with unhealthy levels of ozone will increase.[15]

Particulate matter are small particles of dust, dirt, soot, smoke, and drops of liquid in the air that commonly come from factories, motor vehicles, and construction sites. Fine particulate matter, called $PM_{2.5}$ are particularly harmful to health because the small size of the particles penetrate deep into the lungs, enter the bloodstream, and subsequently travel to organs causing systemic damage to tissues and cells.[16] Short term exposure to $PM_{2.5}$ can cause reduced lung function, respiratory infections, and aggravated asthma while longer-term exposure increases an individual's risk of stroke, heart disease, chronic obstructive pulmonary disease, and cancer.[16] All Connecticut $PM_{2.5}$ monitoring sites have recorded annual $PM_{2.5}$ values below the annual NAAQS $PM_{2.5}$ standards since 2009.[17]

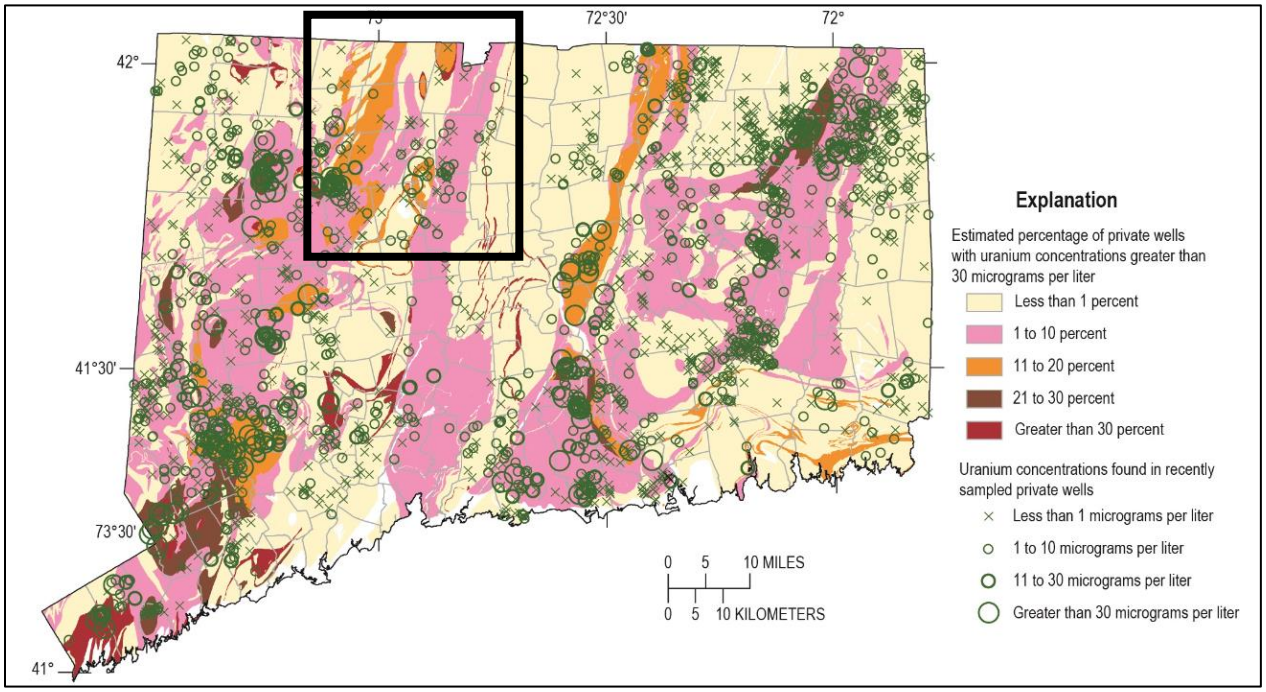
Lead and Housing Stock

Lead poisoning is caused by a build-up of lead in the blood. Lead is a metal that is found in the natural environment but was also used to enhance paints in homes and on products, such as children's toys, as well as within water plumbing pipes. Lead-based paint was banned in the United States in 1978. However, it is estimated that 71% of Connecticut homes were built before 1980.[18] In addition, it is known that approximately 69% of Connecticut homes built prior to 1960 contain some lead paint while 87% of homes built before 1940 contain lead paint.[18] Lead-based paint becomes dangerous when it chips or when it turns to dust during home repairs and remodels and it is subsequently inhaled or swallowed. No level of lead in the blood is healthy for people; however, it is especially harmful in children. Lead harms children's nervous systems and can lead to reduced IQ and attention span, learning disabilities, developmental delays, hearing loss, brain damage, seizures, coma, and rarely death.[18] The damage to an individual's nervous system from lead poisoning is irreversible.

Private Wells

There are a large number of private wells in the FVHD. A 2017 United States Geological Survey (USGS) undertaken in cooperation with the Connecticut Department of Public Health found that 4.7% of private wells in Connecticut have uranium concentrations higher than the Environmental Protection Agency's (EPA) standards while 3.9% of private wells have arsenic concentrations higher than EPA standards.[19] Drinking water with unhealthy uranium levels is associated with kidney disease while arsenic exposure through drinking water increases the risk of cancer, low birth weight, decreased child intellectual development, and suppression of the immune system.[19] A geographic representation of the results from the 2017 USGS report are shown in Figure 16. The FVHD towns are framed by the black box. As Figure 16 shows, there are areas of the FVHD that have concentrations of uranium above EPA standards. In the orange-shaded areas of Barkhamsted, Colebrook, Granby, Hartland, and New Hartford, it is estimated that 11 to 20% of private wells have uranium above the EPA standard. All FVHD towns have some areas of town in which it is estimated that up to ten percent of private wells have uranium levels above EPA standards, including almost all of Avon and Simsbury.

Figure 16: Uranium in Private Wells - Connecticut



Source: *United States Geological Survey, 2017*

Transportation

As a result of the suburban and rural geography of the FVHD, the vast majority of residents are not within walking distance of services, including grocery stores, medical offices, and their places of employment. As one focus group member commented, "If you don't have a car in the Farmington Valley, you're done." Although most people in the FVHD have privately-owned vehicles and are able to drive themselves to places they need to be, for residents who do not have their own vehicles, there are very limited public transportation options in the FVHD. Access to public transportation promotes health equity by increasing access to healthy food options, medical care, employment, and recreation opportunities. Indeed, research has shown that a lack of transportation is likely to result in missed or delayed medical appointments and ultimately poorer health outcomes.[20] All ten towns in the FVHD offer senior buses or Dial-A-Ride that offer limited services to certain places within the town on certain schedules. In addition, CT Transit offers commuter bus services from some FVHD towns into Hartford. However, this commuter bus service is generally limited to one trip in the morning and one trip in the evening, which limits the usefulness of the service to FVHD residents.

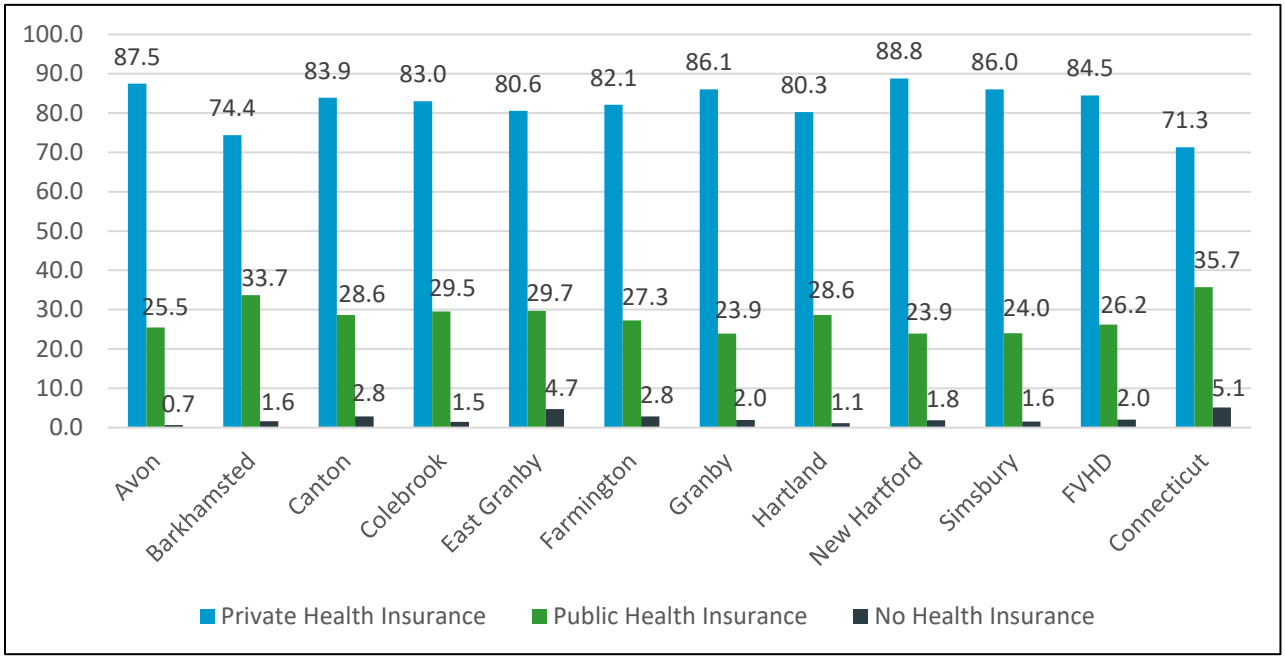
Access to Care

Health Insurance Coverage

Having health insurance is positively associated with health status. Health insurance allows individuals to seek medical care without needing to pay solely out-of-pocket for the cost of the service. Individuals who have health insurance are more likely to receive preventative screening exams on the appropriate schedule than individuals who do not have health insurance as the health insurance provides at least some coverage for these services.[21] Routine preventative care is crucial for detecting any health issues as early as possible, when treatment and management are likely to be the most effective.

In the United States, residents can obtain health insurance from a variety of sources. For the data in Figure 17, private insurance includes employment-based plans, direct purchase plans, and TRICARE (military plan). Public insurance includes Medicare, Medicaid, Children's Health Insurance Program (CHIP), Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA), state-specific plans, and Indian Health Service plans. Because some individuals have both private and public health insurances, the percentage of health insurance coverage may exceed 100% in some towns. As illustrated in Figure 17, the FVHD has a higher percentage of residents with health insurance coverage through a combination of private and public insurance compared to Connecticut. Compared to other FVHD towns, East Granby has the highest percentage of uninsured residents (4.7%).

Figure 17: Percent of Population by Health Insurance Type - Towns, FVHD, and Connecticut



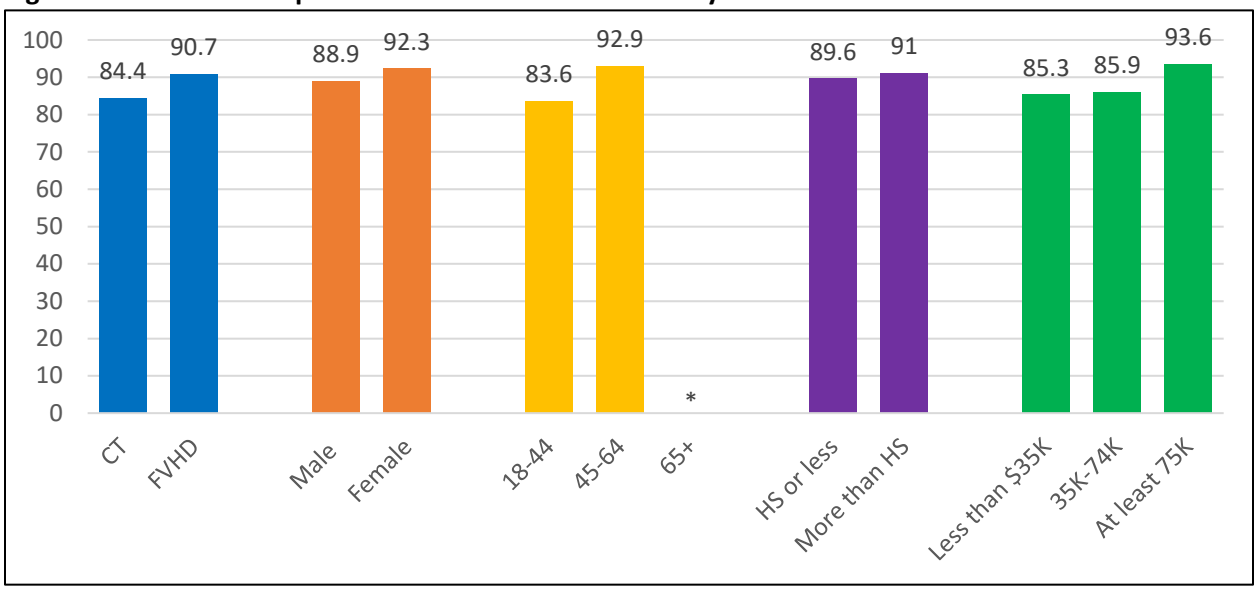
Source: *U.S. Census Bureau, American Community Survey, 2016-2020 5-Year Estimates*

Access to Primary Care Provider

Just as individuals who have health insurance have better health outcomes, individuals who have access to a primary care provider (PCP) are also more likely to have better health outcomes than individuals without a PCP.[22] PCPs offer routine check-ups, early detection and treatment of disease, and chronic disease management. In addition, patients with a PCP are more likely to receive preventative care, including immunizations, blood pressure screenings, and cancer screenings.[22] Many barriers exist to establishing care with a PCP including lack of health insurance, language barriers, inability to take time off of work to attend appointments, transportation issues, and a shortage of providers that leads to delays in getting an appointment.

As Figure 18 shows, 90.7% of FVHD residents report that they have access to at least one PCP compared to 84.4% in Connecticut. Females and males reported similar access to a PCP while adults ages 45 to 64 (92.9%) were more likely than adults 18 to 44 years old (83.6%) to have access to a PCP. Adults from households that earn $75,000 or more (93.6%) are slightly more likely to have at least one PCP compared to individuals from households that earn between $35,000 and $75,000 (85.9%) and from households that earn less than $35,000 (85.3%).

Figure 18: Percent of Population with at Least One Primary Care Provider – FVHD and Connecticut



Source: Connecticut Behavioral Risk Factor Surveillance System, 2016-2020

*Not enough responses in the 65+ age group to statistically analyze.

Summary

The social determinants of health analyzed for the FVHD depict a district that, in aggregate, has higher educational attainment, higher median income levels, and lower rates of unemployment than in Connecticut. While the FVHD exceeds Connecticut in these areas, one in five households is below both the ALICE threshold and the poverty level and are thus unable to afford basic needs. The unemployment rate in the FVHD is historically lower than in Connecticut but increased during the pandemic. Affordable housing is also an issue in the FVHD as just 5.26% of all housing units in the FVHD qualify as affordable. Eight of the ten FVHD towns exceed the *Healthy People 2030* objective for cost-burdened households for renter-occupied households and five of the ten towns exceed the *Healthy People 2030* objective for cost-burdened households for owner-occupied households.

While the air quality of the FVHD cannot be determined at that granular level, the annual number of days with unhealthy ozone levels has decreased in Connecticut since 1990 and all Connecticut $PM_{2.5}$ monitoring sites have recorded annual $PM_{2.5}$ values below the annual NAAQS $PM_{2.5}$ standards since 2009.[17] There is also a limitation to the data for the FVHD on the age of homes. However, it is estimated that 71% of Connecticut homes were built before 1980 and likely contain lead paint.[18] While there are areas of the FVHD that have a higher concentration of uranium in private wells than others, all FVHD towns have some areas of town in which it is estimated that up to ten percent of private wells have uranium levels above EPA standards, including almost all of Avon and Simsbury.

FVHD residents have very limited access to public transportation and rely heavily on having their own car for mobility. There are few services such a Dial-a-Ride that offer transportation but only to certain places and at certain times.

Compared to Connecticut, the FVHD has a higher percentage of residents with health insurance coverage through a combination of private and public insurance. The percentage of FVHD residents that

self-report access to at least one primary care provider is also higher than in Connecticut with 90.7% compared to 84.4% respectively.

Health Behaviors

Health behaviors contribute significantly to health status as the health behaviors and choices that an individual makes each day and overtime either promote or hinder their health. The following section focuses on the lifestyle behaviors of FVHD residents that effect health status. The data examines several broad categories of health behaviors and risk factors, including physical activity, substance use, and vaccinations and screenings, that influence health outcomes in our communities.

The data in this section are presented at the FVHD-level and further broken down by gender, age, educational attainment, and household income. In addition, it is important to note that FVHD data is compared to data for Connecticut as a whole.

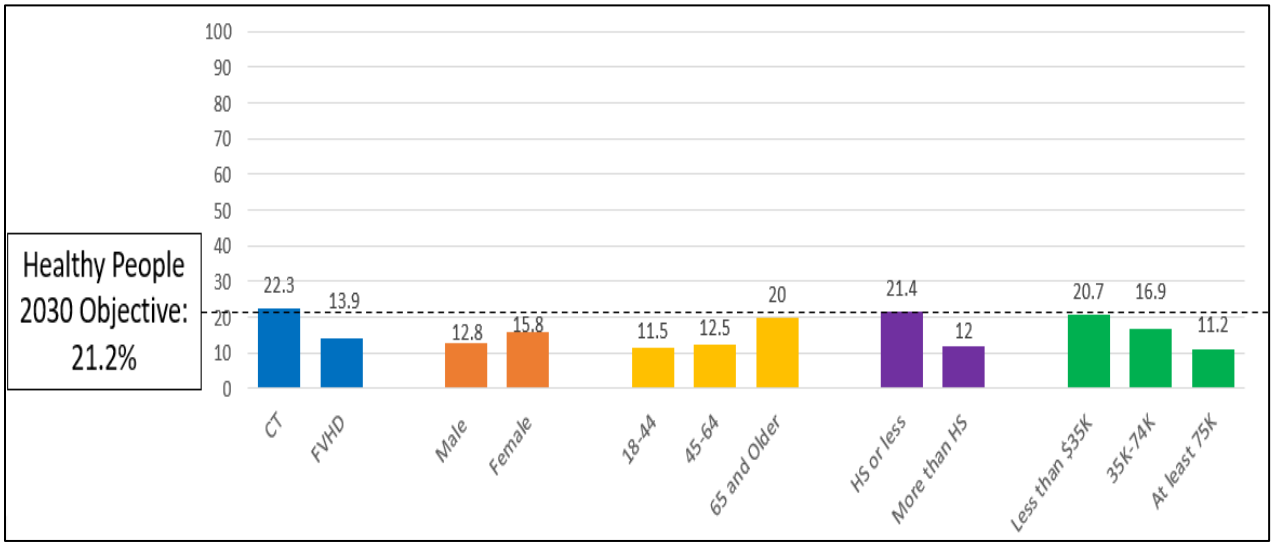
The source of most data in this section is the Connecticut Behavioral Risk Factor Surveillance System (BRFSS). FVHD-level BRFSS data is compared to state-level BRFSS data. The BRFSS is a telephone survey of adults and the data collected is self-reported. Thus, BRFSS data is subject to recall bias and social desirability bias. In addition, a limitation of utilizing BRFSS data to analyze the FVHD population is that race cross-tabulation data is suppressed because of the low racial diversity of FVHD BRFSS respondents, which mirrors the low racial diversity of the FVHD as a whole. Due to this limitation, we were unable to compare data between racial groups.

Physical Activity

The benefits of physical activity on an individual's physical, mental, and emotional health are numerous. Regular physical activity helps to prevent, or manage, many physical health problems including weight gain, high blood pressure, type 2 diabetes, cancers, cardiovascular disease, arthritis, and falls.[23] In addition, exercise improves mood, eases anxiety and depression, and boosts energy.[23] The U.S. Department of Health and Human Services recommends that adults receive 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic physical activity each week as well as do muscle-strengthening activities on at least two days each week.[24] These recommendations also emphasize that some physical activity is better than none.

Figure 19 shows that the percentage of FVHD adults that do not receive any physical activity (13.9%) is less than in both Connecticut (22.3%) and the *Healthy People 2030* objective of 21.2%. Adults 65 years and older (20%), adults with a high school degree or less (21.4%), and adults from households that earn less than $35,000 per year (20.7%) are more likely to report no physical activity.

Figure 19: Percent of Population that Receives No Physical Activity – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Substance Use

Cigarettes

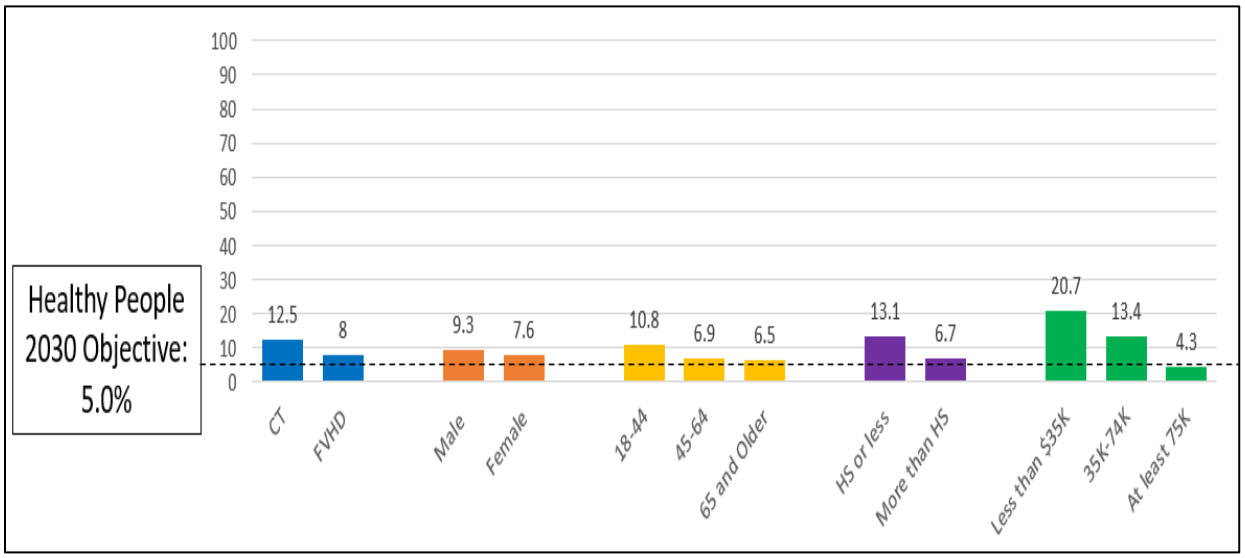
A 2014 Surgeon General report declared that cigarette smoking is the leading preventable cause of premature disease and death in the United States.[25] Indeed, tobacco use led to over 480,000 deaths in the United States in 2021.[26] Furthermore, a 2020 Surgeon General report emphasized that quitting smoking, regardless of age and how long one has smoked, is one of the most important steps someone can take to improve their health and can add as much as a decade of life expectancy back to someone's life.[27]

The negative health effects of cigarette smoking are vast as tobacco is detrimental to nearly every organ in the body.[26] It is estimated that smoking contributes to one out of every three deaths from cancer, one out of every four deaths from cardiovascular disease, and eight out of ten cases of chronic obstructive pulmonary disease (COPD).[26] In addition, smoking increases the risk for stroke and developing type 2 diabetes.[26]

Furthermore, not only is tobacco extremely harmful to the health of the cigarette smoker, but secondhand smoke contains over 7,000 chemicals, of which hundreds are toxic and around 70 are known carcinogens.[28] Secondhand smoke can cause coronary heart disease, stroke, and lung cancer in non-smokers and it increases the risk for Sudden Infant Death Syndrome (SIDS).[28] It is estimated that exposure to secondhand smoke causes more than 40,000 deaths each year in the United States.[26]

As shown in Figure 20, the percentage of adults in the FVHD that report they currently smoke is 8%. While this is lower compared to the state (12.5%), it exceeds the *Healthy People 2030* objective of 5%. All identified groups fall short of achieving the *Healthy People 2030* objective except for adults from households that earn $75,000 or more.

Figure 20: Percent of Population that Currently Smokes – FVHD and Connecticut



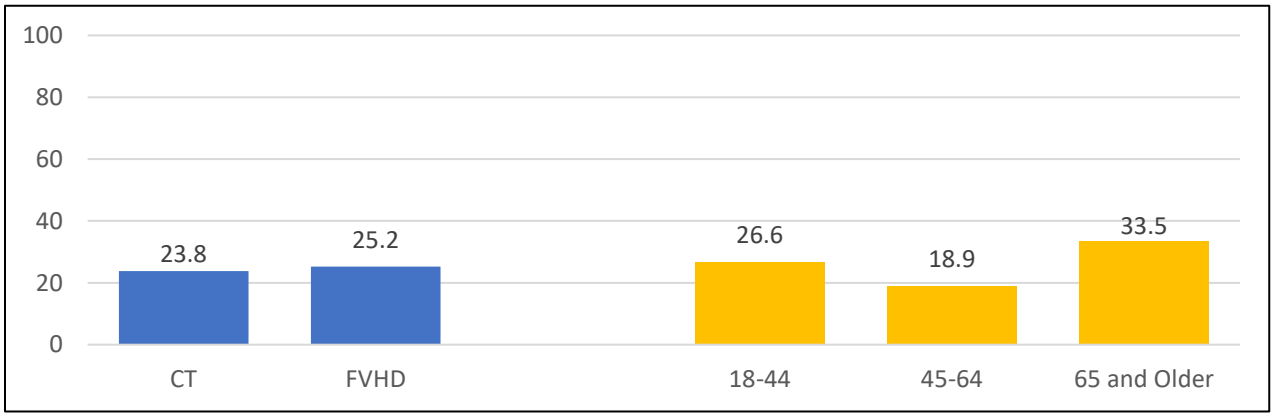
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Electronic Cigarettes

Although the percentage of the population that currently smokes cigarettes has been steadily decreasing over the past several decades, electronic cigarettes have increased in popularity since their introduction in the United States around 2007, especially among middle and high school students.[29,30] Electronic cigarettes, commonly called e-cigarettes, come in many styles but they all work by heating a liquid to produce an aerosol that users inhale into their lungs.[31] Although e-cigarettes have the potential to benefit adult smokers who are looking to quit smoking cigarettes and transition away from nicotine, e-cigarettes are not safe for adults who do not already use tobacco products.[31] That is, although e-cigarettes generally contain fewer toxic chemicals than regular cigarettes, they still contain many addictive and harmful substances, including nicotine, heavy metals, volatile organic compounds, and cancer-causing agents.[31]

As seen in Figure 21, 25.2% of adults in the FVHD report using e-cigarettes every day or some days compared to 23.8% in Connecticut, with the highest rates seen in adults 65 years and older (33.5%).

Figure 21: Percent of Population that Report Using E-Cigarettes Every Day or Some Days – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

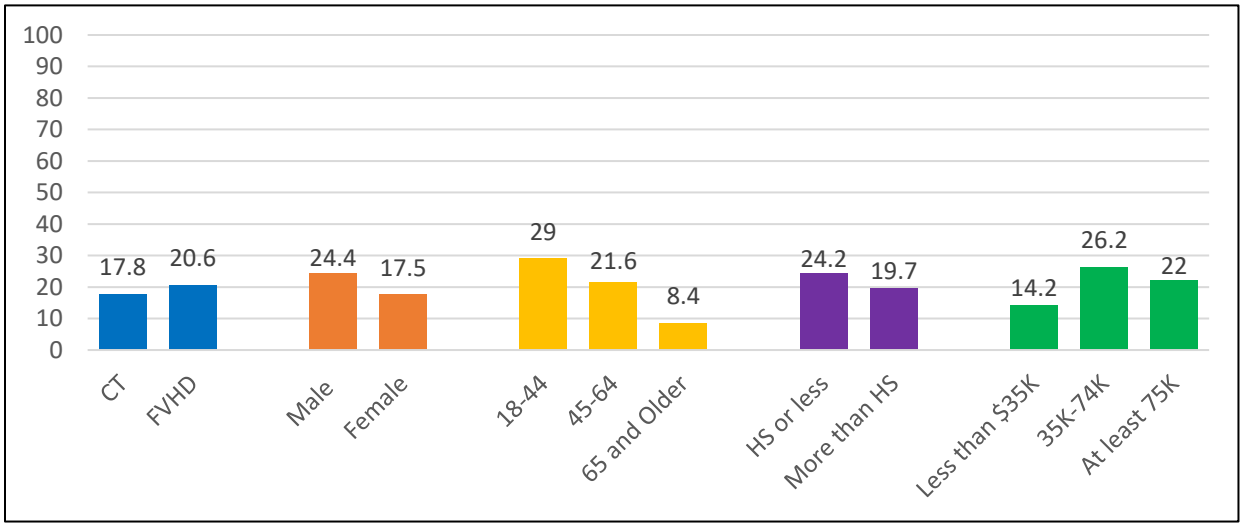
Alcohol

Excessive alcohol consumption, which includes heavy drinking and binge drinking, not only poses health risks to the individual consuming the alcohol, but also to the community around them. The BRFSS defines heavy drinking as at least three drinks daily for men or at least two drinks daily for women while binge drinking is defined as six or more drinks during one occasion for men or five or more drinks during one occasion for women. Health risks associated with excessive drinking include liver disease, pancreatitis, stroke, heart disease, and various cancers, including liver, mouth, throat, larynx, and esophagus.[32,33,33]

The town Social Service Directors noted that alcohol use and alcohol abuse in the senior citizen population is currently at an all-time high. This uptick has been seen in 911 calls involving seniors suffering from alcohol abuse.

In the FVHD, 20.6% of the adult population reports excessive alcohol consumption. As seen in Figure 22, the prevalence is higher in males (24.4%), adults ages 18 to 44 years old (29%), adults with a high school degree or less (24.2%), and adults from households that earn between $35,000 and $74,999 (26.2%)

Figure 22: Percent of Population with Excessive Alcohol Consumption – FVHD and Connecticut



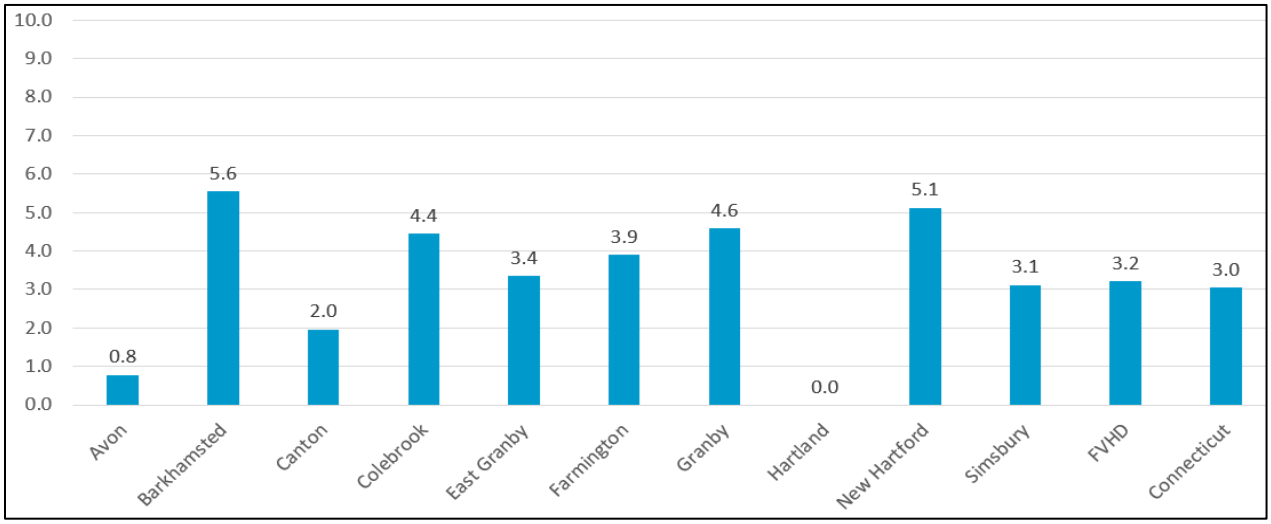
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Driving Under the Influence Motor Vehicle Crashes

The effects of excessive alcohol consumption span beyond the consumer. Excessive alcohol consumption is associated with intimate partner violence, sexual assault, and homicide.[33] Furthermore, in Connecticut in 2019, there were 3,024 motor vehicle crashes where at least one driver was driving under the influence (DUI) of alcohol, drugs, or medications.[34] From these crashes, there were 1,670 injuries and 91 fatalities.[34] While the number of injuries or deaths associated with each crash are not reported, from this data, it can be estimated that approximately 55% of all DUI crashes involved an injury while approximately 3% involved a fatality. National data shows that DUI crash-related fatalities accounted for 30% of all traffic fatalities in 2020.[35] 62% of these deaths were the alcohol-impaired driver, while the remaining 38% of fatalities were passengers riding with the alcohol-impaired driver (13%), occupants of other vehicles (14%), or nonoccupants such as pedestrians (11%).[35]

As shown in Figure 23, the FVHD has a comparable percentage (3.2%) of motor vehicle accidents that involved a driver under the influence (DUI) as the state (3%). Six of ten towns in the FVHD have higher rates than the FVHD and the state.

Figure 23: Percent of Motor Vehicle Accidents that Involved a Driver Under the Influence of Alcohol, Drugs, or Medication – Towns, FVHD, and Connecticut



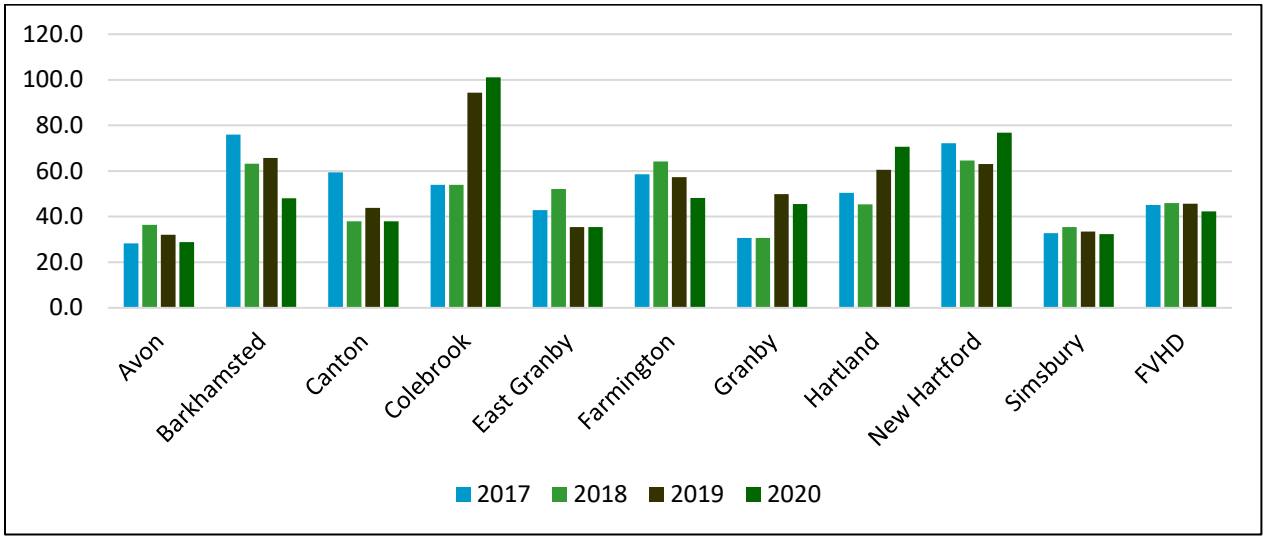
Source: *University of Connecticut, Connecticut Crash Data Repository, January 1, 2020 – February 28, 2022*

Substance Use Program Admissions

The Connecticut Department of Mental Health and Addiction Services (DMHAS) runs many programs that provide services and support to those suffering from mental illness and/or substance use problems. Alcohol is the primary substance clients report using upon admission to a DMHAS substance use program.[36] Figure 24 represents the rate of clients admitted to substance use programs per 10,000 residents by FVHD town and year. As DMHAS data only represents data from the eight clinics operated and funded by DMHAS as well as 120 clinics that are privately owned but funded by DHMAS, the data in Figure 24 is not comprehensive of all substance use program admissions by FVHD residents. In addition, the DMHAS operated and funded clinics often serve clients who are underinsured or uninsured. As Figure 17 shows, FVHD has a very low percentage of the population that is uninsured. Data on treatment program admissions of FVHD residents who seek treatment at private clinics not funded by DMHAS are not included in Figure 24. However, even given these limitations, this data still provides valuable insight into trends by town and year of admissions into substance use treatment programs.

As Figure 24 shows, in the FVHD, the rate of substance use treatment program admissions was relatively stable across the years from 2017 to 2020. Most clients admitted to substance use programs were male (65%) and adults ages 18-49 years old (80%) (data not shown). Compared to the FVHD as a whole, in 2020, Colebrook, Hartland, and New Hartford had significantly higher rates of admissions.

Figure 24: Rate of Substance Use Treatment Program Admissions per 10,000 Adult Residents - Town and FVHD



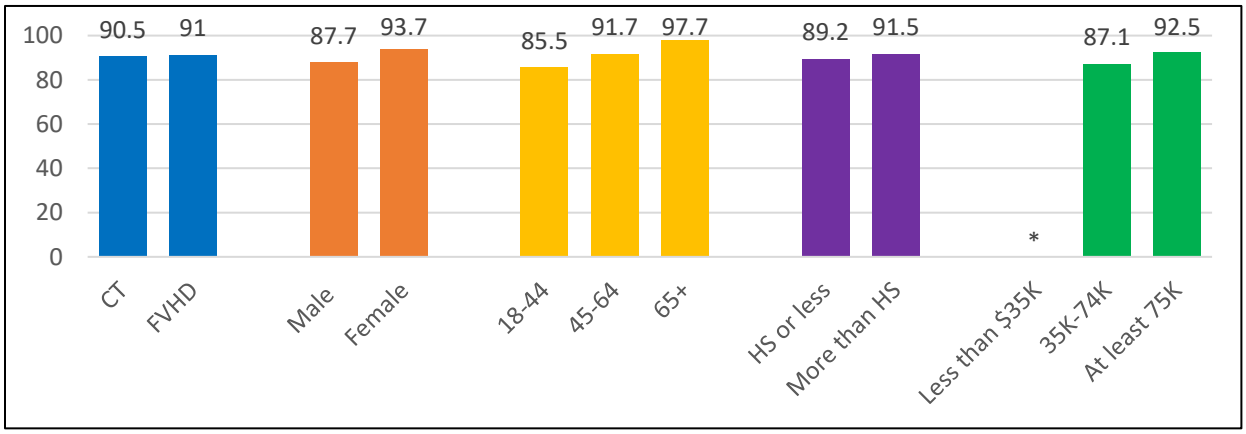
Source: *Connecticut Department of Mental Health and Addiction Services*

Routine Medical Care Visits

Doctors Visit

As discussed earlier, in relation to access to a primary care provider, individuals who receive routine medical care have better health outcomes than individuals who do not receive routine medical care. [22] Figure 25 demonstrates that FVHD residents (91%) have a very similar percentage of the adult population that has visited a doctor for a routine check-up in the last year as compared to Connecticut residents (90.5%). More females (93.7%) than males (87.7%) visit a doctor yearly while adults from households that earn at least $75,000 (92.5%) are more likely than individuals from households that earn between $35,000 to $74,000 (87.1%) to have seen a doctor in the last year. Older adults were more likely to have visited the doctor in the last year with adults ages 65 and older reporting the highest percentage (97.7%), followed by adults ages 45 to 64 (91.7%) and adults ages 18-44 years old (85.5%).

Figure 25: Percent of Population Who Received a Routine Medical Check-Up in the Past Year – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

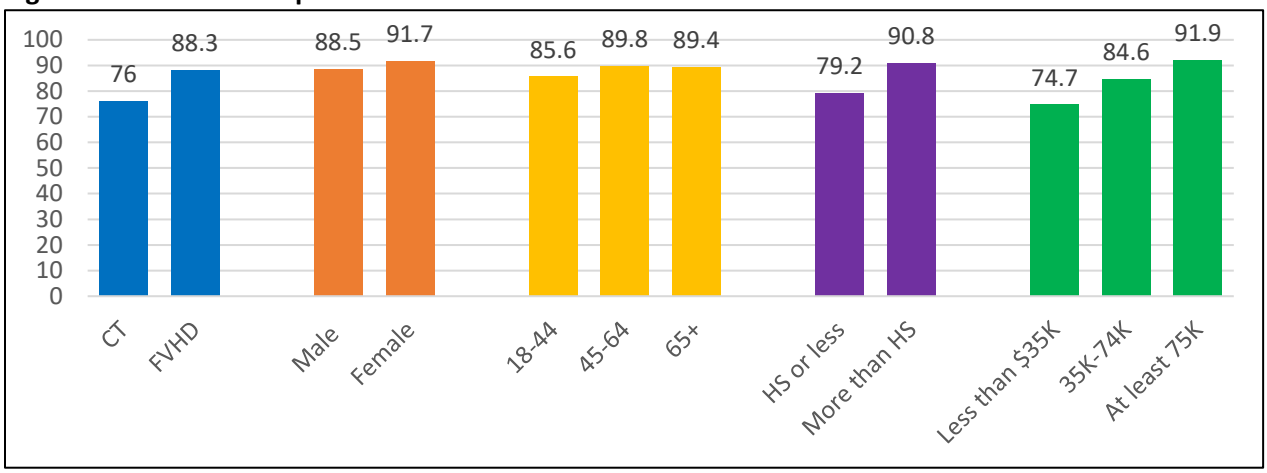
*Not enough responses in the Less than $35,000 income group to statistically analyze.

Dentist Visit

Maintaining good oral health is essential for carrying out routine everyday behaviors including eating, speaking, smiling, and showing emotions. Furthermore, longer-term health problems associated with not maintaining good oral health include untreated cavities, gum disease, tooth loss, and oral cancer.[37] In addition to brushing teeth at least twice a day with fluoride toothpaste, it is also recommended that adults visit the dentist at least once a year.[37]

As shown in Figure 26, 88.3% of adults in the FVHD report they have visited a dentist within the past year compared to 76% in Connecticut. Adults with a high school degree or more (90.8%) and those from households that earn at least $75,000 (91.9%) are more likely to have visited a dentist within the past year compared to those with less than a high school degree (79.2%) and those from households earning between $35,000 and $74,000 (84.6%) and households earning less than $35,000 (74.7%).

Figure 26: Percent of Population Who Visited the Dentist in the Past Year – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

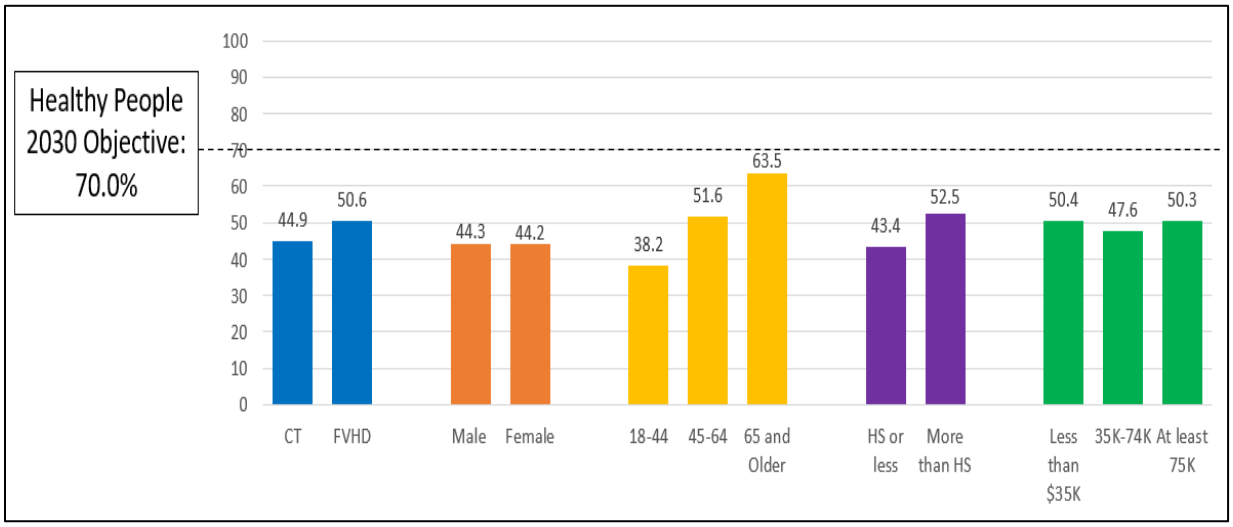
Vaccinations

Influenza

The influenza vaccine, commonly called the flu shot, is a vaccine that protects individuals against the flu or, if they do get the flu, the vaccine reduces severity of disease and risk of hospitalization and death. It is estimated that the influenza vaccine prevented 7.5 million flu illnesses during the 2019 to 2020 flu season and it reduced the risk of being admitted to an intensive care unit (ICU) with the flu by 82%.[38] Flu-related complications include pneumonia, bronchitis, sinus infections, and ear infections and it can worsen an individual's preexisting medical conditions, including heart disease, diabetes, and cancer.[39] With rare exception, everyone six months of age and older is recommended to get the flu shot each year.[39]

The percentage of adults in the FVHD that report receiving the influenza vaccine in the past year (50.6%) is well below the *Healthy People 2030* objective of 70%. Figure 27 shows that adults 65 years and older report the highest percentage (63.5%). Since 2016, influenza-associated hospitalization rates are the highest amongst this age group, with a four year high of 68.6 per 100,000 population in 2017 to 2018.[40] Each year the severity of the influenza virus varies but commonly impacts hospitalizations beginning in December and ending in February or March.

Figure 27: Percent of Population Who Received the Influenza Vaccine in the Past Year – FVHD and Connecticut



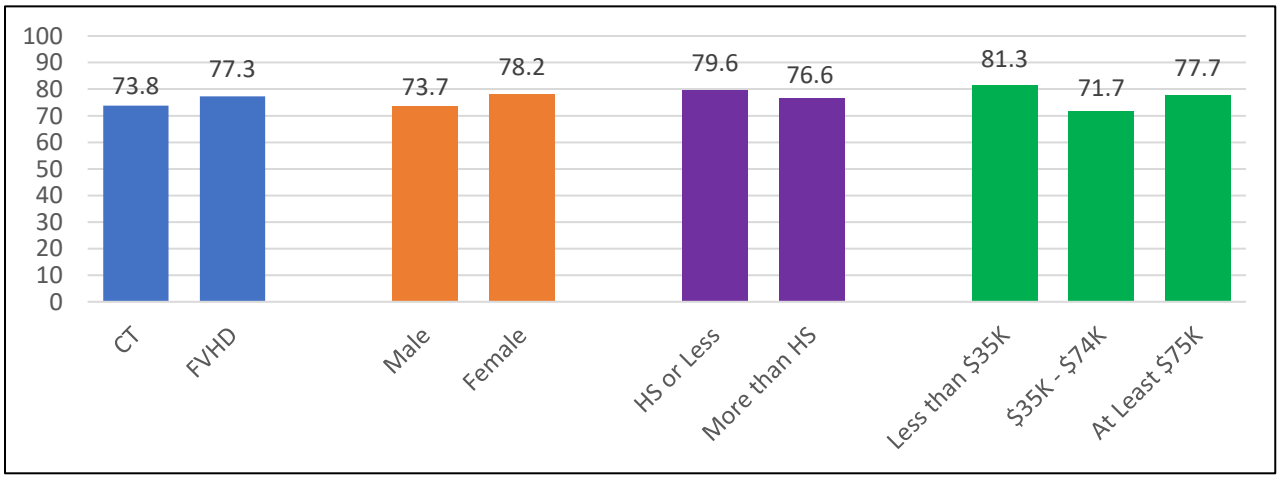
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Pneumococcal

The pneumococcal vaccine helps protect individuals against pneumococcal disease, which is an infectious disease caused by bacteria that attacks various parts of the body and is spread through coughing, sneezing, and close contact.[41] Although anyone can get pneumococcal disease, children younger than 2 years of age and adults 65 and older are at increased risk of severe illness, including pneumonia if the bacteria invade the lungs, sepsis if they invade the bloodstream, and meningitis if they invade the covering of the brain.[41] Thus, it is recommended that people within these age groups receive the pneumococcal vaccine.

As shown in Figure 28, 77.3% of adults in the FVHD 65 years and older report ever receiving the pneumococcal vaccination compared to 73.8% in Connecticut. The prevalence among females (78.2%) was slightly higher than males (73.7%).

Figure 28: Percent of Population Over the Age of 65 that has Ever Received a Pneumococcal Vaccine – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

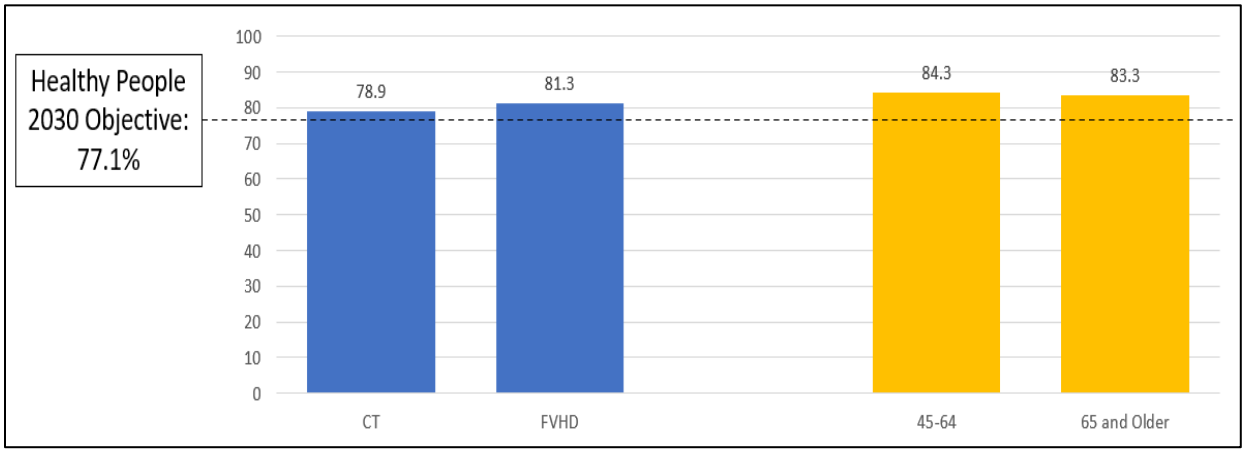
Screenings

Mammogram

Breast cancer is both the second most common type of cancer and the second leading cause of cancer death among women in the United States.[42] Breast cancer screening, commonly known as a mammogram, is the leading method to detect breast cancer. The United States Preventive Services Task Force (USPSTF) recommends that all women ages 50 to 74 receive a mammogram every 2 years; however, women with a family history of breast cancer should begin screening in their 40s.[42] Early detection of breast cancer allows for earlier diagnosis and treatment, which in many cases leads to a higher survival rate.

Figure 29 shows that in the FVHD, for the period 2016 to 2020, 81.3% of females 40 years and older had a breast cancer screening in the past two years. This percentage exceeds the *Healthy People 2030* goal of 77.1%.

Figure 29: Percent of Female Population Over the Age of 40 that Received a Mammogram in the Past 2 Years – FVHD and Connecticut



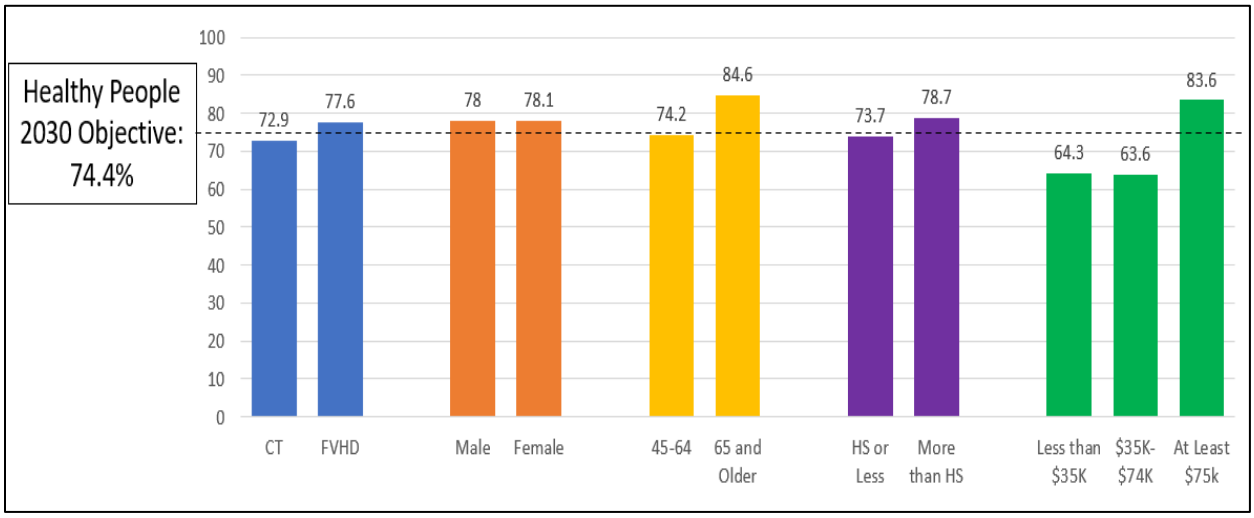
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Colonoscopy

Colorectal cancer (CRC) is both the fourth most common type of cancer and the fourth leading cause of cancer death in both men and women in the United States.[43] One type of screening test for colorectal cancer is a colonoscopy. The USPSTF recommends that all adults ages 45 to 75 screen for colorectal cancer with a colonoscopy every 10 years.[44] On-time colorectal cancer screening is crucial as early detection of precancerous polyps allows them to be removed before they turn into cancer or if cancer is found in the screening, treatment works best when started early.[43]

As demonstrated in Figure 30, in the FVHD for the period 2016 to 2020, 77.6% of individuals 50 to 75 years old reported having had a colonoscopy in the past ten years compared to 72.9% in Connecticut. The highest prevalence is seen in adults 65 years and older (84.6%) and adults from households that earn at least $75,000 (83.6%). The FVHD exceeds the *Healthy People 2030* objective of 74.4%.

Figure 30: Percent of Population Ages 50-75 that Received a Colonoscopy within the Past 10 Years – FVHD and Connecticut



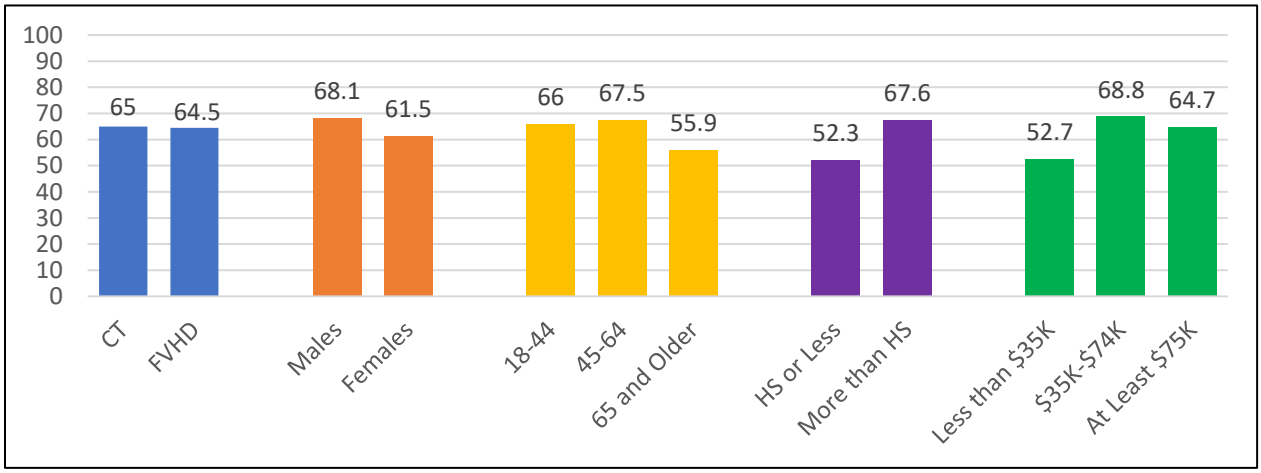
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Sleep

Just as eating a healthy diet and getting enough physical activity are keys to good health, getting enough quality sleep each night is essential to maintaining good health. In the short-term, not receiving enough sleep can cause excessive daytime tiredness, decreased alertness, and impaired memory – all of which effect daily quality of life.[45] However, chronic sleep deprivation can lead to more long-term and serious health problems, including coronary heart disease, stroke, diabetes, and obesity.[46] The American Academy of Sleep Medicine recommends that adults receive at least seven hours of sleep each night.[47]

As shown in Figure 31, 64.5% of adults in the FVHD report receiving, on average, less than eight hours of sleep each night. The prevalence of insufficient sleep is higher in males (68.1%), adults with more than a high school degree (67.6%), and adults from households that earn between $35,000 and $74,999 (68.8%).

Figure 31: Percent of Population that Received Less than 8 Hours of Sleep per Night – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Summary

Compared to Connecticut, the FVHD has a lower percentage of residents who are physically inactive and/or smoke cigarettes but slightly higher percentages of residents who use e-cigarettes and/or consume excessive amounts of alcohol. While the data on substance use admissions is not comprehensive, this data still provides valuable insight into trends by town and year of admissions into substance use treatment programs.

The reported percentages of FVHD residents receiving the influenza vaccine are higher than the state, 50.6% compared to 44.9% respectively, yet the FVHD still falls below the *Healthy People 2030* objective of 70%. The majority of FHVD residents report excellent compliance with receiving scheduled screenings including mammograms and colonoscopies as well as 91% report visiting a primary care physician and 88.3% visiting a dentist within the last year. In the FVHD, 64.5% of adults report that they get less than eight hours of sleep per night.

Health Outcomes

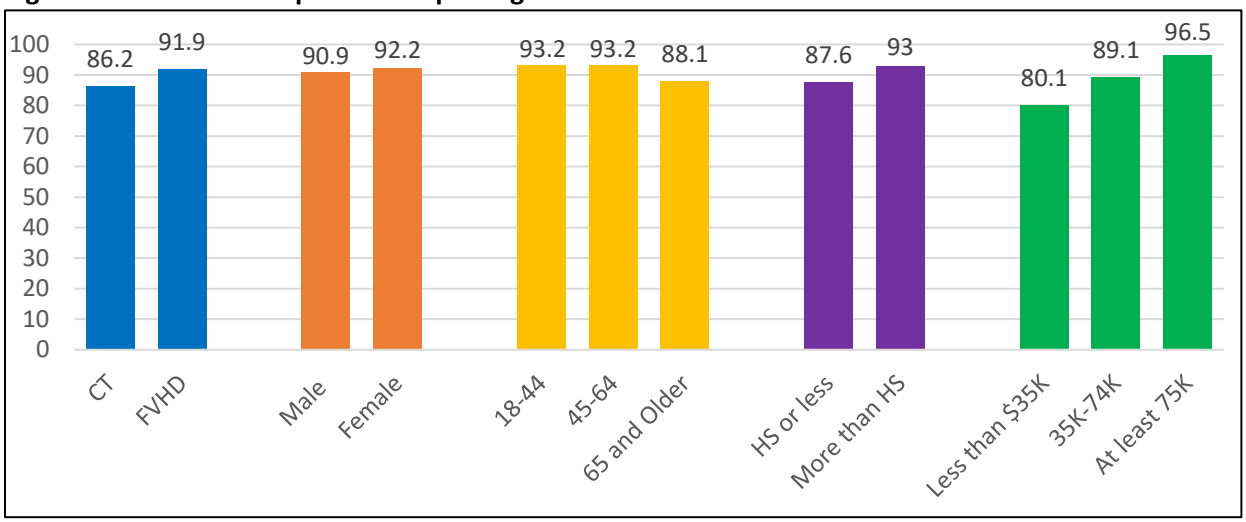
The following section provides an overview of the health outcomes of FVHD residents. Health outcome data includes data on leading causes of death, prevalence of and mortality from various chronic diseases and infectious diseases, maternal and child health outcomes, mental health data, and unintentional injury and death data, including from falls and drug overdose.

Perceived Health Status

Alongside more objective measures of health, such as medical diagnoses and death records, self-perceived general health status is a valuable measure to ascertain because it has a statistically significant relationship with health outcomes.[48] Specifically, self-reported poorer health status is strongly associated with higher mortality as compared to individuals who self-report good health status.[48]

The BRFSS asked respondents to rate their general health as excellent, very good, good, fair, or poor. The percent of respondents who answered good, very good, or excellent are shown in Figure 32. Most adults in the FVHD (91.9%) reported good, very good, or excellent health. The percent of the population that reported good or better health is similar between males and females and across all age groups while individuals with more than a high school education reported slightly higher levels of good or better health (93%) than individuals with a high school education or less (87.6%). Individuals from households with larger incomes were more likely to report good or better health than individuals from lower income households.

Figure 32: Percent of Population Reporting Good or Better General Health – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Leading Causes of Death

Table 1 ranks the leading causes of death (LCOD) among all FVHD residents between 2016 and 2020. This rank order in the FVHD largely mirrors the rank order of LCOD in Connecticut, with the exception that heart disease is the LCOD and cancer is the second LCOD in Connecticut during the same time period. As Table 1 shows, cancer and heart disease account for a significant proportion of deaths in the FVHD.

Table 1: Leading Causes of Death, All Sexes, 2016-2020 – FVHD

Rank	Cause of Death	Count
1.	Cancer	1003
2.	Heart Disease	995
3.	Accidents	234
4.	Stroke	187
5.	Chronic Lower Respiratory Diseases	186

Source: *Connecticut Department of Public Health. Statistics, Analysis, and Reporting Unit.*

Table 2 shows the LCOD by sex in FVHD residents.

Table 2: Leading Causes of Death, By Sex, 2016-2020 – FVHD

Rank	Cause of Death - Males	Count - Males	Cause of Death – Females	Count - Females
1.	Cancer	521	Heart Disease	487
2.	Heart Disease	508	Cancer	482
3.	Accidents	152	Alzheimer's Disease	120
4.	Chronic Lower Respiratory Diseases	80	Stroke	112
5.	Stroke	75	Chronic Lower Respiratory Diseases	106

Source: *Connecticut Department of Public Health. Statistics, Analysis, and Reporting Unit.*

Although the LCOD is different between males (cancer) and females (heart disease), the difference in counts between cancer and heart disease for each sex is minimal. In the FVHD, lung cancer was the

LCOD from cancer for both males and females, accounting for 24.9% of all cancer deaths. Breast cancer was the second leading cause of cancer death among females, accounting for 17.5% of cancer deaths while prostate cancer was the second leading cause of cancer death among males, accounting for 18% of cancer deaths. Colon cancer accounted for 7% of male cancer deaths and 12% of female cancer deaths, respectively. Among heart disease deaths, coronary heart disease accounted for most of these deaths in both men and women (data not shown).

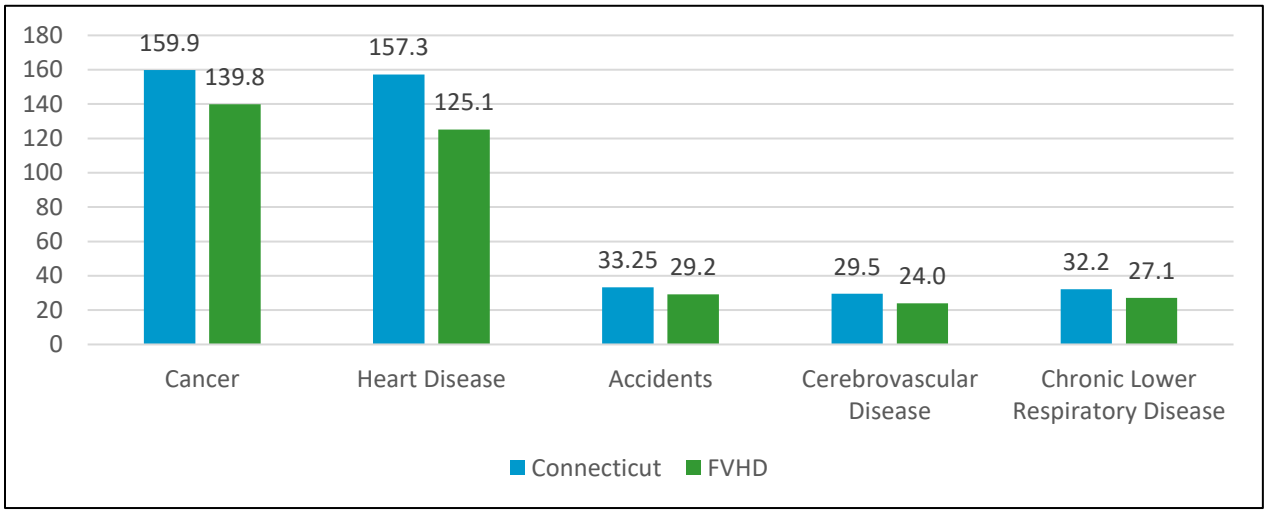
The difference between the LCOD between sexes was in accidents and Alzheimer's Disease. As seen in Table 2, accidents were a LCOD for males but not for females while Alzheimer's Disease was a LCOD for females but not for males. Nearly two-thirds of all people living with Alzheimer's Disease are females.[49] Therefore, it is not unusual that deaths from Alzheimer's Disease in the FVHD are disproportionately high in females as compared to males.

Accidents were the third LCOD among males and the sixth LCOD among females, accounting for 82 deaths among females. The leading cause of accidental death for males and females combined was accidental poisonings, which caused 43.4% of accidental deaths. Accidental falls (33.8%), motor vehicle accidents (20.7%), and accidental drowning and submersion (2%) accounted for the remaining accidental deaths in males and females combined. It is important to note, however, that accidental falls are the leading cause of accidental death among females, accounting for 46% of these deaths, while accidental falls account for only 27.5% of accidental deaths in males. Accidental poisoning is the leading cause of accidental death in males (48.1%) (data not shown).

Age-adjusted mortality rates (AAMRs) are death rates that control for the effects of the varying age distributions between different populations. AAMRs allow for the comparison of death rates between the FVHD and Connecticut by accounting for and controlling the fact that the FVHD has an older population than the state as demonstrated in Figure 2. Figure 33 shows the AAMRs for the leading causes of death in both the FVHD and Connecticut. Stroke is included in cerebrovascular disease.

As Figure 33 shows, the FVHD had a lower AAMR than Connecticut for each of the leading causes of death from 2008 to 2012. As expected, based on Table 1, the AAMR is highest for cancer and heart disease with the FVHD AAMR for cancer being 139.8 deaths per 100,000 residents and heart disease being 125.1 deaths per 100,000 residents.

Figure 33: Age-Adjusted Mortality Rates per 100,000 Residents for the Leading Causes of Death, 2008-2012 – FVHD and Connecticut



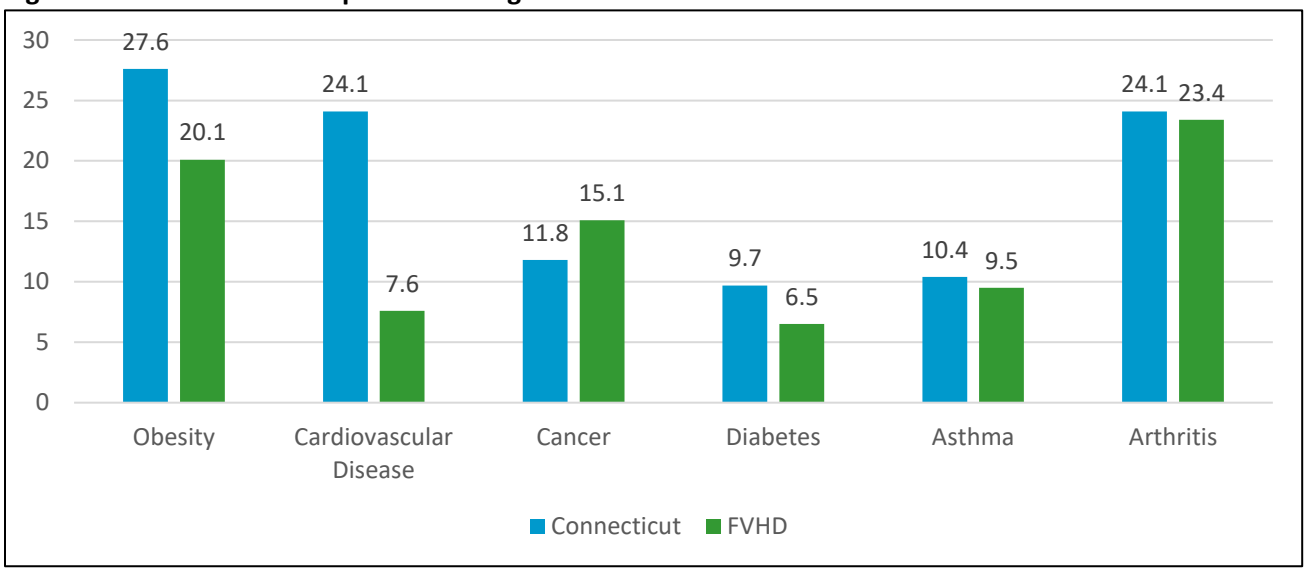
Source: *Connecticut Department of Public Health, Health District AAMR Tables*

Chronic Disease

Defined broadly, chronic diseases are conditions that last one year or more and require ongoing medical attention and/or limit activities of daily living.[50] Chronic diseases, such as heart disease and cancer, are leading causes of morbidity and mortality nationwide. As seen in Table 1, cancer and heart disease are the top two leading causes of death in both the FVHD and Connecticut. Although there is a genetic component of many chronic diseases, many are caused by risk behaviors, including tobacco use, physical inactivity, and excessive alcohol use.[50] As shown in Figures 19 and 20 respectively, although FVHD generally has a relatively low percentage of the population as compared to Connecticut who are physically inactive or use tobacco, there are still segments of the population who are at greater risk of developing a chronic disease based on these health behaviors. Furthermore, Figure 22 demonstrates that excessive alcohol consumption is higher in FVHD than in Connecticut. In this way, the behavioral risk factors for developing chronic disease are present in the FVHD population.

Figure 34 shows the percentage of the FHVD population that self-reports living with various, common chronic diseases compared to the population of Connecticut. With the exception of cancer, adults in the FVHD report a lower prevalence of chronic disease when compared to Connecticut. In the FVHD, arthritis (23.4%) is the most common chronic disease people are living with, followed closely by obesity (20.1%). This means that almost one in four people in the FVHD are living with arthritis while one and five people are obese in the FVHD. Further analysis of each chronic disease follows Figure 34 below. Asthma is discussed in the Environmental Health section.

Figure 34: Percent of the Population Living with Various Chronic Diseases – FVHD and Connecticut



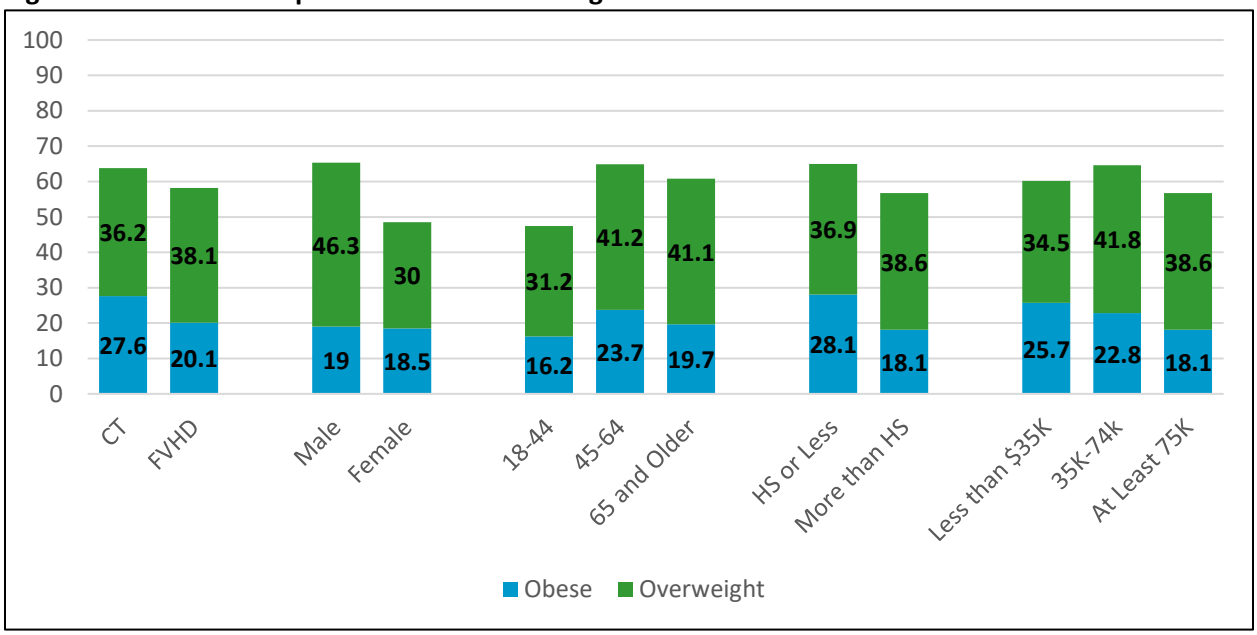
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Obesity

The World Health Organization (WHO) declared obesity a major public health problem and a global epidemic in 1997.[51] Since then, the prevalence of obesity in the United States has increased substantially from 30.5% in 1999 to 2000 to 41.9% from 2017 to 2020.[52] The WHO estimates that the majority of the world's population will be either overweight or obese by 2030.[51] The effects of obesity on an individual's health are vast, affecting nearly every body system. Obesity increases the risk of developing type 2 diabetes, hypertension, high cholesterol, coronary artery disease, cancer, asthma, sleep apnea, osteoarthritis, and stroke, as well as mental illnesses such as depression and anxiety.[52,53]

The BRFSS asked respondents to provide their height and weight and their body mass index (BMI) was calculated using their responses. A BMI between 25.0 and 29.9 is considered overweight while a BMI over 30.0 is considered obese. As shown in Figure 35, FVHD has a lower percentage of obese adults (20.1%) than Connecticut (27.6%); however, an additional 38.1% of FVHD residents are overweight based on their BMI. Taken together, 58.2% of FVHD residents are overweight or obese and at risk of the severe health outcomes discussed above. Males (19%) and females (18.5%) have similar rates of obesity; however, men are more likely to be overweight than females, at 46.3% and 30% respectively.

Figure 35: Percent of Population that is Overweight or Obese – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Cardiovascular Disease

Cardiovascular disease is a broad term that refers to several conditions including coronary heart disease, angina, heart attack, heart failure, and stroke. There are a variety of actions individuals can take to reduce their risk of developing cardiovascular disease, including not using tobacco, remaining physically active, eating a healthy diet, maintaining a healthy weight, getting enough sleep, and getting routine health screenings. As previously discussed, Figures 19, 20, 25, 29, 30, and 31 respectively describe some of these preventative behaviors in FVHD residents while Figure 35 addresses the prevalence of overweight and obesity in FVHD residents.

To measure the prevalence of cardiovascular disease, the BRFSS asked respondents whether they had ever had a heart attack or a stroke or whether a healthcare professional had ever diagnosed them with angina or coronary heart disease. As shown in Figure 34, 7.6% of FVHD residents answered yes to this question compared to 24.1% of Connecticut residents. 18.8% FVHD residents 65 years and older reported being diagnosed with cardiovascular disease compared to 6.4% of residents ages 45 to 64 years old. The prevalence of cardiovascular disease decreased as household income increased, with 15% reported in households with an income less than $35,000 and 4.5% in households that earn at least $75,000 (data not shown).

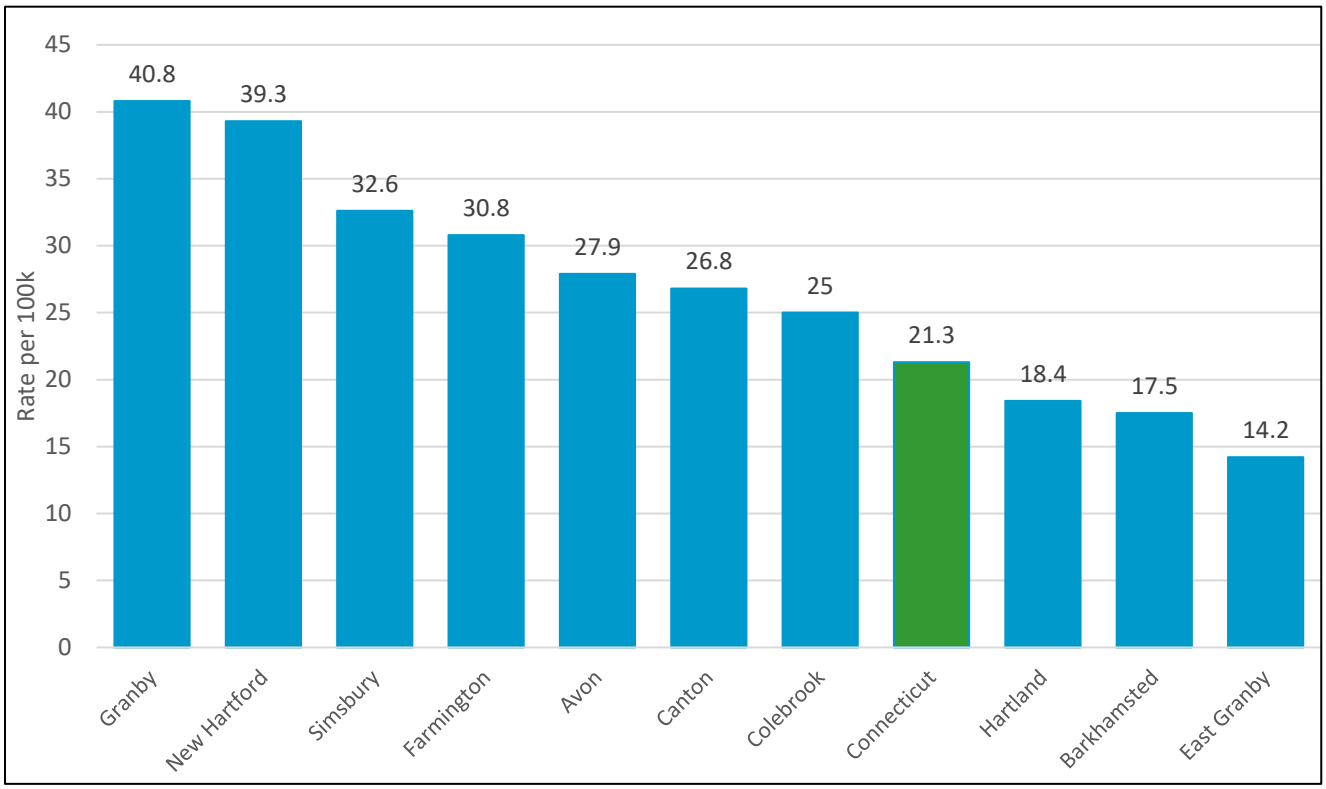
Cancer

Cancer refers to a large number of diseases characterized by the development of abnormal cells that divide uncontrollably and invade nearby healthy body tissues, many times spreading throughout the body. As seen in Table 1, cancer is the leading cause of death in the FVHD and it is estimated to be the cause of one in six deaths worldwide.[54] Nearly one-third of cancer deaths are caused by health risk behaviors such as tobacco use, alcohol consumption, physical inactivity, and consuming a diet low in fruits and vegetables.[50]

Figure 34 demonstrates that 15.1% of FVHD adult residents report having ever been diagnosed with cancer compared to 11.8% in Connecticut. Females (18.8%) in the FVHD were more likely to have been diagnosed with cancer than males (10.2%) while individuals 65 and older (31.5%) had higher rates of cancer than individuals aged 45 to 64 (15.2%). In addition, individuals from households earning over $75,000 (12.8%) had a lower percentage of cancer diagnosis than those in households earning less than $35,000 (16.7%) and those earning $35,000 to $74,000 (19.9%) (data not shown).

Melanoma, the most serious type of skin cancer, is caused by exposure to UV radiation from sunlight or tanning beds. Although not all melanomas can be easily seen, individuals can screen themselves for any unusual moles on their body and visit a dermatologist regularly for screenings.[55] As Figure 36 illustrates, seven towns in the FVHD have higher rates of melanoma than in Connecticut as a whole.

Figure 36: Age-Adjusted Incidence Rate per 100,000 Residents of Melanoma, 2010-2014 – Towns and Connecticut



Source: *Connecticut Department of Public Health*

Diabetes

Diabetes is a disease that occurs when the body doesn't make enough insulin (Type 1 Diabetes) or can't use it well (Type 2 Diabetes). Insulin is a key molecule in the body as it allows for glucose, or sugar, to be let into cells, where it is then used to make energy. When insulin does not do this, the sugar stays in the bloodstream. Overtime, high levels of blood sugar in the bloodstream lead to series health problems, including heart disease, vision loss, kidney disease, and lower-limb amputations.[56] As type 1 diabetes is thought to be triggered by an autoimmune reaction, there is no known way to prevent developing it. However, like most other chronic diseases, type 2 diabetes can be prevented or delayed through healthy

lifestyle behaviors, such as maintaining a healthy weight by eating a nutritious diet and being physical active.

Figure 34 demonstrates that 6.5% of FVHD adult residents report having ever been diagnosed with diabetes. This is lower than the 9.7% of Connecticut residents living with diabetes. Notably, the prevalence of diabetes was higher in adults over the age of 65 (12.1%) versus adults aged 45 to 64 (4.9%) and among adults from households with an income less than $35,000 (19.2%) or between $35,000 and $74,000 (9%) as compared to 3.9% of households with income over $75,000 (data not shown).

Arthritis

As shown in Figure 34, 23.4% of adult FVHD residents report having ever been diagnosed with arthritis. The risk of developing arthritis increases with age, which is important to note given the older age distribution of the FVHD population seen in Figure 2 and further demonstrated by the fact that 51.7% of the FVHD population 65 years and older have reported receiving an arthritis diagnosis (data not shown). Osteoarthritis, the most common form of arthritis, is a degenerative joint disease in which the cartilage within the joint begins to break down, resulting in pain, stiffness, and swelling.[57] This damage to the joints, especially in the knees and hips, interferes with balance and mobility, ultimately increasing the risk of falling and subsequently fracturing a bone in the process.[58] In data provided by the Connecticut Department of Public Health (DPH), it is interesting to note that among the leading causes of inpatient hospitalizations among FVHD residents 65 years and older, the second leading cause is osteoarthritis of the knee and the fourth cause is osteoarthritis of the hip.

Infectious Disease

Enteric Diseases

Enteric diseases, also known as foodborne illnesses, are caused by bacteria, viruses, or parasites that are acquired after consuming contaminated food or water.[59] Most cases of foodborne illness can be prevented through proper food handling processes, including cooking food to proper temperatures, storing food at proper temperatures, proper and frequent handwashing, and preventing cross-contamination of cooking surfaces and utensils.

On average, data from the Connecticut Electronic Disease Surveillance System shows that the FVHD averaged 39 lab-confirmed enteric illnesses each year from 2016 to 2020. Campylobacteriosis was the most common enteric illness in the FHVD, averaging 19 cases per year from 2016 to 2020, followed by salmonellosis, which averaged 13 cases each year.

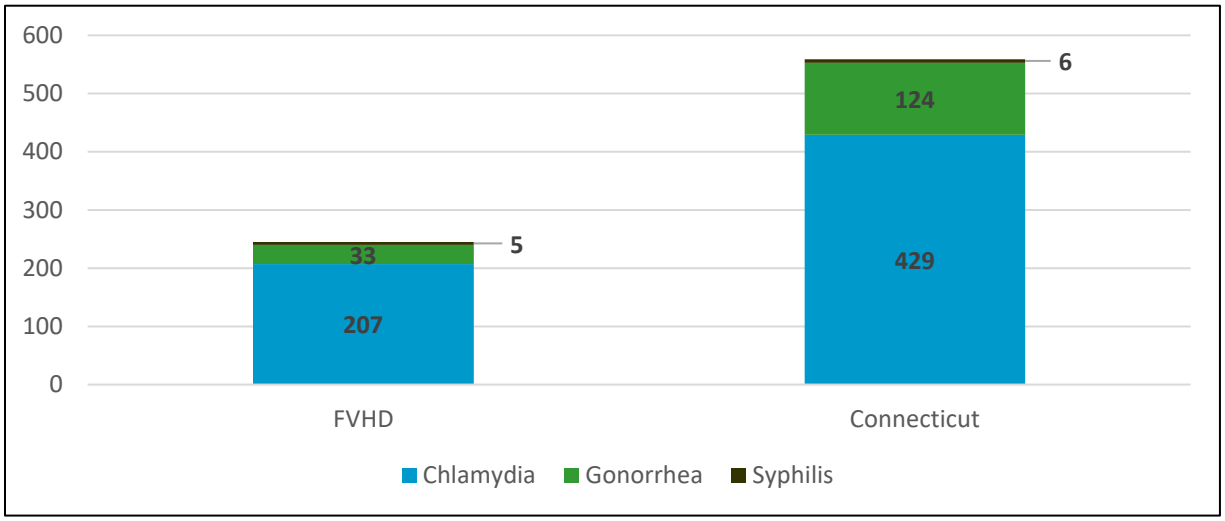
Sexually Transmitted Diseases

An analysis of national 2018 sexually transmitted disease (STD) data revealed that approximately one in five Americans have an STD.[60] In addition to the immediate effects of an STD on the body, including severe discomfort, STDs can have serious long-term health consequences, including increased risk of contracting HIV, pelvic inflammatory disease, cervical cancer, infertility, and perinatal or congenital infections in infants born to infected mothers.[61] Steps an individual can take to reduce their risk of contracting an STD include limiting the number of sexual partners, wearing condoms correctly and consistently, and getting vaccinated against the STDs hepatitis B and human papillomavirus (HPV). In Connecticut, 66.9% of children ages 13 to 17 received all recommended doses of the HPV vaccine in

2020, which falls below the *Healthy People 2030* objective of 80%.[62] Individuals should also get tested for STDs routinely to both catch the STD early to begin treatment and to limit the spread to others.

Chlamydia, gonorrhea, and syphilis are three common STDs. As shown in Figure 37, FVHD has a lower rate of these three STDS as compared to Connecticut, though the rate of syphilis is quite similar between FVHD and Connecticut. In 2019, FVHD had 227 cases of chlamydia, 36 cases of gonorrhea, and 6 cases of syphilis (data not shown).

Figure 37: Rate of Sexually Transmitted Diseases per 100,000 Residents, 2019 – FVHD and Connecticut



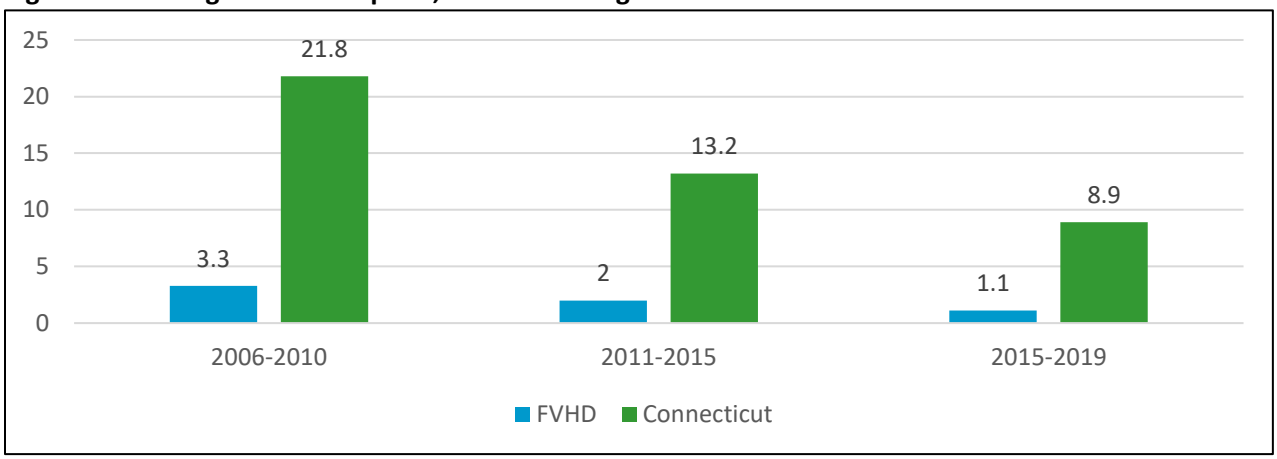
Source: *Connecticut Department of Public Health, Sexually Transmitted Disease Control Program*

Maternal and Child Health

Teenage pregnancy risks the immediate and long-term health of both the mother and the baby. In addition to the health effects of pregnancy and birth on the body, teenage mothers are less likely to complete high school than other students.[63] As discussed with Figure 6, individuals with higher educational attainment are more likely to live healthier lives compared to individuals with lower educational attainment. Furthermore, babies born to teenage mothers are more likely to have low birth weights and preterm delivery.[64] In the longer term, these children are more likely than their peers to develop chronic health conditions, have lower school achievement, not complete high school, and face unemployment as a young adult.[63] Finally, daughters of teenage mothers are more likely to be teenage mothers themselves.[63]

As Figure 38 shows, the teenage birth rate has been steadily declining among FVHD females ages 15 to 19 as well as in Connecticut since 2006. Between 2006 and 2010, there was an average of 11.6 births to teenagers per year in the FVHD while between 2015 and 2019, there was an average of four births to teenagers per year in the FVHD (data not shown).

Figure 38: Teenage Birth Rate per 1,000 Females Ages 15-19 – FVHD and Connecticut



Source: *Connecticut Department of Public Health, Office of Vital Records*

Mental Health

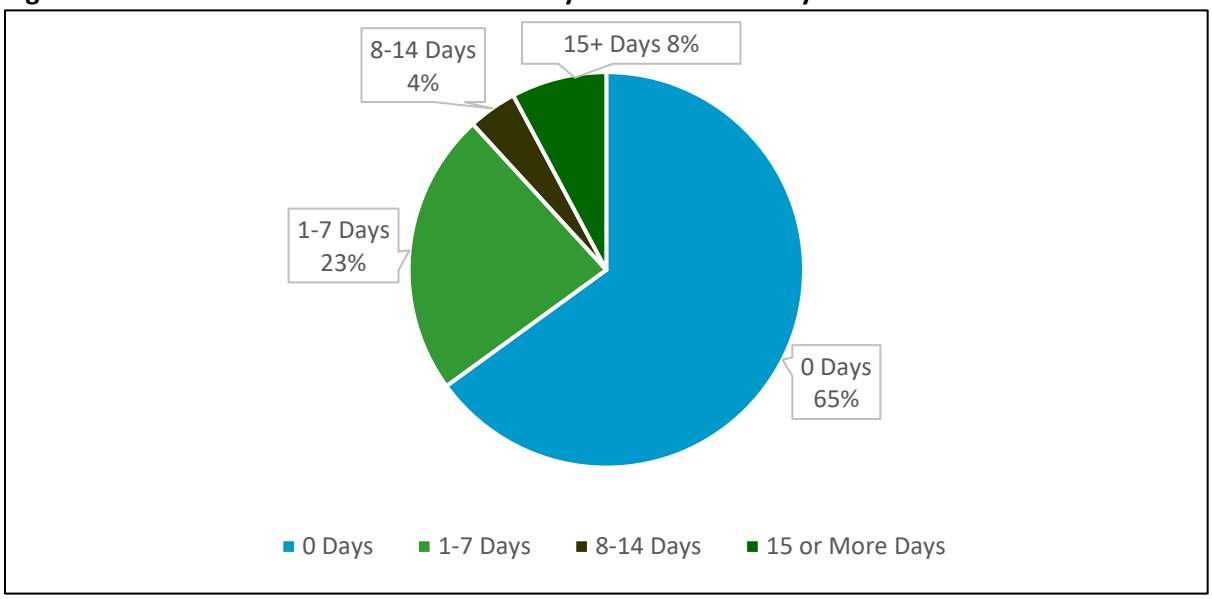
Physical health and mental health are equally important components of overall health and well-being. Mental health encompasses emotional, psychological, and social well-being, which all affect how we think, feel, and act.[65] How we handle stress, relate to and interact with others, and make choices are all everyday decisions that are affected by our mental health. Most everyone experiences occasional poor mental health days. However, mental illnesses are diagnosable health conditions characterized by changes in thinking, mood, and/or behavior that impair daily functioning.[66] Mental illnesses are caused by many factors, including biological or chemical imbalances in the brain, family history of mental illness, and life experiences such as trauma or abuse.[65] Furthermore, mental illness increases the risk of developing chronic diseases, including cardiovascular disease, diabetes, stroke, and Alzheimer's.[67] Alternatively, having a chronic disease increases the risk of developing mental illness.[67] In this way, it is clear that physical health and mental health are interconnected, crucial components of overall health and well-being.

All Social Services Directors reported that they have assisted more residents with mental health problems and illnesses now than they did prior to the COVID-19 pandemic. They are seeing mental health illnesses that are not being treated and span across all age groups.

Self-Perceived Mental Health

As Figure 39 demonstrates, 65% of FVHD residents report not having any poor mental health days in the past month while 23% of respondents reported between one and seven days of poor mental health in the past 30 days. However, 12% of FVHD respondents reported not having good mental health for at least 8 or more days during the past 30 days. BRFSS data found that males are more likely than females to report good mental health while older individuals were more likely to report good mental health than younger individuals. Individuals from households earning more income were more likely to report good mental health than individuals from lower income households (data not shown).

Figure 39 – Number of Poor Mental Health Days in the Past 30 Days - FVHD



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

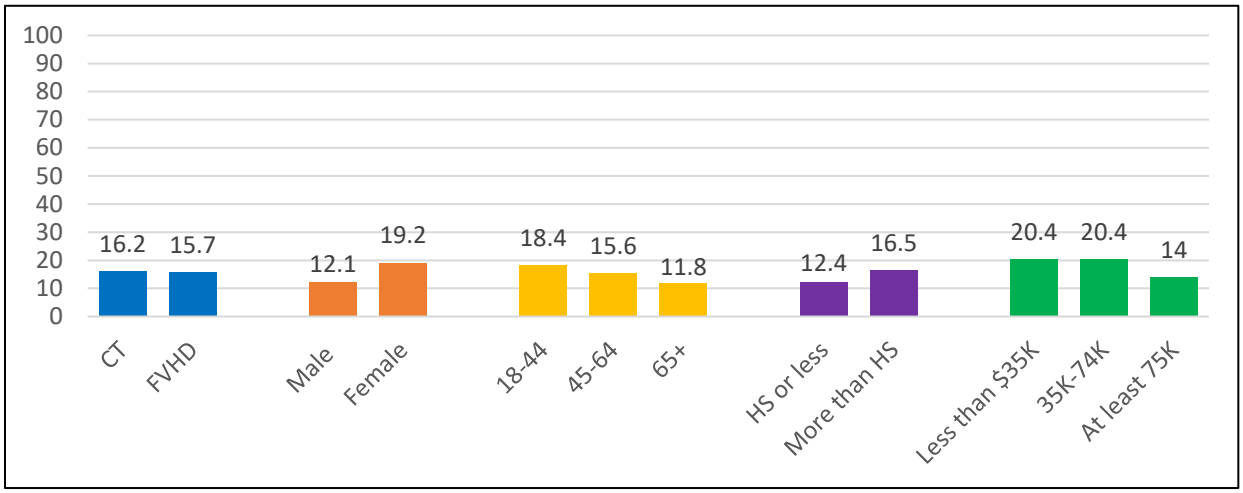
It is important to note that, except for individuals over the age of 65, all groups of respondents reported that they felt their physical health was better than their mental health.

Depression

Depression is one of the most common mental illnesses and the leading cause of disability worldwide.[68] Symptoms of depression include persistent feelings of sadness, anxiety, emptiness, hopelessness, fatigue, irritability, and restlessness that last for at least two weeks. It can take several forms, from mild to severe, and affects an individual's ability to function in their daily lives. Just as with mental illnesses in general, depression is often caused by major life changes, trauma, and stress, as well as by certain medications or physical illnesses.[69] Depression, even the most severe cases, can be treated with medications, psychotherapy, or a combination of both.[69]

As Figure 40 shows, 15.7% of FVHD respondents report having ever been diagnosed with a depressive disorder, which included depression, major depression, minor depression, or dysthymia. The rate of FVHD residents having ever lived with a depressive disorder closely mirrors the 16.2% of Connecticut residents who have ever lived with a depressive disorder. Females (19.2%) were more likely than males (12.1%) to report ever having a depressive disorder while younger individuals were more likely than older individuals to report ever having a depressive disorder. Individuals from lower income households (20.4%) were more likely to report ever having a depressive disorder than individuals from higher income households (14%). These findings mirror the results of self-perceived mental health: groups that reported poorer levels of self-perceived mental health were more likely to report ever receiving a depressive disorder diagnosis.

Figure 40: Percent of Population to Ever Receive a Depressive Disorder Diagnosis – FVHD and Connecticut



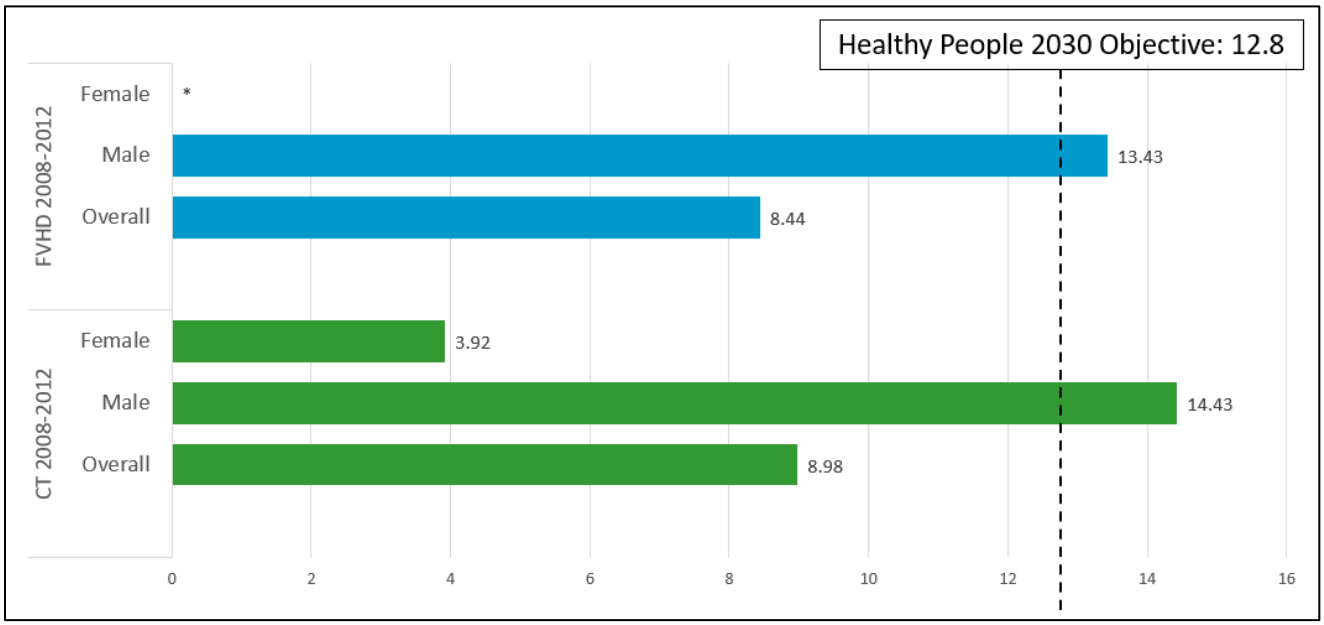
Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

Suicide

46% of individuals who die by suicide have a known mental illness.[70] Although many mental illnesses can be treated or managed successfully, there is immense stigma in our society related to seeking help for a mental illness. In addition, individuals who do try to seek care for their mental illness often face many barriers to accessing care, including a lack of mental health providers, cost of services, and long waits to see a provider. The combination of stigma and barriers to care lead nearly half of Americans with mental illness to go without mental health care each year.[71] This is an extremely dangerous situation that leaves many individuals feeling like they have nowhere to go for help and when the weight of the mental illness becomes unbearable, these individuals may resort to suicide.

Figure 41 displays the age-adjusted mortality rate (AAMR) from suicide per 100,00 residents in the FVHD and in Connecticut between 2008 and 2012. As Figure 41 shows, the rate of suicide is significantly higher in males than in females in both the FVHD and in Connecticut. Between 2008 and 2012, there were 47 deaths by suicide in the FVHD, 36 in males and 11 in females (data not shown). Although no level of suicide should be acceptable in a community, the *Healthy People 2030* objective for the AAMR from suicide is 12.8 per 100,000 residents. The overall AAMR from suicide in FVHD and Connecticut fall below this objective; however, the AAMR from suicide for males in both the FVHD and in Connecticut are above this objective.

Figure 41: Age-Adjusted Mortality Rate from Suicide per 100,000 Residents – FVHD and Connecticut



Source: *Connecticut Department of Public Health, Health District AAMR Table 2008-2012*

**Data for FVHD females suppressed due to too few cases.*

Mental Health Treatment Program Admission

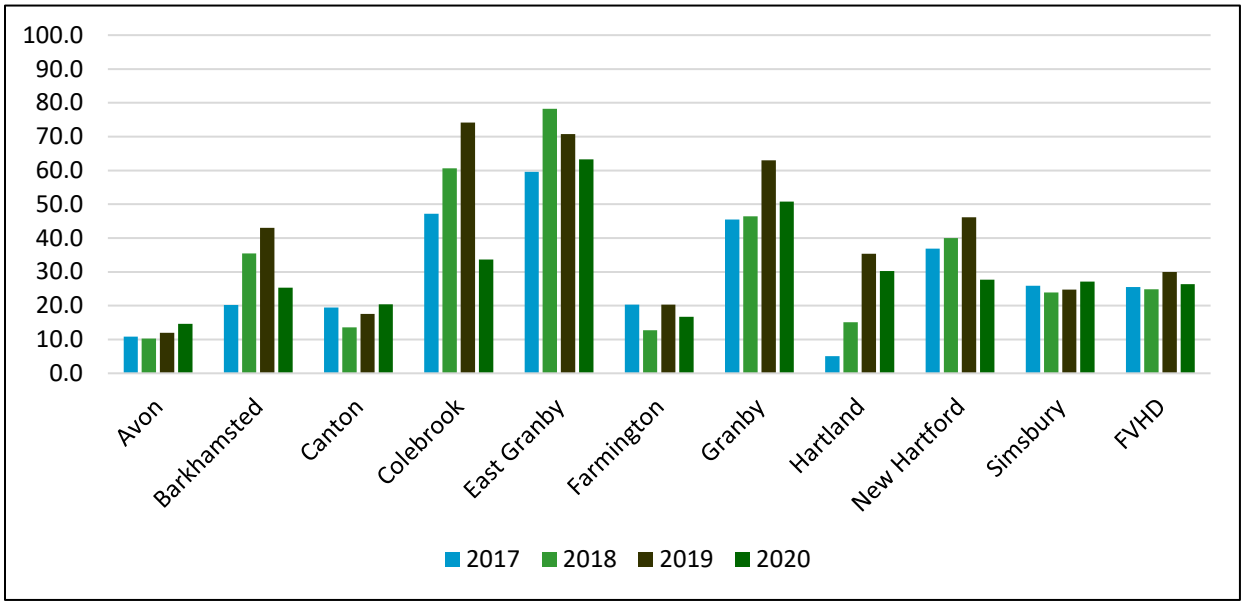
The Connecticut Department of Mental Health and Addiction Services (DMHAS) runs many programs that provide services and support to those suffering from mental illness and/or substance use problems. As DMHAS data only represents data from the eight clinics operated and funded by DMHAS as well as 120 clinics that are privately owned but funded by DHMAS, the data in Figure 42 is not comprehensive of all mental health program admissions by FVHD residents. In addition, the DMHAS operated and funded clinics often serve clients who are underinsured or uninsured. As Figure 17 shows, FVHD has a very low percentage of the population that is uninsured. Data on treatment program admissions of FVHD residents who seek treatment at private clinics not funded by DMHAS are not included in Figure 42. However, this data still provides valuable insight into trends by town and year of admissions into mental health treatment programs.

As shown in Figure 42, in the FVHD and in most towns the rate of mental health treatment admissions per 10,000 residents increased in 2019 and slightly decrease in 2020. The percentage of admissions to mental health treatment programs are similar between males and females and adults ages 18-49 years old account for approximately 70% of all FVHD admissions (data not shown). While these data only represent a fraction of mental health treatment admissions for each town, it is important to note that Colebrook, East Granby, and Granby had consistently higher admissions rates from 2017 to 2020 compared to other FVHD towns.

In the FVHD, depressive disorders were the leading diagnosis for those admitted to mental health treatment programs accounting for approximately 35% to 39% of the total admissions (data not shown). Figure 40 speaks to the prevalence of depressive disorders in the FVHD population. Substance-related and addictive disorders was the second leading diagnosis accounting for approximately 26% to 35% of

all admissions (data not shown). Anxiety, bipolar and related disorders, trauma, and stressor-related disorders were other leading diagnoses for those admitted to mental health treatment programs.

Figure 42: Rate of Mental Health Treatment Program Admissions per 10,000 Adult Residents – Towns and FVHD



Source: *Connecticut Department of Mental Health and Addiction Services*

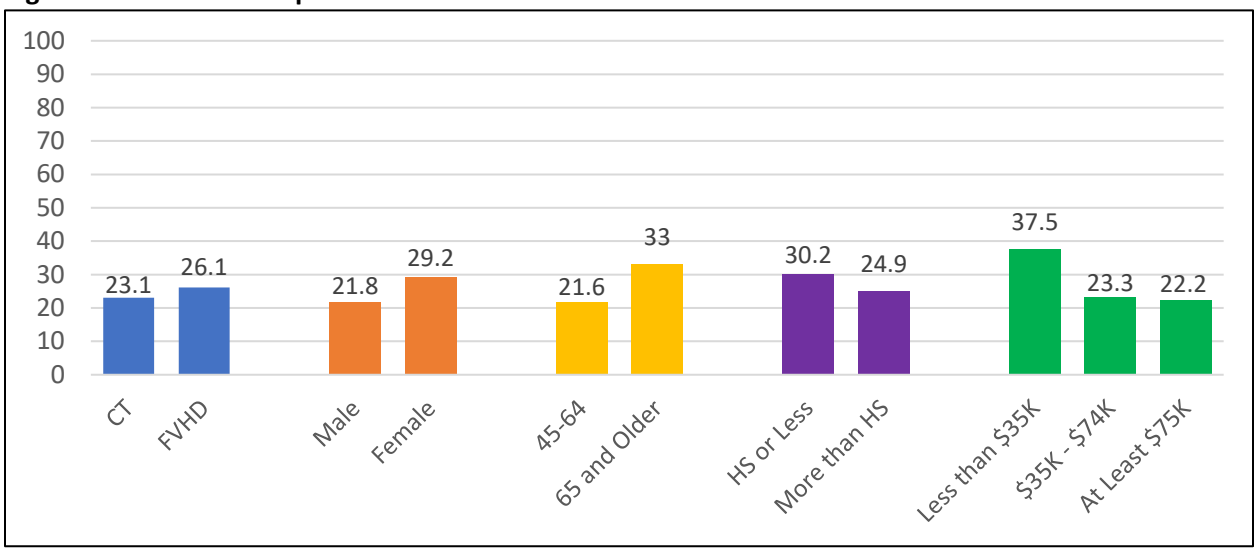
Accidents

Accidental Falls

In the United States, one in four adults over the age of 65 reports falling each year.[72] Common injuries associated with a fall include broken bones and head injuries. Even when a fall does not result in an injury, research has shown that the fear of falling again prompts individuals to cut down on their daily activities, which causes the individual to become weaker, ultimately increasing their risk of falling.[73]

As shown in Figure 43, the FVHD (26.1%) has a higher percentage of the population who has fallen in the past year than Connecticut (23.1%). Females (29.2%) were more likely than males (21.8%) to report a fall as were adults 65 and older (33%) than adults ages 45 to 64 (21.6%). Individuals with lower educational attainment (30.2%) and individuals from households earning less than $35,000 (37.5%) reported higher rates of falls than individuals with higher educational attainment (24.9%) and individuals from households earning between $35,000 and $74,000 (23.3%) and at least $75,000 (22.2%).

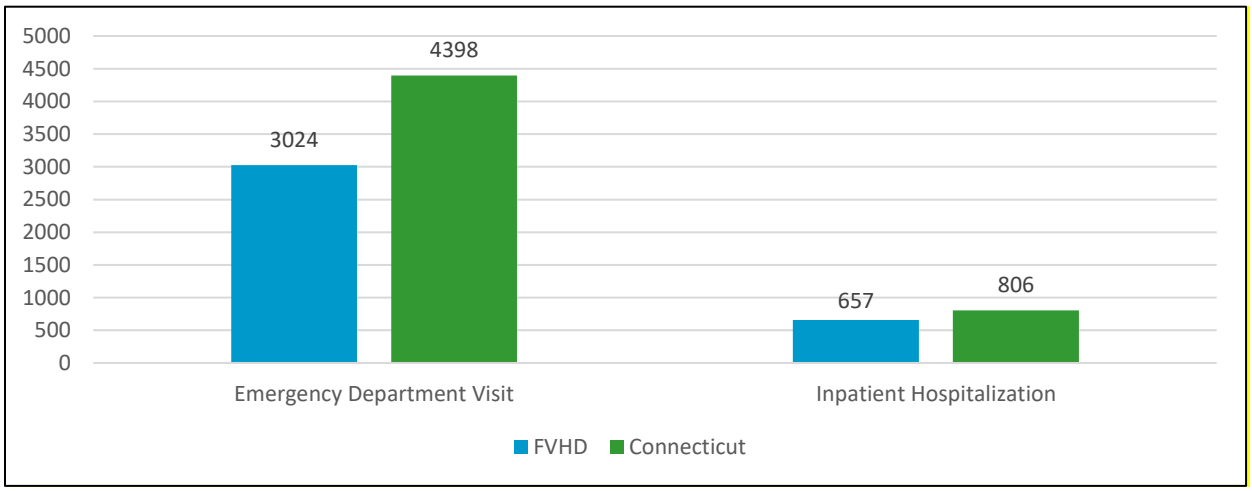
Figure 43: Percent of Population That Has Fallen in the Past 12 Months – FVHD and Connecticut



Source: *Connecticut Behavioral Risk Factor Surveillance System, 2016-2020*

About 37% of individuals who experience a fall require medical treatment or have their activities of daily living restricted for at least one day following the fall.[72] Figure 44 displays the rate per 100,000 residents of emergency department visits and inpatient hospitalizations due to falls among FVHD residents and Connecticut residents.

Figure 44: Rate of Emergency Department Visits and Hospitalizations Due to Falls per 100,000 Residents – FVHD and Connecticut



Source: *Connecticut Environmental Public Health Tracking Unit*

In addition to emergency department visits and hospitalizations due to falls, it is also important to acknowledge that DPH data showed 33.8% of deaths from accidents in FVHD residents are the result of a fall compared to just 22.7% in Connecticut (data not shown).

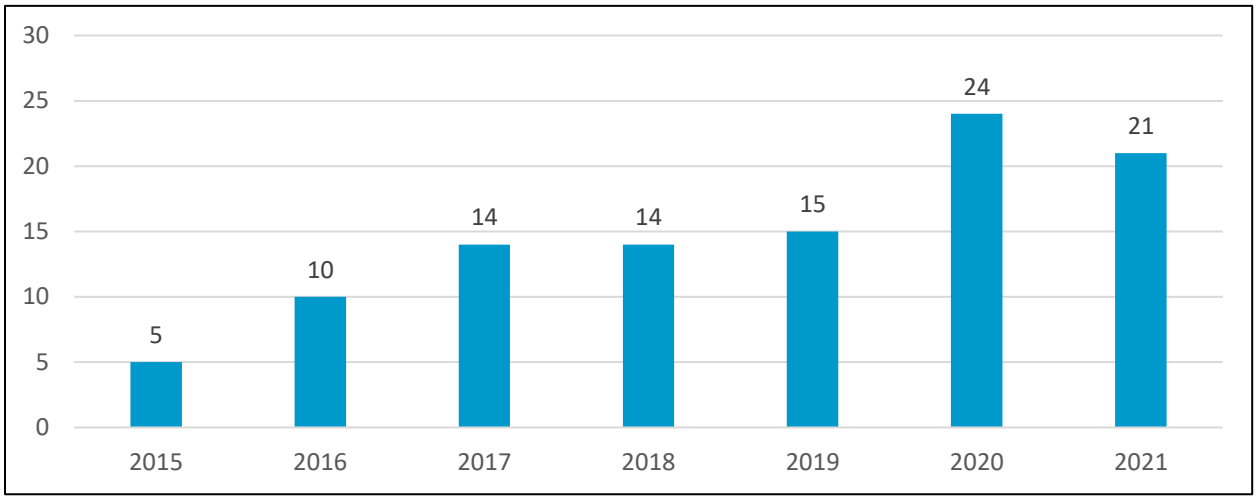
Drug Overdose Deaths

Nationwide, the number of drug overdose deaths has quadrupled since 1999 with more than 70% of these deaths involving an opioid.[74] This led the United States Department of Health and Human Services to declare the opioid crisis a public health emergency in 2017.[75] Connecticut has not been spared from

the opioid epidemic. In fact, the age-adjusted mortality rate for drug-induced deaths is significantly higher in Connecticut at 39.1 deaths per 100,000 residents compared to the 2020 national rate of 28.3.[76] DPH data shows that the number of drug overdose deaths in Connecticut has more than doubled since 2015, from 728 deaths in 2015 to 1,526 deaths in 2021.[77] 92% of the drug overdose deaths in Connecticut in 2021 involved an opioid. Based on these mortality rate data, Connecticut residents are more likely to die from a drug overdose than in a motor vehicle accident.[76]

As Figure 45 shows, deaths from drug overdoses in the FVHD have steadily increased since 2015. The 21 deaths in 2021 is more than quadruple the 5 deaths in 2015. Of the 103 total drug overdose deaths since 2015, 74% were in males and 94% were in White, non-Hispanic residents (data not shown).

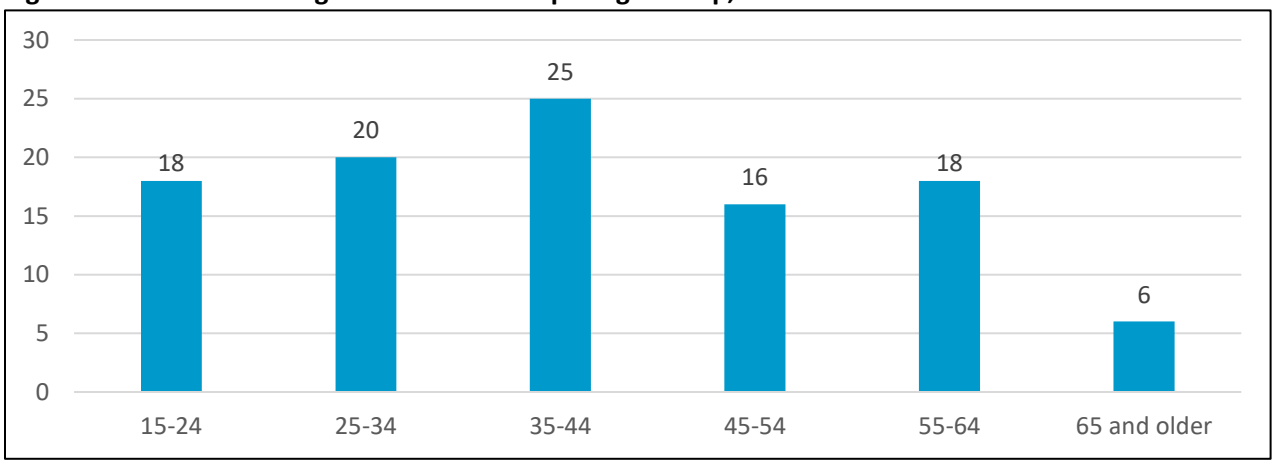
Figure 45: Number of Drug Overdose Deaths per Year, 2015-2021 - FVHD



Source: *Connecticut State Unintentional Drug Overdose Reporting System*

Just as in Connecticut as a whole, the 35- to 44-year-old age group had the highest number of drug overdose deaths in the FVHD. Figure 46 demonstrates the age distribution of drug overdose deaths in the FVHD.

Figure 46: Number of Drug Overdose Deaths per Age Group, 2015-2021 - FVHD



Source: *Connecticut State Unintentional Drug Overdose Reporting System*

According to data from the Connecticut State Unintentional Drug Overdose Reporting System, opioids were involved in 90.3% of drug overdose deaths in the FVHD while fentanyl or a fentanyl analog were involved in 73.8% of deaths.[77] Cocaine, alcohol, benzodiazepines, heroine, and xylazine were other drug categories involved in drug overdose deaths in the FVHD. More than one drug category could be involved in each death.

Environmental Health

Asthma in Adults

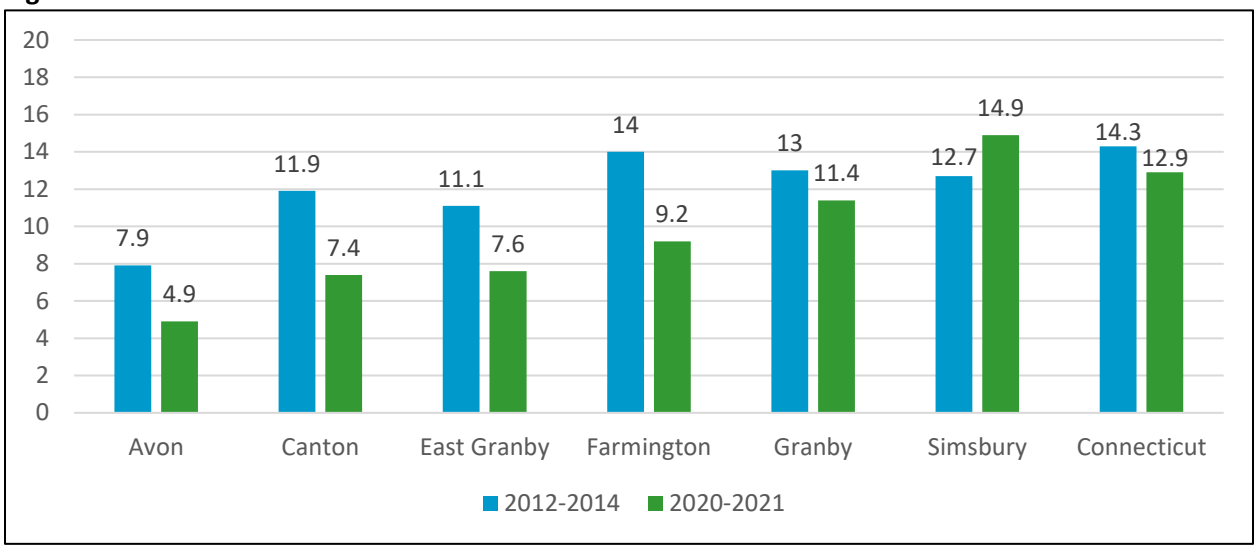
As seen in Figure 34, 9.5% of adult FVHD residents report living with asthma compared to 10.4% in Connecticut. Although asthma cannot be cured, individuals can manage their asthma with medication and by avoiding known asthma triggers. Many asthma triggers are related to allergens and irritants, including secondhand smoke, dust mites, molds, chemical irritants, wood smoke, and ozone and smog.[78] Therefore, a crucial component of controlling asthma is managing indoor air quality, which includes among many other actions not smoking inside, routinely cleaning your home to avoid dust build-up, and improving ventilation, as well as limiting exposure to outdoor air pollution.[78] Uncontrolled asthma frequently causes chest tightness and difficulty breathing, which often leads the individual to seek treatment in an emergency room or to be admitted into the hospital.

Asthma in Children

One in twelve children in the United States have been diagnosed with asthma.[79] Connecticut gathers asthma data through the asthma section on the School Health Assessment Record (HAR), which is completed by a child's licensed medical provider and submitted to the school nurse. School nurses then upload asthma information from the HAR into the statewide School-Based Asthma Surveillance System (SBASS).

Figure 47 shows the prevalence of asthma among students in the school districts in the FVHD that have an elementary school, middle school, and high school. Elementary school districts with regional middle or high schools are not included. With the exception of Simsbury, all FVHD school districts as well as Connecticut experienced a decrease in asthma prevalence between the 2012 to 2014 school years and the 2020 to 2021 school year. In addition, all FVHD school districts except Simsbury reported lower prevalence of asthma across all reported school years when compared to the overall prevalence of asthma across all Connecticut school districts. In Simsbury, the prevalence of asthma increased from 12.7% in the 2012 to 2014 school years to 14.9% in the 2021 to 2022 school year and was higher than the overall prevalence in Connecticut in the 2021 to 2022 school year.

Figure 47: Prevalence of Asthma in Students – FVHD School Districts and Connecticut



Source: *Connecticut School-Based Asthma Surveillance Report 2019, Connecticut School-Based Asthma Surveillance Report, 2021*

Lead Poisoning

Since January 1, 2009, all medical providers in Connecticut are required to test their patients ages nine to 35 months old for lead poisoning via a blood lead test. Currently, local health departments in Connecticut are required to initiate public health case management action for children with a confirmed blood lead level greater than or equal to 5 micrograms per deciliter (ug/dL). The specific public health action taken depends on how high the blood lead level is over 5 ug/dL and include actions such as notifying parents of the child's eligibility for Birth-to-Three programing, providing education about lead poisoning and abatement, and conducting epidemiological investigations. In October 2021, the CDC further reduced their blood lead reference level from 5 ug/dL to 3.5 ug/dL to allow more prompt action to mitigate health effects of lead on children.[80] Subsequently, beginning on January 1, 2023, Connecticut will also recognize a blood lead level of 3.5 ug/dL as warranting local health department action.[81]

Based on 2017 birth cohort data from the Connecticut Vital Registry, 100% of children born in 2017 were screened for lead by the time they turned three in 2020.[82] The number of lead poisoning cases by blood lead level in the FVHD are shown in Table 3. Although FVHD was not required to and did not respond to the 35 cases with a blood lead level of greater than 3.5 ug/dL but less than 5.0 ug/dL in 2020, this number is shown as a reference estimate for the number of cases FVHD may need to respond to beginning in 2023.

Table 3: Number of Lead Poisoning Cases - FVHD

Year	Number of Cases ≥5 ug/dL	Number of Cases ≥3.5 ug/dL
2018	9	Not available
2019	7	Not available
2020	6	35

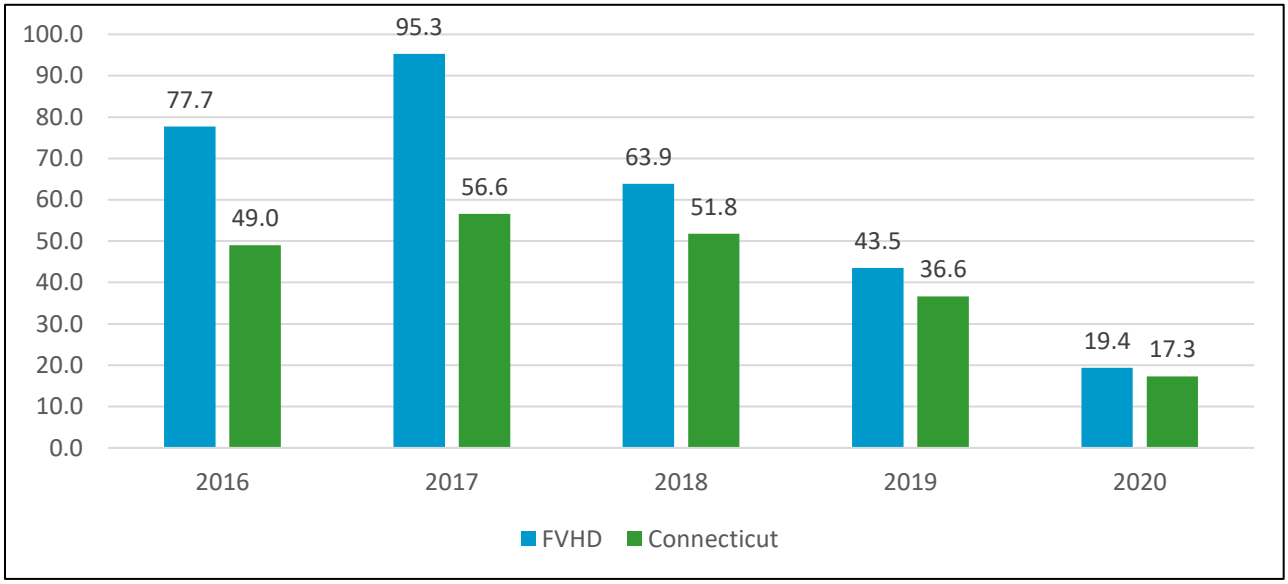
Source: *Connecticut Department of Public Health, Connecticut Childhood Lead Poisoning Surveillance Report*

Lyme Disease

Lyme disease is the most common vector-borne disease nationwide.[83] The bacteria that causes Lyme disease is transmitted to humans through the bite of a blacklegged tick and causes fever, headache, fatigue, and a characteristic skin rash in humans.[83] Most cases of Lyme disease can be treated with antibiotics; however, if Lyme disease is left untreated, it can spread to joints, the heart, and the nervous system resulting in a variety of serious health problems.[83] Ticks prefer to live in wooded areas and low-growing grasslands.[84] Due to the rural and suburban nature of FVHD towns, there are large areas of wooded areas and grasslands within the FVHD that offer an optimal environment for ticks to live.

As Figure 48 demonstrates, the rate of Lyme disease is higher among FVHD residents than in Connecticut residents; however, the case counts in the FVHD have decreased significantly, from 84 in 2016 to 21 in 2020 (data not shown). Connecticut also saw a decrease in cases, dropping from 1,752 in 2016 to 619 in 2020.[85] It is important to note that Figure 48 displays only lab-confirmed and probable cases based on the national surveillance case definition for Lyme disease. These rates are likely undercounts of actual Lyme disease in our communities as physicians may diagnosis and treat Lyme disease based on broader clinical criteria.[86]

Figure 48: Lyme Disease Rate per 100,000 Residents, 2016-2020 – FVHD and Connecticut



Source: *Connecticut Department of Public Health, Lyme Disease Annual Statistics*

Radon

Radon is an odorless, tasteless, naturally occurring gas that seeps up through the ground and diffuses into the air. Radon may be present anywhere based on the geology of Connecticut and levels can fluctuate dramatically even among neighboring homes.[87] Regardless of where someone lives and the risk of radon in the town, it is important to check for this dangerous gas. Radon is the leading cause of death from lung cancer in non-smokers and the second leading cause of lung cancer deaths overall.[88] As mentioned earlier, in the FVHD, lung cancer was the LCOD from cancer for both males and females, accounting for 24.9% of all cancer deaths. It is estimated that lung cancer deaths could be reduced two to four percent by lowering radon levels in homes.[89]

Because radon is odorless and tasteless, the only way to know whether you are being exposed to it in your home is to test for it. Testing for radon is simple and involves leaving a test kit in your home for a period of time before sending the kit to a lab to be analyzed. The United States Environmental Protection Agency (EPA) recommends taking action to mitigate radon in your home if the level is at or above four picocuries per liter (pCi/L) of air.[90] Radon mitigation methods include vent pipe and fan systems, soil depressurization systems, and sealing cracks in the foundation of the home.

Table 4 displays the number of homes in each FVHD town that submitted radon test kits to be analyzed for the period January 1, 2005, to August 26, 2022, as well as the number of kits that resulted in a radon level that met or exceeded 4.0pCi/L. As Table 4 found, in all ten FVHD towns, 20% or more of houses that submitted radon test kits had radon levels that met or exceeded 4.0pCi/L.

Table 4: Measurement of Radon Levels, 1/1/2005 through 8/26/2022 - FVHD Towns

Town	Number of Analyses	Number of Analyses Where Result Was At or Above 4.0 pCi/L	% of Results At or Above 4.0 pCi/L
Avon	505	126	25%
Barkhamsted	101	28	27.7%
Canton	388	94	24.2%
Colebrook	24	7	29.1%
East Granby	115	30	26.1%
Farmington	615	177	28.8%
Granby	247	51	20.6%
Hartland	26	6	23.1%
New Hartford	203	47	23.2%
Simsbury	437	108	24.7%

Source: *Connecticut Department of Public Health Radon Program* (*Note – Total number of analyses is likely higher than total number of households tested due to post-mitigation measurements.)*

Summary

The majority of residents in the FVHD (91.9%) report good or better health. This percentage is similar among all subgroups groups, with one exception being that just 80.1% of individuals from households that earn less than $35,000 report good or better health.

The leading causes of death in the FVHD mirror those in Connecticut with cancer and heart disease accounting for a significant proportion of deaths in the FVHD. The AAMR is highest for cancer and heart disease with the FVHD AAMR for cancer being 139.8 deaths per 100,000 residents and heart disease being 125.1 deaths per 100,000 residents. In the FVHD, lung cancer was the LCOD from cancer for both males and females, accounting for 24.9% of all cancer deaths. Breast cancer was the second leading cause of cancer death among females, accounting for 17.5% of cancer deaths while prostate cancer was the second leading cause of cancer death among males, accounting for 18% of cancer deaths. Colon cancer accounted for 7% of male cancer deaths and 12% of female cancer deaths, respectively. Among

heart disease deaths, coronary heart disease accounted for most of these deaths in both men and women.

The prevalence of chronic diseases reported in the FVHD are lower compared to that reported in Connecticut except for cancer as 15.1% of FVHD residents have ever been diagnosed with cancer compared to 11.8% in Connecticut. Females (18.8%) in the FVHD were more likely to have been diagnosed with cancer than males (10.2%) while individuals 65 and older (31.5%) had higher rates of cancer than individuals aged 45 to 64 (15.2%). In addition, individuals from households earning over $75,000 (12.8%) had a lower percentage of cancer diagnosis than those in households earning less than $35,000 (16.7%) and those earning $35,000 to $74,000 (19.9%). The age-adjusted incidence rate per 100,000 residents of melanoma**,** the most serious type of skin cancer, was higher in seven towns in the FVHD than in Connecticut for the period 2010 to 2014.

In the FVHD, arthritis (23.4%) is the most common chronic disease people are living with, followed closely by obesity (20.1%). The risk of developing arthritis increases with age, as demonstrated in which 51.7% of the FVHD population 65 years and older have received an arthritis diagnosis. Based on responses to the BRFSS, 58.2% of FVHD residents are overweight (38.1%) or obese (20.1%) with the highest percentages of obesity reported in those ages 45 to 64 years (23.7%), those with a high school education or less (28.1%), and those from households that earn less than $35,000 (25.7%).

In the FVHD, 7.6% of residents answered yes when asked whether they had ever had a heart attack or a stroke or whether a healthcare professional had ever diagnosed them with angina or coronary heart disease compared to 24.1% in Connecticut residents. FVHD residents 65 years and older (18.8%) reported being diagnosed with cardiovascular disease compared to 6.4% of residents ages 45 to 64. The prevalence of cardiovascular disease decreased as household income increased, with 15% reported in households with an income less than $35,000 and 4.5% in households that earn at least $75,000.

In the FVHD, 6.5% of FVHD residents have ever been diagnosed with diabetes compared to 9.7% in Connecticut. The prevalence of diabetes was higher in adults over the age of 65 (12.1%) versus adults ages 45 to 64 (4.9%) and among adults from households with an income less than $35,000 (19.2%) or between $35,000 and $74,000 (9%) as compared to 3.9% of households with income over $75,000.

Regarding maternal and child health, the teenage birth rate has steadily declined among FVHD females ages 15 to 19 as well as in Connecticut since 2006.

Based on the BRFSS, 65% of FVHD adult residents report zero poor mental health days in the past month. 23% of respondents reported between one and seven days of poor mental health and 12% reported not having good mental health for at least eight or more days during the past 30 days. BRFSS data found that males are more likely than females to report good mental health while older individuals were more likely to report good mental health than younger individuals. Individuals from households earning more income were more likely to report good mental health than individuals from lower income households.

Based on results from the BRFSS, 15.7% of FVHD adult respondents reported having ever been diagnosed with a depressive disorder, which included depression, major depression, minor depression, or dysthymia. The 15.7% of FVHD residents that report having ever lived with a depressive disorder closely mirrors the 16.2% of Connecticut residents who have ever lived with a depressive disorder. Females (19.2%) were more likely than males (12.1%) to report ever having a depressive disorder while

younger individuals were more likely than older individuals to report ever having a depressive disorder. Individuals from lower income households (20.4%) were more likely to report ever having a depressive disorder than individuals from higher income households (14%). While the data we have regarding mental health treatment program admissions is limited, in the FVHD, depressive disorders were the leading diagnosis for those admitted to mental health treatment programs, accounting for approximately 35% to 39% of the total admissions. The percentage of admissions to mental health treatment programs of adults ages 18-49 years old account for approximately 70% of all FVHD admissions which mirrors the results from the BRFSS that younger individuals were more likely to report having a depressive disorder than older adults.

The AAMR of suicide is significantly higher in males than in females in both the FVHD and in Connecticut. Between 2008 and 2012, there were 47 deaths by suicide in the FVHD, 36 in males and 11 in females. The overall AAMR from suicide in the FVHD and Connecticut falls below the *Healthy People 2030* objective; however, the AAMR for males is higher in both the FVHD and Connecticut than the *Healthy People 2030* objective.

Accidents rank the 3rd highest LCOD in the FVHD. The leading cause of accidental death for males and females combined was accidental poisonings, which caused 43.4% of accidental deaths. Accidental falls (33.8%), motor vehicle accidents (20.7%), and accidental drowning and submersion (2%) accounted for the remaining accidental deaths in males and females combined. Based on BRFSS responses, the FVHD (26.1%) has a higher percentage of the population who has fallen in the past year than Connecticut (23.1%). Females (29.2%) were more likely than males (21.8%) to report a fall as were adults 65 and older (33%), individuals with lower educational attainment (30.2%) and individuals from households earning less than $35,000 (37.5%).

According to data sourced from the Connecticut State Unintentional Drug Overdose Reporting System, drug overdose deaths among FVHD residents have steadily increased since 2015. The 21 deaths in 2021 is more than quadruple the 5 deaths in 2015. Of the 103 total drug overdose deaths since 2015, 74% were in males, 94% were in White, non-Hispanic residents, 24.2% were in adults ages 35 to 44 years old and opioids were involved in 90.3% of drug overdose deaths in the FVHD while fentanyl or a fentanyl analog were involved in 73.8% of deaths.

Environmental health indicators reviewed included the prevalence of asthma in adults and children, lead poisoning among children, Lyme disease, and radon reports. The prevalence of asthma in adults in the FVHD is 9.5% compared to 10.6% in Connecticut. Based on data sourced from the statewide School-Based Asthma Surveillance System (SBASS), the prevalence of asthma in students decreased in all FVHD school districts with the exception Simsbury as well as Connecticut between the 2012 to 2014 school years and the 2020 to 2021 school year.

The FVHD averaged approximately seven cases of blood lead levels above 5 ug/dL in children between 2018 and 2020. However, it is estimated that the FVHD will experience a significantly higher number of children with lead poisoning when the blood lead reference level is decreased to 3.5 ug/dL in 2023. Based on lab confirmed cases sourced from the Connecticut Department of Public Health, the rates of Lyme disease in the FVHD are lower than those in Connecticut and have been decreasing since 2017. While data on radon levels in FVHD homes is not comprehensive as it only includes homes that test and

return the test to be analyzed, based on test kits analyzed from 2005 to 2022, in all ten FVHD towns 20% or more of homes that submitted radon test kits resulted in radon levels that met or exceeded 4.0pCi/L.

Youth Health

The following section contains data analysis of health behaviors and outcomes in youth within the FVHD. The majority of the data in this section is from the 2019 Connecticut School Health Survey (CSHS) which is a survey taken by Connecticut high school students in grades nine through twelve. Just as with BRFSS data, because the CSHS is a self-report survey, CSHS data is subject to recall bias and social desirability bias. In addition, CSHS data is presented only at the state-level, so analysis at the FVHD-level is not possible. However, CSHS data is still valuable to examine as it provides a big picture of the health status of Connecticut high school students. The data is broken down by sex, grade, race, and sexual orientation, which allows for analysis of subgroups of students who may be at greater risk for adverse health outcomes.

Health Behaviors

Health behaviors contribute significantly to health status as the health behaviors and choices that an individual makes each day and overtime either promote or hinder their health. The following section focuses on the lifestyle behaviors of youth FVHD residents that effect health status. The data examines several broad categories of health behaviors and risk factors, including substance use, distracted driving, sleep, and screentime.

Substance Use

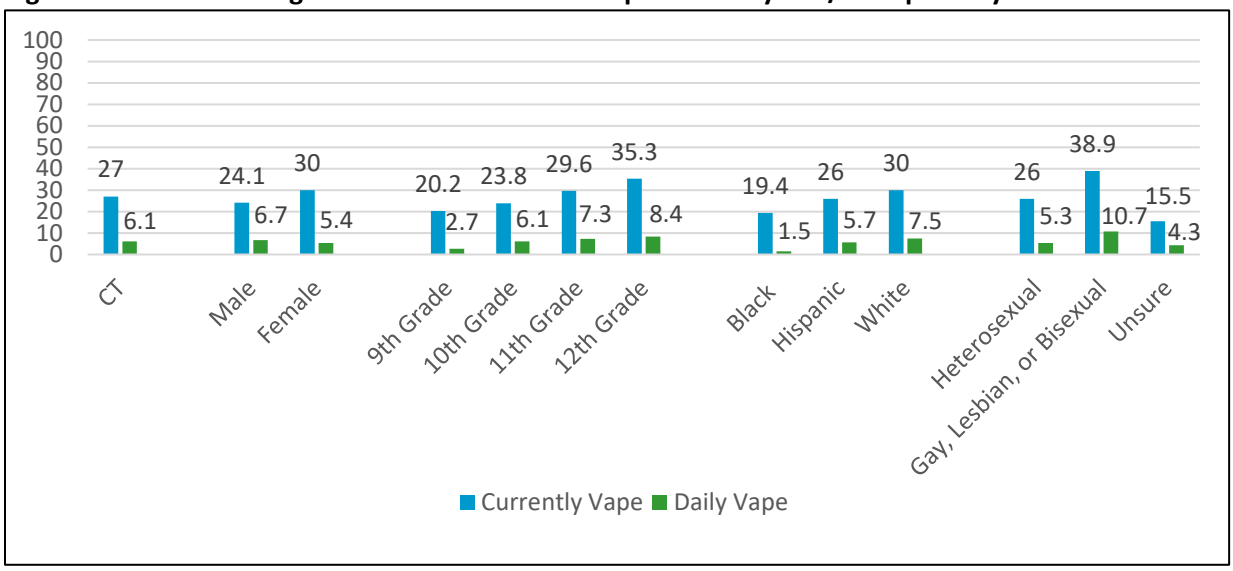
Vaping

Electronic cigarettes, known more commonly as vapes, have been the most commonly used tobacco product among youth in the United States since 2014.[29] As a comparison, in 2021, six times more high school students reported currently using e-cigarettes than students who reported using cigarettes.[91] In 2018, the U.S. Surgeon General declared e-cigarette use an epidemic among youth in the United States.[29] Vaping exposes children to toxic chemicals, carcinogens, and nicotine. Not only is nicotine highly addictive, but nicotine also harms brain development during adolescence, particularly the parts of the brain responsible for attention, memory, and learning.[92] Many adults vape to quit smoking cigarettes; however, youth are more likely to start with vaping and later move on to cigarettes.[93] Due to this progression, vaping is never safe for children.

According to the 2019 CSHS, 44.8% of Connecticut high school students have ever used an e-cigarette. Students in older grades were more likely to report ever using an e-cigarette, while Hispanic (48.9%) and White (56.5%) students were more like than Black students (37%) to have ever used an e-cigarette. Gay, lesbian, or bisexual students (56.6%) were more likely than heterosexual students (44.3%) to have ever used an e-cigarette. Rates were similar between males and females (data not shown).

Figure 49 compares the percentage of students who currently vape, defined as on at least one day in the past month, versus daily vaping, defined as on all 30 days in the past month. Categories are not exclusive, so students could be counted in both currently vape and daily vape. Females (30%) were more likely to report that they currently vape than males (24.1%); however, males (6.7%) were slightly more likely than females (5.4%) to report daily vaping. Just as with ever vaping, students in higher grades, Hispanic and White students, and gay, lesbian, or bisexual students reported higher rates of currently vaping and/or daily vaping than their peers.

Figure 49: Percent of High School Students Who Vape Currently and/or Vape Daily - Connecticut

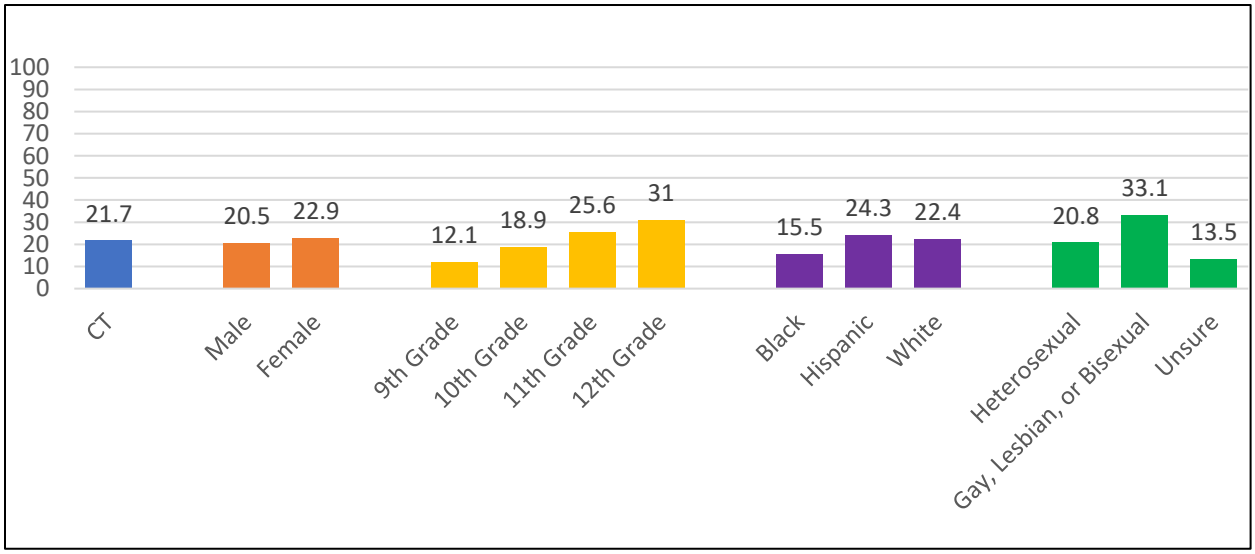


Source: *Connecticut School Health Survey, 2019*

Marijuana

According to 2019 CSHS data, 35.9% of Connecticut high schoolers have ever used marijuana (data not shown). This percentage has shown no statistically significant change since 2005. Figure 50 displays the percentage of students who currently used marijuana, defined as on at least one day in the past month. Overall, 21.7% of high school students reported currently using marijuana, which is a percentage that has also shown no statistically significant change since 2005. Males (20.5%) and females (22.9%) reported similar rates. Just as with e-cigarette use, students in higher grades were more likely to have used marijuana in the past month than students in lower grades. In addition, Hispanic (24.3%) and White (22.4%) students were more likely than Black students (15.5%) to have used marijuana in the past month. Gay, lesbian, or bisexual students (33.1%) reported higher rates of marijuana use than heterosexual students (20.8%).

Figure 50: Percent of High School Students Who Currently Use Marijuana – Connecticut



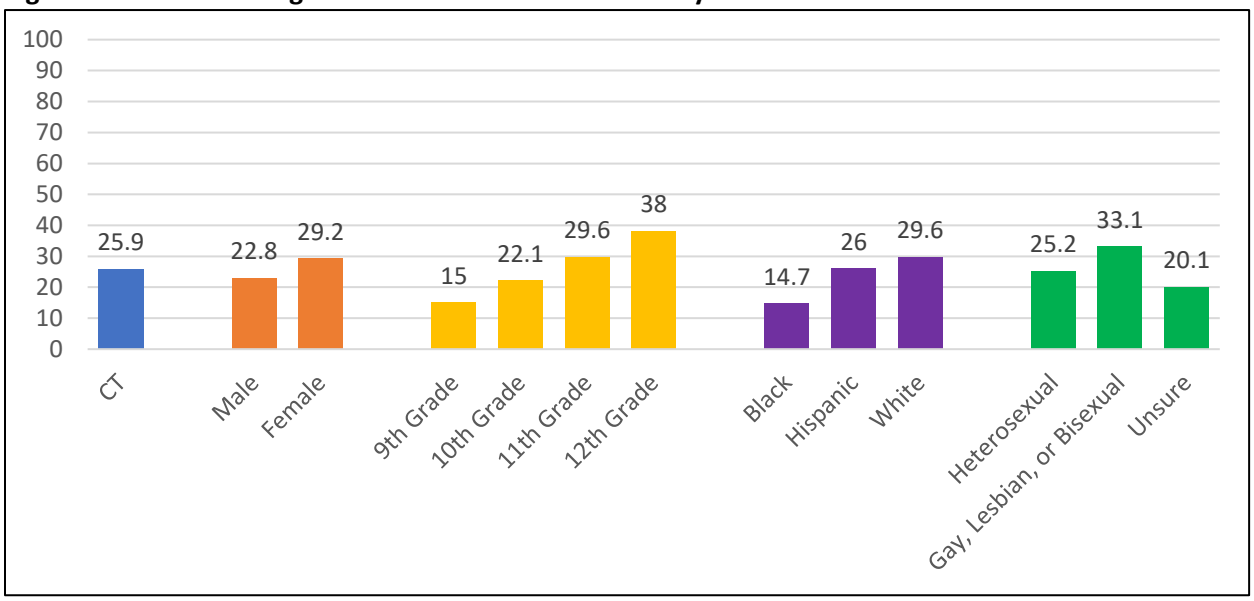
Source: *Connecticut School Health Survey, 2019*

Alcohol

Alcohol is the most commonly used substance among youth in the United States.[94] Individuals who begin drinking before 15 years old are at a higher risk for developing alcohol use disorder later in life than individuals who waited until at least age 21 to begin drinking.[94]

As Figure 51 shows, 25.9% of Connecticut high school students reported consuming alcohol at least once in the past 30 days. This is a statistically significant decrease from 45.3% in 2005. Females (29.2%) were more likely than males (22.8%) to report consuming alcohol in the past month while Hispanic (26%) and White (29.6%) students were more likely than Black students (14.7%) to have consumed alcohol in the past month. In addition, students in higher grades were more likely to report consuming alcohol at least once in the past month as compared to students in lower grades. Gay, lesbian, or bisexual students (33.1%) were more likely than heterosexual students (25.2%) to have consumed alcohol on at least one day in the last month.

Figure 51: Percent of High School Students Who Currently Drink Alcohol - Connecticut



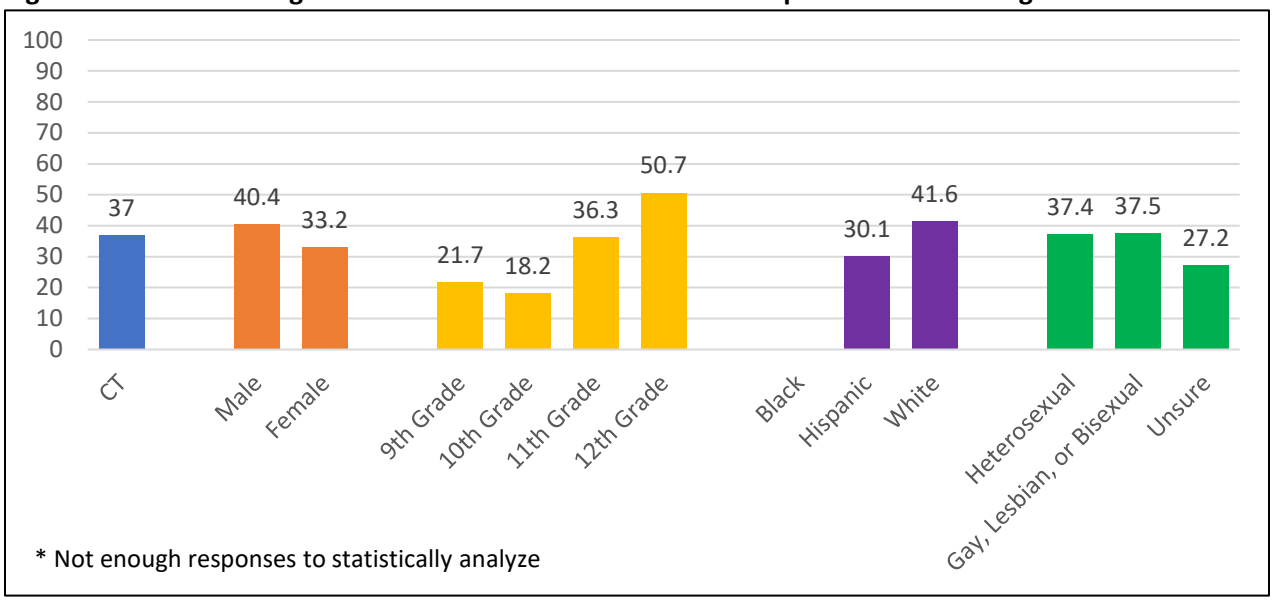
Source: *Connecticut School Health Survey, 2019*

Distracted Driving

In Connecticut, it is illegal for motor vehicle drivers under the age of 18 to use any type of cellphone or mobile electronic device while driving, including hands-free accessories.[95] Drivers who are 18 and older can use hands-free accessories.[95] Therefore, not only is it illegal to text while driving, but it is also illegal for the vast majority of high schoolers to talk on their phones while driving, even on speaker or broadcast through the car's system. Research has found that talking on a cellphone increases a teen's risk of crashing by six times while texting while driving increases crash risk by 23 times for teenagers.[96]

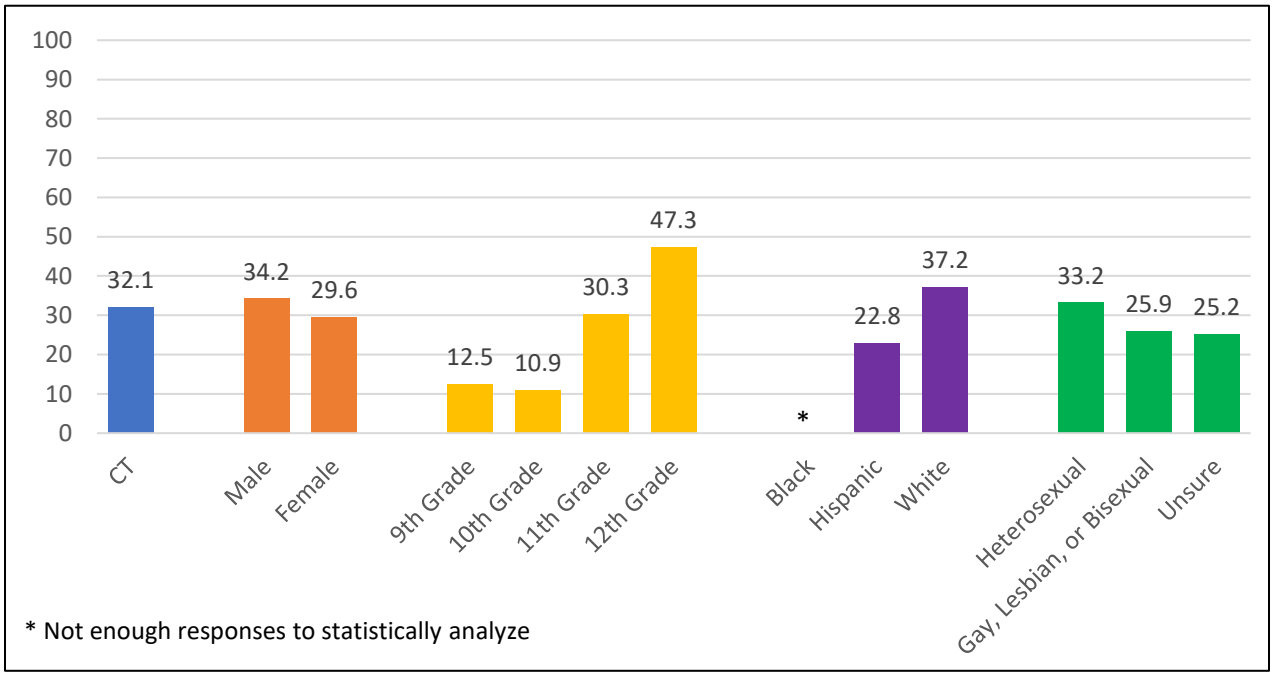
As shown in Figure 52 and Figure 53, just about one out of every three high school students have talked and/or texted on their phone while driving. Students were slightly more likely to report talking (37%) than texting (32.1%) while driving. Males were more likely to report doing either activity than females. White students and heterosexual students were more likely than their peers to talk or text while driving.

Figure 52: Percent of High School Students Who Talked on a Cellphone While Driving - Connecticut



Source: *Connecticut School Health Survey, 2019*

Figure 53: Percent of High School Students Who Texted or Emailed While Driving a Car - Connecticut



Source: *Connecticut School Health Survey, 2019*

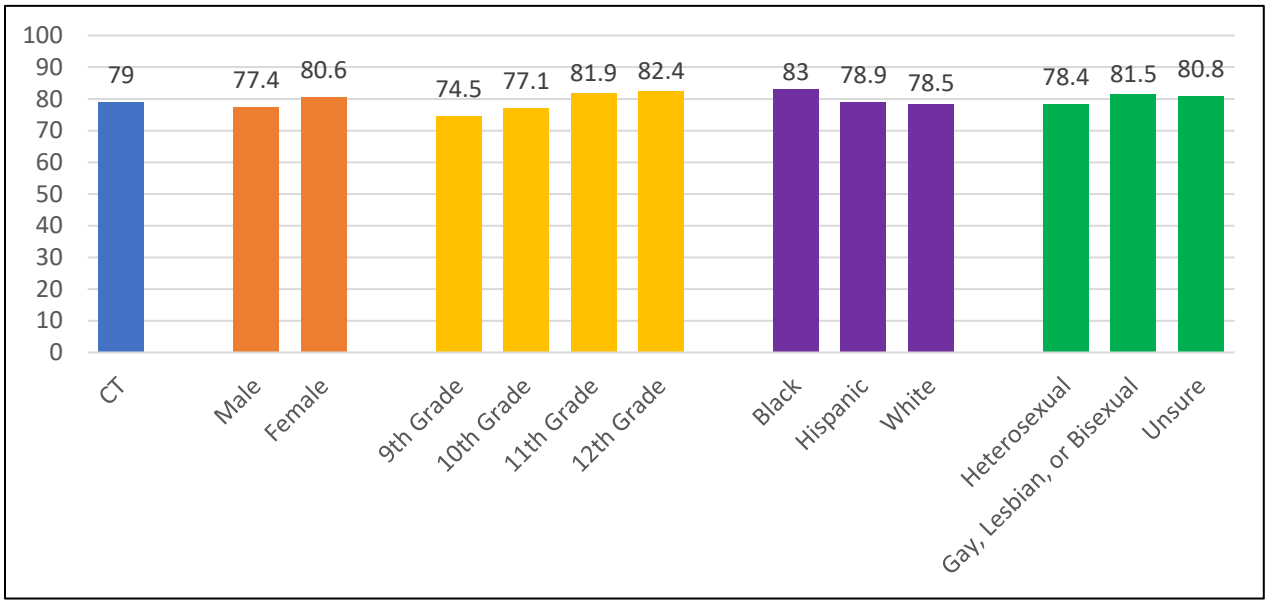
Sleep

According to the American Academy of Sleep Medicine, teenagers ages 13 to 18 years old should receive eight to ten hours of sleep every night.[47] Just as with the discussion accompanying Figure 31 on the health effects of insufficient sleep on adults, insufficient sleep poses serious health risks to teenagers. Getting enough sleep during adolescence is crucial to brain development in the areas of attention, memory, and inhibition control.[97] Research has found that children with insufficient sleep have impaired

decision-making, conflict solving, working memory, and learning as compared to children who get enough sleep.[97] As insufficient sleep effects attention, learning, and memory, it follows that insufficient sleep is associated with lower academic performance in students.[98]

As Figure 54 shows, 79% of Connecticut high school students report that they receive less than the recommended eight hours of sleep each night. The rate of insufficient sleep was similar between males and females, between racial and ethnic groups, and sexual orientation groups. Students in older grades were more likely to report insufficient sleep than students in lower grades. The percentage of high school students who received at least 8 hours of sleep on an average school night has shown a statistically significant decrease since 2007, decreasing from 26% in 2007 to 21% in 2019.

Figure 54: Percent of High School Students Who Sleep Less than 8 Hours per Night - Connecticut



Source: *Connecticut School Health Survey, 2019*

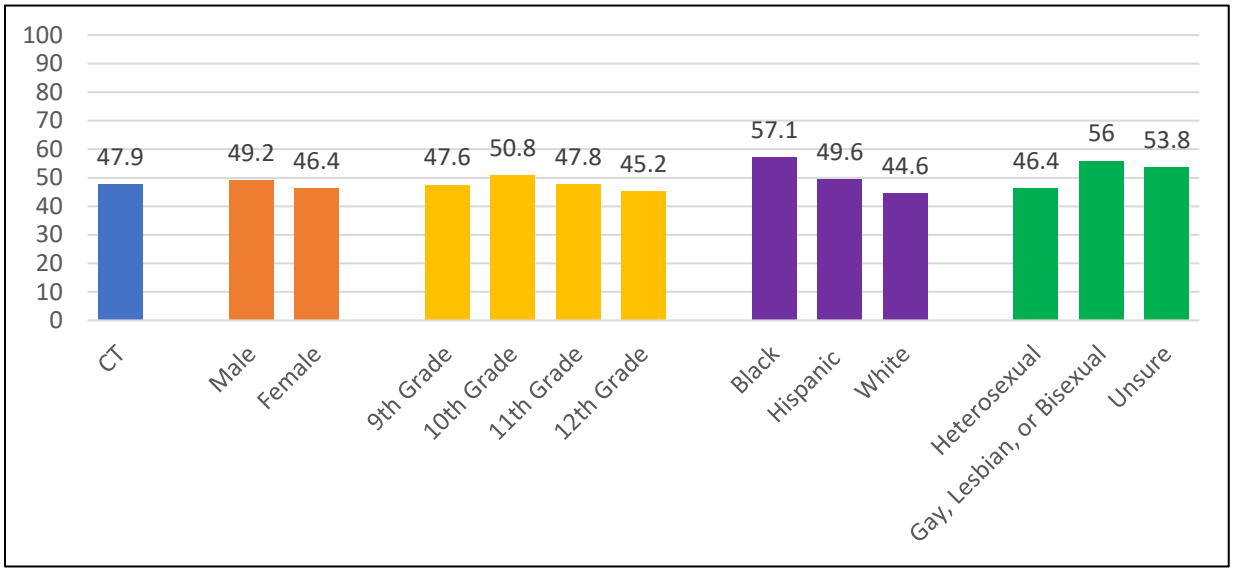
Screen Time

One major contributor to insufficient sleep in teenagers is excessive screentime. Cellphones, computers, and televisions all give off blue light, which deceives the body into thinking it is daytime. In response, the body produces less melatonin, which lessens the body's urge to fall asleep. In this way, excessive screentime, especially right before bedtime, interferes with the body's ability to fall asleep, leading to shorter sleep cycles and less restful sleep.[99] Some of the many effects of insufficient sleep on teenagers is discussed above in Figure 54. In addition, excessive screentime has been linked to poorer quality of life, obesity as a result of less physical activity and a higher caloric diet, impaired academic performance, and problems with emotional and social health.[100,101]

The CSHS asked students to report, on an average school day, how many hours they spend on a computer, cellphone, video game console, or other electronic device for something other than schoolwork. According to Figure 55, just under half of all students responded that they spend three or more hours on a screen doing things other than schoolwork on an average school night. This is a statistically significant increase from 27.6% in 2007. Males (49.2%) and females (46.4%) reported similar rates of excessive screentime as did students across high school grade levels. Black students (57.1%) were more likely to report at least three hours of screentime than Hispanic (49.6%) and White (44.6%)

students. Furthermore, gay, lesbian, or bisexual students (56%) were more likely than heterosexual students (46.4%) to report excessive screentime.

Figure 55: Percent of High School Students With At Least 3 Hours of Screentime per Night - Connecticut



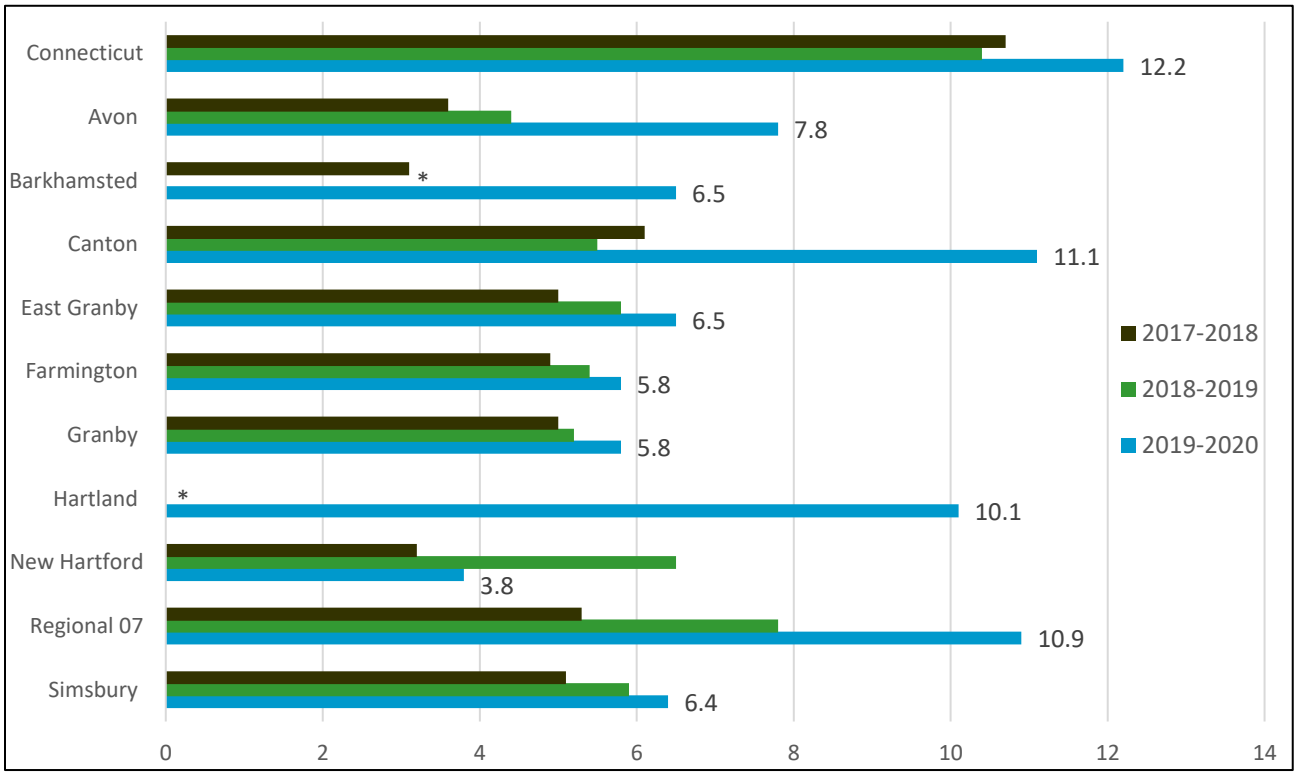
Source: *Connecticut School Health Survey, 2019*

Chronic Absenteeism

According to the Connecticut State Department of Education, a student is chronically absent if they miss ten percent or more of the total number of days enrolled in the school year for any reason. Because students who are chronically absent are missing what is being taught on the days in which they are absent, they are at great risk of falling behind academically. Chronic absenteeism in grades as young as kindergarten is associated with lower achievement in reading and mathematics and an increased risk of school dropout as compared to students who are not chronically absent.[102] As discussed in relation to Figure 6, education and educational attainment are crucial determinants of lifetime health.

The percentage of the student population that was chronically absent in the ten school districts in the FVHD are shown in Figure 56. For the 2019-2020 school year, absenteeism is assessed only for in-person school days until mid-March 2020. Region 7 has a regional middle and high school that students from Barkhamsted, Colebrook, and New Hartford attend. All FVHD school districts had lower chronic absenteeism rates than Connecticut as a whole. However, in all towns except New Hartford, the percentage of students who were chronically absent was higher during the 2019-2020 school year than in previous school years.

Figure 56: Percent of the Student Population That is Chronically Absent – FVHD School Districts and Connecticut



Source: *Connecticut State Department of Education*

*Data not available for Barkhamsted 2018-2019 and Hartland 2017-2018 and 2018-2019.

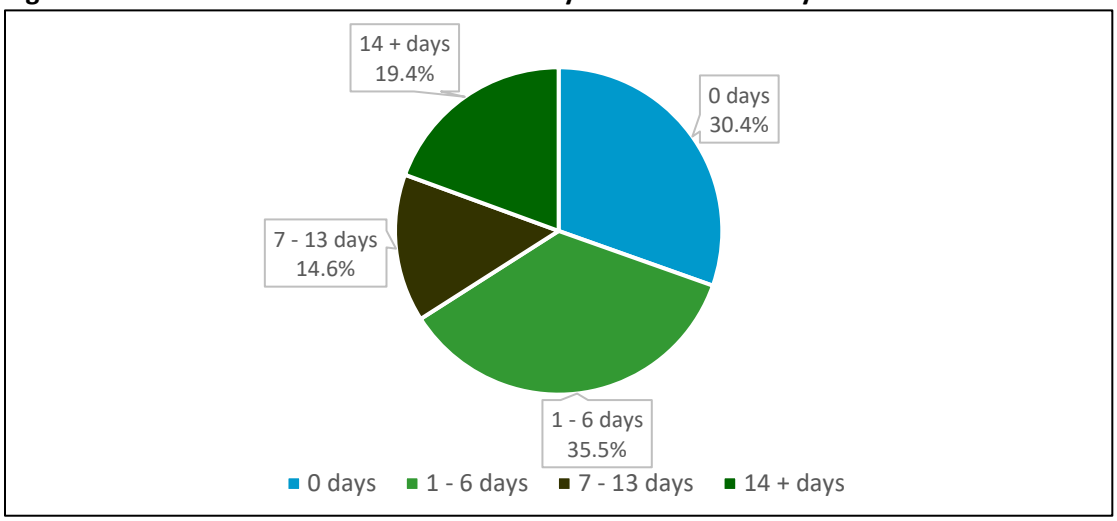
Mental Health

About one in six children in the United States suffer from mental illness each year, with about half of all mental illnesses beginning by age 14.[103] Mental illness in children often delays or disrupts age-appropriate thinking, behaviors, social skills, and regulation of emotions, all of which disrupt the child's ability to function normally at home and at school.[104] Identifying and understanding mental illness in children can be more difficult than in adults because routine childhood development already involves behavioral, social, and emotional changes; therefore, changes due to mental illness may be mistaken as a normal part of growing up.[104] The following section provides a brief overview of the mental health status of youth in the FVHD.

Self-Perceived Mental Health

The CSHS asked respondents to evaluate their mental health, including stress, depression, and problems with emotions, over the past 30 days. As Figure 57 shows, 30.4% of students responded that their mental health was good on all 30 days; however, 34% said their mental health was not good for 7 or more days while 19.4% of students said their mental health was not good for 14 days or more. Females were more likely to report that their mental health was not good for multiple days than males. In addition, White students reported higher numbers of days in which their mental health was not good as compared to Black and Hispanic students. Finally, gay, lesbian, or bisexual students reported much higher numbers of poor mental health days in the past month as compared to heterosexual students (data not shown).

Figure 57 – Number of Poor Mental Health Days in the Past 30 Days – Connecticut

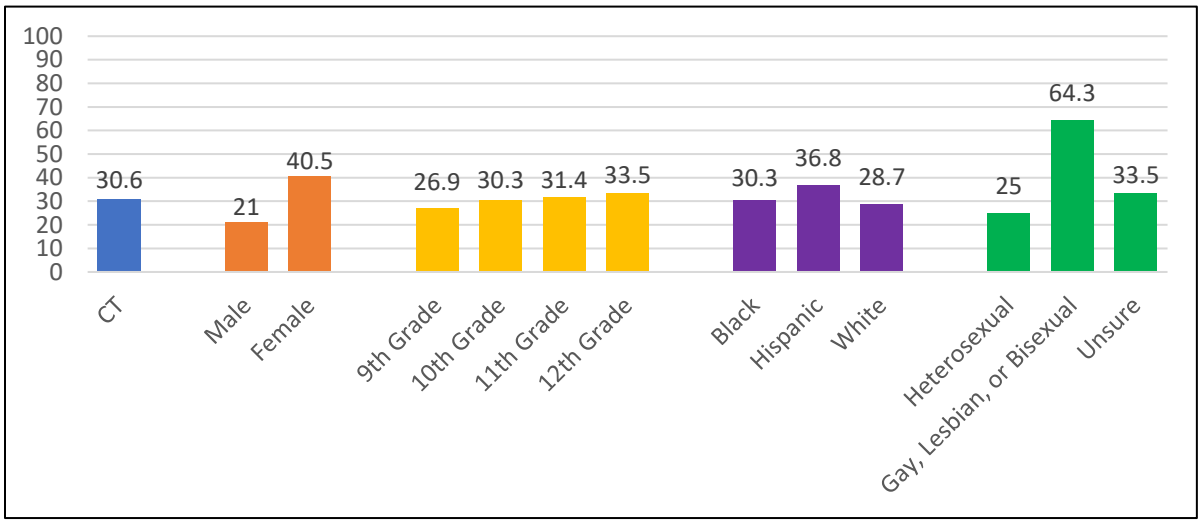


Source: *Connecticut School Health Survey, 2019*

Persistent Sadness

One symptom of mental illness is persistent sadness that lasts at least two weeks.[104] Figure 58 displays the percentage of high school students who responded to the CSHS that they felt so sad or hopeless for two weeks or more in the last year that they stopped doing their usual activities. 30.6% of all students reported they have felt this way in 2019, which is a statistically significant increase from 24.8% in 2005. In 2019, females (40.5%) were much more likely to have experienced persistent sadness than males (21%). Persistent sadness increased slightly by each grade level while Hispanic students (36.8%) were more likely than Black (30.3%) and White (28.7%) students to have experienced persistent sadness. Gay, lesbian, or bisexual students (64.3%) were over 2.5 times more likely to report having felt persistent sadness than heterosexual students (25%).

Figure 58: Percent of High School Students Who Experienced Persistent Sadness or Hopelessness – Connecticut



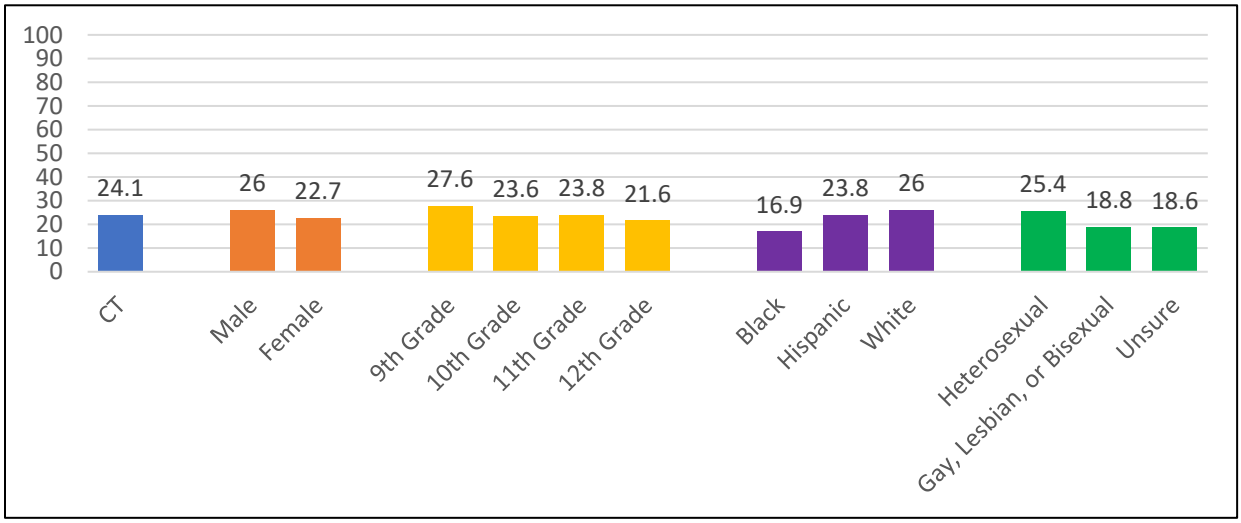
Source: *Connecticut School Health Survey, 2019*

Ability to Get Help

The 2016 National Survey of Children's Health found that approximately half of all children nationwide with a treatable mental illness did not receive necessary treatment from a mental health professional.[103] Just as adults face, the stigma surrounding mental illness in the United States prevents some children and/or their parents from admitting that they need help or to take the steps to seek help. Furthermore, the shortage of mental health professionals has resulted in difficulties finding help or long waits to see a professional. However, it is crucial to not underestimate the influence of trusted relationships with adults and peers on student mental health. These trusted adults and peers give students someone to turn to for help, both for acute issues and more serious issues. Indeed, research has shown that students who have strong relationships with adults and peers at their school are less likely to attempt suicide than students without these relationships.[105]

The CSHS asked students how often they are able to get the kind of help they need when they feel sad, empty, hopeless, angry, or anxious. The kind of help received and from who not specified in the question. 26.4% of students reported that they do not feel sad, empty, hopeless, angry, or anxious while 24.1% of students said they most of the time or always get the kind of help they need when they experience these symptoms. However, this means that just under half of students do not usually or never get the kind of help they need when they are suffering mentally. As demonstrated in Figure 59, students in lower grades were more likely to get the kind of help they need than older students. In addition, Hispanic (23.8%) and White (26%) students were more likely than Black students (16.9%) to have received necessary help. Heterosexual students (25.4%) reported they were able to get the help they needed more often than gay, lesbian, or bisexual students (18.8%). The percentage of students who most of the time or always can get the help they need has shown a statistically significant decrease, from 38.5% in 2005 to 24.1% in 2019.

Figure 59: Percent of High School Students Who Most of the Time or Always Get the Kind of Help They Need – Connecticut



Source: Connecticut School Health Survey, 2019

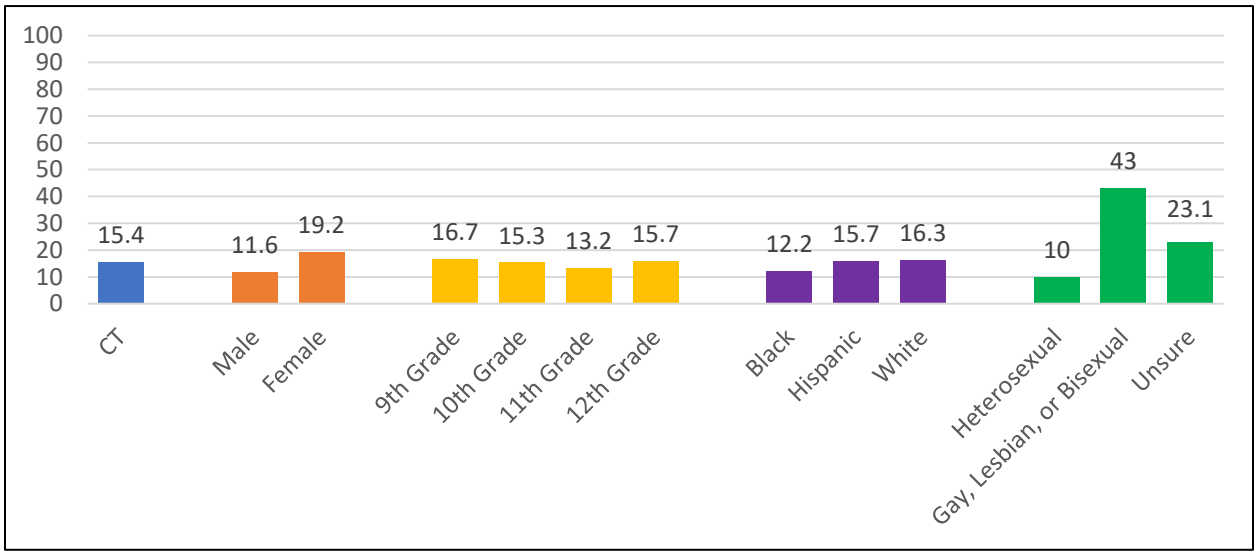
Self-Harm

Non-suicidal self-injury, referred to here as self-harm, is behavior that involves intentionally hurting oneself without the intent to die and includes behaviors such as cutting, carving, burning, scratching,

and hitting. Self-harm is used as a way to manage intense emotional and mental distress as it serves to distract oneself from emotions, to create physical pain to feel something other than numbness, and to enact a form of control when feeling out of control.[106] Although self-harm and a suicide attempt are distinct behaviors, there is immense overlap between the two behaviors. One study found that 70% of students who engage in self-harm behaviors had made at least one suicide attempt and 55% had made multiple attempts.[107]

Figure 60 displays the percentage of students who engaged in self-harm behaviors during the previous year. 15.4% of all students report that engaged in self-harm behaviors, with more females (19.2%) than males (11.6%) reporting this behavior. There was a similar prevalence of self-harm behaviors between grades and between races. However, gay, lesbian, or bisexual students (43%) were over 4 times more likely to report self-harm behaviors in the previous year than heterosexual students (10%).

Figure 60: Percent of High School Students Who Engaged in Self-Harm Behaviors in the Previous Year - Connecticut



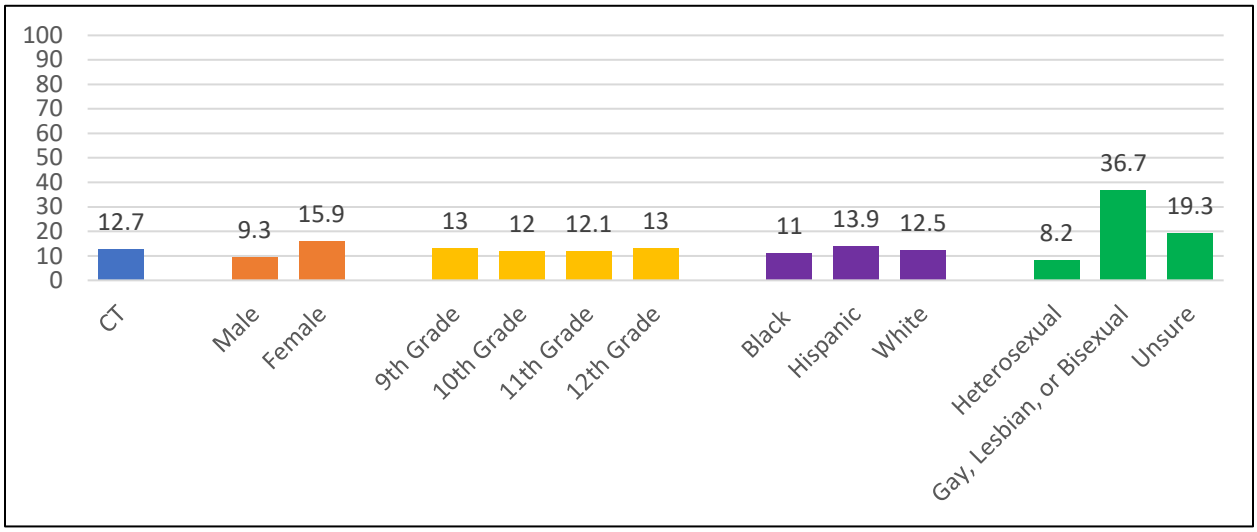
Source: Connecticut School Health Survey, 2019

Suicide

Suicide is the third leading cause of death in young people ages 15 to 24.[108] There are many risk factors for suicide, one of the most prominent being suffering from a mental illness. National data has shown that females are more likely than males to attempt suicide; however, males are four times more likely to die from suicide than females.[108] Connecticut mirrors this national trend with females (8.3%) more likely to have attempted suicide than males (5.2%), as seen in Figure 62. In addition, in Connecticut as well as nationwide, gay, lesbian, or bisexual students were more likely to both contemplate and/or attempt suicide than heterosexual students.[109] As shown in Figure 61, gay, lesbian, or bisexual students were over four times more likely to have considered suicide than heterosexual students while Figure 62 demonstrates that gay, lesbian, or heterosexual students were just under five times more likely to have attempted suicide than heterosexual students.

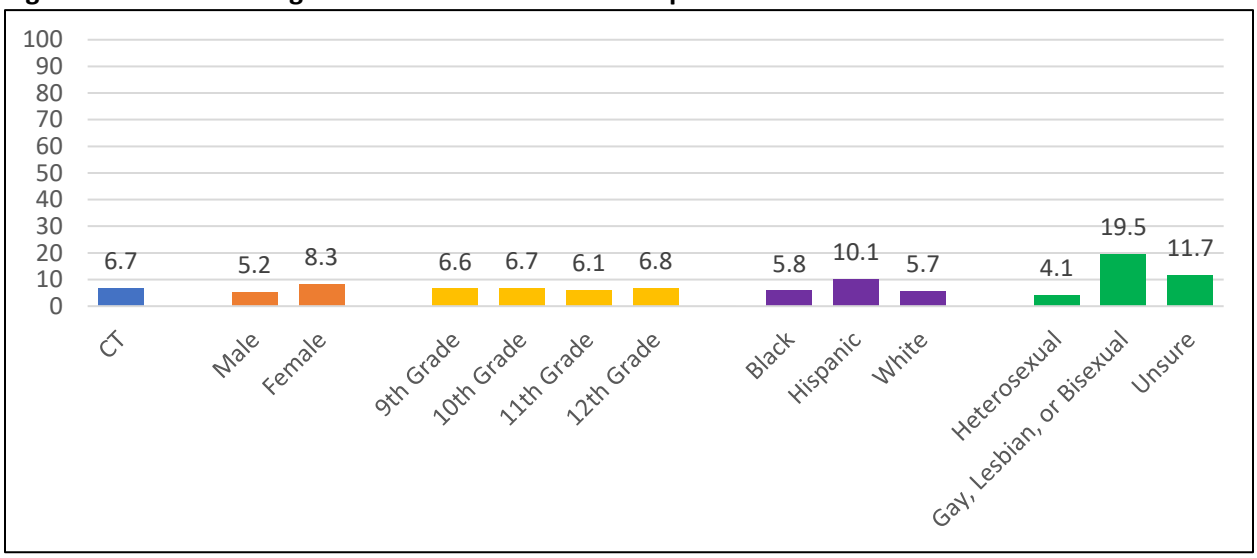
Since 2005, the percentage of Connecticut high schoolers who have considered suicide has shown no statistically significant change; however, suicide attempts have shown a statistically significant decrease since 2005, falling from 12.1% of students in 2005 to 6.7% in 2019.

Figure 61: Percent of High School Students Who Seriously Considered Attempting Suicide in the Past Year – Connecticut



Source: Connecticut School Health Survey, 2019

Figure 62: Percent of High School Students Who Attempted Suicide in the Past Year – Connecticut



Source: Connecticut School Health Survey, 2019

Summary

The health of youth includes analysis of both physical health and mental health. Self-reported behaviors such as vaping, use of marijuana and alcohol, distracted driving, screen time and sleep were examined as well as self-perceived mental health, sadness, self-harm, ability to get help and suicide data. The data source used is the Connecticut Youth Health Survey which presents data at the Connecticut level and the data is thus not specific to the FVHD.

Overall, 27% of students responded that they currently vape with 6.1% vaping daily. The percentage of students who currently vape is higher in females (30%), students in higher grades, White students (30%) and gay, lesbian, or bisexual students (38.9%). Daily vaping follows the same trends with the exception that males (6.7%) are slightly more likely than females (5.4%) to report they vape every day.

Overall, 21.7% of high school students reported currently using marijuana, defined as on at least one day in the past month. Students in higher grades, Hispanic (24.3%) and White (22.4%) students, and gay, lesbian, or bisexual students (33.1%) reported higher rates of current marijuana use than their peers.

Overall, 25.9% of Connecticut high school students reported consuming alcohol at least once in the past 30 days. This is a statistically significant decrease from 45.3% in 2005. Students reporting higher rates of alcohol use were female students (29.2%), students in higher grades, White (29.6%) and Hispanic (26%) students, and gay, lesbian, or bisexual students (33.1%).

Approximately one out of every three Connecticut high school students have talked and/or texted on their phone while driving. Students were slightly more likely to report talking (37%) than texting (32.1%) while driving. Males were more likely to report doing either activity than females.

Overall, 79% of Connecticut high school students report that they receive less than the recommended eight hours of sleep each night. Students in older grades were more likely to report insufficient sleep than students in lower grades. The percentage of high school students who received at least eight hours of sleep on an average school night has shown a statistically significant decrease since 2007, decreasing from 26% in 2007 to 21% in 2019.

When students were asked to report, on an average school day, how many hours they spend on a computer, cellphone, video game console, or other electronic device for something other than schoolwork, just under half (47.9%) responded that they spend three or more hours on a screen doing things other than schoolwork on an average school night. This is a statistically significant increase from 27.6% in 2007.

The CSHS asked respondents to evaluate their mental health, including stress, depression, and problems with emotions, over the past 30 days. 30.4% of students responded that their mental health was good on all 30 days; however, 34% said their mental health was not good for seven or more days while 7.6% of students said their mental health was not good on any day in the past 30 days. When asked have you felt so sad or hopeless for two weeks or more in the last year that you stopped doing your usual activities, 30.6% of all students reported they have felt this way in 2019, which is a statistically significant increase from 24.8% in 2005. Higher percentages were reported in females (40.5%) and gay, lesbian, or bisexual students (64.3%), which is 2.5 times higher than those that identify as heterosexual (25%).

When asked how often they are able to get the kind of help they need when they feel sad, empty, hopeless, angry, or anxious, 24.1% of students responded that they most of the time or always get the kind of help they need when they experience these symptoms. The percentage of students who most of the time or always can get the help they need has shown a statistically significant decrease since 2005, from 38.5% in 2005 to 24.1% in 2019. Overall, 15.4% of all students reported they engaged in self-harm behaviors, with a higher percentage reported by females (19.2%) compared to males (11.6%) and gay, lesbian, or bisexual students (43%) were four times more likely than heterosexual students (10%) to report engaging in self-harm behaviors.

Suicide is the third leading cause of death in young people ages 15 to 24.[108] The percentage of students that have attempted suicide is higher in females (8.3%) compared to males (5.2%) and is five times higher in gay, lesbian or bisexual students (19.5%) compared to heterosexual students (4.1%). Since

2005, the percentage of Connecticut high schoolers who have considered suicide has shown no statistically significant change; however, suicide attempts have shown a statistically significant decrease since 2005, falling from 12.1% of students in 2005 to 6.7% in 2019.

Conclusions and Next Steps

The Community Health Assessment provides an overview of the social, economic, and environmental determinants of health in the FVHD as well as the health behaviors and health outcomes of FVHD residents. The focus group with Social Services Directors provided greater contextual information regarding quality of life, health, and service needs in our communities. Data included in this report, while not all encompassing, were selected based on criteria established by the CHA Advisory Group. This data will be used to engage in community conversations that will assist in the identification of priority public health issues and strategies to improve health outcomes for our community.

Mental health and substance abuse are not only prominent issues nationally and statewide but are identified as priority areas in the FVHD based on the secondary data and focus group discussions. Mental health is of great concern as we emerge from the COVID-19 pandemic. Mental health in youth, especially those that identify as gay, lesbian, or bisexual, is of particular concern as one third of students asked report feeling sad or hopeless for two weeks or more in 2019 and only 24% report the ability to get help most or all of the time. There is an issue of stigma associated with mental health conditions as well as an issue to accessing services that must be addressed. In addition, drug overdose deaths have increased substantially in the last five years with over 70% of deaths involving fentanyl.

Housing, homelessness, and food insecurity were identified as priority focus areas through our discussions with community partners. The high percentage of cost burdened households for both owners and renters, the lack of affordable housing, and a lack of services for the homeless population exacerbate these issues and must be addressed to ensure that all residents of the FVHD are able to attain optimal health.

While adults in the FVHD report low levels of inactivity, one in five adult residents is obese. As mentioned previously, the effects of obesity on an individual's health are vast, affecting nearly every body system and increasing the risk of developing type 2 diabetes, hypertension, high cholesterol, coronary artery disease, cancer, asthma, sleep apnea, osteoarthritis, and stroke, as well as mental illnesses such as depression and anxiety.[52,53] While we do not have FVHD data on childhood obesity, in Connecticut children ages 10 to 17 years old, the obesity rate has increased from 13.4% in 2016 to 15.3% in 2019 to 2020.[110]

Compared to Connecticut, the rates of adults living with cancer is higher in the FVHD and is the leading cause of death. As mentioned earlier, in the FVHD, lung cancer was the leading cause of death from cancer for both males and females, accounting for 24.9% of all cancer deaths. Radon is the leading cause of death from lung cancer in non-smokers and the second leading cause of lung cancer deaths overall.[88] In all ten FVHD towns, 20% or more of houses that submitted radon test kits had radon levels that met or exceeded 4.0pCi/L. It is estimated that lung cancer deaths could be reduced two to four percent by lowering radon levels in homes.[89] Education campaigns to build awareness regarding the impact of radon in the home support the mission of ensuring environmental health conditions that enable an individual to attain optimal health.

While there is a high percentage of residents in the FVHD that report having health insurance coverage, regular visits to a PCP and a dentist, and preventative screenings such as mammograms and colonoscopies, the percentage of adults that report receiving the influenza vaccine is 50%, which is well below the *Healthy People 2030* objective of 70%. Hospitalizations due to influenza illness can be reduced and possibly prevented with vaccination. Increasing influenza vaccination rates and understanding the barriers to vaccine is an area for further public health focus.

Accidents are the third leading cause of death in the FVHD and 33.8% of deaths from accidents in FVHD residents are the result of a fall compared to just 22.7% in Connecticut. With the aging population in the FVHD, this is an area of focus to improve health outcomes for this increasing segment of our population.

As we move from the Community Health Assessment to developing the Community Health Improvement Plan (CHIP), we will build on the previous efforts and input from partners who have contributed to the work of the Farmington Valley Health District. Together, we will look at the common upstream factors of social determinants of health as cross-cutting themes to identify inequities that impact prioritized health issues. By focusing on these determinants of health, identifying assets in the Farmington Valley that can be mobilized to enhance community well-being (see Appendix C), and collaborating with cross-sector partners to explore strategic opportunities, we will create the FVHD CHIP. The CHIP will serve as a roadmap for collaborative health improvement activities over the next five years and will prioritize areas that affect the conditions where people live, learn, work, and play that will enable our residents to achieve the highest attainable standard of health.

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Appendix A: CHA Advisory Group Members

Name	Affiliation
Rick Brush	Simsbury Diversity, Equity, and Inclusion Council
Pat DeRossi	Nurse Coordinator, Avon Public Schools
Teresa Dotson	Registered Dietitian
Kristin Formanek	Director of Social Services, Town of Simsbury
Jodi French	School Health Nurse Supervisor, Granby Public Schools and Farmington Valley Visiting Nurse Association
Douglas Gerard	Medical Advisor, Farmington Valley Health District
Jadwiga Gloclowksi	Farmington Valley Health District Board Member
Mary Hess	Retired, Director of Research and Development, Wheeler Clinic
Nancy Parent	Director of Community and Recreational Services, Town of Farmington
Mary Jane Parlow	Farmington Valley Health District Board Member
Nancy Sheetz	Chief Executive Officer, Farmington Valley Visiting Nurse Association
Cyndi Stern	Community Member
Kate Taylor	APRN
Brian Toal	Retired, Section Chief, Environmental Health Section, Connecticut Department of Public Health
Jane Ungemack	University of Connecticut
Carolyn Warbrik	Community Member

Note: Epidemiologists from the Environmental Public Health Tracking Program at the Connecticut Department of Public Health also served as CHA Advisory Group members.

APPENDIX B: CHA ADVISORY GROUP COLLABORATION TIMELINE

May 17, 2019 - FVHD sent invitation to identified community partners and subject matter experts to participate in the FVHD Community Health Assessment Advisory Group

June 4, 2019 - First meeting of the Advisory Group

Summary of Work:

- Brainstormed major public health issues in our communities
- Given overview of a community health assessment
  - Purpose
  - Goals
  - Role of Advisory Group
- Discussed Mobilizing Action through Planning and Partnership (MAPP) as model through which CHA will be developed
  - Timeline
  - Methodology
- Brainstormed potential missing members from the Advisory Group
- Discussed data selection criteria

June 25, 2019 -

Summary of Work:

- Given overview of MAPP Health Improvement Methodology
- Discussed the concept of health equity and its importance in the CHA process
- Brainstormed vision statement for CHA and CHIP process
- Discussed the usefulness of producing a Community Health Survey

July 30, 2019 -

Summary of Work:

- Further work on vision statement
- Reviewed secondary data summaries
  - Demographics
  - Social determinants of health
  - Overall health
  - Health behaviors

August 27, 2019 -

Summary of Work:

- Finalized vision statement
- Reviewed secondary data summaries
  - Health behaviors
    - Preventative medical care and screenings
    - Substance use
  - Mental health
  - Health outcomes
  - Infectious disease
- Data presentation by DPH personnel

September 24, 2019 -

Summary of Work:

- Reviewed secondary data summaries
  - Health outcomes
  - Substance use
  - Infectious disease
- Viewed DPH data presentations
  - Emergency department visits
  - Hospitalizations
  - Mortality data

October 29, 2019 -

Summary of Work:

- Conducted secondary data gap analysis
  - Mental health
    - Access to mental health services
    - Loneliness in seniors
  - Childhood obesity
  - HPV vaccination rates
  - Prevalence of lift assists for falls

November 26, 2019 -

Summary of Work:

- Reviewed secondary data
  - Mental health
  - Hospitalization data
- Brainstormed individuals and organizations who could bring value to the Community Health Improvement Plan (CHIP)

February 25, 2020 – Last Pre-COVID Advisory Group Meeting

Summary of Work:

- Brainstormed ideas for primary data collection

June 28, 2022 – First Post-COVID Advisory Group Meeting

Summary of Work:

- Provided overview of CHA to new Advisory Group members
  - Discussion of the role of Advisory Group members
- Reviewed summary of secondary data collection and analysis to date
- Identified data gaps
- Brainstormed ideas for primary data collection

July 26, 2022 –

Summary of Work:

- Reviewed remaining data gaps
- Discussed populations in our communities at greatest risk for poor health outcomes
- Brainstormed groups within our community that serve and/or represent the identified populations at greatest risk for poor health outcomes to partner with for focus groups
- Asset mapping activity (see Appendix C)

APPENDIX C: COMMUNITY ASSETS

The community assets listed below were compiled by members of the CHA Advisory Group as resources, beyond healthcare, that can be mobilized to enhance community well-being.

Associations:

- Canton Community Health Fund
- Cultural Groups
- Exchange Club of Farmington
- Farmington Community Chest
- Farmington Substance Abuse Council
- Farmington Village Green and Library Association
- Knights of Columbus
- Land Trusts (Canton, Farmington, etc.)
- Lions Clubs
- Masons
- Mommy and Me Groups
- Parent Teacher Associations
- Professional Organizations (that have local presence/members. Ex: CT Dietetic Association)
- Restaurant Associations
- Rotary Club
- Simsbury Diversity, Equity, and Inclusion Council
- Simsbury-Granby Chamber of Commerce
- Simsbury Main Street Partnership
- Sports Leagues
- Student Groups (high school clubs, etc.)
- Tariffville Village Association
- Theatre Groups
- Town Political Groups

Institutions:

- ABC House
- Amplify
- Assisted Living Facilities
- Birth to Three Programs
- Child Health and Development Institute of Connecticut
- Connecticut Age Well Collaborative/Connecticut Community Care
  - LGBTQ initiative for elder care
- Connecticut Clearinghouse
- Connecticut Foodshare
- Feeding America
- Gifts of Love/Simsbury Community Farm
- Healing Meals Community Project
- Health Clubs (Big Sky, HealthTrax, Silver Sneakers, YMCA)
- Hill-Stead Museum
- Jackson Laboratories
- Libraries
- National Alliance on Mental Illness of Connecticut
- New Horizons Village
- Ojakian Commons (partnership with National Multiple Sclerosis Society)
- Places of Worship
- Public and Private Schools
- Stanley-Whitman House
- Town Departments, Boards, and Commissions
  - Economic Development
  - Emergency Services – Police, EMS, Fire
  - Housing Authority
  - Parks and Recreation
  - Public Works
  - Senior Services
  - Social Services
- Tunxis Community College
- University of Connecticut
- Unionville Museum

Individuals:

- Directors of Social and Senior Services of Towns
- Elected Leaders and Public Officials
- Faith-Based Leaders
- Residents That Serve on Town Boards and Committees

Physical Space:

- Bike and Walking Paths (Rails to Trails, Farmington Valley Greenway, etc.)
- Farmington Valley YMCA
- International Skating Rink
- School Facilities
- Parks and Green Spaces (McLean Game Refuge, Stratton Brook State Park, Simsbury Farms, Winding Trails, etc.)
- Town Facilities (community centers, senior centers, Park and Recreation facilities)

Local Economy:

- Farmer's Markets
- Grocery Stores
    - Ethnic Grocery Stores
- Pleasant Valley Drive-In
- Shoppes at Farmington Valley
- Town's Chamber of Commerce