Describing Connecticut

SOCIAL FACTORS
ECONOMIC FACTORS
KEY POPULATION CHARACTERISTICS
MORTALITY

INTRODUCTION

In order to fully understand the state of Connecticut's health and health outcomes, it is imperative for this State Health Assessment to begin by describing our residents by those fundamental sociodemographics that contribute to certain populations experiencing a greater burden of ill health; the difference in these health outcomes on a population level are health disparities. The World Health Organization states that *"what makes societies prosper and flourish can also make people healthy."* At a glance it would appear that Connecticut is doing well from a national perspective; America's Health Rankings 2018 Annual Report reported that Connecticut is the third healthiest state in the country. But even when our society thrives there continue to be pockets of our people who experience worse health outcomes solely because they identify or pertain to historically underrepresented groups based on but not exclusive to sex and sexual orientation, gender identity, race, ethnicity, or age.

Identifying who is at greatest risk for preventable health conditions is an important initial step toward identifying relevant health inequities and supporting health equity. And while these populations are defined by elements that are immutable, there are other populations of interest — immigrants and refugees, veterans, the formerly incarcerated, and people with mental health disorders — who also experience poor health outcomes disparately. Although the 2018 America's Health Rankings Annual Report found that Connecticut is the third healthiest state in the nation, we must consider that it is also the most diverse state in New England; this greater diversity indicates a need for greater resources in order to respond more equitably. Each of these presents a different aspect of meeting the health needs of our communities, from having a competent and diverse workforce to removing language barriers.

This chapter examines Connecticut's population shift toward an aging population, which has implications to our workforce and future healthcare costs; the language needs of our Limited English Proficient population, to which removing language barriers can further social cohesion, respect for persons, and acceptance; and our current status with people with disabilities and veterans, and the declining prison population, which indicates a need for more equitable initiatives that allow these individuals to live independently, sustainably, and as an integral part of their communities. This State Health Assessment goes a step further from the last in that it takes a better examination of the sociodemographic breakdown of Connecticut's population in order to facilitate more equitable distribution of resources in the future.

In addition to sociodemographic characteristics, we also take a close look at the context of the communities that play a crucial part in contributing to poor health outcomes, broadly defined as the social determinants of health. The County Health Rankings model estimates that about 50% of a person's health is associated to both social and economic factors, and the physical environment. In this chapter, we focus on income and poverty, housing quality

and affordability, education, and access to transportation. These determinants of health are those elements of everyday life in which people have little direct control and are often related to government policies or inaction, but have real life implications in determining if someone is able to achieve their optimal health status. We will specifically look to where these factors are inequitably distributed to identify areas of improvement as we move towards our vision of Healthy People in Healthy, Equitable Connecticut Communities.

Since the last State Health Assessment, Connecticut has made strides to address some of these inequities through the Connecticut Green and *Healthy Homes* Initiative (GHHI) and the State Innovation Model (SIM) program. The Connecticut GHHI, a seven-agency collaborative initiated in 2017 with a shared vision to improve housing quality and energy efficiency as platforms for improved health, is facilitated by the Connecticut Green Bank and focuses on working with private-sector investors to create low-cost, long-term sustainable financing to maximize the use of public funds because investing in housing for low- and middle-income families can increase savings in both energy and healthcare costs. The SIM program is also working toward addressing determinants of health by developing and implementing a healthcare payment and service delivery model reforms that will promote healthier people, better care, and smarter spending; as examples we cite the Health Enhancement Communities (HEC) framework and the Health Score CT cost estimator. The HECs are intended to work collaboratively to improve the social, economic, and physical conditions that enable residents within a community to meet their basic needs, achieve their health and well-being goals, and thrive throughout their lives. Given their unique and essential perspectives and insights about their communities, HECs' success depends on the ongoing involvement of community members in making decisions about things that matter most to them and reflect the diversity of the populations within the HEC geographies. The Health score CT cost estimator tool was released online in October 2019 and is intended to better inform state residents about where they might find lower-cost healthcare procedures and services, whether inpatient or outpatient, in the hopes of saving money; and to provide care quality data on area providers.

Where appropriate, this chapter provides comparisons between Connecticut, the New England region, and the United States.

SOCIAL FACTORS

The Social Determinants of Health (SDOH) are the upstream non-health factors that "impact a wide range of health, functioning and quality of life outcomes."[1] For public health, this is as preventive as it gets. When considering these upstream factors in the work of a public health entity such as the Connecticut Department of Public Health (CT DPH), we can more effectively inform the public and policymakers so we can all live better lives. As an agency whose mission declares that the equal enjoyment of a person's highest attainable standard of health is a human right, we must also examine the conditions that contribute to "avoidable differences in health among specific population groups that result from cumulative social disadvantages."[2] More specifically, we apply an equity lens to ascertain which populations are being most negatively impacted.

It is at this intersection that employing the Healthy People 2020 "place-based" SDOH framework[1] can further narrow our focus to present this State Health Assessment. The SDOH framework is built upon "the relationship between how population groups experience 'place' and the impact of 'place' on health."[1] There are five key SDOH areas: education; neighborhoods and the built environment; the social and community context of where people live, work, or play; health and health care; and economic stability. In this section we examine the first three of the five key areas. Economic factors are discussed in the next section, and the discussion and analysis on health and health care is addressed in the Health Systems chapter. We must not lose sight that there are a host of other social factors that impact the health of our residents, including but not limited to public safety and exposure to crime and violence, exposure to media and emerging technologies like the internet, educational and job opportunities, and access to healthful foods.

It is important to mention that while CT DPH prefers community-level data, not all sources present data thusly due to collection strategies or analysis considerations. Connecticut's decentralized government structure makes it difficult to find county level data useful but reliable third-party data sources are typically oriented in such a manner as the majority of the nation has a county government structure. Faced with this challenge, CT DPH opted to use county level data when more geographically-precise data were unavailable or unreliable.

Education

Economic factors such as poverty and unemployment can lead to unhealthy living conditions. Yet education can provide individuals with foundational knowledge, life skills, and social and psychological supports to make healthier choices. Therefore, quality education and higher educational attainment can be a protective factor that can advance more equitable outcomes.[3] It has been demonstrated that individuals without a high school diploma have higher incidences of risk behaviors and other adverse health outcomes; and earn less money, which can limit access to resources and healthy environments.[4]

EARLY EDUCATION

Experiences and education within the first five years of life can shape one's health trajectory across the lifespan. Early education and care programs can be protective against social and economic challenges and narrow inequitable gaps in health outcomes.[5] Participating in these programs are also associated with higher educational attainment, better eating habits, increased use of preventive healthcare services, and lower rates of child injuries, child abuse/maltreatment, teen pregnancy, depression, use of tobacco or other drugs, and arrests and incarceration.[5] As noted in **Figure 1**, the rate of Pre-K enrollment for 4-year old children in state-funded preschool programs in Connecticut has made sizable gains over the past 5 years; however, enrollment among 3-year old children has remained fairly stable over the past decade and thus far peaked at 10% in 2016.

CONNECTICUT RANKS NINTH IN THE US FOR EARLY EDUCATION SPENDING PER CHILD[1]

- Connecticut has three state-funded pre-kindergarten programs: School Readiness Program, Child Day Care Contracts, and Smart Start[*]

- In 2018, 14,585 children were enrolled in state pre-kindergarten programs[*]

- On average, our state spent $7,612 per child enrolled; this reflects a 30% drop in average per child expenditure since 2011[*]

- According to most recent estimates available (2013–2014 school year), children enrolled in CT early childhood and pre-kindergarten programs were:[**]

  + 50% are non-Hispanic White, 26% are Hispanic/Latino, 15% are non-Hispanic Black or African American, and 5% are non-Hispanic Asian

  + 23% are students with disabilities served under the Individuals with Disabilities Education Act

  + 2% are English Language Learners (those who speak English less than "very well;" for more information about Limited English Proficient section)

[*] *Friedman-Krauss, A.H., et al. (2019). The State of Preschool 2018: State Preschool Yearbook. National Institute for Early Education Research. Retrieved from http://nieer.org/wp-content/uploads/2019/05/YB2018_Executive-SummaryR.pdf.*

[**] *Civil Rights Data Collection, 2013–2014 State and National Estimates: Total Enrollment in Early Childhood and Pre-K.*

FIGURE 1: Percentage of children enrolled in early childhood and Pre-K programs by age group, CT, 2002–2018
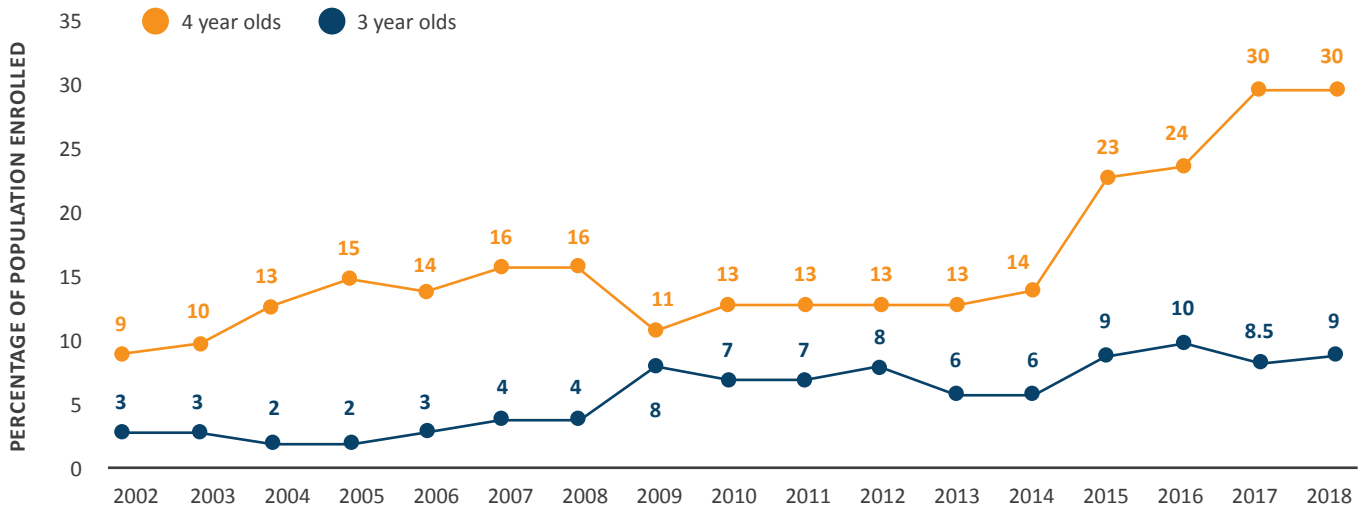
Source: National Institute for Early Education Research. 2013, 2016 and 2018 State of Preschool Yearbooks. Retrieved from http://nieer.org/state-preschool-yearbooks.

EDUCATIONAL ATTAINMENT

In an age-adjusted multivariate analysis of the entire US, it was demonstrated that lack of high school education captured the effect of income inequality in addition to contributing to increased mortality that is attributed to increased risk of injury as a result of high-risk occupations, inadequate health insurance coverage, and unhealthy behaviors like smoking.[6] In Connecticut, one in ten residents aged 25 and older have earned less than a high school degree, which is slightly less than the national proportion (**Figure 2**). As a state, nearly two in five residents 25 and older earned a bachelor's degree and above in 2017, exceeding the national rate. Fairfield County had the greatest percentage of its residents with at least a bachelor's degree (47%) while residents from Windham County experienced the lowest percentage (24%);[7] unsurprisingly, Fairfield County also has the most towns — 10 out of 23 — with median household incomes exceeding $125,000 (**Figure 10**).

The inequity of educational attainment rates in Connecticut is striking (**Figure 3**). Hispanics fare the poorest of any racial/ethnic population in educational attainment; well over a quarter of Hispanic residents 25 years and over have less than a high school degree – which is more than double the rate for Black or Asian residents.[7] While Black residents are more likely to have a high school diploma than Hispanic residents, they are still far less likely to attain a Bachelor's degree (20%) than Asians (65%) or non-Hispanic Whites (44%). The varying profiles of low and high educational attainment rates within these racial/ethnic groups warrants further understanding in order to develop informed strategies for improving educational attainment at all levels.

Neighborhood and Built Environment

ACCESS TO HEALTHY FOODS

Many of our health outcomes are influenced by what, how much, and how often we eat. Yet for many, making the healthy food choice is not the easy choice. For some CT residents, healthy and affordable foods are not as readily available in their communities as places that prepare or sell processed pre-packaged foods that are more likely to be high in salt, sugars, and fats. Children within these communities are especially vulnerable since they are subject to the food choices made by their parents, and the eating habits developed during childhood are likely to carry into early adulthood.[8] Although research indicates that eating habits can change as we get older and our environment changes,[9] the stage is set for increased likelihood of chronic disease as we age. Therefore, healthy food access, which is

FIGURE 2: Percentage of population 25 years and older with a bachelor's degree or higher, CT and US, 2010–2017
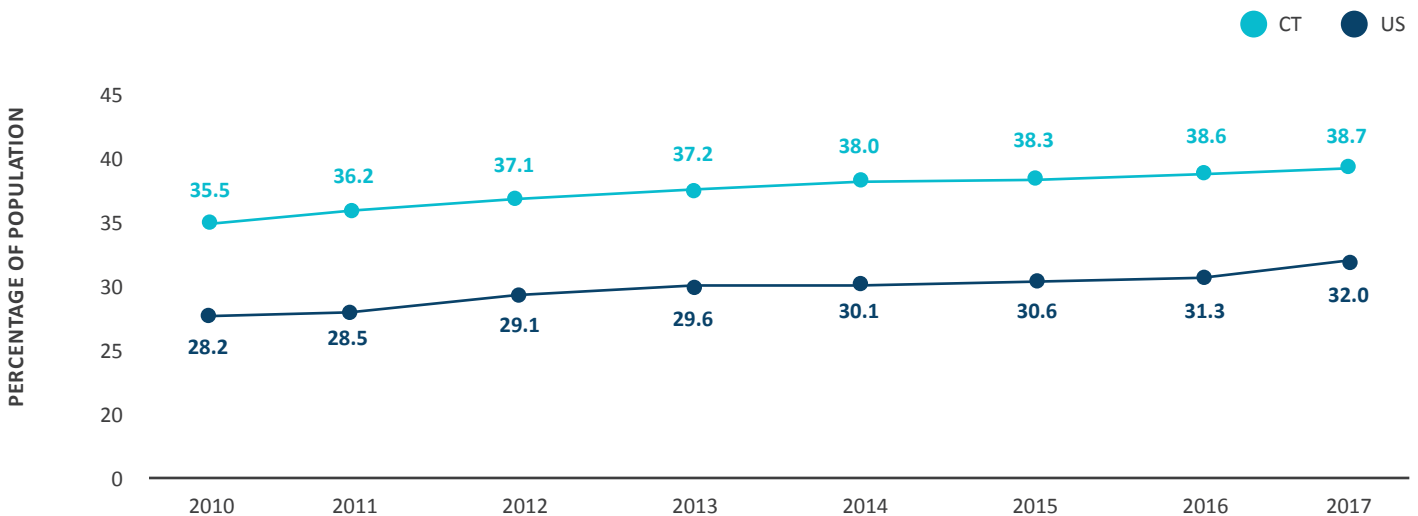
Source: US Census Bureau. American Community Survey 1-Year Estimates, Table S1501.

influenced by the affordability and availability of food and household income, is an important factor that impacts population health both immediately and with lasting effects.
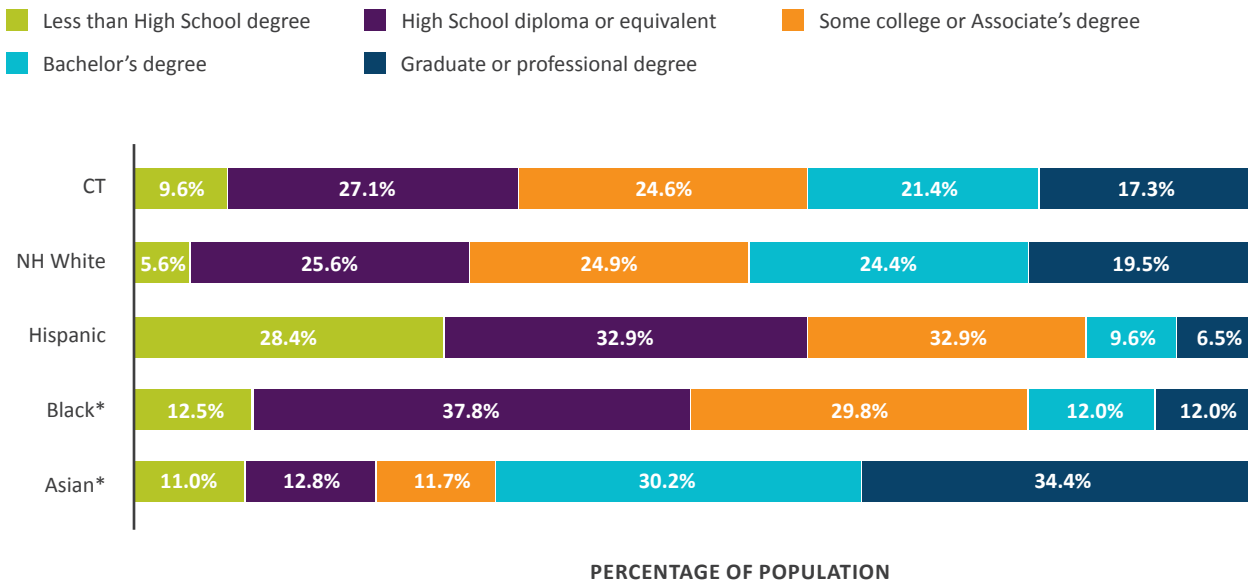
FOOD INSECURITY

The United States Department of Agriculture defines food security as having regular access to enough food to live an active, healthy life.[10] Conversely, food insecurity indicates that a household has limited or uncertain access to adequate, healthy food due to a lack of money and other resources such as access to stores that provide healthy, affordable foods. When people cannot afford healthy foods, they may skip meals or reduce portion size; purchase inexpensive and processed energy-dense foods enriched with added sugars and refined grains; and experience protracted stress and anxiety when trying to make ends meet. Though food insecurity often occurs in short bouts, eating habits that develop from food insecurity can persist over time because food insecure households often experience repeated food budget shortages. And while food insecurity does not necessarily cause hunger, hunger is a likely outcome for those who are food insecure.[1] Compounded with financial constraints and other community stressors, families that are food insecure have difficulties in maintaining good health.

There are two categories of food insecurity: low food security and very low food security. Low food security households obtain enough food to avoid substantially disrupting their eating patterns or reduce food intake by eating less varied diets, participate in Federal food assistance programs, or obtain emergency food from community food pantries. In very low food security households, one or more household members experienced disruption in their normal eating patterns and a reduction in food intake during the year because they had insufficient money or other resources.

As mentioned earlier in this section, there can be lasting effects of food insecurity that can impact health, and our children are the most susceptible. **Figure 4** highlights the strides made in recent years to undercut food insecurity; overall CT does slightly better than the Nation overall and for our children. The food insecurity rate for children however is higher than that of the State's, which indicates that more must be done to promote a healthier life course for our children.

FIGURE 3: Percent distribution of educational attainment of population age 25 and older by race/ethnicity, CT, 2017

Legend:
- Less than High School degree
- High School diploma or equivalent
- Some college or Associate's degree
- Bachelor's degree
- Graduate or professional degree

	Less than High School	High School diploma	Some college/Associate's	Bachelor's	Graduate/professional
CT	9.6%	27.1%	24.6%	21.4%	17.3%
NH White	5.6%	25.6%	24.9%	24.4%	19.5%
Hispanic	28.4%	32.9%	32.9%	9.6%	6.5%
Black*	12.5%	37.8%	29.8%	12.0%	12.0%
Asian*	11.0%	12.8%	11.7%	30.2%	34.4%

PERCENTAGE OF POPULATION

*Include persons of Hispanic origin

Source: *US Census Bureau. American Community Survey 1-Year Estimates, Table S1501.*

FIGURE 4: Food insecurity rate overall and among children, CT and US, 2015–2017
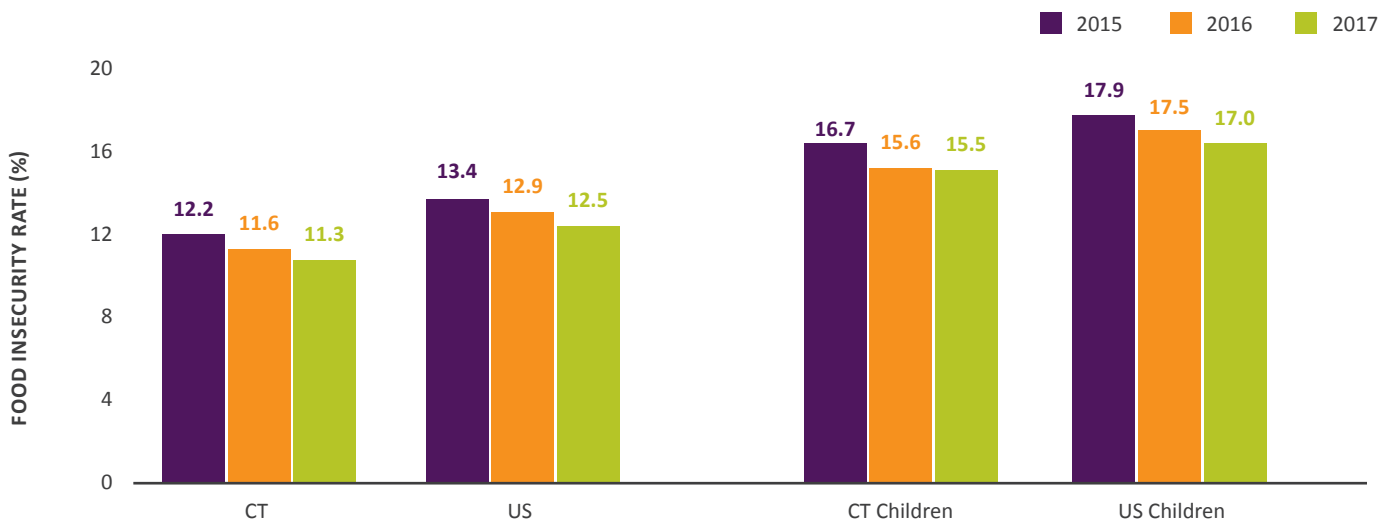
Source: Feeding America. Child Food Insecurity in the United States. Data retrieved from https://map.feedingamerica.org/.

PROGRAM SPOTLIGHT: SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP)

The Supplemental Nutrition Assistance Program (SNAP, or formerly referred to as the Food Stamp Program) is the largest domestic food and nutrition assistance program for low-income Americans in the nation. The program aims to reduce food insecurity and improve nutritional choices by providing nutrition benefits via an Electronic Benefits Transfer (EBT) card to supplement the food budget of low-income individuals and families. EBT cards can be used in authorized retail food stores to purchase eligible foods.
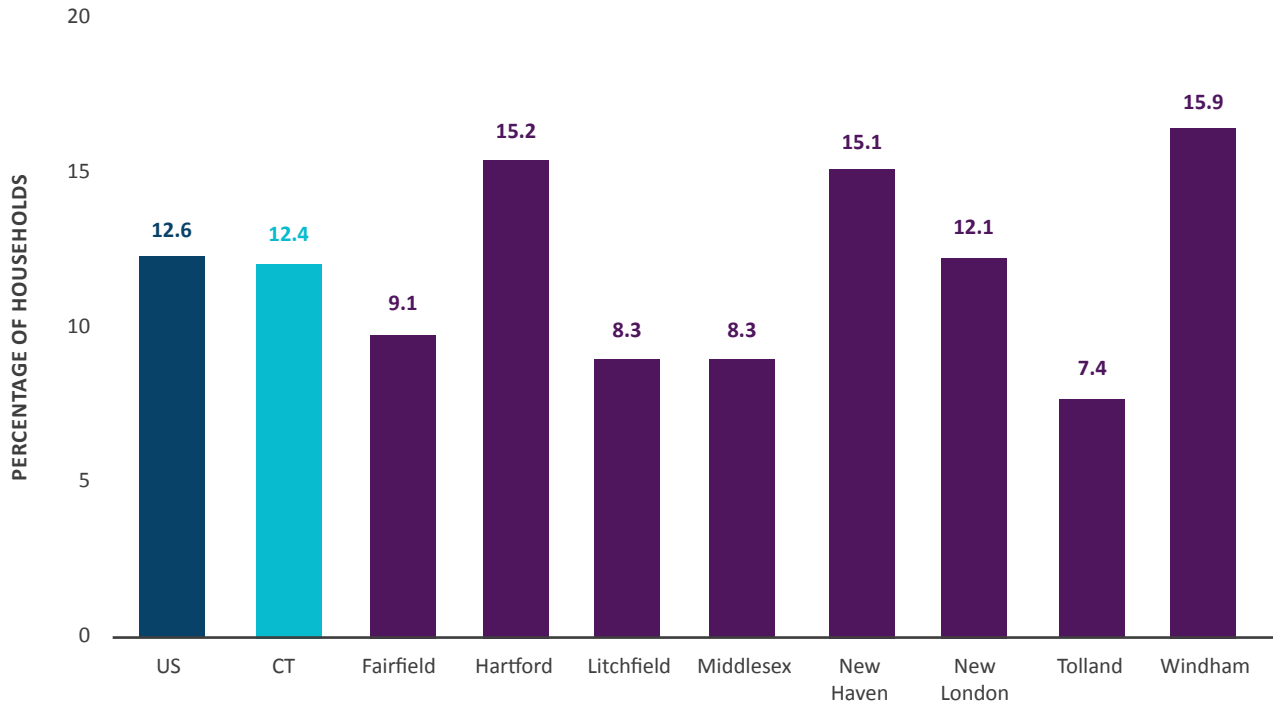
The percentage of households receiving SNAP in our state is nearly identical to the Nation; however, an analysis by county indicate that New Haven, Hartford, and Windham Counties have the highest percentage of households receiving SNAP benefits in CT. Hartford had the highest rate of households receiving SNAP at 41%, and three of CT's largest cities (including Waterbury at 31% and Bridgeport at 28%) were represented in the top 10 towns with the highest rates of households receiving SNAP. Of note, Fairfield County had the highest disparity among its towns with SNAP recipients; the next highest SNAP recipient rate of any town within the county was Danbury at 10%.[*]

When examining households by race/ethnicity, we see that one in three Hispanic households, and over one in four Black households receive SNAP benefits, compared to less than 10% of non-Hispanic White and Asian households.

[*] U.S. Census Bureau. 2013–2017 American Community Survey 5-Year Estimates, S2201: FOOD STAMPS/Supplemental Nutrition Assistance Program (SNAP).

FIGURE 5: Percentage of households receiving SNAP; US, CT, and CT county; 2013–2017

Source: *US Census Bureau, 2013–2017 American Community Survey 5-Year Estimates, Table S2201.*

FIGURE 6: Percentage of households receiving SNAP by race/ethnicity, CT, 2013–2017
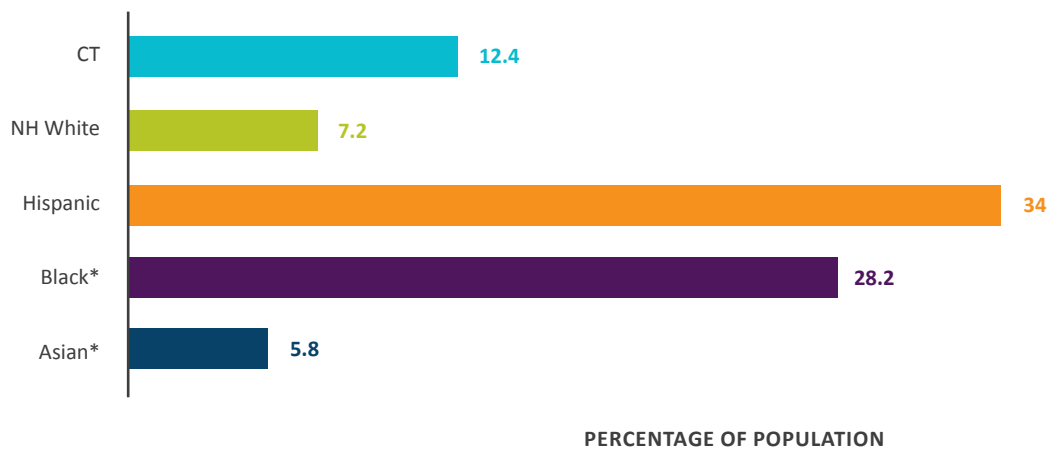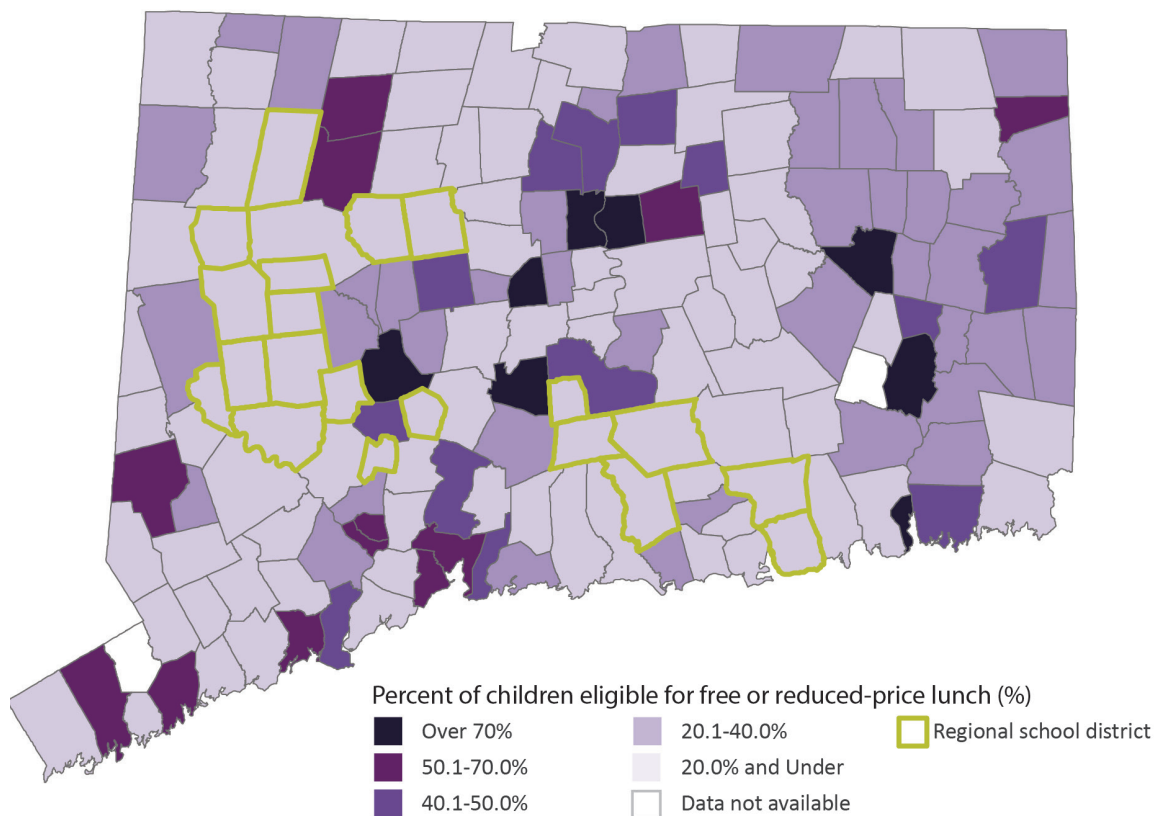

PERCENTAGE OF POPULATION

*Include persons of Hispanic origin

Source: *Connecticut Data Collaborative. (2017). SNAP Recipients by Town [Year: 2013–2017]. Retrieved from http://data.ctdata.org/.*

PROGRAM SPOTLIGHT: FREE AND REDUCED-PRICE LUNCH

The National School Lunch Program, created under the National School Lunch Act, focuses on reducing child hunger and food insecurity to promote child health and reduce obesity. Children who meet eligibility requirements based on family size and income receive adequate nutrition to support their health and well-being. Participation in the National School Lunch Program is a useful indicator of household poverty.

In our state, over one in three children are eligible for free or reduced-price lunch.

FIGURE 7: Connecticut State Department of Education. Eligibility data for free and reduced lunch by school district. Retrieved from EdSight interactive data portal for 2017–2018 school year.

Percent of children eligible for free or reduced-price lunch (%)

- Over 70%
- 50.1-70.0%
- 40.1-50.0%
- 20.1-40.0%
- 20.0% and Under
- Data not available
- Regional school district

Source: Connecticut State Department of Education. Eligibility data for free and reduced lunch by school district. Retrieved from EdSight interactive data portal for 2017–2018 school year.

Note: *for towns that are part of a regional school district (i.e., 6, 10, 12, 13, 14, 15, 16, 17, and 18; outlined above), percentage eligible reflect regional school district rate; all other rates are for town school districts.*

TRANSPORTATION ACCESS

Access to transportation can offer people the flexibility to access resources and reliably ensure they can get to and from work or attend to their daily routines and needs. Many lower income people living in urban environments look for entry- and mid-level jobs that are often located in cities' periphery and industrial areas. However, limitations to the public transit system designed to promote ridership in our high density residential communities (e.g., reduced bus service at night and on weekends, distance between bus stops and job centers) result in long commute times, making transportation a challenge to those who are reliant on it. Conversely, providing reliable public transportation to serve our rural communities present challenges as there is no one-size-fits-all strategy to address varying community demands and there would have to be financial resources secured for implementation, maintenance, and fuel and energy costs.[11;12] In addition, jobs that pay well and are a short commute from home are largely inaccessible to most people who need them as only a small percentage of living-wage jobs in cities are held by residents of the neighborhoods where most cities' population lives.[13] This misalignment between the job supply and demand makes access to transportation a critical aspect of regional economic development.

Respondents to a locally administered survey indicated that at some point in the previous year they were not able to go someplace due to lack of reliable transportation. Analysis indicate that females, young adults (aged 18–34 years), persons of color, low-income residents, or residents with low educational
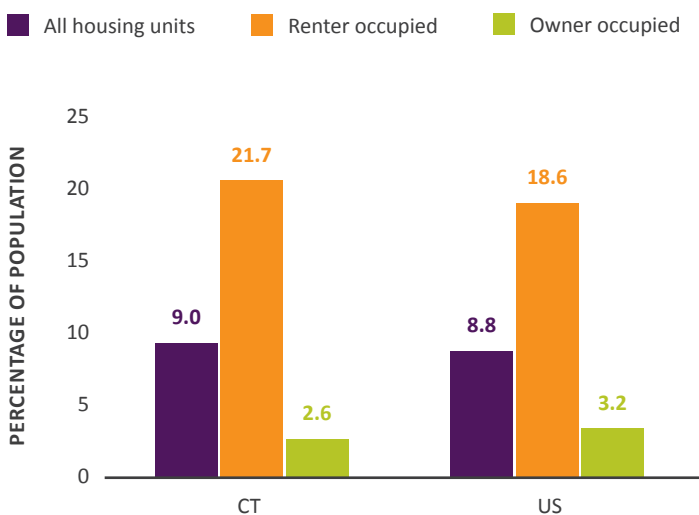
attainment were more likely to be impacted by lack of transportation. Relatedly, more than one third of those lacking reliable transportation were also unable to hold medical appointments. This reduced access to healthcare most frequently affected females, older adults, Hispanic residents, low-income residents, and resident with low educational attainment.[14]
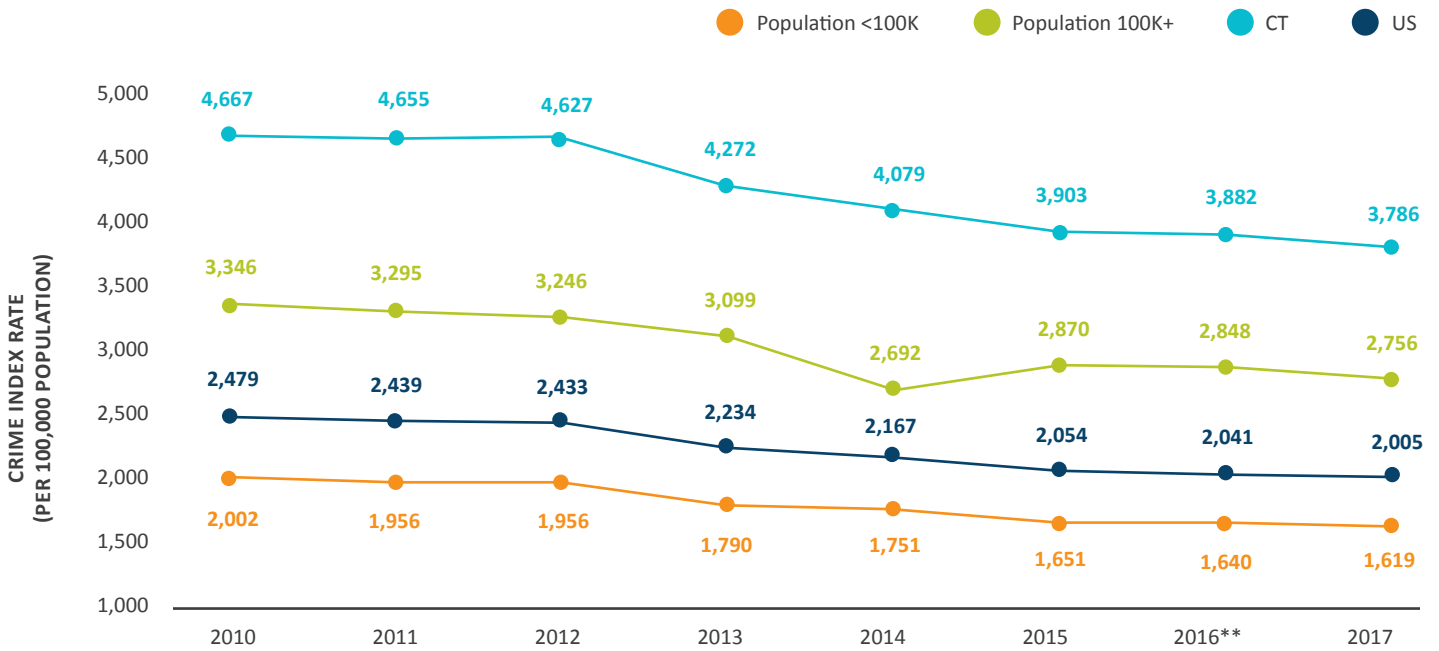
In 2017, about 9% of CT households were without access to a personal vehicle (**Figure 8**). With six of the top ten most populous cities in CT, New Haven and Hartford Counties have the highest percentage of households without access to a car.[15] When we look at vehicle access by whether the head of the household rents or owns their home, there are stark differences. Throughout our state, fewer than 3% of owner-occupied households are without access to a car (referred to as "housing tenure") as opposed to the nearly 22% of renter-occupied households; compared to national data, CT fares slightly better for owner-occupied households and markedly worse for renter-occupied households. Depending on the county of residence, between 12% to over 25% of renter occupied households are without access to a car.[7]

VIOLENT AND PROPERTY CRIME

Crime and violence disrupt community cohesion by creating fear, stress, and distrust among residents. There is evidence that suggests that the having access to places in which people can engage in physical activity may improve physical activity levels among adults and youth.[16] A relatively new measure of park accessibility concluded that CT has the second highest population weighted density-to-park ratio in the US behind the District of Columbia;[17] yet for people who live in poor urban neighborhoods, park access can be limited by the perception of park safety.[18] This and other factors influence how residents engage with and move throughout the community; for example, they may be more likely to limit outdoor physical activity due to safety concerns. While the physical and mental health of individuals are negatively impacted by crime, the social and economic health of a community is affected as well. Institutions and businesses are less likely to invest in these communities and residents with means are more likely to relocate to other neighborhoods. Such disinvestment limits neighborhood resources and opportunities, feeding into a vicious cycle of further violence and disinvestment.

The Crime Index rate — a crime statistic that sums instances of seven major offenses (i.e., murder, rape, robbery, aggravated assault, burglary, larceny, and motor vehicle theft) that is standardized for comparison within a given geographic area – has steadily decreased in the nation and in our state (**Figure 9**). Even so, when analyzing this data by town population, our urban centers — being more densely populated — have continually experienced a Crime Index Rate that is on average 2.4 times higher than for our towns with populations under 100,000 throughout the decade beginning in 2010.

FIGURE 8: Percentage of occupied housing units with no vehicles by housing tenure, CT, 2013–2017

Source: US Census Bureau. American Community Survey 5-Year Estimates, Table B25044.

FIGURE 9: Crime Index rate by CT town size, CT and US; 2008-2017

*Includes Bridgeport, Hartford, New Haven, Stamford and Waterbury

**Prior to 2016, forcible rape was tallied only when the victim was female; since 2016 the data include all incidents regardless of the sex or gender of the victim

Source: *Connecticut State Police Uniform Crime Reporting Program. (2018, September) Crime in Connecticut 2017: Annual Report of the Uniform Crime Reporting Program, 2018. Data analyzed December 18, 2019. Retrieved from https://portal.ct.gov/-/media/DESPP/Division-of-Crimes-Analysis/2017-CRIME-IN-CT-FINAL.pdf?la=en.*

Investing in community-based participatory initiatives that enhance the safety and vitality of a neighborhood, while also implementing strategies that protect against displacement, promote economic development and opportunities, preserve existing affordability, and produce new affordable housing can promote community health and equitable growth.[19]

"I was waiting for a Section 8 for me and I waited two months for it and because I had a domestic violence problem they denied me it, and I was the victim."

— STATE HEALTH ASSESSMENT FOCUS GROUP, HISPANIC COMMUNITY

Social and Community Context

Social relationships and supports, including community connectedness, interpersonal trust and relationships, and civic engagement and life, are important factors that impact health. There is evidence that increased community cohesion or connectedness increase longevity, strengthen immune systems, and result in lower levels of anxiety and depression as well as greater empathy and higher self-esteem.[20;21] As a consequence of people being more open to trusting and cooperating with each other, "social connectedness generates a positive feedback loop of social, emotional and physical well-being."[21] Communities with high levels of social capital and cohesion are more readily equipped to mobilize and organize for social, political, or interpersonal actions to vastly improve safety, trust, and community resilience. But for many communities of color and other historically underrepresented people, these social trusts are hard to attain when families must prioritize the accumulation of assets that pave the way for greater personal stability.[22]

FIGURE 10: Percentage of citizens who voted in the November 2018 election by race/ethnicity, CT and US, 2018

PERCENTAGE OF POPULATION
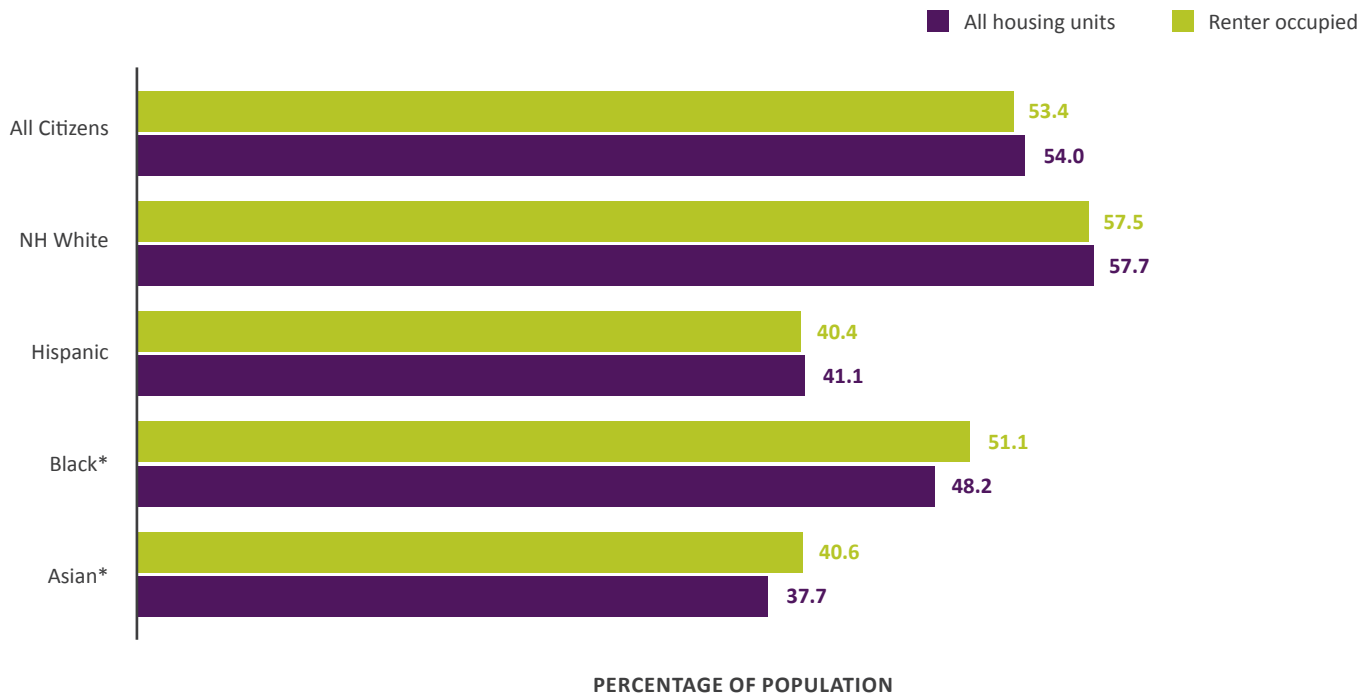
*Include persons of Hispanic origin

Source: *US Census Bureau. "Table 4B. Reported Voting and Registration by Sex, Race and Hispanic Origin, for States: November 2018." Voting and Registration in the Election of November 2018. Data analyzed November 29, 2019. Retrieved from www.census.gov/data/tables/time-series/demo/voting-and-registration/p20-583.html.*

Just like economic capital, social capital can be unevenly distributed within and among our communities, where people get marginalized and are impacted by social isolation or disruption more than others.

VOTER PARTICIPATION

Resident engagement in political and social processes is associated with improving community health by building "social trust that facilitate coordination and cooperation for mutual benefit."[23;24] When a community is actively engaged, it has a greater voice in shaping its future through the advocacy for policies, programs, and resources; and through the election of politicians that are more reflective and empathetic of a community's problems and the inequities that contribute to them. Conversely, disparities in civic engagement, particularly in poor communities and communities of color, commonly result in the lack of proper representation to the concerns of these populations and an inability to direct resources where they are most needed.

In November 2018, 54% of CT citizens voted in the US Midterm Election, a predictable 16% drop from the turnout for the November 2016 Presidential Election (in which more people tend to participate); regardless this was on par with election participation nationally (**Figure 10**). When we examine available data by race/ethnicity both statewide and nationally, non-Hispanic White citizens consistently have the highest voter turnout while Hispanic voters have the lowest turnout of any group. Connecticut's Black and Asian populations experienced voter turnouts that were 5.7% and 7.1% less than the national turnout, respectively.

CULTURE AND LITERACY

The cultural beliefs that people hold as well as their ability to communicate in and understand English — the de facto language spoken throughout the nation — also influences health when proven practices for achieving optimal health run counter to a person's view of safe or ethical living, or are simply not communicated in a way that a person can understand. Health

SERVICES SPOTLIGHT: TOOLS TO SUPPORT CROSS-CULTURAL HEALTH COMMUNICATION AND LANGUAGE ACCESS

- Language Access Portal: Contains information, in multiple languages, for six disease areas where major health disparities have been identified in non-English speaking populations.

- National Culturally and Linguistically Appropriate Services (CLAS) Standards: These 15 Standards can help organizations address the cultural and linguistic differences between the people who provide information and services and the communities they serve.

For more information on CT's efforts to support culturally and linguistically appropriate services, see the Health Systems chapter.

Source: Centers for Disease Control and Prevention. Tools for Cross-Cultural Communication and Language Access Can Help Organizations Address Health Literacy and Improve Communication Effectiveness. www.cdc.gov/healthliteracy/culture.html

literacy — "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions"[25] — also plays a role in health decision making regardless of language among people with low educational attainment.

### LIMITED ENGLISH PROFICIENCY POPULATION

Limited English Proficiency (LEP) people, defined as those who speak English less than "very well," experience challenges in navigating, accessing, or leveraging systems, opportunities, and resources in housing, employment, healthcare, and education. In addition to being LEP, households may also be linguistically isolated which occurs when all members aged 14 and older speak a language other than English and everyone in the household speaks English less than "very well".[26] The linguistically isolated households may have less influence upon the social, political, and economic life and policies in their communities due to an inability to communicate and comprehend English well.

In Connecticut, 8.2% of all residents ages 5 and older are LEP and about 5% of households are linguistically isolated[27;28] and some towns within our state have upwards of 20% of residents who have limited English proficiency. It is of absolute importance for the health and healthcare providers who primarily serve residents from these towns to begin strategizing so as to address these health inequities in order to provide the best care possible and about 5% of households are linguistically isolated[27;28] and some communities within our state have upwards of 20% of residents who have limited English proficiency.

For more information regarding our communities with the highest rates of LEP, see the Country of Birth and Language Use section in Key Population Characteristics.

DISCONNECTED YOUTH

When young people ages 16–24 are neither working nor in school, they are considered "disconnected."[29] When youth are disconnected, they are more likely to engage in risky behaviors that include violence and substance use, which increases the likelihood of adverse physical and mental health outcomes in a population that is still maturing cognitively.[30] As a measure of societal progress, this indicator is used to gauge how well young people fare as they transition to adulthood and are engaged with "the people, institutions and experiences that...help them develop the knowledge skills, maturity, and sense of purpose required to live rewarding lives as adults."[31] Everyone who lives in our communities are all affected by the negative social and economic effects of disconnected youth.

FIGURE 11: Percentage of disconnected youth, US and CT, 2008–2016
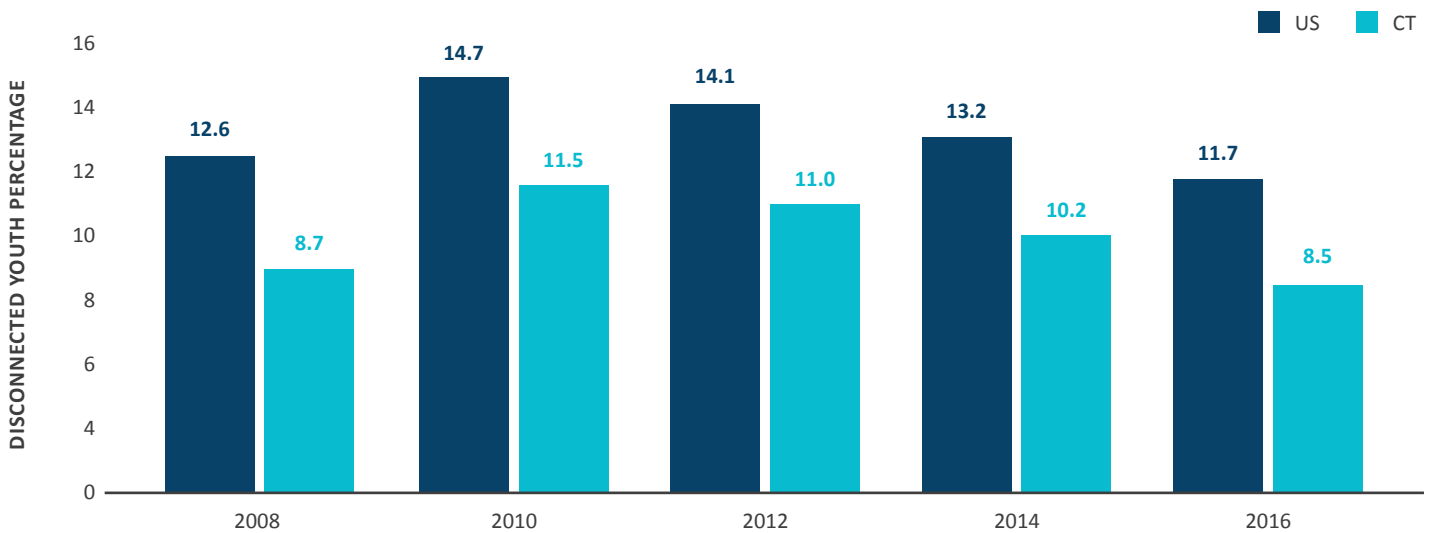
Source: *Lewis, Kristen. Making the Connection: Transportation and Youth Disconnection. New York: Measure of America, Social Science Research Council, 2019.*

In the US and in our state, the disconnected youth rate peaked during the Great Recession of 2008 and has been in decline since (**Figure 11**); CT has seen a decrease of 26% between 2010 and 2016. Although New England has the lowest disconnected youth rate regionally in the US[29] and Connecticut consistently experiences lower rates of disconnected youth than the Nation as does the rest of New England, it is important to note that nationally disconnected youth are three-times more likely to have some kind of disability and that the youth disconnection rate correlates strongly in areas with long work commutes.[29]

RESIDENTIAL SEGREGATION

Residential segregation, which stems from a long history of discriminatory policies and practices, persists throughout the country due to structural, institutional, and individual racism. Such segregation results in generationally cyclical inequities such as poor housing quality; lack of access to resources like quality education, employment, and healthcare; restricted upward mobility; and exposure to environmental contaminants.[32] These inequities result in health disparities for a wide range of health outcomes.

The dissimilarity index measures evenness in the spatial distribution of different populations[33] and ranges from 0 (complete integration) to 100 (complete segregation); the score is essentially "the percentage of either Black or White residents that would have to move to different geographic areas in order to produce a distribution that matches that of the larger area."[32] For Connecticut, approximately 63% of Black and White residents would have to move to a different area to fully integrate these communities throughout the state (**Figure 12**).[32] It's notable that our towns that are considered most diverse are primarily within those counties that have the highest dissimilarity index scores (Fairfield, Hartford, and New Haven counties). For our state to be fully integrated regardless of race/ethnicity, half of our residents would need to relocate.[34]

INCARCERATION

Connecticut's incarcerated population is comprised of inmates in state or federal prisons (i.e., inmates sentenced to more than one year of incarceration) or held in local jails (i.e., inmates sentenced to less than one year, people who violate parole or probation, and those awaiting trial, sentencing, or transfer to prison).[35] While incarceration is designed to punish criminal offenses, incarceration also affects the physical and mental health of inmates, disrupts family and community social structures, and limits access to resources and opportunities once inmates re-enter into their communities.

FIGURE 12: Residential Dissimilarity Index by race/ethnicity, CT and CT County, 2013–2017
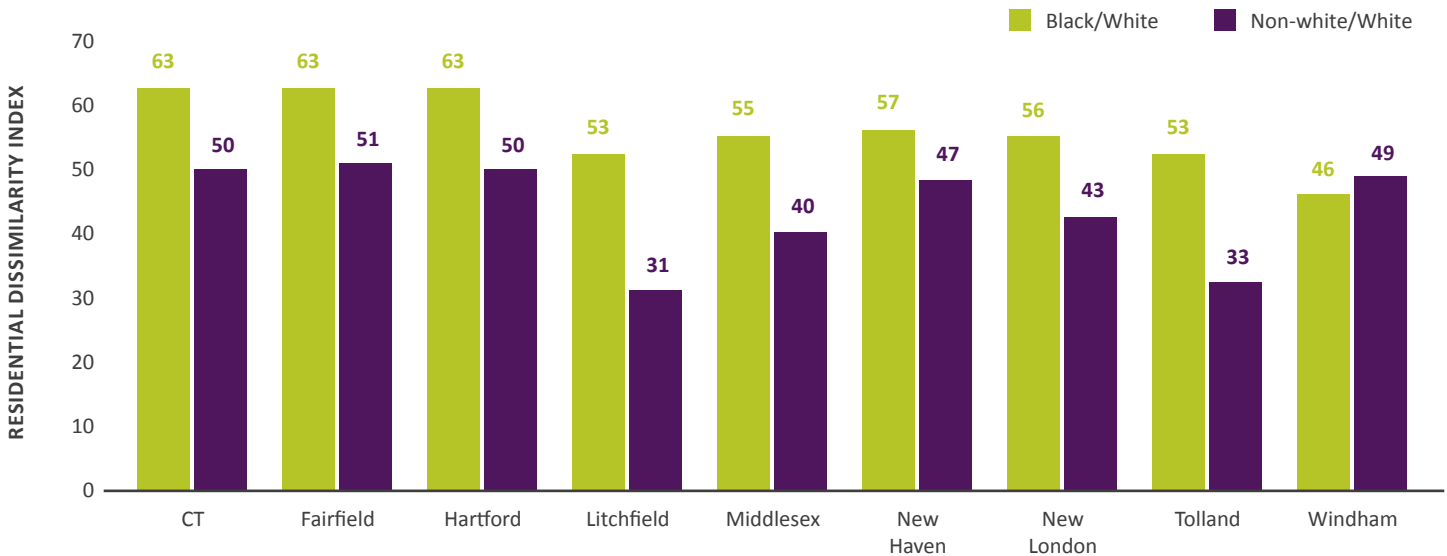
Source: U.S. Census Bureau. American Community Survey 5-Year Estimates; as cited by 2019 County Health Rankings and Roadmaps

The high proportion of imprisoned men — in particular non-Hispanic Black and Hispanic men — contributes in part to the aforementioned high proportion of female-headed Black/African American and Hispanic/Latino households. The economic and caretaking burdens related to incarceration disproportionately affect women and by extension, their children, in the following ways:

• Economic hardship, as incarcerated fathers cannot contribute financial support during incarceration;

• Added costs related to incarceration, since most states charge system-involved people for a range of criminal proceedings and oversight (e.g., in CT, these fees include electronic monitoring, public defender or legal costs, room and board, and civil and/or criminal fees).[36] Women — in particular women of color – often shoulder these financial burdens.[37]

• Caretaking, as many men in state and federal prisons are fathers of minor children. In addition to caring for their children, women bear emotional and caretaking labor as they need to comfort children, help them understand where their parent is, and facilitate visitation.[38]

For more information on incarceration statistics, see the Incarcerated and Formerly Incarcerated Persons section in Key Population Characteristics.

ECONOMIC FACTORS

For many of Connecticut's residents, the optimal, healthy choice may not be the financially attainable choice. Economic position often shapes health behaviors and decisions, which in turn influences our health status. Economic position is influenced by factors such as income, income distribution, and poverty; education; and employment; and has repercussions in a person's ability to access healthy foods, quality housing, and appropriate health services as well as other environmental conditions that impact health.

Income

A reliable income at a regionally appropriate level is critical in determining a person's health and health outcomes. When families cannot attain livable incomes, it can strain their ability to access to the products that can help them become and stay well, like healthy food and medical care. Going one step further, income essentially dictates the places in which people live and spend their time as they have to consider the affordability of all those other expenditures that go along with living in any given community. Our residents who lack secure economic resources often have less of an ability to choose where they live and may find themselves in communities with high concentrations of poverty, high crime, and low home ownership rates. These same communities are also more likely to have few places to shop for healthy, fresh foods and are highly target for marketing by tobacco, alcohol, and businesses that sell high caloric-, salt- and fat-dense prepared foods at price points that are attractive to the already economically constrained populations.

The unequal distribution of income is an indicator for poorer health status; Western industrialized nations with a more unequal distribution of income tend to have poorer health than similar nations with more equitable income distribution.[4] Low-income residents routinely experience stressors, such as housing insecurity, discrimination, and community violence that can cumulatively affect health throughout a person's life course.[39] Understanding who makes a living income, where they live, and how income is distributed is essential to uncovering inequities and identifying approaches to advance health equity.

Income, per the US Census Bureau, is how much money households or individuals obtain from 50 different sources, including but not limited to the wages and salary from employment, Social Security payments, pensions, child support, public assistance, and interest and dividends.[16] For households and families, the median income is based on the distribution of the total number of households and families including those with no income; the median income for individuals is based on individuals 15 years old and over with income. A household is defined by the US Census Bureau to include "all the people who occupy a housing unit (such as a house or apartment) as their usual place of residence" regardless of whether all occupants are related; group quarters are not considered households. While the US Census Bureau provides income in three ways (per person, per family, and per housing unit), the use of household income remains among the most widely accepted measures of income since it covers single parents as well as limited-income households that would pool and share their economic resources, when possible.

MEDIAN HOUSEHOLD AND PER CAPITA INCOME

Median household income is the middle of the income distribution among all housing units such that one-half of households fall below the median income and one-half above. Median income serves as a summary of an income distribution that can be compared over time or between populations, and is a much better indicator than average income because it tends to more accurately represent what people earn in a given area.

In 2018, Connecticut ranked 5th among all 50 states in median household income at $76,348, exceeding the national median household of $61,937.[17] Since 2009 — the year in which the Great Recession ended — through 2018, Connecticut has seen the smallest percentage gain in per capita income of all the New England states at 27.5%; for comparison, the next smallest gain in per capita income over the same time period was Maine's at 32.0%.[40] Massachusetts experienced the largest per capita gains over the same time period at 40.7%, which is just under 50% of the growth seen in our state; Massachusetts was also the only state in New England to outpace the national per capita growth rate 38.6%.[7]

As highlighted in **Figure 13**, income however is not distributed equally throughout Connecticut's 169 towns. This is important because income inequality within communities can have broad negative health impacts such as an increased risk of mortality and can serve as a social stressor by accentuating the differences in social class and status. Communities with greater income inequality can experience a loss of social connectedness, as well as decreases in trust, social support, and a sense of community for all residents.

The U.S. Census Bureau calculates the Gini coefficient as a measure of income inequality. Ranging from 0 to 1, where 0 indicates perfect equality and 1 indicates perfect inequality, Connecticut has a calculated Gini coefficient of 0.501, the only New England state to exceed a coefficient 0.5 (the only other places to exceed Connecticut's income inequality index were the District of Columbia and New York at 0.524 and 0.513, respectively).[17] As a result, many of Connecticut's towns have median household incomes that are higher than the state median, which means that residents whose household incomes fall below the median are concentrated in those towns that are also our most populous. Much of Connecticut's wealth is located in Fairfield County, where ten towns have median incomes greater than $125,000. In contrast, the Northwest and Eastern portions of the state consistently have median incomes that are under $100,000.[41]

In 2017, median incomes among non-Hispanic White and Asian households were about $40,000 higher than both Black and Hispanic/Latino households.[41] Between 2013 and 2017, Hispanic households have made the largest gains in median incomes, increasing almost 25% or about $9,000, while gains made by non-Hispanic White and Black households were on par with the overall state gains of 11% (**Figure 14**). Nonetheless, the income gap between our Hispanic and Black residents and our non-Hispanic White and Asian residents in Connecticut was about $39,500 annum per household in 2017; or simply, median household incomes that are 85% higher.

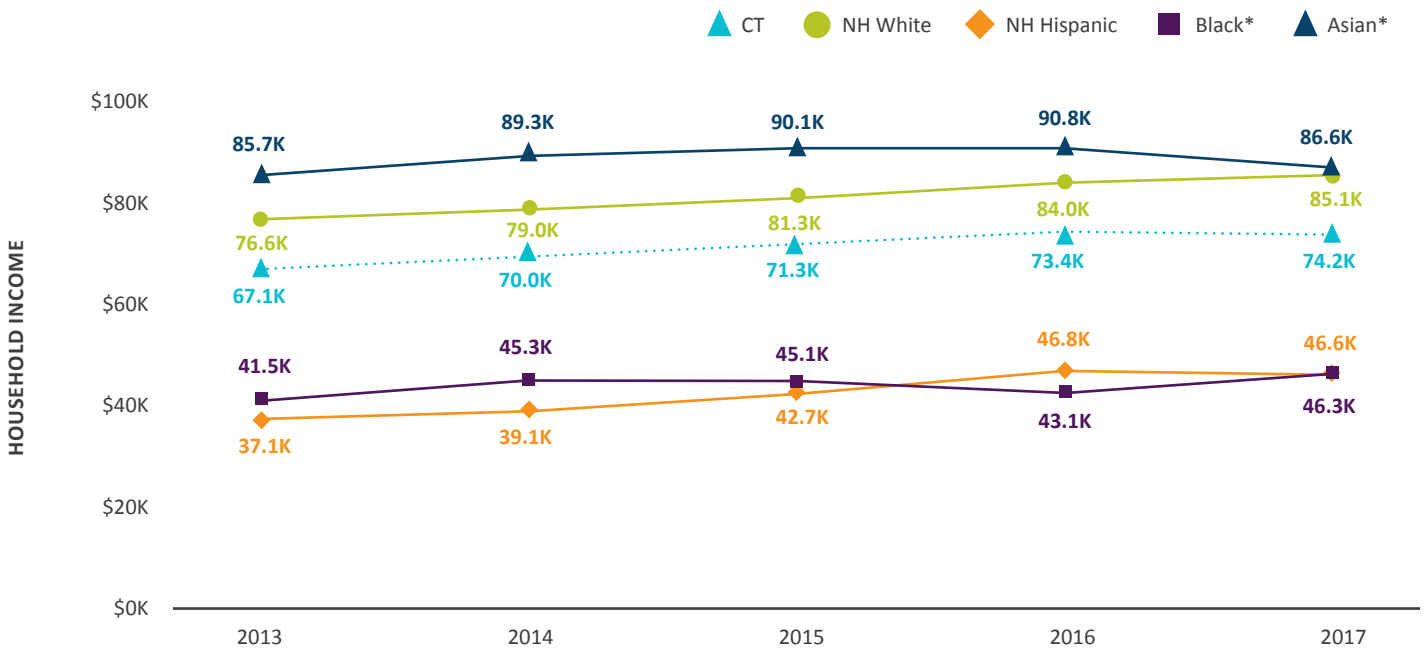**FIGURE 13: Median household income in the past 12 months by town, CT, 2013–2017**

Median Household Income
- $125,001-$220,000
- $100,001-$125,000
- $50,001-$100,000
- $33,481-$50,000
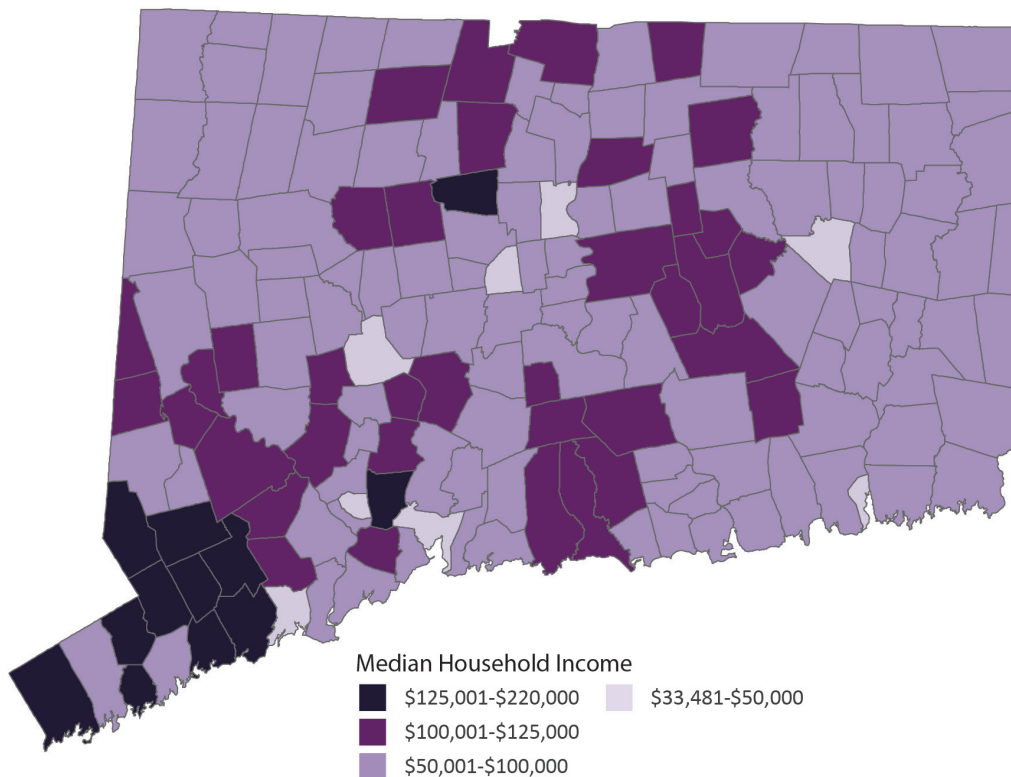
Source: US Census Bureau. American Community Survey 5-Year Estimates, Table S1903.

CONNECTICUT RANKS THIRD IN INCOME INEQUALITY IN THE US

- Connecticut ranks third in income inequality among all 50 states.

- The top 1% of CT's population takes home 27.3% of all CT income.

- The average income of the top 1% of CT residents is 37.2 times more than the bottom 99%, at $2.5 million and $67,752, respectively.

- Fairfield County ranks 12th in income inequality among all US counties.

- The average income of the top 1% of Fairfield County residents is 26.3 times more than the bottom 99%, at $1.3 million and $50,107, respectively.

Source: Sommeiller, E., & Price, M. (2018). The new gilded age: Income inequality in the U.S. by state, metropolitan area, and county. Washington, DC: Economic Policy Institute.

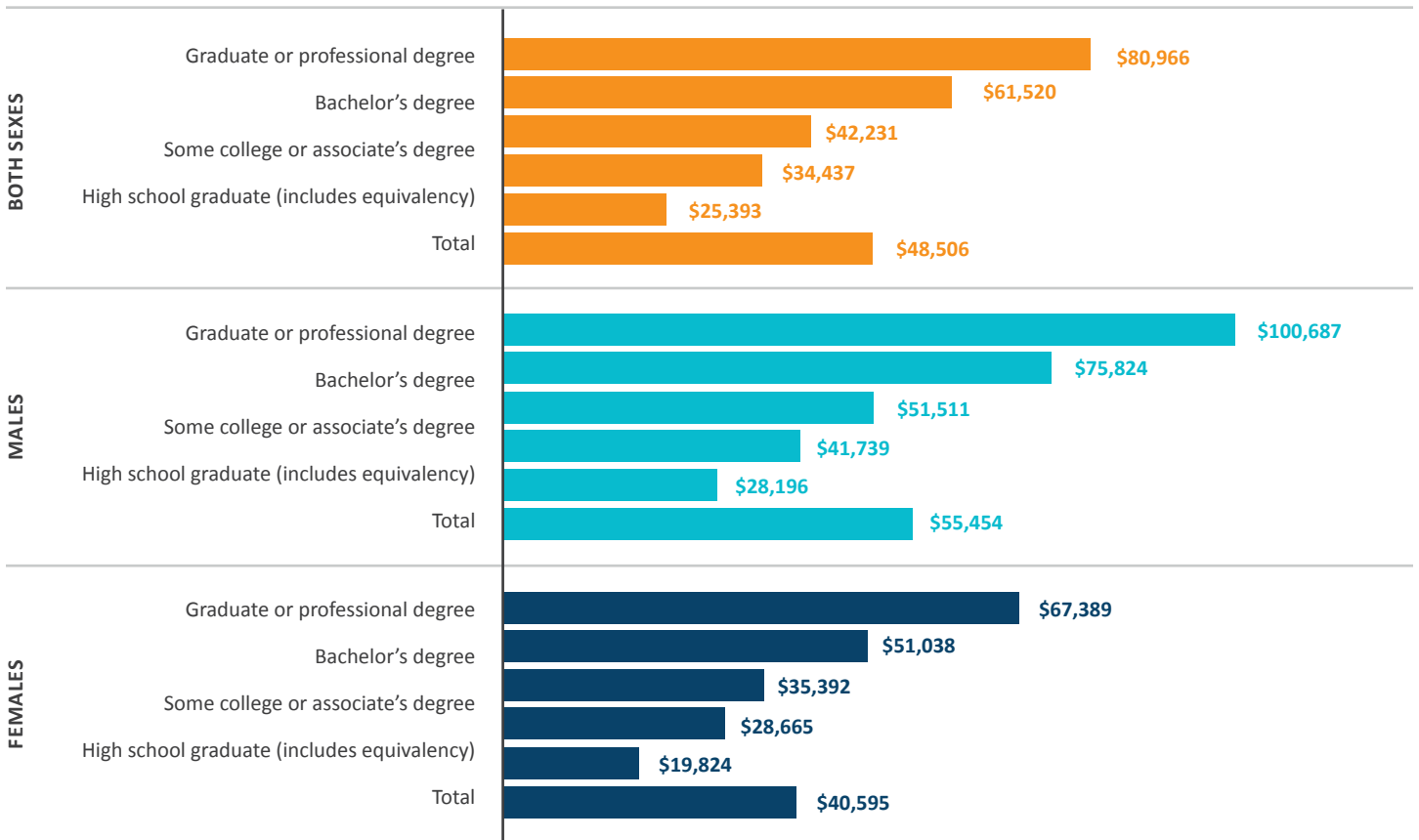**FIGURE 14: Median household income in US dollars in the past 12 months by race/ethnicity, CT, 2013–2017**

Legend: ▲ CT ● NH White ◆ NH Hispanic ■ Black* ▲ Asian*

Y-axis: HOUSEHOLD INCOME ($0K to $100K)

Asian*: 85.7K (2013), 89.3K (2014), 90.1K (2015), 90.8K (2016), 86.6K (2017)
NH White: 76.6K (2013), 79.0K (2014), 81.3K (2015), 84.0K (2016), 85.1K (2017)
CT: 67.1K (2013), 70.0K (2014), 71.3K (2015), 73.4K (2016), 74.2K (2017)
Black*: 41.5K (2013), 45.3K (2014), 45.1K (2015), 43.1K (2016), 46.3K (2017)
NH Hispanic: 37.1K (2013), 39.1K (2014), 42.7K (2015), 46.8K (2016), 46.6K (2017)

X-axis: 2013, 2014, 2015, 2016, 2017

*Include persons of Hispanic origin

Source: *U.S. Census Bureau. American Community Survey 1-Year Estimates; Tables B19013, B19013B, B19013D, B19013H, and B19013I.*

The higher one's income, the more selective a person can be. People with higher incomes have more disposable income, which translates to greater housing, food, and health services options and ultimately a longer, healthier life. Income however is closely associated with their educational attainment; the higher the degree the more income one expects to bring in. The top 10 positions with the highest annual incomes are all general and specialized providers of health services, with projected earnings to increase between 13% and 18% in the 10-year period ending in 2026[41] and all of them require years of education and training. Regardless of sex this holds true for our state, as people with graduate and professional degrees make 3.2 and 2.3 times more annually than people who have earned less than a high school degree and those who are high school and equivalent graduates, respectively (**Figure 15**). When analyzing the same median annual earnings by sex however, we can see that there is a noticeable disparity in the median earnings. Regardless of education, males earn 1.4 times what females earn, and the earnings disparity slightly increases to 1.5 times for those who have earned at least a 4-year college degree (**Figure 16**). As another way of framing the pay disparity, females with a graduate or professional degree earn less than males with a 4-year college degree annually ($67,389 as opposed to $75,824).

This pay disparity due to a person's sex persists among all race/ethnicity groups (**Figure 16**). The disparity is even more apparent when considering that Asian females and non-Hispanic White females both earned more than Black and Hispanic residents of either sex. When looking at **Figure 17**, we can see that females generally earn both High School and Bachelor's degrees at a higher rate than males across racial/ethnic groups with the exception of CT's Asian population, but that educational inequities exist statewide along racial/ethnic lines and presumably in communities that are predominantly Black and/or Hispanic. As discussed in Education section of this chapter, lack of higher educational attainment among Black and Hispanic residents in CT contributes to lower earnings for these populations. If education is, as Horace Mann once put it, the "great equalizer of the conditions of men"[42] then it is imperative that we strive to remove those barriers to quality education that exist within our communities and support initiatives and policies that promote equity in education to break the cycle of poverty. Concurrently, we must also recognize that even with higher educational attainment females do not earn the same as males, reinforcing the need for equity in pay in order to attain equity in health.

FIGURE 15: Median earnings in US dollars of full-time, year-round workers 25 years and older by sex and education, CT, 2017

BOTH SEXES

Graduate or professional degree	$80,966
Bachelor's degree	$61,520
Some college or associate's degree	$42,231
High school graduate (includes equivalency)	$34,437
Total	$48,506

MALES

Graduate or professional degree	$100,687
Bachelor's degree	$75,824
Some college or associate's degree	$51,511
High school graduate (includes equivalency)	$41,739
Total	$55,454

FEMALES

Graduate or professional degree	$67,389
Bachelor's degree	$51,038
Some college or associate's degree	$35,392
High school graduate (includes equivalency)	$28,665
Total	$40,595

*Include persons of Hispanic origin

Source: Connecticut Data Collaborative. (2017). SNAP Recipients by Town [Year: 2013–2017]. Retrieved from http://data.ctdata.org/.
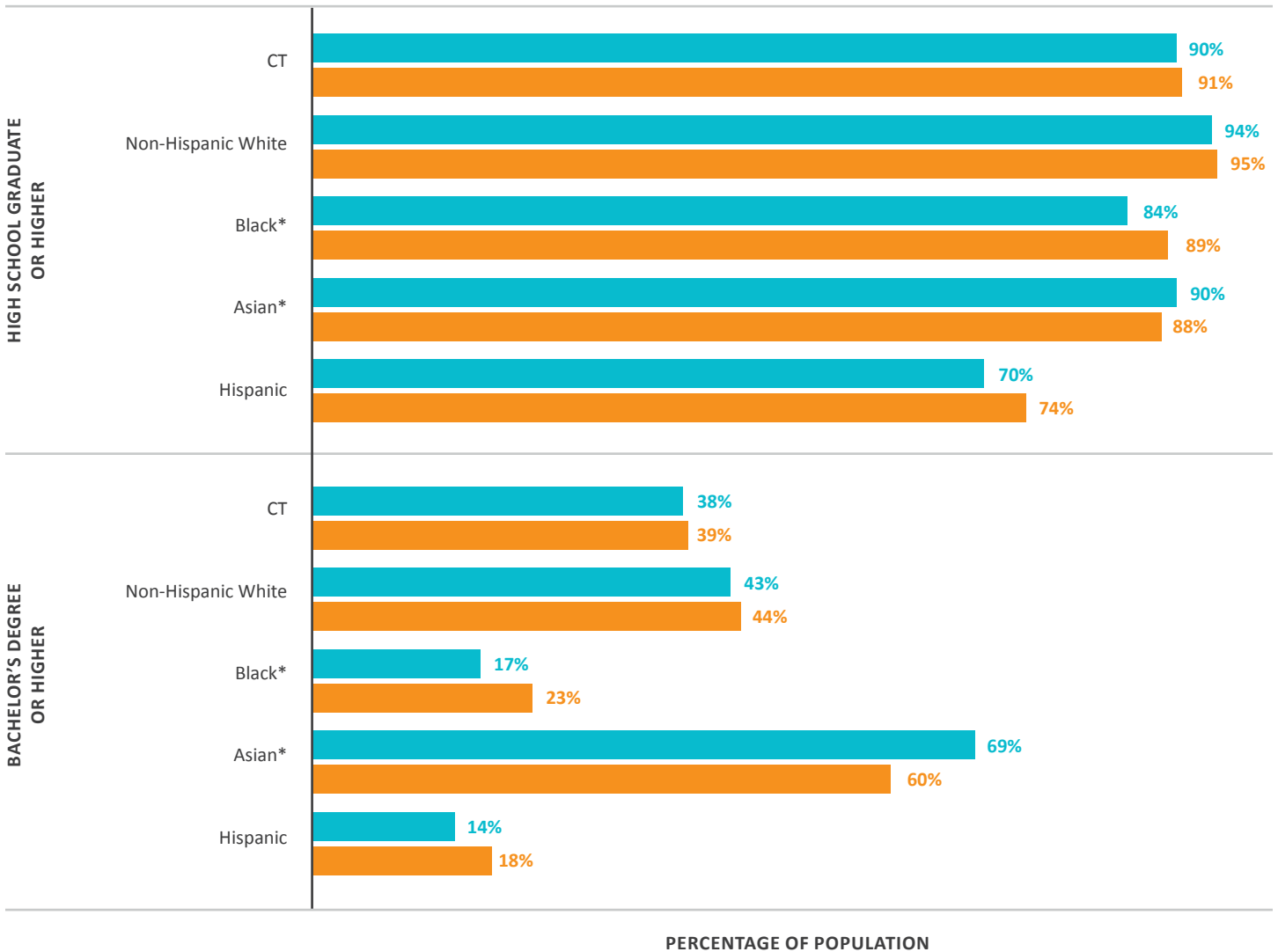
FIGURE 16: Median earnings in US dollars of full-time, year-round workers by sex and race/ethnicity, CT, 2017
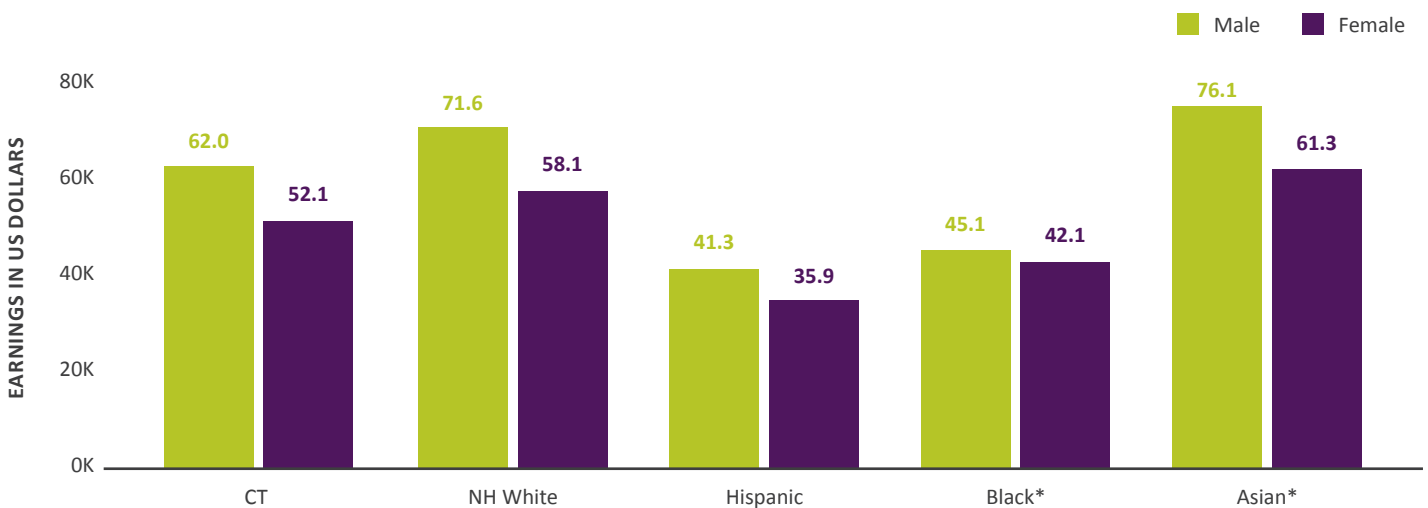
	Male	Female
CT	62.0	52.1
NH White	71.6	58.1
Hispanic	41.3	35.9
Black*	45.1	42.1
Asian*	76.1	61.3

*Include persons of Hispanic origin

Source: US Census Bureau. American Community Survey 1-Year Estimates, Table 19326.

FIGURE 17: Educational attainment rate by sex and race/ethnicity, CT, 2017

HIGH SCHOOL GRADUATE OR HIGHER

	Female	Male
CT	90%	91%
Non-Hispanic White	94%	95%
Black*	84%	89%
Asian*	90%	88%
Hispanic	70%	74%

BACHELOR'S DEGREE OR HIGHER

	Female	Male
CT	38%	39%
Non-Hispanic White	43%	44%
Black*	17%	23%
Asian*	69%	60%
Hispanic	14%	18%

PERCENTAGE OF POPULATION

*Include persons of Hispanic origin

Source: US Census Bureau. American Community Survey 1-Year Estimates, Table S1501.

POVERTY

The federal government by way of the Department of Health and Human Services annually publishes Federal Poverty Guidelines (FPG; colloquially referred to as the Federal Poverty Level)[43] that inform programs to determine eligibility for services, such as the National School Lunch Program, which provides free meals to children from households with incomes at or below 130% FPG and reduced-price school meals to those children whose households have an income between 130% to 185% of the FPG. These guidelines are not to be confused with the Federal Poverty Threshold (FPT), which is a statistic produced by the US Census, can vary by family size, and account for changes in cost of living.[44] Although knowing the distinction between these two metrics is important, our residents who live below and around the FPT or are eligible for services due to the FPG are at greatest risk for poor health outcomes due to lack of economic resources, the burden of deciding how to use these limited economic resources, and the inability to easily choose in which communities to live.

10

FIGURE 18: Percentage of residents living in poverty by race and ethnicity, CT; 2007, 2012 and 2017
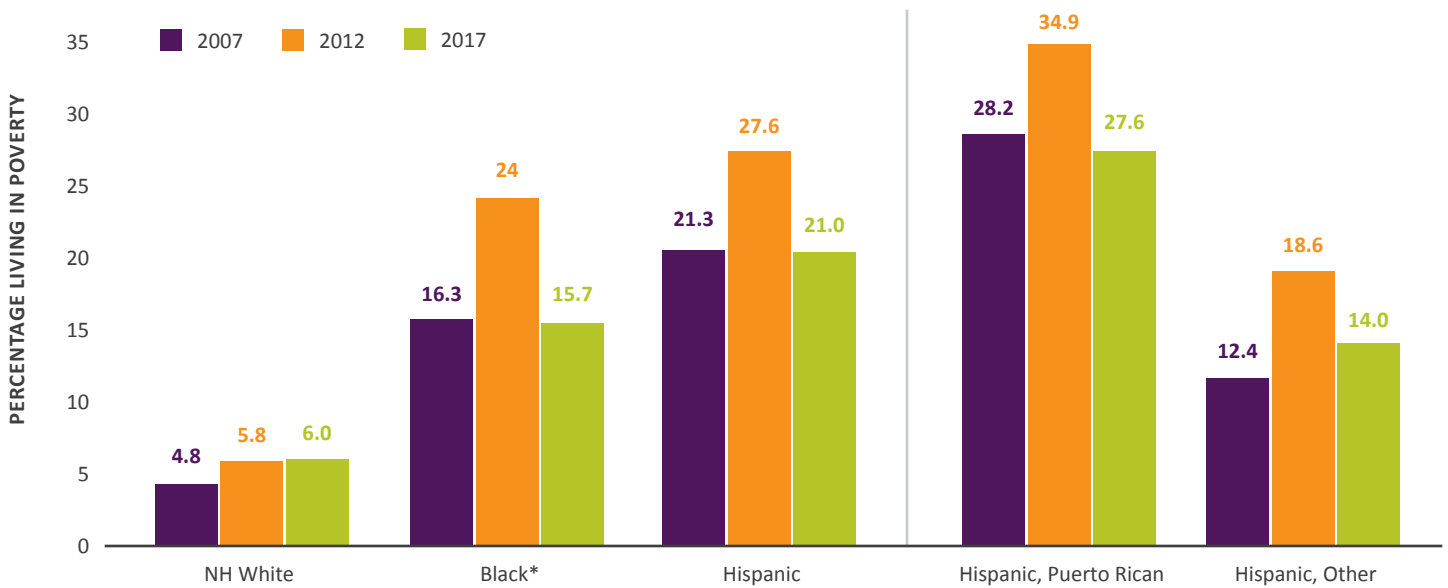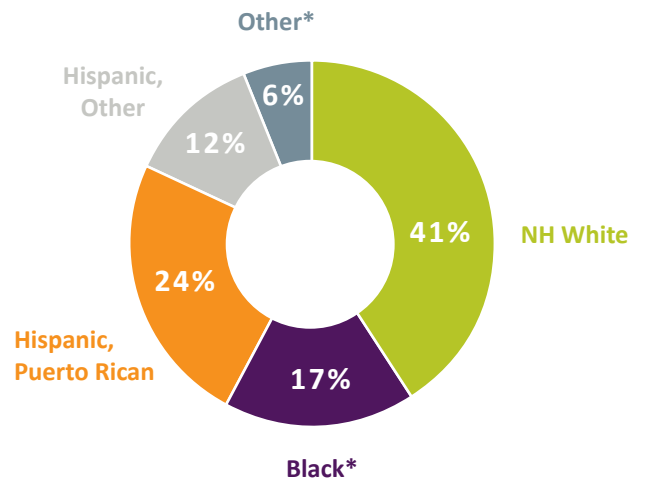

Source: US Census Bureau. American Community Survey 1-Year Estimates, Table S1701.

Poverty affects many of our Connecticut residents. In 2017, 1 in 10 residents in our state lived on incomes below the FPT.[45] And of those who do live in poverty 55% are either Black or Hispanic children as opposed to only 5.5% of non-Hispanic White children statewide.[46]

Poverty is often associated with race and ethnicity. In Connecticut, persons of color are far more likely to live in poverty than non-Hispanic White residents (**Figure 18**). In 2017,6% of non-Hispanic Whites lived in poverty compared with 15% of Black residents and 21% of Hispanic residents.[45] Recognizing that Connecticut as a state has the highest concentration of Puerto Ricans living off the island (about 8.2% of the total population in 2017)[47] and many of these Puerto Ricans live in our urban centers where poverty is highest, residents who identify as Puerto Rican were broken out as a separate race/ethnicity group from Hispanics of other countries of origin. The disaggregation of Puerto Ricans from other Hispanics proved meaningful as Puerto Ricans had the highest rates of poverty at 27.6% in 2017 — substantially higher than both Black residents and other Hispanic residents.[45]

FIGURE 19: Distribution of race and ethnicity among those living in poverty, CT, 2017

*Include persons of Hispanic origin

Source: US Census Bureau. American Community Survey 1-Year Estimates, Table S1701.

While non-Hispanic White residents have the lowest rate of poverty among the race/ethnicity groups, they actually represent the largest share of residents living in poverty (41%) due to our state's largely non-Hispanic White composition (**Figure 18**) and their rate of poverty in 2017 remains higher than the pre-recession rate in 2007 (**Figure 19**).[45] When viewed through an equity lens, however, the percentage of non-Hispanic White residents who live in poverty is less than half that of the next lowest poverty rate among persons of color. Poverty in Connecticut remains disparate for our populations of color.

Using the FPT to assess economic plight in CT can mask the true extent of inadequate incomes. The estimate of a living wage for a family of 3 in Connecticut in 2017 was $59,502, which is $40,000 higher than the FPT and even higher than 200% of the FPT by $20,000 (**Table 1**).[48] With the state's high cost of living, residents earning below 200% of the FPT are at risk for the same poor outcomes associated with poverty. In Connecticut, 23% of our state population lives below 200% FPT. While Connecticut does have high rates of poverty in our urban centers, the map presented in **Figure 20** shows that families all across CT are struggling to make ends meet. While poverty is concentrated within our urban centers, CT's suburban and rural residents also experience high levels of economic distress.
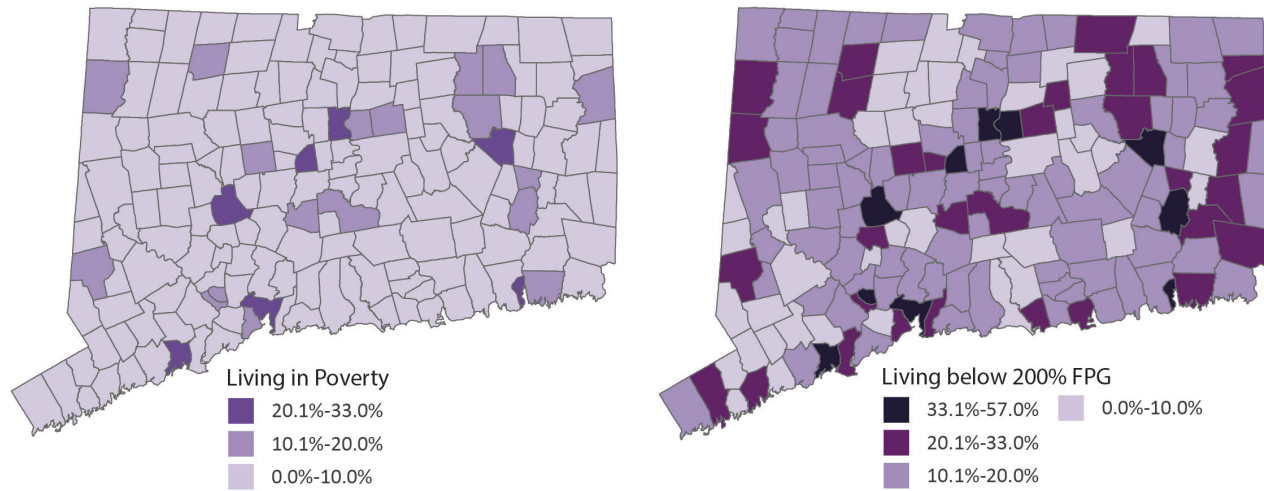
Employment

An individual's access to health resources and services and healthy options is generally dictated by his or her income. Higher incomes are directly associated with higher educational attainment and the likelihood of employment, which also is i ndicative of an individual participating in employer-sponsored health insurance. While unemployment and income are interlinked, examining unemployment rates both overall and among specific population groups allow us to better understand who in our state is actively seeking employment and how we can better direct resources to where they are most needed.

UNEMPLOYMENT

Unemployment is defined by the federal government as people 16 years and older "who are jobless, looking for a job, and available for work;" individuals who are retirees or homemakers and are not seeking employment are not considered to be part of the workforce and not factored in analysis.[49]

The Great Recession caused national unemployment levels to nearly double from 4.6% in 2007 to a peak of 9.6% in 2010 and gradually returned to pre-recession levels by 2016 at 4.9%.[50]

TABLE 1: Poverty thresholds by family size, CT, 2017

LIVING WAGE FOR FAMILY OF 3 IN CT: $59,502

FAMILY SIZE	FEDERAL POVERTY THRESHOLD	200% OF THE POVERTY THRESHOLD
One person	$ 12,488	$ 24,976
Two people	$ 15,877	$ 31,754
Three people	$ 19,515	$ 39,030
Four people	$ 25,094	$ 50,188
Five people	$ 29,714	$ 59,428

Sources: *Glasmeier, A.K., and MIT. (2004) Living Wage Calculation for Connecticut [Living Wage Calculator]. Data analyzed September 15, 2019. Retrieved from https://livingwage.mit.edu/states/09; US Census Bureau. Poverty Thresholds – 2017. Retrieved from www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html.*

FIGURE 20: Proportion of residents living in poverty and 200% of FPT by town, 2013–2017

Living in Poverty
- 20.1%-33.0%
- 10.1%-20.0%
- 0.0%-10.0%

Living below 200% FPG
- 33.1%-57.0%
- 20.1%-33.0%
- 10.1%-20.0%
- 0.0%-10.0%

Source: US Census Bureau, American Community Survey 5-Year Estimates, Table S1701.

FEMALE-HEADED HOUSEHOLDS CONCENTRATED AMONG BLACK AND HISPANIC/LATINO HOUSEHOLDS

Female-headed households tend to be poorer and at highest risk for food insecurity.[*]

- Almost one in three female-headed households report household incomes less than 125% of the poverty level, compared to 4.9% of married households.[**]

- 16.3% of CT households are female-headed, with no husband present. When analyzed by race/ethnicity, female heads of households comprised:[**]

  + 8% of Asian households.

  + 11% of non-Hispanic White households.

  + 30% of Hispanic/Latino households.

  + 36% of Black or African American households.

[*] *Bay Area Regional Health Inequities Initiative. Applying Social Determinants of Health Indicator Data for Advancing Health Equity*

[**] *US Census Bureau (2017). American Community Survey 1-Year Estimates. B11002: Household Type by Relatives and Nonrelatives for Populations in Households.*

Connecticut experienced a similar pattern of unemployment rates over time although the State has lagged behind the recovery seen regionally (**Figure 21**); however, our rate peaked at 9.1% in 2010 and then remained slightly above the national rate from 2012 through 2018.[51] As of 2018, the unemployment rate has dropped below pre-Great Recession levels to 4.1%.

Despite its higher per capita and household median income levels and lower poverty level than the nation, Connecticut fared no better than the US as a whole in terms of unemployment rates. Nonetheless, when looking at unemployment rates based on education level, higher attainment of education had a mitigating effect on the likelihood of being unemployed. As demonstrated in **Figure 22**, CT residents with a Bachelor's degree or higher were least affected by unemployment during the past decade.[52] Retaining employment has a well-established association with good individual health that carries social, psychological, and financial benefits and an overall decrease to the societal cost of healthcare.[53] In addition, research indicates

that unemployed people reported both physical and mental health status improvement when they were recipients of unemployment benefits as a higher income allows people to consume and utilize more healthy goods and services.[54] Of note, the study also indicated that people who were single and Black were more likely to not receive unemployment benefits while those who did were more likely to be married, White, male and to have higher household incomes, highlighting yet another inequity in this safety net service.[54]

When analyzing unemployment by race/ethnicity, we see that higher percentages of non-Hispanic White and Asian residents are employed, compared to Hispanic/Latino and Black residents. Earlier in this chapter, **Figure 3** highlighted educational attainment disparities among our residents of different races and ethnicities; **Figure 23** affirms that if our State crafts policies that consider the inequities in our education system we can ultimately impact economic determinants of health.

**FIGURE 21: Unemployment rate (seasonally adjusted); US, New England and CT; 2009–2018**
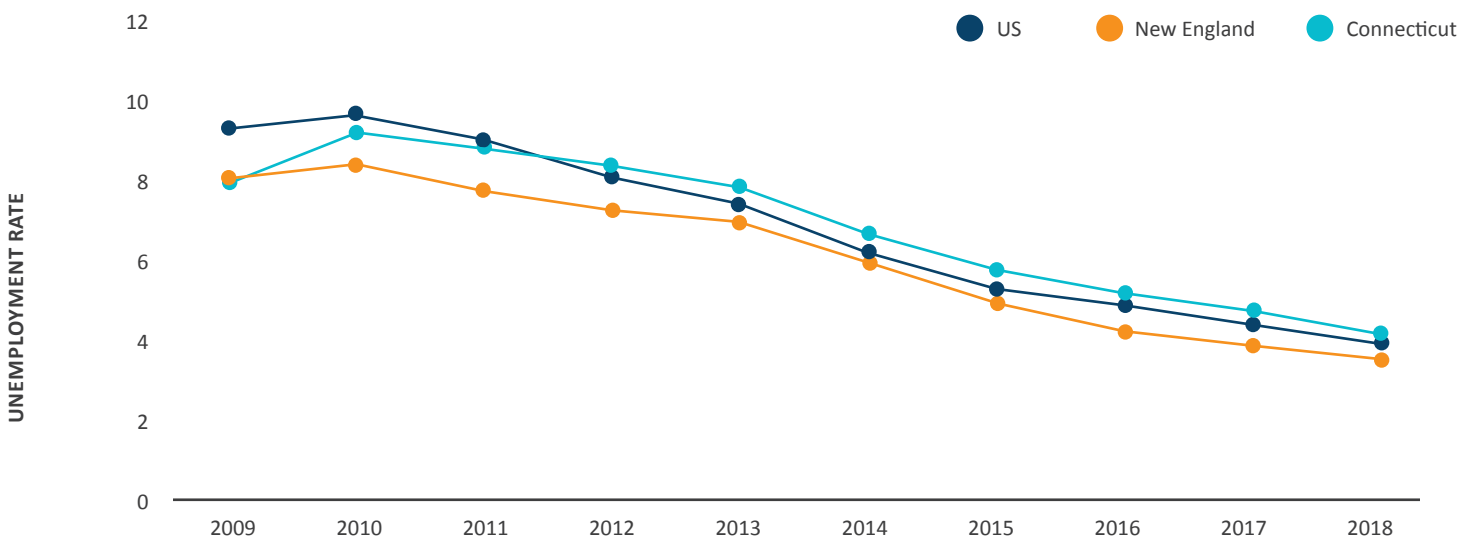
Source: US Bureau of Labor Statistics. New England – Labor Force Statistics. Retrieved from www.bls.gov/regions/new-england/data/xg-tables/ro1xg02.htm. Data analyzed December 12, 2019.

FIGURE 22: Unemployment rate by educational attainment, CT, 2010–2017
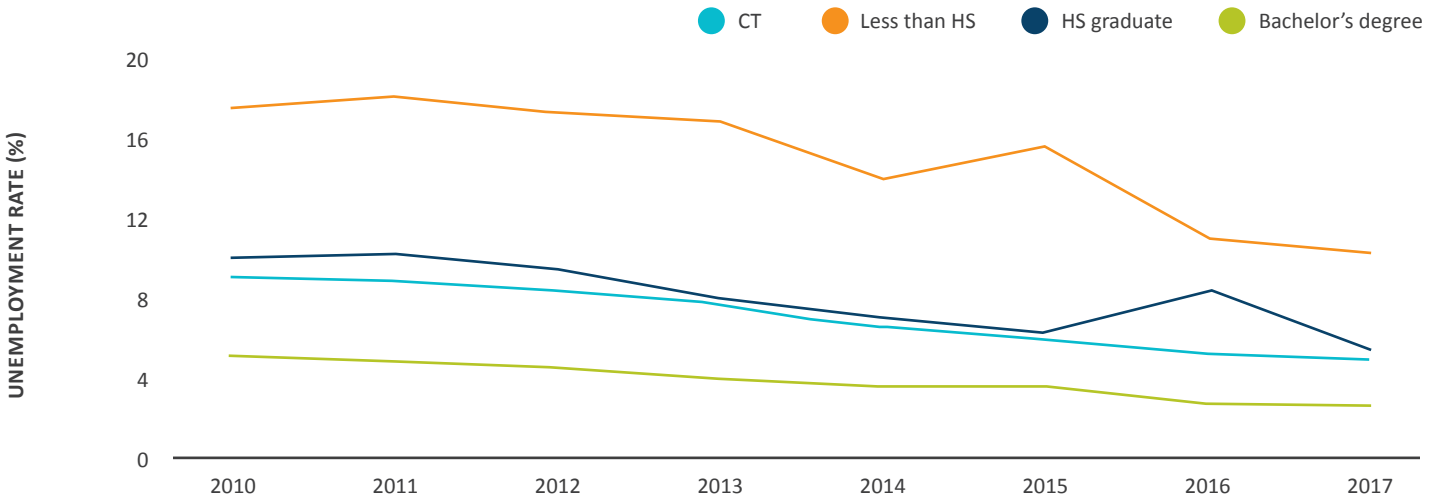
Source: *US Census Bureau. American Community Survey 1-Year Estimates, Table S2301. Data analyzed December 12, 2019.*

FIGURE 23: Percentage unemployed by race/ethnicity, CT, 2017
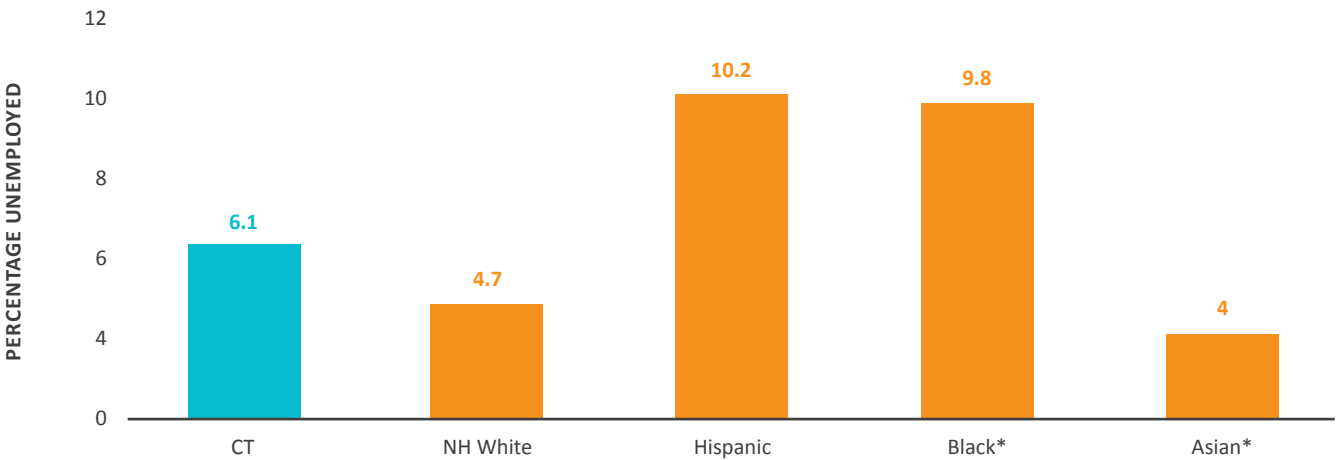
* Include persons of Hispanic origin

Source: *US Census Bureau. 2005–2017 American Community Survey 1-Year Estimates, Table S2301.*
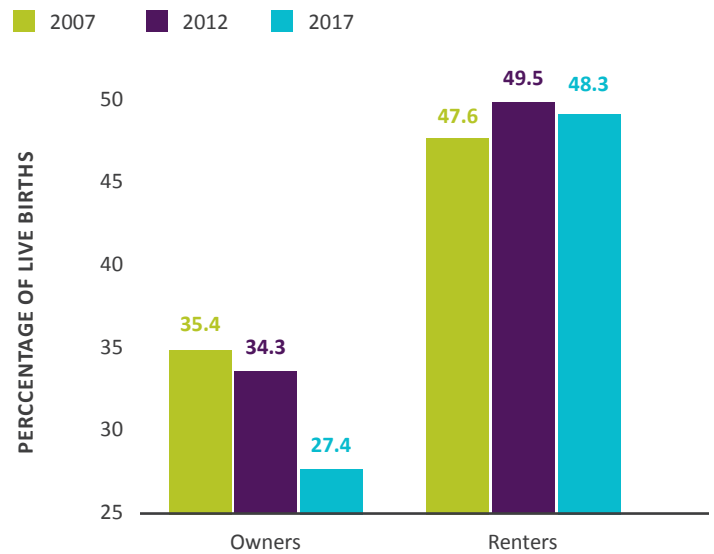
Housing

Among the many environments we frequent in our daily lives, where we live and the affordability, stability, and quality of our housing are influential on our health and well-being.[55]

HOUSING AFFORDABILITY AND STABILITY

Households are considered cost burdened when they spend more than 30% of their gross income on housing.[56] In 2017, an estimated 27% of owners and 48% of renters in Connecticut were cost-burdened (**Figure 24**).[18] Being cost burdened limits a household's ability to afford health promoting necessities, such a safe housing, fresh foods, and healthcare. Cost-burdened households are also at greater risk for housing instability as a change in employment status or unforeseen costs such as medical expenses could create financial hardship and possible displacement or eviction.[57] Housing instability for children has been associated with poor physical health.[55]

Connecticut's changes in housing costs over time are similar to the US and our neighboring states in that gross rents have risen more than owners' costs.[58;59] In Connecticut, the median housing costs for owners were estimated at $1,616 in 2017 which is the same as 2007. In contrast, Connecticut's gross rents in 2017 were estimated at $1,125 which is 20% higher than 2007. The increase in gross rents but not owner costs may explain why the percentage of owners in Connecticut who are cost-burdened has decreased since 2007 while the percentage of renters who are cost-burdened has not (**Figure 24**). Furthermore, **Figure 28** highlights that housing affordability is a statewide issue. For 2013–2017, 84% of towns in Connecticut had at least 1 in 3 of their renting households meeting the criteria of cost-burdened, meaning that high rent-to-income ratios are not limited to those towns where rents are high or incomes are low. In several of Connecticut's towns, more than half of renting households are cost-burdened.

**FIGURE 24: Percentage of cost-burdened by housing tenure, CT, 2007, 2012, and 2017**

Source: U.S. Census Bureau. American Community Survey 1-Year Estimates, Tables B25064 and B25088.

HOUSING QUALITY

Our economic position also influences the quality of housing that we can access. In 1978, the federal government banned consumer uses of lead-containing paint, meaning homes built prior to this legislation are more likely to have lead-based paint. As such, we look at when housing was built to approximate the risk of lead poisoning and other home health hazards. To learn more about how lead and other home-based hazards affects housing quality, see the Environmental Health chapter.

Throughout Connecticut, the housing stock is generally older with about 70% of housing units built in 1979 or earlier.[60] Renters comprise 35% of households in housing units built before 1980 but only 30% of housing built from 1980 through present day, which indicates that newer and safer housing options are not being made available to people who most desperately need it.[60] Five cities with populations greater than 100,000 — a substantial representation of our residents — live within Hartford, New Haven, and Fairfield Counties, which have the highest percentage of older housing among all counties.

FIGURE 25: Percentage of renters with housing costs that are 30% or more of household income by town, CT, 2013–2017

Cost-burdened Renters

- 50%-78%
- 33%-49%
- 20%-32%
- 0%-19%
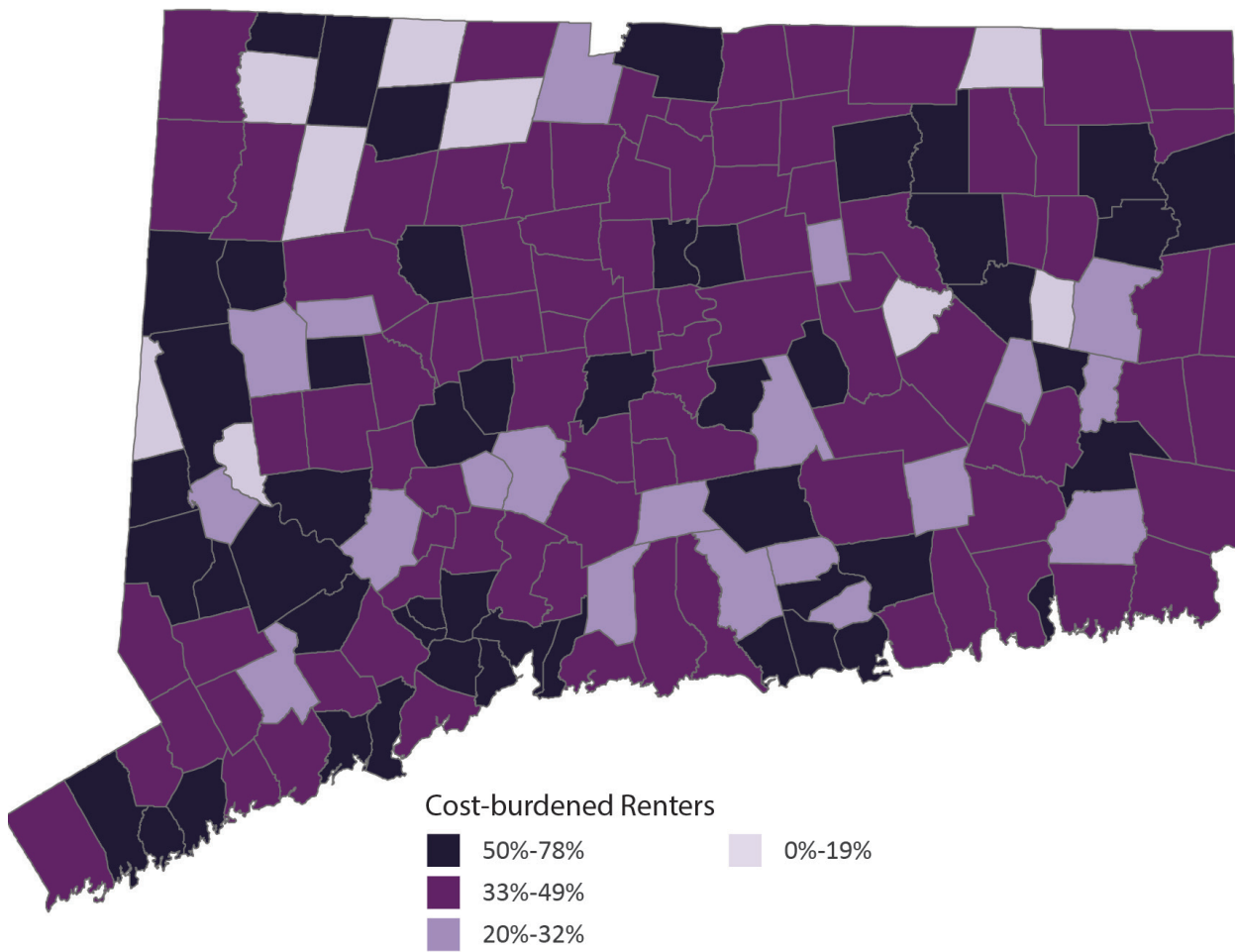
Source: *U.S. Census Bureau. American Community Survey 5-Year Estimates, Table B25106.*

CONNECTICUT'S EVICTION RATE EXCEEDS THE NATIONAL RATE

An eviction happens when landlords remove tenants from their rental unit and are involuntary for the renters, often leaving them not only without shelter but at-risk of losing their possessions. For this data, an eviction is defined as an eviction judgment issued to a renting home for any reason.

- Our state's eviction rate of 3.04 (i.e., the number of evictions per 100 rental homes) was the equivalent of 13,760 evictions per year, or 37.6 evictions per day

- Court reported statistics also indicate that our state's eviction rate is likely underestimated due to data collection difficulties

- Hartford and New Haven Counties' eviction rates exceed the state average

- Waterbury, Hartford, Bridgeport, and New Haven were ranked within the top 100 in the nation for highest eviction rates at 22nd, 29th, 39th, and 69th; respectively

FIGURE 26: Eviction rate (per 100 renter homes) for CT's five largest towns, CT, 2016
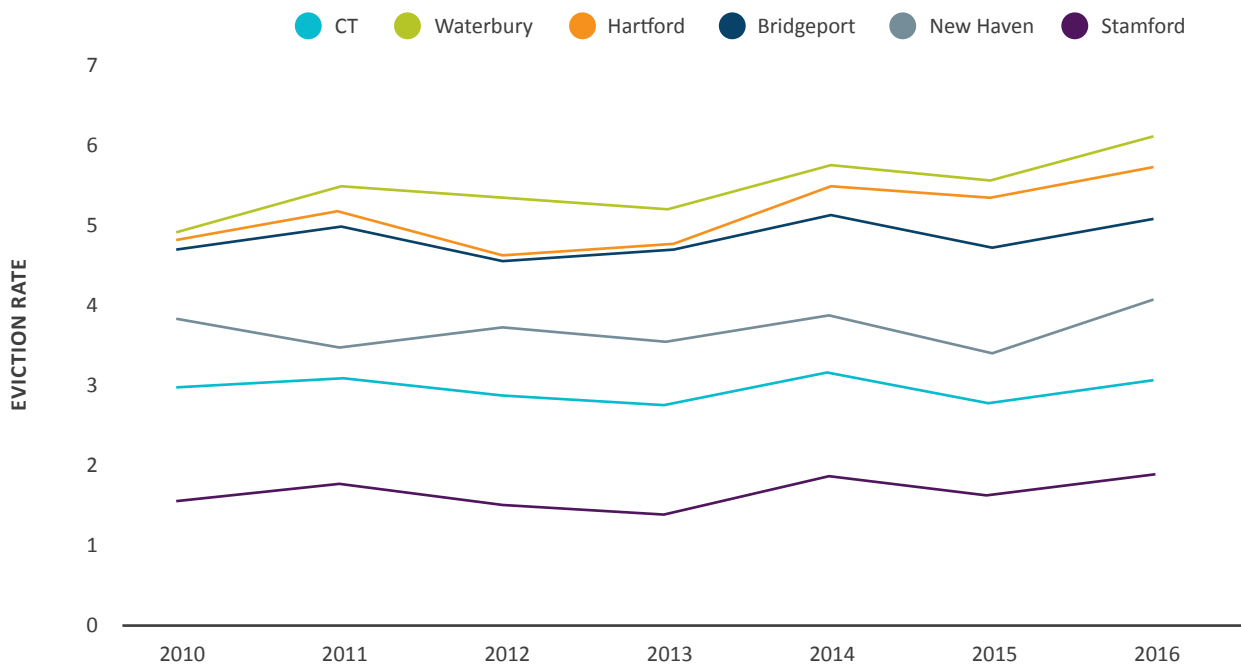
Source: Connecticut State Department of Education. Eligibility data for free and reduced lunch by school district. Retrieved from EdSight interactive data portal for 2017–2018 school year.

Source: Eviction Lab. Map & Data. Retrieved from https://evictionlab.org/map/#/2016?geography=states&type=er. Data analyzed December 27, 2019.

KEY POPULATION CHARACTERISTICS

Overall Population Size and Growth

In 2018, Connecticut was home to 3.572 million people.[61] Although the state is among the smallest in the nation, it ranked 6th in 2018 for population density. Between 2000 and 2018, Connecticut's population increased about 5% overall (**Figure 27**) with the majority of this growth occurring between 2000 and 2010. Since 2010, Connecticut is one of only three states to have a net population loss (**Figure 28**).[61;62] Within Connecticut, Fairfield County stands out as the only county that is growing. As Connecticut's largest county, Fairfield's growth of 25,000 people between 2010 and 2018 largely offset the loss of 28,000 across the remainder of the counties.

Long-term slowing of Connecticut's population growth is due, in part, to declines in the net difference between births and deaths. Connecticut's birth counts are trending down as fewer babies are being born each year due to historically low birth rates locally and nationally (see Declining Birth Counts).[63] Death counts are trending up as half of our largest age cohort (baby boomers aged 58–73 years in 2018) is now 65 or older and as opioid-related deaths continue to occur at record-level rates.[64;65] Together, the combination of fewer births and more deaths results in a slowing of Connecticut's natural population increase.[61]

While the rate of natural increase has slowed, Connecticut's population loss since 2010 is attributed primarily to large increases in domestic out-migration between 2014 and 2018. According to the US Census Bureau's Population Estimates Program, net domestic migration is negative meaning that more people move out of Connecticut for another state than vice versa.[61] At the same time, net international migration is positive meaning that more people move into Connecticut from another country than vice versa. When added together, Connecticut's net overall migration has been negative since 2012 because our domestic out-migration is greater than our international in-migration.

Net out-migration is not unique to Connecticut, but occurs in New England overall and in other regions of the United States. What makes Connecticut unique is that our level of out-migration has not yet returned to pre-recession levels while neighboring states have done so. In a report on Connecticut's Population and Migration Trends by Connecticut's Office of Policy and Management, the authors note that housing (48%), family (30%), and employment (20%) were cited as the top reasons for moving (inter- and intra-state) in the US. "We can only make the assumption that the same reasons apply for Connecticut."[66]

FIGURE 27: Population size by age group, CT, 2000–2018
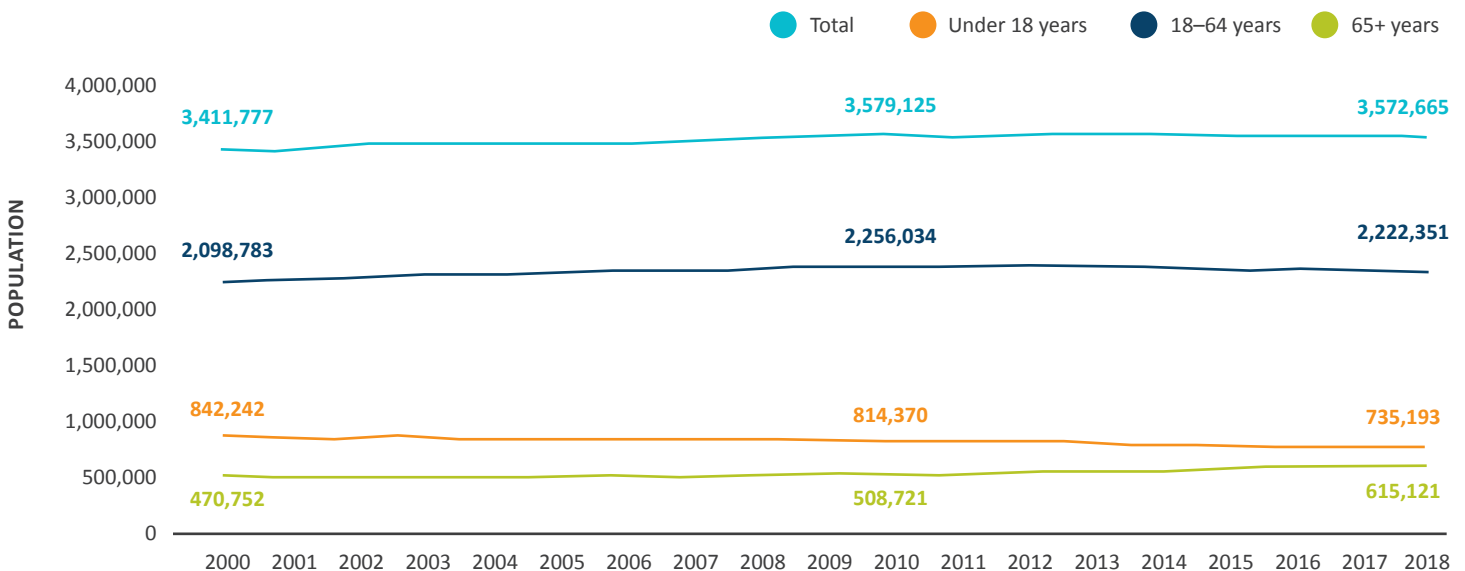
Source: US Census Bureau Population Estimates Program, Intercensal Population Estimates for Connecticut 2000–2009 & Vintage 2018 Population Estimates for Connecticut

FIGURE 28: Population change for states (and Puerto Rico) from April 1, 2010 to July 1, 2018

Percent change
- 13.50 or more
- 4.50 to 13.49
- 0.00 to 4.49
- Population loss
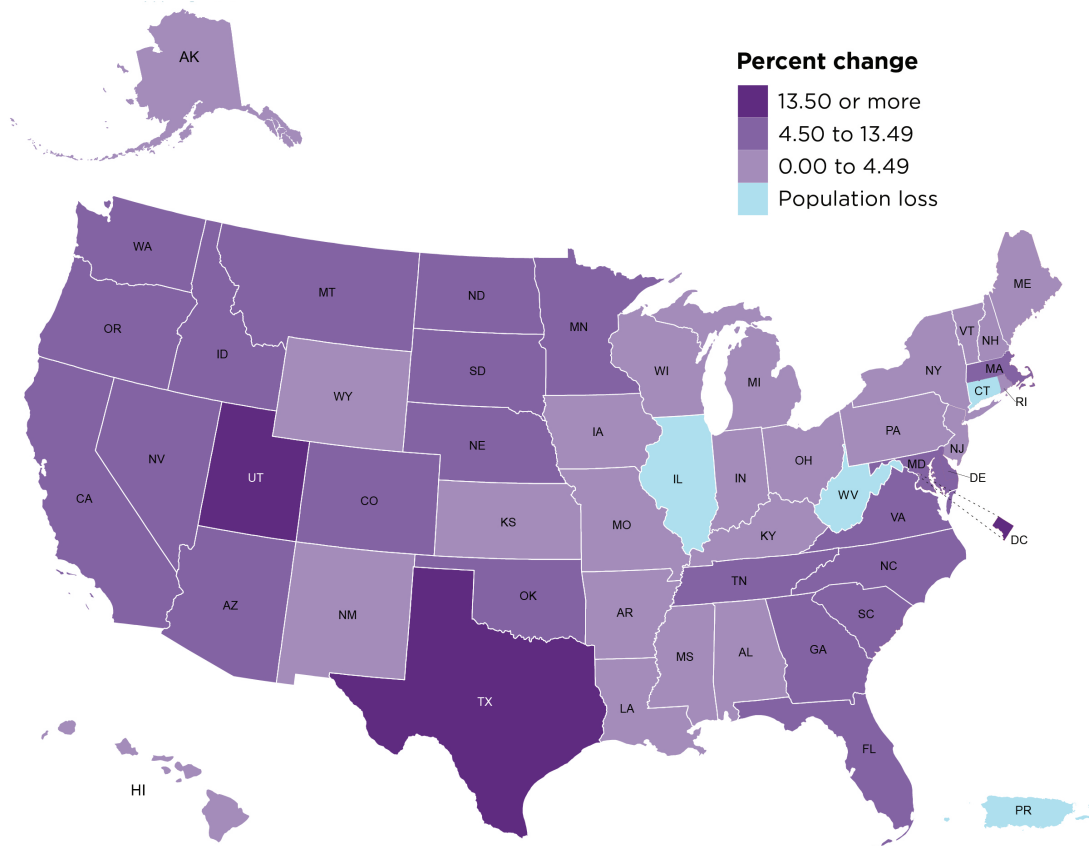
Source: US Census Bureau Population Estimates Program, Vintage 2018 Population Estimates. Retrieved from www.census.gov/library/visualizations/2018/comm/population-change-2010-2018.html.

Declining Birth Counts

Fertility rates throughout the Nation have reached historic lows in recent years.[63;67] General Fertility Rate (GFR) is the rate of births per 1,000 women of childbearing age (15–44). In 2017, Connecticut had a fertility rate of 52 per 1,000 women aged 15–44. Our rate is below the national rate of 60 but consistent with neighboring states and for New England as a whole.[63;66]

The trends in age-specific fertility rates over time have been stable in Connecticut. Teen births have steadfastly declined as an intended consequence of teen pregnancy prevention efforts. Among women aged 20–24, fertility declines have been substantial with nearly a 50% decrease in fertility since 2000. Fewer births among these women are a primary contributor to the overall declines in GFR. The GFR among women aged 25–29 years shifted lower following the great recession which contributed to an overall GFR decline between 2007 and 2010

but the steep post-recession declines have not continued (**Figure 29**). While women are delaying childbirth to later ages, evidenced by increases in fertility rates among women over 35 years of age, the magnitude of those increases do not offset the decreases seen among women under 30 years of age. Women overall are simply having fewer babies.[68]

Rate differences in fertility between race and ethnicity groups have narrowed since the great recession (**Figure 30**).[68] General fertility rates for Hispanic women and non-Hispanic Asian women have each dropped by 28% since their peaks in 2007 while non-Hispanic Black women declined 15% and non-Hispanic White women declined 6% between 2007 and 2017. The large declines among Hispanic women, who have been the most fertile in Connecticut, are also a contributor to the overall decline in births in Connecticut. Fertility levels directly impact the size and composition of the U.S. population (see Race and Ethnicity section).[69]

FIGURE 29: General fertility rates by age group, CT, 2000–2017

● All ages ● 15–19 years ● 20–24 years ● 25–29 years ● 30–34 years ● 35–39 years ● 40–44 years
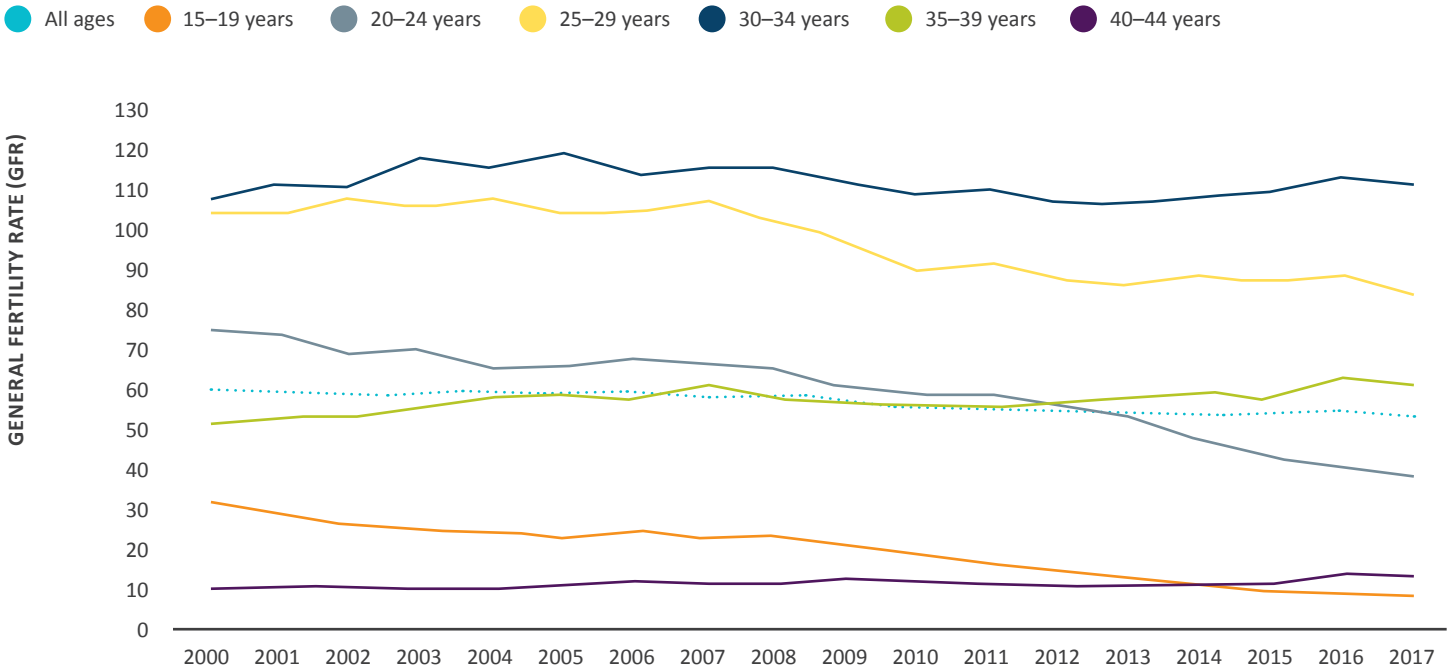
Source: CT DPH Surveillance Analysis and Reporting Unit, 2017 Registration Report

FIGURE 30: General fertility rates by race/ethnicity, CT, 2000–2017

● All races/ethnicities ● NH White ● NH Black ● NH Asian ● Hispanic
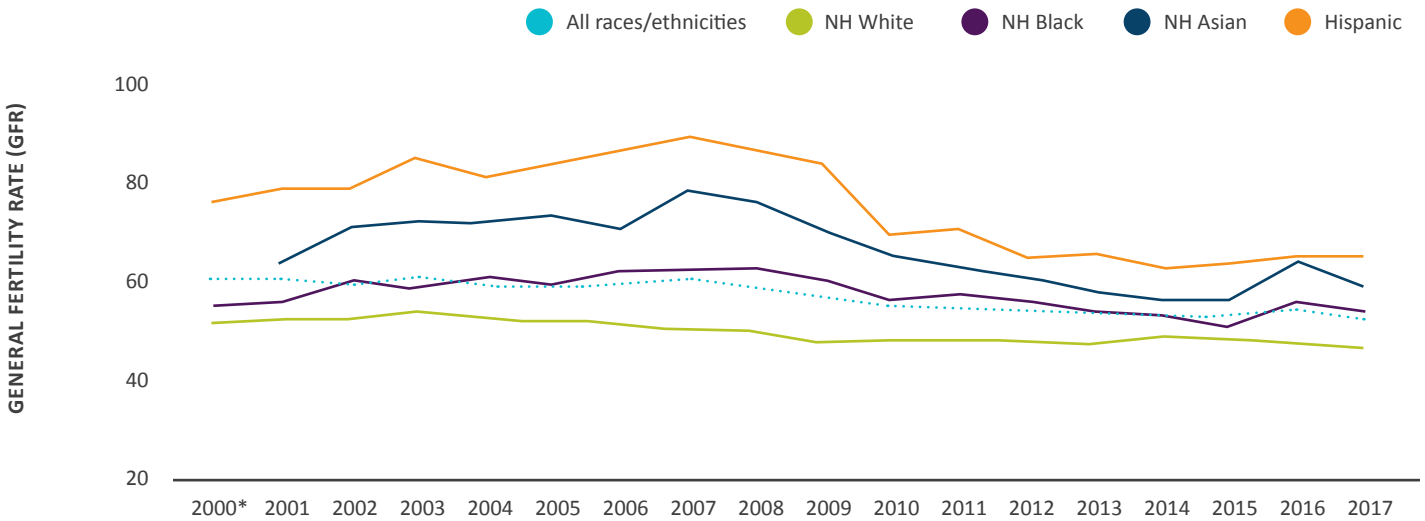
* The 2000 GFR for NH Asian is not shown due to limitations in the collection of Asian races in 2000

Source: CT DPH Surveillance Analysis and Reporting Unit, 2017 Registration Report

Gender

Gender ratios vary across the lifespan. While men slightly outnumber women at birth, men tend to die at a faster rate than women and die at younger ages than women resulting in an older population that is more female.[70;71] Life expectancy at birth is another way to summarize the gender differences in health. In 2017, Connecticut women lived on average 4.8 years longer than Connecticut men.[72] Understanding the changing risk profiles between men and women throughout their lifetimes is important to improving health outcomes.

Age

While Connecticut is not growing in size, it is changing in other ways. In particular, our population is aging. The median age of Connecticut's population increased from 37.4 years in 2000 to 40.9 years in 2017 which is higher than the United States median age of 38.1 years.[73] Among Connecticut towns, the median age ranges from 21 years to 59 years (**Figure 31**).[74] The youngest town is Mansfield, home of the University of Connecticut, with a median age of 21 years. The oldest towns are located in the Litchfield Hills and near the mouth of the Connecticut River and tend to have smaller overall populations.

FIGURE 31: Median age by town, CT, 2013–2017

Median Age
- 50-59 years
- 45-49 years
- 35-44 years
- 21-34 years
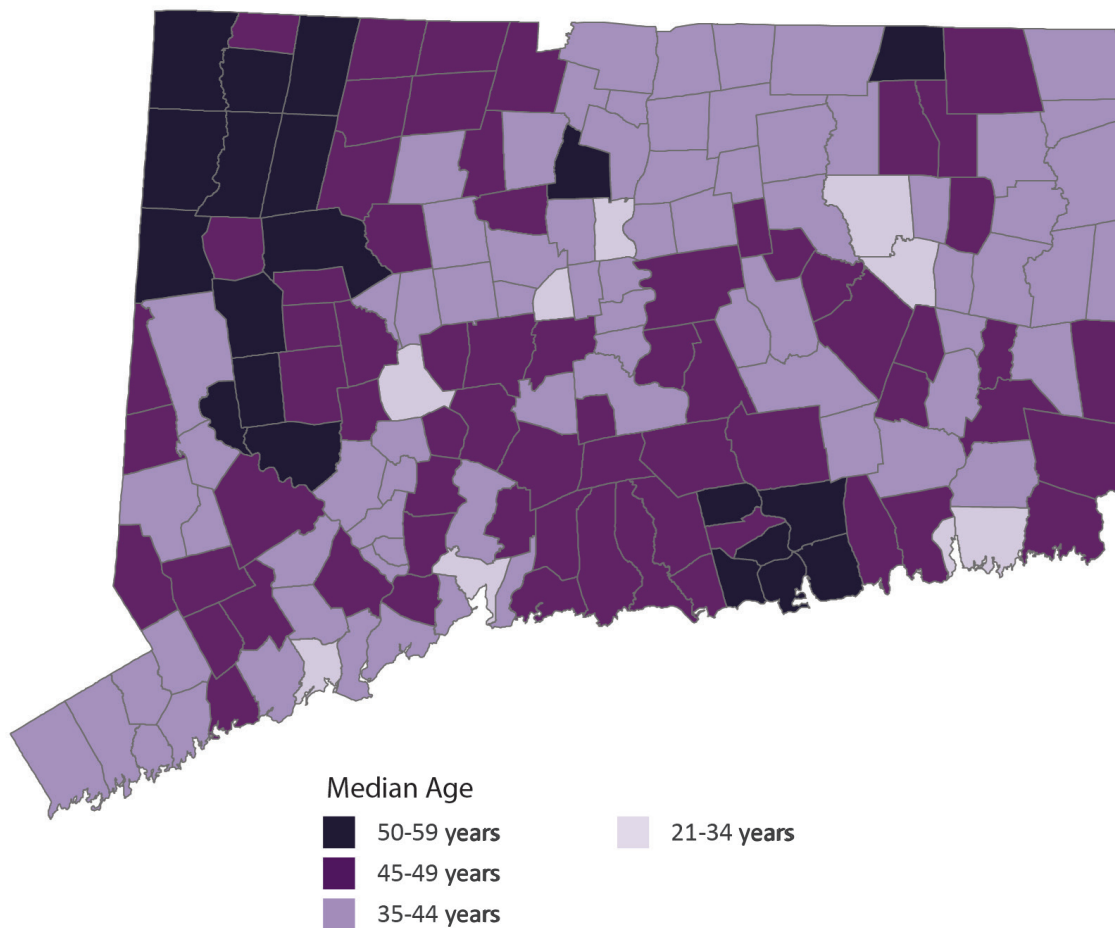
Source: *U.S. Census Bureau. American Community Survey 5-Year Estimates, Table S0101.*

Between 2000 and 2017, the number of people living in Connecticut aged 65 and older grew 28%. In comparison, the number of people aged 18–64 years grew 7% while the number of people under age 18 decreased by 12%.[75] By 2017, the number of persons in Connecticut under 15 years old was nearly the same as the number of persons aged 65 and over for the first time in history — a milestone that the nation as a whole is not expected to reach until around 2035.[75;76]

Population pyramids are useful for visualizing the age structure of our state (**Figure 32**). Comparing the pyramid for 2000 to 2017 highlights why our population is aging. The largest age co-hort (baby boomers who were aged 53 to 71 in 2017) is moving out of the working class and into the 65 and older portion of the distribution. Simultaneously, declining fertility over the past 20 years has shrunk the size of our pyramid base. Together, these changes create a population pyramid that is increasingly narrow and top-heavy.

An aging population has both economic and social implications.[77] Rising numbers of seniors and elderly increases the burden of care among their families, the health care system, and long-term care facilities, particularly those facilities that care for people with Alzheimer's disease.[78] Older people have higher rates of morbidity and many residents are living longer with multiple chronic conditions and disabilities. As the number of retirees expands over the next 10–15 years to cover the entire baby-boomer generation, Connecticut will contend with increased expenditures for Medicare and Social Security – at the same time as the tax base shrinks.[78;79]

The dependency ratio is a metric used to describe the economic burden shouldered by the working-age population. It compares the number of people outside the workforce (under 16 years and 65 years and over) to those presumed in the workforce (16–64 years). In 2017, Connecticut's dependency ratio was

FIGURE 32: Population pyramids by age and sex, CT, 2000 and 2017
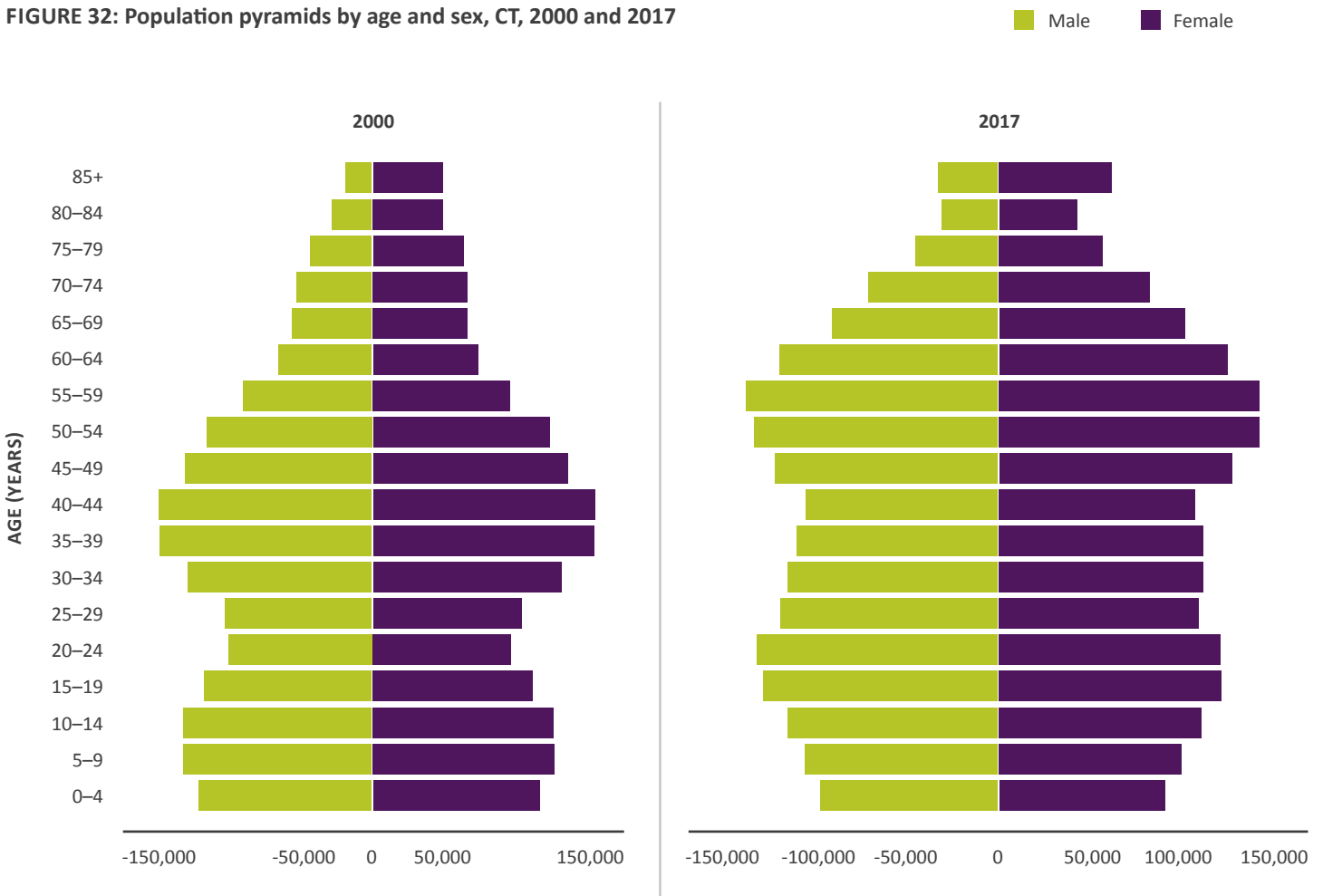
Source: U.S. Census Bureau Population Estimates Program, Vintage 2017 Population Estimates

60% meaning that there is 1.2 dependent persons for every 2 working persons in Connecticut.[80] Among our towns, the dependency ratios vary widely from as low as 20% (1 dependent person for every 5 working persons) to as high as 98% (1 dependent person for every 1 working person) (**Figure 33**).[74] The higher the dependency ratio, the greater the reliance on the working-age population to support the local and state economies.

Race and Ethnicity

Though Connecticut is increasingly diverse, it is still less racially and ethnically diverse than the United States overall. In 2017, almost 67% of Connecticut residents identified as non-Hispanic

White compared to just over 60% in the US overall.[80] Compared to New England states, Connecticut leads in racial/ethnic diversity with the largest proportion of persons of color, followed sequentially by Massachusetts, Rhode Island, New Hampshire, Vermont, and then Maine.

Between 2007 and 2017, the number of persons of color increased from 26% to 32% of the total population.[81;82] In 2017, non-Hispanic White was the largest racial/ethnic category representing 67% of the population followed by Hispanic/Latino at 16%, non-Hispanic Black/African American at 10%, non-Hispanic Asian at 4.5%, non-Hispanic Two or More (TOM) races at 2%, and non-Hispanic American Indian and Alaska Native (AIAN) at 0.2% (**Figure 34**).

FIGURE 33: Age dependency ratio by town, CT, 2013–2017

Age Dependency Ratio

- 80%-98%
- 70%-79%
- 60%-69%
- 20%-59%
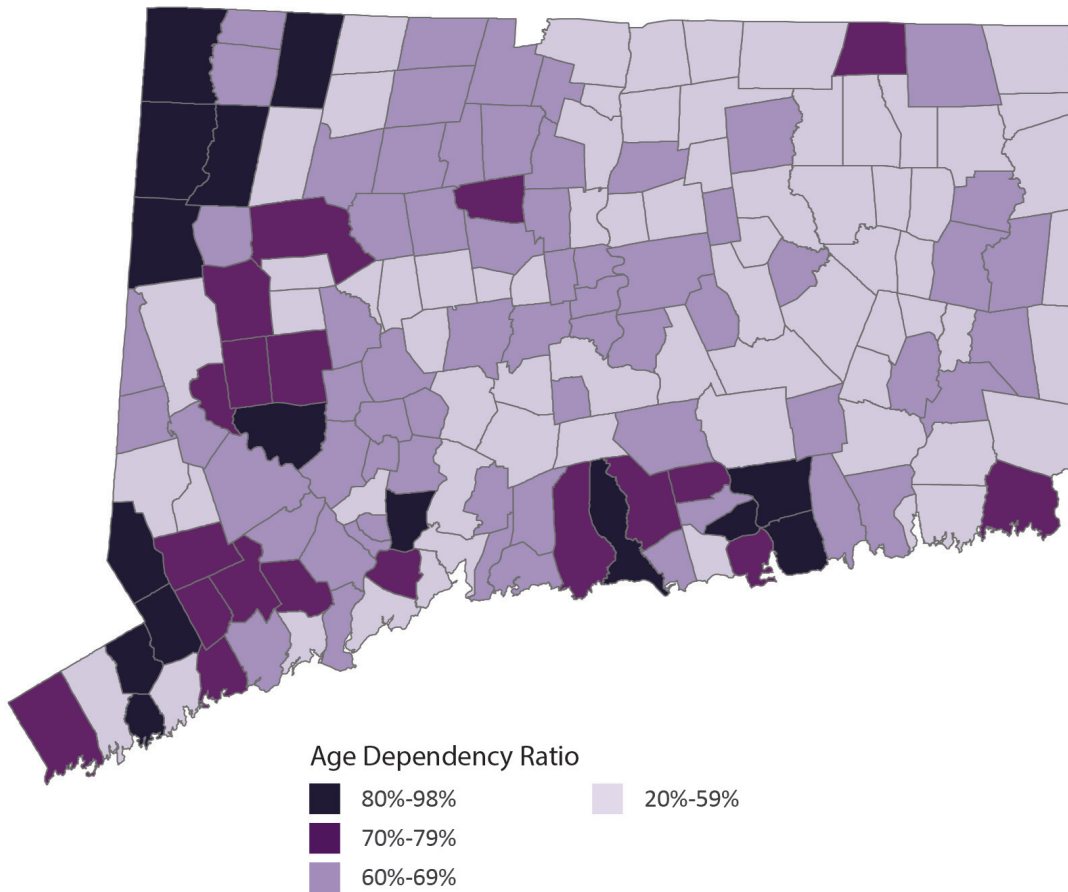
Source: *U.S. Census Bureau. American Community Survey 5-Year Estimates, Table S0101.*

FIGURE 34: Population by race/ethnicity, CT, 2000–2017
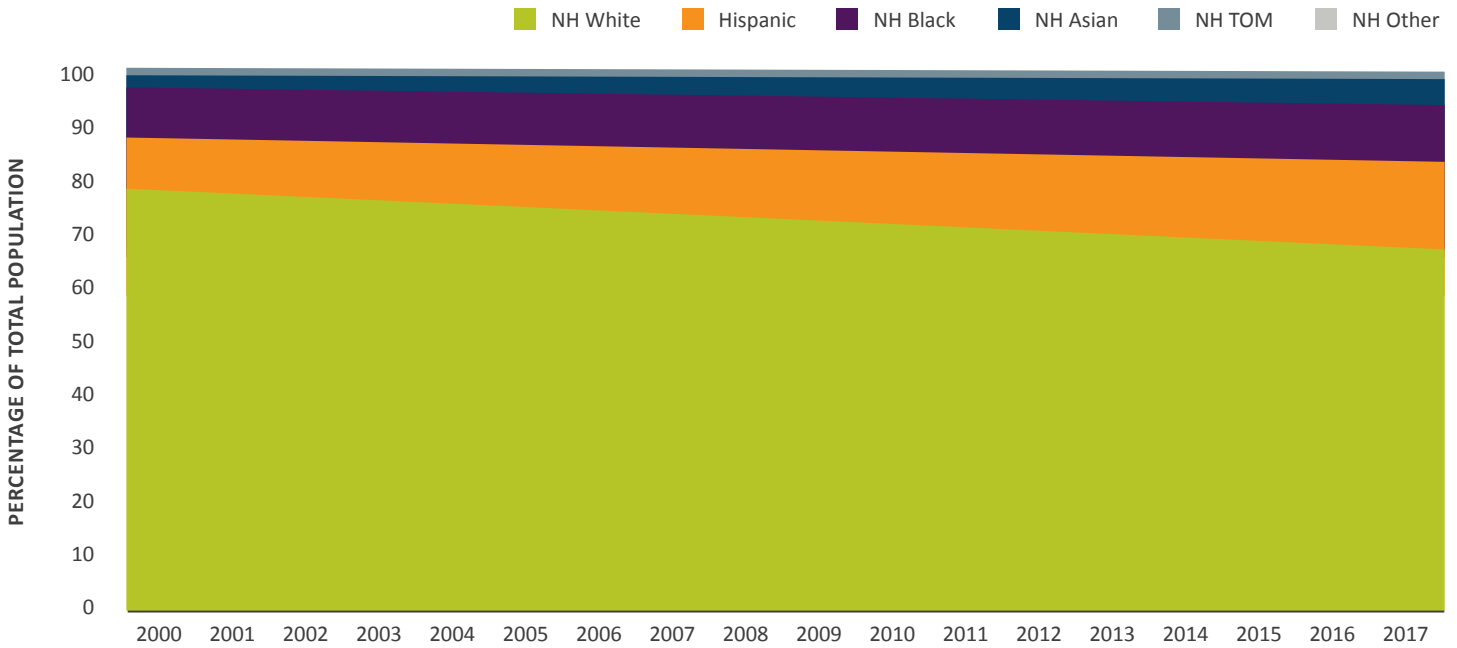
Source: US Census Bureau Population Estimates Program, Intercensal Population Estimates for Connecticut 2000–2009 & Vintage 2017 Population Estimates for Connecticut

FIGURE 35: Selected age groups by race/ethnicity, CT, 2017
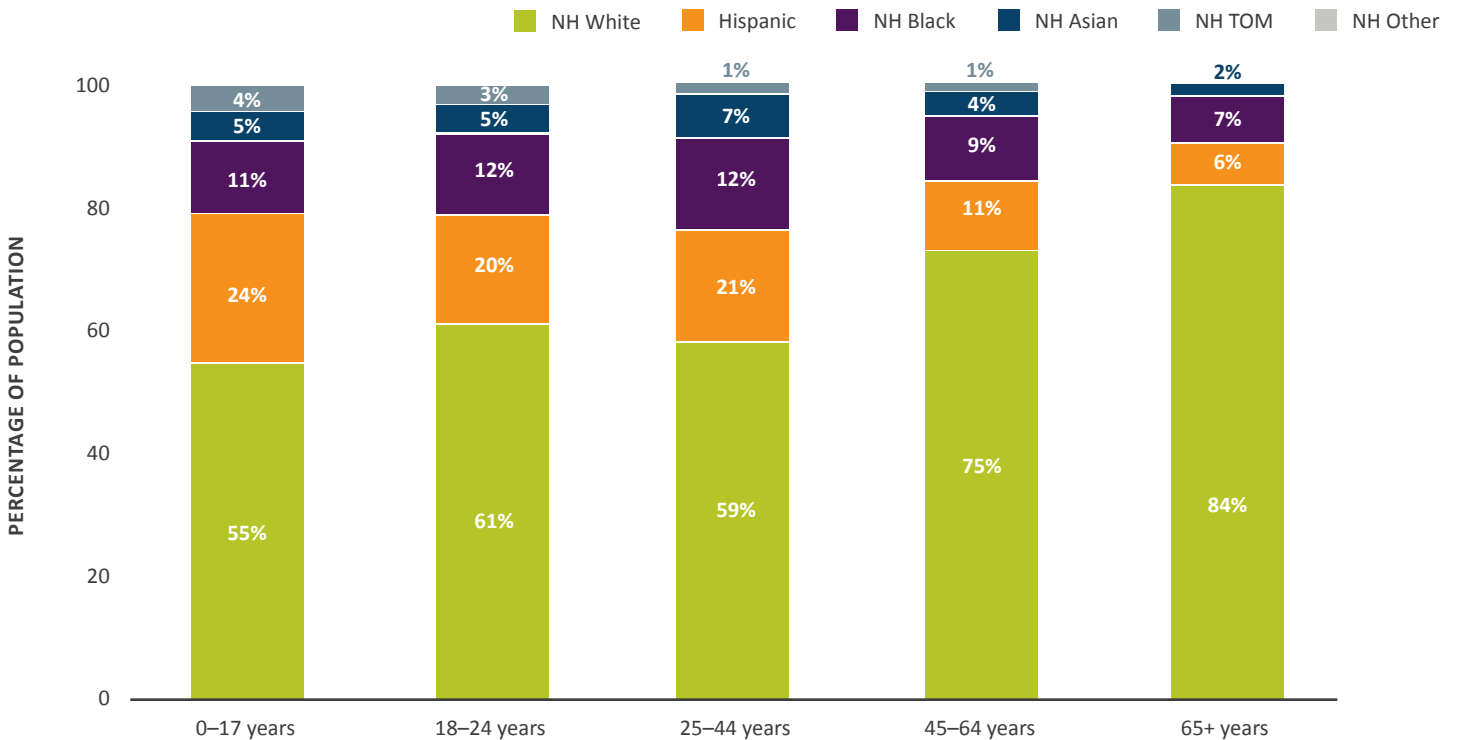
Source: US Census Bureau Population Estimates Program, Vintage 2017 Population Estimates for Connecticut

Connecticut maintains the highest proportion of Puerto Rican residents among all 50 states and D.C. In 2017, 8% of the state's population identified as Puerto Rican — higher than other top ranked states (New York State at 6%, Florida at 5%, New Jersey at 4%).[83] The distribution of Hispanic origins in Connecticut is markedly different than the United States as well. Nationally, the Hispanic population is 18% overall and is comprised of 11% Mexican, 2% Puerto Rican, and 5% Other Hispanic. In Connecticut, the Hispanic population is 16% overall and comprised of 2% Mexican, 8% Puerto Rican, and 6% Other Hispanic.[83]

Race and ethnicity varies by age (**Figure 35**).[83] In 2017, the median age for Hispanic and Black residents was 29 years and 34 years respectively while non-Hispanic White residents had a median age of 47. The median age was lowest among those identifying as two or more (TOM) races (19 ½ years). In 2017, 54% of the population under age 5 was non-Hispanic White compared with 84% of the population aged 65 and older.[83]

The racial/ethnic composition of the population varies by geography (**Figure 36**). About half of the state's persons of color live in just eight of Connecticut's towns (Bridgeport, Hartford, New Haven, Waterbury, Stamford, Norwalk, New Britain, and Danbury).[7] Towns with the highest percentages of persons of color are Hartford (85%), Bridgeport (79%), and New Haven (70%). For the years 2013–2017, Connecticut had 21 towns where at least 1 in 3 residents were persons of color — up from 15 towns in 2005–2009.

FIGURE 36: Percent of the population who are persons of color by town, CT, 2013–2017
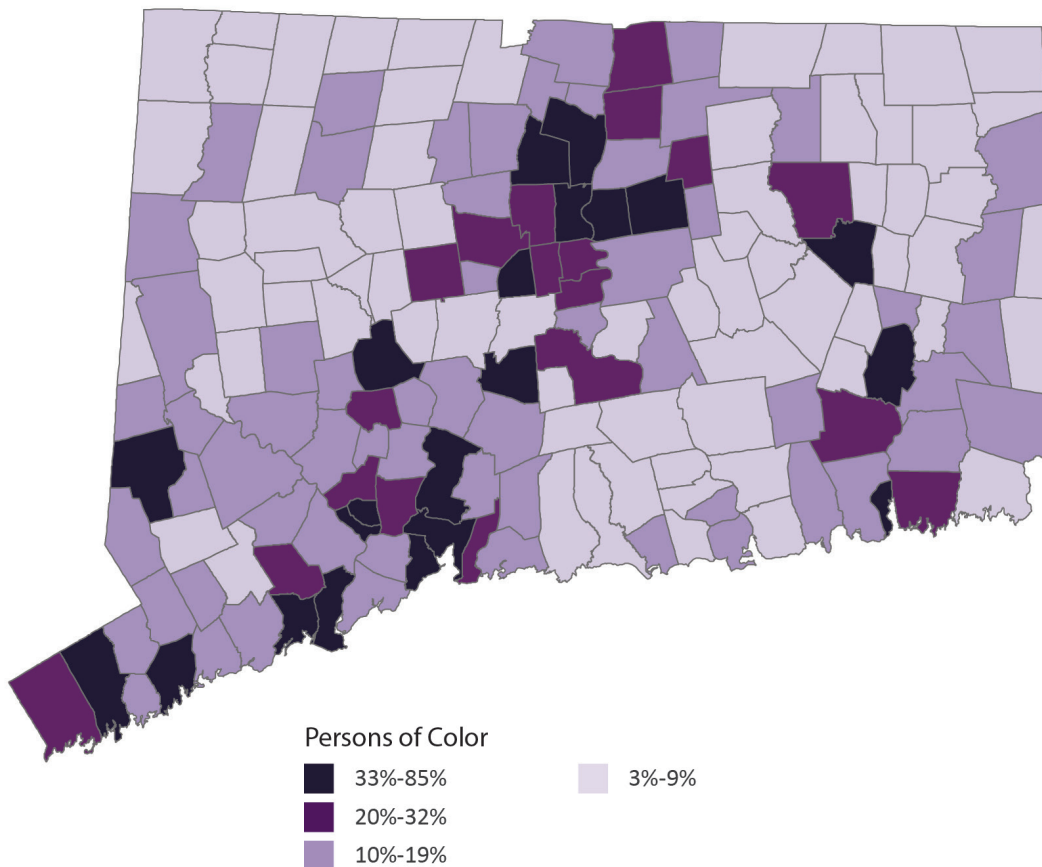

Persons of Color

- 33%-85%
- 20%-32%
- 10%-19%
- 3%-9%

Source: *US Census Bureau. American Community Survey 5-Year Estimates, Table DP05.*

Marital Status

Among Connecticut residents aged 15 years and older, 35% have never married, 47% are married, 12% are divorced or separated, and 6% are widowed.[84] These proportions mirror those seen at the national level and other New England states. The percentage of the population that has never married has increased slightly from 33% in 2010.[84;85] Between 2010 and 2017, the percentage of the population aged 35 and older that was married remained the same at 69%. Black and Hispanic residents are more likely to have never married than Asian and non-Hispanic White residents (**Figure 37**).

While not limited to residents of Connecticut, the State registered 19,943 marriages in 2017 of which 3% were same sex marriages. Mean age at first marriage for men was 31.8 years and for women was 30.2 years.[68]

Country of Birth and Language Use

In 2017, an estimated 14.7% of Connecticut residents were born outside of the United States, which is slightly higher than the national rate of 13.7% and New England rate of 13.4%.[86] Just under half of those foreign-born residents were born in Latin America (i.e., countries in South and Central America, as well as certain Caribbean nations), one quarter were born in Europe, and one quarter were born in Asia (**Figure 38**).[87] While Connecticut's overall percentage of residents born in Latin America is similar to the national percentage of 50%, our residents are much less likely to have been born in Central America (12% in Connecticut versus 33% in the US) than the Caribbean or South America.

The likelihood of speaking a language other than English at home is much higher for foreign-born residents (76%) than native residents (13%); yet, Connecticut's foreign-born residents were still more likely to report "only English spoken at home" (24%) than all US foreign-born residents (16%). Of those who speak a language other than English at home, Spanish was the most commonly spoken other language (54%) followed by Other Indo-European languages (29%) and Asian languages (11%).

FIGURE 37: Marital status by race/ethnicity, CT, 2017
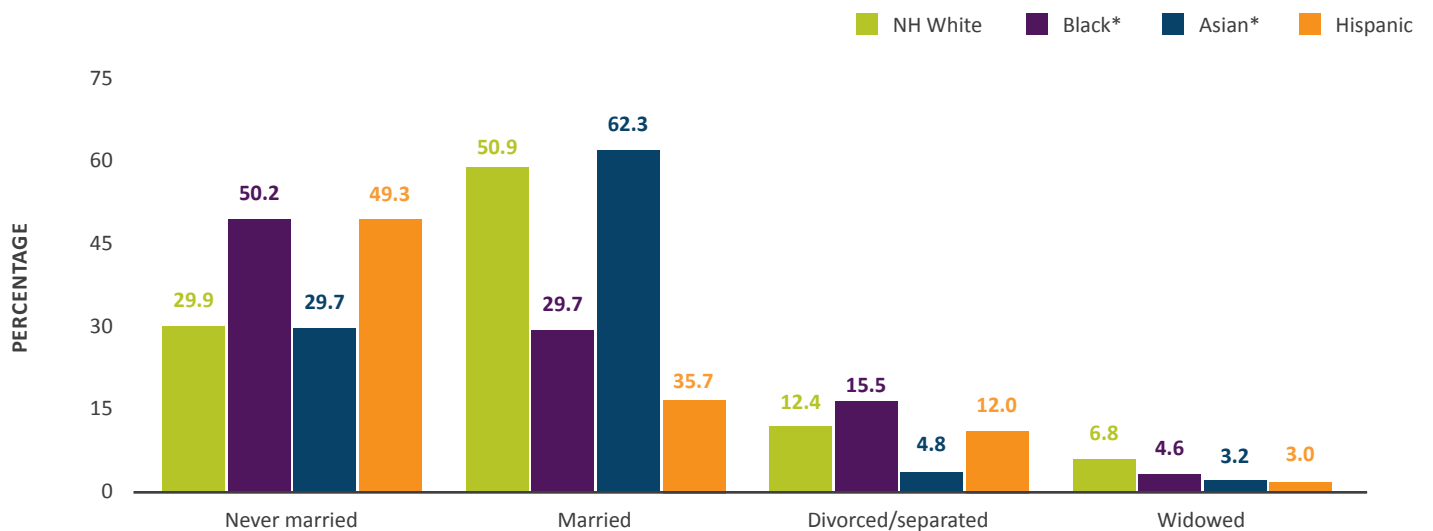
*Includes persons of Hispanic origin
Source: US Census Bureau. American Community Survey 1-Year Estimates, Table S1201.
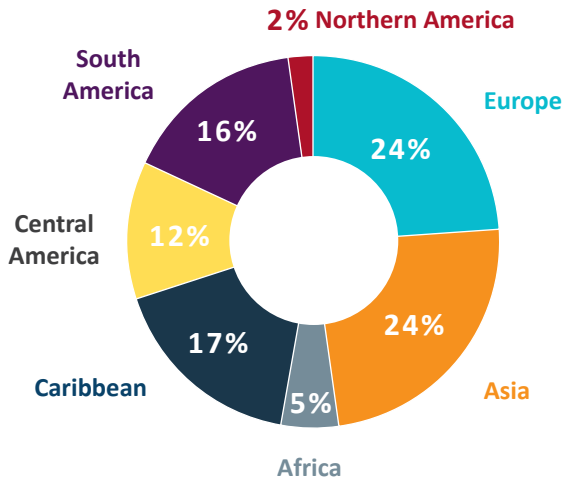
PROGRAM SPOTLIGHT: LGBTQ

In 2017, an estimated 5.4% of Connecticut residents self-identified as lesbian, gay, bisexual or transgender (LGBTQ).

- The racial/ethnic distribution of Connecticut LGBTQ residents mirrors that of the state; 67% identify as White, 17% as Hispanic/Latino, 10% as Black/African American, and 7% as all other races.

- Connecticut LGBTQ individuals are younger on average than non-LGBTQ individuals (39.6 versus 48.8 years).

- 20% of Connecticut LGBTQ residents are raising children.

- Connecticut LGBTQ individuals are more likely to report being food insecure (22% versus 13% non-LGBTQ) and have an annual income under $24,000 (22% versus 14% non-LGBTQ).

- In 2017, 28.5% of gay, lesbian, and bisexual high school students in Connecticut reported being bullied on school property compared to 18.9% of other students.

- Connecticut is among 13 states and the District of Columbia that have passed non-discrimination laws and statewide regulations to protect LGBTQ students.

Sources: *Behavioral Risk Factor Surveillance Survey, 2017; Gallup Daily Tracking Survey, 2017; Connecticut High School Youth Risk Behavior Survey, 2017.*

FIGURE 38: Place of birth for foreign-born population, CT, 2017

Source: US Census Bureau. American Community Survey 1-Year Estimates, Table B05006.

TABLE 2: Top 10 CT towns where people aged 5 and older speak English less than "very well," CT, 2013–2017

TOWN	PERCENTAGE LEP
Bridgeport	22.9%
Danbury	22.3%
New Britain	19.2%
Hartford	19.1%
Stamford	18.7%
Windham	18.7%
Norwalk	16.0%
Waterbury	14.3%
East Hartford	13.8%
New London	12.9%

Sources: US Census Bureau, 2017 American Community Survey 5-Year Estimates, Table S1601

According to the American Community Survey's estimates for 2013–2017, Connecticut's overall language use and ability to speak English was about the same as the US with 22% speaking a language other than English at home and 8% reporting their ability to speak English is less than "very well."[27] That being said, our residents with limited English proficiency (LEP) are often living in communities with other foreign-born residents who have LEP. As a result, Connecticut's LEP population is concentrated in just a few of our communities. **Table 2** lists the 10 towns in Connecticut with the highest rates of LEP; together, these 10 towns represent 50% of the LEP residents in Connecticut. The families in these communities are likely to experience the negative health effects of being linguistically isolated (see Limited English Proficiency Population) as those residents in Connecticut with LEP are overwhelmingly (>90%) adults aged 18 years old and over.[27]

Population with Disability

The American Community Survey reports on six main categories of disability (**Figure 39**). Based on these six categories, Connecticut overall has a lower proportion of residents (11.1%) with a disability in 2017 compared to both the United States (12.7%) and New England (12.4%).[88]

Naturally, the likelihood of an age-related disability increases with age. In Connecticut, 20% of those aged 65–74 years and 44% of those aged 75 years and over reported having a disability.[88] In terms of disparities, Connecticut's Black, Hispanic, and non-Hispanic White residents were similar to the state average of 11% while Asian residents reported the lowest rate at 5.5%. American Indian and Alaskan Native populations reported the highest rates of disability at 29%. Although the small numbers of American Indian and Alaskan Native in Connecticut should be considered when interpreting Connecticut estimates, in the United States and in most New England states, the American Indian and Alaskan Native populations also experience the highest proportion of disability.[88]

"There are still hidden secrets that people are missing out on so I think marketing them and getting the word out there [is important]. I think we need to partner together so that people can know about all the different programs that we have."

— **STATE HEALTH ASSESSMENT FOCUS GROUP,** FAMILIES AFFECTED BY ALZHEIMER'S

PROGRAM SPOTLIGHT: REFUGEES

A *refugee* is defined as "someone who has been forced to flee his or her country because of persecution, war or violence, [and who] has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group."* Most refugees suffer tremendous losses during their flight from home: their social and economic networks are disrupted or destroyed, and access to health, education, food, and shelter may be precarious at best.

Since 1975, the U.S. has resettled over 3 million refugees.** Connecticut has resettled almost 6,000 refugees from sub-Saharan Africa, Syria, Afghanistan, Myanmar, and Latin America over the last eleven federal fiscal years. Refugees have disproportionately higher rates of mental health issues, dental problems, latent tuberculosis infection, elevated blood levels, vitamin deficiencies, and parasitic infections than the general U.S. population.***

The Department of Public Health's Refugee and Immigrant Health Program provides oversight, technical assistance, and surveillance for domestic refugee health assessments conducted soon after refugees' arrival to the state.† Domestic refugee health assessments in Connecticut include screening, care, and referrals for refugees as they begin adjusting to life in the U.S.

* USA for UNHCR. (2019). Refugee Facts, from www.unrefugees.org/refugee-facts/ on October 11, 2019.

** Office of Refugee Resettlement. (2019). Annual Refugee Arrival Data by Resettlement State and Country of Origin, from www.acf.hhs.gov/orr/about/history on October 11, 2019.

*** Yun, K., Matheson, J., Payton, C., Scott, K. C., Stone, B. L., Song, L., . . . Mamo, B. (2016). Health Profiles of Newly Arrived Refugee Children in the United States, 2006–2012. American Journal of Public Health, 106(1), 128-135. doi: 10.2105/ajph.2015.302873

† Connecticut Department of Public Health. (2019). Refugee and Immigrant Health Program (RIHP). Available at https://portal.ct.gov/DPH/Infectious-Diseases/Tuberculosis/Refugee-and-Immigrant-Health-Program

FIGURE 39: Disability type by age group, CT, 2017

■ All ages ■ Population under 18 years ■ Population 18 to 34 years
■ Population 35 to 64 years ■ Population 65 to 74 years ■ Population 75 years and over

PERCENTAGE OF THE POPULATION

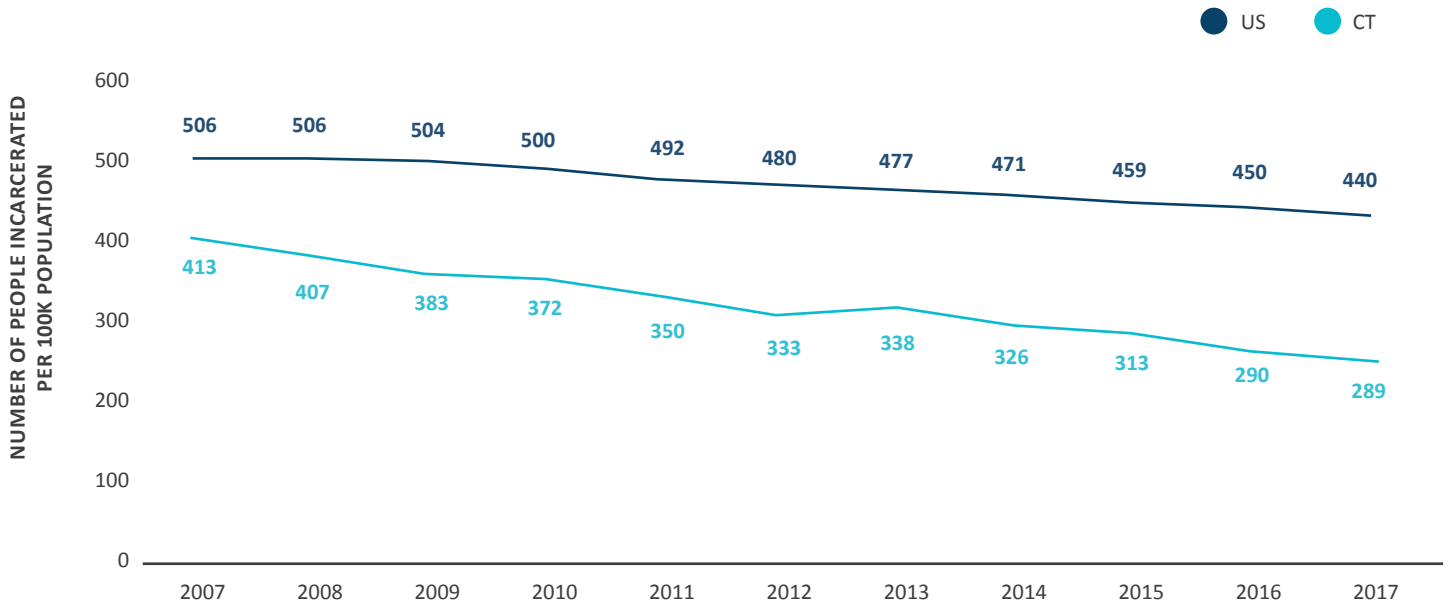- With a hearing difficulty: 2.9%, 18.1%
- With a vision difficulty: 1.8%, 7.4%
- With a cognitive difficulty: 4.5%, 12.1%
- With an ambulatory difficulty: 5.7%, 28.2%
- With a self-care difficulty: 2.2%, 11.9%
- With an independent living difficulty: 5.0%, 23.3%
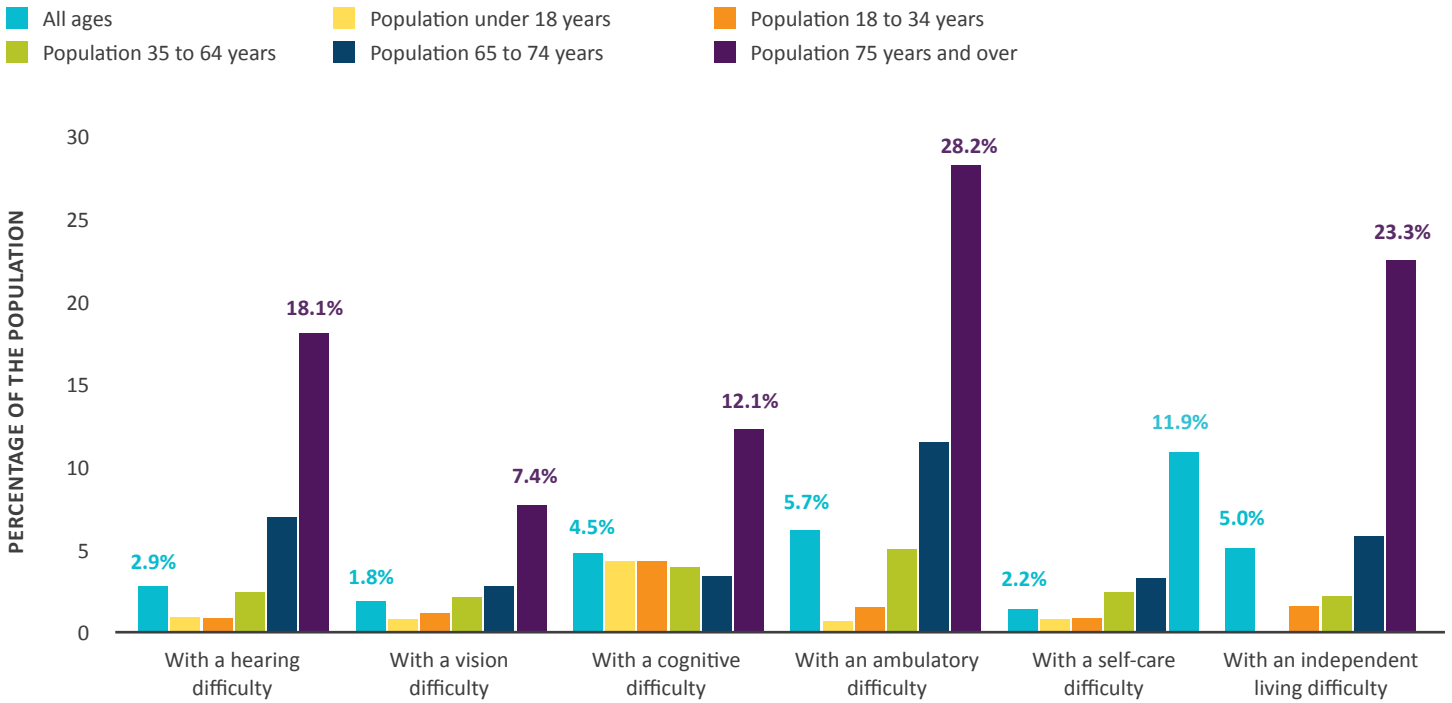
Source: US Census Bureau. American Community Survey 1-Year Estimates, Table S1810.

FIGURE 40: Incarcerated rate in Federal or State prisons, CT and US, 2007–2017

● US ● CT

NUMBER OF PEOPLE INCARCERATED PER 100K POPULATION

Year	US	CT
2007	506	413
2008	506	407
2009	504	383
2010	500	372
2011	492	350
2012	480	333
2013	477	338
2014	471	326
2015	459	313
2016	450	290
2017	440	289

Source: Bureau of Justice Statistics, Publications & Products: Prisoners. Prisoners in 2017. Data analyzed November 28, 2019. Retrieved from www.bjs.gov/index.cfm?ty=pbse&sid=40

## PROGRAM SPOTLIGHT: EMPLOYMENT AMONG PEOPLE WITH DISABILITIES

- The employment/population ratio is "derived by dividing the civilian non-institutional population 16 to 64 years who are employed by the total civilian non-institutional population 16 to 64 years and multiplying by 100."[*]

- People with disabilities participate in the labor force and are employed at rates that are approximately two-thirds of the overall State's rates.

- The unemployment rate for persons with disabilities is more than twice in that for CT.[**]

- Among all disability types, individuals with a hearing or vision difficulty were the most likely to be employed at 95% and 90%, respectively, while individuals with cognitive disabilities were least likely at 75%.[***]

[*] US Census Bureau. Census.gov: Glossary, from www.census.gov/glossary/#term_Household.

[**] US Census Bureau. 2005–2017 American Community Survey 1-year Estimates, S2301: EMPLOYMENT STATUS. Retrieved from American FactFinder.

[***] US Census Bureau. 2017 American Community Survey 1-year Estimates, B18120: EMPLOYMENT STATUS BY DISABILITY STATUS AND TYPE. Retrieved from American FactFinder.

FIGURE 41: Employment/population ratio by disability status, CT, 2009–2017
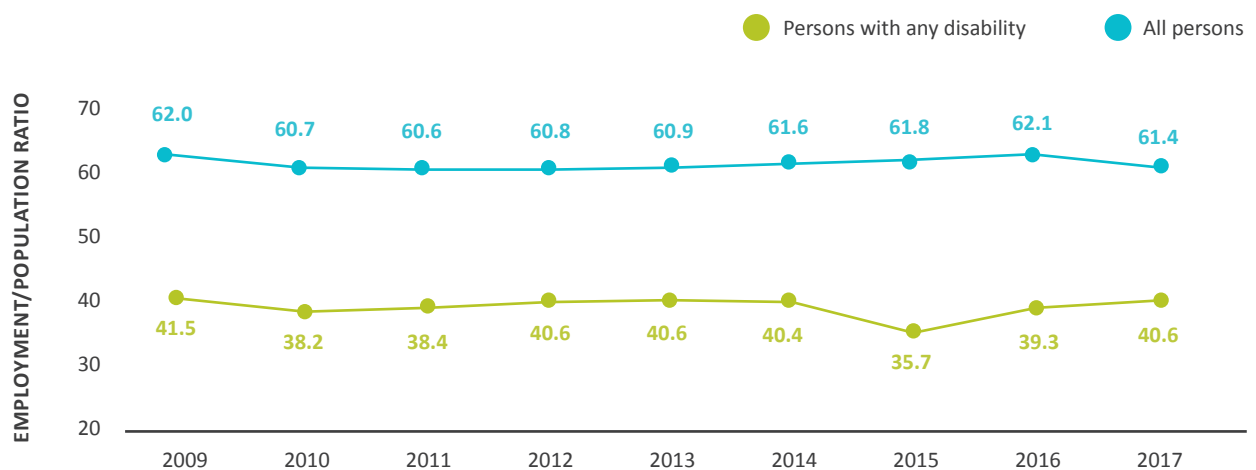
Source: US Census Bureau. American Community Survey 1-year Estimates, Table S2301.

Incarcerated and Formerly Incarcerated Persons

In the US, the incarceration rate has steadily declined over the past decade, dropping 13% between 2007 and 2017 (**Figure 40**).[89] Connecticut's state prison population has also been in steady contraction for a decade, declining 30% from 19,438 to 13,649 inmates between 2008 and 2018 and greatly surpassing the decline experienced nationally.[90] As of 2017, Connecticut has the 38th highest state imprisonment rate in the nation; our rate, however, still ranks higher than all other New England states, New York, and New Jersey.[89]

In 2018, 13,228 people were incarcerated, of which 25% were awaiting trial and 75% were serving out sentences. Among those who were sentenced, 94% were male and 69% were persons of color. During the past decade, the incarcerated rates among people aged 18–29 years have declined while the racial-ethnic composition of the prison population has remained stable at about 31% non-Hispanic White, 41% non-Hispanic Black, and 26% Hispanic.[90] Our State's race/ethnicity disparities in incarceration rates exceed those experienced nationwide; non-Hispanic Black prisoners outnumber non-Hispanic White prisoners by 9:1 (compared to the US at 5:1) and Hispanic prisoners outnumber non-Hispanic White prisoners by 4:1 (compared to the US at 1.4:1).[89]

An assessment of the number of people who were formerly incarcerated and at risk for negative social, economic, and health outcomes is elusive. Since 1973, approximately 370,000 people have been admitted to a Department of Corrections facility in Connecticut; however, this number represents any person who was detained overnight and thus represents a broad swath of those who land in jail or prison. While many social and economic factors are associated with incarceration, few of these factors are measured in a systematic way. As a result, Connecticut does not have reliable data regarding income or mental health for our incarcerated populations — although the State acknowledges that up to one third of inmates have a mental health issue.

We do know that formerly incarcerated men and women are at increased risk of death following release from prison. A recent analysis by Connecticut's Office of Policy and Management found that ex-prisoners in our state who were released or discharged from prison died at significantly higher rates during the 5-years after release than their counterparts in the general population.[91] Mortality risk profiles varied by age and race/ethnicity but overall White ex-prisoners aged 20–29 years had the highest risk for death due to elevated rates of both homicide and drug overdose. Furthermore, the analyses found that non-Hispanic White former prisoners were the most likely to die (35 deaths per 1,000 former prisoners) compared to Black (14 deaths per 1,000 former prisoners) and Hispanic (16 deaths per 1,000 former prisoners) prisoners within the 5-year period following their release from prison. The imbalance in death rates observed among non-Hispanic Whites was largely driven by high rates of overdose deaths in non-Hispanic White ex-prisoners among all age groups.

Although the State offers multiple offender reentry services through the Department of Correction that initiate at the point of incarceration,[92] there remain real barriers experienced by formerly incarcerated persons in the US that include restrictions to voting, in accessing education, to public benefits that impact a person's ability to obtain housing and economic relief,[93] as well as debt related to incarceration,[94] childcare,[95] and mobility. The State has also taken actions in order to address these barriers to community reintegration by establishing the Council on the Collateral Consequences of a Criminal Record[96] and engaging in reform to the juvenile justice system by way of the Juvenile Justice Policy and Oversight Committee[97] as a way to be better informed and to promote inclusivity of the voices of those who are impacted most disproportionately.

"I called at least a dozen places and no place around town took Medicare."

"We have to go online to find employment, which is difficult. Sometimes only able to get jobs face to face, it's impossible just through paper. The more empowered someone is, the more they want to empower themselves and improve overall health."

— **STATE HEALTH ASSESSMENT FOCUS GROUP,** FORMERLY INCARCERATED PERSONS

FIGURE 42: Incarceration rate by race/ethnicity, CT, 2015–2017
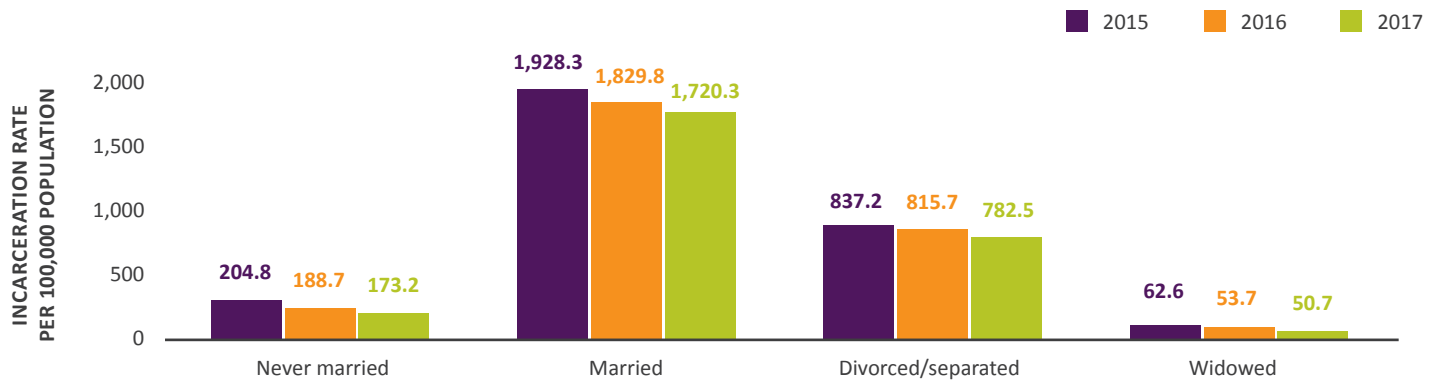
Source: Bureau of Justice Statistics. National Prisoner Statistics, 2017; and Federal Justice Statistics Program, 2017 (preliminary). Retrieved on December 29, 2019.

VETERANS

Six percent of Connecticut's population are armed forces veterans. Among these veterans, 90% are male, 60% are 65 years and over, and 86% are non-Hispanic White.[98] While just over half of Connecticut's veterans served in Vietnam, Korea, and World War II, 28% of our veterans served in the Gulf War (13% prior to 9/11 and 15% post 9/11).[98]

Among the civilian population aged 18 years and over, our veterans are less likely to have a college degree; however, they are also more likely to be employed and less likely to live in poverty than non-veterans. While median income overall was higher for veterans than non-veterans, this difference is reflective of the gender pay gap as most veterans are men. Among men, the median income was the same for veterans and non-veterans at about $45,750.[98]

MORTALITY

Through health planning and interventions, we strive to maximize the length and quality of the lives of our residents. As such, it is important to explore how long our residents live, the causes of preventable deaths, and the leading causes of death overall.

Life Expectancy

Life expectancy at birth estimates how many years a baby born today can expect to live, on average, assuming that current mortality rates remain stable into the future. The estimated average number of years that a person is expected to live at birth provides an intuitive summary measure of population health status.

The US life expectancy at birth in 2017 was 78.6 years.[99] Life expectancy for Connecticut residents was 80.8 years in 2017 and 80.9 years in 2018 based on preliminary 2018 death data.[72;100] Average life expectancy in Connecticut remains higher than the US (**Figure 43**) providing evidence that the overall health of our residents is better than the Nation as a whole. A recent 2016 ranking of life expectancy among US states reported that Connecticut's overall life expectancy was ranked 3rd, just behind California, ranked 2nd, and Hawaii, ranked 1st.[101]

In the US, important changes in life expectancy are occurring. After nearly a century of living longer year after year, the US experienced a plateau in life expectancy from 2011 to 2014 and annual declines in life expectancy from 2015–2017. The recent three-year declines were greater among men and occurred in non-Hispanic White, non-Hispanic Black, and Hispanic populations. In the US, the declines were driven by a rise in midlife mortality due to drug overdoses, alcoholic liver disease, and suicides.[99;101;102;103]

Connecticut's life expectancy, while higher than the US, also plateaued beginning in 2013 but has not declined. This plateau is not due to our reaching the upper limit of potential life expectancy improvements but rather represents increased premature mortality due to preventable conditions. In Connecticut, alcohol-induced and drug-induced deaths are the primary driving factors in the reported life expectancy declines for men

and the leveling-off for women.[104] While the US life expectancy has been impacted by suicide deaths, suicides are not a primary driver in Connecticut.[104]

When life expectancy is compared for various demographic subgroups, meaningful differences in population health and mortality emerge. In general, women tend to live longer than men. The female advantage in Connecticut was approximately 4.8 years throughout the 2005–2018 period (**Figure 43**). Non-Hispanic Asian residents in Connecticut live longer, on average, than any of the other racial/ethnic groups evaluated, while non-Hispanic Black residents live the shortest lives (**Figure 44**).

Years of Potential Life Lost

Premature mortality is often measured by the number of years of potential life lost (YPLL) due to death occurring before the age of 75. In 2017, 11,800 residents of Connecticut died before the age of 75 resulting in an estimated 200,000 years of potential life lost to premature mortality that year.[105] While not every person will live to age 75, YPLL provide an overall measure of premature mortality that can be compared across time or between population groups.

Connecticut's age-adjusted YPLL rate was 5,581 per 100,000 people in 2017 which is about 18% lower than the US YPLL rate of 6,804 per 100,000 people.[106] Our lower rate indicates that people in Connecticut live to age 75 and beyond more often than the US as a whole — reiterating Connecticut's longer life expectancy estimates discussed previously.

FIGURE 43: Life expectancy by sex, CT and US, 2005-2018
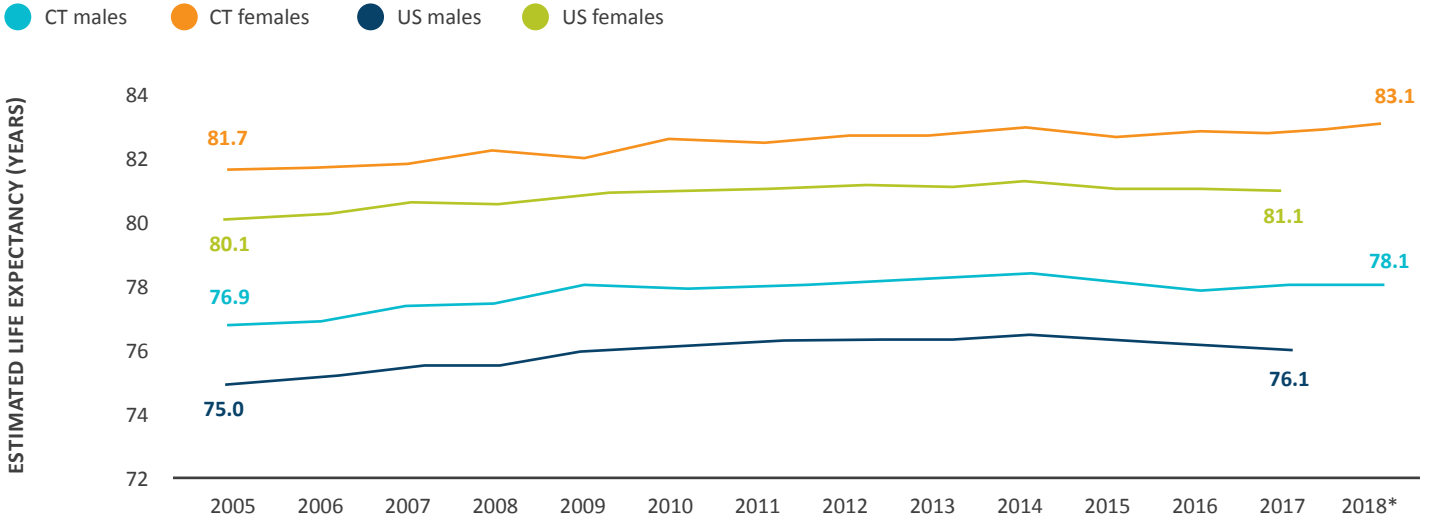
● CT males ● CT females ● US males ● US females

* 2018 data for CT are provisional

Source: *CT DPH Surveillance Analysis and Reporting Unit, Life Expectancy Estimates. Data analyzed September 24, 2019; Arias, E., & Xu, J. Q. (2019). United States life tables, 2017. National Vital Statistics Reports, 68(7).*

FIGURE 44: Life expectancy by sex and race/ethnicity, CT, 2005-2018
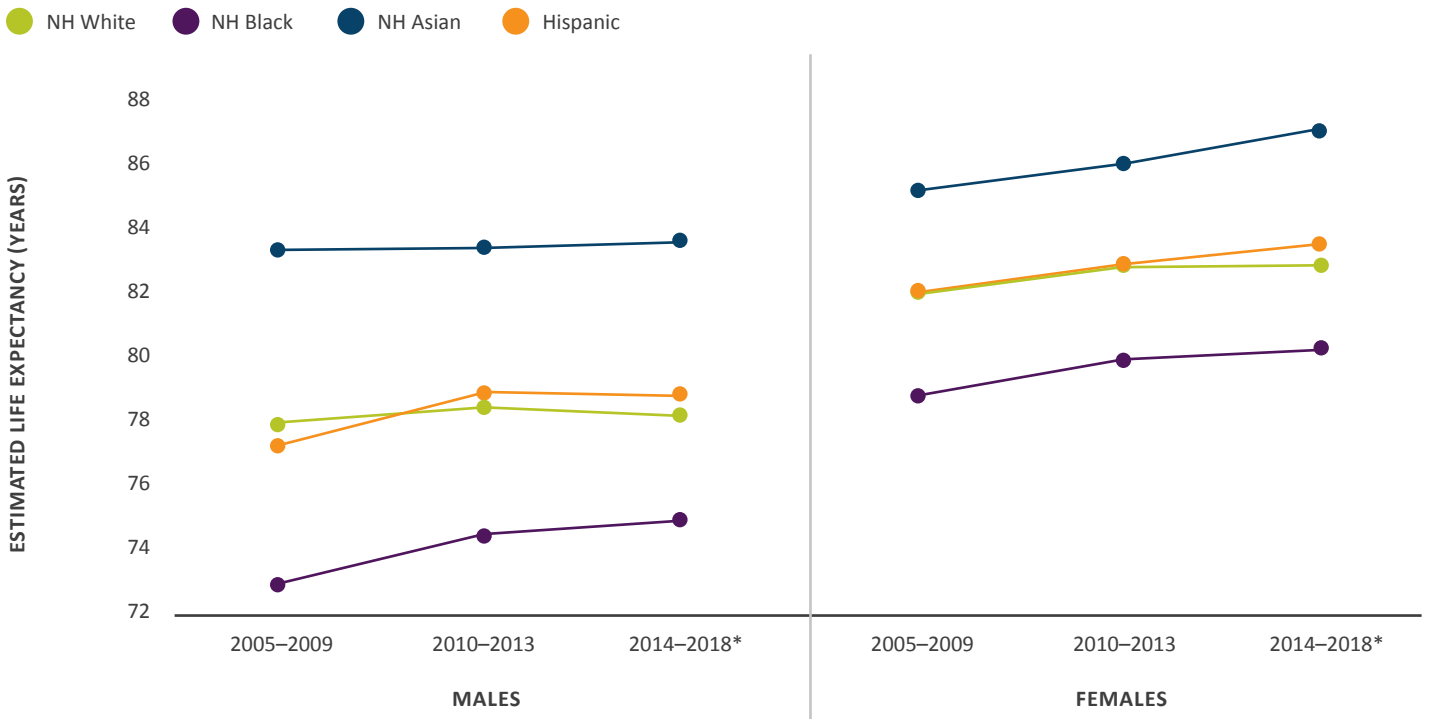
● NH White ● NH Black ● NH Asian ● Hispanic

* 2018 data for CT are provisional

Source: *CT DPH Surveillance Analysis and Reporting Unit, Life Expectancy Estimates. Data analyzed September 24, 2019.*

Since YPLL measures the number of life years lost, the leading causes of YPLL are those that affect a lot of people before age 75 (e.g., heart disease and cancer are common after age 50) or those that incur the loss of many life years by occurring at younger ages (e.g., accidents, suicide, and perinatal deaths)

When looking at the leading causes of premature death for both the US and Connecticut, the same top five leading causes are found; however, Connecticut has a lower proportion of premature death than the US for cancer, heart disease, suicide, and liver disease, yet a higher proportion than the US for accidents (**Table 3**).[106]

Accidents refer to unintentional injuries caused by poisoning (drug- or alcohol-related overdoses), motor vehicles, firearms, and falls. The elevated rate for accidents in Connecticut reflects the higher rates of drug-related mortality in our state compared with the US overall. In Connecticut, accidents represented 24% of the burden of premature death overtaking cancer which accounts for 21% of the burden (**Table 3**). Accidental deaths caused by poisoning, motor vehicles, and firearms were highest among ages 25–34; in contrast, fall-related deaths were greatest among residents 85 years and older.

When looking at years of potential life lost by race/ethnicity, the burden of the leading causes of premature death varies (**Table 4**). Liver disease, caused by alcoholic cirrhosis, ranks in the top 5 for non-Hispanic White residents but not for any other of the subgroups. Homicide and perinatal death rank 4th or 5th among non-Hispanic Black and Hispanic residents, out-ranking suicide. Non-Hispanic Asian residents, who live the longest lives in Connecticut, are more affected by premature deaths due to cancer than accidents. Ranking of YPLL by race/ethnicity highlights how a population subgroup's profile of premature mortality reflects the specific disease burden and mortality risk experienced by that subgroup.

Mortality Rate

Risk for death for many conditions starts to rise in early adult-hood and increases steeply in old age. Since age is strongly related to risk for death, populations with older people will have higher death rates than populations with younger people. Age-adjusted mortality rates (AAMRs) adjust the rate of death for the age distribution of a population to a standard age distribution, thereby providing a fair comparison between different places or subgroups at a single point in time or between different times for the same place or subgroup. Age-adjusted mortality rate refers to the number of people who died per 100,000 standard population.

The AAMR for all deaths in Connecticut, termed all-cause AAMR, was 651.2 per 100,000 standard population in 2017 and was the fourth lowest state rate in the US and the lowest state rate in New England.[107] Over the past decade, the all-cause AAMR has decreased by 4.3% from 680.5 to 651.2.[65] Women consistently have lower all-cause AAMRs than men — a gap of approximately 28% in 2017 (**Figure 45**).[65]

All-cause AAMRs vary by geography. The most current mortality rates available at the town-level reflect deaths occurring between 2010 and 2014. The five Connecticut towns with the lowest AAMRs for 2010–2014 were Cornwall, Westport, New Canaan, Weston, and Sherman, ranging from 380.8 to 447.0 per 100,00 standard population, while the five Connecticut towns with the highest AAMRs were North Canaan, New London, Windham, New Britain, and Ansonia, ranging from 809.2 to 986.7 per 100,000 standard population.[108]

In terms of race/ethnicity, Connecticut residents who are non-Hispanic Black have the highest all-cause AAMR at 727.1 deaths per 100,000 standard population (**Figure 46**).[100] Non-Hispanic White residents have higher all-cause AAMRs (652.5) than Hispanic (516.6), non-Hispanic Asian (346.4), and non-Hispanic American Indian and Alaskan Native (283.7) residents.

While the different age distributions of racial and ethnic subgroups are taken into account when comparing AAMRs, disparities between groups can be harder to detect because Connecticut has far fewer deaths for people of color compared to those for non-Hispanic White residents. In Connecticut, 86% of deaths (130,515 out of 151,924 from 2013–2017) occurred to non-Hispanic White residents. Fewer deaths among persons of color means there is less statistical power to detect group differences. As the younger residents of Connecticut, who are a more diverse population, become older and represent a larger proportion of the deaths, disparities in mortality rates will be easier to identify. As an example, the low AAMR rate for non-Hispanic American Indian and Alaskan Native residents was not significantly different from Hispanic or non-Hispanic Asian residents; the low statistical power to detect such sizeable rate differences is reflective of the small numbers associated with non-Hispanic American Indian and Alaskan Native subgroup.

TABLE 3: Top five causes of years of potential life lost (YPLL) before age 75, CT and US, 2017

RANK	US	%	CT	%
	Top 5 Causes	62%	Top 5 Causes	67%
1	Cancer	19%	Accidents	24%
2	Accidents	21%	Cancer	21%
3	Heart Disease	13%	Heart Disease	13%
4	Suicide	6%	Suicide	6%
5	Perinatal Deaths	4%	Perinatal Deaths	4%

Sources: *CDC National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS). Retrieved September 19, 2019.*

TABLE 4: Top five causes of years of potential life lost (YPLL) before age 75 by race/ethnicity, CT, 2017

| RANK	CT	%	NH WHITE	%	NH BLACK	%	NH ASIAN	%	HISPANIC	%
	Top 5 Causes	67%	Top 5 Causes	71%	Top 5 Causes	63%	Top 5 Causes	66%	Top 5 Causes	66%
1	Accidents	24%	Accidents	25%	Accidents	17%	Cancer	22%	Accidents	26%
2	Cancer	21%	Cancer	22%	Cancer	15%	Accidents	17%	Cancer	18%
3	Heart Disease	13%	Heart Disease	14%	Heart Disease	13%	Heart Disease	12%	Heart Disease	10%
4	Suicide	6%	Suicide	6%	Homicide	9%	Perinatal Deaths	8%	Perinatal Deaths	8%
5	Perinatal Deaths	4%	Liver Disease	4%	Perinatal Deaths	8%	Suicide	6%	Homicide	4%

Sources: *CDC National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS). Retrieved September 19, 2019.*

FIGURE 45: Age-adjusted mortality rates by sex, CT, 2013–2017
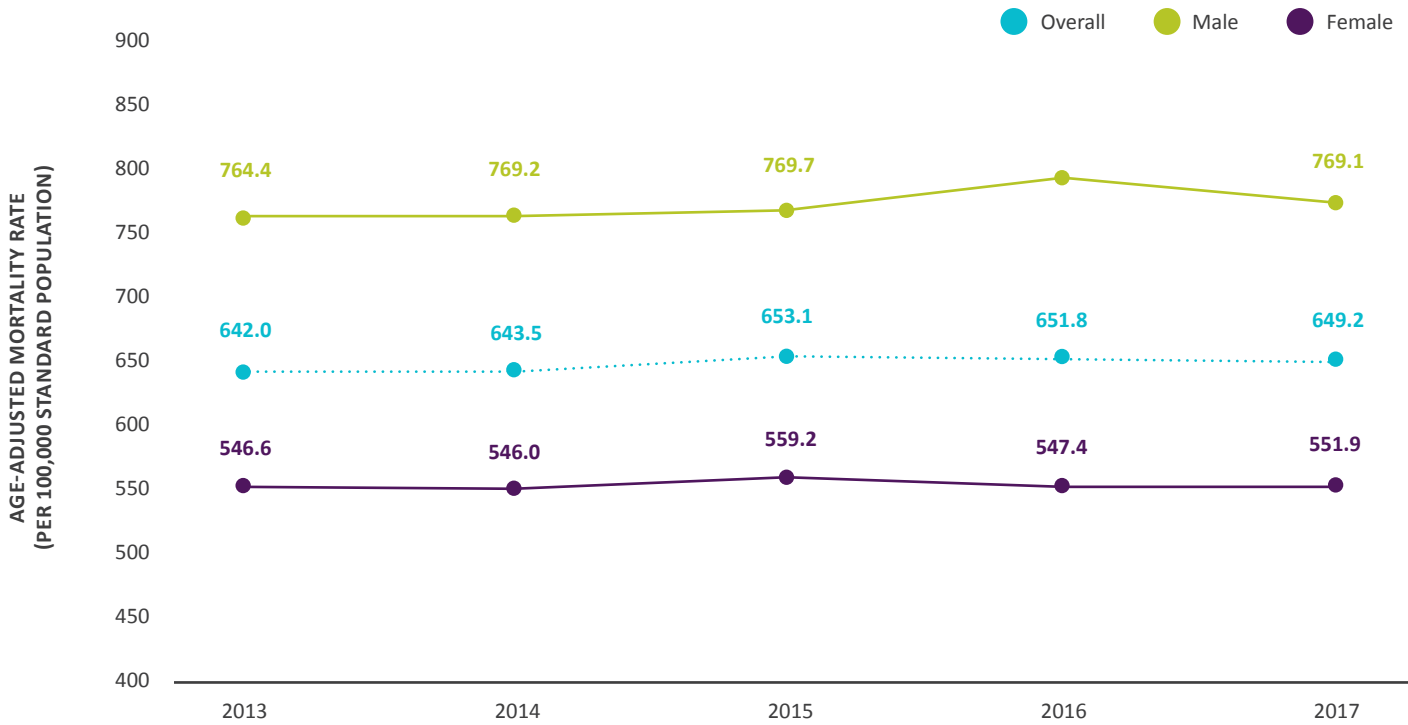
Source: CT DPH Surveillance Analysis and Reporting Unit, Single-Year Age-Adjusted Mortality Rates for Connecticut, 2013–2017

FIGURE 46: Five-year age-adjusted mortality rates by race/ethnicity, CT, 2013–2017
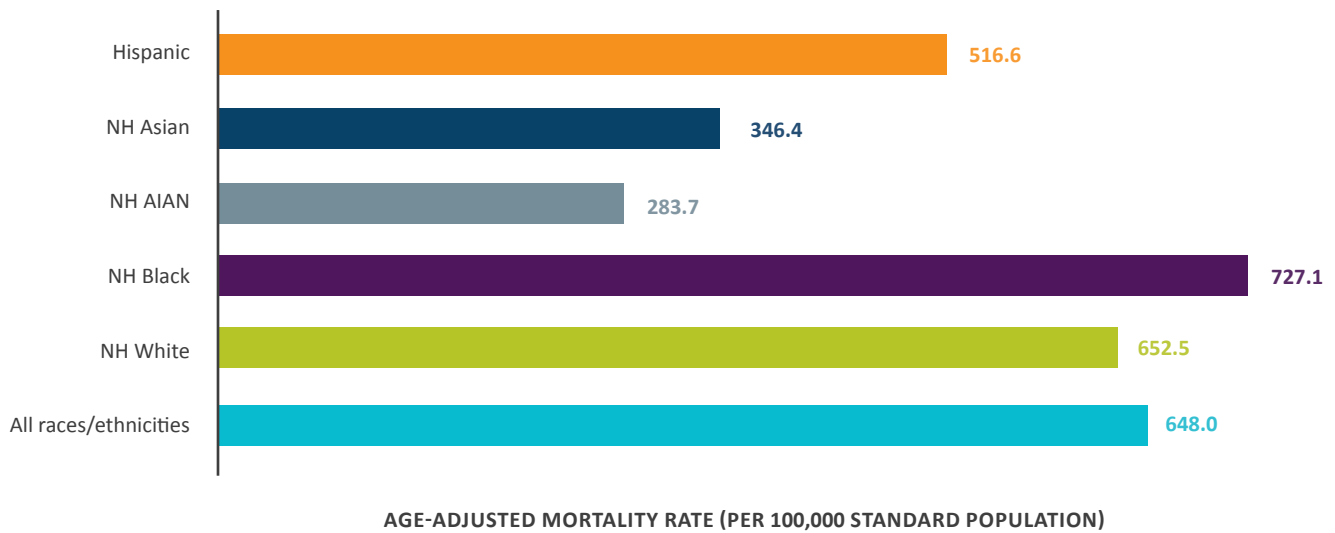
Source: CT DPH Surveillance Analysis and Reporting Unit, Five-year Age-Adjusted Mortality Rates by Race/Ethnicity for Connecticut, 2013–2017

The National Center for Health Statistics publishes a list of 113 selected, rankable causes of death. The leading causes of death (LCOD) drawn from this list are ranked by the number of deaths. The top LCOD represent those illnesses imposing the largest burden of mortality in Connecticut.

LEADING CAUSES OF DEATH

In Connecticut, the top five leading causes of death in 2017 were the same as in the U.S. and in New England, although the ranked order of the leading causes varied among the three geographies (**Table 5**)[65;107] The top ranked LCOD tend to be stable over time, meaning that these causes of death consistently have the most deaths each year; yet which people are dying from those causes and the age at which people are dying varies among population subgroups. Leading causes of death and the age-adjusted mortality rates for those leading causes often differ between men and women and between racial and ethnic groups — reflecting the fact that different populations have different risk profiles for morbidity and mortality (**Table 6**).

The top five leading causes of death in Connecticut in 2017 were heart disease, cancer, accidents, chronic lower respiratory diseases (CLRD), and stroke. Mortality rates for these leading causes in Connecticut were lower than US mortality rates — except for accidental deaths for which Connecticut's rates were higher (**Figure 47**). Connecticut also has lower rates of mortality from cancer and chronic respiratory diseases than the rest of New England. In New England, but not Connecticut, cancer caused more deaths than heart disease. Although diabetes is not ranked in the top five for leading causes of death in Connecticut, it ranked in the top five for both Hispanic and non-Hispanic Black residents (**Table 6**).

Between 2007 and 2017, mortality in Connecticut declined for heart disease by 15.4%, cancer by 16.6%, and for stroke by 16.8%, while mortality rates for chronic respiratory diseases did not change. In 2013, Connecticut surpassed the Healthy People 2020 goal for heart disease mortality and has remained below that goal through 2017. Although heart disease is the leading cause of death among both males and females, women have lower rates of mortality due to heart disease (**Figure 48**). Women also have lower mortality rates for cancer and accidents than men but rates for chronic respiratory diseases and stroke do not differ by sex.

When comparing mortality rates across racial/ethnic subgroups, varying patterns emerge (**Figure 49**). Non-Hispanic White residents have higher mortality rates for heart disease and chronic lower respiratory diseases than non-Hispanic Asian and Hispanic residents but do not differ from non-Hispanic Black residents. For cancer, non-Hispanic Black residents had the highest rates among all subgroups followed by non-Hispanic White residents who were higher than both Hispanic and non-Hispanic Asian. For accidents, non-Hispanic White residents were higher than all of the other race/ethnicity subgroups and non-Hispanic Asian residents were lower than all of the other subgroups. For stroke, no disparities were found.[100]

Accidental deaths include deaths that were unintentionally caused by poisoning (including drug overdoses and alcohol-induced deaths), motor vehicles, firearms, and falls. The substantial rise in accidental deaths over the past few years pushed Connecticut's age-adjusted mortality rate above the national rate (**Figure 47**). Overdose deaths are the primary driver behind this shift; between 2013 and 2017, the AAMR for accidental drug overdoses doubled from 14.5 to 29.6 deaths per 100,000 standard population.[65] Connecticut experienced more overdose deaths than the US both overall and in all ten-year age groups between 15 and 64 years.[107] In contrast, accidental deaths caused by motor vehicles, falls, and firearms have not increased.[65]

Mortality indicators serve as an overall metric by which we are able to assess the health of Connecticut. Our long life expectancy demonstrates that as a whole, we are a healthy state and our mortality rates show that, in many ways, we fare better than other states in our Nation. Nonetheless, we are still experiencing increases in preventable deaths and we still have wide disparities in mortality outcomes by race and ethnicity. Throughout this report, you will learn about many of the risk factors and health outcomes that lead to our mortality profile.

TABLE 5: Top five ranked leading causes of death; CT, NE, and US; 2017

| CAUSE OF DEATH (ICD-10 CODES)	RANK BY NUMBER OF DEATHS		
	CT	NE	US
Heart disease (I00-I09,I11,I13,I20-I51)	1	2	1
Cancer (C00-C97)	2	1	2
Accidents (V01-X59,Y85-Y86)	3	3	3
Chronic lower respiratory diseases (J40-J47)	4	4	4
Stroke (I60-69)	5	5	5

Sources: *CDC/National Center for Health Statistics, CDC WONDER, Underlying Cause of Death 1999–2017. Retrieved September 19, 2019.*

TABLE 6: Top five ranked five-year leading causes of death by race/ethnicity, CT, 2013–2017

| CAUSE OF DEATH (ICD-10 CODES)	RANK BY NUMBER OF DEATHS			
	NH White	NH Black	NH Asian	Hispanic
Heart disease (I00-I09,I11,I13,I20-I51)	1	2	2	2
Cancer (C00-C97)	2	1	1	1
Accidents (V01-X59,Y85-Y86)	3	3	4	3
Chronic lower respiratory diseases (J40-J47)	4	6	5	6
Stroke (I60-69)	5	4	3	4
Diabetes (E10-E14)	9	5	9	5

Sources: *CT DPH Surveillance Analysis and Reporting Unit, Five-year Age-Adjusted Mortality Rates by Race/Ethnicity for Connecticut, 2013–2017.*

FIGURE 47: Age-adjusted mortality rates for top five leading causes of death, CT and US, 2017
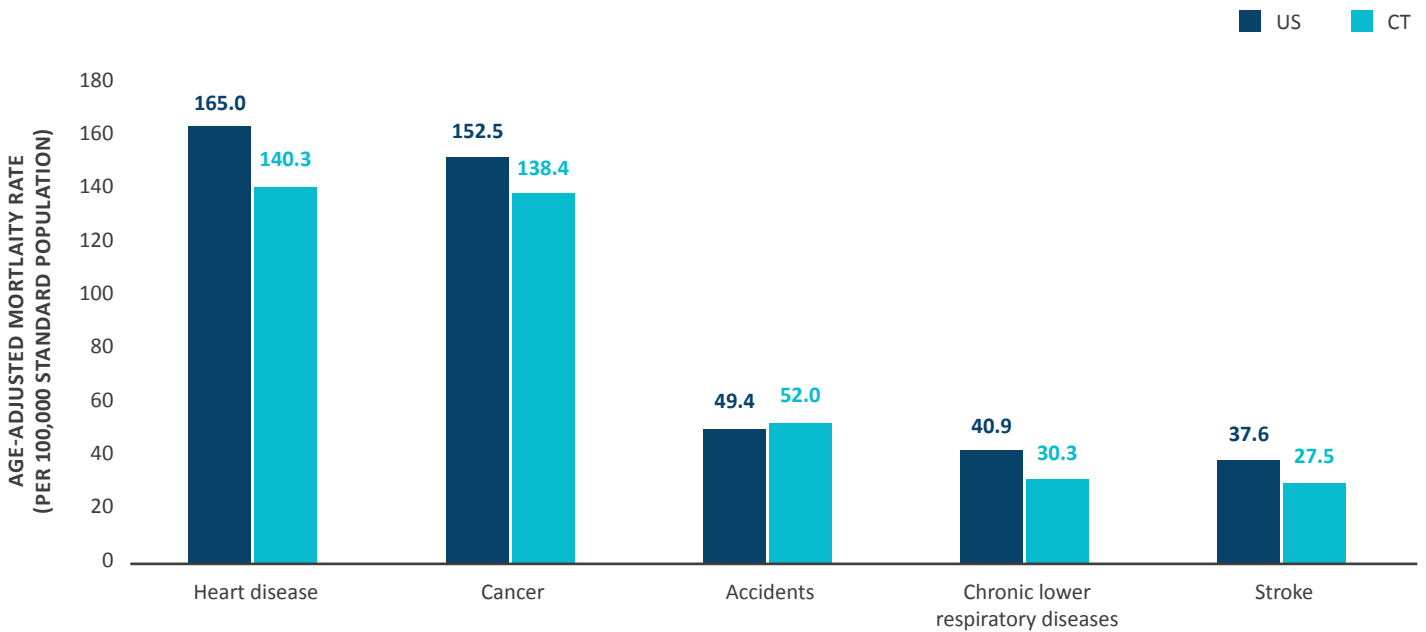
US ■ CT ■

Source: CT DPH Surveillance Analysis and Reporting Unit, Single-Year Age-Adjusted Mortality Rates for Connecticut, 2017; CDC/National Center for Health Statistics, CDC WONDER, Underlying Cause of Death 1999–2017. Retrieved September 19, 2019.

FIGURE 48: Age-adjusted mortality rates for top five leading causes of death by sex, CT, 2017
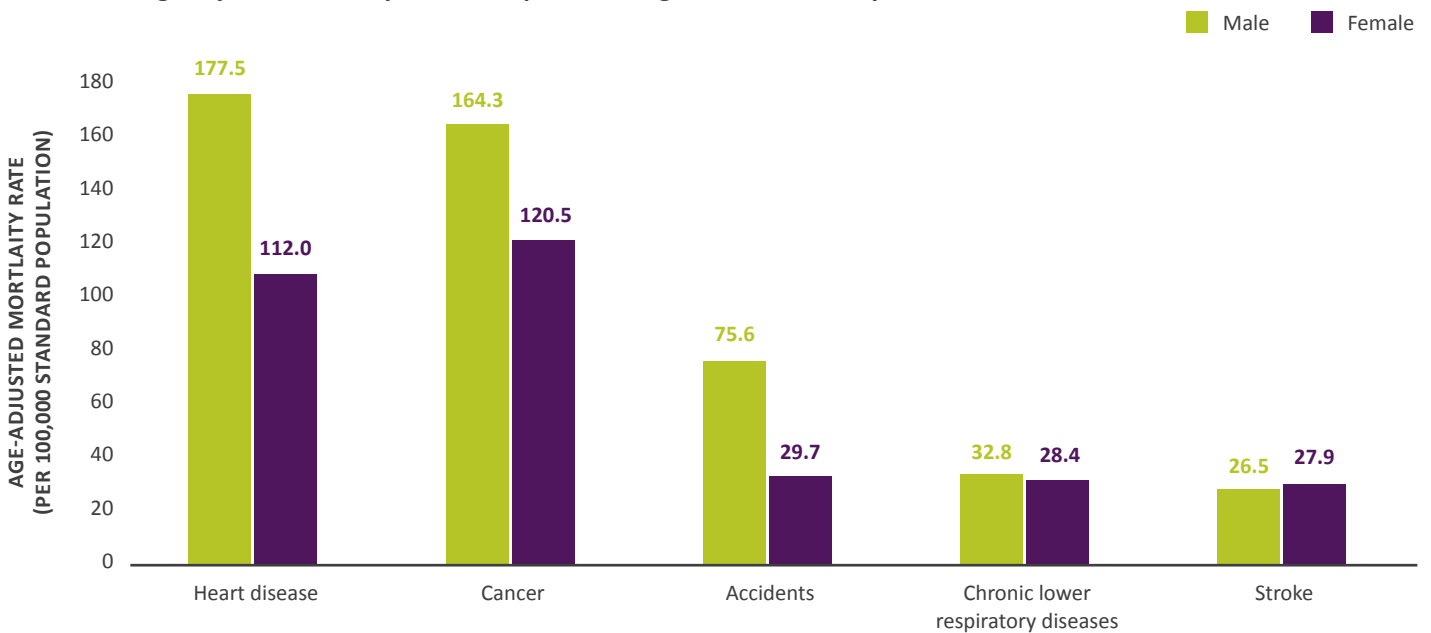
Male ■ Female ■

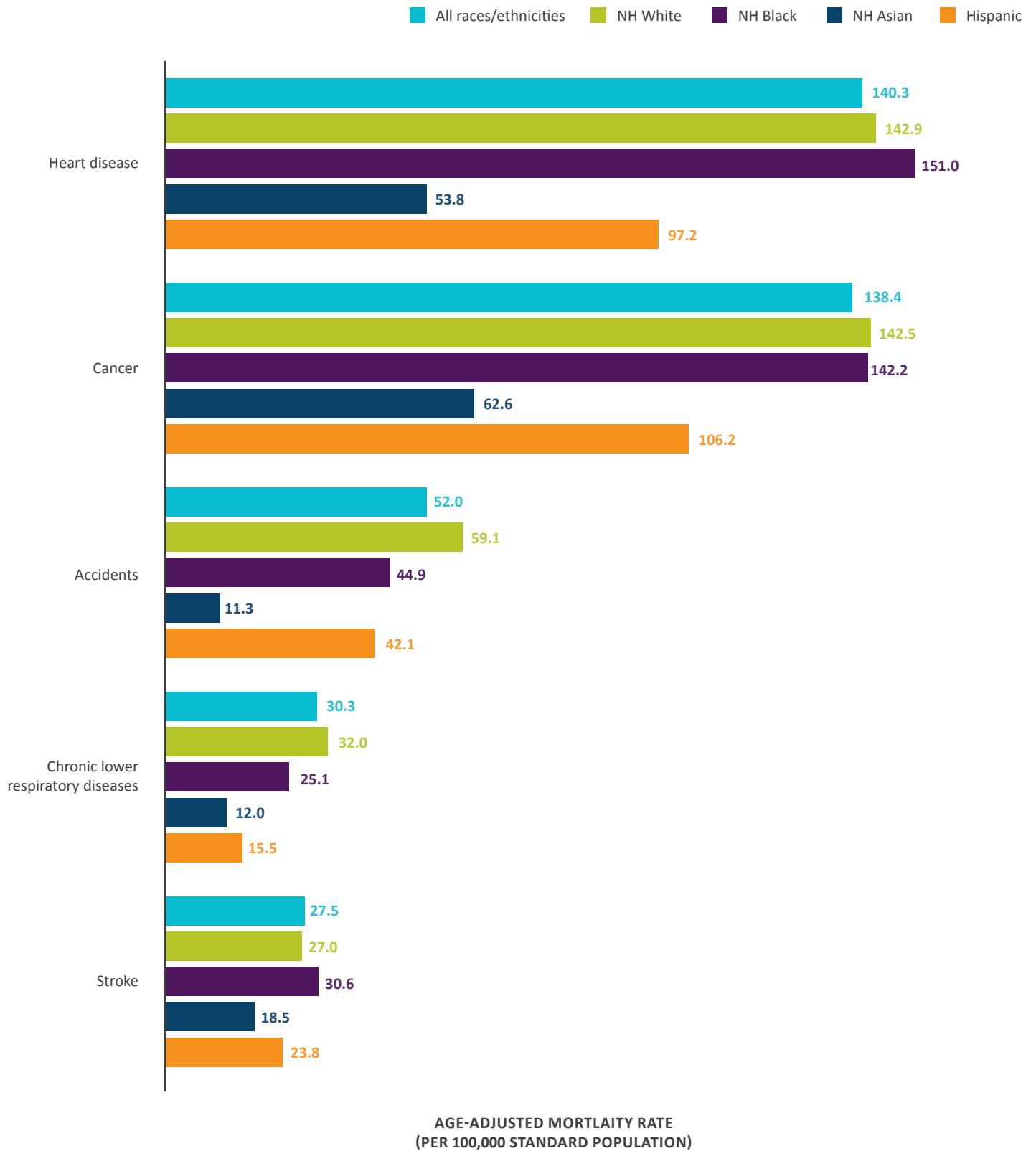*Source:* CT DPH Surveillance Analysis and Reporting Unit, Single-Year Age-Adjusted Mortality Rates for Connecticut, 2017

FIGURE 49: Five-year age-adjusted mortality rates for top five leading causes of death by race/ethnicity, CT, 2013–2017

Legend: All races/ethnicities | NH White | NH Black | NH Asian | Hispanic

Heart disease
- All races/ethnicities: 140.3
- NH White: 142.9
- NH Black: 151.0
- NH Asian: 53.8
- Hispanic: 97.2

Cancer
- All races/ethnicities: 138.4
- NH White: 142.5
- NH Black: 142.2
- NH Asian: 62.6
- Hispanic: 106.2

Accidents
- All races/ethnicities: 52.0
- NH White: 59.1
- NH Black: 44.9
- NH Asian: 11.3
- Hispanic: 42.1

Chronic lower respiratory diseases
- All races/ethnicities: 30.3
- NH White: 32.0
- NH Black: 25.1
- NH Asian: 12.0
- Hispanic: 15.5

Stroke
- All races/ethnicities: 27.5
- NH White: 27.0
- NH Black: 30.6
- NH Asian: 18.5
- Hispanic: 23.8

**AGE-ADJUSTED MORTLAITY RATE
(PER 100,000 STANDARD POPULATION)**

Source: *CT DPH Surveillance Analysis and Reporting Unit, Five-year Age-Adjusted Mortality Rates by Race/Ethnicity for Connecticut, 2013–2017*

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