



Connecticut Department  
of Public Health

# Healthy Connecticut 2020



## 1 State Health Assessment

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# HEALTHY CONNECTICUT 2020

## Part 1: State Health Assessment

**Connecticut Department of Public Health**

410 Capitol Avenue  
Hartford, Connecticut 06106

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## CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

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### ACKNOWLEDGMENTS

The *Connecticut State Health Assessment* was developed by the Connecticut Department of Public Health with the assistance of the Connecticut Health Improvement Planning Coalition's Advisory Council, comprising experts and stakeholders from throughout the state. The Advisory Council provided guidance and advice on the content, format, and presentation of the Assessment.

The Assessment is the result of more than a year of dedicated and collaborative effort of many DPH staff and staff from several other State agencies, who analyzed and contributed data and reviewed multiple iterations of this document as it evolved. This Assessment would not have been possible without their expertise and commitment to this project.

We gratefully acknowledge the contributions of our consultant,

**Health Resources in Action**  
Boston, MA

for facilitating the activities of the Advisory Council and for developing and compiling this Assessment in cooperation with DPH.

### PHOTO CREDITS

Page 59 [Environmental Health divider]: Clean Drinking Water ©Chuck Rogers. All rights reserved.  
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## LETTER FROM THE COMMISSIONER

Dear Colleagues:

I am pleased to present the 2014 Connecticut State Health Assessment. Over the past several months Department of Public Health staff, working in collaboration with other state agencies and diverse organizations from across the state, developed this comprehensive health assessment - Connecticut's first since 1999.



The assessment helps establish the health status of the state, and provides the basis for the Connecticut State Health Improvement Plan. The work behind these two efforts comprise our state health planning initiative, *Healthy Connecticut 2020*, providing a blueprint for improving the health of Connecticut residents by the end of 2020.

The assessment contains good news for Connecticut, but also presents important challenges. Connecticut meets or exceeds many national targets for health status and risk factors. For example, the state's water quality is among the highest in the nation, and HIV, teen births and cigarette smoking declined over the last decade. The assessment also illustrates that our residents are dying prematurely from chronic diseases and injuries, and documents the increase of unhealthy behaviors such as binge drinking and prescription drug misuse over the last decade.

Some of our greatest challenges underlie statewide statistics. Profound disparities in health exist among certain demographic and socioeconomic groups and even adjacent towns. These disparities are greatest for prenatal care and birth outcomes, chronic diseases, and access to health care. Other groups, such as older adults and veterans, are more at-risk for some conditions such as injury and suicide. Fortunately, many of the health problems we face today are preventable. By investing in prevention and making policy and system changes, we can dramatically improve the health and quality of life for all our residents.

Thank you and congratulations to the DPH staff and our many partners who contributed to this important process. Complex issues require the collective action of stakeholders in all sectors on all levels. I hope the findings of this assessment provide a catalyst for such action. We have much to do, and I invite you to join us in working toward a healthier Connecticut.

Sincerely,

A handwritten signature in black ink that reads "Jewel Mullen, MD, MPH, MPA". The signature is written in a cursive, flowing style.

Jewel Mullen, MD, MPH, MPA  
Commissioner



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## EXECUTIVE SUMMARY

The *Healthy Connecticut 2020 State Health Assessment* provides an overview of the social, economic, physical well-being, and mental health of our state's population. Understanding Connecticut's current health status, and the multitude of factors that influence health, provides an important foundation to guide us in identifying priorities for public health planning, existing strengths and assets upon which to build, and areas for further collaboration and coordination.

The Assessment informed the development of goals, objectives, and strategies for the *Healthy Connecticut 2020 State Health Improvement Plan*. The Plan serves as a roadmap to improve the health of Connecticut residents. The State Health Assessment and State Health Improvement Plan provide opportunities for organizations and agencies across Connecticut to focus dialogue and align around a common framework for improving health.

### Summary of Findings

Connecticut overall meets most national targets for health and has better health outcomes, compared to many other states, for many indicators, including smoking and obesity prevalence, infectious disease incidence, teen birth rates, and health insurance coverage. Although statewide statistics indicate an overall healthy profile for Connecticut, these numbers provide a misleading description, as striking health disparities exist by age, sex, race, ethnicity, geography, and socioeconomics, highlighting areas and populations in need.

#### *Maternal, Infant, and Child Health*

- Preterm birth, low birthweight, and fetal and infant mortality remain highest among infants born to black non-Hispanic women relative to white non-Hispanics. The prevalence of preterm birth and low birthweight is highest in Connecticut's largest towns. Over the past decade, neonatal abstinence syndrome has increased in Connecticut and is most prevalent among white non-Hispanics and persons with Medicaid insurance coverage.

#### *Chronic Diseases and Their Risk Factors*

- Similar to the rest of the country, in Connecticut, chronic conditions such as heart disease, cancer, stroke, and chronic lower respiratory disease are the leading causes of death. Some diseases and risk factors, such as asthma, diabetes, high blood pressure, and high cholesterol, are more prevalent among persons with lower educational attainment or lower incomes. Further, there is greater mortality among black non-Hispanics relative to other racial and ethnic groups for cancer, heart disease, and stroke.
- The prevalence of overweight and obesity has increased in Connecticut during the past decade, and is most prevalent among adult and adolescent males and persons with lower educational attainment.
- There is much room for improvement in behaviors associated with chronic diseases, such as healthy eating, increased physical activity, and reductions in smoking. Health behaviors associated with chronic diseases are shaped by socioeconomic status, whereby persons with lower educational attainment or lower income are more likely to smoke, be less physically active, or less likely to consume a healthy diet.
- There are important disparities in cancer incidence and mortality. Black non-Hispanics experience higher breast cancer mortality, prostate cancer incidence and mortality, and colorectal cancer incidence and mortality. Hispanics have higher cervical cancer incidence; and white non-Hispanics have higher incidence rates of breast cancer, lung cancer, and melanoma.
- Hispanic and black non-Hispanic children and adults have higher prevalence of asthma relative to white non-Hispanics, and asthma-related emergency department rates for children are increasing. Further, asthma-related emergency department visits are highest in Connecticut's largest towns.

### *Infectious Diseases*

- Consistent with the nation overall, Connecticut has experienced significant improvements in the treatment, survival, and quality of life of persons with HIV, as evidenced by a decline in the number of new HIV cases and deaths among persons with HIV. Disparities remain, however, with males and black non-Hispanics more likely than others to be diagnosed with HIV.
- Connecticut ranks among the top 10 states for vaccination coverage of young children. Despite evidence of the efficacy of vaccines in preventing infectious disease, however, one in five children 19-35 months of age still have not completed the full series of vaccines recommended by the CDC, and some vaccine-preventable diseases, such as pertussis, still occur even with high vaccination rates .

### *Mental Health, Alcohol, and Substance Abuse*

- Connecticut has experienced an increase in emergency department visits for alcohol use or dependence. Further, deaths due to overdose of prescription pain killers have been increasing and are more common in suburbs and in rural regions of the state.

### *Injuries and Violence*

- Unintentional injuries are a major contributor to premature death in Connecticut. Falls, accidental poisoning, and motor vehicle accidents are the top three causes of deaths due to unintentional injuries. During the past decade, the number of deaths due to falls doubled. Intentional injuries also contribute to premature mortality. The number of deaths due to suicide has increased in Connecticut over the past decade, and suicide is the leading cause of injury death.

### *Environmental Risk Factors and Health*

- Connecticut experienced a decline in childhood lead poisoning during the past decade. Lead poisoning remains most common in Connecticut's largest towns and areas with older housing units. Opportunities exist to improve environmental conditions in homes and communities, to address indoor hazards and incorporate health considerations into land planning and use.

### *Health Systems*

- Racial, ethnic, and geographic disparities exist in health insurance coverage and health care access and utilization. Health insurance coverage is lower in Connecticut's largest towns and for Hispanics. Hispanics are also less likely than other racial or ethnic groups to have a usual source of care. Preventable emergency department visits and medically underserved and health professional shortage areas are more common in and around Connecticut's largest towns.

## **Data Availability and Challenges**

Gaps and challenges remain in the availability of data needed to understand the health of Connecticut residents. They are important to consider and address as the planning process continues. First, local-level health indicators are less readily available than statewide indicators of health. Second, data for specific populations, such as residents of rural areas, sexual minorities, veterans, and racial and ethnic minorities such as American Indians and Asian Americans are less readily available than indicators for the total population or non-minority groups. Third, there is a time lag in the availability of data to inform health assessments. Fourth, data and indicators that directly support certain baseline and target values in the *Healthy Connecticut 2020 State Health Improvement Plan* were not available for inclusion in this Assessment. These include, for example, patient safety standards, trauma screening by primary care and behavioral health providers, enforcement of housing codes, and collaboration among housing code enforcement agencies. Topics such as these were therefore omitted from this report.

Data-related challenges and gaps are important considerations when tracking progress related to health behaviors and outcomes. The success of future interventions cannot be assessed without baseline and tracking data. Discussion of these data gaps and efforts to resolve them will help to build the foundation for greater coordination and tracking of many important health issues.

## Looking Ahead

The passage of the Patient Protection and Affordable Care Act (ACA) in 2010 has opened a new frontier in health care reform. Although the implementation of the ACA will affect how we approach strategies to improve the health of Connecticut residents, many other factors influence health and well-being within one's family, social network, community, and state. Improving the health of Connecticut's population can only be achieved through collaboration and coordination among multiple partners throughout the state, spanning from governmental agencies to non-profit organizations to business.

The *Healthy Connecticut 2020 State Health Improvement Plan* utilizes a participatory, collaborative model and is guided by the findings from this *State Health Assessment*. It provides a roadmap for action by building on existing assets, leveraging resources, and engaging partners to act collectively to improve the health of Connecticut residents.

## Summary Data

The following are summary data for health indicators in each of the seven Focus Areas in the Assessment. Patterns of disparities in health or risk factor outcomes and targets for corresponding *Healthy People 2020* objectives are given when appropriate and available

### Maternal, Infant, and Child Health

During the past decade, Connecticut experienced several improvements in maternal, infant, and child health, including declines in births to teen mothers (an identified “Winnable Battle” by CDC), smoking during pregnancy, and infant mortality. During this period, however, there were also significant increases in neonatal abstinence syndrome, cesarean sections for singleton births, and non-adequate prenatal care. Furthermore, there were disparities among population groups for births to teen mothers, preterm birth, low birthweight births, non-adequate prenatal care, neonatal abstinence syndrome, and infant mortality.

**Table 1. Maternal, Infant, and Child Health: Summary Indicators**

| Indicator   | Current Status                                   | Population Disparities  | Healthy People 2020 Target |
|---|--|---|----------------------------|
| <b>Rate of births to teen mothers (15-19 years of age)<sup>1</sup></b>                    | 16.4 births per 1,000 women 15-19 years of age   | <u>Race and Ethnicity</u><br>White non-Hispanic: 5.8 per 1,000<br>Black non-Hispanic: 29.1 per 1,000<br>Asian non-Hispanic: 3.3 per 1,000<br>Hispanic: 47.2 per 1,000 | N/A                        |
| <b>Percent of singleton births that were preterm (&lt;37 weeks gestation)<sup>2</sup></b> | 8.0%   | <u>Race and Ethnicity</u><br>White non-Hispanic: 6.5%<br>Black non-Hispanic: 12.1%<br>Hispanic: 9.2%  | 11.4%<br>(for all births)  |
| <b>Percent of low birthweight births (&lt;2,500 grams)<sup>3</sup></b>                    | Singleton births: 5.6%<br>Multiple births: 56.8% | <u>Race and Ethnicity (Singleton)</u><br>White non-Hispanic: 4.1%<br>Black non-Hispanic: 9.6%<br>Hispanic: 6.4%   | 7.8%<br>(for all births)   |
| <b>Percent of pregnant women who received adequate prenatal care<sup>4</sup></b>          | 77.8%  | <u>Race and Ethnicity</u><br>White non-Hispanic: 80.7%<br>Black non-Hispanic: 71.5%<br>Hispanic: 73.8%  | 77.6%                      |
| <b>Percent of women who used tobacco during pregnancy<sup>5</sup></b>                     | 4.6%   | <u>Race and Ethnicity</u><br>White non-Hispanic: 5.5%<br>Black non-Hispanic: 5.0%<br>Hispanic: 3.4%   | 1.4%                       |
| <b>Infant mortality rate<sup>6</sup></b>  | 5.3 deaths per 1,000 live births                 | <u>Race and Ethnicity</u><br>White non-Hispanic: 3.7 per 1,000<br>Black non-Hispanic: 11.7 per 1,000<br>Hispanic: 6.1 per 1,000                                       | 6.0 per 1,000 live births  |
| <b>Percent of infants who were breastfed exclusively at 3 months<sup>7</sup></b>          | 37.1%  | <u>Race and Ethnicity</u><br>White non-Hispanic: 39.6%<br>Black non-Hispanic: 31.7%<br>Hispanic: 32.5%  | 46.2%                      |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> Connecticut Department of Public Health, 2011; <sup>2</sup> Connecticut Department of Public Health, Vital Statistics Registration Reports, 2011, Table 3; <sup>3</sup> Connecticut Department of Public Health, 2011; <sup>4</sup> Connecticut Department of Public Health, Vital Statistics Registration Reports, Table 4, 2011; <sup>5</sup> Connecticut Department of Public Health, 2011; <sup>6</sup> Connecticut Department of Public Health, 2008-2010; <sup>7</sup> Connecticut Department of Public Health, Pregnancy Risk Assessment and Tracking System (PRATS) Survey, 2010-2011.

## Environmental Risk Factors and Health

The indoor and outdoor environments strongly affect health; exposure to environmental hazards such as secondhand tobacco smoke, lead, asbestos, and air pollution can contribute to cancer, cardiovascular disease, preterm birth, respiratory disease, and cognitive and developmental issues.

Connecticut has experienced many successes in environmental health. For the last several decades, ozone and particle pollution levels have generally declined. Connecticut is home to superior drinking water quality, largely due to a robust infrastructure that monitors and protects water quality and safety. In the past decade, the prevalence of blood lead levels among children under 6 years of age decreased substantially (-64%).

Despite such progress in reducing environmental risk factors, there are still a high number of days when air quality is impaired. Continued improvement in air quality and increases in “Healthy Homes” inspections can help to ensure that improvements in environmental quality improve.

**Table 2. Environmental Risk Factors and Health: Summary Indicators**

| Indicator  | Current Status | Population Disparities | Healthy People 2020 Target |
|--|----------------|------------------------|----------------------------|
| Ozone levels <sup>1</sup><br>(parts per million)   | 11 to 174 ppm  | N/A                    | N/A                        |
| Fine particulate matter <sup>2</sup><br>(parts per million)  | 0 to 83 ppm    | N/A                    | N/A                        |
| Percent of water companies that delivered water that met health standards <sup>3</sup>                   | 99.8%          | N/A                    | 91.0%                      |
| Percent of children <6 years of age with blood lead levels $\geq 5$ $\mu\text{g}/\text{dL}$ <sup>4</sup> | 3.1%           | N/A                    | N/A                        |
| Number of initial Healthy Homes Inspections <sup>5</sup>   | 45             | N/A                    | N/A                        |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> Connecticut Department of Public Health, 2012; <sup>2</sup> Connecticut Department of Public Health, 2012; <sup>3</sup> State of Connecticut Council on Environmental Quality, *Environmental Quality in Connecticut* Report, 2012; <sup>4</sup> Connecticut Department of Public Health, 2012; <sup>5</sup> Connecticut Department of Public Health, 2012.

## Chronic Disease Prevention and Control

Chronic diseases are among the leading causes of death in Connecticut, and they encompass many conditions that can be prevented or minimized. In the past decade, Connecticut experienced a significant decline in certain risk factors, such as smoking among students in middle school and high school, and increases in screening for colorectal cancer among adults. At the same time, there were increases in the prevalence of obesity, overweight, high blood pressure, high cholesterol, diabetes, and asthma among adults.

There are disparities in the prevalence of chronic diseases or their risk factors by race, ethnicity, age, income, educational attainment, sex, and geography. The CDC has identified factors associated with reduced risk of chronic disease, such as reductions in smoking, increased physical activity, improved nutrition, and reductions in obesity, as “Winnable Battles”.

**Table 3. Chronic Disease Prevention and Control: Summary Indicators**

| Indicator  | Current Status                     | Population Disparities   | Healthy People 2020 Target      |
|--|------------------------------------|--|---------------------------------|
| Percent of adults who currently smoke (≥18 years of age) <sup>1</sup>                                    | 16.0%                              | <u>Educational Attainment</u><br>Less than H.S.: 24.2%<br>Graduated H.S./G.E.D.: 19.3%<br>Some college: 16.6%<br>College graduates: 6.9%   | 12.0%                           |
| Percent of adults who met both aerobic exercise and muscle strengthening guidelines <sup>2</sup>         | 21.8%                              | <u>Income</u><br><\$35,000: 17.0%<br>\$35,000-\$74,999: 19.7%<br>\$75,000+: 28.4%  | 20.1%                           |
| Percent of adults who consume fruits and vegetables less than once daily (≥18 years of age) <sup>3</sup> | 31.9%                              | <u>Income</u><br><\$35,000: 39.6%<br>\$35,000-\$74,999: 31.7%<br>\$75,000+: 25.7%  | N/A                             |
| Percent of obesity among adults (≥18 years of age) <sup>4</sup>  | 25.6%                              | <u>Sex</u><br>Males: 27.1%<br>Females: 24.1%   | 30.5%                           |
| Percent of obesity among students (Grades 9-12) <sup>5</sup>   | 12.5%                              | <u>Race and Ethnicity</u><br>White non-Hispanic: 9.8%<br>Black non-Hispanic: 24.0%<br>Hispanic: 15.2%                                      | 16.1%                           |
| Heart disease death rate <sup>6</sup>  | 152.0<br>per 100,000<br>population | <u>Sex</u><br>Males: 191 per 100,000<br>Females: 124 per 100,000   | 100.8 per 100,000<br>population |
| Cancer death rate <sup>7</sup>   | 163.3<br>per 100,000<br>population | <u>Race and Ethnicity</u><br>White non-Hispanic: 165.4 per 100,000<br>Black non-Hispanic: 181.4 per 100,000<br>Hispanic: 115.0 per 100,000 | 160.6 per 100,000<br>population |
| Percent of adults ever told they have asthma (≥18 years of age) <sup>8</sup>                             | 14.3%                              | <u>Race and Ethnicity:</u><br>White non-Hispanic: 13.0%<br>Black non-Hispanic: 17.0%<br>Hispanic: 20.8%                                    | N/A                             |
| Percent of children ever told they have asthma (<18 years of age) <sup>9</sup>                           | 18.7%                              | <u>Race and Ethnicity</u><br>White non-Hispanic: 17.4%<br>Black non-Hispanic: 21.4%<br>Hispanic: 23.9%                                     | N/A                             |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012; <sup>2</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011; <sup>3</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011; <sup>4</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012; <sup>5</sup> Connecticut Department of Public Health, Connecticut School Health Survey (CSHS), 2011; <sup>6</sup> Connecticut Department of Public Health, Vital Statistics (Registration Reports), Mortality Tables Statewide Age-Adjusted Mortality Rates, 2010; <sup>7</sup> Source: Connecticut Tumor Registry, Connecticut Department of Public Health, 2008-2010; <sup>8</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2008-2010; <sup>9</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2008-2010.

## Infectious Disease Prevention and Control

Substantial reductions in the incidence of infectious disease have been achieved largely through immunizations and other preventive practices, and have contributed to decreases in infectious disease deaths and increased life expectancy. During the past 10 years, the number of new cases of HIV and MRSA (methicillin-resistant *Staphylococcus aureus*) infections decreased substantially in Connecticut; these indicators are encompassed in the CDC’s “Winnable Battles”.

Connecticut has made great progress in several areas of infectious disease prevention and control; however, disparities by race, ethnicity, age, and sex remain in the incidence of sexually transmitted diseases and in adult vaccination rates.

**Table 4. Infectious Disease Prevention and Control: Summary Indicators**

| Indicator  | Current Status                                     | Populations Disparities  | Healthy People 2020 Target   |
|--|--|--|--|
| Percent of females 13 to 17 years of age who completed 3 doses of HPV vaccine <sup>1</sup>       | 43.6%  | N/A  | 80.0%<br>(Females 13 to 15 years of age)   |
| Chlamydia incidence rate <sup>2</sup>  | 382.3 per 100,000 population                       | <u>Race and Ethnicity</u><br>White non-Hispanic: 92 per 100,000<br>Black non-Hispanic: 1,213 per 100,000<br>Asian non-Hispanic: 49 per 100,000<br>American Indian non-Hispanic: 277 per 100,000<br>Hispanic: 422 per 100,000 | N/A  |
| Gonorrhea incidence rate <sup>3</sup>  | 68.5 per 100,000 population                        | <u>Race and Ethnicity</u><br>White non-Hispanic: 11 per 100,000<br>Black non-Hispanic: 317 per 100,000<br>Asian: 7 per 100,000<br>American Indian non-Hispanic: 11 per 100,000<br>Hispanic: 67 per 100,000                   | Females: 251.9 per 100,000 population<br><br>Males: 194.8 per 100,000 population |
| Percent of children 19 to 35 months of age who receive recommended vaccines <sup>4</sup>         | 79.0%  | N/A  | 80.0%  |
| Percent of adolescents 13 to 17 years of age who completed Tdap vaccine <sup>5</sup>             | 89.3%  | N/A  | 80.0%  |
| Percent of adults who received influenza vaccine in past year <sup>6</sup>                       | 39.2%  | <u>Race and Ethnicity</u><br>White non-Hispanic: 43.0%<br>Black non-Hispanic: 25.8%<br>Hispanic: 30.0%   | 80.0% (for persons 18 to 64 years of age)  |
| Percent of adults 65+ years of age who received pneumonia vaccine in their lifetime <sup>7</sup> | 67.6%  | <u>Race and Ethnicity</u><br>White non-Hispanic: 70.3%<br>Black non-Hispanic: 53.8%<br>Hispanic: 60.4%   | 90.0%  |
| Rate of healthcare-associated MRSA infections <sup>8</sup>                                       | 4.21 per 100,000 population<br>914 cases<br>(2012) | N/A  | 6.6 per 100,000 population   |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> National and State Vaccination Coverage among Adolescents Aged 13 to 17 Years: United States, 2012. *Morbidity and Mortality Weekly Report (MMWR)* 2013; 62(34): 685-693, Table 3; <sup>2</sup> Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Table 5.2; <sup>3</sup> Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Table 5.2; <sup>4</sup> Connecticut Department of Public Health, *Healthy Connecticut 2010* Final Report, CDC, National Immunization Survey; Morbidity and Mortality Weekly Reports, *National, State, and Local Area Vaccination Coverage among Children Aged 19-35 Months, United States – 2009-2011*, Table 3; <sup>5</sup> National and State Vaccination Coverage among Adolescents Aged 13 to 17 Years: United States, 2012. *Morbidity and Mortality Weekly Report (MMWR)* 2013; 62(34): 685-693, Table 3; <sup>6</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012. <sup>7</sup> Connecticut Behavioral Risk Factor Surveillance System, 2012; <sup>8</sup> Connecticut Department of Public Health, Active Bacterial Core Surveillance Program, 2012

## Injury and Violence Prevention

Unintentional injury and violence are the leading cause of visits to emergency rooms in Connecticut, and they are among the leading causes of premature death in Connecticut. It is estimated that injuries cost the US health system \$80.2 billion annually, and result in productivity losses of \$326 billion annually. Most causes of injury, disability, and injury-related death are preventable. In Connecticut, disparities by sex, age, race, ethnicity, or geography exist for death and premature death rates due to unintentional injury, and for traumatic brain injury, homicide, suicide, and sexual assault.

**Table 5. Injury and Violence Prevention: Summary Indicators**

| Indicator   | Current Status                               | Population Disparities*   | Healthy People 2020 Target  |
|---|--|---|-----------------------------|
| <b>Motor vehicle crash mortality rate<sup>1</sup></b>                     | 8.3 per 100,000 population<br><br>318 deaths | <u>Race and Ethnicity</u><br>White non-Hispanic: 8.5 per 100,000<br>Black non-Hispanic: 8.1 per 100,000<br>Asian non-Hispanic: 4.6 per 100,000<br>Hispanic: 8.5 per 100,000 | 12.4 per 100,000 population |
| <b>Fall mortality rate<sup>2</sup></b>                                    | 7.4 per 100,000 population<br><br>327 deaths | <u>Race and Ethnicity</u><br>White non-Hispanic: 7.4 per 100,000<br>Black non-Hispanic: 4.4 per 100,000<br>Hispanic: 5.3 per 100,000  | 7.0 per 100,000 population  |
| <b>Rate of hospitalizations due to traumatic brain injury<sup>3</sup></b> | 103.3 per 100,000 population                 | <u>Sex</u><br>Males: 123.0 per 100,000<br>Females: 84.5 per 100,000   | 77.0 per 100,000 population |
| <b>Percent who used safety belts<sup>4</sup></b>                          | 88.0%  | N/A   | 92.0%                       |
| <b>Homicide rate<sup>5</sup></b>  | 3.5 per 100,000 population                   | <u>Sex</u><br>Males: 5.6 per 100,000<br>Females: 1.5 per 100,000  | 5.5 per 100,000 population  |
| <b>Suicide rate<sup>6</sup></b>   | 8.4 per 100,000 population                   | <u>Sex</u><br>Males: 13.4 per 100,000<br>Females: 3.6 per 100,000   | 10.2 per 100,000 population |
| <b>Sexual assault rate<sup>7</sup></b>                                    | 16.8 per 100,000 population                  | <u>Town</u><br>New Haven: 54.0 per 100,000<br>Bridgeport: 38.9 per 100,000<br>Hartford: 36.1 per 100,000<br>Waterbury: 5.3 per 100,000                                      | N/A                         |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> Connecticut Department of Public Health, Mortality Tables, Age-Adjusted Mortality Rate by Race and Ethnicity, 2006-2010; <sup>2</sup> Connecticut Department of Public Health, Mortality Tables, Age-Adjusted Mortality Rate by Race and Ethnicity, 2006-2010. <sup>3</sup> Connecticut Department of Public Health, 2011.; <sup>4</sup> Connecticut Department of Transportation, *2012 Highway Safety Plan*, 2011, Table OP-2.; <sup>5</sup> Connecticut Department of Public Health, 2006-2010.; <sup>6</sup> Connecticut Department of Public Health, 2006-2010.; <sup>7</sup> Connecticut Department of Public Safety *Uniform Crime Reports: Offense Statistics*, 2010.



## Mental Health, Alcohol, and Substance Use and Abuse

Mental health and substance use and abuse affect individuals, families, and communities in complex and challenging ways. In addition to premature mortality, mental health and substance abuse contribute to substantial social and economic costs to families and communities.

In Connecticut, there are disparities by age, sex, race, ethnicity, and educational attainment in the prevalence of diagnosed depression and poor mental health days, emergency department visits due to mental health, alcohol abuse or dependence, and substance use. Additionally, over the past decade, Connecticut has experienced an increase in binge drinking among adults. Prescription drug and pain reliever misuse and overdose are an emerging public health challenge and a leading cause of injury death.

**Table 6. Mental Health and Substance Use and Abuse: Summary Indicators**

| Indicator  | Current Status | Population Disparities*  | Healthy People 2020 Target                       |
|--|----------------|--|--|
| Percent of adults who have been told by a health care provider that they have depression <sup>1</sup>          | 16.7%          | <u>Educational Attainment</u><br>Less than high school: 20.1%<br>Graduated high school or GED: 17.3%<br>Some college: 18.6%<br>College graduate: 13.6% | 5.8%<br>(Diagnosis of major depressive episodes) |
| Percent of Medicare beneficiaries with dementia or Alzheimer's disease <sup>2</sup>                            | 13.1%          | N/A  | N/A  |
| Percent of children with special health care needs who currently have an autism spectrum disorder <sup>3</sup> | 7.8%           | N/A  | N/A  |
| Percent of adults who engaged in binge drinking in past month (≥18 years of age) <sup>4</sup>                  | 17.5%          | <u>Age</u><br>18 to 34 years: 31.5%<br>35 to 54 years: 15.9%<br>55+ years: 7.3%  | 24.4%  |
| Percent of students in grades 9-12 who engaged in binge drinking in past month <sup>5</sup>                    | 22.3%          | N/A  | 8.6%   |
| Percent of persons 12 years of age and older who used pain relievers for nonmedical purposes <sup>6</sup>      | 4.4%           | <u>Age</u><br>12 to 17 years: 4.7%<br>18 to 25 years: 10.7%<br>26+ years: 3.3%   | N/A  |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> Connecticut Department of Public Health, Behavioral Risk Factor Surveillance System, 2012; <sup>2</sup> Centers for Medicaid and Medicare Services, State-Level Chronic Conditions Reports, 2007-2011; <sup>3</sup> Children with Special Health Care Needs Survey, 2009-2010; <sup>4</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012; <sup>5</sup> Connecticut Department of Public Health, Connecticut School Health Survey (CSHS), 2011; <sup>6</sup> Substance Abuse and Mental Health Services Administration (SAMHSA), Survey on Drug Use and Health Model-Based Estimates, 2010-2011.

## Health Systems

Equitable access to quality health care is important for eliminating health inequities, reducing health care costs, and improving quality of life. Improvements in health insurance coverage, quality of and access to health care, the size and diversity of the health care workforce, and communication among public health-related organizations are critical to enhancing health systems and reducing health care expenditures. Furthermore, strengthening the public health infrastructure is an important factor for ensuring prevention related initiatives.

Connecticut has numerous health care providers in community-based settings, safety net facilities, and other settings; however, access to preventive care and treatment are not equally distributed. Many of the poorest communities in the state are designated as medically underserved areas and health professional shortage areas and disparities exist by sex, race, and ethnicity in Connecticut residents' level of health insurance coverage and access to primary care.

**Table 7. Health Systems: Summary Indicators**

| Indicator   | Current Status             | Population Disparities  | Healthy People 2020 Target                 |
|---|----------------------------|---|--|
| Percent of uninsured children (<18 years of age) <sup>1</sup>                             | 3.8%                       | <u>Race and Ethnicity</u><br>White non-Hispanic: 2.6%<br>Black non-Hispanic: 5.7%<br>Asian non-Hispanic: 6.8%<br>American Indian non-Hispanic: 10.1%<br>Hispanic: 5.3%                          | 0%<br>(for all <65 years old)              |
| Percent of uninsured adults (≥18 years of age) <sup>2</sup>                               | 12.9%                      | <u>Race and Ethnicity</u><br>White non-Hispanic: 8.8%<br>Black non-Hispanic: 18.8%<br>Asian non-Hispanic: 15.9%<br>American Indian non-Hispanic: 22.8%<br>Hispanic: 28.3%                       | 0%<br>(for all <65 years old)              |
| Percent of adults with usual source of care (≥18 years of age) <sup>3</sup>               | 86.2%                      | <u>Race and Ethnicity</u><br>White non-Hispanic: 89.9%<br>Black non-Hispanic: 77.7%<br>Hispanic: 73.0%  | 83.9%<br>(for usual primary care provider) |
| Percent of children with a medical home <sup>4</sup>                                      | 62.4%                      | <u>Poverty Status</u><br>400+% of Federal poverty level: 72.6%<br>200-399% of Federal poverty level: 63.2%<br>100-199% of Federal poverty level: 48.9%<br><100% of Federal poverty level: 33.8% | 63.3%                                      |
| Rate of non-urgent emergency department visits <sup>5</sup>                               | 179.7 per 1,000 population | <u>"The Five Connecticut" Designations</u><br>Urban Core: 366.9 per 1,000<br>Urban periphery: 186.2 per 1,000<br>Rural: 143.0 per 1,000<br>Suburban: 89.3 per 1,000<br>Wealthy: 69.4 per 1,000  | N/A  |
| Number of Medically Underserved Areas or Populations <sup>6</sup>                         | 29                         | <u>County</u><br>Fairfield: 6      New Haven: 8<br>Hartford: 7      New London: 3<br>Litchfield: 1      Tolland: 1<br>Middlesex: 1      Windham: 2  | N/A  |
| Percent of medical practices that have implemented electronic health records <sup>7</sup> | 53.5%                      | N/A   | N/A  |

**Note:** Current status refers to data for the most recent year available; see data for this Focus Area in Assessment body for specifics.

**Data Sources:** <sup>1</sup> US Census Bureau, American Community Survey, 1-Year Estimates, 2012, DP03 File; <sup>2</sup> US Census Bureau, American Community Survey, 1-Year Estimates, 2012, DP03 File; <sup>3</sup> Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System Core Questions Data Report, 2012; <sup>4</sup> Medical Home Performance Profile for All Children, 2007 National Survey of Children's Health; <sup>5</sup> Connecticut Department of Public Health, OHCA, 2010. *Profile in Emergency Department Visits Not Requiring Inpatient Admission to a Connecticut Acute Care Hospital Fiscal Year 2006-2009*, Chart 7; <sup>6</sup> Connecticut Department of Public Health, Primary Care Office, October 1, 2013; <sup>7</sup> Connecticut Department of Public Health, Connecticut's Health Information Technology Exchange Evaluation Process: Baseline Assessments & Updates, 2011 and Connecticut Department of Public Health, Personal Communication.

# PROCESS AND METHODS



## Introduction

Having a healthy population is about more than delivering quality health care to residents. Where a person lives, learns, works, and plays all have an enormous impact on health. As such, understanding the current health status of Connecticut residents and the multitude of factors that influence health enables the identification of priorities for public health planning, existing strengths and assets upon which to build, and areas for further collaboration and coordination.

The *Healthy Connecticut 2020 State Health Assessment* provides a foundation for this work by presenting a broad set of indicators that paint a comprehensive portrait of the health of Connecticut residents.

## What is a State Health Assessment?

A State Health Assessment is a systematic examination of the health status of Connecticut residents and the factors that affect health, using wide-ranging set of indicators that can be tracked over time and for particular population groups. The indicators range from birth characteristics (low birthweight, adequacy of prenatal care, etc.) to leading causes of death, and factors in between, such as behavioral and environmental risk factors.

The State Health Assessment is intended to help program planners, policy makers, and others to develop a shared understanding of health issues, and to have access to the most recent measures of the health of Connecticut residents. The ultimate purpose of the *State Health Assessment* is to inform the development of goals, objectives, and strategies for the *Healthy Connecticut 2020 State Health Improvement Plan*--the roadmap to improving the health and well-being of all Connecticut residents.

The *State Health Assessment* and *State Health Improvement Plan* facilitate a data-informed and evidence-based process. They provide opportunities for organizations and agencies across Connecticut to come together around a common framework for improving health. Two important tenets of this process are the core aims of prevention and health equity.

## Prevention as the Cornerstone of Public Health

The seven Focus Areas in this *State Health Assessment* are united by a desire to improve the health of Connecticut residents and reduce health disparities by investing in prevention, the cornerstone of public health. This can be achieved through interventions at the individual, family, community, and policy levels.

The persistent and rising prevalence of chronic disease, for example, is a major public health challenge that faces the nation as well as Connecticut. Reductions in chronic disease can be achieved with improvements in diet and physical activity and further declines in tobacco use. Individuals can make behavioral changes in their lives on their own; however, personal behaviors are largely influenced by social determinants, such as the availability of affordable, healthy food; safe places for recreation; and health-related policies in all sectors, such as smoke-free housing mandates.

Policy, systems, and environmental changes that support efforts to promote “making the healthy choice the easy choice” and reducing stressors, will help to improve the health of all Connecticut residents and reduce health disparities, whether social, economic, demographic, or geographic.

## Health Equity: Good Health for All of Connecticut’s Residents

When compared to many other states across the country, Connecticut is a healthy state, with numerous successes to celebrate. This is not uniformly true for all regions in Connecticut, however, and specific population groups consistently experience poor health outcomes.

Barriers to the opportunities to live a healthy life may be disproportionately concentrated among certain populations, such as racial and ethnic minorities, low-income populations, residents of rural and urban areas, homeless persons, persons with disabilities, veterans, and the lesbian, gay, bisexual, and transgender (LGBT) community.

The influences of race, ethnicity, income, and geography on health patterns are often intertwined. In the United States, social, economic, and political processes ascribe social status based on race and ethnicity, which may influence opportunities for educational and occupational advancement and

housing options, two factors that profoundly affect health.

In the present report, we describe health patterns for Connecticut overall and areas of need for particular population groups. Understanding factors that contribute to health patterns for these populations can facilitate the identification of data-informed and evidence-based strategies to provide all residents with the opportunity to live a healthy life.

## **A Collaborative Process**

Development of the *State Health Assessment* and *State Health Improvement Plan* is an iterative, collaborative process that has engaged organizations, agencies, and residents from all sectors across the state. The following section provides an overview of this process.

### **Partner Engagement**

Accountable and effective public health practice requires comprehensive health improvement planning that engages a wide range of partners. Development of the State Health Assessment was led by the Connecticut Department of Public Health (DPH) in collaboration with many partners from across the state (See Appendix A: Partners and Organizations).

The Connecticut Health Improvement Planning Coalition, a large body of representatives from diverse local, regional, and statewide entities whose policies and activities can affect and influence health, reviewed preliminary assessment data. They participated in Planning Work Groups, requested and reviewed data provided to the Work Groups, served as community ambassadors for planning initiatives, and fostered connections with key networks and groups for action.

The Advisory Council, made up of 25 Connecticut leaders from various sectors, guided DPH in the development of the *State Health Assessment*. Specifically, the Advisory Council provided feedback on the *State Health Assessment* template and made recommendations on assessment topics, tone, and format.

Additionally, a State Health Assessment Indicators Work Group was convened. It comprised epidemiologists, program leaders, content experts, and data specialists from DPH and other agencies

and organizations. Members provided guidance on the topics and indicators to be incorporated into the Assessment. After meeting as a group in December 2012, individuals were contacted throughout the process to solicit comments and data during the development Assessment.

Health Resources in Action (HRiA), a non-profit public health organization based out of Boston, MA, provided technical assistance, data compilation and synthesis, and writing services for the State Health Assessment.

### **Community Engagement**

Community engagement at multiple levels is critical throughout all components of a health improvement planning process, from conducting the assessment to developing and implementing the improvement plan. Involving a broad range of stakeholders and developing multi-sector partnerships was essential for developing a comprehensive portrait of Connecticut's health status. In addition to being involved on the Coalition, community members were invited to provide input and feedback as the State Health Assessment was drafted. Preliminary data on the State Health Assessment was published on the DPH website for the entire year that the full report was being developed. Additionally, direct public comment on draft State Health Assessment findings was gathered in September and October, 2013 at eight county-level public forums held in Rockville, Windham, Hartford, Torrington, Bridgeport, New Haven, New London, and Middletown. Additionally, a Spanish-language Webinar was held for the state's Latino residents, and a special Forum was held for State agencies. Input from these sessions was used to refine the content and framing of the State Health Assessment data.

## Relationship between the Assessment and Other Guiding Documents and Initiatives

The *State Health Assessment* was guided by and aligned with the *National Prevention Strategy*, *Healthy People 2020* objectives, and other existing Connecticut and DPH topic-specific assessments and plans. Other key initiatives, such as the *County Health Rankings* and the topics in CDC's *Winnable Battles* and *Prevention Status Reports* were reviewed and considered in development of the Assessment.

## Focus Areas and Areas of Concentration

The Connecticut Health Improvement Planning Coalition and its partners identified seven Focus Areas and areas of concentration for the *State Health Assessment* and *State Health Improvement Plan*:

1. Maternal, Infant, and Child Health
2. Environmental Risk Factors and Health
3. Chronic Disease Prevention and Control
4. Infectious Disease Prevention and Control
5. Injury and Violence Prevention
6. Mental Health, Alcohol, and Substance Abuse
7. Health Systems

Each of the Focus Areas contains several areas of concentration—specific topics of health or public health concern related to the Focus Area.

On January 31, 2013, a summary of preliminary findings for the Assessment was presented to members of the Coalition at their first assembly. Following the presentation, participants were asked to break into one of six Focus Area groups, based on their particular areas of interest and expertise. In these facilitated discussions, participants were invited to ask questions, provide insight, and define the main Focus Areas for the Assessment and Plan. A seventh Focus Area, Environmental Risk Factors and Health, was recommended by the Coalition and added.

The present *State Health Assessment* examines trends and patterns for each of the seven Focus Areas and introductory sections on the social and economic environment, leading causes of mortality and hospitalization, and the health of specific groups and high risk populations.

## Data Sources

The list of indicators and data sources for the State Health Assessment was compiled through a collaborative, iterative process involving experts and stakeholders within DPH, from other agencies, and partnering organizations from a multitude of sectors. The following is a brief description of the sources of information used in the Assessment.

## Key Informant Interviews

As a first step for the Assessment, 29 interviews were conducted with key informants— leaders from around the state. The interviews included heads of state agencies, community service organizations, statewide organizations focused on specific population groups, the state Legislature, academia, education, and business. Discussions explored their perspectives on current and emerging health issues in Connecticut, the current state of health data, and their thoughts about important issues to consider in the Assessment.

## Sources of Data Used in State Health Assessment

Data for the State Health Assessment were obtained from a variety of sources. All data are for calendar years, unless otherwise noted. For example, exceptions include most hospital emergency department data which are given by federal fiscal year (FFY: October 1 to September 30).

- Demographic, social, and economic indicators are from the 2010 US Census and the American Community Surveys.
- Data on births, deaths, hospitalizations, emergency department visits, infectious diseases, and supply of primary care, mental health, and oral health providers are from databases managed by the Connecticut Department of Public Health.
- Indicators of self-reported chronic disease and health behaviors such as smoking, dietary practices, and physical activity are from the Connecticut Behavioral Risk Factor Surveillance System for adults 18 years of age and older) and from the Connecticut School Health Survey (also known as the Youth Risk Behavior Surveillance System and Connecticut Youth Tobacco Survey) for students in grades 6 to 8 and 9 to 12. Most data from these surveys were analyzed by the Connecticut Department of Public Health.

[It is important to note that sampling methods for the BRFSS, a telephone survey, were changed beginning in 2011 to include cell phones, for greater representativeness. Because of this change, survey results after 2010 are not directly comparable with results from previous years. As such, BRFSS trend graphs in this report have breaks in lines between 2010 and 2011.]

- Other sources of health data include, but are not limited to: National Immunization Survey; US Department of Agriculture Food Desert Locator; Centers for Medicaid and Medicare Services; Substance Abuse and Mental Health Services Administration (SAMHSA) Survey on Drug Use and Health Model-Based Estimates; Connecticut Department of Veteran Affairs-Connecticut Veteran's Needs Assessment Study; Connecticut Poison Control Center; Connecticut Department of Emergency Services and Public Protection; US Department of Health and Human Services Administration for Children and Families; Bureau of Labor Statistics; National Survey of Children's Health; and the Connecticut Department of Environmental Protection.

Tests of statistical significance were performed for some of the indicators presented in the Assessment. Statistically significant ( $p < 0.05$ ) changes over time or differences between population groups are noted in the graphs and corresponding narrative. When statistical significance is not mentioned in the graphs or narrative, it indicates that tests for statistical significance were not conducted.

### **Limitations of Health Indicator Data**

As with most health assessments, the indicators presented in this health assessment have several limitations. First, indicators of the health status of Connecticut residents are derived from surveillance data and are often presented for multi-year periods, during which time data collection or analysis methods may have changed. Any changes in the collection or analysis of surveillance data are noted along with figures where appropriate.

Second, there is a time lag between data collection, analysis, and availability for public reporting. This Assessment includes data for the

most recently available years at the time the Assessment was performed.

Third, data from different sources, obtained by different surveillance methods, sometimes are available for the same indicator; for the purpose of the Assessment, choices were made as to which source to use. For example, there are two measures of seat belt use in Connecticut: self-reported use, collected as part of the DPH Behavioral Risk Factor Surveillance Survey; and observed driver and front seat passenger seat belt use, from statewide scientific observations conducted by the Connecticut Department of Transportation.

Fourth, data are not directly available for many measures, such as numbers of injuries and prevalence of certain conditions (heart disease, arthritis, hearing impairment, etc.), so estimates must be made or proxies must be used, such as numbers of emergency room visits or hospitalizations.

Fifth, not one but several indicators may be useful for characterizing a particular disease or condition for which a direct measure is not available. For example, the actual number of Connecticut residents with heart disease is not known. To provide an assessment of the disease, this Assessment instead includes data on a spectrum of indicators related to heart disease—deaths, hospitalizations, and self-reports of being diagnosed with heart disease, high blood pressure, and cholesterol by a health care provider.

Sixth, some data are not available for specific populations of interest, such as town populations, racial and ethnic groups, homeless persons, and sexual minorities. This is often due to small sample or population sizes or limitations in the availability of data for marginalized populations.

Finally, some data, particularly those obtained through certain surveys, are based on self-report, which over- or under-estimate the prevalence of the health issue or health behavior.

Despite these limitations, the indicators included in the *State Health Assessment* can provide important insight into health issues affecting Connecticut residents and can inform the health improvement planning process.





# POPULATION CHARACTERISTICS

## POPULATION CHARACTERISTICS

The demographic characteristics of Connecticut’s residents, changes in the population over time, and variation in the characteristics of Connecticut residents across the state are important things to consider to understand the distribution of health issues across Connecticut and for particular populations. In addition, understanding factors that affect vulnerable populations in Connecticut is important for identifying and addressing health disparities. The social and economic environment in which people live profoundly affects health.<sup>1,2,3</sup> Inequalities in health are related to socioeconomic status, race, ethnicity, sex, country of birth, and other social characteristics.<sup>4,5</sup> Interventions to improve and promote the health of all Connecticut residents requires an understanding of the influence of social and economic factors on health.

This section includes the following topic areas:

- Race, Ethnicity, and Age
- Population Pyramids: Age Distributions by Sex, Race and Ethnicity
- Country of Birth and Language Use
- Town Groupings by Socioeconomic Factors: “The Five Connecticut’s”
- Socioeconomic Status
- Unemployment Rate
- Housing Characteristics
- Transportation

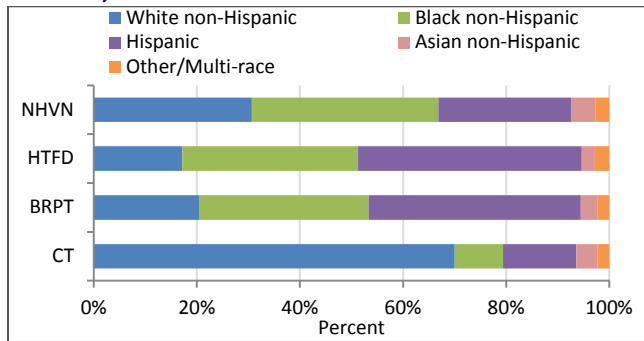
**RACE, ETHNICITY, AND AGE**

**Table 8. CHANGE IN POPULATION CHARACTERISTICS, CONNECTICUT 2000 VS. 2010**

| Characteristic                 | 2000      | 2010      | Change 2000-2010 |       |
|--------------------------------|-----------|-----------|------------------|-------|
| Population                     | 3,405,565 | 3,574,097 |                  | 4.9%  |
| Median age                     | 37.4 yrs  | 40.0 yrs  | 2.6 yrs          |       |
| 65+ yrs of age                 | 13.8%     | 14.2%     | 36,376           | 7.7%  |
| <b>Race and Ethnicity</b>      |           |           |                  |       |
| White only                     | 81.6%     | 77.6%     | -7,945           | 0.3%  |
| Black or African American only | 9.1%      | 10.1%     | 52,653           | 16.9% |
| Asian only                     | 2.4%      | 3.8%      | 53,252           | 64.7% |
| American Indian only           | 0.3%      | 0.3%      | 9,637            | 16.8% |
| Other/2+ races                 | 6.6%      | 8.2%      | 69,155           | 31.1% |
| Hispanic, any race             | 9.4%      | 13.4%     | 158,764          | 49.6% |

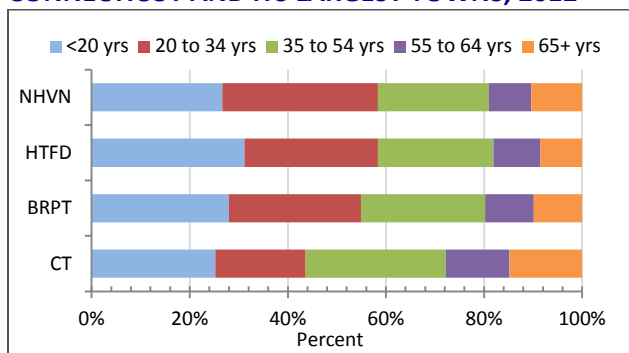
Source: US Census Bureau, 2000 and 2010 Census.

**Fig. 1. PERCENT OF POPULATION BY RACE AND ETHNICITY, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP05 File.

**Fig. 2. PERCENT OF POPULATION BY AGE, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP05 File.

**Why Population Characteristics are Important**

The distribution of characteristics of the population, including age, sex, race, ethnicity, country of birth, and socioeconomic status, may influence the health patterns in the region and the number and type of services and resources in the area.

**Findings in Connecticut**

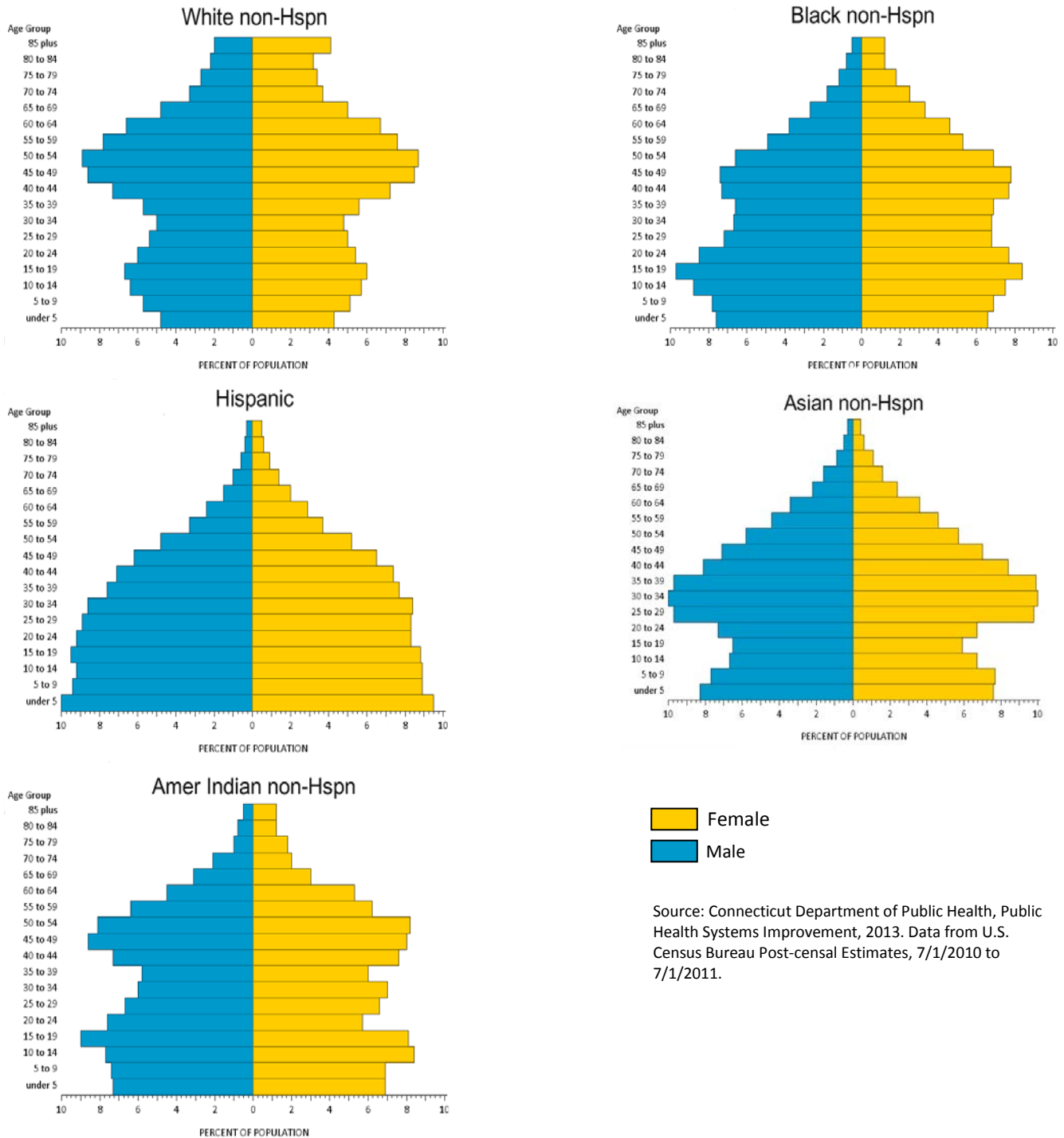
Connecticut’s population increased by about 5% between 2000 and 2010. During this period, the proportion of residents who were at least 65 years of age increased by nearly 8%; this affected the median age of the state’s population, which increased to 40 years. Connecticut is becoming increasingly diverse by race and ethnicity. During the last decade, the white population decreased, whereas there were increases in the numbers of other population groups, notably Asians (65% increase) and Hispanics (50% increase).

In Connecticut, 70% of the population is white non-Hispanic and 30% is nonwhite and non-Hispanic (14.2% Black non-Hispanic, 9.4% Hispanic, 4.1% Asian non-Hispanic, and 2.3% of another race or multi-racial background). In 2012, Connecticut’s largest towns had greater racial and ethnic diversity than Connecticut overall. Fully 36.2% of New Haven’s population is black non-Hispanic, followed by 30.7% white non-Hispanic, 25.9% Hispanic, and 4.6% Asian non-Hispanic. The Hispanic population accounts for more than 40% of the population in Hartford and Bridgeport.

In 2012, about 1 in 4 Connecticut residents (25.2%) was under 20 years of age, and 1 in 7 (14.8%) was 65 years of age or older. Connecticut’s largest towns have a greater proportion of young persons than the state overall, with more than half of the populations of New Haven, Hartford, and Bridgeport younger than 35 years of age, compared to about 44% statewide. These differences are explained in large part by the age distributions of different racial and ethnic groups, shown in Fig. 3.

**POPULATION PYRAMIDS: AGE DISTRIBUTION BY SEX, RACE, AND ETHNICITY**

**Fig. 3.**  
**POPULATION PYRAMIDS: AGE DISTRIBUTION BY SEX, RACE AND ETHNICITY**  
**CONNECTICUT, 2010**



Source: Connecticut Department of Public Health, Public Health Systems Improvement, 2013. Data from U.S. Census Bureau Post-censal Estimates, 7/1/2010 to 7/1/2011.

### Findings in Connecticut

The figures above are called “population pyramids.” They show the percentages of females and males in 5-year age groups for different racial and ethnic groups. Older ages are at the tops of the pyramids, and younger ages at the bottoms.

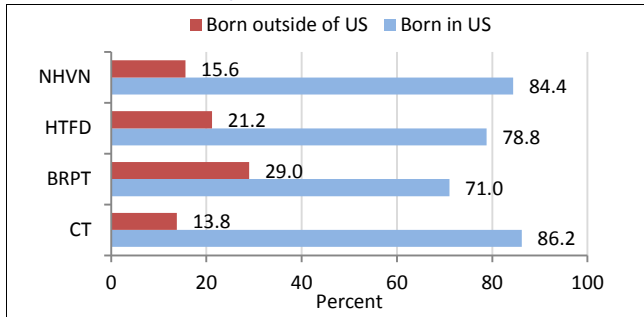
The profiles for the different groups are strikingly different. White non-Hispanics have the largest proportions of older adults and the smallest proportions of children, especially children under 5 years of age.

In contrast, Hispanics and Asian non-Hispanics have the smallest proportions of older adults, and Hispanics and Asians have greatest proportions of children.

The proportions of males and females in different populations diminish steadily after about 40 to 50 years of age with two notable exceptions. Percentages of Hispanics males begin to decline after 19 years of age and females after 34 years of age; and the proportion of white non-Hispanic females in the oldest age group actually exceeds those in the three lower age groups.

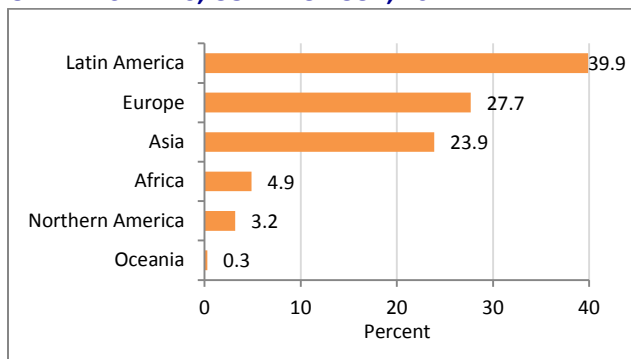
**COUNTRY OF BIRTH AND LANGUAGE USE**

**Fig. 4. PERCENT OF POPULATION BORN IN U.S. AND OUTSIDE U.S., CONNECTICUT AND ITS LARGEST TOWNS, 2012**



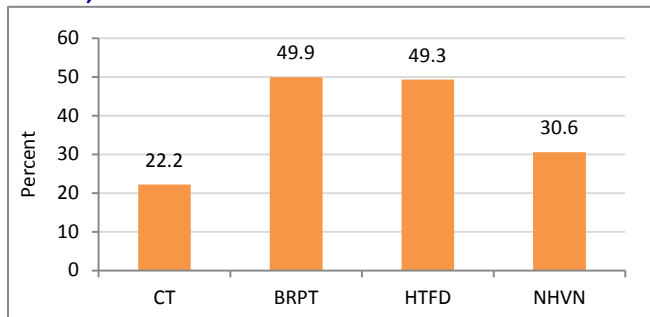
Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP02 File.

**Fig. 5. WORLD REGION OF BIRTH FOR CONNECTICUT RESIDENTS BORN OUTSIDE OF UNITED STATES, CONNECTICUT, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP02 File.

**Fig. 6. PERCENT OF POPULATION 5 YRS+ WHO SPEAK A LANGUAGE OTHER THAN ENGLISH AT HOME, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP02 File.

**Why Country of Birth and Language Use are Important**

The United States is becoming increasingly diverse racially and ethnically. The nation is projected to become a “minority-majority” society by 2043, one in which white non-Hispanics will be the largest racial and ethnic group, but will constitute less than half of the population.<sup>6</sup>

The US is characterized as a nation of immigrants, and immigration is one factor that contributes to these demographic shifts.<sup>7</sup> The countries from which immigrant populations originated and language spoken are important for understanding social and health patterns among immigrant populations.

As discussed later in this report and shown in Figure 33, Hispanics and black non-Hispanics have higher birth rates compared to white non-Hispanics, and this also accelerates the demographic shift to a population in which one or more racial and ethnic groups make up the majority of the population.

**Findings in Connecticut**

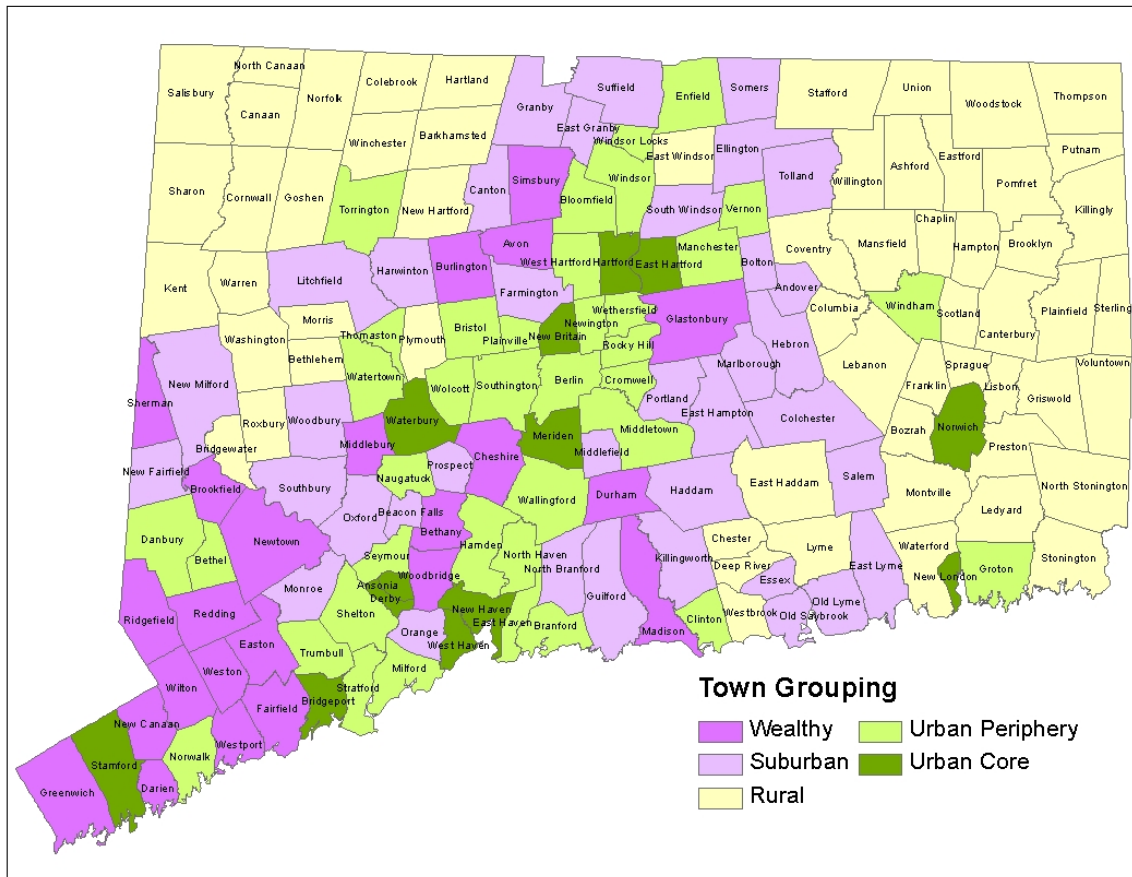
In 2012, approximately 1 in 7 Connecticut residents (13.8%) was born outside the United States. Connecticut’s largest towns have a greater proportion of residents born outside of the US, 29.0% in Bridgeport, 21.2% in Hartford, and 15.6% in New Haven.

The majority of Connecticut residents who were born outside the United States were born in Latin America (39.9%), Europe (27.7%), and Asia (23.9%).

In 2012, more than 1 in 5 Connecticut residents 5 years of age or older spoke a language other than English at home. In Connecticut’s largest towns, a greater proportion of residents spoke a language other than English at home. This was true for about half of residents of Bridgeport and Hartford, and nearly 1 in 3 residents of New Haven.

### TOWN GROUPINGS BY SOCIOECONOMIC FACTORS: THE FIVE CONNECTICUTS

Fig. 7. The Five Connecticut: Town Groupings by Socioeconomic Factors, Connecticut, 2009



Source: Connecticut State Data Center. The Changing Demographics of Connecticut: The Five Connecticut. Recreated graph from updated 2009 data provided through personal communication.

#### Findings in Connecticut

Connecticut’s statewide averages for demographic, social, and economic factors present a misleading characterization of the state. Striking disparities exist across and even within town borders, in terms of racial and ethnic composition, income, poverty, educational attainment, and numerous other factors. Many of these factors, alone or in combination, can profoundly affect health.

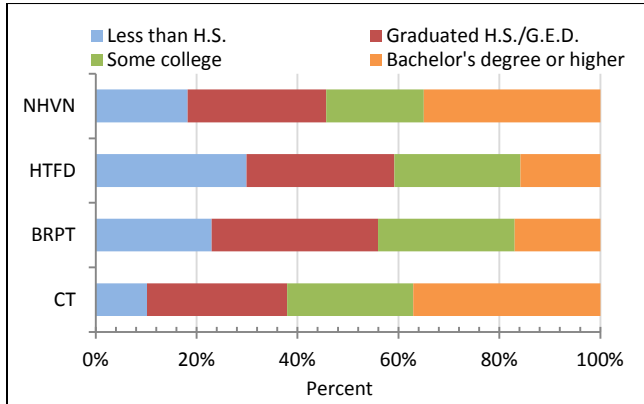
The Connecticut State Data Center analyzed socioeconomic data for Connecticut’s 169 towns and organized them into five distinct groups based on three characteristics: population density, median family income, and percent of population living below the federal poverty level. They found that this combination clearly and accurately described population distribution in Connecticut.

The distribution of the “Five Connecticut”, or town classifications, across the state is shown in the map above. The categories range from “Wealthy” (exceptionally high income, low poverty, and moderate population density) to “Urban Core” (lowest income, highest poverty, and highest population density). In many cases, towns categorized in these extreme groups are found side by side or sandwiched between one another (e.g., Stamford and Greenwich/New Canaan/Darien; Waterbury and Middlebury/Cheshire).

As can be seen in maps and graphs depicting health characteristics of towns, shown later this Assessment, the wealthiest towns commonly are the healthiest, whereas the Urban Core towns—Connecticut’s largest towns-- often have the poorest health outcomes.

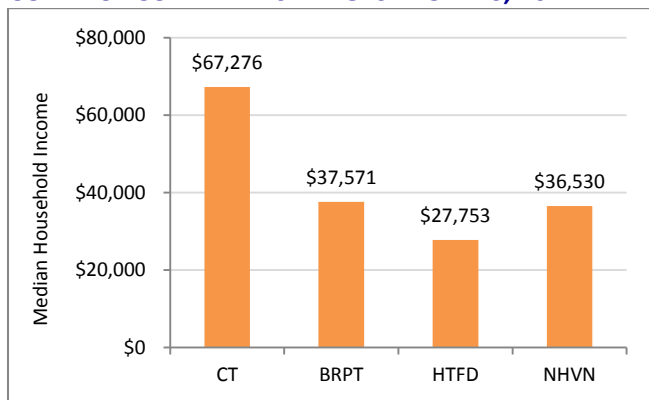
**SOCIOECONOMIC STATUS**

**Fig. 8. PERCENT OF POPULATION, BY EDUCATIONAL ATTAINMENT, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



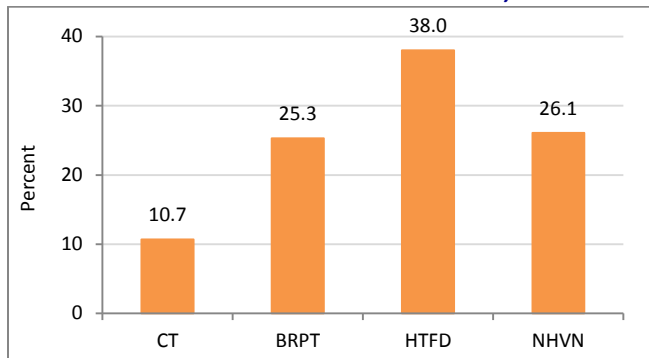
Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP02 File.

**Fig. 9. MEDIAN HOUSEHOLD INCOME, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP03 File.

**Fig. 10. PERCENT OF INDIVIDUALS WITH INCOMES BELOW THE FEDERAL POVERTY LEVEL, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP03 File.

**Why Socioeconomic Status is Important**

Health is greatly influenced by socioeconomic status; persons of lower income or lower educational attainment generally have less favorable health profiles compared to their counterparts with higher income or greater educational attainment.<sup>8</sup>

There are several mechanisms by which socioeconomic status may influence health, including the physical, social, and economic context in which people live and work. This context may influence access to health-promoting resources such as affordable healthy food and safe places for recreation; exposures to adverse physical environments (toxic substances or unsafe occupational conditions); and the concentration of stressors such as exposure to violence, social, political, and economic exclusion, and discrimination.<sup>9</sup> People with higher socioeconomic status also may have access to greater resources to help them cope with stressors.<sup>10</sup>

**Findings in Connecticut**

In 2012, about 10% of Connecticut adults had less than a high school education, 28% completed high school or had a GED, 25% had some college education, and 37% had a bachelor’s degree or higher. Relative to the state overall, Connecticut’s largest towns appeared to have a greater proportion of adults with the lowest levels of educational attainment.

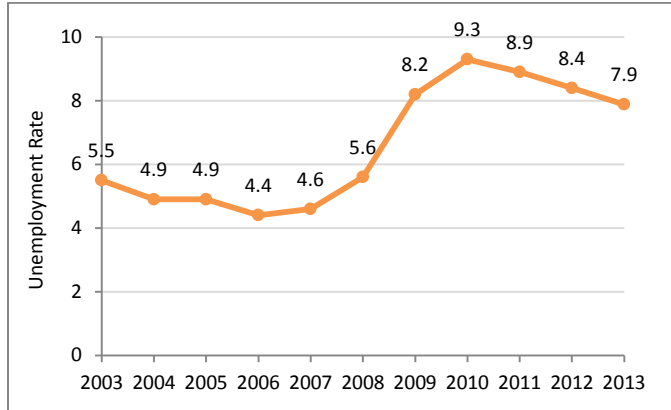
The median household income in Connecticut was \$67,276 in 2012. Household income was lower in Connecticut’s largest towns compared to Connecticut overall. The median household income was about half the state average in Bridgeport and New Haven, and about 40% of the state average in Hartford.

Approximately 1 in 10 Connecticut residents had incomes below the federal poverty level in 2012. Connecticut’s largest towns had higher proportions of persons with incomes below the federal poverty level, compared to the state overall. In 2012, 38% of individuals in Hartford had incomes below the federal poverty level, as did 26% in New Haven, and 25% in Bridgeport.



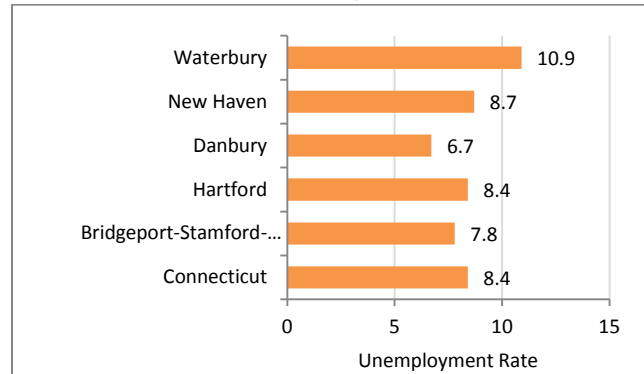
### UNEMPLOYMENT RATE

**Fig. 11. UNEMPLOYMENT RATE, CONNECTICUT, 2003-2013**



Note: Annual unemployment rate in Connecticut in 2013 calculated, and December 2013 rate was based on preliminary data.  
 Source: Bureau of Labor Statistics, Local Area Unemployment Statistics, Connecticut, 2003-2013.

**Fig. 12. UNEMPLOYMENT RATE, CONNECTICUT AND METROPOLITAN AREAS, 2012**



Source: Bureau of Labor Statistics, Metropolitan Area Unemployment Statistics, 2012.

### Why Unemployment is Important

Americans spend more than half their waking lives at work.<sup>11</sup> Employment can confer income, benefits, and occupational and economic stability, factors that may promote health.<sup>12</sup> Job loss, unemployment, and underemployment are associated with less favorable health outcomes.<sup>13</sup>

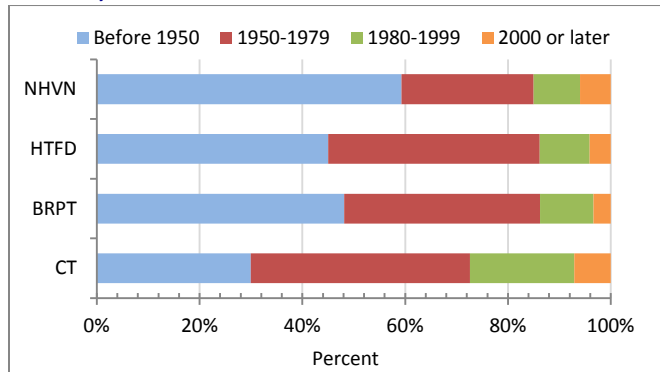
### Findings in Connecticut

In Connecticut, the unemployment rate ranged from 5.5% in 2003 to a high of 9.3% in 2010. As with the rest of the US, Connecticut experienced an increase in the unemployment rate from 2007 to 2010, followed by a decline. Preliminary data indicate that in 2013, the unemployment rate in Connecticut was 7.9%.

In 2012, the unemployment rate in Waterbury (10.9%) appeared to exceed that for Connecticut (8.4%).

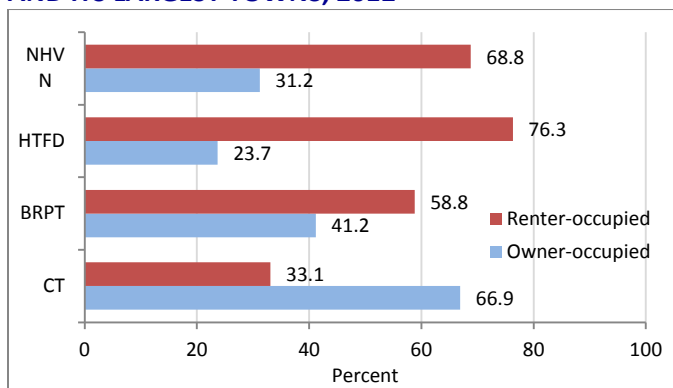
### HOUSING CHARACTERISTICS

**Fig. 13. PERCENT OF HOUSING, BY YEAR OF CONSTRUCTION, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



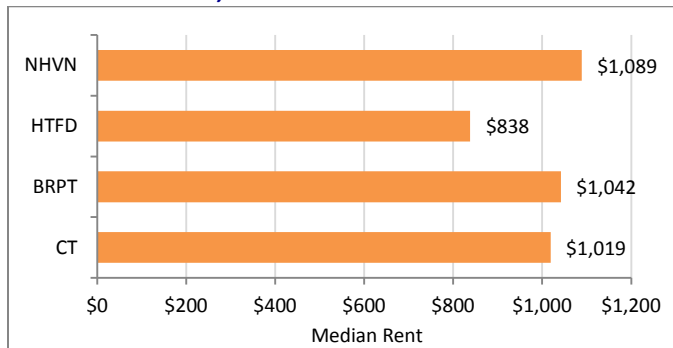
Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP04 File.

**Fig. 14. PERCENT OF HOUSES THAT ARE OWNER-OCCUPIED OR RENTER-OCCUPIED, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP04 File.

**Fig. 15. MEDIAN RENT, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP04 File.

### Why Housing Characteristics are Important

Where people live is integral to their daily lives, health, and well-being. Housing is generally the largest household expense, and for homeowners, can be an important source of wealth.<sup>14</sup> The conditions in the home and neighborhood environment may promote health or be a source of exposures that may increase the risk of adverse health outcomes.<sup>15</sup>

Age of housing is particularly important, because older homes are more likely to contain lead paint, asbestos, and other substances that are hazardous to health.

### Findings in Connecticut

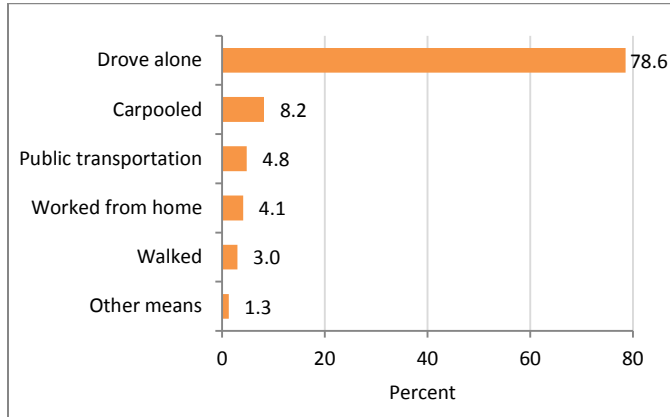
In 2012, 30% of houses in Connecticut were constructed before 1950, while only 7% were constructed in 2000 or later. Homes in Connecticut’s largest towns are generally older than those across Connecticut. In New Haven, 59% of homes were built before 1950, followed by 48% of homes in Bridgeport, and 45% of homes in Hartford that were constructed before 1950.

In Connecticut, 67% of homes were owner-occupied in 2012, while 33% were renter-occupied. In Connecticut’s largest towns, a greater proportion of residents were renters relative to Connecticut overall. In Hartford, 76% of residents rented their home, followed by 69% in New Haven and 58.8% in Bridgeport.

In Connecticut in 2012, the median rental cost was \$1,019. Rents were highest in New Haven (\$1,089), Bridgeport (\$1,042), and Hartford (\$838).

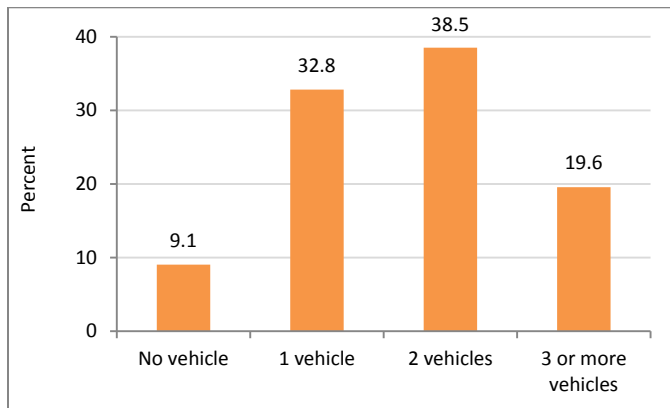
**TRANSPORTATION**

**Fig. 16. MEANS OF TRANSPORTATION FOR PERSONS 16 YEARS OF AGE AND OLDER WHO COMMUTED TO WORK, CONNECTICUT, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP03 File.

**Fig. 17. PERCENT OF HOUSEHOLDS WITH A MOTOR VEHICLE, BY NUMBER OF VEHICLES, CONNECTICUT, 2012**



US Census Bureau, 2012 American Community Survey 1-Year Estimates, B08201 File.

**Why Transportation is Important**

Transportation is important to most people for getting to school, work, and also to health care services and health-promoting resources, such as healthy foods.<sup>16</sup>

Transportation policies that have invested in highways have connected people with goods and services outside their communities, but have also contributed to decreased physical activity, increased air pollution, and car accidents, factors that are associated with poor health outcomes and premature death.<sup>17</sup>

**Findings in Connecticut**

In 2012, about 8 in 10 Connecticut residents drove a vehicle alone to work. Less than 1 in 10 carpooled to work, and even fewer used public transportation or walked to commute to work.

About 1 in 10 of households did not have a vehicle, 1 in 3 had one vehicle, and nearly 6 out of 10 Connecticut households had at least 2 vehicles.



# LEADING CAUSES OF DEATH AND HOSPITALIZATION

## LEADING CAUSES OF DEATH AND HOSPITALIZATION

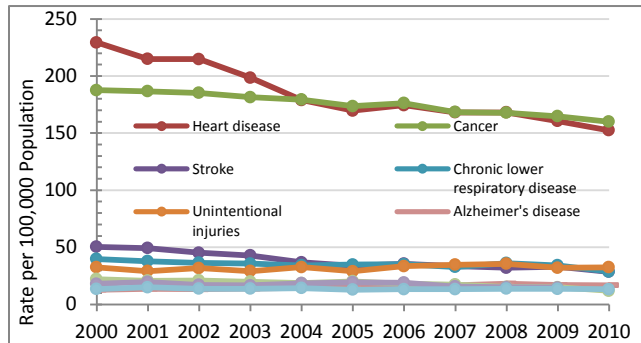
Mortality statistics, such as the leading causes of death and premature death, provide insights into the health problems of Connecticut's residents. Because advancements in disease treatments have reduced the number of preventable deaths, hospitalization and emergency department visits have become important indicators to foster greater understanding of the health of residents in Connecticut. Each of these indicators can inform the development and enhancement of programs and policies to improve the health and quality of life of Connecticut's residents. Definitions of the indicators in this section are given in detail *in Appendix B: Definition of Measures*.

This section includes the following topic areas:

- Leading Causes of Mortality
- Age-Specific Mortality
- Mortality & Premature Mortality
- Life Expectancy
- Hospitalizations and Emergency Department Visits

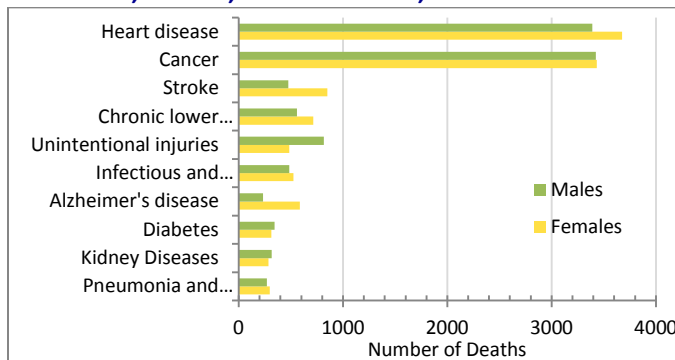
**LEADING CAUSES OF MORTALITY**

**Fig. 18. AGE-ADJUSTED MORTALITY RATE FOR LEADING CAUSES OF DEATH, CONNECTICUT, 2000-2010**



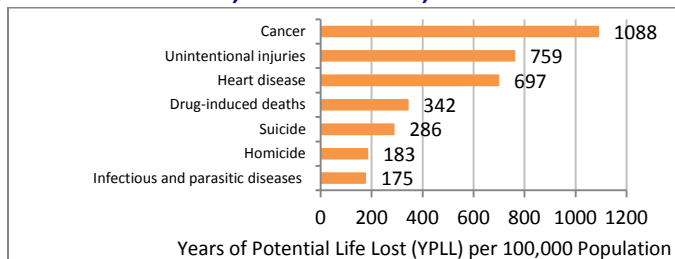
Note: "Infectious and parasitic diseases" is not a standard category used in ranking "Leading causes of death," but it is included for descriptive purposes. Source: Connecticut Department of Public Health, Age-Adjusted Mortality Rate Tables, 1-Year Estimates, 2000-2010.

**Fig. 19. NUMBER OF DEATHS FOR LEADING CAUSES OF DEATH, BY SEX, CONNECTICUT, 2010**



Note: "Infectious and parasitic diseases" is not a standard category used in ranking "Leading causes of death," but it is included for descriptive purposes. Source: Connecticut Department of Public Health, Age-Adjusted Mortality Rate Tables, 1-Year Estimates, 2010.

**Fig. 20. AGE-ADJUSTED PREMATURE MORTALITY (YEARS OF POTENTIAL LIFE LOST) FOR LEADING CAUSES OF DEATH, CONNECTICUT, 2010**



Note: "Infectious and parasitic diseases" is not a standard category used in ranking "Leading causes of death," but it is included for descriptive purposes. Source: Connecticut Department of Public Health, Age-Adjusted YPLL before 75 Years of Age, 2010.

**Why Mortality Statistics are Important**

Looking at which diseases result in the most deaths in the state provides an indirect measure of the health of residents in Connecticut and may help to guide discussions regarding the allocation of resources in efforts to reduce mortality rates. To maximize their usefulness for public health planning and evaluation, mortality assessments often consider additional factors.<sup>18</sup> Much of the mortality information presented here will also be evaluated in light of factors such as: whether the cause of death is preventable and dimensions of disease burden, such as prematurity, associated costs and disability, and disparities in the distribution of disease burden throughout the population.

**Findings in Connecticut**

*Trends*

Heart disease has historically been the leading cause of death among males and females in Connecticut, and cancer has consistently been the second leading cause of death in Connecticut. However, in 2009 cancer became the leading cause of death among males in Connecticut and remained the leading cause of death among males in 2010. As with previous years, heart disease was the leading cause of death among females in Connecticut in 2010.

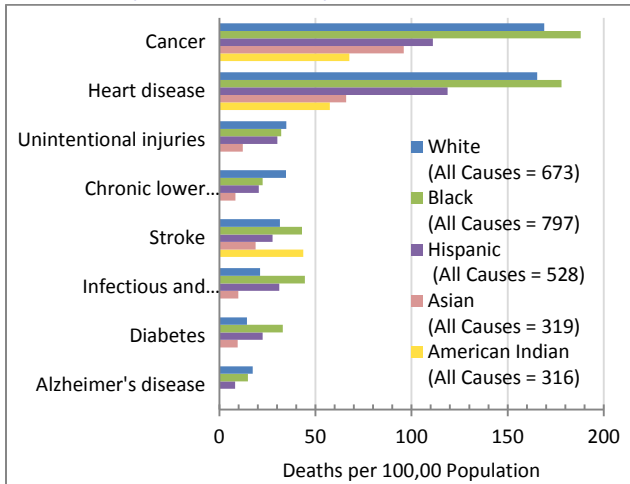
*Disparities*

The number of deaths for several of the leading causes of death differs by sex. In 2010, the number of deaths due to stroke was approximately 79% higher for females compared to males and more than two times as many females died from Alzheimer's disease than males. The number of deaths due to unintentional injuries was 68% higher among males relative to females.

Cancer is the leading cause of premature death before 75 years of age. In 2010, Connecticut experienced 1,088 years of potential life lost due to death from cancer before age 75. The second- and third-leading causes of premature death were accidents or unintentional injuries and heart disease, respectively.

**MORTALITY: AT-RISK POPULATIONS**

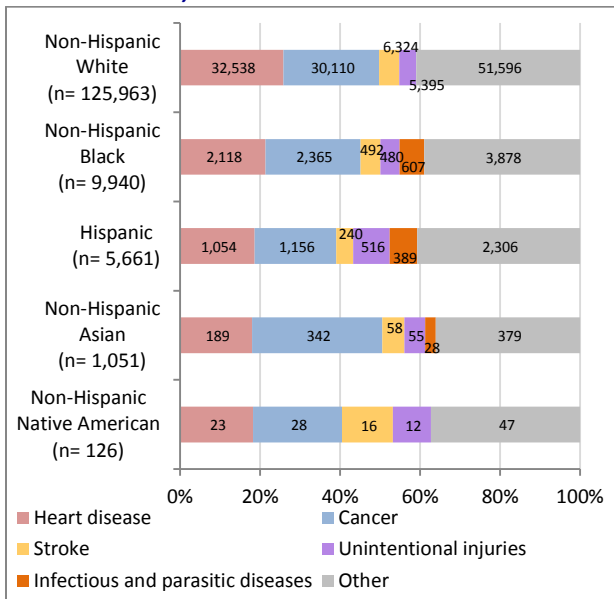
**Fig. 21. AGE-ADJUSTED MORTALITY RATES FOR LEADING CAUSES OF DEATH, BY RACE AND ETHNICITY, CONNECTICUT, 2006-2010**



Note: N/A indicates data not available; all racial groups are non-Hispanic. "Infectious and parasitic diseases" is not a standard category using in ranking "Leading causes of death," but it is included for descriptive purposes.

Source: Connecticut Department of Public Health, Age-Adjusted Mortality Rate Tables, 2006-2010.

**Fig. 22. NUMBER OF DEATHS FOR LEADING CAUSES OF MORTALITY, BY RACE AND ETHNICITY, CONNECTICUT, 2006-2010**



Note: "Infectious and parasitic diseases" is not a standard category using in ranking "Leading causes of death," but it is included for descriptive purposes. Source: Connecticut Department of Public Health, Age-Adjusted Mortality Rate Tables, 2006-2010.

**Why Mortality Disparities are Important**

One objective of Healthy People 2020 is to achieve health equity and eliminate health disparities in morbidity and mortality.<sup>19</sup> Examining the distribution of mortality among racial and ethnic groups may facilitate the identification of populations most in need of interventions to eliminate disparities in risk of morbidity and premature mortality.<sup>20</sup> There are important racial, ethnic, and socioeconomic disparities in mortality. In the US, black non-Hispanics have higher rates of mortality from heart disease, stroke, and most cancers than white non-Hispanics.<sup>21,22</sup> Hispanics and black non-Hispanics also have higher diabetes mortality rates relative to white non-Hispanics.<sup>23</sup> Further, residents of lower socioeconomic status and those who reside in low-income neighborhoods or counties have a higher risk of mortality.<sup>24,25</sup>

**Findings in Connecticut**

*Disparities*

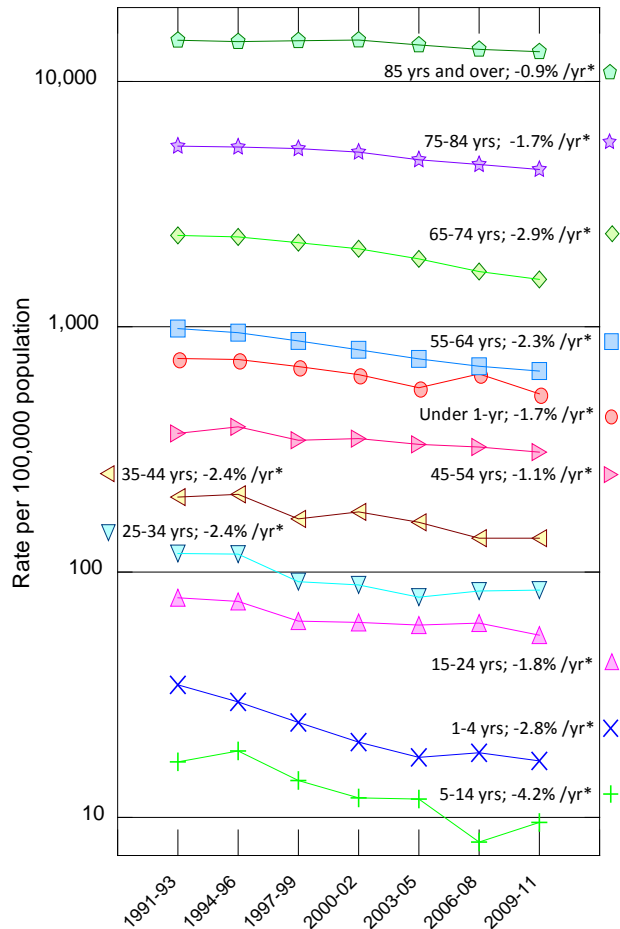
For 2006-2010 combined, the age-adjusted mortality rate per 100,000 Connecticut residents was significantly higher for black non-Hispanics than white non-Hispanics for cancer, heart disease, stroke, diabetes, and infectious and parasitic diseases. Hispanics had higher mortality rates due to diabetes and infectious and parasitic diseases than white non-Hispanics.

For 2006-2010 combined, heart disease and cancer were the top two leading causes of death for each racial and ethnic group in Connecticut. Heart disease was the leading cause of death for white non-Hispanics, while cancer was the leading cause of death for black non-Hispanics, Hispanics, Asians, and American Indians. Unintentional injury and stroke were also among the leading causes of death for each racial and ethnic group in Connecticut. Death from infectious and parasitic diseases was among the top five causes of death for black non-Hispanics, Hispanics, and Asians. Diabetes was the fifth-leading cause of death for American Indian non-Hispanics.



AGE-SPECIFIC MORTALITY

**Fig. 23. AGE-SPECIFIC DEATH RATES, WITH AVERAGE ANNUAL PERCENT CHANGE ESTIMATES, CONNECTICUT, 1991-2011**



Note: \* The average annual percent change for each age-group was significantly different than zero at p<0.05.  
 Source: Connecticut Department of Public Health, Health Surveillance & Statistics Section.

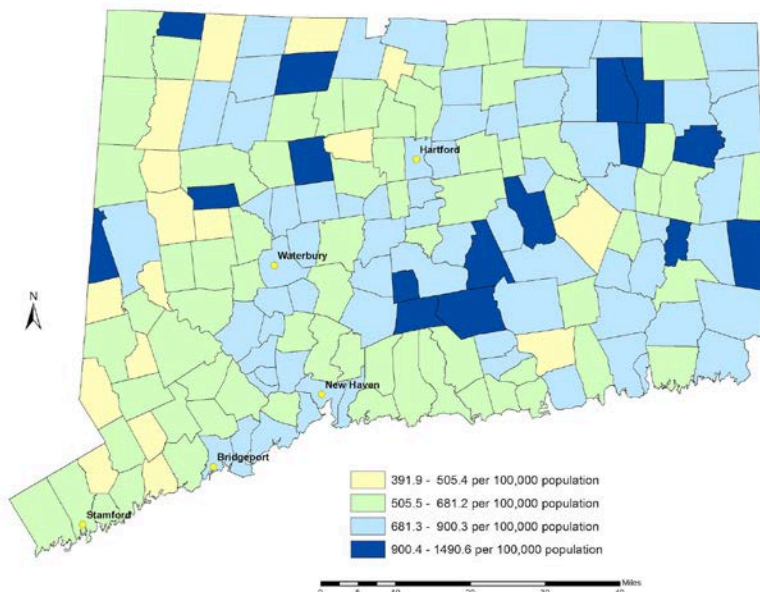
Findings in Connecticut

The examination of broad age-specific death rate trend patterns for the total Connecticut population demonstrates that a steady and significant decline in death rates has occurred between 1991 and 2011 for each age group examined. This reflects the cumulative impact of improvements in disease prevention and treatment throughout the age continuum. Death rates vary tremendously by age, with the highest rate among persons at least 85 years of age being almost 1,000 times higher than the lowest rate, for persons 5 to 14 years of age. This extreme variation makes these rate trends harder to display and interpret. Estimates of the average annual percent change are provided to simplify age-specific trend comparisons. In contrast to this Fig., most of the mortality statistics in this report are “age-adjusted” to allow fair and simple comparisons between population groups of differing ages.

Infant death rates have declined steadily over this twenty-year period. Infant mortality rate declines for singleton births, where more of the neonatal risk is preventable, are even steeper (see discussion in the Maternal, Infant and Child Health section of this report). The decline in the death rate for young children (1-4 yrs.) was the steepest of any age group through 2003-2005. Since then the rate for young children has remained at the lowest levels of any age group. Steady rate reductions ranging from 1% to 4% per year were made in the five contiguous age groups 5 to 14 years of age to 55 to 64 years of age. Among the three age groups for persons 65 and over, rates were about level until about 2000-2002 when significant declines began in all three groups.

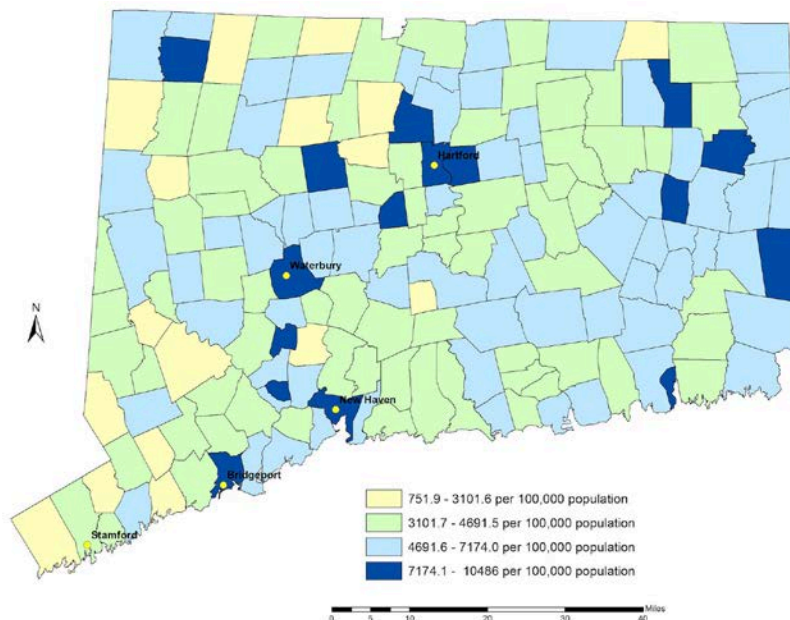
**MORTALITY AND PREMATURE MORTALITY ACROSS CONNECTICUT**

**Fig. 24. ALL-CAUSE MORTALITY, BY TOWN, CONNECTICUT, 2006-2010**



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2011.

**Fig. 25. ALL-CAUSE PREMATURE MORTALITY (YEARS OF POTENTIAL LIFE LOST), BY TOWN, CONNECTICUT, 2006-2010**



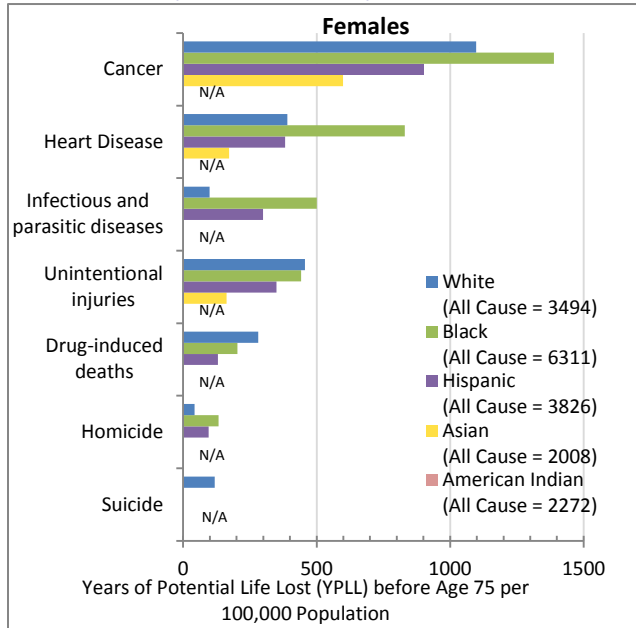
Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

**Findings in Connecticut**

The age-adjusted all-cause mortality rate in Connecticut from 2006 to 2010 was highest in several towns in eastern Connecticut and was moderately high in Connecticut’s largest towns. The all-cause premature mortality rate was highest in Connecticut’s largest towns and some towns in eastern Connecticut.

**PREMATURE MORTALITY: AT-RISK POPULATIONS**

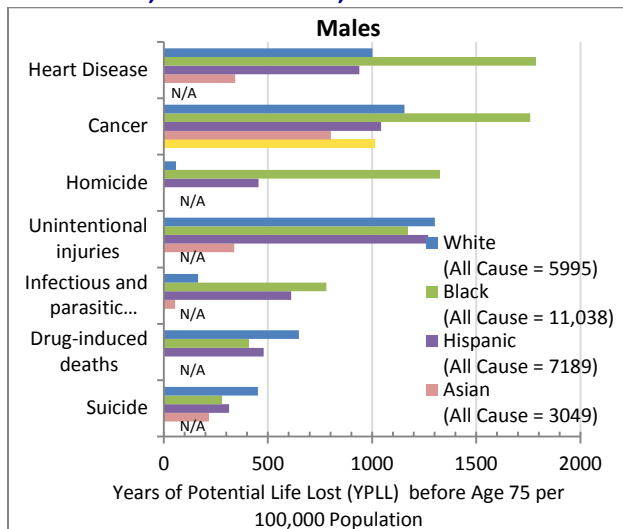
**Fig. 26. AGE-ADJUSTED RATES FOR LEADING CAUSES OF PREMATURE MORTALITY (YEARS OF POTENTIAL LIFE LOST BEFORE 75 YEARS OF AGE), FOR FEMALES, CONNECTICUT, 2006-2010**



Note: N/A indicates data not available. All racial groups are non-Hispanic.

Source: Connecticut Department of Public Health, YPLL Tables by Race/Ethnicity, Age-Adjusted YPLL Rate <75, 2006-2010.

**Fig. 27. AGE-ADJUSTED RATES FOR LEADING CAUSES OF PREMATURE MORTALITY (YEARS OF POTENTIAL LIFE LOST BEFORE 75 YEARS OF AGE), FOR MALES, CONNECTICUT, 2006-2010**



Note: N/A indicates data not available; All racial groups are non-Hispanic.

Source: Connecticut Department of Public Health, YPLL Tables by Race/Ethnicity, Age-Adjusted YPLL Rate <75, 2006-2010.

**Why Mortality Disparities are Important**

In 2009, Connecticut had the second lowest premature mortality rate (276 deaths per 100,000 population) relative to other states.<sup>26</sup> There are racial and ethnic disparities in years of potential life lost (YPLL), an indicator of the estimated number of years that a person would have lived had they not died prematurely.<sup>27,28</sup> In the US, compared to white non-Hispanics, black non-Hispanics have higher age-adjusted YPLL for premature death for all-causes and for diabetes, heart disease, cancer, and homicide.<sup>29</sup> Hispanics have higher age-adjusted YPLL for premature death due to diabetes and homicide relative to white non-Hispanics, and American Indians have higher age-adjusted YPLL for all-causes, diabetes, and homicide than white non-Hispanics.<sup>30</sup>

**Findings in Connecticut**

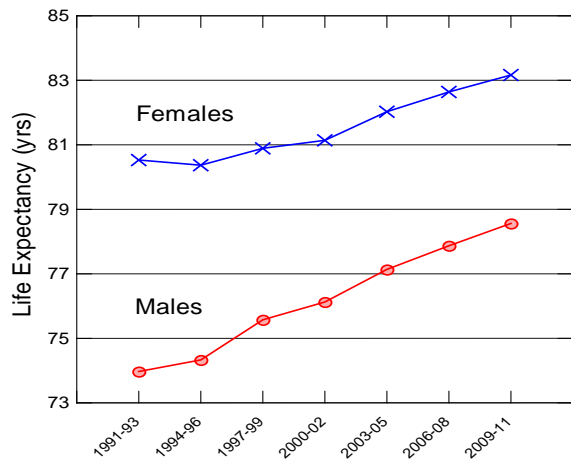
*Disparities*

For 2006-2010 combined, cancer was the leading cause of premature death for females across racial and ethnic groups in Connecticut. Relative to other racial and ethnic groups, black non-Hispanic females experienced the highest YPLL rates due to cancer, heart disease, infectious and parasitic diseases, and homicide. Relative to white non-Hispanic females, black non-Hispanic females experienced 26% higher YPLL rates due to cancer and more than double the YPLL rate due to heart disease. For black non-Hispanic, Hispanic, and Asian females, heart disease was the second-leading cause of premature death. Unintentional injury was the second leading cause of premature death for white non-Hispanic females.

For 2006-2010 combined, heart disease was the leading cause of premature death for black non-Hispanic males in Connecticut, who experienced 78% higher YPLL rate due to heart disease relative to white non-Hispanics. Unintentional injury was the leading cause of premature death for white non-Hispanic and Hispanic males, and cancer was the primary cause of premature death for Asian males. For black non-Hispanic males, YPLL rate due to homicide was more than 22 times that for white non-Hispanics. Compared to white non-Hispanics, the YPLL rate due to homicide was almost 8 times greater for Hispanic males.

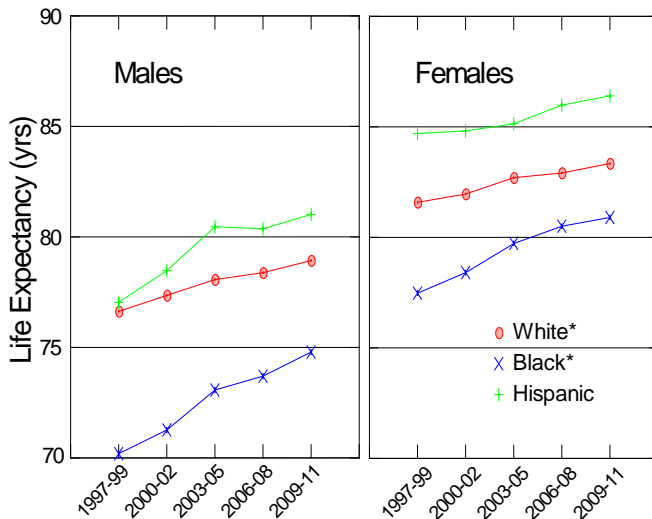
### LIFE EXPECTANCY

**Fig. 28. LIFE EXPECTANCY AT BIRTH, BY SEX, CONNECTICUT, 1991-2011**



Source: Connecticut Department of Public Health, Health Surveillance & Statistics Section.

**Fig. 29. LIFE EXPECTANCY AT BIRTH, BY SEX AND RACE AND ETHNICITY, CONNECTICUT, 1997-2011**



\*Note: White and Black race figures are limited to non-Hispanic. Hispanic figures include persons of any race.

Source: Connecticut Department of Public Health, Health Surveillance & Statistics Section.

### Why Life Expectancy is Important

Life expectancy at birth is a useful and intuitive summary measure of the overall influence of current mortality rates. It provides an estimate of how many years a baby born today can expect to live on average, assuming that current mortality rates remain stable into the future.

### Findings in Connecticut

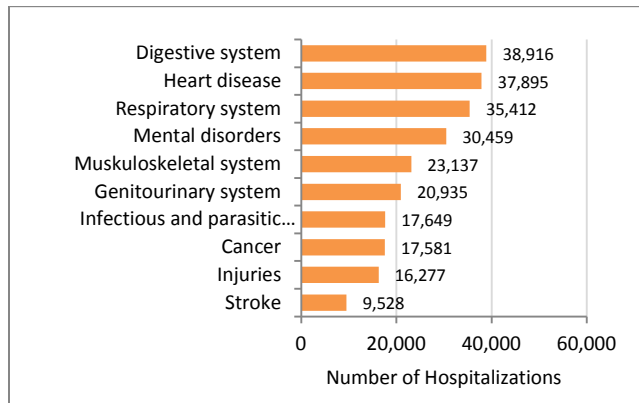
Over the 20-year period (1991-2011), estimated life expectancy values increased for both females (+2.6 years) and males (+4.6 years). While female life expectancy was consistently higher, the male-female disparity declined by 2.0 years over this period, from a gap of 6.6 years in 1991-1993 to 4.6 years in 2009-2011.

Life expectancy values were consistently the highest for Hispanic males and females and the lowest for black non-Hispanics. Black non-Hispanic males have the lowest life expectancy for any group, and despite improvements, the latest black non-Hispanic life expectancy in 2009-2011 is still significantly worse than the black non-Hispanic female and white non-Hispanic males from over a decade earlier (1997-1999).

Life expectancy increased for all subgroups since 1997-1999. The largest increases were for Black males (+4.6 years) and Hispanic males (+4.0 years). Among females, the largest life expectancy increase was for non-Hispanic black females (+3.4 years). White non-Hispanic males and females as well as Hispanic females all increased by about 2.0 years. The largest decline in the life expectancy gap between males and females occurred among Hispanics. This gap narrowed by 2.3 years, it dropped from 7.7 years in 1997-1999 to 5.4 years among Hispanics in 2009-11. The white non-Hispanic population continues to have the smallest male-female life expectancy gap. These life expectancy trends and groups differences described above are all statistically significant ( $p < 0.05$ ).

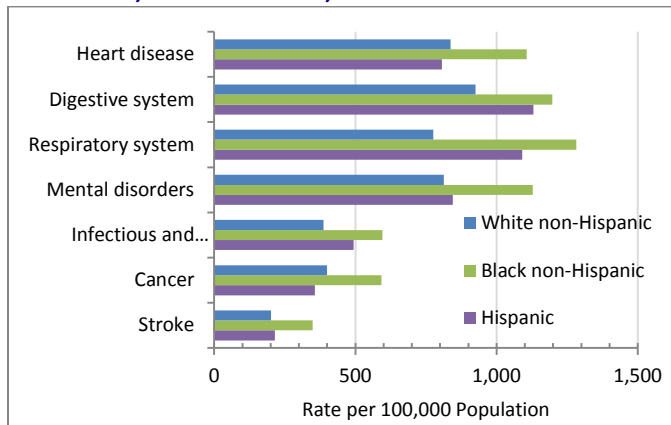
### HOSPITALIZATIONS AND EMERGENCY DEPARTMENT VISITS

**FIG. 30. NUMBER OF HOSPITALIZATIONS, CONNECTICUT, 2011**



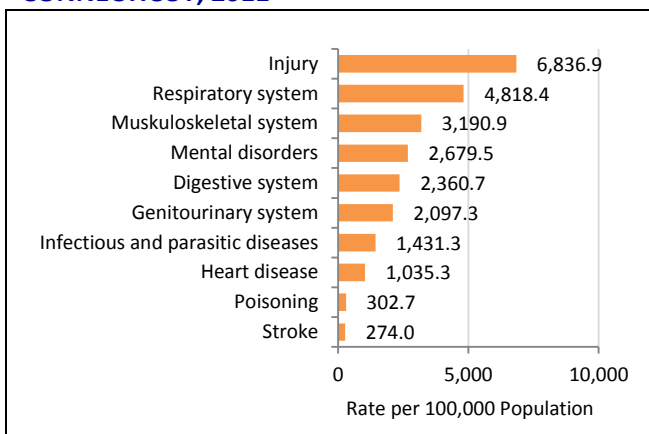
Source: Connecticut Department of Public Health, Hospitalization Tables, Table H-1, 2010.

**Fig. 31. HOSPITALIZATION RATES, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health, Hospitalization Tables, Table H-2, 2010.

**Fig. 32. RATE OF EMERGENCY DEPARTMENT VISITS, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health, OHCA.

### Why Hospitalizations and ED Visits are Important

Hospitalizations involve more resources and costs than outpatient care. While not all hospitalizations can be avoided, hospitalizations for acute illnesses and chronic conditions can often be prevented by effective treatment from primary care providers.<sup>31</sup> Populations with limited access to primary care often have higher rates of preventable hospitalizations.<sup>32</sup> In the US, black non-Hispanics and Hispanics have higher hospitalization rates than white non-Hispanics.<sup>33</sup>

### Findings in Connecticut

#### Trends

As with 2011, issues of the digestive system, heart disease, and respiratory system have historically been the leading causes of hospitalization in Connecticut. From 2001 to 2011, the hospitalization rate for heart disease varied by 28%.

In 2011 there were 38,916 hospitalizations due to issues of the digestive system and 37,895 hospitalizations due to heart disease.

#### Disparities

In 2011, black non-Hispanics appeared to experience greater hospitalization rates for all of the leading causes of hospitalizations compared to white non-Hispanics and Hispanics. The hospitalization rate for black non-Hispanics for heart disease was 37% higher than that for white non-Hispanics, and hospitalizations for mental disorders were 34% higher for black non-Hispanics relative to white-non-Hispanics.

The emergency department visit rate was highest for injuries (6,836.9 per 100,000 population), followed by diseases of the respiratory system (4,818.4 per 100,000 population), and musculoskeletal system (3,190.9 per 100,000 population)



# 1

## MATERNAL, INFANT, AND CHILD HEALTH



## MATERNAL, INFANT, AND CHILD HEALTH

The health and well-being of mothers, infants, and children are important indicators of community health and critical for our nation's future health, well-being, and prosperity. While overall infant mortality rates have declined in Connecticut, racial and ethnic disparities persist in infant mortality, low birthweight, very low birth weight, and preterm birth, and risk factors for infant mortality.<sup>34</sup> Family planning was a critically important development for family health in the last century, and it continues to be important for maternal, infant, and child health.<sup>35</sup> Neonatal abstinence syndrome, a condition in which babies are born addicted to prescription pain relievers, is an emerging issue in maternal, infant, and child health affecting Connecticut's residents. The use of assisted reproductive technologies (ART) to conceive is also an emerging issue in family health, as women who undergo ART are more likely to have a preterm delivery or low birthweight infants.<sup>36</sup> Definitions of the indicators in this section are given in detail *in Appendix B: Definition of Measures*.

This section includes the following topic areas:

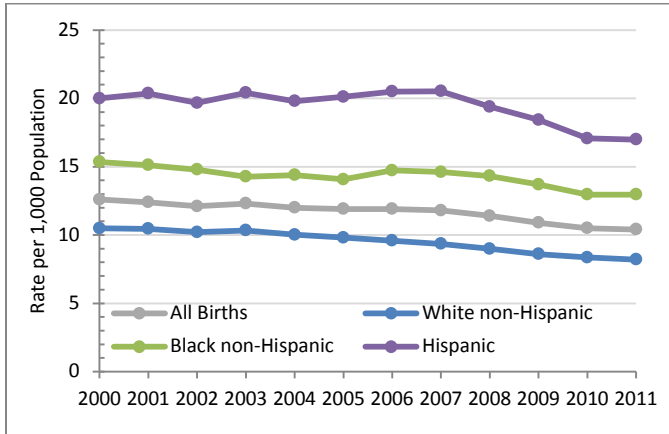
- Birth Rate and Demographic Characteristics of Birth Cohort
- Births to Teen Mothers
- Preterm Births and Low Birthweight Births
- Preconception Health, Unplanned Pregnancies, and Cesarean Sections
- Prenatal Care
- Smoking During Pregnancy
- Prenatal Care and Pregnancy Disparities
- Neonatal Abstinence Syndrome
- Assistive Reproductive Therapy (ART) Use
- Fetal and Infant Mortality
- Breastfeeding
- Newborn Screening, Developmental Screening, and Well-Child Visits
- Dental Care Utilization among Children

Other health conditions affecting children and adolescents are discussed throughout the report in health topic-specific chapters.



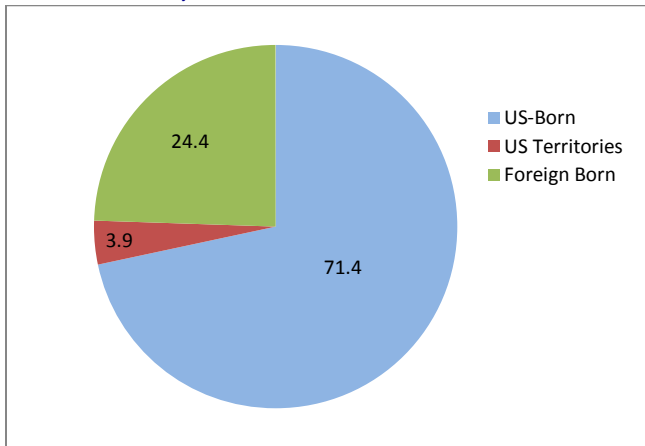
**BIRTH RATE AND DEMOGRAPHICS OF BIRTH COHORT**

**Fig. 33. BIRTH RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011**



Source: Connecticut Department of Public Health.

**Fig. 34. PERCENT OF BIRTHS, BY PLACE OF BIRTH CONNECTICUT, 2011**



Source: Connecticut Department of Public Health.

**Why Birth Rates are Important**

Birth rates indicate trends in population growth. In the US, the birth rate declined from 2007 to 2010, and flattened from 2011 to 2012.<sup>37</sup>

Connecticut is ranked seventh in the country for births to women born outside of the United States.<sup>38</sup>

**Findings in Connecticut**

*Trends*

In 2011, there were 37,277 births in Connecticut. There were 10.4 births per 1,000 population in Connecticut in 2011. Birth rates have declined over the past decade for each of Connecticut’s largest racial and ethnic groups.

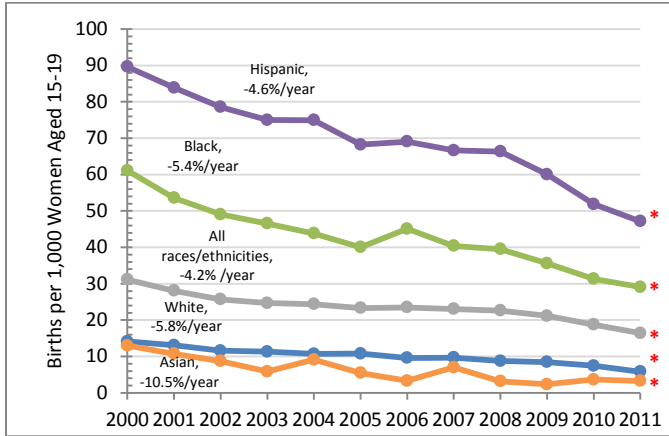
*Disparities*

From 2000 to 2011, the decline in birth rate was highest for white non-Hispanics, who experienced a 22% decline over this period. However, the major reduction in birth rate for the state between 2007 and 2010 can be attributed to the Hispanic population. Between 2000 and 2007, the Hispanic birth rate was the highest and remained steady at approximately 20 births per 1,000 Hispanic persons. Between 2007 and 2010, the Hispanic birth rate dropped by 17% compared to 11% for each of the other racial and ethnic groups.

In 2011, over 1 in 4 Connecticut births occurred to a mother who was born outside of the continental United States.

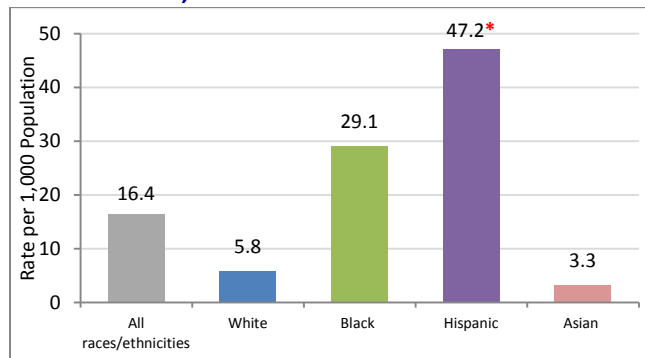
**BIRTHS TO TEEN MOTHERS**

**Fig. 35. BIRTH RATE TO TEEN MOTHERS (15-19 YEARS OF AGE) AND ANNUAL PERCENT CHANGE, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011**



Note: All racial groups are non-Hispanic. \* Indicates estimated annual percent change trends that were significant within each racial or ethnic group (p<0.05).  
 Source: Connecticut Department of Public Health.

**Fig. 36. BIRTH RATE TO TEEN MOTHERS (15-19 YEARS OF AGE), BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: All racial groups are non-Hispanic. \* Indicates a significantly higher birth rate for Hispanics (p<0.05).  
 Source: Connecticut Department of Public Health.

**Why Births to Teen Mothers are Important**

In 2010, Connecticut had the fourth lowest teen birth rate of any US state.<sup>39</sup> Nationally and in Connecticut, the teen birth rate has fallen substantially since its peak in 1991.<sup>40</sup> Despite this considerable progress, the importance of making further improvements is still compelling. In 2011, nearly 1 in 4 Connecticut teen mothers delivered a second pregnancy while still a teenager.<sup>41</sup> Expectant teen mothers are at greater risk for poorer prenatal care and perinatal health habits, and higher rates of adverse outcomes such as low birthweight and premature delivery. In 2011, 27% of Connecticut teen mothers initiated prenatal care late or not at all compared with 12% of non-teen mothers.<sup>42</sup>

Teen pregnancy and birth are significant contributors to lower educational attainment and income. As compared with their peers, teen parents are less likely to graduate from high school or college, or to be fully employed as adults and more likely to experience an intergenerational cycle of teen parenting.<sup>43,44,45,46,47</sup> Children of teen mothers are more likely to experience adverse outcomes that increase public sector costs, such as higher rates of dependence on public health care and welfare. As adolescents, children of teen mothers have higher incarceration rates and lower earnings. Short- and long-term public sector costs of Connecticut teen pregnancies in 2008 totaled \$137 million.<sup>48</sup> This cost would have been more than twice as high without the steady decline in Connecticut’s teen birth rate.<sup>49</sup>

**Findings in Connecticut**

*Trends*

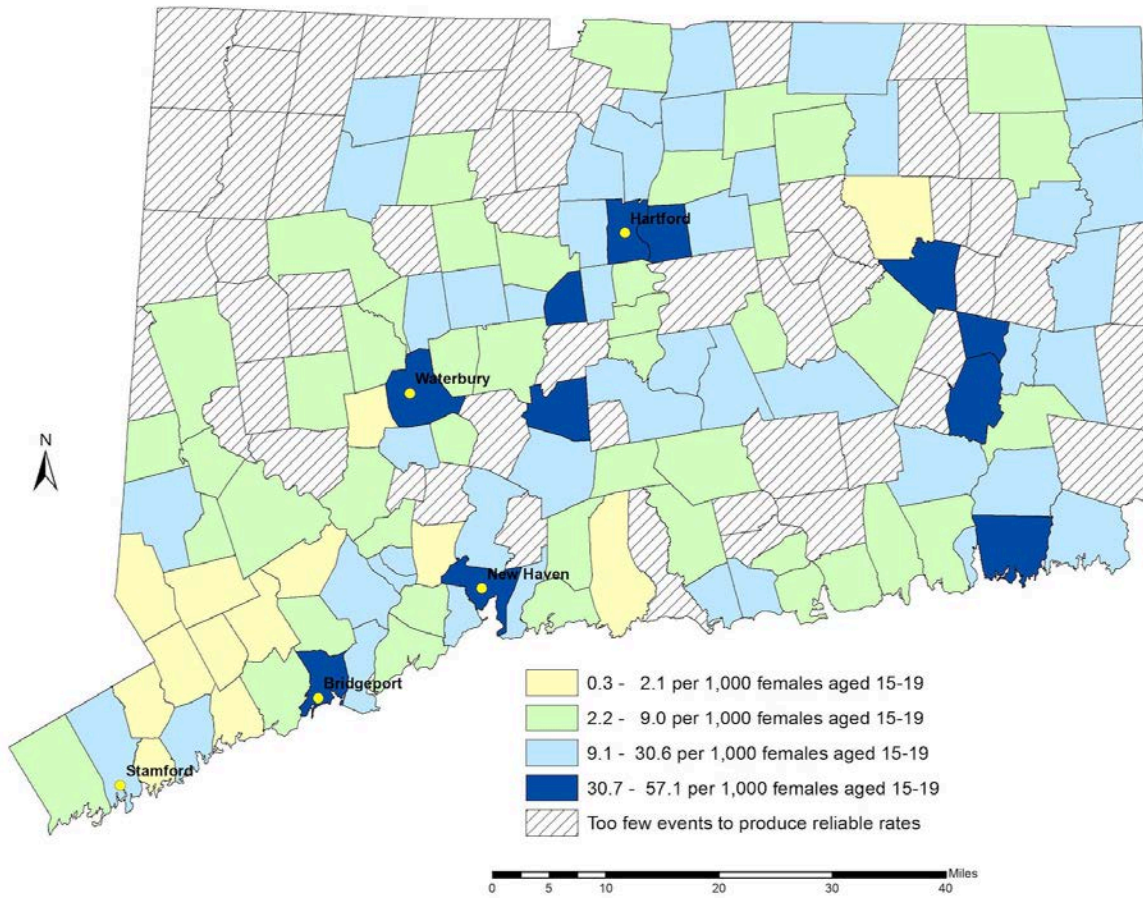
From 2000 to 2011, there was a significant annual 4.2% decrease in the rate of births per 1,000 teen women. The overall rate of teen births in Connecticut declined by nearly 50% over the past decade, fueled by significant declines for each racial or ethnic group (ranging from -4.6% to -10.5% per year).

*Disparities*

Even with the substantial reduction in teen birth rates, Hispanic (47.2 per 1,000) and black non-Hispanic (29.1 per 1,000) mothers had significantly higher rates in 2011 as compared with white non-Hispanic mothers (5.8 per 1,000). The high teen birth rate for Hispanic women may be consistent with younger age-specific birth rates among Hispanic women relative to other racial and ethnic groups and to the high birth rates among Hispanics overall.

**BIRTHS TO TEEN MOTHERS ACROSS CONNECTICUT**

**Fig. 37. BIRTH RATE TO TEEN MOTHERS (15-19 YEARS OF AGE), BY TOWN, 2007-2011**



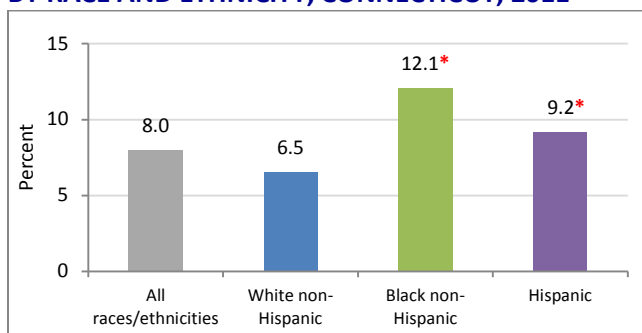
Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2007-2011.

**Findings in Connecticut**

From 2007 to 2011 combined, the rate of births to teenage mothers was highest in Connecticut’s largest towns and in towns in eastern Connecticut, as shown in dark blue in the map.

### PRETERM BIRTHS AND LOW BIRTHWEIGHT BIRTHS

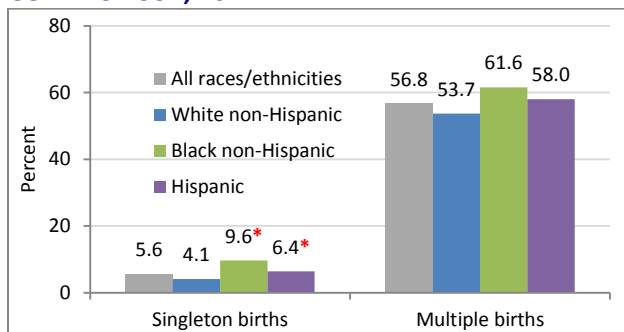
**Fig. 38. PERCENT OF SINGLETON PRETERM BIRTHS, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: \* Indicates significantly higher percent preterm birth for black non-Hispanics and Hispanics (p<0.05).

Source: Connecticut Department of Public Health, Vital Statistics Registration Reports, 2011, Table 3.

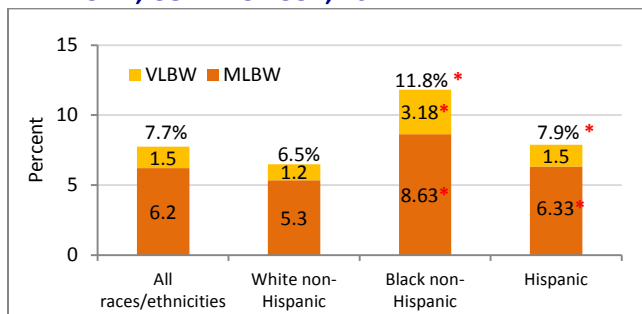
**Fig. 39. PERCENT OF LOW BIRTHWEIGHT BIRTHS, BY PLURALITY AND RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: \* Indicates statistically significant difference in percent low birthweight births for black non-Hispanics and Hispanics (p<0.05).

Source: Connecticut Department of Public Health.

**Fig. 40. PERCENT OF LOW BIRTHWEIGHT BIRTHS, BY LOW BIRTHWEIGHT STATUS AND RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: VLBW indicates very low birthweight and MLBW indicates moderate low birthweight. \* Indicates significantly higher VLBW and MLBW for black non-Hispanics and significantly higher MLBW for Hispanics (p<0.05).

Source: Connecticut Department of Public Health.

### Why Preterm Births and Low Birthweight are Important

Preterm and low birthweight births are important predictors of infant survival, child development, and well-being.<sup>50</sup> Preterm birth is the leading cause of infant deaths, accounting for approximately 35% of infant deaths in the United States.<sup>51</sup> Infants born prematurely are also at risk for neurological disabilities, respiratory conditions, or developmental delays.<sup>52</sup> Preterm birth costs the US \$26 billion annually.<sup>53</sup> The risk for infant morbidity and mortality increases with lower birthweight, which is associated with gestational age.<sup>54</sup> Twin or higher multiple-birth pregnancies increase the risk of low birthweight and preterm births.<sup>55</sup>

### Findings in Connecticut

In 2011, 8.0% of singleton births were preterm and 5.6% of singleton births were low birth weight in Connecticut.

#### Disparities

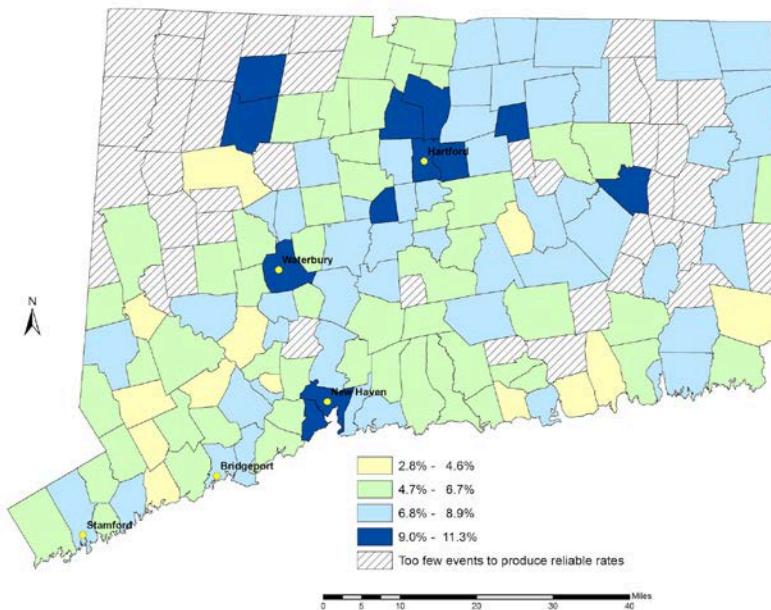
In 2011, the proportion of preterm births for black non-Hispanic and Hispanic women was significantly higher than that for white non-Hispanic women. The percent of singleton preterm births among black non-Hispanic women was 1.9 times higher than that for white non-Hispanic women. For Hispanics, the proportion of singleton preterm births was 1.4 times higher than that for white non-Hispanics in 2011. From 2000 to 2011, there was little change in the percent of preterm births for the total population and Connecticut’s largest racial and ethnic groups, suggesting that the gap in preterm births between black non-Hispanics and white non-Hispanics is not improving.

In 2011, the proportion of low birthweight births among black non-Hispanics (9.6%) and Hispanics (6.4%) was significantly higher than that for white non-Hispanics (4.1%). From 2000 to 2011 there was no improvement in the proportion of low birthweight births for the total population or by race and ethnicity, suggesting that disparities in low birthweight births have not improved.

In 2011, there were a significantly higher proportion of very and moderately low birthweight births among black non-Hispanics relative to white non-Hispanics. There was a significantly higher percent of moderately low birthweight births among Hispanic women relative to white non-Hispanics.

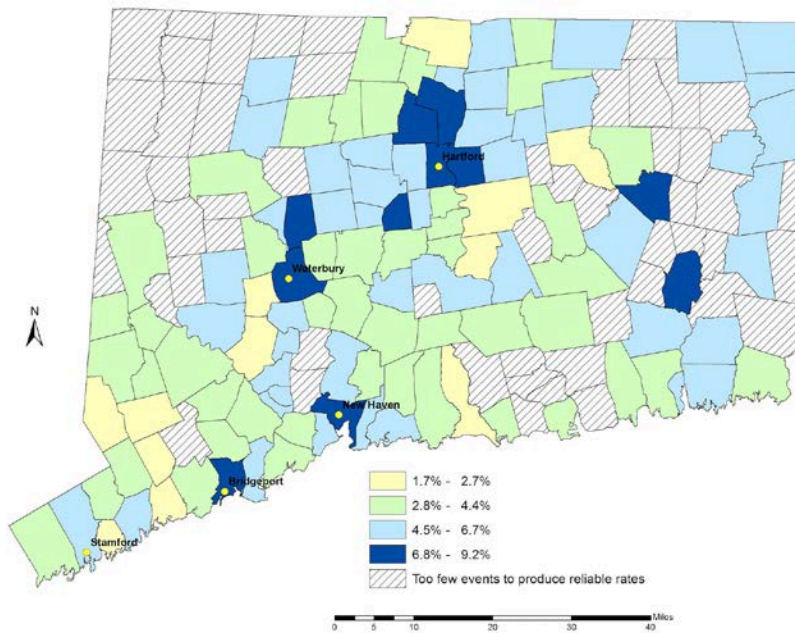
**PRETERM BIRTH AND LOW BIRTHWEIGHT ACROSS CONNECTICUT**

**Fig. 41. PERCENT OF PRETERM BIRTHS, BY TOWN, CONNECTICUT, 2007-2011**



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2007-2011.

**Fig. 42. PERCENT OF LOW BIRTHWEIGHT BIRTHS, BY TOWN, CONNECTICUT, 2007-2011**



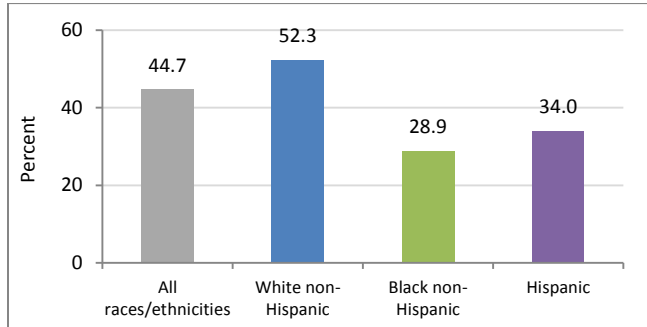
Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2007-2011.

**Findings in Connecticut**

From 2007 to 2011 combined, preterm birth was more heavily concentrated in and around Waterbury, Hartford, and New Haven and in Northern areas in Connecticut. The towns that experienced the greatest proportion of low birthweight births from 2007 to 2011, combined, included Hartford, Waterbury, New Haven, Bridgeport, their surrounding towns, and towns in the eastern region of Connecticut.

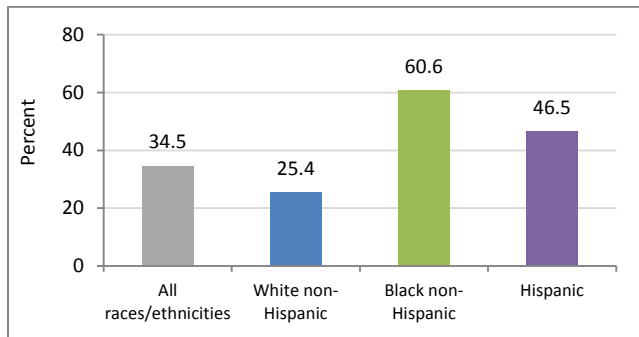
**PRECONCEPTION HEALTH, UNPLANNED PREGNANCIES, AND CESAREAN SECTIONS**

**Fig. 43. PERCENT OF WOMEN WHO DISCUSSED PRECONCEPTION HEALTH WITH A HEALTH CARE PROVIDER PRIOR TO PREGNANCY, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011**



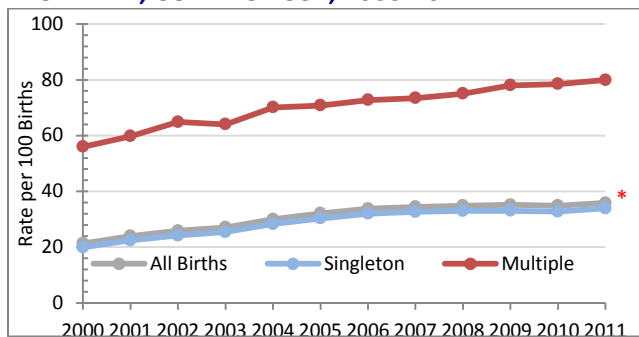
Source: Connecticut Department of Public Health, 2010-2011 Connecticut Pregnancy Risk Assessment and Tracking System (PRATS) Survey.

**Fig. 44. PERCENT OF UNPLANNED PREGNANCIES, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011**



Source: Connecticut Department of Public Health, 2010-2011 Connecticut Pregnancy Risk Assessment and Tracking System (PRATS) Survey.

**Fig. 45. CESAREAN SECTION (C-SECTION) RATES, BY PLURALITY, CONNECTICUT, 2000-2011**



Note: \* Indicates significant annual percent change for singleton births (p<0.05).

Source: Connecticut Department of Public Health.

**Why Preconception Health, Unplanned Pregnancies, and Cesarean sections are Important**

Preconception health is the health of men and women during their reproductive years, prior to conception.<sup>56</sup> Because half of all pregnancies in the US are unplanned, preconception health is important regardless of whether men or women plan to have children.<sup>57</sup> Preconception health care is health care that focuses on conditions that may influence the likelihood of having a healthy baby.<sup>58</sup>

From 1998 to 2009, the rate of births delivered by Cesarean section (C-section) in the US increased, and has remained stable since 2009.<sup>59</sup> C-sections are associated with health and safety concerns for the mother and infant, including increased risk of surgical complications, maternal re-hospitalization, and neonatal intensive care unit admission.<sup>60</sup> Hospital costs associated with C-sections are nearly double those for vaginal deliveries.<sup>61</sup>

**Findings in Connecticut**

In 2010 and 2011 (combined), 44.7% of women reported that they discussed preconception health with a health care provider prior to their pregnancy. Additionally, slightly more than one-third of women (34.5%) reported that they had a unplanned pregnancy in 2010 and 2011, combined.

Since most births are singleton deliveries, the total C-section rate follows trends for C-sections for singleton births. C-sections rates among singleton births increased significantly between 2000 and 2006, with an 8.0% annual increase. From 2006 to 2011 the rates have leveled out at a 0.7% annual increase. In 2011, there was 33.9 C-sections per 100 births for singleton births, compared to 79.9 per 100 births for multiple births.

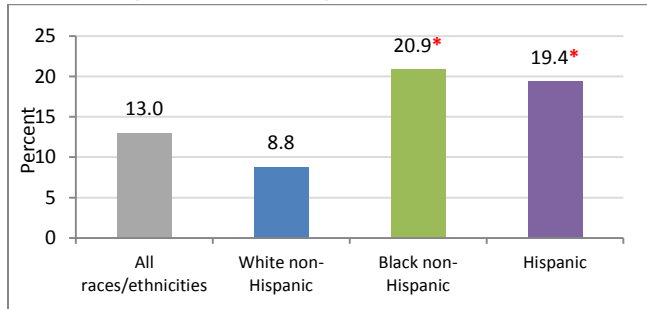
*Disparities*

In 2010-2011, more than half of white women discussed preconception health with their health care provider prior to pregnancy, compared to only 28.9% of black non-Hispanic women and 34.0% of Hispanic women in 2010-2011.

In 2010 and 2011, 60.6% of black non-Hispanic women reported that they had an unplanned pregnancy, followed by 46.5% of Hispanic women. Only one quarter (25.4%) of white women reported that they had an unplanned pregnancy.

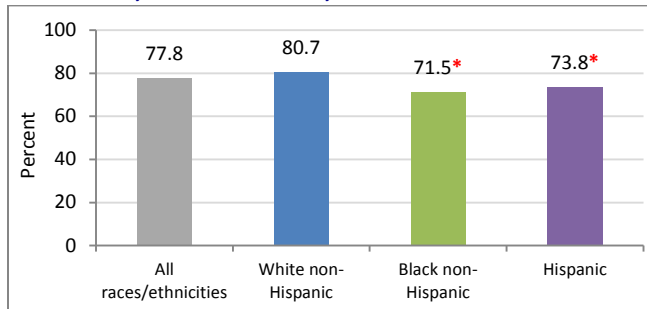
**PRENATAL CARE**

**Fig. 46. PERCENT OF MOTHERS WHO RECEIVED LATE OR NO PRENATAL CARE, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



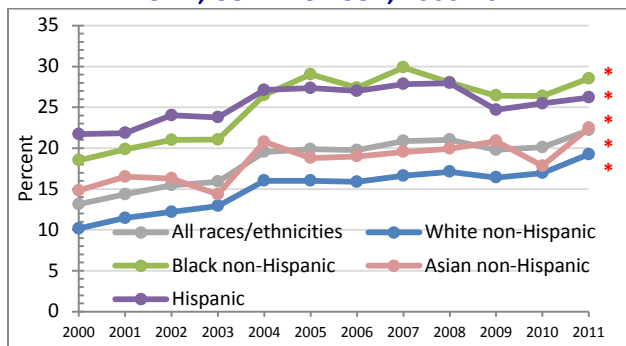
Note: Late prenatal care refers to prenatal care that was initiated after the first trimester. \* Indicates significantly higher percent of black non-Hispanic and Hispanic women with late or no prenatal care (p<0.05). Source: Connecticut Department of Public Health, Vital Statistics (Registration Reports), Table 4, 2011.

**Fig. 47. PERCENT OF WOMEN WHO RECEIVED ADEQUATE PRENATAL CARE, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: \* Indicates significantly lower proportion of black non-Hispanic and Hispanic women who received adequate prenatal care (p<0.05). Source: Connecticut Department of Public Health, Vital Statistics (Registration Reports), Table 4, 2011.

**Fig. 48. PERCENT OF WOMEN WITH NON-ADEQUATE PRENATAL CARE UTILIZATION, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011**



Note: \* Indicates significant annual percent change within racial or ethnic groups (p<0.05). Source: Connecticut Department of Public Health, Vital Statistics (Registration Reports), Table 4, 2011.

**Why Prenatal Care is Important**

The health and well-being of mothers, infants, and children are important for our nation’s future health, well-being and prosperity. Poor preconception health and inadequate access to prenatal care can influence the risk of adverse birth outcomes and later life health.<sup>62</sup> Early entry into prenatal care allows providers to treat pre-existing conditions early in pregnancy and establishes a relationship that lasts throughout the pregnancy.

**Findings in Connecticut**

In 2011, 13.0% of pregnant women received late or no prenatal care, and 77.8% received adequate prenatal care.

The percent of women receiving non-adequate prenatal care increased significantly from 2000 through 2005, with an 8.9% annual increase over this period. From 2006 to 2011, the proportion of women receiving non-adequate prenatal care leveled off, with a 1.0% annual increase over this period.

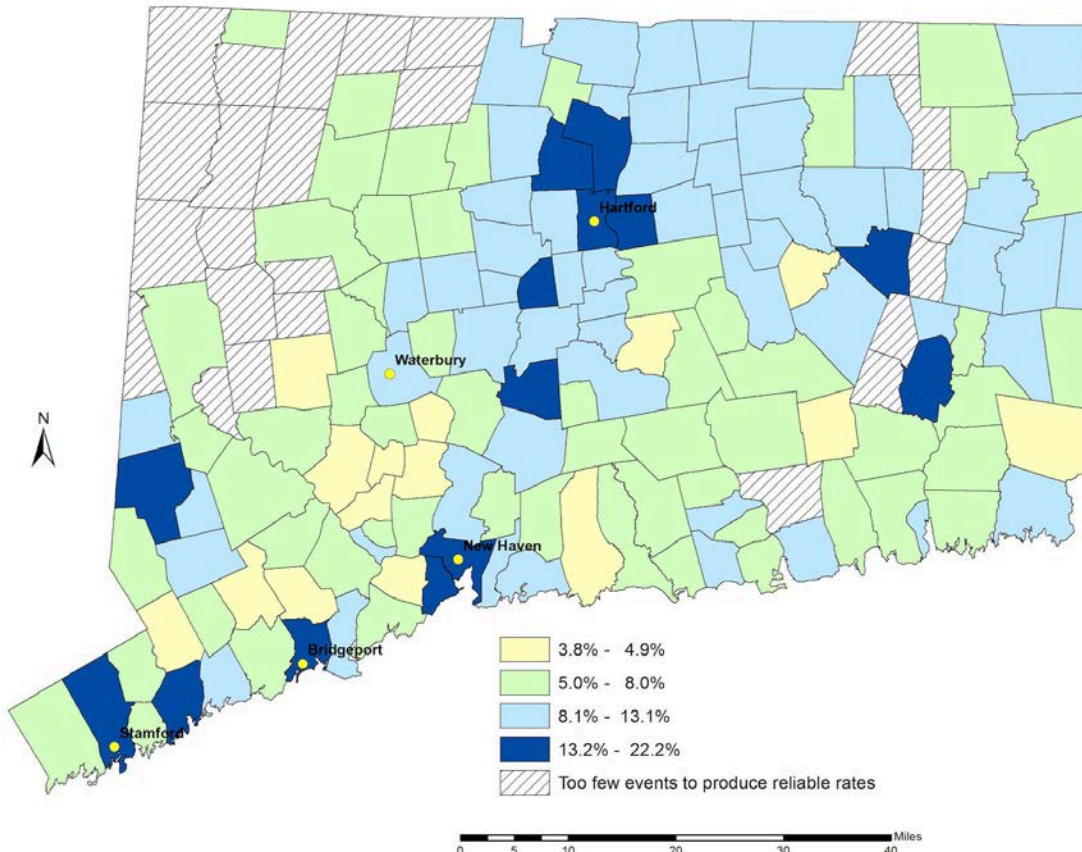
*Disparities*

In 2011, more than double the proportion of black non-Hispanic mothers (20.9%) and Hispanic mothers (19.4%) received late or no prenatal care relative to white non-Hispanic mothers (8.8%). These differences were statistically significant. In 2011, a significantly smaller percent of black non-Hispanic mothers (71.5%) and Hispanic mothers (73.8%) received adequate prenatal care, compared to white non-Hispanic mothers (80.7%).

Both white non-Hispanic and black non-Hispanic women experienced significant and high annual percent increases in non-adequate prenatal care for the first part of the decade (2000-2004 and 2000-2005, respectively). The rate of increase in non-adequate prenatal care slowed among white non-Hispanic women after 2004, but still continued to increase for steadily from 2005 to 2011. The percent of Hispanic mothers receiving non-adequate prenatal care also increased significantly from 2000 to 2005 but then leveled off from 2006 to 2011. There was a small but significant annual increase in the proportion of Asian women who received non-adequate prenatal care across the entire 2000-2011 timeperiod.

LATE PRENATAL CARE ACROSS CONNECTICUT

Fig. 49. PERCENT OF MOTHERS WHO RECEIVED LATE PRENATAL CARE, BY TOWN, CONNECTICUT, 2007-2011



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2007-2011.

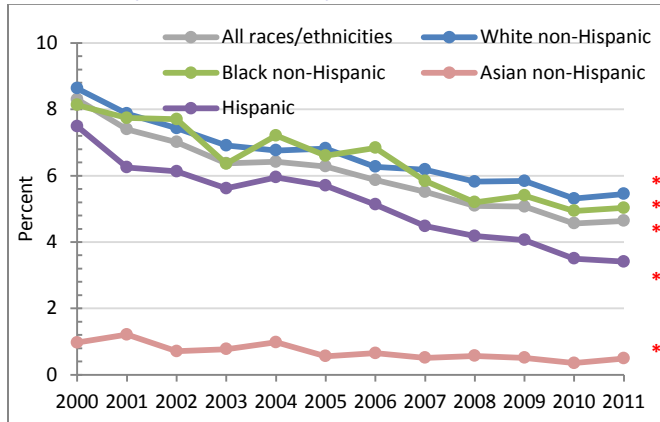
Findings in Connecticut

The proportion of women who received late prenatal care was highest in Hartford, New Haven, Bridgeport, and Stamford, and their surrounding towns, as well as in towns proximate to these towns and in eastern Connecticut.



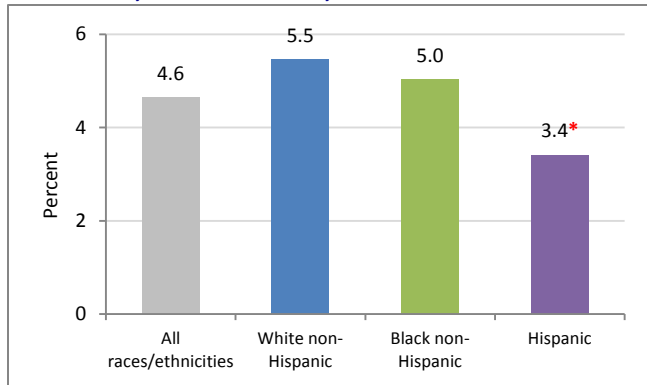
**SMOKING DURING PREGNANCY**

**Fig. 50. PERCENT OF WOMEN WHO USED TOBACCO DURING PREGNANCY, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011**



Note: All racial groups are non-Hispanic. \* Indicates significant annual percent change for each racial or ethnic group (p<0.05).  
Source: Connecticut Department of Public Health.

**Fig. 51. PERCENT OF WOMEN WHO USED TOBACCO DURING PREGNANCY, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: \* Indicates significantly lower prevalence of tobacco use during pregnancy among Hispanic women (p<0.05).  
Source: Connecticut Department of Public Health.

**Why Smoking During Pregnancy is Important**

Smoking during pregnancy is associated with greater risk of miscarriage, problems with the placenta, preterm birth, low birthweight, sudden infant death syndrome (SIDS), and certain birth defects.<sup>63</sup> In Connecticut, the risk of a low birthweight baby among women who smoke was over two-fold greater than among women who do not smoke.<sup>64</sup>

**Findings in Connecticut**

*Trends*

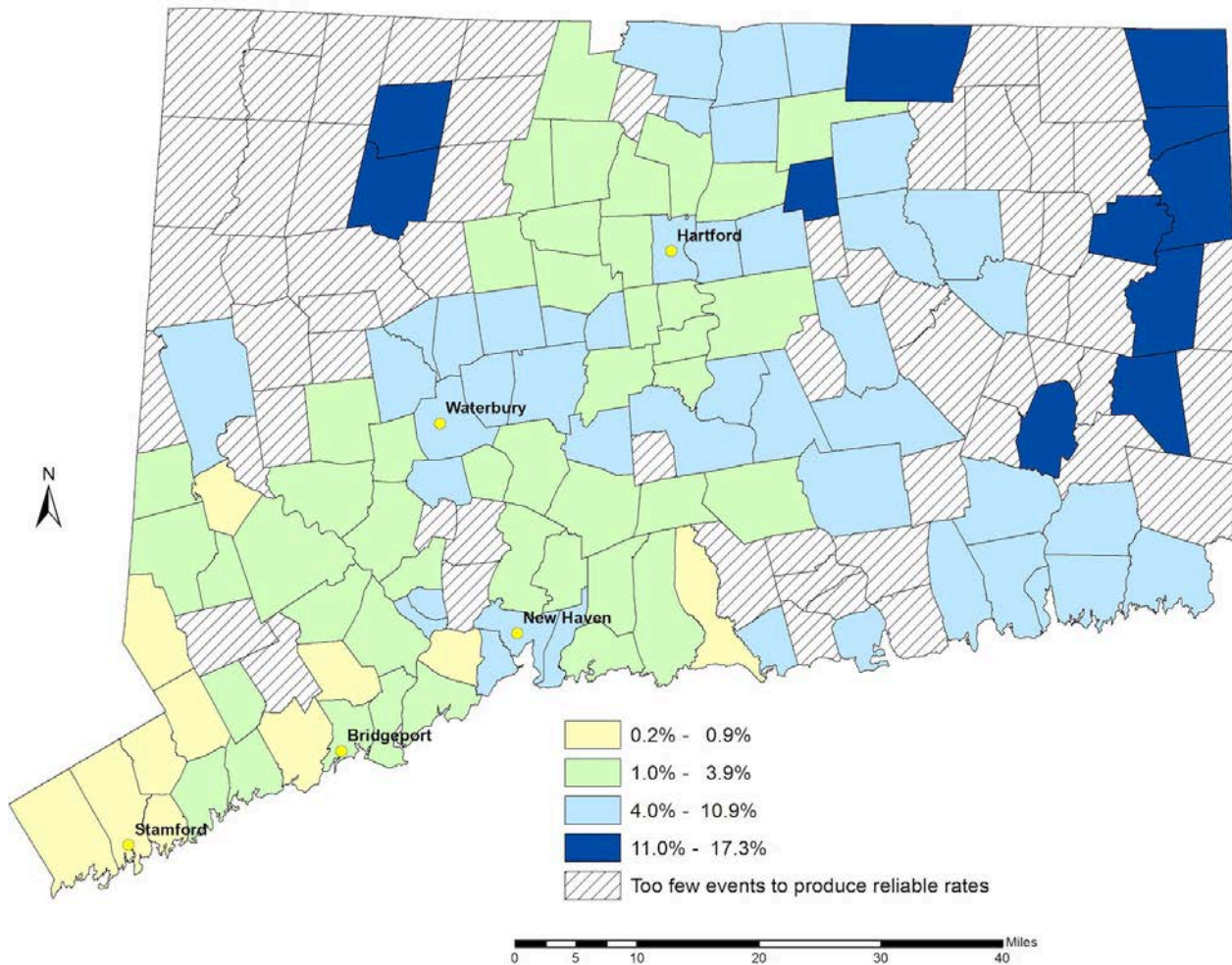
From 2000 to 2011, there was a steady, significant decline in the percent of women who smoked during their pregnancy. Over this period, significant declines in tobacco use during pregnancy occurred for all racial and ethnic groups.

*Disparities*

In 2011, a significantly smaller percent of Hispanic (3.4%) women smoked during pregnancy, relative to white non-Hispanic (5.5%) and black non-Hispanic (5.0%) women.

**SMOKING AMONG PREGNANT WOMEN ACROSS CONNECTICUT**

**Fig. 52. PERCENT OF WOMEN WHO REPORT THAT THEY SMOKED TOBACCO DURING PREGNANCY, BY TOWN, CONNECTICUT, 2006-2010**



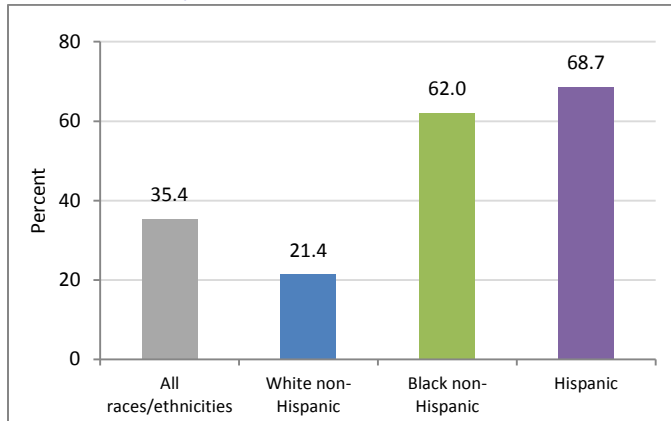
Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, Birth Certificates, 2006-2010.

**Findings in Connecticut**

The prevalence of smoking among women during pregnancy was highest in several towns in northeastern Connecticut and some towns in northwestern Connecticut. There was a moderately high prevalence of smoking among pregnant women in central and southeastern Connecticut, including the towns of Hartford, Waterbury, and New Haven.

**PRENATAL CARE AND PREGNANCY DISPARITIES**

**Fig. 53. PERCENT OF WOMEN ENROLLED IN SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANT AND CHILDREN (WIC) DURING PREGNANCY, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011**



Source: Connecticut Department of Public Health, 2010-2011 Connecticut Pregnancy Risk Assessment and Tracking System (PRATS) Survey.

**Table 9. PRENATAL CARE AND PREGNANCY OUTCOMES, BY MEDICAID ENROLLMENT STATUS, CONNECTICUT, 2010**

|                            | Medicaid (%) | Non-Medicaid (%) | Ratio: Medicaid/Non-Medicaid* |
|----------------------------|--------------|------------------|-------------------------------|
| Late or no prenatal care   | 19.6         | 8.0              | 2.5                           |
| Non-adequate prenatal care | 25.5         | 16.6             | 1.5                           |
| Smoked during pregnancy    | 9.2          | 1.5              | 6.2                           |
| Low birthweight            | 8.6          | 7.5              | 1.1                           |
| Very low birthweight       | 1.8          | 1.3              | 1.4                           |
| Preterm delivery           | 11.1         | 9.8              | 1.1                           |

Note: \* Indicates that all comparisons were significantly different (p<0.05).

Source: Connecticut Department of Public Health.

**Why Prenatal Care and Pregnancy Disparities are Important**

Medicaid participants are more likely to be poorer and have less education on average than the balance of the Connecticut population, factors that affect health care access and are associated with poor pregnancy outcomes.<sup>65</sup>

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a federally funded program that offers supplemental food, health care referrals, and nutrition education for low-income women who are pregnant, breastfeeding, or not breastfeeding postpartum. It also focuses on infants and children up to 5 years of age who are at risk for under nutrition.<sup>66</sup>

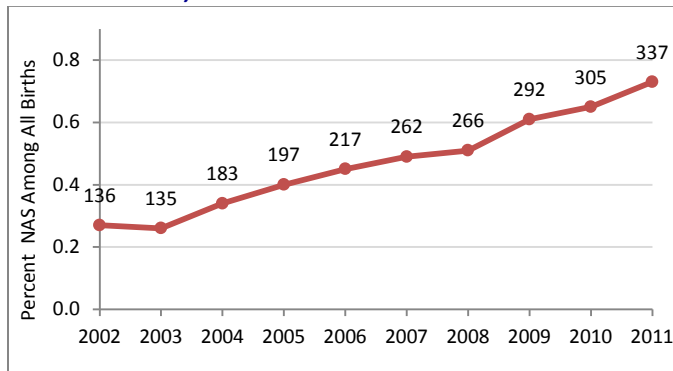
**Findings in Connecticut**

In 2010 and 2011, a combined 35.4% of women in Connecticut were enrolled in WIC during their pregnancy. WIC enrollment was higher for black non-Hispanic (62.0%) and Hispanic (68.7%) women relative to white non-Hispanic (21.4%) women.

In 2010, 39.0% of Connecticut births were paid for by Medicaid. In 2010 Medicaid mothers had a significantly higher prevalence of late or non-adequate prenatal care, and smoking. Further, their infants tended to have poorer outcomes, particularly very low birth weight births. The largest disparities were for late or no prenatal care, where Medicaid participants had a 2.5-fold higher prevalence, and for maternal smoking, where the disparity ratio was 6.2-fold higher than for non-Medicaid participants. The disparity ratio was only about 10%, for two important indicators: low birth weight (less than 2,500 grams) and preterm delivery (less than 37 weeks gestation).

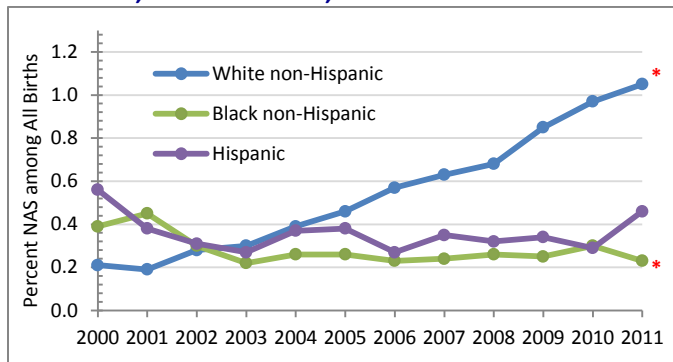
**NEONATAL ABSTINENCE SYNDROME**

**Fig. 54. PERCENT AND NUMBER OF CHILDREN BORN WITH NEONATAL ABSTINENCE SYNDROME, CONNECTICUT, 2002-2011**



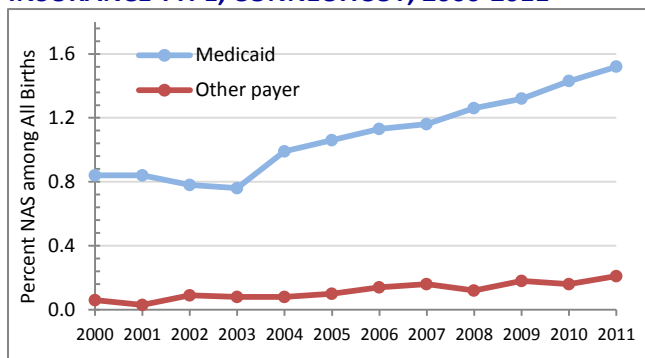
Note: Number of discharges with NAS indicated above trend line.  
Source: Connecticut Department of Public Health.

**Fig. 55. PERCENT OF CHILDREN BORN WITH NEONATAL ABSTINENCE SYNDROME, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011**



Note: \* Indicates significant increasing trend for white non-Hispanics and decreasing trend for black non-Hispanics (p<0.05).  
Source: Connecticut Department of Public Health.

**Fig. 56. PERCENT OF CHILDREN BORN WITH NEONATAL ABSTINENCE SYNDROME, BY HEALTH INSURANCE TYPE, CONNECTICUT, 2000-2011**



Source: Connecticut Department of Public Health.

**Why Neonatal Abstinence Syndrome is Important**

In response to an alarming recent nationwide increase in babies born addicted to prescription pain relievers, the National Association of Attorneys General sent a letter to the US Food and Drug Administration urging the addition of a "black box warning" on all prescription opioids to alert pregnant women about the possibility that their babies may be born with Neonatal Abstinence Syndrome (NAS).<sup>67</sup> This condition is potentially harmful to the newborn, requiring the baby to undergo withdrawal from the drugs.<sup>68</sup> In 2011, the median hospitalization charges for NAS in Connecticut were \$44,061 per event, with a total charge of \$22.8 million.<sup>69</sup>

**Findings in Connecticut**

*Trends*

Similar to trends across the US, there has been a 2.7-fold increase in neonatal abstinence syndrome among children born in Connecticut, from 0.27% in 2002 to 0.73% in 2011.

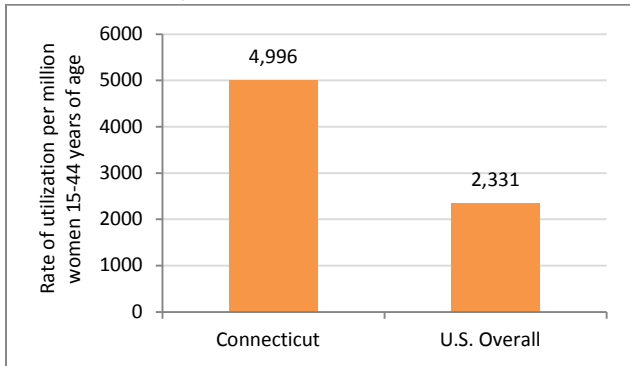
*Disparities*

The increase in NAS during the past decade largely occurred among white non-Hispanics, who experienced a significant yearly increase in children born with NAS from a low of 0.21% in 2000 to a high of 1.05% in 2011. There has been a small, but significant decreasing trend of 0.01% annually for black non-Hispanics, from 0.39% in 2002 to 0.23% in 2011, and no significant change in the percent of NAS for Hispanics. Without intervention, the increasing trend in NAS within white non-Hispanics is not expected to change.

The proportion of children born with NAS was greater for children born to women whose expected source of payment for the delivery was Medicaid, as compared to women enrolled in other insurance programs. NAS in births to women who are enrolled in Medicaid nearly doubled, from 0.84% of all Medicaid births in 2002 to 1.52% in 2011. These patterns suggest that the use of prescription opioids among pregnant women is increasing at a rapid rate in Connecticut.

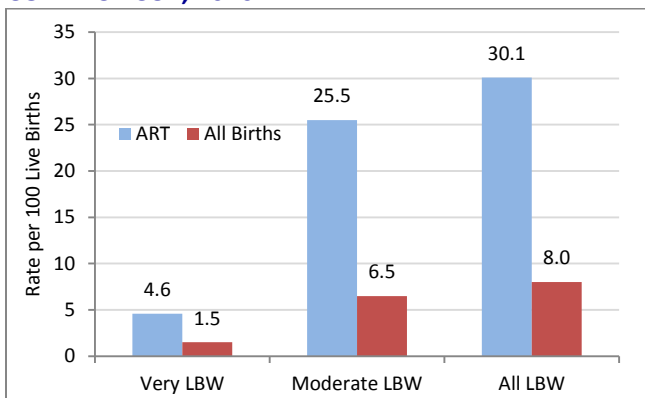
**ASSISTED REPRODUCTIVE TECHNOLOGY (ART) USE**

**Fig. 57. RATE OF ASSISTED REPRODUCTIVE TECHNOLOGY (ART) UTILIZATION, US vs. CONNECTICUT, 2010**



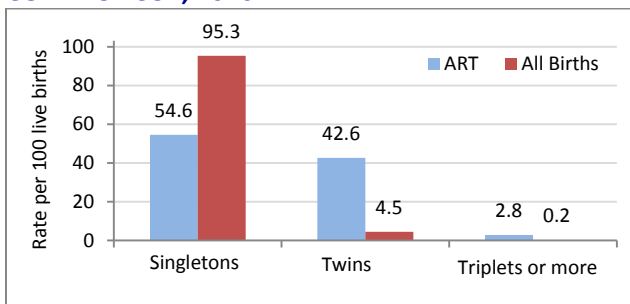
Source: Connecticut Department of Public Health.

**Fig. 58. RATE OF LOW BIRTHWEIGHT BIRTHS FOR ASSISTED REPRODUCTIVE TECHNOLOGY (ART) AND ALL BIRTHS, BY LOW BIRTHWEIGHT CATEGORY, CONNECTICUT, 2010**



Note: Low birthweight (LBW) is defined as an infant born <2,500 g; moderate low birthweight (MLBW) is classified as 1,500 to 2,499 g; very low birthweight (very LBW) is defined as <1,500 g.  
Source: Connecticut Department of Public Health.

**Fig. 59. RATE OF SINGLETON AND MULTIPLE INFANT BIRTHS FOR ASSISTED REPRODUCTIVE TECHNOLOGY (ART) AND ALL BIRTHS, CONNECTICUT, 2010**



Source: Connecticut Department of Public Health.

**Why Assisted Reproductive Technology is Important**

Connecticut is ranked fifth in the country for assisted reproductive technology (ART) usage. From 2006 to 2010, 12% of women 15 to 44 years of age or their husbands or partners and 9% of men 25 to 44 years of age reported using of infertility services in their lifetime.<sup>70</sup> Use of infertility services was more common among women who were older or white non-Hispanic, and those who had never previously been pregnant or had higher levels of education and household income.<sup>71</sup> Women who receive ART are at a greater risk of multiple pregnancies and poor birth outcomes.<sup>72</sup> Babies born low birth weight are at increased risk for morbidity and mortality.<sup>73</sup> ART may contribute to Connecticut’s increasing trend in multiple births, and is estimated to contribute to about 10-15% of low birthweight and very low birthweight.

**Findings in Connecticut**

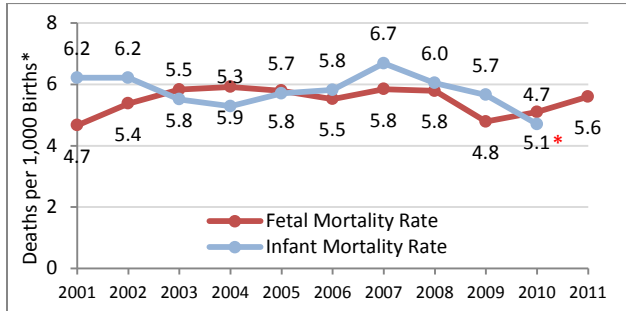
Although the national rate of assisted reproductive technology (ART) usage in 2010 was 2,331 per million women of childbearing age, the rate in Connecticut was 4,996, nearly twice as high as the rate nationally.

The rate of low birth weight (<2,500 g) in Connecticut during 2010 was 8.0 per 100 live births, while the rate of low birth weight among women who received ART was nearly 4-fold higher (30.1 per 100 live births). The rate of very low birth weight (<1,500g) among women receiving ART was 3-fold higher, and the rate of moderately low birth weight (1,500-2,499g) was nearly 4-fold higher than that for all births. These data indicate that ART contributes substantially to both moderate and very low birth weight babies.

The rate of singleton babies born in 2010 to mothers who received ART was 54.6 per 100 live births, a value nearly 2 times less than that among all births in the state. In contrast, the rate of twins and triplets born to mothers who received ART was about 10-times higher, indicating that ART is more likely to result in multiple births, such as twins, triplets, or higher orders. Babies from multiple births are at a higher risk of poor birth outcomes.

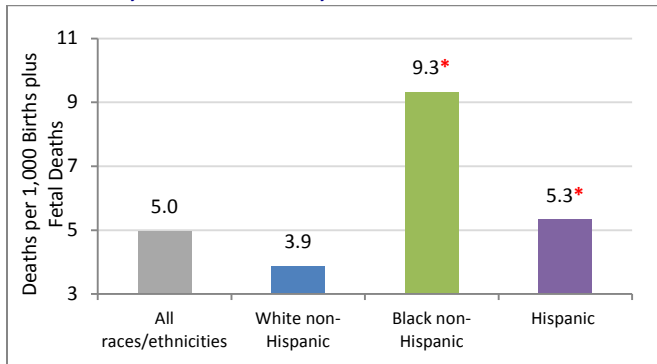
**FETAL AND INFANT MORTALITY**

**Fig. 60. FETAL AND INFANT MORTALITY RATE, CONNECTICUT, 2001-2011**



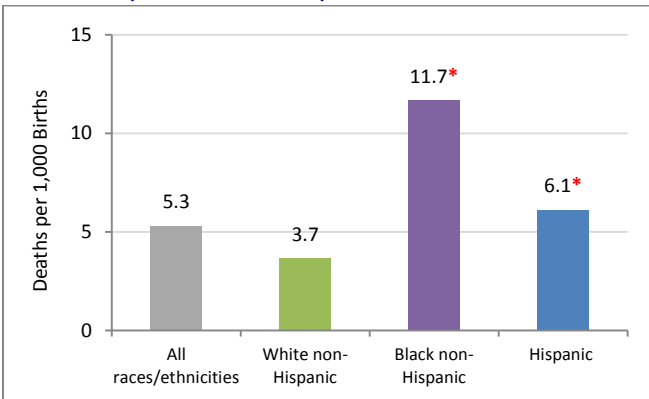
Note: \* Indicates significant decline in infant mortality rate over this period for singleton and multiple gestation deliveries ( $p < 0.05$ ). Source: Connecticut Department of Public Health.

**Fig. 61. FETAL MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



Note: \* Indicates significantly higher fetal mortality rate for black non-Hispanics and Hispanics ( $p < 0.05$ ). Source: Connecticut Department of Public Health.

**Fig. 62. INFANT MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



Note: \* Indicates significantly higher infant mortality rate for black non-Hispanics and Hispanics ( $p < 0.05$ ). Source: Connecticut Department of Public Health.

**Why Fetal and Infant Mortality are Important**

Infant mortality is an indicator of the health and well-being of the nation.<sup>74</sup> The infant mortality rate in the United States is higher than that of other developed nations.<sup>75</sup> While infant mortality rates have declined in the US, racial and ethnic disparities persist.<sup>76</sup> Often overlooked, fetal mortality is a prevalent public health issue.<sup>77</sup>

**Findings in Connecticut**

*Trends*

Infant mortality rates have continued to decline over the last 20 years (1990-2011) in Connecticut. Infant mortality rates among singleton births have declined at a rate of 2.4% per year. Rates among multiple gestation deliveries have declined at a more modest 1.9% per year. In contrast, fetal mortality rates have not changed significantly in Connecticut over the last 20 years.

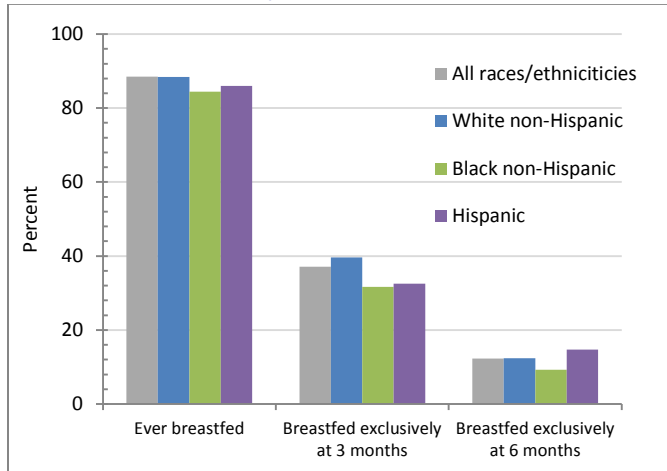
*Disparities*

From 2008 to 2010, combined, the fetal mortality rate for black non-Hispanics and Hispanics was significantly higher than that for white non-Hispanics. For black non-Hispanics (9.3 per 1,000 live births plus fetal deaths) the fetal mortality rate was 2.4 times the fetal mortality rate for white non-Hispanics (3.9 per 1,000 live births and fetal deaths). The fetal mortality rate for Hispanics (5.3 per 1,000 live births plus fetal deaths) was 1.4 times that for white non-Hispanics.

The infant mortality rate for black non-Hispanics (11.7 per 1,000 live births) was 3.2 times that for white non-Hispanics (3.7 per 1,000) and the infant mortality rate for Hispanics (6.1 per 1,000 live births) was 1.7 times that for white non-Hispanics in 2010. These differences in the infant mortality rate by race and ethnicity were statistically significant.

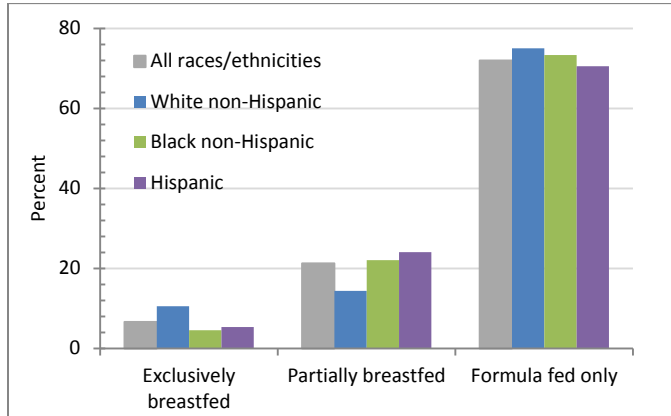
**BREASTFEEDING**

**Fig. 63. PERCENT OF INFANTS WHO WERE BREASTFED, BY DURATION, EXCLUSIVITY, AND RACE AND ETHNICITY, CONNECTICUT 2010-2011**



Source: Connecticut Department of Public Health, 2010-2011 Connecticut Pregnancy Risk Assessment and Tracking System (PRATS) Survey.

**Fig. 64. PERCENT OF INFANTS ENROLLED IN WIC WHO WERE BREASTFED, BY DURATION, EXCLUSIVITY, AND RACE AND ETHNICITY, CONNECTICUT, 2012**



Source: Connecticut Department of Public Health.

**Why Breastfeeding is Important**

Breastfeeding is associated with improved maternal and infant health, including nutritional, immunologic, developmental, and psychological benefits.<sup>78</sup> Infants who are breastfed are at a lower risk of childhood infections, respiratory conditions, sudden infant death syndrome, childhood obesity, type 2 diabetes, and childhood asthma.<sup>79</sup> Mothers who breastfeed have a lower risk of breast and ovarian cancer.<sup>80</sup> It is estimated that if 90% of infants were breastfed exclusively for 6 months, the US would save \$13 billion each year in costs associated with health care and premature death.<sup>81</sup>

**Findings in Connecticut**

In 2010-2011, combined, 88.5% of infants in Connecticut were ever breastfed. Overall, 37.1% of infants were breastfed exclusively at three months, while only 12.3% were breastfed exclusively at 6 months.

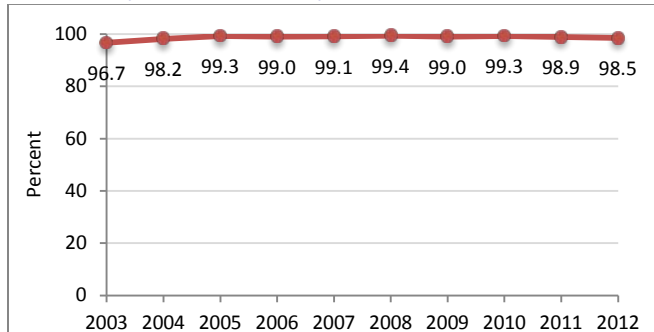
*Disparities*

Nearly 4 in 10 white non-Hispanic infants (39.6%) were exclusively breastfed at 3 months, compared to only 31.7% of black non-Hispanics and 32.5% of Hispanics. Exclusive breastfeeding at 6 months ranged from 9.3% among black non-Hispanic infants to 14.7% among Hispanic infants.

Among infants enrolled in WIC, only 6.7% were exclusively breastfed, 21.3% were partially breastfed, and 72.0% were only formula fed. A greater proportion of white non-Hispanic (10.6%) infants were exclusively breastfed compared to black non-Hispanic (4.6%) and Hispanic (5.4%) infants.

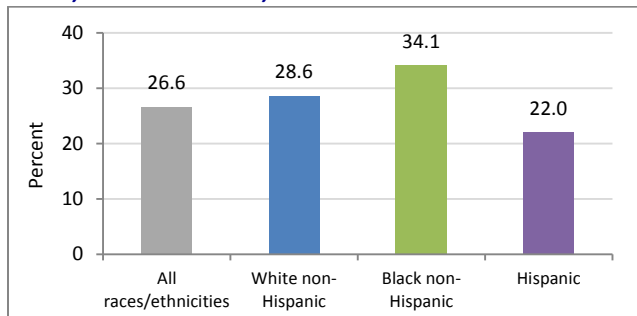
**NEWBORN SCREENING, DEVELOPMENTAL SCREENING, AND WELL-CHILD VISITS**

**Fig. 65. PERCENT OF NEWBORNS WHO HAVE BEEN SCREENED FOR HEARING BEFORE LEAVING HOSPITAL, CONNECTICUT, 2003-2012**



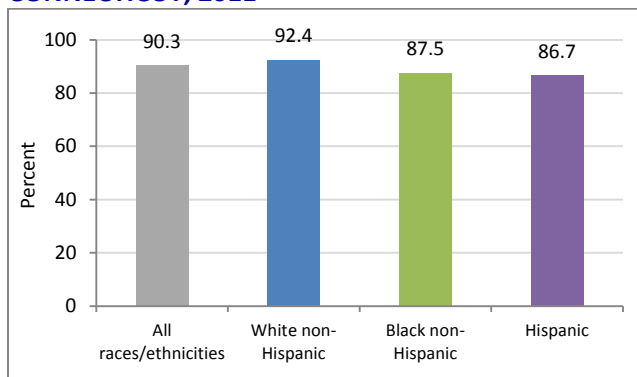
Source: Connecticut Department of Public Health, 2003-2007 and US DHHS HRSA Maternal and Child Health Title V Information System, National Performance Measure #01, Connecticut, 2008-2012.

**Fig. 66. PERCENT OF CHILDREN (10 MONTHS TO 5 YEARS) WHO WERE SCREENED FOR BEING AT RISK FOR DEVELOPMENTAL, BEHAVIORAL, AND SOCIAL DELAYS DURING A HEALTH CARE VISIT IN PAST YEAR, CONNECTICUT, 2011**



Source: National Survey of Children’s Health, 2011.

**Fig. 67. PERCENT OF CHILDREN (0 TO 17 YEARS) WHO SAW A HEALTH CARE PROVIDER FOR PREVENTATIVE MEDICAL CARE IN PAST YEAR, CONNECTICUT, 2011**



Source: National Survey of Children’s Health, 2011.

**Why Newborn Screening, Developmental Screening, and Well-Child Visits are Important**

Newborn screening occurs soon after birth and can help prevent serious health problems, such as brain damage, organ damage, and even death. All newborns delivered in Connecticut are screened for selected genetic and metabolic disorders.

One to three of every 1,000 children in the US are born with hearing loss.<sup>82</sup> Early diagnosis of hearing loss and early intervention are critical for helping children to develop speech and language skills on time.<sup>83</sup>

Well-child visits provide an opportunity for health care providers to monitor the health and development of children through regular developmental screenings at time points recommended by the American Academy of Pediatrics.<sup>84</sup> Developmental screening refers to a brief test to assess whether a child is learning the basic skills that s/he should or whether they are experiencing developmental delays.

**Findings in Connecticut**

*Trends*

Over the 2005 to 2012 period, performance of newborn screening before hospital discharge was at 98.5% or better. Connecticut has a perfect track record (100%) for timely follow-up of positive newborn screening results.

In 2011, only 26.6% of children were screened for being at risk for developmental, behavioral, and social delays during their health care visit. Overall, 90.3% of children in Connecticut saw a health care provider for preventative medical care in the past year in 2011.

*Disparities*

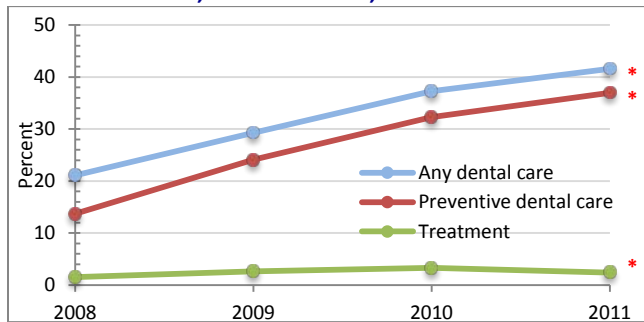
In 2011, 34.1% of black non-Hispanic children were screened for developmental, behavioral, and social delays during their health care visit in the past year, followed by white non-Hispanic (28.6%) and Hispanic children (22.0%).

In 2011, 92.4% of white non-Hispanic children saw a health care provider for preventative care in the past year, followed by black non-Hispanic (87.5%) and Hispanic (86.7%) children.



**DENTAL CARE UTILIZATION AMONG CHILDREN**

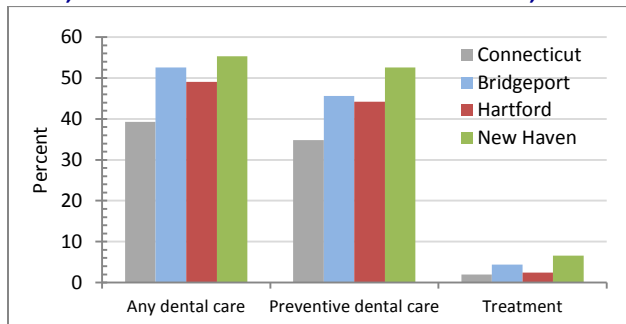
**Fig. 68. PERCENT OF CHILDREN UNDER 3 YEARS OF AGE WITH MEDICAID COVERAGE WHO USED DENTAL CARE, BY TYPE OF CARE, CONNECTICUT, 2008-2011**



Note: \* Indicates significantly higher percent dental care utilization compared to 2008 (p<0.001).

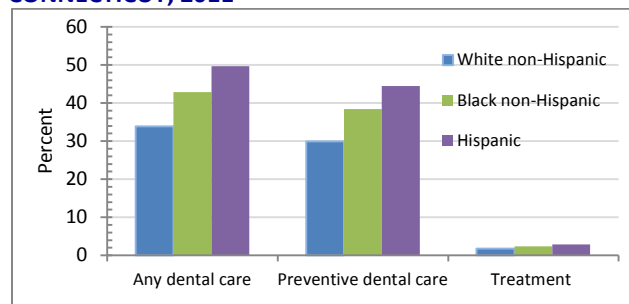
Source: Connecticut Voices for Children, *Dental Services for Children and Parents in the HUSKY Program: Utilization Continues to Increase Since Program Improvements in 2008* (Table 1), July 2013.

**Fig. 69. PERCENT OF CHILDREN UNDER 3 YEARS OF AGE WITH MEDICAID OR PRIMARY CARE CASE MANAGEMENT WHO USED DENTAL CARE, BY TYPE OF CARE, CONNECTICUT AND ITS LARGEST TOWNS, 2011**



Source: Connecticut Voices for Children.

**Fig. 70. PERCENT OF CHILDREN UNDER 3 YEARS OF AGE ENROLLED IN MEDICAID OR PRIMARY CARE CASE MANAGEMENT WHO USED DENTAL CARE SERVICES, BY TYPE OF CARE AND RACE AND ETHNICITY, CONNECTICUT, 2011**



Source: Connecticut Voices for Children.

**Why Dental Care Utilization among Young Children is Important**

Good oral health is important for overall well-being and physical health across the life course.<sup>85</sup> Poor oral health is associated increased risk of dental caries, periodontal disease, and tooth loss.<sup>86</sup> In addition, poor oral health may exacerbate chronic conditions such as diabetes and may contribute to adverse pregnancy outcomes.<sup>87</sup> Many low-income families, including families with Medicaid, lack access to preventive dental care and treatment important for preventing the progression of dental disease.<sup>88</sup>

In Connecticut, the use of dental care among children younger than 3 years of age has been low.<sup>89</sup> In an effort to improve dental care access and utilization, Connecticut increased reimbursement for dental services for those covered through HUSKY A (Medicaid) or HUSKY B (Children’s Health Insurance Program, CHIP) programs in 2008.<sup>90</sup>

**Findings in Connecticut**

*Trends*

In 2009 there was a significant increase in the percent of children with Medicaid coverage who received any dental care, preventative dental care, or dental treatment, relative to 2008. This increase coincided with Connecticut’s improved dental services reimbursement for children with Medicaid or SCHIP. The proportion of children under 3 years old who had Medicaid coverage and received any dental care, preventative dental care, or dental treatment in 2010 and 2011 was also significantly higher than that in 2008.

In 2011, use of any type of dental care among children under 3 years old with Medicaid or primary care case management ranged from 49.1% in Hartford to 55.3% in New Haven. Use of preventive dental care appeared to be highest among children under 3 years of age in New Haven (52.6%) compared to the towns of Bridgeport (45.6%) and Hartford (44.2%).

*Disparities*

Use of any type of dental care or preventive dental care among children under 3 years of age with Medicaid or primary care case management appeared to be highest for Hispanic children; however significance testing was not conducted.



## 2

# ENVIRONMENTAL RISK FACTORS AND HEALTH



## ENVIRONMENTAL RISK FACTORS AND HEALTH

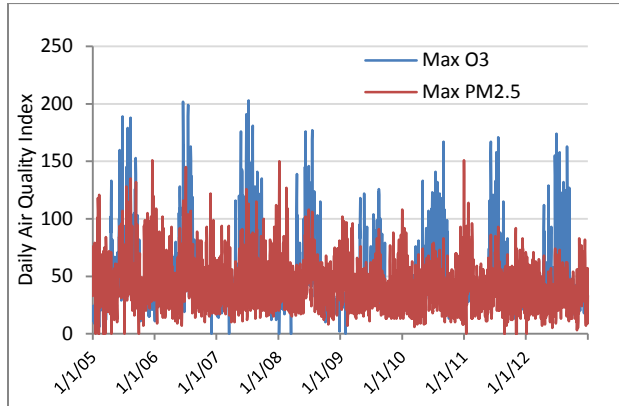
Exposure to environmental hazards such as tobacco smoke, lead, asbestos, and air pollution have declined in the US and Connecticut. However, these environmental exposures remain important causes of cancer, cardiovascular disease, preterm birth, respiratory disease, and cognitive and developmental issues, among other health consequences.<sup>91,92</sup> The need for prevention, identification, and treatment of environmental exposures linked to these health issues remains. In addition to the important improvements in health linked to addressing environmental risk factors, there are also substantial savings attributed to addressing environmental hazards. For example, improvements in meeting federal clean air standards would save approximately \$193 million in hospital expenditures over a three-year period.<sup>93</sup> Further, each dollar invested in household lead paint hazard control would yield \$17 to \$221 in savings.<sup>94</sup> Definitions of the indicators in this section are given in detail *in Appendix B: Definition of Measures*.

This section includes the following topic areas:

- Outdoor Air Quality
- Indoor Air Quality
- Water Quality
- Air Poisoning
- Radon
- Asbestos

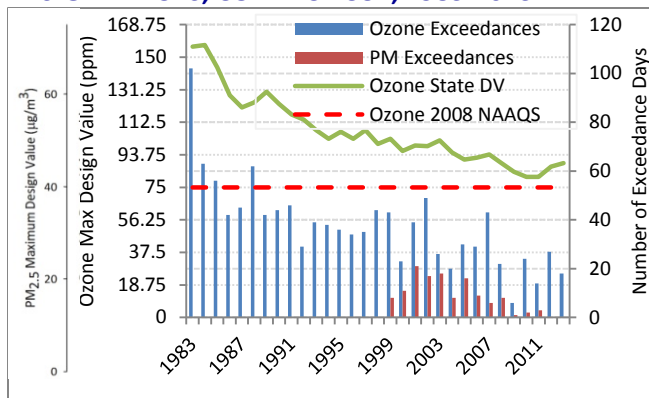
**OUTDOOR AIR QUALITY**

**Fig. 71. DAILY AIR QUALITY INDEX TIME SERIES, CONNECTICUT, 2005-2012**



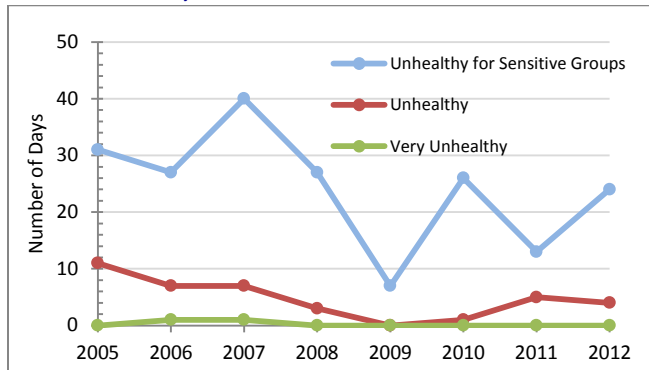
Note: Max O3 indicates ozone; PM2.5 indicates fine particulate matter <2.5 µm in diameter.  
Source: Connecticut Department of Public Health.

**Fig. 72. OZONE (O<sub>3</sub>) AND FINE PARTICULATE (PM<sub>2.5</sub>) EXCEEDANCE DAYS AND MAXIMUM DESIGN VALUES, CONNECTICUT, 1983-2013**



Note: PM indicates fine particulate matter; DV indicates maximum design values; NAAQS indicates National Ambient Air Quality Standards.  
Source: Connecticut Department of Environmental Protection.

**Fig. 73. AIR QUALITY INDEX TRENDS, CONNECTICUT, 2005-2012**



Source: Connecticut Department of Public Health.

**Why Outdoor Air Quality is Important**

Poor outdoor air quality is associated with premature mortality, preterm birth, cancer, respiratory disease, and cardiovascular disease.<sup>95,96</sup> Air quality has continued to improve in Connecticut, but there are still many occasions each year when air quality levels, measured according to the Environmental Protection Agency’s (EPA’s) Air quality index (AQI), impact public health.<sup>97,98</sup> Improvements in meeting federal clean air standards would save approximately \$193 million in hospital expenditures over a three-year period.<sup>99</sup>

**Findings in Connecticut**

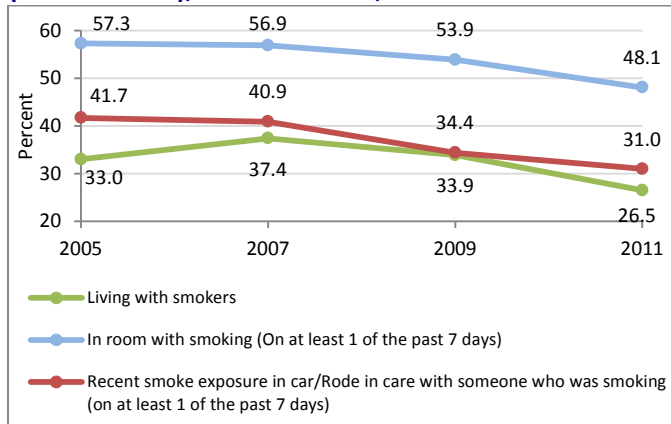
In 2012, the daily air quality index for ozone ranged from 11 to 174 and for fine particulate matter ranged from 0 to 83.

Ozone and particle pollution levels are trending lower since 1983 and 2000, respectively. However there are still an unacceptably high number of days when air quality is impaired.

The number of days in which the air quality index was unhealthy for sensitive groups ranged from 31 days in 2005 to 24 days in 2012, a 23% change. The number of days that the air quality index was unhealthy varied from 11 days in 2005 to 4 days in 2012. In 2012, there were no days in which the air quality index was very unhealthy.

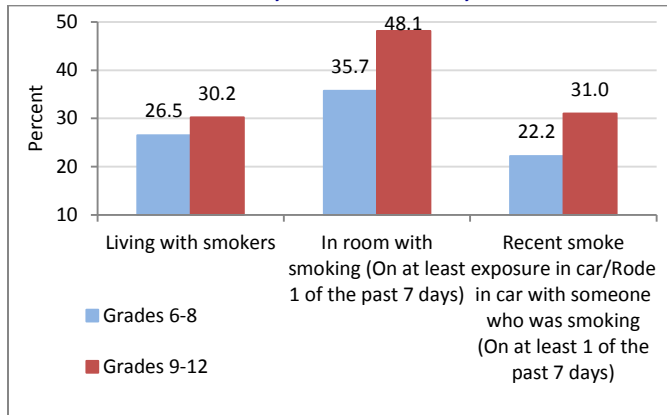
**INDOOR AIR QUALITY**

**Fig. 74. SMOKE EXPOSURE AMONG STUDENTS (GRADES 9-12), CONNECTICUT, 2005-2011**



Source: Connecticut Department of Public Health, Connecticut Youth Tobacco Survey, 2005-2011.

**Fig. 75. SMOKE EXPOSURE AMONG STUDENTS IN GRADES 6-8 AND 9-12, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health, Connecticut Youth Tobacco Survey, 2011.

**Why Indoor Air Quality is Important**

Approximately 90% of people’s lives are spent indoors and indoor air may be more polluted than outdoor air.<sup>100,101</sup> Poor quality of the indoor environment can cause asthma and other respiratory diseases, eye and nose irritations, headaches, dizziness, and fatigue.<sup>102</sup>

**Findings in Connecticut**

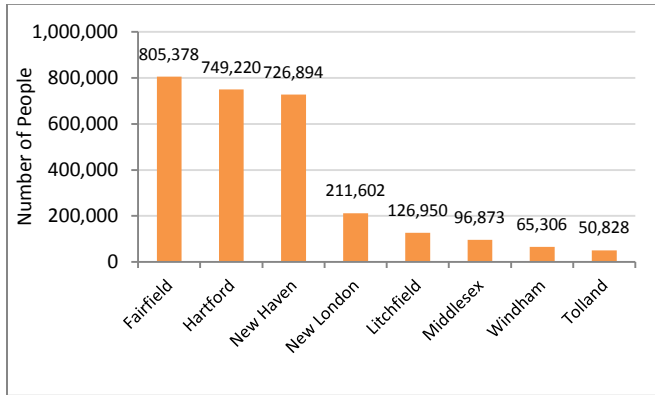
*Trends*

Over the 2005 to 2011 period, the proportion of students in grades 9-12 who lived with smokers varied by 20%. Student exposure to smoke in a room with others varied by 16%, and student smoke exposure in a car changed by 26%.

Nearly half of students in grades 9-12 and one-third of students in grades 6-8 reported smoke exposure in a room with someone else who smoked in the past 7 days. Slightly fewer indicated that they were exposed to smoke in a car in the past 7 days or by living with someone who smoked.

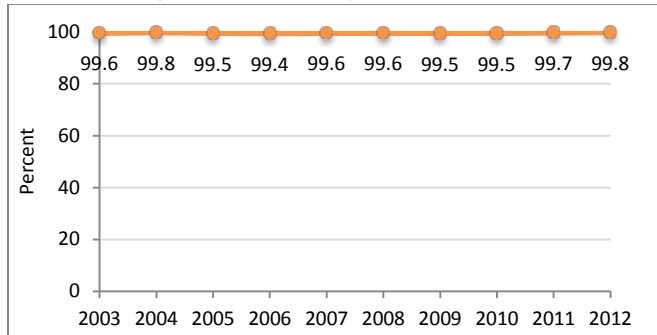
**WATER QUALITY**

**Fig. 76. NUMBER OF PEOPLE SERVED BY PUBLIC WATER SYSTEMS, BY COUNTY, CONNECTICUT, 2010**



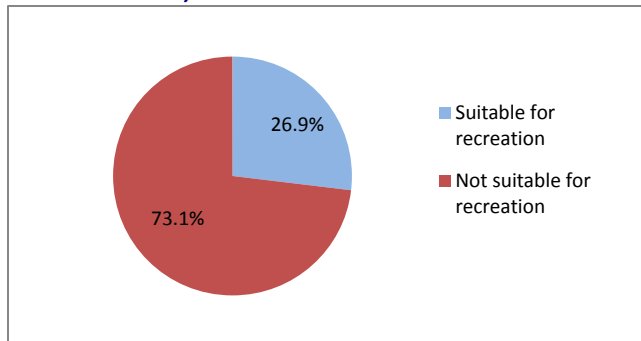
Source: Connecticut Department of Public Health, *Connecticut Healthy Homes Data Book, 2012*.

**Fig. 77. PERCENT OF WATER COMPANIES THAT DELIVERED WATER THAT MET HEALTH STANDARDS, CONNECTICUT, 2003-2012**



Source: State of Connecticut Council on Environmental Quality, *Environmental Quality in Connecticut Report, 2012*.

**Fig. 78. PERCENT OF RIVERS AND STREAMS CLASSIFIED AS SUITABLE FOR SWIMMING, CONNECTICUT, 2012**



Source: State of Connecticut Council on Environmental Quality, *Environmental Quality in Connecticut Report, 2012*.

**Why Water Quality is Important**

With its many uses for drinking, recreation, and hygiene, water is critical to life. Without clean and safe drinking water waterborne illness can be a serious problem. Water is also necessary for recreational activities like swimming which helps promote healthy, active lifestyles. Connecticut has some of the highest quality water in the country, largely due to the strong public health infrastructure that regulates and monitors water in an effort to protect watersheds and to promote water quality and safety.

**Findings in Connecticut**

The Safe Drinking Water Information System (SDWIS) is the sole database of record for all Connecticut public drinking water information and is used to enforce the federally mandated Safe Drinking Water Act. SDWIS maintains all aspects of drinking water from inventory to water quality to violations and enforcement.

*Trends*

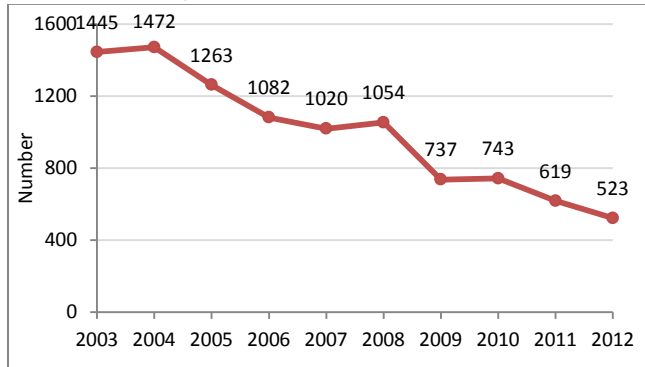
Fairfield, Hartford, and New Haven counties have the greatest number of residents who are served by public water systems in Connecticut.

From 2003 to 2012, more than 99% of water companies delivered water that met health standards.

In Connecticut, 26.9% of rivers and streams that were assessed were classified as suitable for recreation in 2012.

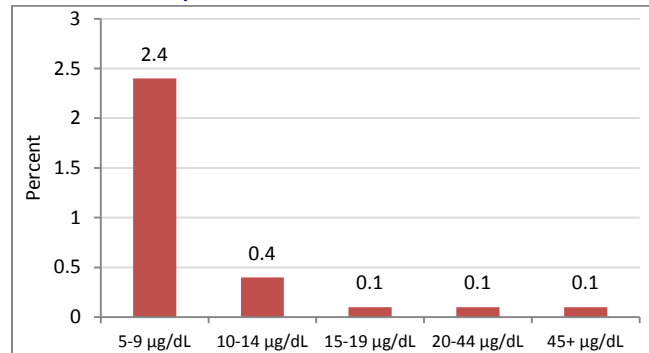
**LEAD POISONING**

**Fig. 79. NUMBER OF CHILDREN <6 YEARS OF AGE WITH BLOOD LEAD LEVEL ≥10µG/DL, CONNECTICUT, 2003-2012**



Source: Connecticut Department of Public Health and Lead and Healthy Homes Program, *Childhood Lead Poisoning in Connecticut 2011 Surveillance Report*, Fig. 8.

**Fig. 80. PERCENT OF LEAD POISONED CHILDREN AMONG THE TOTAL NUMBER OF CHILDREN <6 YEARS OF AGE SCREENED, BY BLOOD LEAD LEVEL, CONNECTICUT, 2012**



Note: Lead poisoned classified as Blood Lead ≥5µg/dL.  
Source: Connecticut Department of Public Health.

**Table 10. NUMBER OF HEALTHY HOMES INSPECTIONS, CONNECTICUT, 2010-2012**

|                                  | 2010     | 2011      | 2012      |
|----------------------------------|----------|-----------|-----------|
| Initial Healthy Homes Assessment | 8        | 33        | 45        |
| Healthy Homes Re-Assessment      | 0        | 25        | 32        |
| <b>Total</b>                     | <b>8</b> | <b>58</b> | <b>77</b> |

Source: Connecticut Department of Public Health.

**Why Lead Poisoning is Important**

High levels of lead exposure among children are associated with adverse health effects including anemia, kidney damage, colic, muscle weakness, brain damage, and death.<sup>103</sup> Lower levels of lead exposure can cause adverse cognitive, developmental, and behavioral effects.<sup>104</sup> In pregnant women, exposure to lead may cause the fetus to be born prematurely and have a lower birthweight, while high enough exposures may cause miscarriage.<sup>105</sup> While elevated blood lead levels among children have declined over the past few decades, disparities persist.<sup>106</sup> A greater proportion of black non-Hispanic or low-income children, as well as those living in homes constructed before 1960 have elevated blood lead levels.<sup>107,108</sup> In addition, second-hand smoke exposure is associated with elevated blood lead levels in youth and adults, greater than the blood lead levels found in persons who smoke.<sup>109</sup> For every dollar invested in household lead paint hazard control, a \$17 to \$221 return on this investment is achieved through savings in expenditures related to health care, special education, attention deficit-hyperactivity disorder, and reductions in crime, and greater lifetime earnings, and tax revenue, resulting in a net saving of \$181-269 billion.<sup>110</sup>

In 2012, the CDC reduced the existing 10 µg/dL “level of concern” to a new 5 µg/dL “reference value.” In response, the Connecticut Department of Public Health revised Connecticut’s blood lead screening requirements and medical follow-up guidelines to align with national recommendations. These revisions took effect in 2013.

**Findings in Connecticut**

*Trends*

From 2003 to 2012, the number of children identified with a blood lead level of at least 10+ µg/dL declined by 64% from a high of 1445 in 2003 to a low of 523 in 2012.

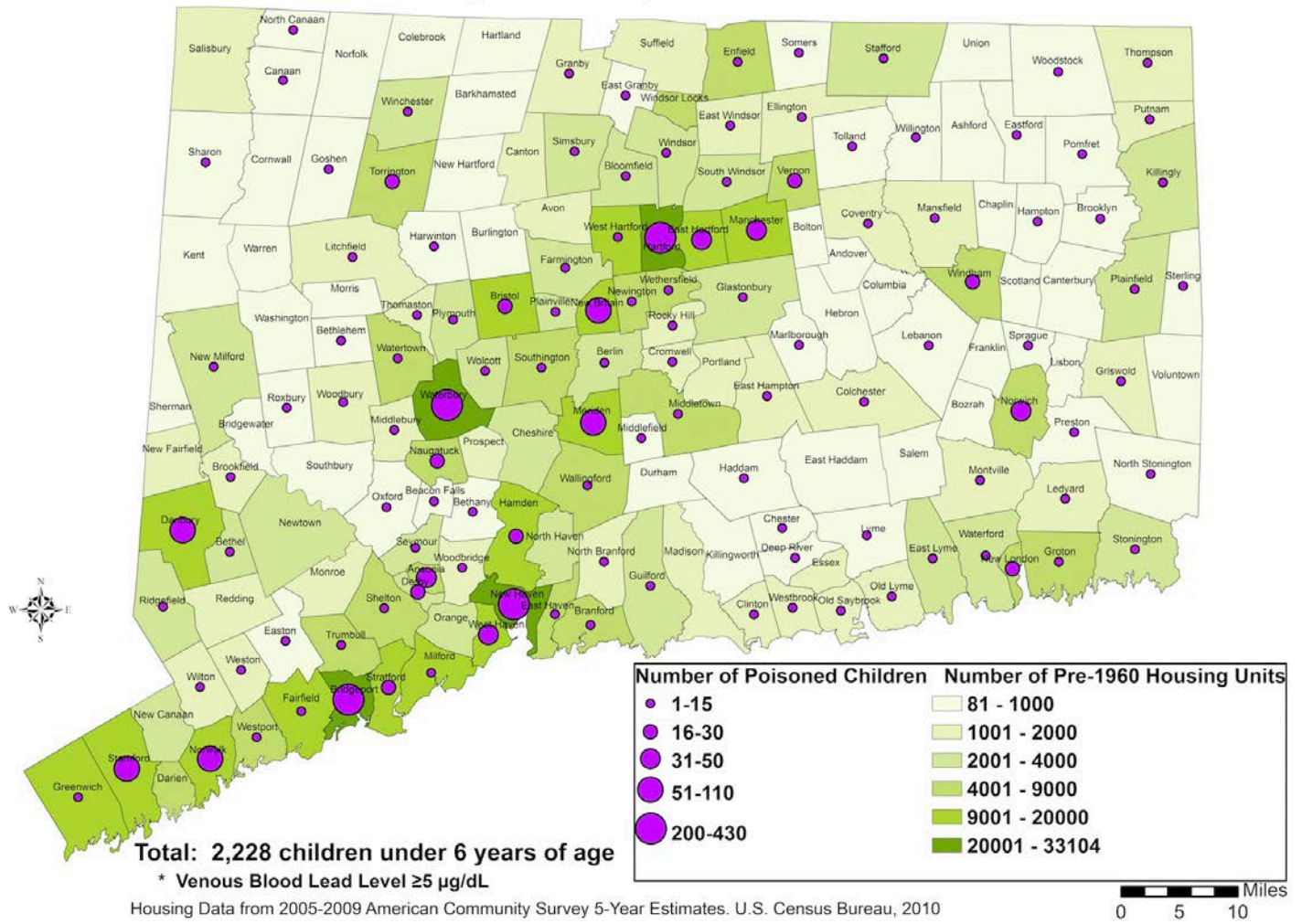
Among children with elevated blood lead levels, the majority had confirmed blood lead levels between 5-9 µg/dL. Fully 2.4% of children less than 6 years of age had confirmed blood lead levels between 5-9 µg/dL in 2012.

Lead exposure is one component of Healthy Home inspections. Since Healthy Homes inspections began in 2010, the number of initial healthy homes inspections has increased. In 2012, there were 45 initial inspections and 32 re-assessments, totaling 77 inspections that year.



LEAD POISONING ACROSS CONNECTICUT

Fig. 81. NUMBER OF LEAD POISONED CHILDREN AND HOUSING UNITS CONSTRUCTED BEFORE 1960, CONNECTICUT, 2011

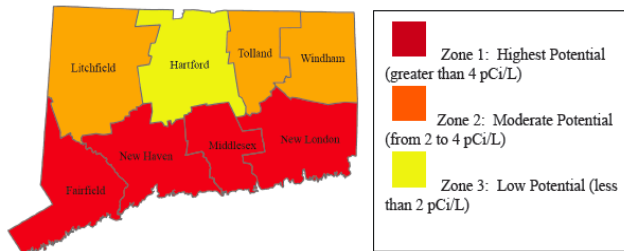


Findings in Connecticut

Housing units built before 1960 are concentrated in Connecticut’s largest towns. There is a strong association between older housing and lead poisoning, as the areas with the greatest number of housing units constructed before 1960 overlap with lead poisoning cases.

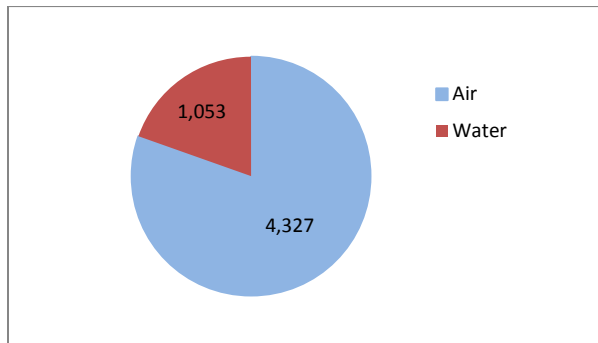
**RADON**

**Fig. 82. POTENTIAL RADON LEVELS, CONNECTICUT, 1988**



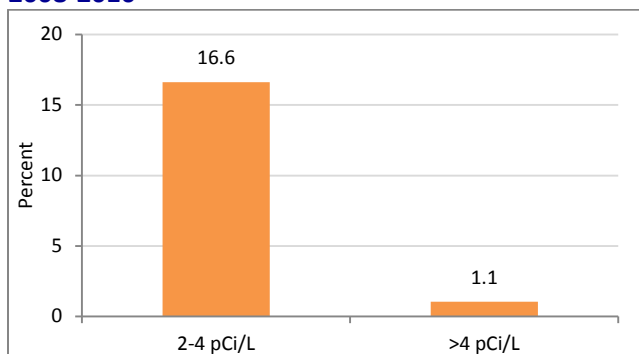
Source: Connecticut Department of Public Health, *Connecticut Healthy Homes Data Book, 2012*. From US EPA, 1988.

**Fig. 83. NUMBER OF RADON MITIGATION SYSTEMS INSTALLED IN HOMES, BY TYPE, CONNECTICUT, JANUARY 2009 THROUGH DECEMBER 2011**



Source: Connecticut Department of Public Health, Radon Program.

**Fig. 84. PERCENT OF CHILD DAY CARE CENTERS AND GROUP DAY CARE HOMES THAT USE BASEMENT OR GROUND FLOOR OF A BUILDING WITH ELEVATED RADON LEVELS, CONNECTICUT, 2008-2010**



Note: There were 1,714 child day care centers and group day care homes tested over the 2008 to 2010 period.

Source: Connecticut Department of Public Health, *Connecticut Healthy Homes Data Book, 2012*.

**Why Radon is Important**

Radon, a radioactive gas that is a product of uranium decay, is odorless, colorless, and naturally occurring.<sup>111</sup> Radon exposure is associated with increased risk of lung cancer, and is the second-leading cause of lung cancer in the US.<sup>112</sup>

**Findings in Connecticut**

*Trends*

From 2009 through 2011, 5,380 radon mitigation systems were installed in Connecticut homes, 4,327 of which were radon mitigation systems for air and 1,053 of which were mitigation systems for water.

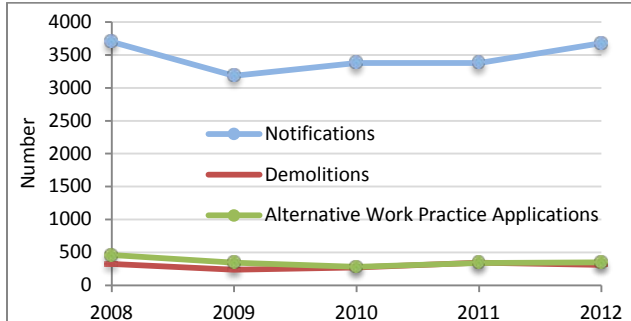
There were 1,714 child day care centers and group day care homes tested for radon from 2008 to 2010. Over the 2008 to 2010 period, approximately 18% of child day care centers and group day care homes utilized a basement or ground floor level of a building that had elevated radon levels, with 16.6% having radon levels between 2-4 pCi/L and 1.1% having over 4 pCi/L.

*Disparities*

As indicated in the map, the majority of Connecticut is located in zones with potentially high to moderate levels of radon. As of 1988, Fairfield, New Haven, Middlesex, and New London counties had potential for high levels of radon, and the counties of Windham, Tolland, and Litchfield had potentially moderate radon levels.

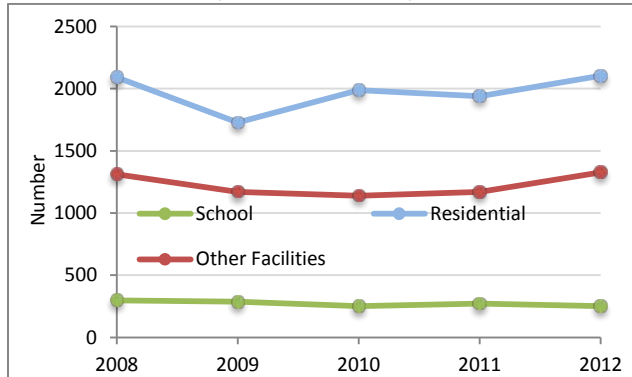
**ASBESTOS**

**Fig. 85. NUMBER OF ASBESTOS ABATEMENT NOTIFICATIONS, DEMOLITIONS, AND ALTERNATIVE WORK PRACTICE APPROVALS, CONNECTICUT, 2008-2012**



Source: Connecticut Department of Public Health.

**Fig. 86. NUMBER OF ASBESTOS NOTIFICATIONS BY TYPE OF FACILITY, CONNECTICUT, 2008-2012**



Source: Connecticut Department of Public Health.

**Why Asbestos is Important**

While most building products today do not contain asbestos, before the mid-1970s, asbestos was used in many building products.<sup>113</sup> Asbestos exposure is associated with greater risk of developing lung cancer, asbestosis, and mesothelioma.<sup>114</sup>

**Findings in Connecticut**

*Trends*

The number of asbestos notifications ranged from 3,700 in 2008 to 3,679 in 2012. In 2012, there were 311 asbestos-related demolitions and 350 alternative work practice applications.

The number of asbestos notifications for schools ranged from 298 notifications in 2008 to 250 notifications in 2012. The number of asbestos notifications for residential facilities varied from 2,091 in 2008 to 2,103 in 2012. The number of asbestos notifications for other types of facilities ranged from 1,311 in 2008 to 1,326 in 2012.



# 3

## CHRONIC DISEASE PREVENTION AND CONTROL



## CHRONIC DISEASE PREVENTION AND CONTROL

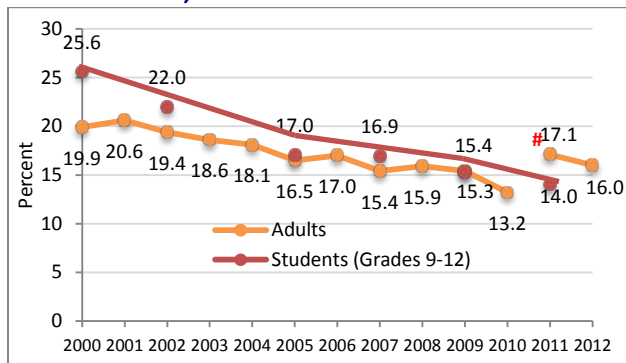
The prevalence of chronic conditions has increased in the United States.<sup>115,116</sup> The CDC has designated reductions in smoking and obesity and improvements in nutrition, physical activity, and tobacco control as “Winnable Battles” in efforts to improve the health of Americans and reduce the prevalence and severity of chronic diseases.<sup>117</sup> In Connecticut, costs associated with treatment of and loss of productivity due to cancer, diabetes, heart disease, hypertension, stroke, mental disorders, and pulmonary conditions totaled \$16.2 billion in 2003.<sup>118</sup> Estimates indicate that if this trend in the prevalence of chronic disease persists, the economic impact of chronic disease in Connecticut could sum to \$44.5 billion in 2023.<sup>119</sup> Addressing modifiable risk factors for chronic disease, such as smoking, nutrition, physical activity, and the early detection of disease, could reduce the future economic impact of chronic disease in Connecticut by \$11.9 billion in 2023.<sup>120</sup> Definitions of the indicators in this section are given in detail *in Appendix B: Definition of Measures*.

This section includes the following topic areas:

- Smoking
- Physical Activity
- Nutrition
- Overweight and Obesity
- Heart Disease
- Stroke
- Diabetes
- Cancer
  - Cancer Stage and Survival
  - Breast Cancer
  - Cervical Cancer
  - Prostate Cancer
  - Lung Cancer
  - Colorectal Cancer
  - Melanoma
  - Cancer Screening Behaviors
- Chronic Kidney Disease
- Arthritis and Osteoporosis
- Asthma
- Chronic Obstructive Pulmonary Disease
- Chronic Lower Respiratory Disease
- Oral Health
- Vision and Hearing

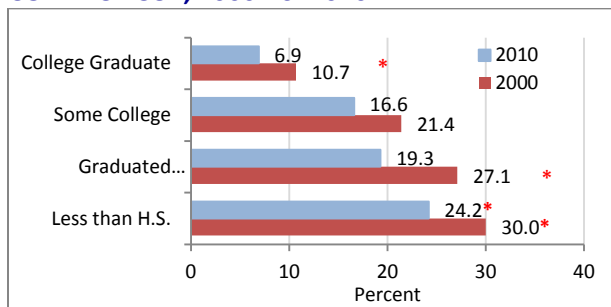
**TOBACCO USE**

**Fig. 87. PERCENT OF CURRENT SMOKERS AMONG ADULTS AND STUDENTS (GRADES 9-12), CONNECTICUT, 2000-2012**



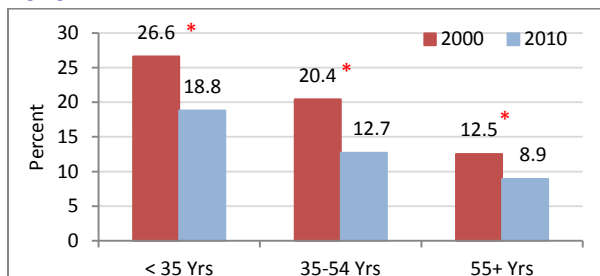
Note: # Break in adult trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000-2012; Connecticut School Health Survey (CSHS) Youth Tobacco Component, 2000-2011.

**Fig. 88. PERCENT OF CURRENT SMOKERS AMONG ADULTS, BY EDUCATIONAL ATTAINMENT, CONNECTICUT, 2000 VS. 2010**



Notes: \* Indicates significant difference between college graduates and those with less than a high school education and significant reduction in smoking prevalence for those with high school degree or college degree from 2000 to 2010 (p<0.05).  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000 and 2010.

**Fig. 89. PERCENT OF CURRENT SMOKING AMONG ADULTS, BY AGE GROUP, CONNECTICUT, 2000 VS. 2010**



Note: \* Indicates significant reduction in smoking prevalence for all age groups and in 2010, significantly higher prevalence among <35 years compared to older age groups (p<0.05).  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000 and 2010.

**Why Tobacco Use is Important**

The CDC has designated tobacco control as a “Winnable Battle” to improve health.<sup>121</sup> While smoking rates have declined, reductions in the prevalence of smoking have stalled and smoking remains the most preventable cause of death and disease in the US.<sup>122,123,124</sup> Smoking is a risk factor for cancer, heart disease, respiratory diseases, and adverse birth outcomes.<sup>125</sup> Approximately two-thirds of smokers want to quit, and half of adult smokers try to quit each year.<sup>126</sup> Smoking accounts for 3.1 million years of potential life lost (YPLL) among males, and 2 million YPLL among females.<sup>127</sup> In 2004 in Connecticut, smoking incurred \$1.6 billion in medical costs, \$1.0 billion in lost productivity, and \$430 million in Medicaid costs.<sup>128</sup> Delaying the age of first initiation of tobacco use can reduce the risk that youth become regular smokers and increase their chances of successfully quitting if they do begin regular tobacco use.

**Findings in Connecticut**

*Trends*

From 2000 to 2012, the prevalence of smoking among adults varied from 19.9% in 2000 to 16.0% in 2012. In 2012, over 400,000 adult residents smoked. From 2000 to 2010, there was a significant reduction in the prevalence of smoking among those with either a high school or college degree, but no significant reduction among Connecticut residents who did not graduate from either high school or college. The overall decline in smoking among adults from 2000 to 2010 was seen across all age groups.

From 2000 to 2011, there was a significant decrease in the percent of students in grades 6-8 and grades 9-12 who currently smoked cigarettes.

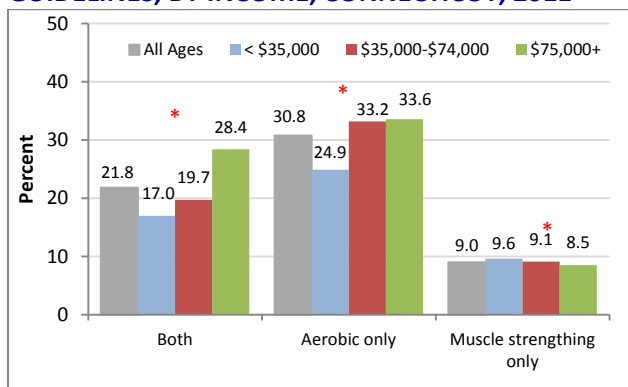
*Disparities*

Adults with less than a high school degree had the highest prevalence of smoking cigarettes (30.0% in 2000 and 24.2% in 2010), and adults with at least a college degree had the lowest prevalence (10.7% in 2000 and 6.9% in 2010). This difference was statistically significant. In 2010, the prevalence of current smoking was significantly higher among adults less than 35 years old, compared to either adults 35-54 years old or those at least 55 years old.

Among high school students in 2011, the percent of current smokers did not vary significantly by sex or grade but was significantly higher among white non-Hispanics (15.5%) relative to black non-Hispanics (7.8%).

**PHYSICAL ACTIVITY: ADULTS**

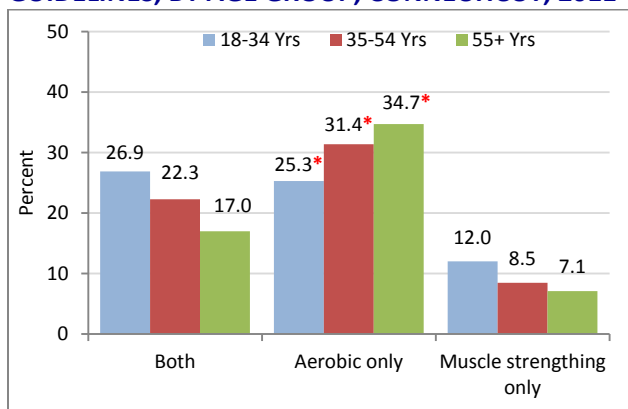
**Fig. 90. PERCENT OF ADULTS WHO MET AEROBIC EXERCISE AND MUSCLE STRENGTHENING GUIDELINES, BY INCOME, CONNECTICUT, 2011**



Notes: \* Indicates significantly greater percent who met both guidelines with increasing income; significantly lower proportion who met both guidelines compared to aerobic only, and significantly lower percent who met muscle strengthening guidelines compared to aerobic only or both guidelines across income groups (p<0.05).

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011.

**Fig. 91. PERCENT OF ADULTS WHO MET AEROBIC EXERCISE AND MUSCLE STRENGTHENING GUIDELINES, BY AGE GROUP, CONNECTICUT, 2011**



Notes: \* Indicates that the percent of adults within each age group who met aerobic only guidelines was significantly higher than those who met the muscle strengthening guidelines, respectively (p<0.05).

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011.

**Why Physical Activity among Adults is Important**

Physical activity is a modifiable health behavior that can improve health and quality of life, including reducing the risk of premature mortality, heart disease, stroke, diabetes, certain cancers, depression, and falls.<sup>129</sup>

However, the majority of Americans do not meet the guidelines for recommended levels of moderate-to-vigorous physical activity and strength training.<sup>130</sup> It is estimated that investing \$10 per person in community-based disease prevention programs to improve physical activity and nutrition and prevent smoking would save Connecticut \$2.9 million in health care costs over the next 10 to 20 years.<sup>131</sup>

**Findings in Connecticut**

In 2011, only 21.8% of adults met guidelines for both aerobic and muscle training. Fully 30.8% of adults met guidelines for aerobic exercise only, and only 9.0% of adults only met muscle strengthening guidelines.

*Disparities*

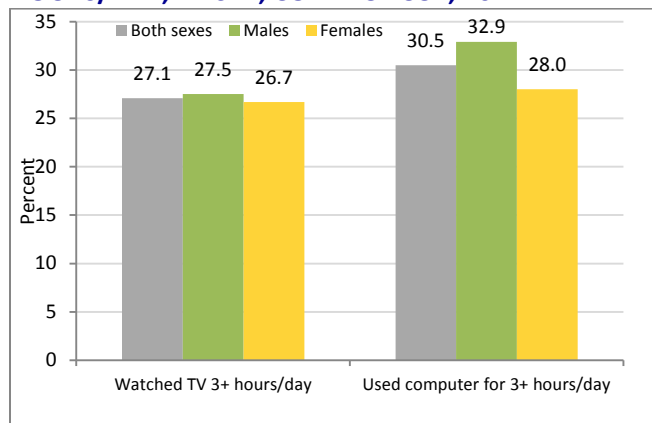
Among all income levels in 2011, the percent of adults who met both aerobic and muscle strengthening guidelines was significantly lower than those who met only the aerobic guidelines. Among adults earning less than \$35,000, the percent prevalence of meeting both guidelines was 17.0%, compared to 24.9% who met only the aerobic guideline.

Among adults 18 to 34 years of age in 2011, 26.9% met both aerobic and muscle strengthening guidelines, and the percent who met the aerobic only guideline (25.3%) was significantly higher than those who met the muscle strengthening only guideline (12.0%). A similar result was observed among persons 35 to 54 years of age and those at least 55 years of age, in which the percent who met the aerobic only guideline was significantly higher than the percent who met the muscle strengthening only guideline.



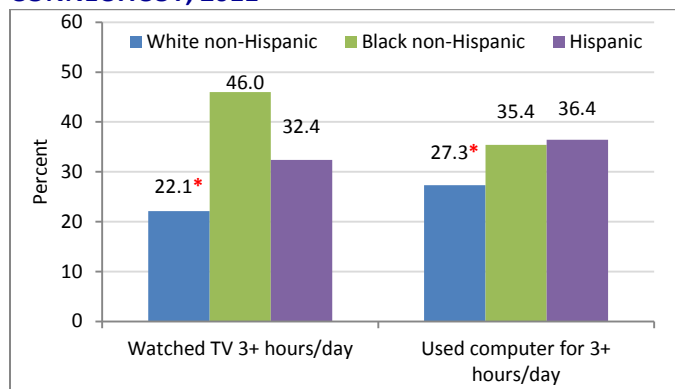
**PHYSICAL ACTIVITY: ADOLESCENTS**

**Fig. 92. PERCENT OF STUDENTS (GRADES 9-12) WHO WATCHED TV, OR PLAYED VIDEO GAMES OR WERE ON THE COMPUTER FOR 3 OR MORE HOURS/DAY, BY SEX, CONNECTICUT, 2011**



Source: Connecticut School Health Survey (CSHS), 2011.

**Fig. 93. PERCENT OF STUDENTS (GRADES 9-12) WHO WATCHED TV, PLAYED VIDEO GAMES, OR WERE ON THE COMPUTER FOR 3 OR MORE HOURS/DAY, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: \* Indicates significantly greater proportion of black non-Hispanic and Hispanic students who watched TV or used computer for 3+ hours/day relative to white non-Hispanic students (p<0.05).

Source: Connecticut School Health Survey (CSHS), 2011.

**Why Physical Activity among Adolescents is Important**

Physical activity is associated with reduced risk of premature mortality, heart disease, stroke, diabetes, certain cancers, depression, and falls.<sup>132</sup> Only one-quarter of youth 12 to 15 years of age engage in moderate to vigorous physical activity for at least 60 minutes daily.<sup>133</sup> Engagement in physical activity among youth varies by age, sex, and socioeconomic status. Among youth, older youth are more likely to spend greater time engaging in sedentary behaviors, and boys and youth with higher household incomes are more likely to meet physical activity guidelines.<sup>134</sup> There are sex differences in preferred type of physical activity, with basketball, running, football, and bike riding being more common among male youth.<sup>135</sup> In contrast, running, walking, playing basketball, and dancing are the most common types of physical activity for female youth 12 to 15 years of age.<sup>136</sup>

**Findings in Connecticut**

*Trends*

Among students in grades 9-12, the percent of students who were physically active for a total of at least 60 minutes per day on all seven of the past seven days was 26.0% in 2011.

During 2005-2011, a significant decrease (from 33.5% to 27.1%) occurred in the percent of students in grades 9-12 who watched three or more hours of television on an average school day.

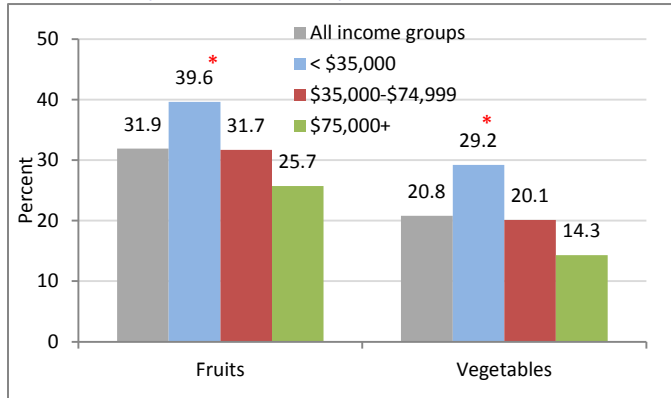
*Disparities*

In 2011, male students (34.8%) in grades 9-12 were more likely than female students (17.0%) to have been physically active for at least 60 minutes daily, in the past week.

In 2011, female students were just as likely as male students to spend more than 3 hours per day playing video or computer games or using the computer for purposes other than schoolwork. In 2011, both black non-Hispanic (46.0%) and Hispanic (32.4%) students were more likely to watch 3 or more hours of television on an average day relative to white non-Hispanic (22.1%) students. Similarly, in 2011, black non-Hispanic (35.4%) and Hispanic (36.4%) students were more likely than white non-Hispanic (27.3%) students to spend 3 or more hours per day using the computer for something other than schoolwork.

**NUTRITION**

**Fig. 94. PERCENT OF ADULTS WHO CONSUME FRUITS AND VEGETABLES LESS THAN ONCE DAILY, BY INCOME, CONNECTICUT, 2011**



Note: \* Indicates significant decrease in the percent who consumed less than 1 fruit or vegetable daily with increasing income (p<0.05)  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011.

**Fig. 95. LOW INCOME CENSUS TRACTS CONSIDERED “FOOD DESERTS”, CONNECTICUT, 2009**



Source: United States Department of Agriculture, Economic Research Service, Food Desert Locator, 2009. Map provided by personal communication.

**Why Nutrition is Important**

A healthy diet high in fruits and vegetables can reduce the risk of overweight and obesity, malnutrition, heart disease, diabetes, osteoporosis, oral disease, and some cancers.<sup>137</sup> However, few Americans meet nutritional guidelines, as indicated by daily consumption of fruit and vegetables.<sup>138</sup> Inadequate financial resources and limited access to healthy, affordable food contribute to these patterns.<sup>139,140</sup> Children and adults in lower-income households are less likely to consume a healthful diet than those of higher income households.<sup>141</sup> Investing in community-based programs to improve nutrition and other health behaviors associated with obesity and chronic diseases is estimated to save Connecticut \$2.9 million in health care costs over the next 10 to 20 years.<sup>142</sup>

**Findings in Connecticut**

*Trends*

In Connecticut, only 19.7% of students in grades 9-12 ate fruits and vegetables five or more times per day in 2011.

*Disparities*

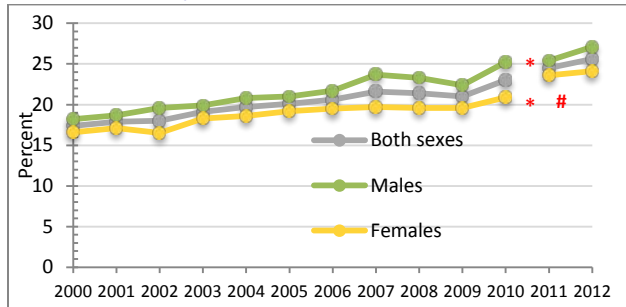
Overall, among students in grades 9-12, the prevalence of eating fruits and vegetables five or more times per day does not vary statistically by sex, race or ethnicity, or grade. From 2005 to 2011, the prevalence of the recommended “5-a-Day” fruit and vegetable consumption did not change statistically among students in grades 9-12.

In 2011, whereas 39.6% of adults who earned less than \$35,000 ate less than one fruit daily, only 31.7% and 25.7% of adults earning \$35,000-\$74,999 and at least \$75,000, respectively, ate one fruit daily. Among all income levels, the percent of adults consuming less than one vegetable daily was significantly lower than the percent who consumed less than one fruit daily.

Areas in Connecticut that are considered food deserts, where residents of low-income neighborhoods do not have easy access to a supermarket or large grocery store, are indicated in red. Most of these food deserts are located in the urban core and rural areas of Connecticut, in communities with the most challenging socioeconomic issues.

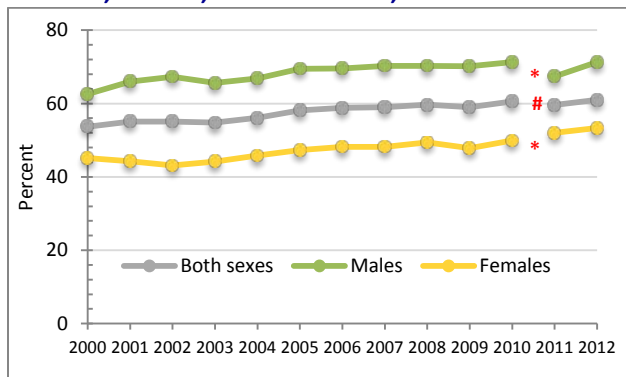
**OVERWEIGHT AND OBESITY: ADULTS**

**Fig. 96. PERCENT OF OBESE ADULTS, BY SEX, CONNECTICUT, 2000-2012**



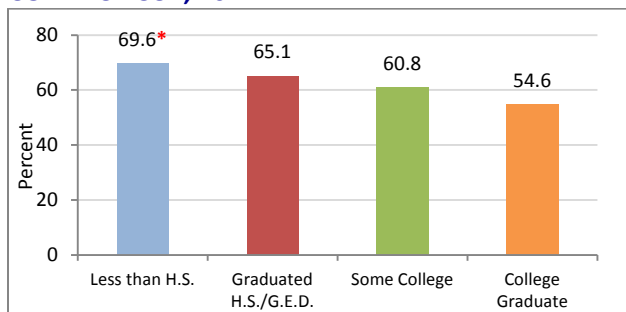
Note: \* Indicates a significantly higher rate of increase in obesity among males relative to females from 2000 to 2010 (p<0.05). # Break in trend due to new weighting in 2011.  
Source: Connecticut Behavioral Risk Factor Surveillance System, 2000-2012.

**Fig. 97. PERCENT OF OVERWEIGHT OR OBESE ADULTS, BY SEX, CONNECTICUT, 2000-2012**



Note: \* Indicates significantly higher percent prevalence of overweight and obesity among males relative to females in 2000 through 2010 (p<0.05). # Break in trend due to new weighting in 2011.  
Source: Connecticut Behavioral Risk Factor Surveillance System, 2000-2012.

**Fig. 98. PERCENT OF OVERWEIGHT OR OBESE ADULTS, BY EDUCATIONAL ATTAINMENT, CONNECTICUT, 2012**



Notes: \* Indicates significantly higher percent overweight and obese for those with less than HS education relative to some college or college degree (p<0.05).  
Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Why Overweight and Obesity are Important**

Since the 1980s, the prevalence of obesity has doubled among adults.<sup>143</sup> Obesity contributes to several chronic conditions including heart disease, stroke, diabetes, kidney disease, osteoarthritis, and some cancers, and accounts for over 25% of health care costs in the US.<sup>144,145</sup> Obesity is also associated with lower worker productivity and higher absenteeism.<sup>146</sup> As the prevalence of obesity increases, health care costs are expected to increase by 10 to 20% in the US.<sup>147</sup> Prevention efforts, including investing in community-based programs to improve nutrition and physical activity, behaviors associated with lower obesity rates, have been estimated to save Connecticut \$2.9 million in health care costs over the next 10 to 20 years.<sup>148</sup>

**Findings in Connecticut**

*Trends*

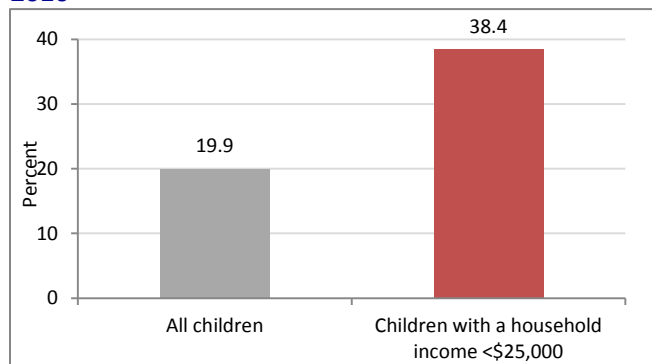
In 2012, 25.6% of Connecticut adults were obese, and 61.0% of adults were overweight or obese. The percent prevalence of adult obesity in Connecticut increased significantly among males from 18.2% in 2000 to 25.2% in 2010, and among females from 16.6% in 2000 to 20.9% in 2010. In 2012, 27.1% of adult males, and 24.1% of adult females were obese. In 2012, obesity affected an estimated total of over 650,000 adult residents in the state. A similar increasing trend in overweight and obesity, combined, was observed from 2000 to 2012 among both males and females.

*Disparities*

In 2012, as educational attainment increased, the proportion of adults in Connecticut who were overweight and obese, combined, decreased. For instance, whereas the percent prevalence of overweight and obesity was 69.6% among adults without a high school degree, the prevalence among those with some college education and with a college degree, was 60.8% and 54.6%, respectively. This difference was significant.

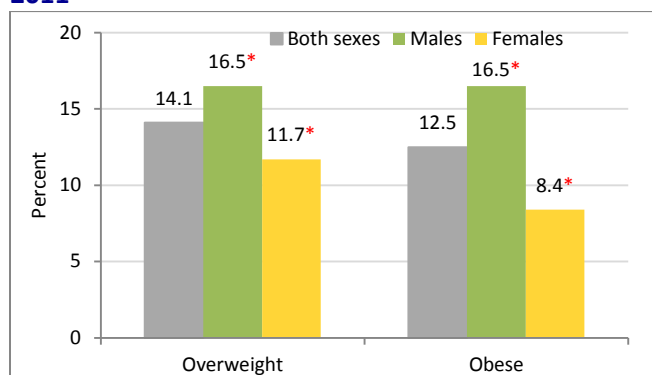
### OVERWEIGHT AND OBESITY: CHILDREN AND ADOLESCENTS

**Fig. 99. PERCENT OF CHILDREN (5-12 YEARS OF AGE), WHO WERE OBESE, CONNECTICUT, 2008-2010**



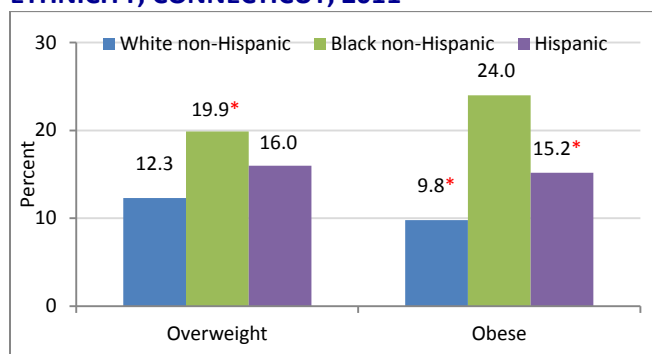
Source: Behavioral Risk Factor Surveillance System, 2008-2010.

**Fig. 100. PERCENT OF OVERWEIGHT AND OBESE STUDENTS (GRADES 9-12), BY SEX, CONNECTICUT, 2011**



Source: Connecticut School Health Survey (CSHS), 2011.

**Fig. 101. PERCENT OF OVERWEIGHT AND OBESE STUDENTS (GRADES 9-12), BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Source: Connecticut School Health Survey (CSHS), 2011.

### Why Overweight and Obesity among Children and Adolescents are Important

Since the 1980s, the prevalence of obesity has tripled among youth.<sup>149</sup> However, recent national data suggest that the prevalence of obesity among children 2 to 5 years of age declined 40% from 2003-2004 to 2011-2012.<sup>150</sup> Due to the obesity epidemic, it is projected that today’s youth will be the first generation to live less healthy and shorter lives than their parents.<sup>151</sup>

#### Findings in Connecticut

In 2008-2010, combined, almost one-fifth (19.9%) of children 5 to 12 years of age in Connecticut were obese.

There were no statistically significant changes in the proportion of obese students in grades 9-12 in Connecticut from 2005 to 2011. In 2011, 16.5% of male students and 8.4% of female students were obese.

#### Disparities

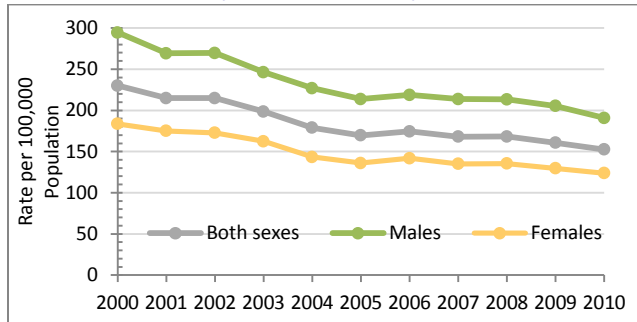
In 2008-2010, combined, a greater proportion of children from low-income households (<\$25,000 household income) were obese (38.4%) relative to Connecticut’s total population of children 5 to 12 years of age (19.9%).

The prevalence of obesity among students in grades 9-12 in 2011 was significantly higher among male (16.5%) than among female (8.4%) students. A significantly greater proportion of male (16.5%) students were overweight as compared to female (11.7%) students in 2011.

A significantly greater proportion of Hispanic students in grades 9-12 (15.2%) were obese in 2011 relative to white non-Hispanic students (9.8%). The proportion of overweight black non-Hispanic students (19.9%) was significantly greater than that for white non-Hispanic students (12.3%) in 2011. There were no statistical differences in overweight between Hispanic and white non-Hispanic students in 2011.

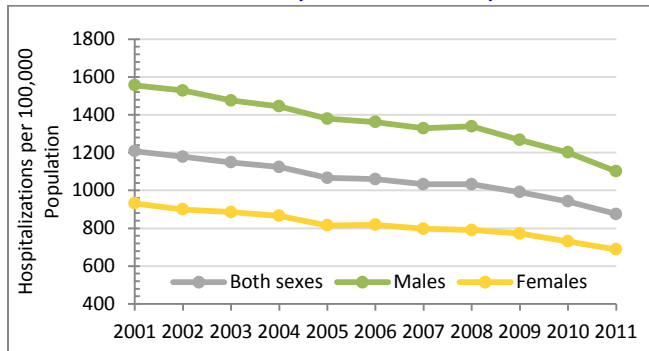
**HEART DISEASE**

**Fig. 102. HEART DISEASE AGE-ADJUSTED MORTALITY RATE, CONNECTICUT, 2000-2010**



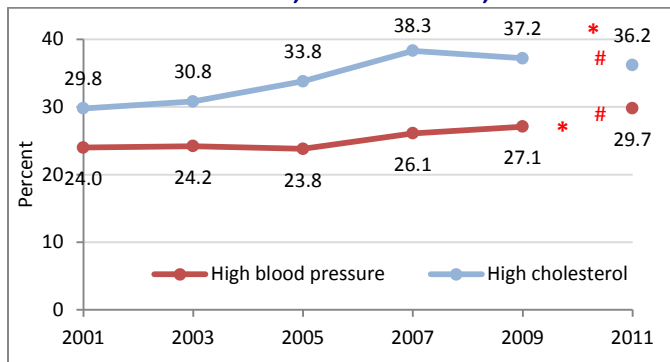
Source: Connecticut Department of Public Health, Vital Statistics (Registration Reports), Mortality Tables Statewide Age-Adjusted Mortality Rates, 2001-2010.

**Fig. 103. HEART DISEASE AGE-ADJUSTED HOSPITALIZATION RATE, CONNECTICUT, 2001-2011**



Source: Connecticut Department of Public Health, Hospitalization Tables, 2001-2011, Table H-1.

**Fig. 104. PERCENT OF ADULTS EVER TOLD BY A PROVIDER THAT THEY HAD HIGH BLOOD PRESSURE OR HIGH CHOLESTEROL, CONNECTICUT, 2001-2011**



Note: \* Indicates significant increasing trend for reported diagnosis of high blood pressure or high cholesterol from 2001 to 2009 (p<0.05). # Break in trend due to new weighting in 2011.  
 Source: Connecticut Behavioral Risk Factor Surveillance System, 2001-2011.

**Why Heart Disease is Important**

While heart disease mortality has declined in Connecticut, heart disease is one of the leading causes of death in Connecticut and the US and is the third-leading cause of premature death in Connecticut.<sup>152</sup> Risk factors for heart disease include high blood pressure, high cholesterol, cigarette smoking, diabetes, poor nutrition, physical inactivity, and overweight and obesity.<sup>153</sup> In 2010, medical expenses for cardiovascular disease and stroke were estimated to cost \$155.7 billion in the US.<sup>154</sup> The total direct and indirect cost of cardiovascular disease and stroke in the US in 2010 was estimated to be \$503.2 billion.<sup>155</sup>

**Findings in Connecticut**

*Trends*

The heart disease mortality rate among male and female residents in Connecticut appeared to decline over the 2000 to 2010 period. Deaths from heart disease decreased by 29% over this period from a high of 230 in 2000 to a low of 152 in 2010.

From 2001 to 2011, the rate of hospitalizations due to heart disease appeared to decline by 27.5% for both sexes.

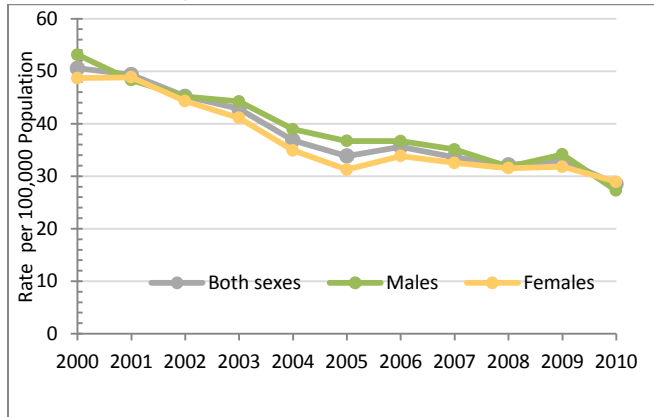
The percent prevalence of adults ever told by a health care provider that they had high blood pressure in Connecticut increased from 24.0% in 2001 to 29.7% in 2011. In 2011, high blood pressure affected over 800,000 adult residents in the state. This estimate is for persons who were ever told by a health care provider that they had high blood pressure and does not include persons with undiagnosed high blood pressure. A similar increase was observed with the percent prevalence of adults ever told they had high cholesterol, from a low of 29.8% in 2001 to 36.2% in 2011. This estimate is for persons who were ever told by a health care provider that they had high cholesterol and does not include persons with undiagnosed high cholesterol. In 2011, high cholesterol affected over 800,000 adult residents. Across all years, the prevalence of diagnosed high cholesterol was significantly higher than that of high blood pressure.

*Disparities*

Heart disease mortality and hospitalization rates were consistently higher for males than females over the 2001-2010 and 2001-2011 periods, respectively. In 2010, the heart disease mortality rate for males was 54% greater than that for females. The heart disease hospitalization rate was 60% higher for males as compared to females in 2011.

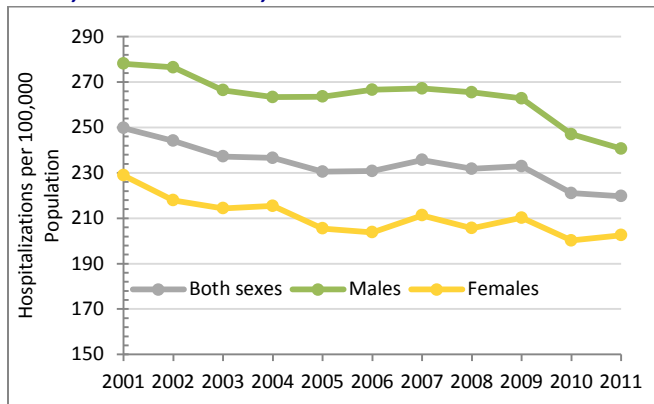
**STROKE**

**Fig. 105. STROKE AGE-ADJUSTED MORTALITY RATE, CONNECTICUT, 2000-2010**



Source: Connecticut Department of Public Health, Vital Statistics (Registration Reports), Mortality Tables Statewide Age-Adjusted Mortality Rates, 2001-2010.

**Fig. 106. STROKE AGE-ADJUSTED HOSPITALIZATION RATE, CONNECTICUT, 2001-2011**



Source: Connecticut Department of Public Health, Hospitalization Tables, 2001-2011, Table H-1.

**Why Stroke is Important**

Stroke is the third leading cause of death in the US and Connecticut.<sup>156</sup> Disability, reduced quality of life, and significant health care costs are associated with heart disease and stroke.<sup>157,158</sup> Risk factors for stroke include high blood pressure, high cholesterol, cigarette smoking, diabetes, poor nutrition, physical inactivity, and overweight and obesity.<sup>159</sup> In 2010, the total direct and indirect cost of cardiovascular disease and stroke in the US was estimated to be \$503.2 billion.<sup>160</sup>

**Findings in Connecticut**

*Trends*

For male and female residents in Connecticut, the stroke mortality rate appeared to decline from 2000 to 2010. Over this period, the mortality rate appeared to decline by 43% for males and 41% for females.

From 2001 to 2010, hospitalization rates for stroke appeared to decline by 13.4% for males and 11.5% for females.

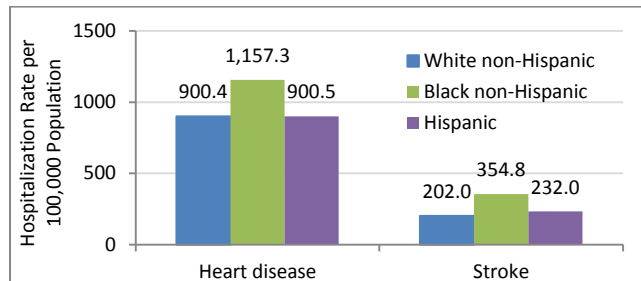
*Disparities*

The stroke mortality rate appeared to be higher for males than females over the 2001 to 2010 period. However, in 2010 the stroke mortality rate for females eclipsed that for males.

From 2001 to 2010, the hospitalization rate for stroke appeared to be higher for males than females. In 2010, the stroke hospitalization rate for males was 18.9% higher than that for females.

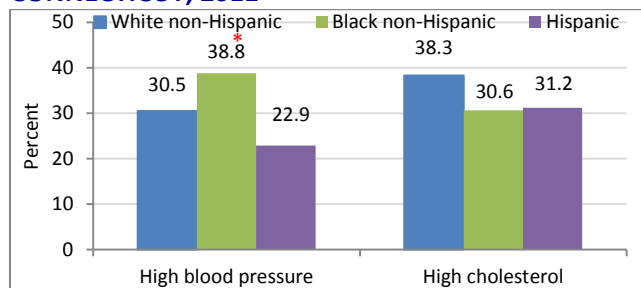
### HEART DISEASE AND STROKE: AT-RISK POPULATIONS

**Fig. 107. HEART DISEASE AND STROKE AGE-ADJUSTED HOSPITALIZATION RATE, CONNECTICUT, 2010**



Source: Connecticut Department of Public Health, Hospitalization Table, 2010, Table H-2.

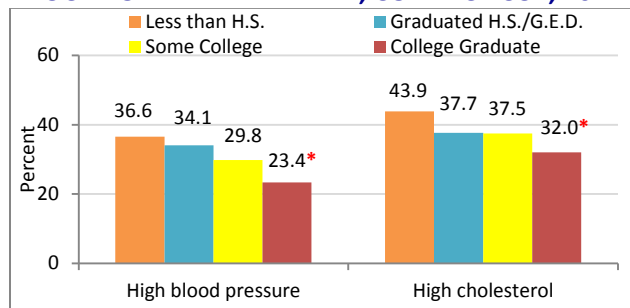
**Fig. 108. PERCENT OF ADULTS EVER TOLD BY A PROVIDER THAT THEY HAD HIGH BLOOD PRESSURE OR HIGH CHOLESTEROL, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: \* Indicates significantly different prevalence of reported diagnosed high blood pressure by race and ethnicity (p<0.05).

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011.

**Fig. 109. PERCENT OF ADULTS EVER TOLD BY A HEALTH CARE PROVIDER THAT THEY HAD HIGH BLOOD PRESSURE OR HIGH CHOLESTEROL, BY EDUCATIONAL ATTAINMENT, CONNECTICUT, 2011**



Notes: \* Indicates significantly lower prevalence of diagnosed high blood pressure for those with a college degree relative to persons without a college degree and significant difference in diagnosed high cholesterol between those with a college degree and those without a high school degree (p<0.05). Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011.

### Why Heart Disease and Stroke Disparities are Important

Heart disease and stroke are preventable conditions, with persistent racial disparities. Compared to white non-Hispanics, black non-Hispanics have an excess prevalence of heart disease, the leading cause of death in the US, and stroke, the third-leading cause of death in the US.<sup>161</sup> Black non-Hispanics and Hispanics experience disparities in risk factors for heart disease and stroke, such as nutrition and physical activity.<sup>162,163</sup>

### Findings in Connecticut

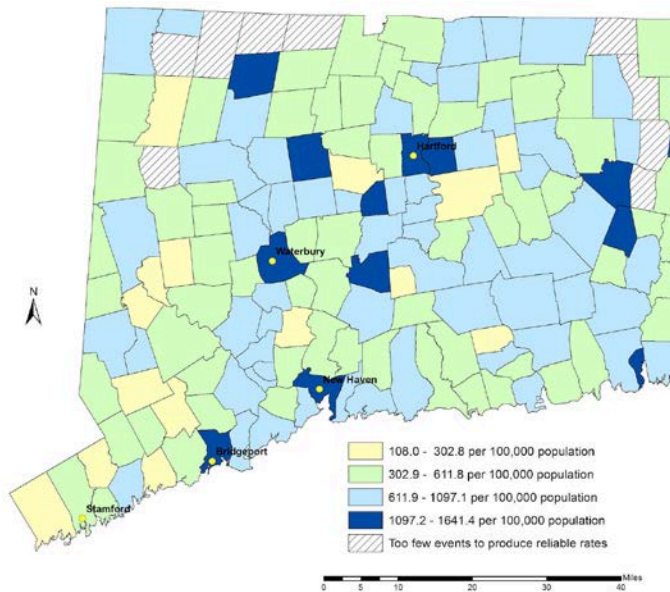
In 2010, the rate of hospitalizations for heart disease was highest for black non-Hispanics, approximately 29% higher than that for white non-Hispanics and Hispanics. Black non-Hispanics had the highest stroke hospitalization rate, which was approximately 76% higher than that for white non-Hispanics. The stroke hospitalization rate for Hispanics was approximately 15% higher than that for white non-Hispanics.

In 2011, the prevalence of diagnosed high blood pressure varied significantly by race and ethnicity, ranging from a low of 22.9% for Hispanics, to a high of 38.8% for black non-Hispanics. Approximately 3 in 10 white non-Hispanic adults were diagnosed with high blood pressure. The percent of adults ever told that they had high cholesterol did not vary significantly by race or ethnicity.

The proportion of adults in 2011 ever told they had high blood pressure among those with a college degree (23.4%) was significantly lower than that of adults with less than a college education. Although the percent of adults diagnosed with high cholesterol was inversely related to educational level, only the difference between those without a high school degree (43.9%) and those with a college degree (32.0%) was significant.

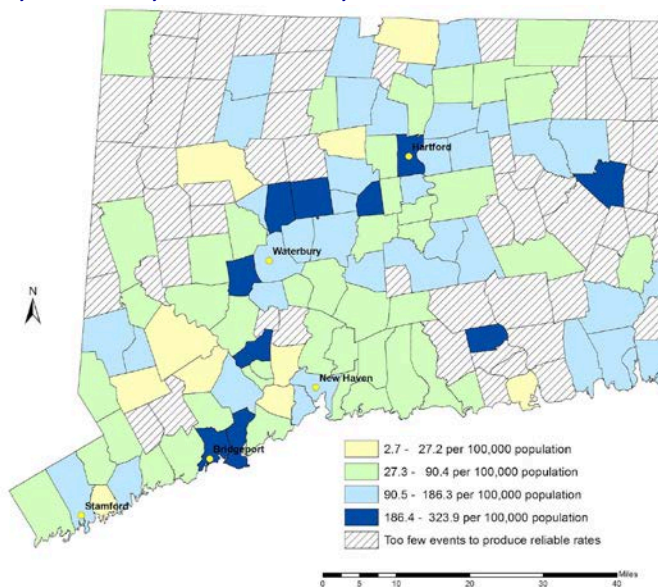
**PREMATURE MORTALITY DUE TO HEART DISEASE AND STROKE ACROSS CONNECTICUT**

**Fig. 110. PREMATURE MORTALITY DUE TO HEART DISEASE, YEARS OF POTENTIAL LIFE LOST (YPLL) UNDER AGE 75, BY TOWN, CONNECTICUT, 2006-2010**



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

**Fig. 111. PREMATURE MORTALITY DUE TO STROKE, YEARS OF POTENTIAL LIFE LOST (YPLL) UNDER AGE 75, BY TOWN, CONNECTICUT, 2006-2010**



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

**Findings in Connecticut**

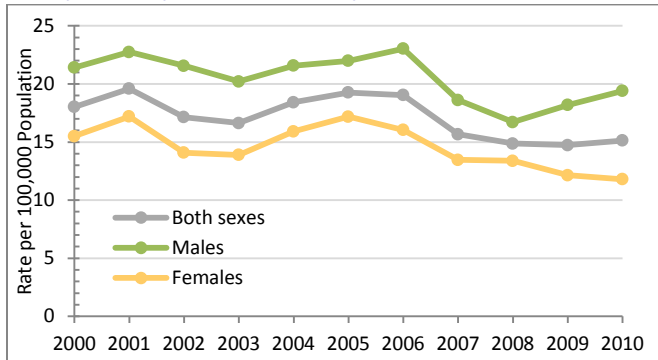
From 2006 to 2010, combined, premature mortality due to heart disease was greatest in Connecticut’s largest towns and neighboring communities as well as eastern Connecticut, as indicated by the dark blue shading.

Over the 2006 to 2010 period, combined, premature mortality due to stroke was greatest in Connecticut’s largest towns and neighboring communities and some towns in eastern Connecticut.



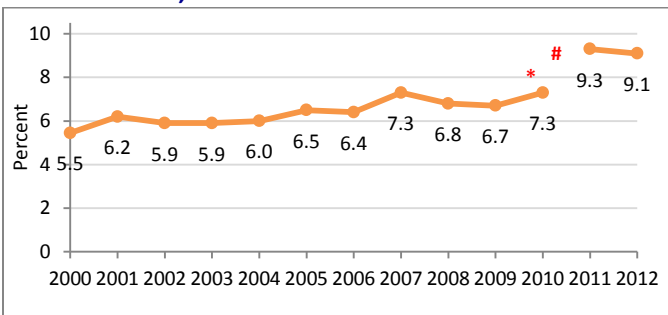
**DIABETES**

**Fig. 112. DIABETES AGE-ADJUSTED MORTALITY RATE, BY SEX, CONNECTICUT, 2000-2010**



Source: Connecticut Department of Public Health, Vital Statistics, Mortality Tables, Statewide Age-Adjusted Mortality Rates, 2001-2010.

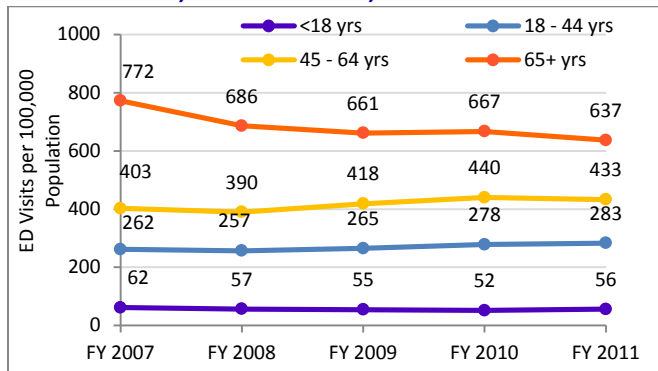
**Fig. 113. PERCENT OF ADULTS WHO HAVE BEEN TOLD BY A DOCTOR THAT THEY HAVE DIABETES, CONNECTICUT, 2000-2012.**



Note: \* Indicates a significant annual increase in the prevalence of reported diagnosis of diabetes from 2000 to 2010 ( $p < 0.05$ ). # Break in trend due to new weighting in 2011.

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000-2012.

**Fig. 114. DIABETES EMERGENCY DEPARTMENT VISITS BY AGE, CONNECTICUT, FY 2007-FY 2011**



Source: Connecticut Department of Public Health, OHCA from Connecticut Hospital Association CHIME, Inc. Emergency Department Database.

**Why Diabetes is Important**

The prevalence of diabetes in the US has increased steadily since 1990 and poses a substantial burden to individuals living with diabetes and society.<sup>164</sup> The actual prevalence of diabetes in Connecticut may be higher than the 9.7% who have been diagnosed with diabetes because many adults are unaware that they have the condition (undiagnosed).<sup>165</sup> In 2012, diabetes accounted for 20% of health care costs in the US.<sup>166</sup> In Connecticut, costs associated with health care, lost productivity, and premature mortality due to diabetes totaled \$1.7 billion in 2002.<sup>167</sup> Diabetes is also a financial burden for persons with diabetes, whose medical expenditures are more than double those of persons without diabetes.<sup>168</sup> Diabetes is a risk factor for lower life expectancy, cardiovascular disease, stroke, kidney disease, vision loss, amputations, and disability.<sup>169,170,171</sup>

**Findings in Connecticut**

*Trends*

From 2000 to 2010, the diabetes mortality rate appeared to decline by 15% for males and 31% for females. Of note, since 2008 the diabetes mortality rate for males ranged from 17.0 per 100,000 population in 2008 to 19.0 per 100,000 population in 2011.

While the diabetes mortality rate has declined since 2001, the proportion of Connecticut adults who have ever been told by a health care provider that they had diabetes increased. From 2000 to 2012, the proportion of adults ever told they had diabetes increased from a low of 5.5% in 2000 to a high of 9.1% in 2012.

In 2011, there were 138.3 diabetes-related hospitalizations per 100,000 and 808.7 emergency department (ED) visits due to diabetes per 100,000 residents.

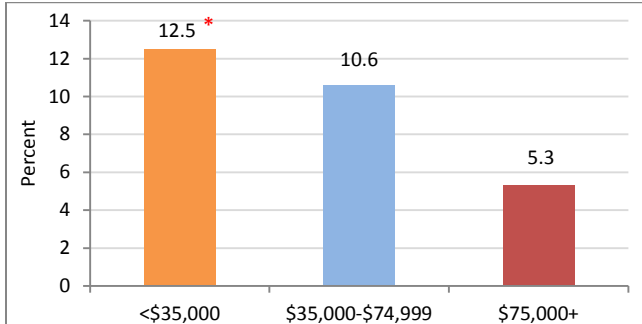
*Disparities*

From 2001 to 2010, the diabetes mortality rate was higher among males than females. In 2010, the diabetes mortality rate for males was 1.6 times that for females.

Diabetes-related emergency department visits for persons 65 years of age and older varied from 772 per 100,000 in FY 2007 to 637 per 100,000 in FY 2011.

**DIABETES: AT-RISK POPULATIONS**

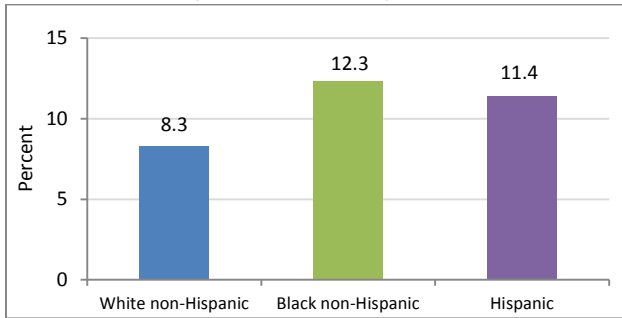
**Fig. 115. PERCENT OF ADULTS EVER TOLD BY A PROVIDER THAT THEY HAD DIABETES, BY INCOME, CONNECTICUT, 2012**



Notes: \* Indicates significantly higher percent of adults who reported diabetes diagnosis among those with <\$35,000 income relative to >\$75,000.

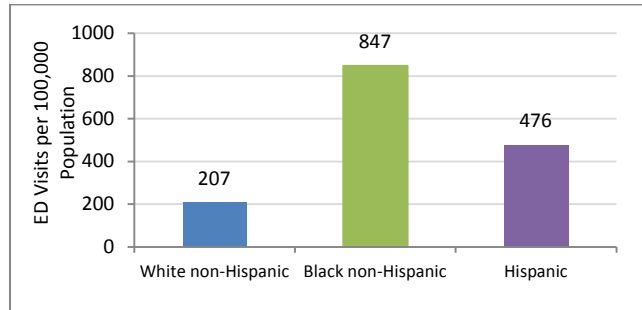
Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Fig. 116. PERCENT OF ADULTS EVER TOLD BY A PROVIDER THAT THEY HAD DIABETES, BY RACE AND ETHNICITY, CONNECTICUT, 2012**



Source: Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Fig. 117. DIABETES EMERGENCY DEPARTMENT VISITS, BY RACE AND ETHNICITY, CONNECTICUT, FY2007-FY2011**



Source: Connecticut Department of Public Health, OHCA from Connecticut Hospital Association Chime, Inc. Emergency Department Database.

**Why Diabetes Disparities are Important**

In the US, diabetes, a costly and preventable chronic condition, is disproportionately concentrated among black non-Hispanics, Hispanics, and persons of lower socioeconomic status.<sup>172</sup> The prevalence of diabetes has increased for those with a high school education or less.<sup>173</sup>

**Findings in Connecticut**

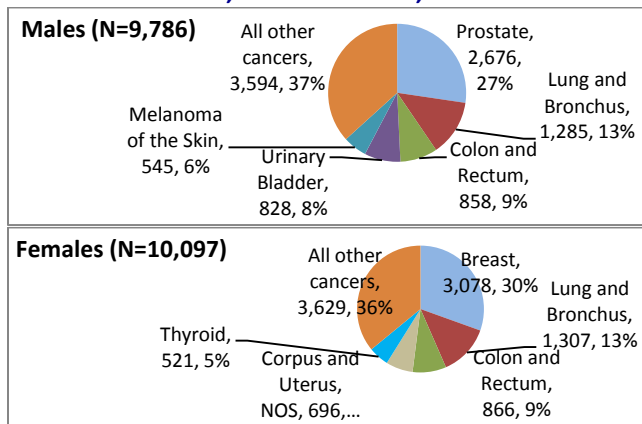
The prevalence of diabetes among adults in Connecticut in 2012 differed by income. A significantly greater percent of adults with incomes less than \$35,000 (12.5%) were told they have diabetes as compared to those with incomes of at least \$75,000 (5.3%).

The percent of adults ever told they have diabetes in Connecticut in 2012 ranged from 12.3% for black non-Hispanics and 11.4% for Hispanics to 8.3% for white non-Hispanics (8.3%). Yet, this difference was not significantly different.

Diabetes-related emergency department visits differ by race and ethnicity, with black non-Hispanics and Hispanics having disproportionately higher rates of emergency department visits for diabetes than white non-Hispanics. The rate of diabetes-related emergency department visits for black non-Hispanics was 4.1 times that for white non-Hispanics. For Hispanics, the rate of diabetes-related emergency department visits was 2.3 times that for white non-Hispanics.

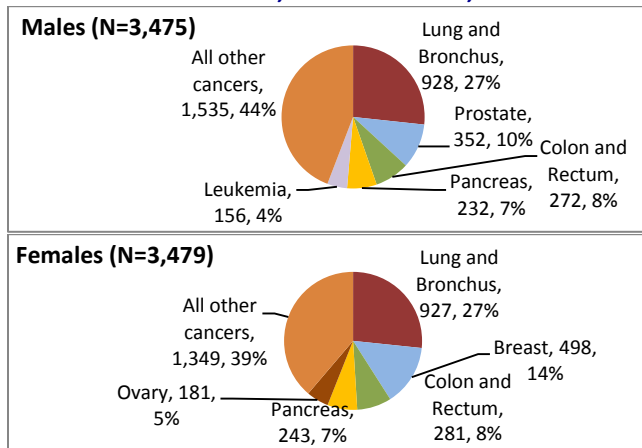
**CANCER**

**Fig. 118. NUMBER OF NEW CANCER CASES, BY SEX AND CANCER SITE, CONNECTICUT, 2010**



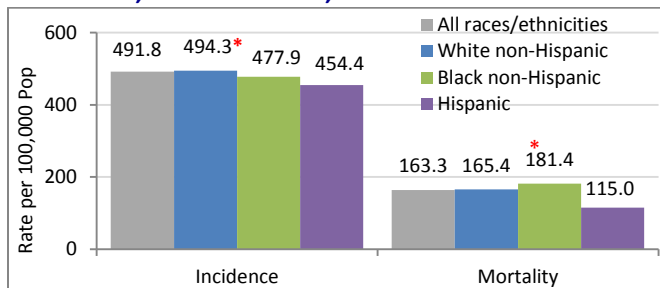
Source: Connecticut Tumor Registry, Connecticut Department of Public Health.

**Fig. 119. NUMBER OF DEATHS DUE TO CANCER, BY SEX AND CANCER SITE, CONNECTICUT, 2010**



Source: HISR, Connecticut Department of Public Health.

**Fig. 120. CANCER INCIDENCE AND MORTALITY RATE FOR ALL INVASIVE CANCERS, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



Note: \* Indicates significantly higher incidence for white non-Hispanics relative to Hispanics and difference in mortality rate across racial and ethnic groups (p<0.05). Source: Connecticut Tumor Registry, Connecticut Department of Public Health.

**Why Cancer is Important**

Cancer is the second leading cause of death in Connecticut, where 1 in 2 males and 1 in 3 females in will be diagnosed with cancer at some point in their life.<sup>174</sup> Cancer is a term that covers more than 100 different diseases. The majority of cancers are thought to be associated with modifiable risk factors.<sup>175</sup> It is estimated that more than half of all cancers are preventable.<sup>176</sup> In the US, racial and ethnic minorities and persons of lower socioeconomic status experience higher rates of cancer incidence and mortality.<sup>177</sup> Modifiable behavioral risk factors for cancer include smoking, physical inactivity, poor nutrition, and ultraviolet light exposure.<sup>178</sup> Cancer screening is an effective strategy to detect cancer in early stages.<sup>179</sup> It is estimated that in 2008, health care costs associated with cancer cost the US \$77.4 billion, and loss of productivity due to cancer cost \$124 billion.<sup>180</sup>

**Findings in Connecticut**

In 2008-2010, there were 491.8 per 100,000 residents new cancer cases and 163.3 deaths per 100,000 residents due to cancer.

In 2010, cancer of the prostate, lung and bronchus, and colon and rectum contributed the greatest number of new cancer cases among males, followed by cancer of the urinary bladder and melanoma of the skin. For females, cancer of the breast, lung and bronchus, and colon and rectum comprised the largest number of new cancer cases in Connecticut in 2010, followed by cancer of the corpus and uterus and thyroid.

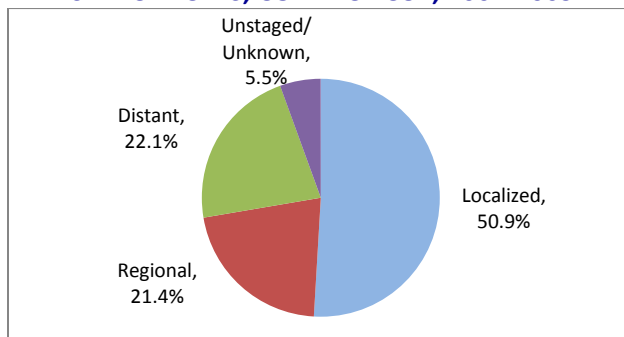
In 2010, cancer of the lung and bronchus contributed the largest number of cancer deaths for male and female residents of Connecticut. For males, prostate cancer was the second leading cause of death due to cancer, followed by cancer of the colon and rectum. For females, breast cancer was the second leading cause of death due to cancer, followed by cancer of the colon and rectum.

**Disparities**

From 2008 to 2010, combined, the cancer incidence rate for all invasive cancers was significantly higher for white non-Hispanics relative to Hispanics and the difference between white non-Hispanics and black non-Hispanics was not significant. Compared to white non-Hispanics and Hispanics, the cancer mortality rate for all invasive cancers was significantly higher for black non-Hispanics.

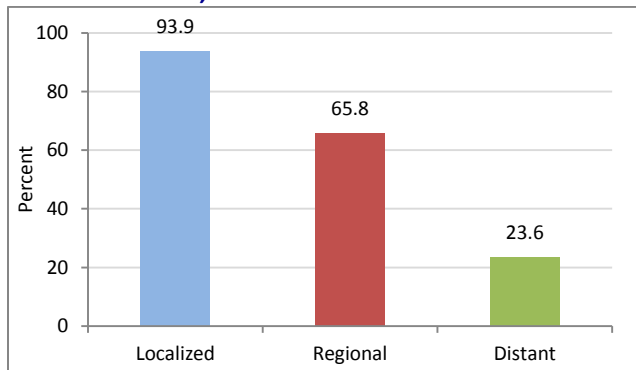
**CANCER STAGE AND CANCER SURVIVAL**

**Fig. 121. STAGE OF CANCER DIAGNOSIS FOR ALL INVASIVE CANCERS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 122. FIVE-YEAR CANCER RELATIVE SURVIVAL FOR ALL INVASIVE CANCERS, BY CANCER STAGE, FOR PERSONS DIAGNOSED 2004-2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Cancer Survival is Important**

The survival rate is a measure of how long people live after being diagnosed with cancer. The relative survival rate adjusts for mortality in the general population, and is defined as the ratio of a cancer patient's chance of surviving their cancer for a given period of time relative to that of a person of the same age and sex in the general US population.

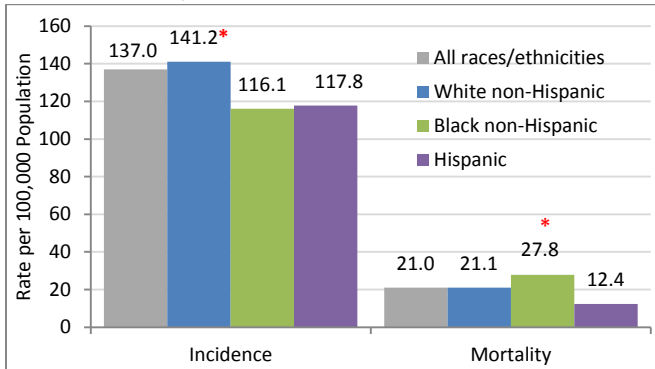
**Findings in Connecticut**

For all invasive cancers diagnosed between 2004 and 2009, 50.9% of cancer cases were diagnosed when the cancer was in a localized stage, 21.4% were diagnosed when the cancer was regional, and 22.1% when the cancer was distant.

Cancer survival decreased with cancer stage for all invasive cancers. In 2010, the 5-year cancer survival rate was 93.9% for persons diagnosed with localized cancer, 65.8% for those diagnosed with regional cancer, and 23.6% for persons diagnosed with distant cancer.

**BREAST CANCER**

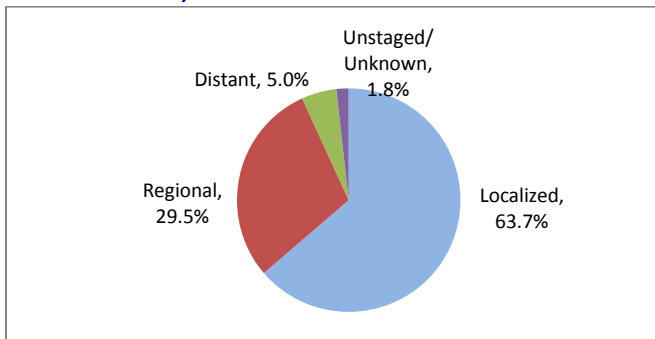
**Fig. 123. FEMALE BREAST CANCER INCIDENCE AND MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



Note: \* Indicates significantly higher incidence for white non-Hispanics than black non-Hispanics and Hispanics and difference in mortality rate across racial/ethnic groups (p<0.05).

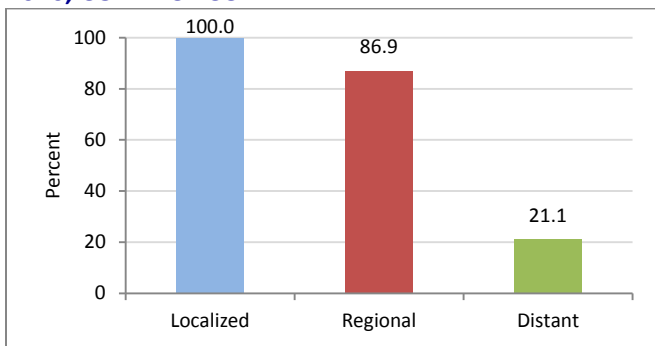
Source: Connecticut Tumor Registry, Connecticut Department of Public Health.

**Fig. 124. STAGE OF BREAST CANCER DIAGNOSIS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 125. FIVE-YEAR BREAST CANCER RELATIVE SURVIVAL, BY CANCER STAGE, FOR FEMALES DIAGNOSED 2004-2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Breast Cancer is Important**

Breast cancer is the most common cancer diagnosed among females in Connecticut and is the second leading cause of cancer death among females in Connecticut.<sup>181</sup> It is estimated that annual direct medical costs for breast cancer in the US totals \$5.98 billion.<sup>182</sup> Risk factors for breast cancer include young age at menarche, never giving birth or giving birth at a later age, not breastfeeding, long-term use of hormone replacement therapy, older age, personal or family history of breast cancer, overweight and obesity, excess alcohol use, and physical inactivity.<sup>183</sup> In the US, while white non-Hispanic females have the highest breast cancer incidence rate, black non-Hispanic females have the highest breast cancer mortality rate.<sup>184,185</sup> Late stage diagnosis and poverty are also risk factors for breast cancer mortality.<sup>186</sup>

**Findings in Connecticut**

From 2008 to 2010 combined, there were 137.0 new breast cancer cases per 100,000 population, and 21.0 deaths due to breast cancer per 100,000 residents.

The majority (63.7%) of breast cancer cases diagnosed between 2004 and 2009, combined, were diagnosed when the cancer was localized. More than one quarter (29.5%) of breast cancer cases were diagnosed when the cancer was in the regional stage, and 5.0% of cases were diagnosed in the distant stage.

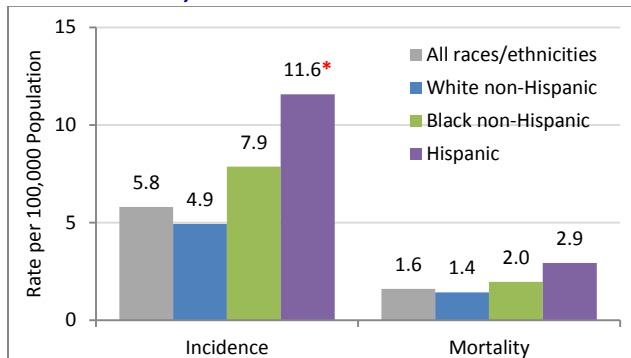
Breast cancer survival decreased with stage of diagnosis. In 2010, the 5-year cancer survival rate was 100.0% for persons diagnosed with localized breast cancer, 86.9% for those diagnosed with regional breast cancer, and 21.1% for persons diagnosed with distant breast cancer.

*Disparities*

Over the 2008 to 2010 period, the breast cancer incidence rate for white non-Hispanic females was significantly higher than that for black non-Hispanic and Hispanic females. The breast cancer mortality rate differed by race and ethnicity for each racial and ethnic group. Despite their lower breast cancer incidence rate, black non-Hispanics had a significantly higher mortality rate than white non-Hispanics and Hispanics. The mortality rate for white non-Hispanics was significantly higher than that for Hispanics.

**CERVICAL CANCER**

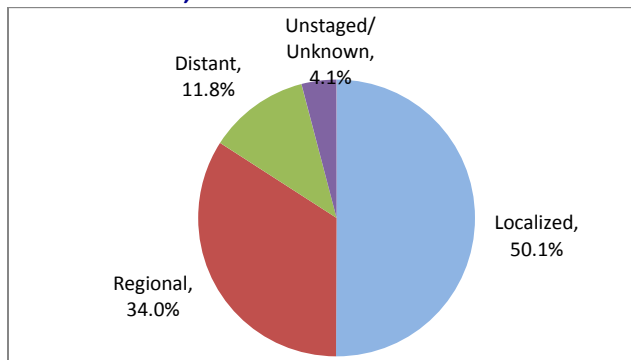
**Fig. 126. CERVICAL CANCER INCIDENCE AND MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



Note: \* Indicates significantly higher incidence for Hispanics relative to white non-Hispanics (p<0.05)

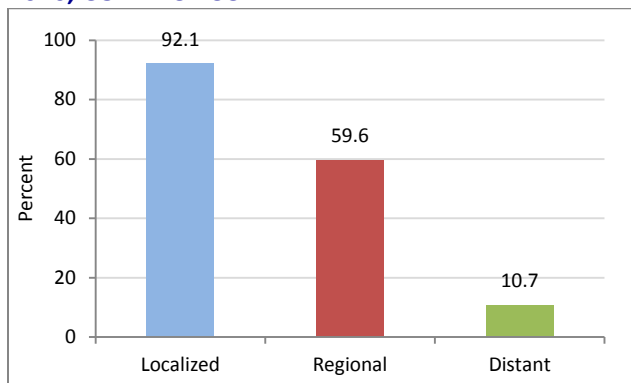
Source: Connecticut Department of Public Health.

**Fig. 127. STAGE OF CERVICAL CANCER DIAGNOSIS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 128. FIVE-YEAR CERVICAL CANCER RELATIVE SURVIVAL, BY CANCER STAGE, FOR FEMALES DIAGNOSED 2004-2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Cervical Cancer is Important**

Direct medical costs associated with treating human papillomavirus (HPV) and cervical cancer is estimated to be \$4 billion annually.<sup>187</sup> Risk factors for cervical cancer include HPV, smoking, long-term birth control use, and HIV.<sup>188</sup> In the US, cervical cancer incidence and mortality is highest for low-income females, females with lower educational attainment, females living in low-income neighborhoods, and black non-Hispanic and Hispanic females.<sup>189,190</sup>

**Findings in Connecticut**

From 2008 to 2010 combined, there were 5.8 new cases of cervical cancer diagnosed per 100,000 population, and 1.6 deaths due to cervical cancer per 100,000 population.

Half (50.1%) of cervical cancer cases diagnosed between 2004 and 2009, combined, were diagnosed when the cancer was localized. Approximately one-third (34.0%) of cervical cancer cases diagnosed over this period were diagnosed when the cancer was in the regional stage and 11.8% were diagnosed in the distant stage.

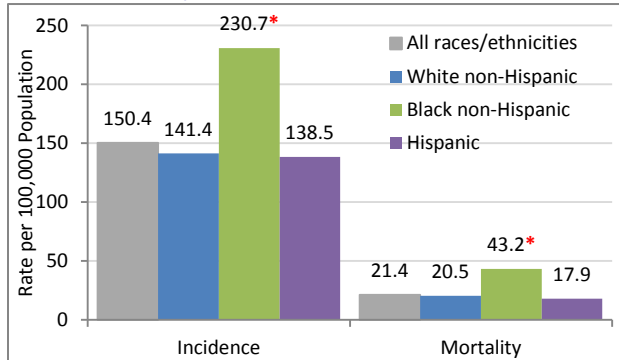
Cervical cancer survival decreased with stage of diagnosis. In 2010, 5-year survival for cervical cancer cases diagnosed between 2004 and 2009 was 92.1% when the cancer was diagnosed in the localized stage, followed by 59.6% for females diagnosed with cervical cancer in the regional stage, and 10.7% for females diagnosed when cervical cancer was in the distant stage.

*Disparities*

From 2008 to 2010 combined, the cervical cancer incidence rate for Hispanic females was significantly higher than that for white non-Hispanic females. The cervical cancer mortality rate did not vary significantly by race or ethnicity.

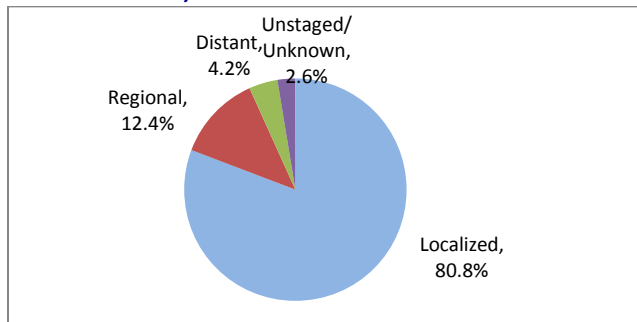
**PROSTATE CANCER**

**Fig. 129. PROSTATE CANCER INCIDENCE AND MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



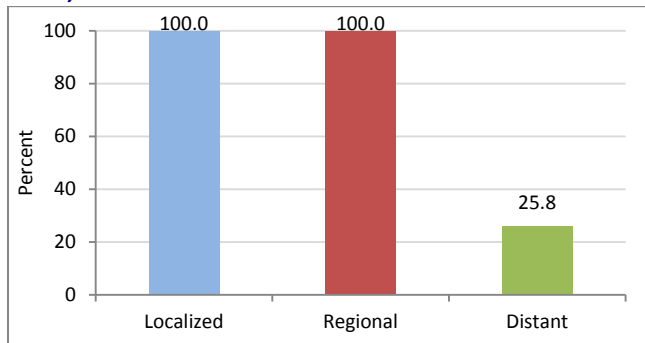
Note: \* Indicates significantly higher incidence and mortality for black non-Hispanics relative to white non-Hispanics and Hispanics (p<0.05). Source: Connecticut Tumor Registry, Connecticut Department of Public Health.

**Fig. 130. STAGE OF PROSTATE CANCER DIAGNOSIS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 131. FIVE-YEAR PROSTATE CANCER RELATIVE SURVIVAL, BY CANCER STAGE, FOR MALES DIAGNOSED 2004-2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Prostate Cancer is Important**

Prostate cancer is the most common cancer diagnosed among men in Connecticut and is the second leading cause of cancer death among men in Connecticut.<sup>191</sup> Estimates indicate that in the US, direct medical costs for prostate cancer total \$4.61 billion annually.<sup>192</sup> Risk factors for prostate cancer include older age and family history of prostate cancer.<sup>193</sup> In the US, black non-Hispanic males have the highest prostate cancer incidence and mortality rate relative to other racial and ethnic groups.<sup>194</sup>

**Findings in Connecticut**

In 2008 to 2010, combined, there were 150.4 new cases of prostate cancer per 100,000 population, and 21.4 deaths due to prostate cancer per 100,000 population.

Over the 2004 to 2009 period, the majority (80.8%) of prostate cancer diagnoses occurred when the cancer was localized, 12.4% were diagnosed in the regional stage and 4.2% were diagnosed in the distant stage.

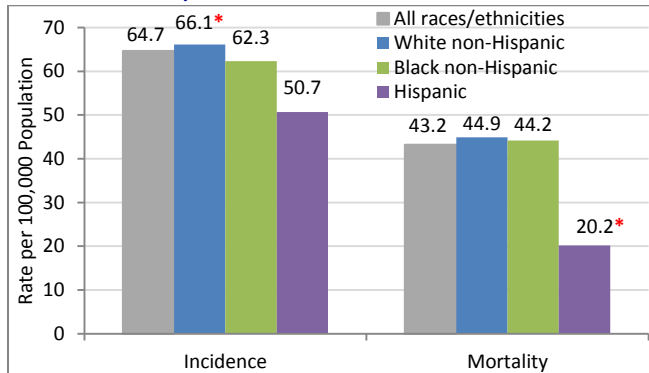
In 2010, the 5-year survival rate for prostate cancer was 100% for persons diagnosed when the cancer was in the localized or regional stage. The 5-year survival rate for those diagnosed when the cancer was in the distant stage was 25.8%.

*Disparities*

Over the 2008 to 2010 period, the prostate cancer incidence and mortality rate was significantly higher for black non-Hispanics relative to white non-Hispanics and Hispanics. The incidence rate for black non-Hispanics was 1.6 times that for white non-Hispanics and the mortality rate was 2.1 times that for white non-Hispanics.

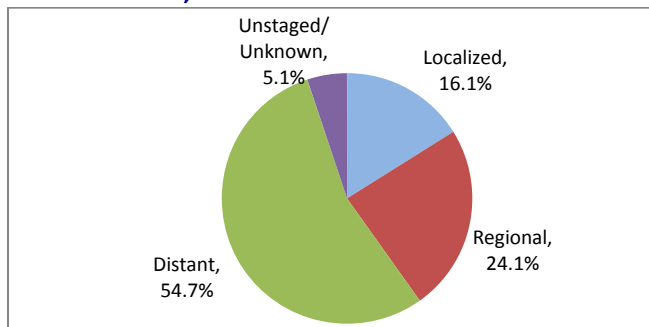
**LUNG CANCER**

**Fig. 132. LUNG CANCER INCIDENCE AND MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



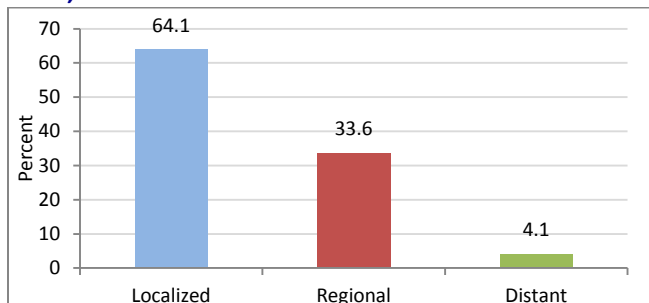
Note: \* Indicates significantly higher incidence for white non-Hispanics compared to Hispanics and significantly lower mortality for Hispanics relative to white non-Hispanics and black non-Hispanics (p<0.05).  
 Source: Connecticut Tumor Registry, Connecticut Department of Public Health.

**Fig. 133. STAGE OF LUNG CANCER DIAGNOSIS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 134. FIVE-YEAR LUNG CANCER RELATIVE SURVIVAL, BY CANCER STAGE, FOR PERSONS DIAGNOSED 2004- 2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Lung Cancer is Important**

Cancer of the lung and bronchus contribute to \$4.68 billion in direct medical costs annually in the US.<sup>195</sup> Risk factors for cancer of the lung and bronchus include smoking tobacco; exposure to tobacco smoke, radon, or asbestos; and personal or family history of lung cancer.<sup>196</sup> In the US, black non-Hispanic males have the highest incidence and mortality rate for cancer of the lung and bronchus.<sup>197</sup> In Connecticut, inpatient hospital charges for lung cancer in 2001 totaled \$44.4 million, or more than \$21,000 per hospitalization.<sup>198</sup>

**Findings in Connecticut**

From 2008 to 2010, combined, there were 64.7 new cases of lung cancer per 100,000 Connecticut residents and 43.2 deaths due to lung cancer per 100,000 Connecticut residents.

Over the 2004 to 2009 period, combined, only 16.1% of lung cancer cases were diagnosed when the cancer was in the localized stage and 24.1% of cases were diagnosed in the regional stage. More than half (54.7%) of lung cancer cases were diagnosed when the cancer was in the distant stage.

In 2010, the 5-year survival rate for persons diagnosed with lung cancer when it was in the localized stage was 64.1%. Persons diagnosed in the regional stage had a 33.6% survival rate. Those diagnosed in the distant stage, the more common stage of lung cancer diagnosis, had 4.1% survival rate.

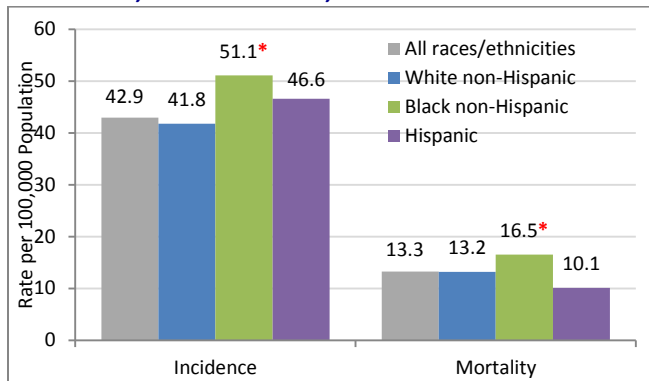
**Disparities**

The lung cancer incidence and mortality rate was significantly higher for white non-Hispanics as compared Hispanics from 2008 to 2010, combined. The lung cancer incidence rate for white non-Hispanics was 1.3 times that for Hispanics and the mortality rate for white non-Hispanics was 2.2 times that for Hispanics.



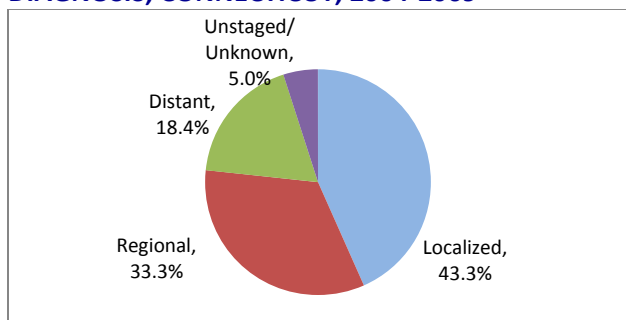
**COLORECTAL CANCER**

**Fig. 135. AGE-ADJUSTED COLORECTAL CANCER INCIDENCE AND MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



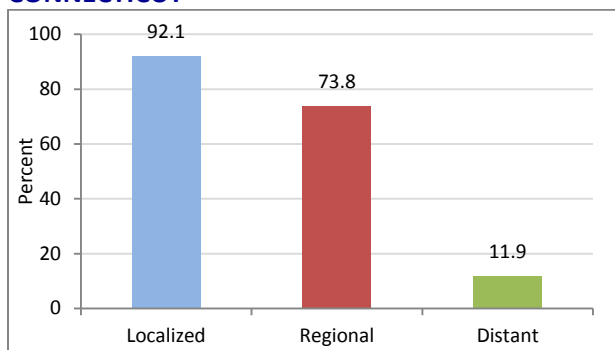
Note: \* Indicates significantly higher incidence for black non-Hispanics than white non-Hispanics and significantly higher mortality for black non-Hispanics than Hispanics (p<0.05).  
 Source: Connecticut Tumor Registry, Connecticut Department of Public Health.

**Fig. 136. STAGE OF COLORECTAL CANCER DIAGNOSIS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 137. FIVE-YEAR COLORECTAL CANCER RELATIVE SURVIVAL, BY CANCER STAGE, FOR PERSONS 2004-2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Colorectal Cancer is Important**

In the US, annual medical costs for colorectal cancer totals \$5.71 billion annually.<sup>199</sup> Risk factors for colorectal cancer include inflammatory bowel disease, a personal or family history of colorectal cancer or colorectal polyps, physical inactivity, low fruit and vegetable intake, a high-fat or low-fiber diet, overweight and obesity, alcohol consumption, and tobacco use.<sup>200</sup> In the US, black non-Hispanic males have the highest colorectal cancer incidence and mortality rate.<sup>201,202</sup> Lack of health insurance and vitamin D deficiency are also risk factors for colorectal cancer mortality.<sup>203</sup>

**Findings in Connecticut**

*Trends*

From 2008 to 2010, combined, there were 42.9 new cases of colorectal cancer per 100,000 population, and 13.3 deaths due to colorectal cancer per 100,000 population.

Over the 2004 to 2009 period, combined, 43.3% of colorectal cancer cases were diagnosed when the cancer was localized, 33.3% were diagnosed in the regional stage, and 18.4% were diagnosed when the cancer was in the distant stage.

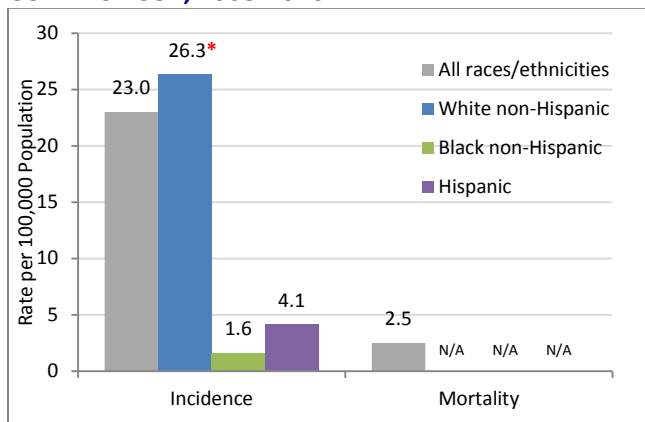
In 2010, the 5-year colorectal cancer survival rate was 92.1% for persons diagnosed in the localized stage, 73.8% for those diagnosed in the regional stage, and 11.9% for persons diagnosed in the distant stage.

*Disparities*

Over the 2008 to 2010 period, the colorectal cancer incidence rate for black non-Hispanics was significantly higher than that for white non-Hispanics. The incidence rate for black non-Hispanics was 1.2 times that for white non-Hispanics. The colorectal cancer mortality rate for black non-Hispanics was 1.6 times that for Hispanics, and this difference was statistically significant.

**MELANOMA**

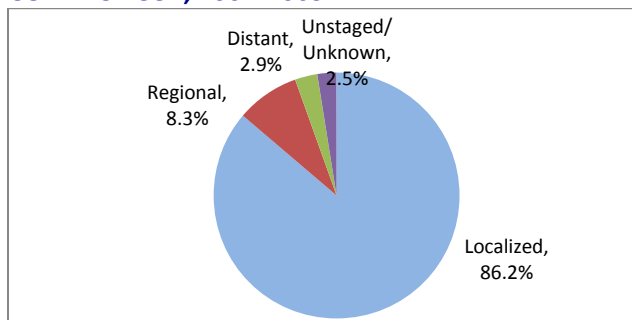
**Fig. 138. AGE-ADJUSTED MELANOMA INCIDENCE AND MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010**



Note: \* Indicates significantly higher incidence for white non-Hispanics relative to black non-Hispanics and Hispanics (p<0.05). N/A indicates data not available due to fewer than 10 deaths.

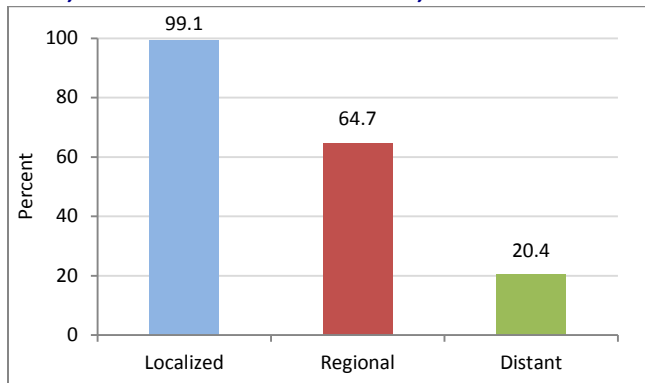
Source: Connecticut Department of Public Health.

**Fig. 139. STAGE OF MELANOMA DIAGNOSIS, CONNECTICUT, 2004-2009**



Source: Connecticut Department of Public Health.

**Fig. 140. FIVE-YEAR MELANOMA RELATIVE SURVIVAL, BY CANCER STAGE, FOR PERSONS 2004-2009, FOLLOWED THROUGH 2010, CONNECTICUT**



Source: Connecticut Department of Public Health.

**Why Melanoma is Important**

Melanoma can result in 15 years of potential life lost per death and loss in productivity.<sup>204</sup> In the US, morbidity and mortality due to melanoma or non-melanoma skin cancer contribute to \$39.2 million and \$1 billion, respectively.<sup>205</sup>

**Findings in Connecticut**

In 2008 to 2010 combined, there were 23.0 new cases of melanoma per 100,000 Connecticut residents.

Over the 2004 to 2009 period, combined, the majority (86.2%) of persons diagnosed with melanoma were diagnosed when the cancer was in the localized stage, 8.3% were diagnosed in the regional stage, and 2.9% were diagnosed when the cancer was in the distant stage.

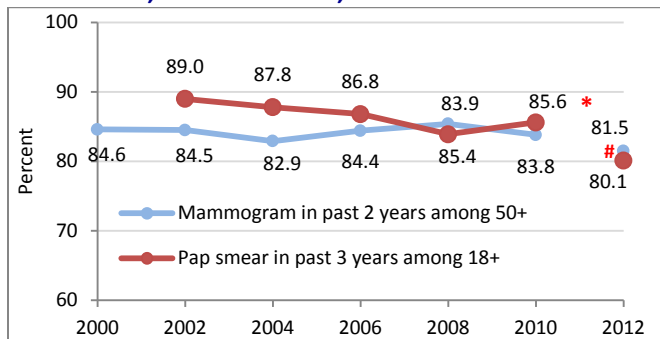
In 2010, the 5-year relative survival for persons diagnosed with melanoma was 99.1% for persons diagnosed in the localized stage, 64.7% for those diagnosed in the regional stage, and 20.4% for Connecticut residents diagnosed with melanoma when the cancer was in the distant stage.

*Disparities*

White non-Hispanics had a significantly higher melanoma incidence than black non-Hispanics and Hispanics in 2008 to 2010, combined.

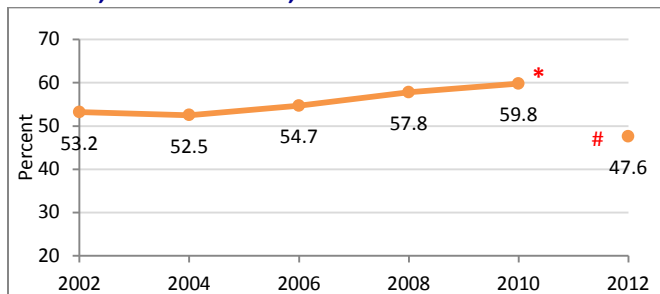
**CANCER SCREENING BEHAVIORS**

**Fig. 141. BREAST AND CERVICAL CANCER SCREENING, CONNECTICUT, 2000-2012**



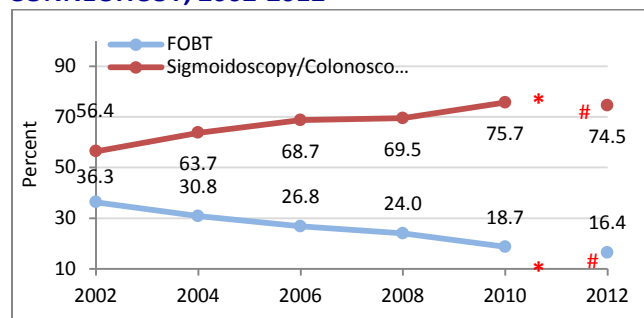
Note: \* Indicates significant decrease in Pap smear testing from 2002 to 2010 ( $p < 0.05$ ). # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000-2012.

**Fig. 142. PROSTATE CANCER SCREENING BEHAVIORS, AMONG MALES AT LEAST 40 YEARS OF AGE, CONNECTICUT, 2002-2012**



Note: \* Indicates significant increase in percent who received PSA test within past 2 years from 2002 to 2010 ( $p < 0.05$ ). # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2002-2012.

**Fig. 143. COLORECTAL CANCER SCREENING AMONG PERSONS 50 YEARS OF AGE OR OLDER, CONNECTICUT, 2002-2012**



Note: \* Indicates significant increase in sigmoidoscopy/colonoscopy screening and decrease in FOBT from 2002 to 2010 ( $p < 0.05$ ). # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2002-2012.

**Findings in Connecticut**

*Trends*

The percent of females at least 18 years old who received a Pap smear in the past three years decreased significantly from 89.0% in 2002 to 85.6% in 2010. In 2012, 80.1% of adult females received a Pap smear in the past three years. The percent of females at least 50 years old who received a mammogram in the past two years varied from 84.6% in 2000 to 81.5% in 2012. In 2012, about 230,000 adult females did not receive a Pap smear in the past three years, and 120,000 females at least 50 years old did not receive a mammogram in the past two years.

The percent of males at least 40 years old who received a PSA test within the previous two years increased slightly, yet significantly, from 53.2% in 2002 to 59.8% in 2010. In 2012, 47.6% of males at least 40 years of age received a PSA test within the past two years.

The percent of adults at least 50 years old who had ever received a sigmoidoscopy/colonoscopy increased significantly from a low of 56.4% in 2002 to a high of 75.7% in 2010. In 2012, 74.5% of adults at least 50 years of age received a sigmoidoscopy/colonoscopy. Conversely, the percent in this age group who received a fecal occult blood test (FOBT) within the past two years decreased significantly from 36.3% in 2002 to 18.7% in 2010. In 2012, 16.4% of adults at least 50 years of age received a FOBT.

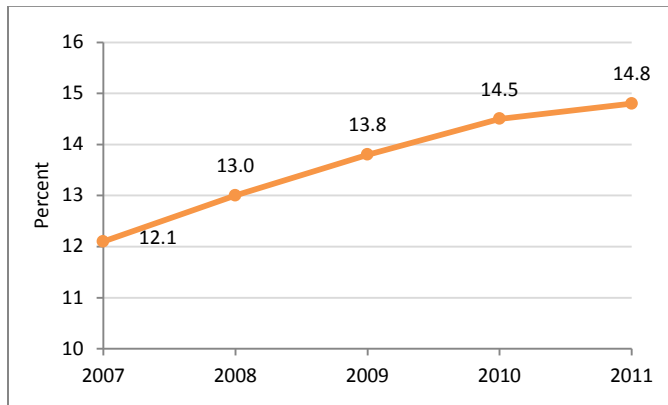
*Disparities*

The percent of males who were screened for prostate cancer was significantly lower than the percent of females who were screened for breast or cervical cancer.

There was no significant difference between males and females in the percent that have had either a FOBT or sigmoidoscopy/colonoscopy.

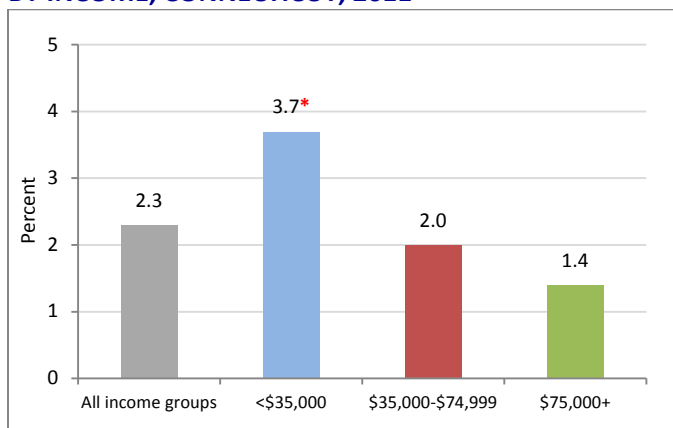
**CHRONIC KIDNEY DISEASE**

**Fig. 144. PERCENT OF MEDICARE BENEFICIARIES WITH CHRONIC KIDNEY DISEASE, CONNECTICUT, 2007-2011**



Source: Centers for Medicaid and Medicare Services, State-Level Chronic Conditions Reports, 2007-2011.

**Fig. 145. PERCENT OF ADULTS EVER TOLD BY A PROVIDER THEY HAVE CHRONIC KIDNEY DISEASE, BY INCOME, CONNECTICUT, 2011**



Note: \* Indicates significantly higher prevalence for <\$35,000 income compared to \$75,000+ household income (p<0.05).

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2011.

**Why Chronic Kidney Disease is Important**

Chronic kidney disease is a condition associated with premature mortality, poor quality of life, and significant health care costs.<sup>206,207</sup> The prevalence of chronic kidney disease has increased in the US.<sup>208</sup> Cardiovascular disease, hypertension, diabetes, and obesity are risk factors for kidney failure.<sup>209</sup> In 2009, treatment of end-stage renal disease, one adverse outcome of chronic kidney disease, cost the US \$40 billion.<sup>210</sup>

**Findings in Connecticut**

*Trends*

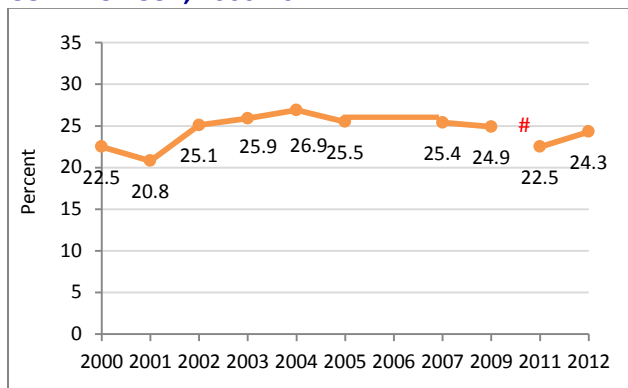
The prevalence of chronic kidney disease among Medicare beneficiaries varied from 12.1% in 2007 to 14.8% in 2011.

*Disparities*

The prevalence of adults ever told they have chronic kidney disease in 2012 decreased with increasing income. Whereas the percent prevalence among adults with an annual income less than \$35,000 was 3.7%, the prevalence among adults with an annual income of at least \$75,000 was less than half (1.4%). This difference was significant.

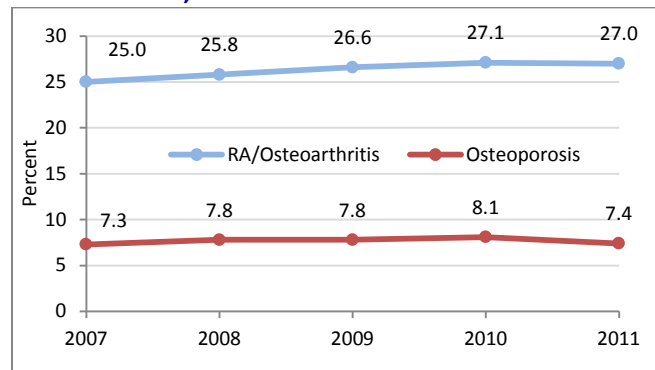
**ARTHRITIS AND OSTEOPOROSIS**

**Fig. 146. PERCENT OF ADULTS EVER TOLD BY A PROVIDER THAT THEY HAVE ARTHRITIS, CONNECTICUT, 2000-2012**



Note: # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000-2012.

**Fig. 147. PERCENT OF MEDICARE BENEFICIARIES WITH RHEUMATOID ARTHRITIS (RA)/OSTEOARTHRITIS AND OSTEOPOROSIS, CONNECTICUT, 2007-2011**



Note: RA indicates rheumatoid arthritis.  
 Source: Centers for Medicaid and Medicare Services, State-Level Chronic Conditions Reports, 2007-2011.

**Why Arthritis and Osteoporosis are Important**

Arthritis and osteoporosis may affect overall quality of life, self-care activities such as bathing, grooming, feeding, housework and ability to work at a job.<sup>211</sup> Osteoporosis, or reduced bone strength, is associated with an increased risk of fractures and most commonly affects persons aged 50 or older, particularly females.<sup>212</sup> Arthritis, the most common cause of disability,<sup>213</sup> often co-occurs with other chronic conditions, such as heart disease, diabetes, and obesity.<sup>214</sup> In 2003, arthritis and other rheumatic conditions cost the US \$128 billion, or 1.2% of the US Gross Domestic Product.<sup>215</sup> The per capita cost of one chronic condition such as arthritis or osteoporosis among Medicare beneficiaries has increased steadily and was \$2,236 in 2011.<sup>216</sup> Due to the aging of the US population, disability rates attributed to arthritis, and the economic costs of arthritis, are expected to rise.<sup>217,218</sup>

**Findings in Connecticut**

*Trends*

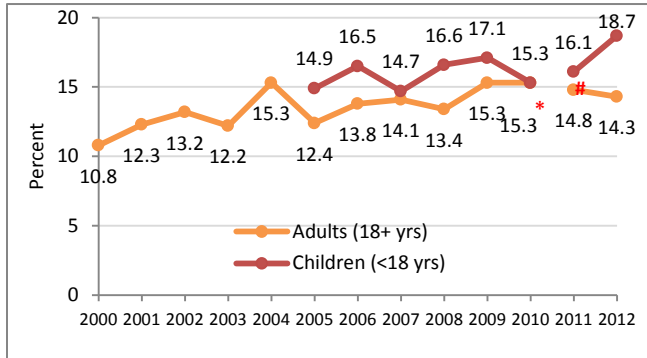
The percent of adults in Connecticut who have ever been told they have arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia varied from 22.5% in 2000 to 24.9% in 2009. In 2012, 24.3% of adults in Connecticut were told that they have arthritis.

The percent of Medicare beneficiaries with osteoarthritis varied from 25.0% in 2007 to 27.0% in 2011.

Between 2007 and 2011, the prevalence of osteoporosis in Medicare beneficiaries ranged from a low of 7.3% to a high of 8.1%.

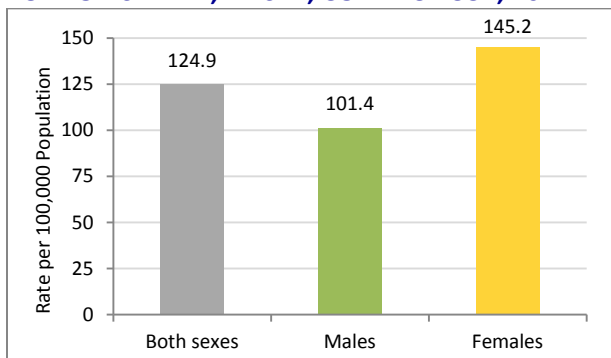
**ASTHMA**

**Fig. 148. PERCENT OF CHILDREN AND ADULTS EVER TOLD THEY HAVE ASTHMA, CONNECTICUT, 2000-2012**



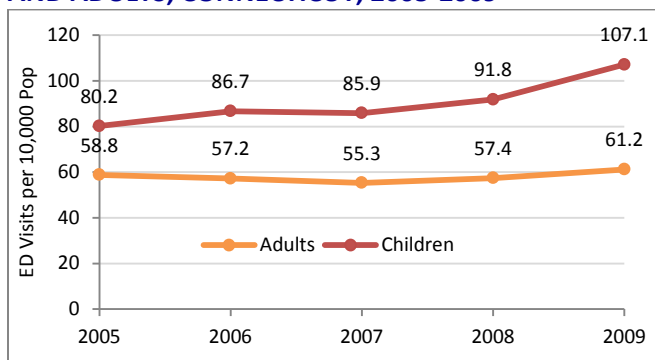
Note: \* Indicates significant increasing trend for adults from 2000 to 2010 (p<0.05). # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2000-2012.

**Fig. 149. AGE-ADJUSTED HOSPITALIZATION RATE DUE TO ASTHMA, BY SEX, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health, Hospitalization Tables, Table H-1, 2011.

**Fig. 150. AGE-ADJUSTED EMERGENCY DEPARTMENT VISITS FOR ASTHMA FOR CHILDREN AND ADULTS, CONNECTICUT, 2005-2009**



Source: Connecticut Department of Public Health Asthma Program, Burden of Asthma in Connecticut 2012 Surveillance Report, Table 7.

**Why Asthma is Important**

Healthy People 2020 characterizes asthma as a significant public health burden.<sup>219</sup> Since the 1980s, the prevalence of asthma, a preventable and treatable illness, has increased.<sup>220</sup> In 2007, health care expenses and costs associated with lost school and work days due to asthma cost the US \$56 billion.<sup>221</sup> In 2009 in Connecticut, hospital charges for asthma totaled \$112.9 million, the highest charges over the 2000-2009 period, with emergency department visits costing \$32.6 million and inpatient hospitalization costing \$80.3 million.<sup>222</sup>

**Findings in Connecticut**

*Trends*

The prevalence of asthma among adults increased significantly from a low of 10.8% in 2000 to 15.3% in 2010. In 2012, 14.3% of Connecticut adults were ever told that they have asthma. The proportion of children with asthma ranged from 14.9% in 2005 to 18.7% in 2012. In 2012, asthma affected an estimated 400,000 adults. In 2012, the proportion of children with asthma was significantly greater than that for adults, suggesting that childhood asthma may be increasing at a greater rate than asthma among adults.

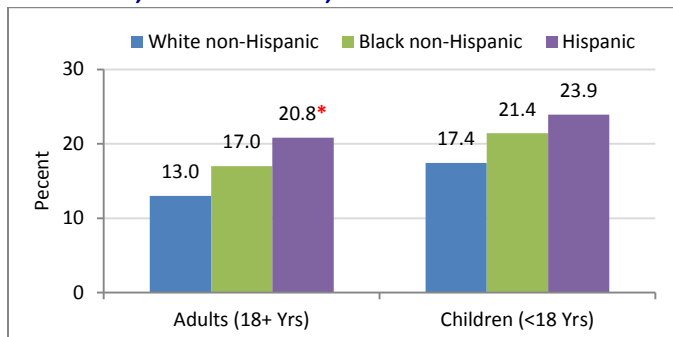
The rate of emergency department visits due to asthma for children varied by 34% over the 2005 to 2009 period. There was a 4% variation in the asthma-related emergency department visit rate for adults over this period.

*Disparities*

In 2011, the rate of hospitalizations due to asthma was 43% higher for females (145.2 per 100,000 population) relative to males (101.4 per 100,000 population).

**ASTHMA: AT-RISK POPULATIONS**

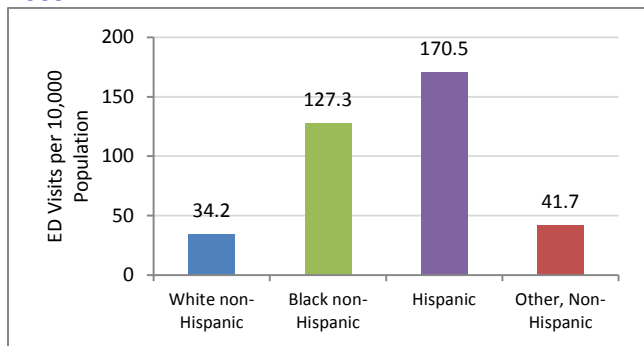
**Fig. 151. PERCENT OF CHILDREN AND ADULTS EVER TOLD THEY HAVE ASTHMA, BY RACE AND ETHNICITY, CONNECTICUT, 2012**



Note: \* Indicates significantly higher prevalence for Hispanic adults relative to white non-Hispanic adults (p<0.05).

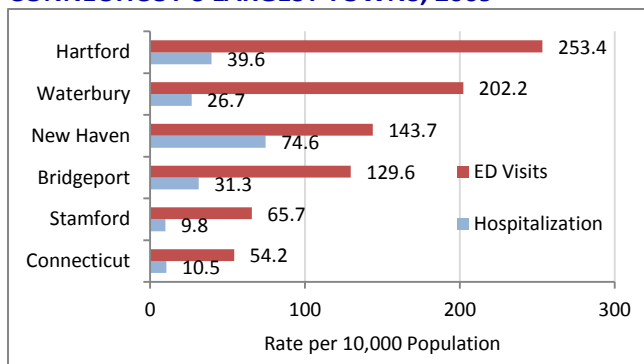
Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Fig. 152. AGE-ADJUSTED RATE OF ASTHMA ED VISITS BY RACE AND ETHNICITY, CONNECTICUT, 2009**



Source: Connecticut Department of Public Health Asthma Program, Burden of Asthma in Connecticut 2012 Surveillance Report, Table 8.

**Fig. 153. RATE OF ASTHMA ED VISITS AND HOSPITALIZATION FOR CONNECTICUT AND CONNECTICUT’S LARGEST TOWNS, 2009**



Source: Connecticut Department of Public Health Asthma Program, Burden of Asthma in Connecticut 2012 Surveillance Report, Fig. 22 and 29.

**Why Asthma Disparities Are Important**

Children, black non-Hispanics, Puerto Ricans, persons living in the Northeast region of the US, residents in urban areas, and persons with household incomes below the federal poverty level experience a disproportionate burden of asthma.<sup>223,224</sup> The workplace environment may also contribute to or exacerbate asthma.<sup>225</sup> In 2009, residents in Connecticut’s five largest cities accounted for 41% or \$46 million of the \$112 million in asthma health care costs in the Connecticut.<sup>226</sup>

**Findings in Connecticut**

In 2012, the percent of white non-Hispanic adults who were ever told they have asthma was 13.0%, significantly lower than that reported by Hispanic adults (20.8%). Fully 17.0% of black non-Hispanic adults had ever been told that they had asthma relative to 13.0% of white non-Hispanics, but this difference was not significant. The percent of children ever told they have asthma ranged from 17.4% among white non-Hispanic children to 21.4% and 23.9%, among black non-Hispanic and Hispanic children, respectively; these differences were not significant.

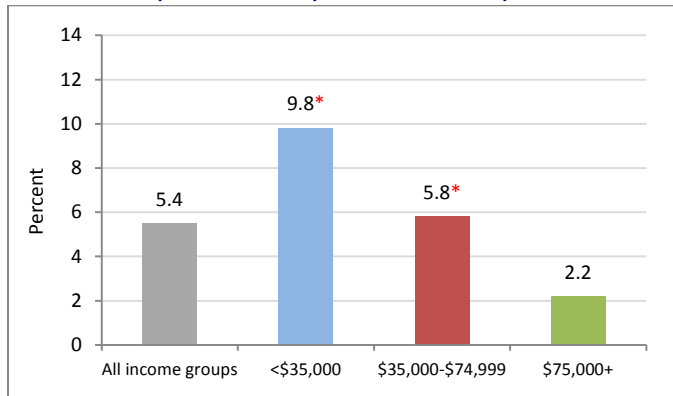
There appeared to be differential rates of emergency department visits for asthma by race and ethnicity in 2009. Hispanics appeared to experience approximately 5 times the rate of asthma-related emergency department visits than for white non-Hispanics. The emergency department visit rate for black non-Hispanics appears to be more than 3.7 times the rate for white non-Hispanics in 2009.

The rate of emergency department visits for each of Connecticut’s largest cities exceeded the overall rate for Connecticut. The asthma-related emergency department visit rate was highest for Hartford, 4.7 times the rate for Connecticut. The second-highest emergency department rate was in Waterbury, 3.7 times the rate for Connecticut.

The asthma hospitalization rate in Connecticut’s largest towns also exceeded that for the State, with the exception of Stamford. The asthma hospitalization rate was highest in New Haven, 7.1 times the rate for Connecticut in 2009.

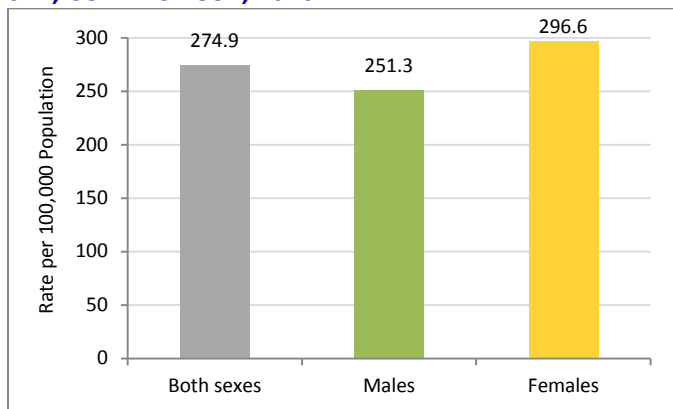
### CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

**Fig. 154. PERCENT OF ADULTS EVER TOLD THEY HAVE COPD, EMPHYSEMA, OR CHRONIC BRONCHITIS, BY INCOME, CONNECTICUT, 2012**



Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Fig. 155. AGE-ADJUSTED CHRONIC OBSTRUCTIVE PULMONARY DISEASE HOSPITALIZATION RATE, BY SEX, CONNECTICUT, 2010**



Source: Connecticut Department of Public Health, Hospitalization Tables, Table H-1, 2011.

### Why Chronic Obstructive Pulmonary Disease is Important

Healthy People 2020 describes COPD, or chronic airflow limitation, as a preventable and treatable disease.<sup>227</sup> Exposure to cigarette smoke is a major risk factor for COPD.<sup>228</sup> The significant social and economic costs of COPD, such as health care, disability and missed work, are expected to increase with the aging of the US population.<sup>229</sup> In 2008, the total costs of COPD and asthma in the US was \$68 billion, including health care costs and costs attributed to loss of productivity.<sup>230</sup>

### Findings in Connecticut

#### Trends

Over the 2007 to 2011 period, the proportion of Medicare beneficiaries in Connecticut with COPD remained stable. In 2011, 10.6% of Medicare beneficiaries had COPD.

#### Disparities

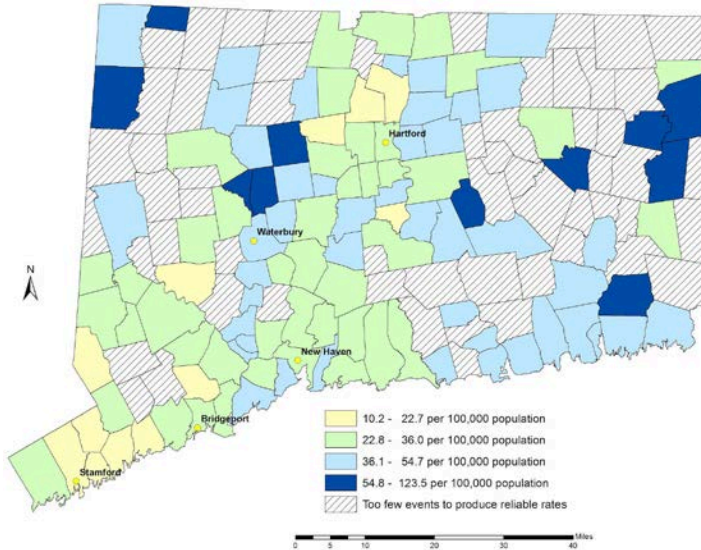
The percent of adults in Connecticut who have ever been told that they have COPD, emphysema, or chronic bronchitis decreased from a high of 9.8% among adults with incomes less than \$35,000, to 5.8% among adults with incomes between \$35,000 and \$74,999, and 2.2% among adults with incomes of at least \$75,000. These differences were significant.

The COPD hospitalization rate for females was 1.2 times that for males.



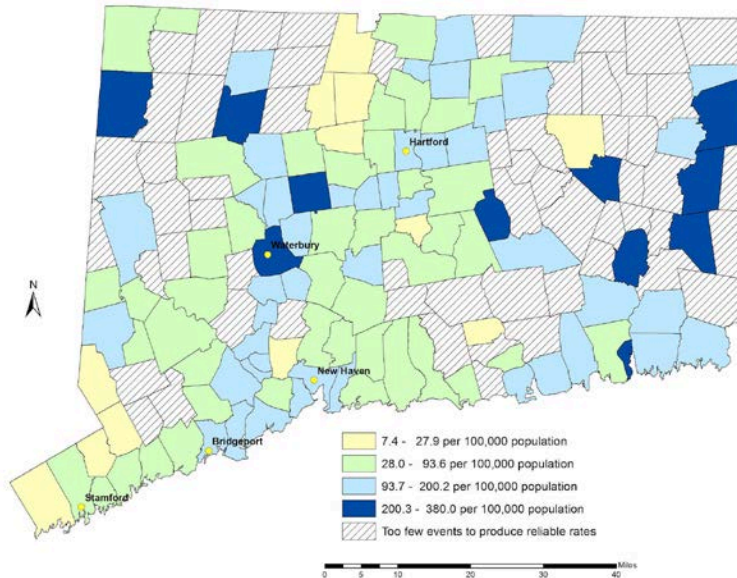
**CHRONIC LOWER RESPIRATORY DISEASE ACROSS CONNECTICUT**

**Fig. 156. AGE-ADJUSTED MORTALITY RATE DUE TO CHRONIC LOWER RESPIRATORY DISEASE, BY TOWN, CONNECTICUT, 2006-2010**



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

**Fig. 157. PREMATURE MORTALITY DUE TO CHRONIC LOWER RESPIRATORY DISEASE, BY TOWN, CONNECTICUT, 2006-2010**



Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

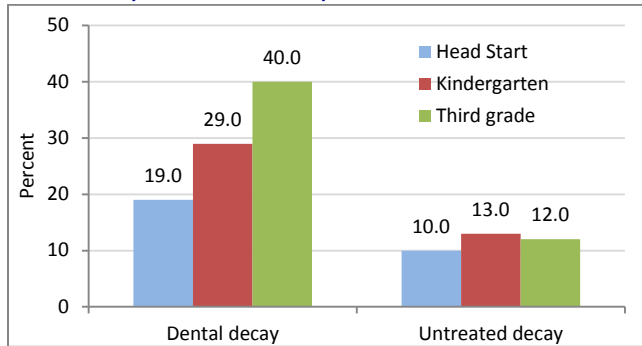
**Findings in Connecticut**

The age-adjusted mortality rate due to chronic lower respiratory disease was highest in northeastern and northwestern Connecticut.

In 2006-2010, combined, premature mortality due to chronic lower respiratory disease was greatest in Waterbury and several towns in eastern and western Connecticut.

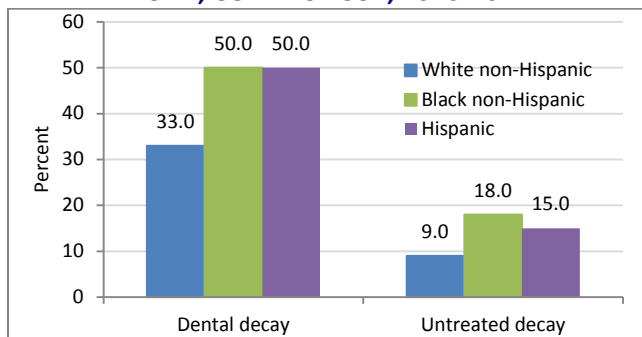
**Oral Health: Children and Youth**

**Fig. 158. DENTAL DECAY AND UNTREATED DECAY, BY GRADE, CONNECTICUT, 2010-2011**



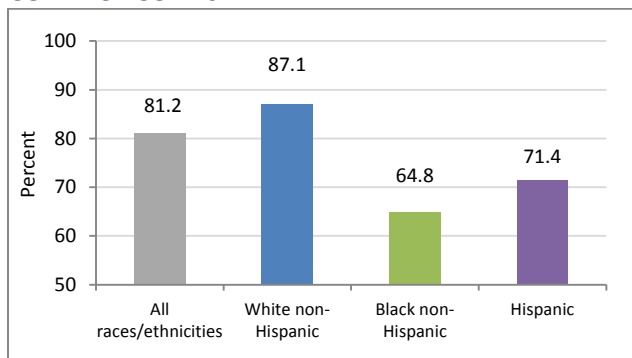
Source: Connecticut Department of Public Health, *Every Smile Counts: The Oral Health of Connecticut's Children Report, 2012*, Key Finding #1.

**Fig. 159. PERCENT OF CHILDREN (KINDERGARTEN AND 3<sup>RD</sup> GRADE) WHO EXPERIENCE DENTAL DECAY AND PROLONGED UNTREATED DECAY, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011**



Source: Connecticut Department of Public Health, *Every Smile Counts: The Oral Health of Connecticut's Children Report, 2012*, Key Finding #4.

**Fig. 160. PERCENT OF STUDENTS (GRADES 9-12) WHO SAW A DENTIST IN THE PAST 12 MONTHS, CONNECTICUT 2011**



Source: Connecticut School Health Survey, 2011.

**Why Oral Health is Important**

Oral health is intricately linked to physical health and well-being.<sup>231</sup> Dental carries, or tooth decay, a preventable infectious bacterial disease process, is an important indicator of poor oral health.<sup>232</sup> While oral health in the US has improved over the past 50 years, there are significant disparities in oral health by educational attainment, income, race, and ethnicity.<sup>233</sup>

**Findings in Connecticut**

In 2011, 81.2% of students in grades 9-12 saw a dentist for a check-up, exam, teeth cleaning, or other dental work during the past 12 months.

*Disparities*

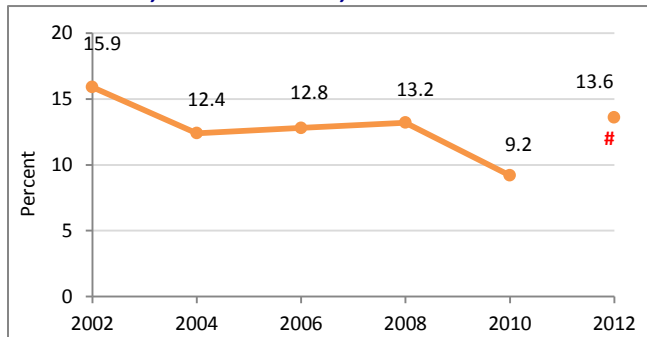
In 2010 and 2011 combined, the proportion of students with dental decay varied by grade level, with 19.0% of children in Head Start, 29.0% of kindergarten students, and 40.0% of third-grade students having dental decay. Untreated decay ranged from 10.0% for children in Head Start to 13.0% for kindergarten children, and 12.0% for third-grade students.

In 2010 and 2011, combined, it appeared that a greater proportion of black non-Hispanic (50.0%) and Hispanic (50.0%) elementary school students (kindergarten and 3<sup>rd</sup> grade) experienced dental decay relative to white non-Hispanic students (33.0%). Untreated dental decay ranged from 18.0% among black non-Hispanic elementary students and 15.0% among Hispanic students to 9.0% for white non-Hispanic students.

In 2011, use of dental services among students in grades 9-12 varied by race and ethnicity. Fully 87.1% of white non-Hispanic students in grades 9-12 saw a dentist in the past year, compared to 64.8% of black non-Hispanic students and 71.4% of Hispanic students.

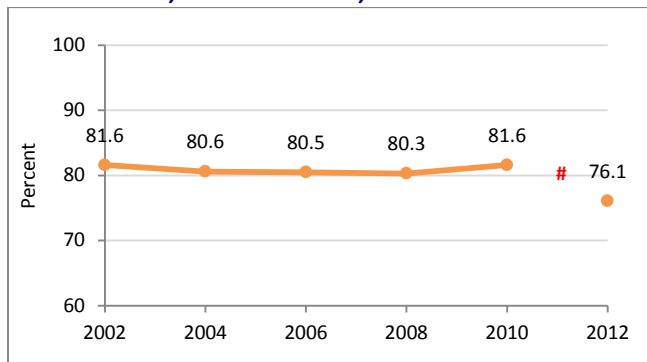
**ORAL HEALTH: ADULTS**

**Fig. 161. PERCENT OF ADULTS 65+ YEARS OF AGE WHO HAVE HAD ALL OF THEIR NATURAL TEETH EXTRACTED, CONNECTICUT, 2002-2012**



Note: # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2002-2012.

**Fig. 162. PERCENT OF ADULTS WHO VISITED THE DENTIST OR DENTAL CLINIC IN THE PAST YEAR FOR ANY REASON, CONNECTICUT, 2002-2012**



Note: # Break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2002-2012.

**Why Oral Health is Important**

Oral health is intricately linked to physical health and well-being.<sup>234</sup> Chronic conditions, such as diabetes, heart disease, lung disease, and stroke, are risk factors associated with poor oral health.<sup>235</sup>

**Findings in Connecticut**

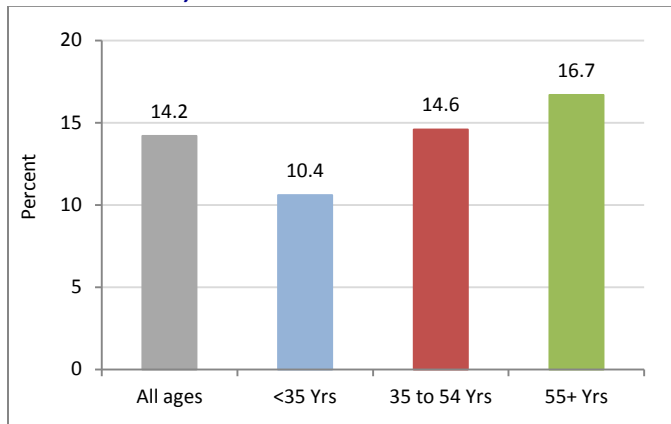
*Trends*

Among adults in Connecticut at least 65 years old, the percent who report having had all their teeth extracted ranged from a high of 15.9% in 2002 to 9.2% in 2010. The extent of this decrease was not, however, significant. In 2012, the number of adults at least 65 years old who had all their teeth extracted (13.6%) were estimated at 70,000 Connecticut residents.

The percent of adults who report having visited a dentist or dental clinic in the past year varied from 81.6% in 2002 to 76.1% in 2012. In 2012, about 700,000 adults reported that they did not visit a dentist or dental clinic in the past year.

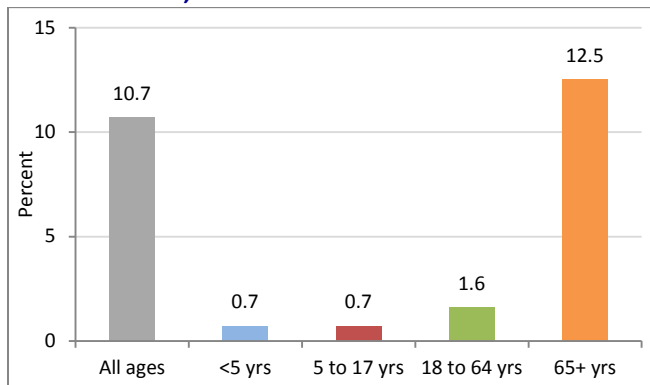
**VISION AND HEARING**

**Fig. 163. PERCENT OF ADULTS EVER TOLD THEY HAVE VISION IMPAIRMENT, BY AGE GROUP, CONNECTICUT, 2012**



Source: Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Fig. 164. PERCENT OF CONNECTICUT RESIDENTS WITH HEARING DIFFICULTY, BY AGE GROUP, CONNECTICUT, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, S1810 File.

**Why Vision and Hearing are Important**

Vision, an often overlooked aspect of health, is an important part of everyday life and interactions that can affect safety on the road or other activities, and can influence engagement in an active lifestyle across the life course.<sup>236</sup>

Hearing and other sensory processes contribute to overall health and well-being and can affect physical and mental health.<sup>237</sup> Hearing loss can affect persons across the life course and may be attributed to genetics, infections, injuries, exposure to loud noise, and aging.<sup>238</sup>

**Findings in Connecticut**

*Trends*

In 2012, 14.2% of adults were diagnosed with a vision impairment.

In 2012, 10.7% of Connecticut residents had a hearing difficulty.

*Disparities*

The percent of adults ever told they have vision impairment increased with age in 2012. The percent of adults ever told they have vision impairment increased from 10.4% among adults less than 35 years old, to 14.6% among adults 35 to 54 years old, and 16.7% among adults at least 55 years old.

In 2012, the percent of Connecticut residents who had hearing difficulty varied by age. Less than 2% of residents below age 65 had hearing difficulty, while 12.5% of residents aged 65 and older had hearing difficulty.

# 4 INFECTIOUS DISEASE PREVENTION AND CONTROL



## INFECTIOUS DISEASE PREVENTION AND CONTROL

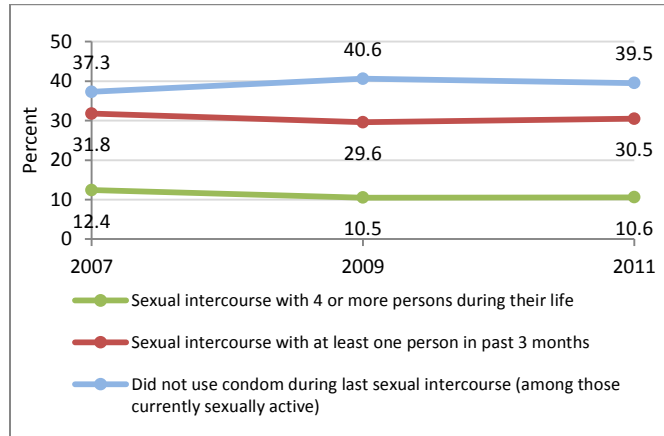
Substantial reductions in the incidence of infectious disease, largely achieved through immunizations and other preventative practices, have contributed to reductions in infectious disease mortality and increased life expectancy. However, infectious diseases remain an important cause of morbidity and mortality. Definitions of the indicators in this section are given in detail in *Appendix B: Definition of Measures*.

This section includes the following topic areas:

- Sexual Risk Behaviors
- Sexually Transmitted Infections
- HIV
- Tuberculosis
- Hepatitis B
- Hepatitis C
- Immunizations for Vaccine-Preventable Diseases
- Vaccine-Preventable Diseases
- Foodborne and Waterborne Infections
- Other Reportable Diseases
- Vector-borne Diseases: Lyme Disease and West Nile Virus
- Healthcare-Associated Infections
- Multidrug-Resistant Organisms

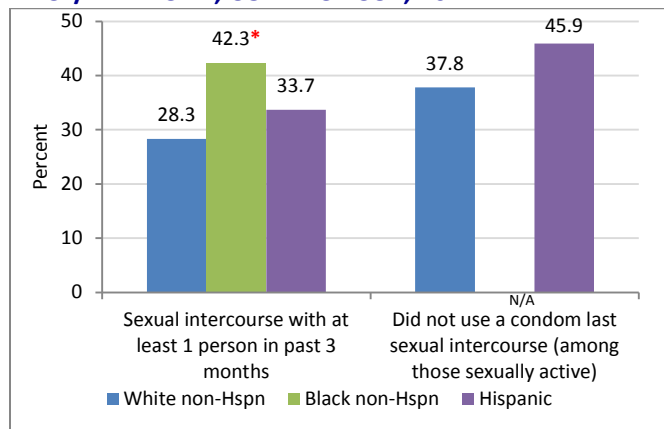
### SEXUAL RISK BEHAVIORS

**Fig. 165. PREVALENCE OF SEXUAL RISK BEHAVIORS AMONG STUDENTS (GRADES 9-12), CONNECTICUT, 2007-2011**



Source: Connecticut School Health Survey (CSHS), 2007-2011.

**Fig. 166. PREVALENCE OF SEXUAL RISK BEHAVIORS AMONG STUDENTS (GRADES 9-12), BY RACE/ETHNICITY, CONNECTICUT, 2011**



Note: N/A indicates data not available. All racial groups are non-Hispanic. \* Indicates significant difference between black non-Hispanic and white non-Hispanic (p<0.05).

Source: Connecticut School Health Survey (CSHS), 2011.

### Why Sexual Risk Behaviors are Important

Sexual behaviors, such as using condom and reducing the number of sexual partners, are important factors that may reduce the risk of sexually transmitted infections (STIs).<sup>239,240</sup> Approximately half of new STIs are among persons 15 to 24 years of age.<sup>241</sup>

### Findings in Connecticut

#### Trends

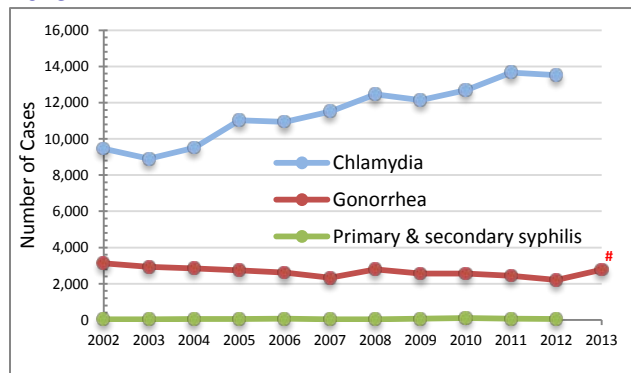
In 2011, approximately 4 in 10 students in grades 9<sup>th</sup>-12<sup>th</sup> who were sexually active indicated that they did not use a condom during last intercourse and 3 in 10 reported that they had sexual intercourse with at least one person in the past 3 months. Approximately 1 in 10 students reported that they had sexual intercourse with 4 or more persons during their lifetime. None of these were statistically significantly different than responses from 2007-2011.

#### Disparities

Black non-Hispanic (42.3%) students were significantly more likely than white non-Hispanic students (28.3%) in grades 9-12 to be currently sexually active. However, the difference between Hispanic (33.7%) and white non-Hispanic (28.3%) students was not statistically significant in 2011. Among currently sexually active students, the prevalence of using a condom during last sexual intercourse did not vary statistically by race, ethnicity, or grade.

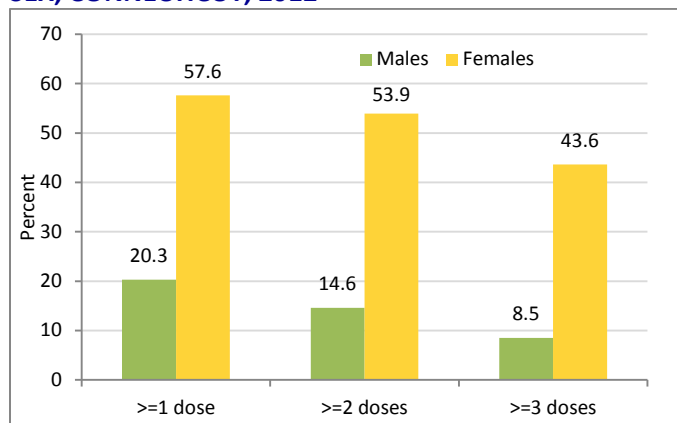
**SEXUALLY TRANSMITTED INFECTIONS**

**Fig. 167. NUMBER OF NEW CASES OF CHLAMYDIA, GONORRHEA, AND SYPHILIS, CONNECTICUT, 2002-2013**



Note: # Indicates preliminary data for 2013.  
Source: Connecticut Department of Public Health.

**Fig. 168. PERCENT OF PERSONS 13 TO 17 YEARS OF AGE WHO HAVE RECEIVED THE HUMAN PAPILLOMAVIRUS (HPV) VACCINE, BY DOSE AND SEX, CONNECTICUT, 2012**



Source: National and State Vaccination Coverage among Adolescents Aged 13 to 17 Years: United States, 2012. *Morbidity and Mortality Weekly Report (MMWR)* 2013; 62(34): 685-693, Table 3.

**Why Sexually Transmitted Infections are Important**

While sexually transmitted infections (STIs) are largely preventable, they remain a significant public health issue, with implications for reproductive health and other health conditions.<sup>242</sup> STIs are also associated with greater risk of HIV transmission.<sup>243</sup> STIs cost the US almost \$16 billion annually.<sup>244</sup> Chlamydia and gonorrhea are the first and second most common reportable STIs in the US, respectively.<sup>245</sup> Both chlamydia and gonorrhea increase the risk of pelvic inflammatory disease (PID), which is associated with infertility, ectopic pregnancies, and chronic pelvic pain.<sup>246</sup> Nationally, 2010 had the highest number of chlamydia cases ever reported to the CDC.<sup>247</sup> This increase may be attributed to better screening and screening tools, or to an actual increase in the prevalence of chlamydia.<sup>248</sup> While the rates of new gonorrhea cases have declined over the last ten years, there are increasing concerns about antibiotic resistance for gonorrhea.<sup>249,250</sup> The CDC recently classified gonorrhea as an “urgent” threat for antimicrobial resistance.<sup>251</sup> While rates of syphilis declined from the 1990s to 2000, rates increased from 2000 to 2009 and decreased slightly in 2010.<sup>252</sup> Infection with high-risk human papillomavirus (HPV) types put females at risk for cervical cancer.<sup>253</sup>

**Findings in Connecticut**

*Trends*

From 2002 to 2012, the number of cases of chlamydia ranged from 9,457 cases in 2002 to 13,514 cases in 2012. The highest number of gonorrhea cases was reported in 2008 (n=2,793 cases). Preliminary data indicate that there were 2,778 cases of gonorrhea in 2013. Concerns regarding antibiotic resistance to treatment for gonorrhea have increased. New cases of primary and secondary syphilis ranged from 27 cases in 2002 to 57 cases in 2012.

*Disparities*

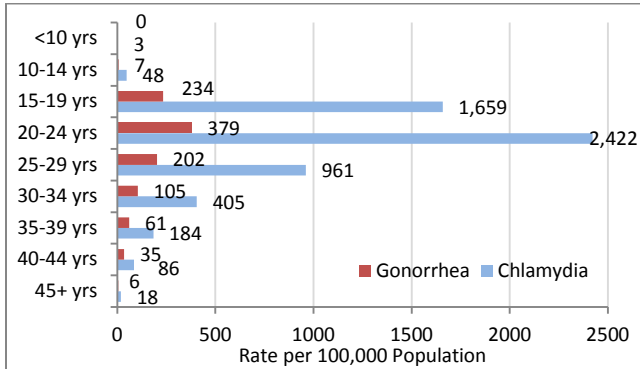
Of note, since 2001, the majority of syphilis cases have been among men who have sex with men (MSM).<sup>254</sup>

In 2012, 57.6% of females 13 to 17 years of age and 20.3% of males of comparable age completed at least one dose of the human papillomavirus (HPV) vaccine. Fully 43.6% of females completed 3 doses of the HPV vaccine, while only 8.5% of males completed 3 doses of the vaccine.



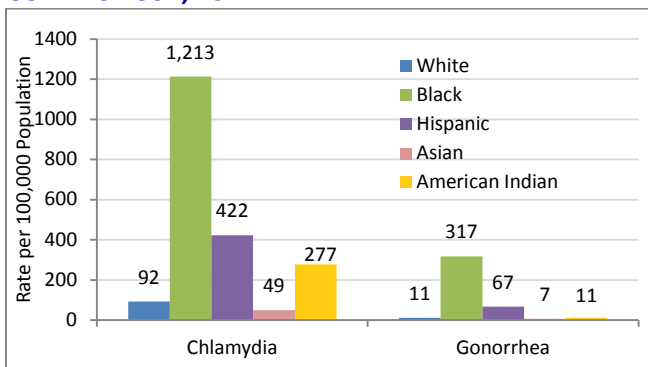
**SEXUALLY TRANSMITTED INFECTIONS: AT-RISK POPULATIONS**

**Fig. 169. RATE OF NEW CHLAMYDIA AND GONORRHEA CASES, BY AGE, CONNECTICUT, 2011**



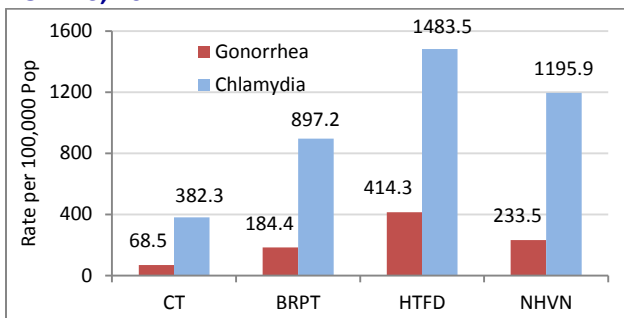
Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Table 5.3.

**Fig. 170. RATE OF NEW CHLAMYDIA AND GONORRHEA CASES, BY RACE AND ETHNICITY, CONNECTICUT, 2011**



Note: All racial groups are non-Hispanic.  
Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Tables 5.1.1 and 5.2.1.

**Fig. 171. RATE OF NEW CASES OF CHLAMYDIA AND GONORRHEA, CONNECTICUT AND ITS LARGEST TOWNS, 2011**



Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Table 5.2.

**Why Disparities in Sexually Transmitted Infections are Important**

Risk of chlamydia and gonorrhea is greatest for black non-Hispanics, American Indians, Hispanics, females, and persons between 15 and 24 years of age.<sup>255</sup> Since the 1980s, rates of chlamydia infections among females have increased.<sup>256</sup> Syphilis rates are highest in urban areas, among men who have sex with men, and among persons 15 to 29 years of age.<sup>257</sup>

**Findings in Connecticut**

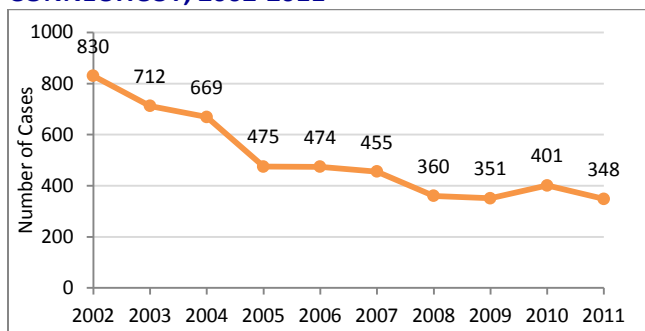
The rate of new chlamydia and gonorrhea cases was highest among persons 20 to 24 years of age, followed by those 15 to 19 years of age and 25 to 29 years of age, respectively.

The rate of new cases of chlamydia and gonorrhea was highest for black non-Hispanics and Hispanics.

The rate of new cases of chlamydia and gonorrhea in Hartford, New Haven, and Bridgeport exceeded that for Connecticut overall. The rate of new cases of chlamydia and gonorrhea was highest in Hartford, followed by New Haven.

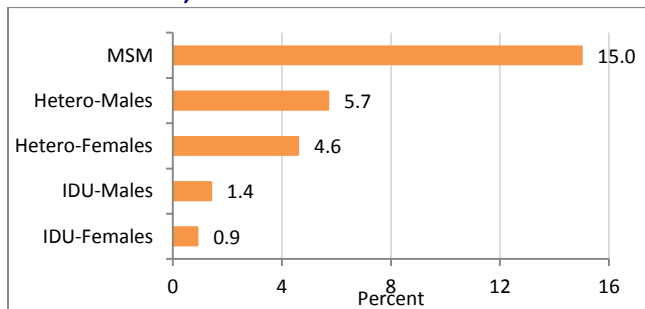
HIV

**Fig. 172. NUMBER OF NEW HIV CASES, CONNECTICUT, 2002-2011**



Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Fig. 2.1.1.

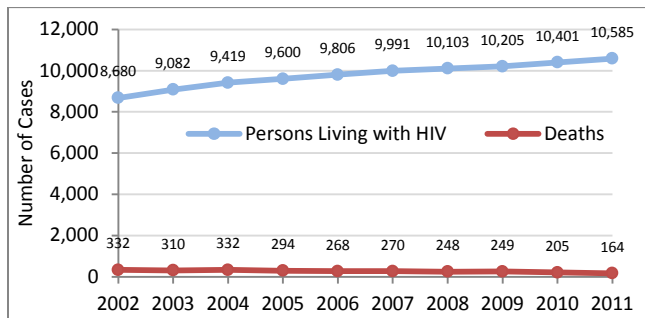
**Fig. 173. PERCENT OF HIV CASES THAT MET THE AIDS DEFINITION WITHIN 12 MONTHS OF DIAGNOSIS, BY TRANSMISSION CATEGORY, CONNECTICUT, 2011**



Note: MSM indicates men who have sex with men; hetero indicates heterosexual; IDU indicates injection drug users.

Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Table 2.2.4.

**Fig. 174. NUMBER OF PEOPLE LIVING WITH HIV AND NUMBER OF DEATHS AMONG PEOPLE KNOWN TO BE LIVING WITH HIV, CONNECTICUT, 2002-2011**



Source: Connecticut Department of Public Health, HIV, TB, and STD Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Fig. 2.1.1.

**Why HIV is Important**

HIV remains a preventable disease that affects approximately 1.1 million people in the US.<sup>258</sup> With improvements in treatment for HIV, persons infected with HIV are able to live longer and healthier lives than several decades ago and the number of deaths from HIV have declined since the 1990s.<sup>259</sup> Since 2010, the number and rate of new HIV cases in the US has remained stable.<sup>260</sup>

**Findings in Connecticut**

*Trends*

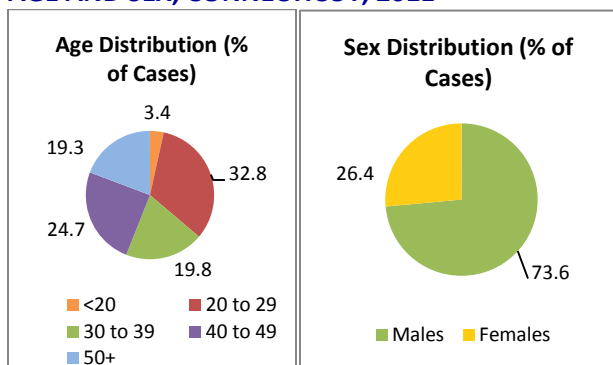
From 2002 to 2011, the number of new HIV cases ranged from 830 cases in 2002 to 348 cases in 2011.

In 2011, 42.8% of HIV cases met the AIDS definition within 12 months after initial diagnosis with HIV infection.<sup>261</sup> The proportion of newly diagnosed HIV cases that progressed to AIDS within one year of initial HIV diagnosis ranged from 15.0% for men who have sex with men (MSM) to 5.7% for heterosexual males and 4.6% for heterosexual females.

The number of persons living with HIV ranged from 8,680 persons in 2002 to 10,585 persons in 2011. During the same period, the number of deaths due to HIV ranged from 332 deaths in 2002 to 164 deaths in 2011. It is important to note that the number of deaths due to HIV presented here include deaths for which HIV was the primary cause of death and those for which HIV was an underlying condition.

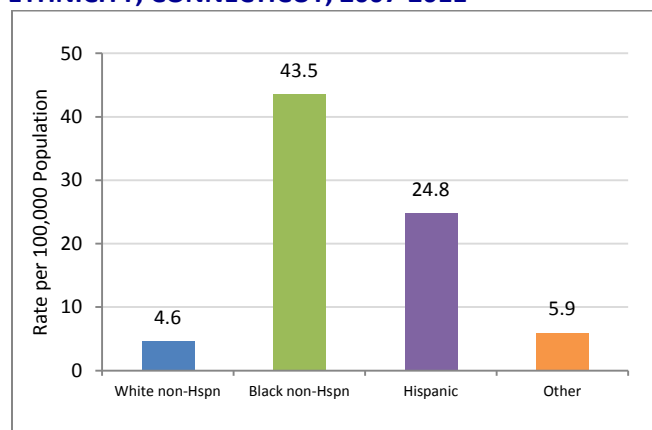
**HIV: AT-RISK POPULATIONS**

**Fig. 175. DISTRIBUTION OF NEW HIV CASES, BY AGE AND SEX, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Table 2.2.4.

**Fig. 176. RATE OF NEW HIV CASES, BY RACE AND ETHNICITY, CONNECTICUT, 2007-2011**



Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Fig. 2.2.7.

**Why HIV Disparities are Important**

Disparities in populations at risk for HIV persist. Black non-Hispanics, Hispanics, men who have sex with men (MSM), and females who engage in unprotected sex or intercourse with high risk partners are at greater risk for HIV.<sup>262</sup>

**Findings in Connecticut**

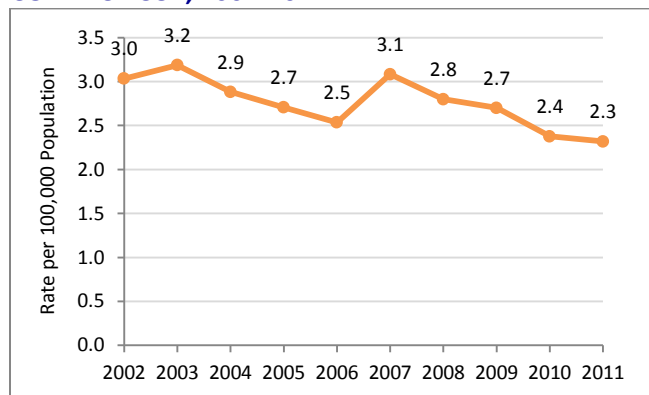
The proportion of new HIV cases varied from 32.8% for persons 20 to 29 years of age, 19.8% among those 30 to 39 years of age, 24.7% among persons 40 to 49 years of age, and 19.3% for persons at least 50 years of age, to 3.4% for persons less than 20 years of age. In 2011, the majority (73.6%) of new HIV/AIDS cases were among males.

Over the 2007 to 2011 period, combined, the rate of new HIV cases ranged from 43.5 per 100,000 among black non-Hispanics to 24.8 per 100,000 for Hispanics, and 4.6 per 100,000 for white non-Hispanics. The rate for black non-Hispanics was almost 10 times the rate for white non-Hispanics.

The CDC estimates that men who have sex with men (MSM) make up about 4% of the male population (or 2% of the overall population). In Connecticut, MSM made up 45.4% of newly reported HIV cases diagnosed in 2011, or about 62% of all cases diagnosed among males in 2011. Almost half (48.7%) of the MSM cases in 2011 were between the ages of 20 and 29.

## TUBERCULOSIS

**Fig. 177. RATE OF NEW TUBERCULOSIS CASES, CONNECTICUT, 2002-2011**



Source: Connecticut Department of Public Health, Total Tuberculosis Incidence, 2002–2011. (Rate calculated)

**Table 11. NUMBER OF NEW TUBERCULOSIS CASES, BY RACE AND ETHNICITY, AND PLACE OF BIRTH, CONNECTICUT, 2011**

| Race or Ethnicity | US-Born | Foreign-Born |
|-------------------|---------|--------------|
| White             | 10      | 6            |
| Black             | 4       | 13           |
| Hispanic          | 1       | 18           |
| Asian             | 3       | 28           |

Note: All racial groups are non-Hispanic.

Source: Connecticut Department of Public Health, Tuberculosis Cases at a Glance, Connecticut, 2011.

### Why Tuberculosis is Important

Tuberculosis (TB) is a disease caused by a bacterium called *Mycobacterium tuberculosis*. The disease is challenging to diagnose, treat, and control. The bacteria usually attack the lungs and if not treated properly, TB disease can be fatal. TB bacteria may become resistant to the drugs used in treatment. The disease was once the leading cause of death in the United States but over the past 20 years, the rate of new cases of tuberculosis has declined.<sup>263</sup> Even though fewer people have the disease, it remains a serious threat particularly to certain populations. Persons born outside of the US are at greater risk of tuberculosis.<sup>264</sup>

### Findings in Connecticut

#### Trends

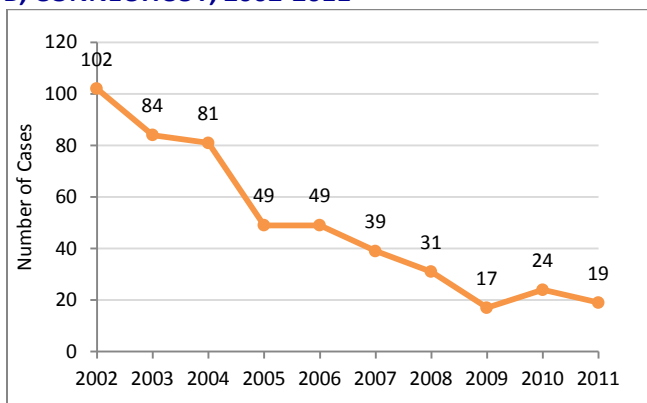
From 2002 to 2011, the rate of new tuberculosis cases ranged from 3.0 per 100,000 Connecticut residents in 2002 to 2.3 per 100,000 Connecticut residents in 2011.

#### Disparities

In 2011, the incidence of new tuberculosis cases ranged from a total of 31 cases among Asians to 16 cases among white non-Hispanics. The majority of new tuberculosis cases were among persons who were born outside of the United States.

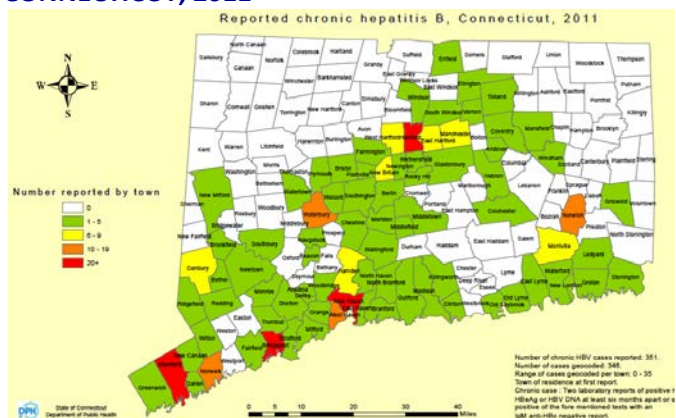
**HEPATITIS B**

**Fig. 178. NUMBER OF CASES OF ACUTE HEPATITIS B, CONNECTICUT, 2002-2011**



Source: Connecticut Department of Public Health.

**Fig. 179. CHRONIC HEPATITIS B, BY TOWN, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health, Reported Chronic Hepatitis B, by Town, 2011.

**Why Hepatitis B is Important**

Hepatitis B is most commonly acquired through sexual contact, injection drug use, or mother-to-child transmission.<sup>265</sup> The incidence of acute hepatitis B has declined in the US for the total population and particularly for Asians.<sup>266</sup> Acute hepatitis B is more common among persons 25 to 44 years of age, males, black non-Hispanics, persons who have had multiple sex partners, and men who have sex with men.<sup>267</sup>

**Findings in Connecticut**

*Trends*

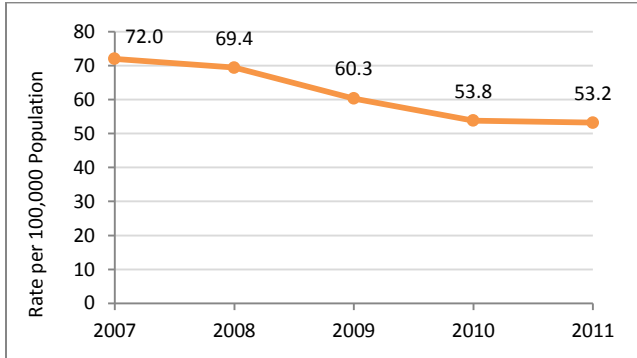
Between 2002 and 2011, the number of acute hepatitis B cases ranged from 102 cases in 2002 to 19 cases in 2011.

*Disparities*

In 2011 the towns of Stamford, Bridgeport, New Haven, and Hartford had 20 or more reported cases of chronic hepatitis B.

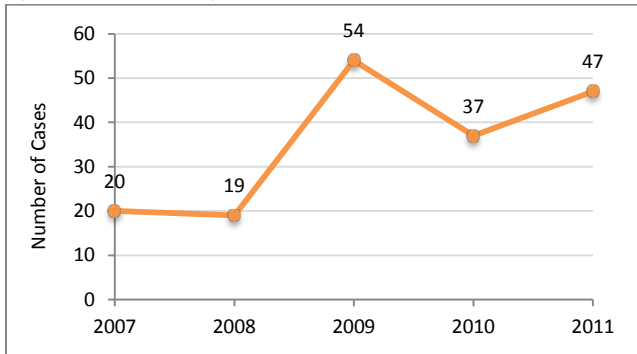
**HEPATITIS C**

**Fig. 180. RATE OF HEPATITIS C CASES (PAST OR PRESENT), CONNECTICUT, 2007-2011**



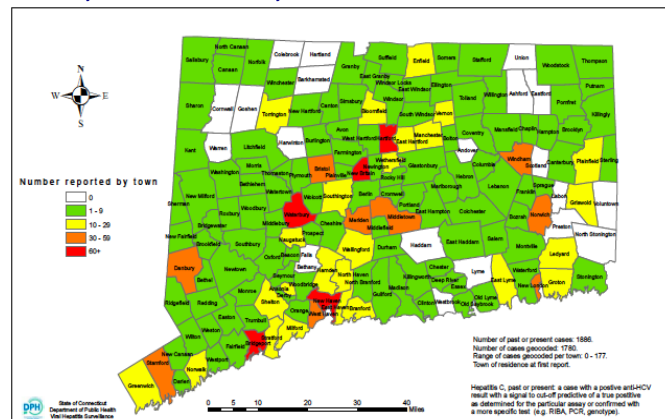
Source: Connecticut Department of Public Health.

**Fig. 181. NUMBER OF CASES OF ACUTE HEPATITIS C, CONNECTICUT, 2007-2011**



Source: Connecticut Department of Public Health, Viral Hepatitis Surveillance Program, Acute Hepatitis C Cases by Year Reported, 2007-2011.

**Fig. 182. HEPATITIS C, PAST OR PRESENT, BY TOWN, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health AIDS and Chronic Diseases Section, *Epidemiologic Profile of HIV/AIDS in Connecticut*, 2013, Fig. 6.2.1.

**Why Hepatitis C is Important**

Hepatitis C is most commonly transmitted through blood to blood contact with an infected person.<sup>268</sup> The number of new cases of acute hepatitis C has declined in the US since the 1990s, and has remained stable over the past decade.<sup>269</sup> In the US, black non-Hispanics, American Indians, and persons 25 to 39 years of age have higher rates of acute hepatitis C.<sup>270</sup>

Currently the most common risk is sharing injection drug syringes and equipment. Prior to 1992 when widespread screening of the blood supply began, Hepatitis C was also often spread through transfusions or transplant.

**Findings in Connecticut**

*Trends*

The rate of hepatitis C cases, past or present, ranged from 72.0 cases per 100,000 Connecticut residents in 2007 to 53.2 cases per 100,000 Connecticut residents in 2011.

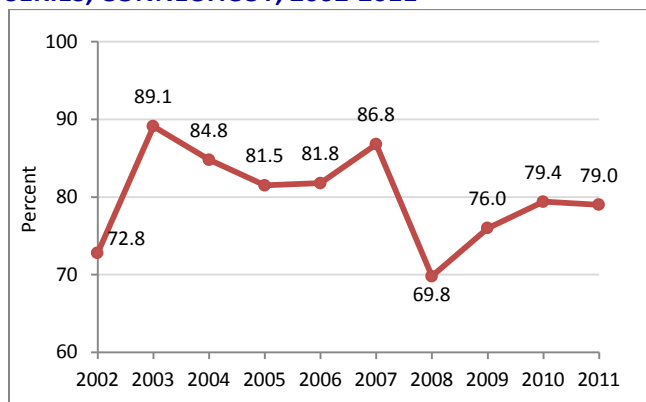
From 2007 to 2011 the number of cases of acute hepatitis C ranged from 20 cases in 2007 to 47 cases in 2011. It is important to note that the rate of acute hepatitis C has increased over the years with increased active monitoring and is higher in Connecticut than in the US (data not shown).<sup>271</sup>

*Disparities*

In 2011, the towns of Bridgeport, New Haven, Waterbury, New Britain, and Hartford had more than 60 cases of hepatitis C (past or present).

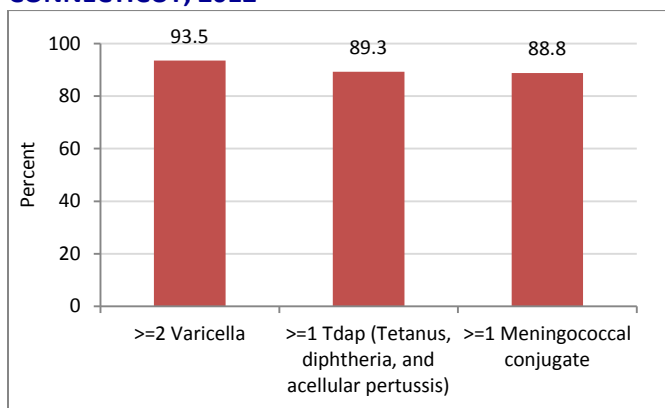
**IMMUNIZATIONS FOR VACCINE-PREVENTABLE DISEASES: CHILDREN AND ADOLESCENTS**

**Fig. 183. PERCENT OF CHILDREN (19-35 MONTHS) WHO COMPLETED RECOMMENDED VACCINE SERIES, CONNECTICUT, 2002-2011**



Source: Connecticut Department of Public Health, *Healthy Connecticut 2010 Final Report*, CDC, National Immunization Survey; Morbidity and Mortality Weekly Reports, *National, State, and Local Area Vaccination Coverage among Children Aged 19-35 Months, United States – 2009-2011*, Table 3.

**Fig. 184. PERCENT OF ADOLESCENTS (13 TO 17 YEARS OF AGE) WHO COMPLETED VARICELLA, TDAP, OR MENINGOCOCCAL VACCINES, CONNECTICUT, 2012**



Source: National and State Vaccination Coverage among Adolescents Aged 13 to 17 Years: United States, 2012. *Morbidity and Mortality Weekly Report (MMWR)* 2013; 62(34): 685-693, Table 3.

**Why Immunizations for Vaccine-Preventable Diseases for Children are Important**

Immunizations have contributed to declines in infectious disease mortality in the US.<sup>272</sup> However, people continue to contract vaccine-preventable diseases.<sup>273</sup> Estimates indicate that routine vaccinations for healthy infants could reduce the medical costs associated with pneumonia by \$342 million and save \$415 million in work-loss and other costs.<sup>274</sup>

**Findings in Connecticut**

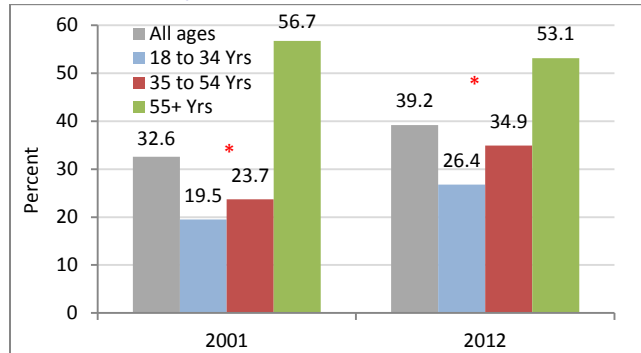
*Trends*

Between 2002 and 2011, vaccination completion rates among children 19 to 35 months ranged from a low of 69.8% in 2008 to a high of 89.1% in 2003. In 2011, 79.0% of children 19 to 35 months of age completed the recommended vaccine series.

In 2012, 93.5% of persons 13 to 17 years of age received at least 2 doses of the varicella vaccine, 89.3% received at least 1 dose of Tdap (tetanus, diphtheria, and acellular pertussis) vaccine, and 88.8% received at least one dose of meningococcal conjugate vaccine.

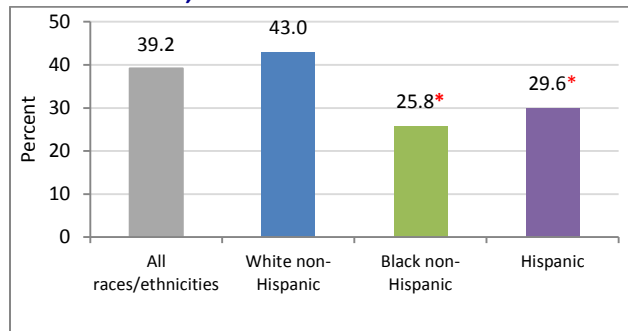
### Immunizations for Vaccine-Preventable Diseases: Adults

**Fig. 185. PERCENT OF ADULTS WHO RECEIVED FLU SHOT IN PAST YEAR, BY AGE GROUP, CONNECTICUT, 2001 VS. 2012**



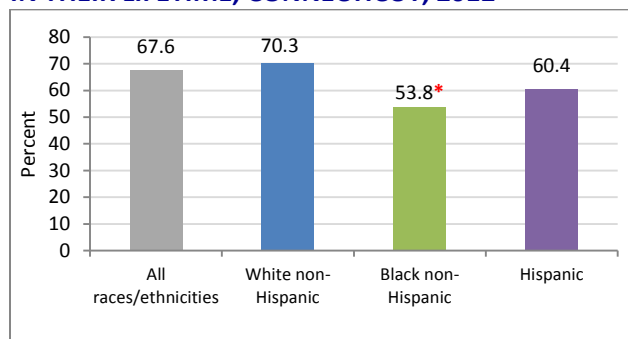
Note: \* Indicates significant increase in vaccinations with increasing age for 2001 and 2012, respectively ( $p < 0.05$ ). Source: Connecticut Behavioral Risk Factor Surveillance System, 2001 & 2012.

**Fig. 186. PERCENT OF ADULTS WHO RECEIVED FLU SHOT IN PAST YEAR, BY RACE AND ETHNICITY, CONNECTICUT, 2012**



Note: \* Indicates significant difference in vaccinations for black non-Hispanics and Hispanics relative to white non-Hispanics ( $p < 0.05$ ). Source: Connecticut Behavioral Risk Factor Surveillance System, 2012.

**Fig. 187. PERCENT OF ADULTS 65 YEARS OF AGE AND OLDER WHO RECEIVED PNEUMONIA VACCINE IN THEIR LIFETIME, CONNECTICUT, 2012**



Note: \* Indicates significantly higher prevalence for white non-Hispanics relative to black non-Hispanics ( $p < 0.05$ ). Source: Connecticut Behavioral Risk Factor Surveillance System, 2012.

### Why Immunizations for Vaccine-Preventable Diseases for Adults are Important

Influenza epidemics cost the US an estimated \$87.1 billion annually, including medical costs and costs associated with lost earnings due to illness and loss of life.<sup>275</sup> It is estimated that direct medical costs associated with pneumonia total \$3.5 billion annually, with persons 65 years of age and older experiencing the most serious cases and contributing to approximately half of these direct medical costs.<sup>276</sup>

#### Findings in Connecticut

##### Trends

In 2012, 39.2% of adults received a flu shot in the past year and 67.6% of adults 65 years of age and older had received a pneumonia vaccine in their lifetime.

##### Disparities

Vaccinations for the seasonal flu, by either shot or nasal spray, increased significantly with age in both 2001 and 2012. In 2012, 53.1% of adults at least 55 years of age received a flu shot in the past year, followed by 34.9% of persons 35 to 54 years of age, and 26.8% of persons 18 to 34 years of age.

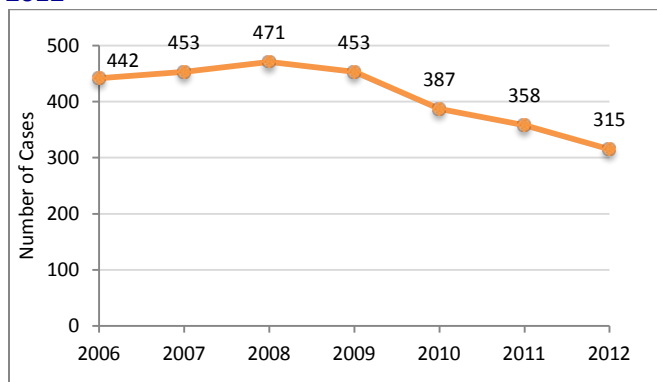
In 2012, a significantly smaller percent of adults within minority racial and ethnic communities reported getting either the seasonal flu shot or nasal spray. While 43.0% of white non-Hispanic adults reported getting the flu vaccine, only 25.8% and 29.6% of black non-Hispanic and Hispanic adults, respectively, reported getting the vaccine. This difference was significant.

In 2012, a significantly greater proportion of white non-Hispanic adults (70.3%) at least 65 years of age had received the pneumonia vaccine in their lifetime relative to black non-Hispanics (53.8%). In 2012, 60.4% of Hispanics at least 65 years of age had received the pneumonia vaccine in their lifetime.



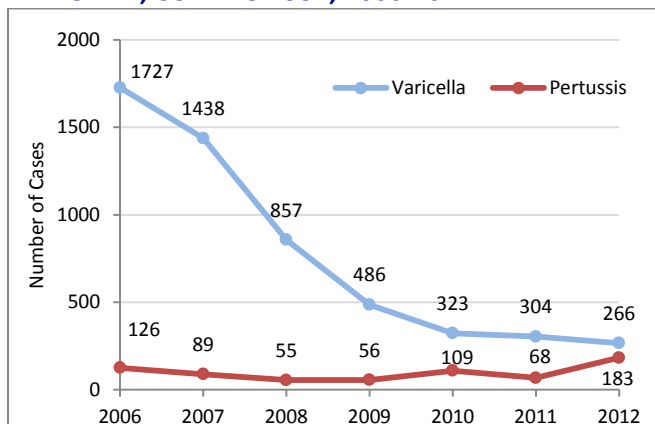
**VACCINE-PREVENTABLE DISEASES**

**Fig. 188. NUMBER OF CASES OF INVASIVE PNEUMOCOCCAL DISEASE, CONNECTICUT, 2006-2012**



Source: Connecticut Department of Public Health, *Reported Cases of Disease by County, 2006-2012*.

**Fig. 189. NUMBER OF CASES OF PERTUSSIS AND VARICELLA, CONNECTICUT, 2006-2012**



Source: Connecticut Department of Public Health, *Reported Cases of Disease by County, 2006-2012*.

**Why Vaccine-Preventable Diseases are Important**

While immunizations have contributed to declines in infectious disease mortality in the US, people continue to contract vaccine-preventable diseases.<sup>277,278</sup>

**Findings in Connecticut**

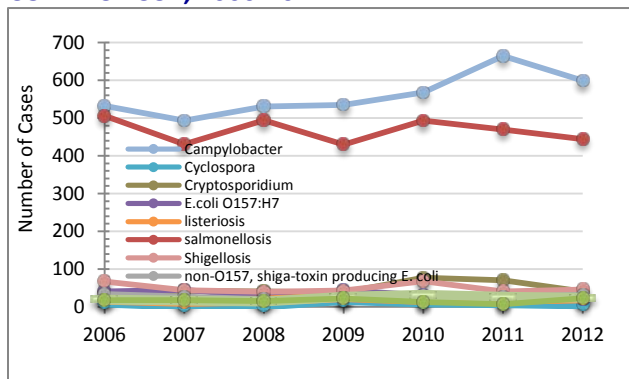
*Trends*

From 2006 to 2012, the annual number of cases of invasive pneumococcal disease ranged from a low of 315 to a high of 471. In 2012, there were 315 cases of invasive pneumococcal disease. A new pediatric vaccine was introduced in 2010.

The number of cases of varicella ranged from 1,727 cases in 2006 to 266 cases in 2012, less than one-fifth of the number of cases in 2006. Over this same period, the number of pertussis or whooping cough cases ranged from a low of 89 cases in 2007 to a high of 183 cases in 2012.

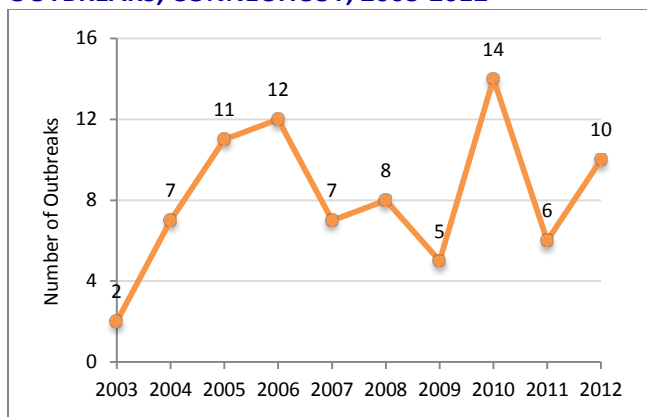
**FOODBORNE AND WATERBORNE INFECTIONS**

**Fig. 190. NUMBER OF CASES OF FOODBORNE AND WATERBORNE INFECTIONS, BY TYPE, CONNECTICUT, 2006-2012**



Source: Connecticut Department of Public Health, *Reported Cases of Disease by County, 2006-2012*.

**Fig. 191. NUMBER OF FOOD-BORNE NOROVIRUS OUTBREAKS, CONNECTICUT, 2003-2012**



Source: Connecticut Department of Public Health.

**Why Food- and Water-borne Infections are Important**

Food- and water-borne infections and other reportable diseases are often preventable and can result in illness, hospitalization, or even death. Food-borne illnesses cost the US \$2.9 to \$6.7 billion annually.<sup>279</sup>

**Findings in Connecticut**

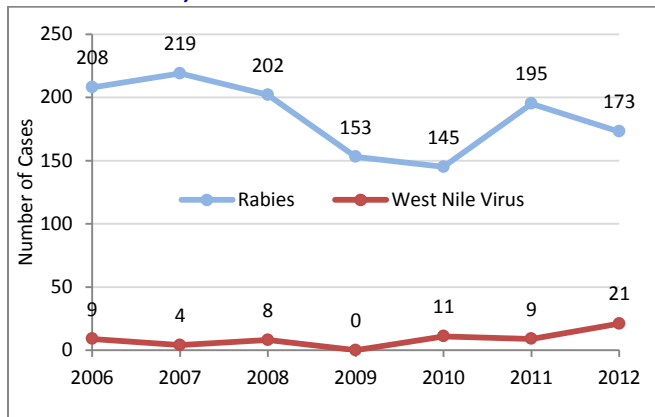
*Trends*

From 2006 to 2012, the number of cases of *Campylobacter* ranged from 532 cases in 2006 to 599 cases in 2012. The number of cases for other food-borne and water-borne illnesses remained relatively steady over this period.

Over the 2003 to 2012 period, the annual number of norovirus outbreaks ranged from 2 to 14. In 2012, there were 10 outbreaks due to norovirus.

**Other Reportable Diseases**

**Fig. 192. NUMBER OF ANIMAL CASES OF RABIES AND HUMAN CASES OF WEST NILE VIRUS, CONNECTICUT, 2006-2012**



Source: Connecticut Department of Public Health, *Reported Cases of Disease by County, 2006-2012*.

**Table 12. TYPE AND NUMBER OF ANIMALS TESTED FOR RABIES AND PERCENT FOUND POSITIVE FOR RABIES, CONNECTICUT, 2002-2012**

|                     | Number tested for Rabies | Percent Found Positive for Rabies |
|---------------------|--------------------------|-----------------------------------|
| Bat                 | 6952                     | 3.8                               |
| Cat                 | 5868                     | 0.8                               |
| Dog                 | 3496                     | 0.1                               |
| Fox                 | 231                      | 18.2                              |
| Goat                | 106                      | 2.8                               |
| Groundhog/Woodchuck | 645                      | 4.7                               |
| Opossum             | 645                      | 0.2                               |
| Rabbit              | 137                      | 0.0                               |
| Raccoon             | 2709                     | 47.4                              |
| Sheep               | 157                      | 0.0                               |
| Skunk               | 1676                     | 32.5                              |
| Squirrel            | 650                      | 0.0                               |

Source: Connecticut Department of Public Health, *Animals Tested for Rabies by Test Result, Percentage Positive, Connecticut, 2002-2012*.

**Why Other Reportable Diseases are Important**

In the US, the number of new reported cases of West Nile virus and rabies has declined, while the number of reported Lyme disease cases, which is more common in the Northeast, has increased.<sup>280</sup>

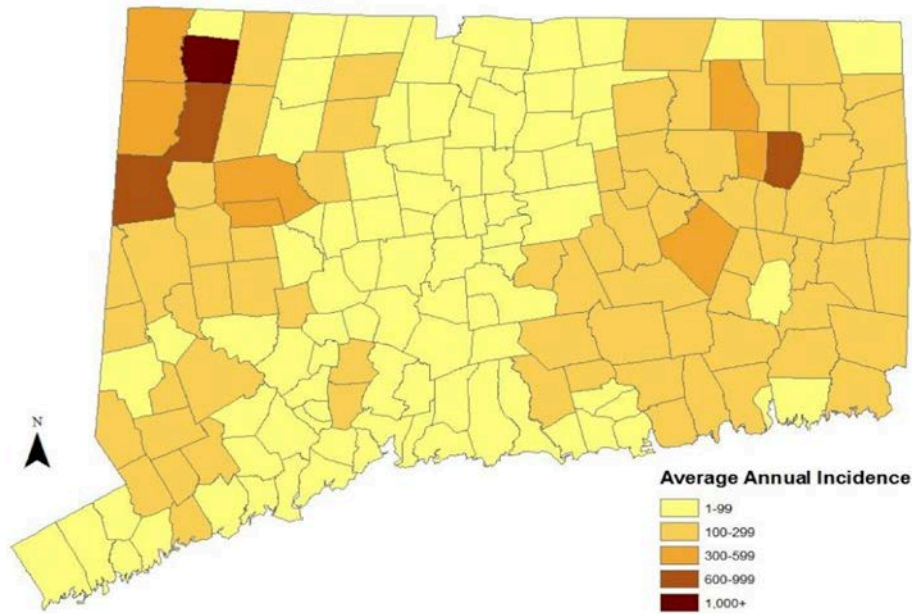
**Findings in Connecticut**

The number of rabies cases among animals ranged from 208 cases in 2006 to 173 cases in 2012. Of note, the number of rabies cases is not a measure of the overall number of rabid animals in Connecticut, as animal testing for rabies is conducted to help manage potential human and domestic animal exposures. In 2012, there were 21 cases of West Nile virus

Over the 2002 to 2012 period, bats, cats, dogs, raccoons, and skunks were the most common type of animal tested for rabies. A greater percent of raccoons (47.4%) and skunks (32.5%) tested positive for rabies, followed by foxes (18.2%).

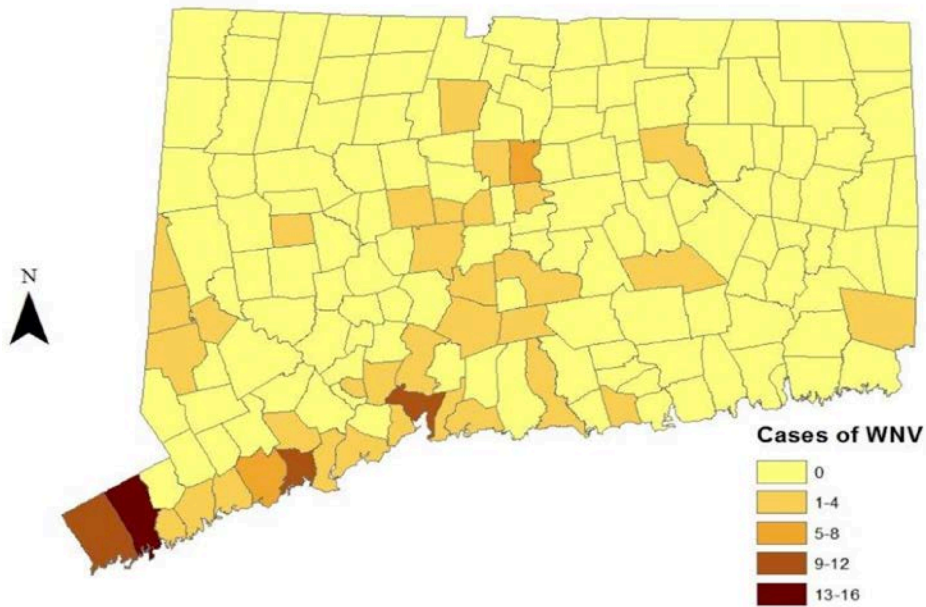
**LYME DISEASE AND WEST NILE VIRUS**

**Fig. 193. AVERAGE ANNUAL INCIDENCE OF LYME DISEASE, BY TOWN, CONNECTICUT, 2002-2012**



Source: Connecticut Department of Public Health.

**Fig. 194. NUMBER CASES OF REPORTED WEST NILE VIRUS, BY TOWN, CONNECTICUT, 2000-2012**



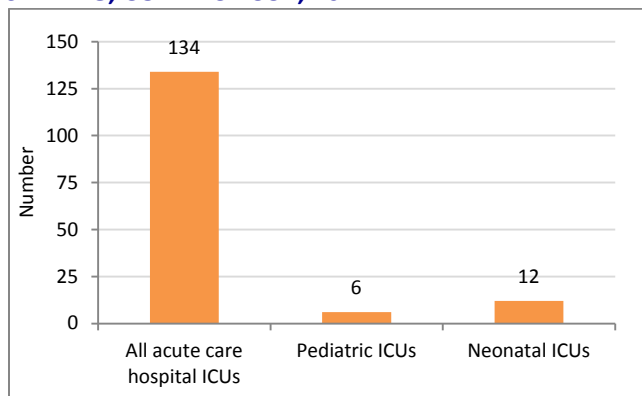
Source: Connecticut Department of Public Health.

**Findings in Connecticut**

Over the 2002 to 2012 period, the incidence of new cases of Lyme disease was highest in the northeastern region of the Connecticut, as well as the eastern region. The number of West Nile Virus cases was highest in the southwestern region of Connecticut over the 2002 to 2012 period.

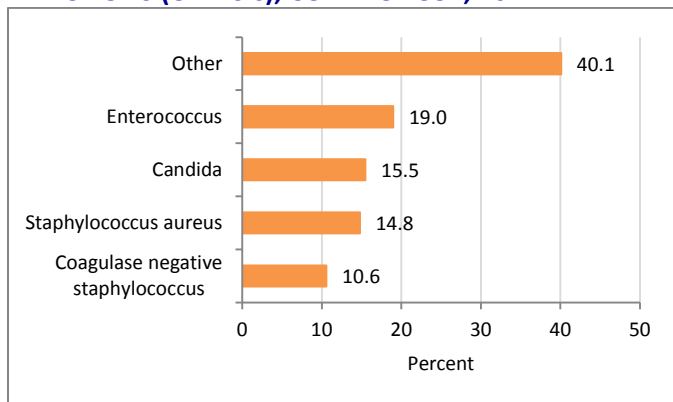
### HEALTHCARE-ASSOCIATED INFECTIONS

**Fig. 195. NUMBER OF CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS (CLABSIs), BY SETTING, CONNECTICUT, 2012**



Note: ICU indicates intensive care unit.  
 Source: Connecticut Department of Public Health, 2012 Report on Healthcare Associated Infections (HAIs) to the General Assembly, October, 2013, Tables 3-5.

**Fig. 196. PERCENT OF PATHOGENS ASSOCIATED WITH CENTRAL LINE ASSOCIATED BLOOD STREAM INFECTIONS (CLABSIs), CONNECTICUT, 2012**



Source: Connecticut Department of Public Health, 2012 Report on Healthcare Associated Infections (HAIs) to the General Assembly, October, 2013, Table 9.

**Table 13. NUMBER OF SURGICAL SITE INFECTIONS (SSIs) AND STANDARDIZED INFECTION RATIO, BY PROCEDURE, CONNECTICUT, 2012**

| Procedure              | Number of infections | Standardized Infection Ratio |
|------------------------|----------------------|------------------------------|
| Colon                  | 132                  | 1.22                         |
| Abdominal hysterectomy | 47                   | 1.44                         |

Source: Connecticut Department of Public Health, 2012 Report on Healthcare Associated Infections (HAIs) to the General Assembly, October, 2013, Table 15.

### Why Healthcare-Associated Infections are Important

Healthcare-associated infections (HAIs) that patients contract after exposure to a health care setting can cause serious health effects and even death. There are several causes of HAIs, including infections that develop from microorganisms already on the patient when they go to the health care setting or the transfer of infectious microorganisms from other patients, health care workers, or visitors, the health care setting, or medical products or devices.<sup>281</sup> Direct medical costs associated with HAIs in US hospitals range from \$28.4 to \$33.8 billion annually. Efforts to prevent even 70% of HAIs could save up to \$31.5 billion.<sup>282</sup> In 2012, Connecticut's HAI reporting mandates were expanded to include all intensive care units (ICUs), and all level III and II/III neonatal units. In addition, new types of HAIs were added to the reporting mandate.<sup>283</sup>

Surgical site infections are the most common type of HAI in acute care hospitals and contribute to post-surgical morbidity and mortality, hospital readmissions, and extended use of antibiotics.<sup>284</sup>

### Findings in Connecticut

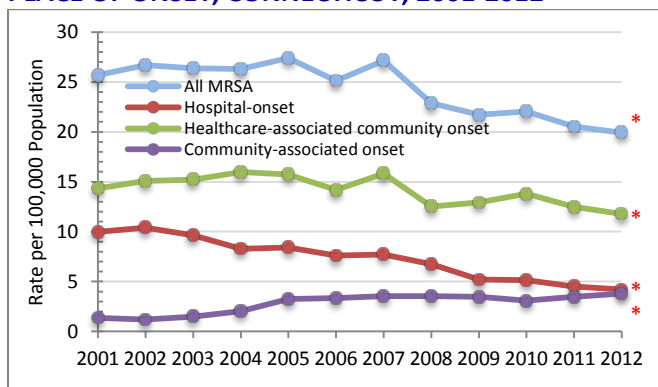
In 2012, there were 134 central line associated blood stream infections (CLABSIs) in intensive care units (ICUs) reported from all acute care hospitals in Connecticut. There were 6 CLABSIs in pediatric ICUs and 12 CLABSIs reported in neonatal ICUs in 2012.

In 2012, among the 134 central line associated blood stream infections in ICUs, 19.0% were due to Enterococcus, 15.5% were from Candida, 14.8% for *staphylococcus aureus*, and 10.6% from coagulase negative staphylococcus.

In 2012, there were 132 surgical site infections (SSIs) from colon surgeries. The standardized infection ratio for SSIs from colon surgeries was 1.22. There were 47 SSIs due to abdominal hysterectomies, with a standardized infection ratio of 1.44 in 2012. These findings suggest that there were more surgical site infections than predicted for colon surgeries and abdominal hysterectomies in 2012.

**MULTIDRUG-RESISTANT ORGANISMS**

**Fig. 197. INCIDENCE OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) INFECTIONS BY PLACE OF ONSET, CONNECTICUT, 2001-2012**



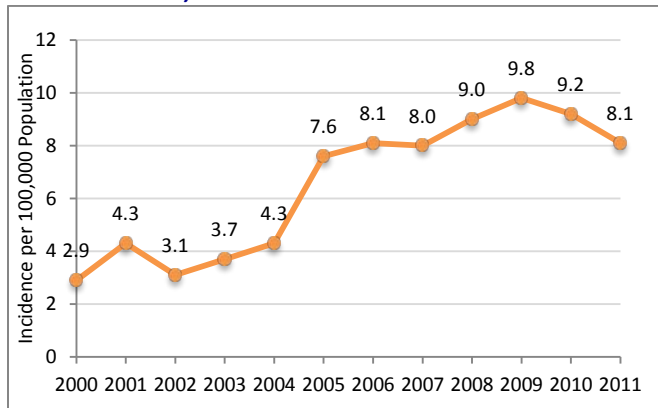
Note: \* Indicates trends that were statistically significant (p<0.05).  
 Source: Connecticut Department of Public Health, Active Bacterial Core Surveillance Program.

**Table 14. NUMBER OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) INFECTIONS, CONNECTICUT, 2012**

| Infection  | Number    |
|--|-----------|
| Methicillin-resistant Staphylococcus aureus (MRSA) (January 2012–December, 2012) | 914 cases |

Source: Connecticut Department of Public Health, *Reported Cases of Disease by County, 2012*.

**Fig. 198. VANCOMYCIN-RESISTANT ENTEROCOCCUS (VRE) INCIDENCE RATE, CONNECTICUT, 2000-2011**



Source: Connecticut Department of Public Health, Active Bacterial Core Surveillance Program.

**Why Multidrug-Resistant Organisms are Important**

Multidrug-resistant organisms (MDROs) are microorganisms that are resistant to one or more types of antimicrobial agents.<sup>285</sup> The prevention and control of MDROs, such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE), which have increased in the United States, is a public health priority.<sup>286</sup> Health care facilities, particularly acute care facilities, are a major source of infection.<sup>287</sup> Greater lengths of stay at health care facilities, health care costs, and mortality are consequences of MDROs.<sup>288</sup>

**Findings in Connecticut**

*Trends*

Over the 2001 to 2012 period, there was a significant decline in overall rates of methicillin-resistant *Staphylococcus aureus* (MRSA) infections, hospital-onset MRSA infections, and healthcare-associated community onset MRSA infections. However, community-associated MRSA infections increased significantly over this period, with rates remaining stable from 2005 to 2012.

In 2012, there were 914 cases of MRSA, not all of which were healthcare-associated.

From 2000 to 2011, the incidence of vancomycin-resistant enterococcus (VRE) ranged from 2.9 cases per 100,000 population in 2000 to 8.1 cases per 100,000 population in 2011.

# 5

## INJURY AND VIOLENCE PREVENTION



## INJURY AND VIOLENCE PREVENTION

Unintentional injury and violence (intentional injury) are among the leading causes of premature death in the United States, and also contribute to disability, poor mental health, high health care costs, and lost productivity.<sup>289</sup> It is estimated that injuries cost the US health system \$80.2 billion annually, and result in productive losses of an additional \$326 billion.<sup>290</sup> Most causes of injury, disability, and injury-related death are preventable. Definitions of the indicators in this section are given in detail in *Appendix B: Definition of Measures*.

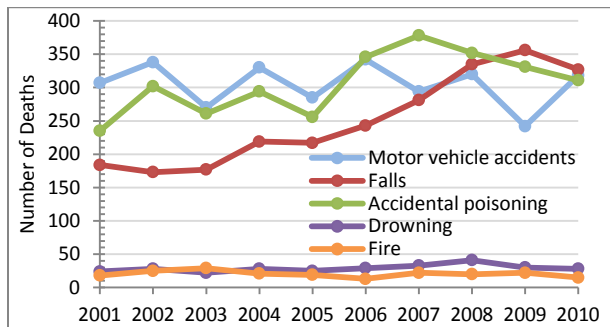
This section includes the following topic areas:

- Unintentional Injury
- Traumatic Brain Injury
- Transportation Safety
- Intentional Injury
- Family Violence
- Child Abuse and Neglect
- Sexual Violence
- Occupational Injuries and Illness



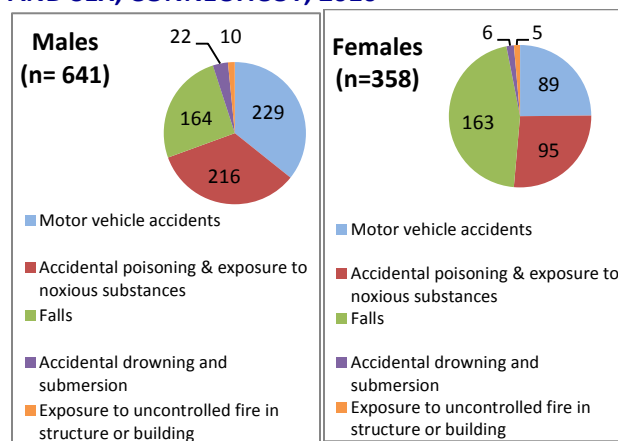
**UNINTENTIONAL INJURY**

**Fig. 199. NUMBER OF DEATHS DUE TO UNINTENTIONAL INJURY, CONNECTICUT, 2001-2010**



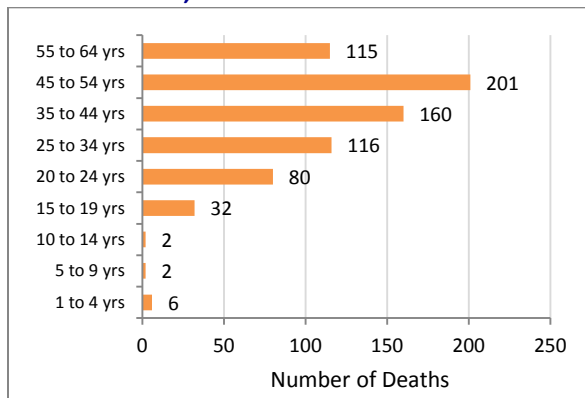
Source: Connecticut Department of Public Health, Vital Statistics, 2001-2010, Table 9.

**Fig. 200. NUMBER OF DEATHS DUE TO UNINTENTIONAL INJURY, BY CAUSE OF DEATH AND SEX, CONNECTICUT, 2010**



Source: Connecticut Department of Public Health, Vital Statistics, 2010, Table 9.

**Fig. 201. NUMBER OF DEATHS DUE TO UNINTENTIONAL INJURY, BY AGE GROUP, CONNECTICUT, 2010**



Source: Connecticut Department of Public Health, Vital Statistics, 2010, Table 10.

**Why Unintentional Injury is Important**

A leading cause of death and disability in the United States, injuries are often predictable and preventable.<sup>291</sup> It is estimated that injuries cost the US health system \$80.2 billion annually, and result in productive losses of \$326 billion annually.<sup>292</sup> Non-fatal falls among older adults result in \$19 billion in annual medical costs.<sup>293</sup> The CDC is currently focusing on intervention strategies to reduce the number of unintentional injuries, particularly unintentional injuries attributed to falls, motor vehicle accidents, and drug overdose.

**Findings in Connecticut**

*Trends*

In Connecticut from 2001 to 2010, motor vehicle accidents, falls, and accidental poisoning were the leading causes of death due to unintentional injury. During this period, accidental poisoning overtook motor vehicle accidents, and subsequently falls overtook both, becoming the leading cause of unintentional injury death. The number of deaths due to falls nearly doubled between 2001 and 2010. Similarly, in 2010, the number of deaths due to accidental poisoning was 1.3 times that for 2001.

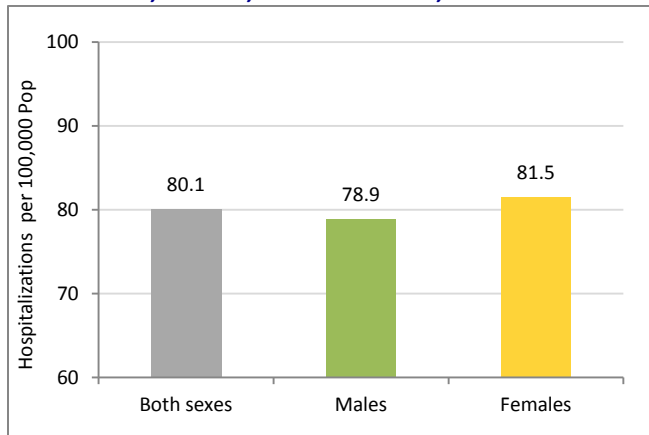
*Disparities*

Connecticut males are nearly twice as likely as females to die from unintentional injuries. Motor vehicle accidents, accidental poisoning, and falls were the top three causes of death for males in 2010. In contrast, falls were the primary cause of unintentional injury death for females, followed by accidental poisoning and motor vehicle accidents.

Through age 45 to 54, the likelihood of dying from an unintentional injury increased with age. The numbers of unintentional injury deaths in 2010 rose progressively for each age group, from 15-19 years of age to 45-54 years of age .

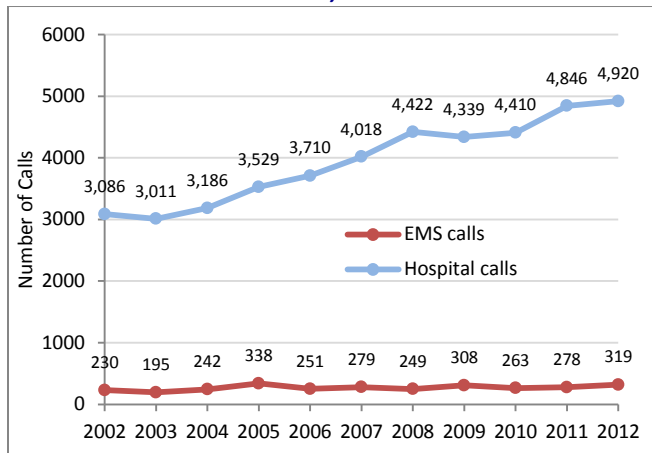
**ACCIDENTAL POISONING**

**Fig. 202. RATE OF HOSPITALIZATIONS FOR POISONING, BY SEX, CONNECTICUT, 2011**



Source: Connecticut Department of Public Health, Hospitalization Tables, Table H-1, 2011.

**Fig. 203. NUMBER OF CALLS FROM HOSPITALS AND EMERGENCY RESPONDERS TO CONNECTICUT POISON CONTROL CENTER, 2003-2012**



Source: Connecticut Poison Control Center.

**Why Accidental Poisoning is Important**

Accidental poisoning is the second leading cause of death due to unintentional injury. Deaths due to accidental poisoning have increased since the 1980s.<sup>294</sup> The increases in accidental poisoning mortality were highest among females, white non-Hispanics, and young people 15 to 24 years of age.<sup>295</sup> From 2000 to 2009, deaths due to accidental poisoning doubled for persons 15 to 19 years of age.<sup>296</sup> This increase is largely attributed to an increase in deaths from prescription drug overdose, which has increased substantially in the US.<sup>297</sup>

This topic is also discussed under Prescription Drug Misuse and Abuse in the *Mental Health and Substance Abuse* section of this report.

**Findings in Connecticut**

*Trends*

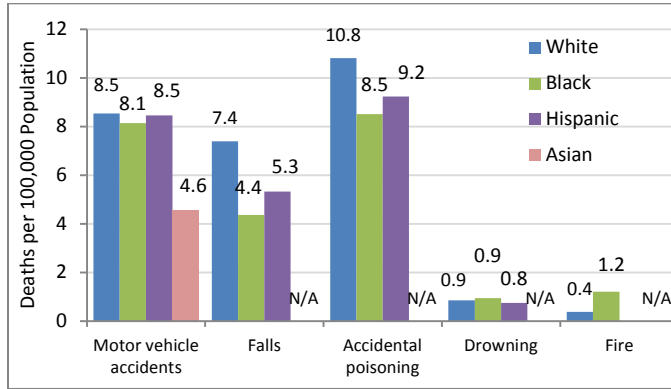
From 1999 to 2010, the age-adjusted mortality rate and premature death rate for accidental poisoning both rose significantly for both males and females. The annual percentage increases in both rates for females were nearly double those for males.<sup>298</sup>

In 2011, 2,931 Connecticut residents were hospitalized for poisoning. The rates of hospitalizations due to poisoning were similar for males and females (78.9 per 100,000 males and 81.5 per 100,000 females). In addition to inpatient hospitalizations, there were 10,838 emergency department visits for poisoning.

From 2002 to 2012, the number of calls from clinicians at hospitals to the Connecticut Poison Control Center for treatment and guidance rose from 3,086 calls in 2002 to 4,920 calls in 2012. The number of calls from emergency responders, including 911 dispatchers, EMTs and paramedics, and fire personnel on rescue vehicles ranged from 230 calls in 2002 to 319 calls in 2012.

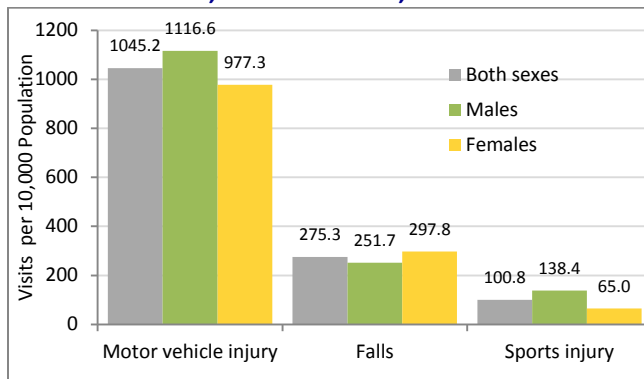
**UNINTENTIONAL INJURIES: AT-RISK POPULATIONS**

**Fig. 204. AGE-ADJUSTED MORTALITY RATE FOR UNINTENTIONAL INJURY, BY TYPE OF UNINTENTIONAL INJURY, RACE AND ETHNICITY, CONNECTICUT, 2006-2010**



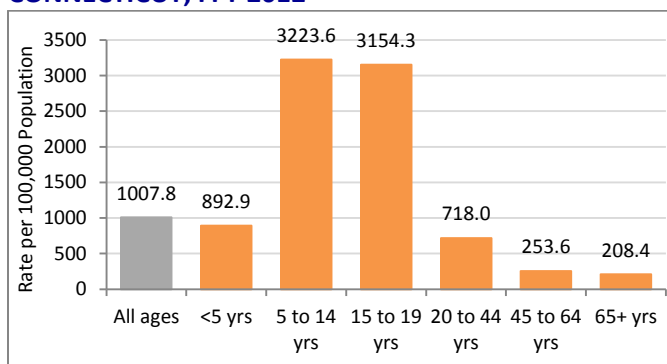
Note: All racial groups are non-Hispanic. N/A indicates data not available. Source: Connecticut Department of Public Health, Mortality Tables, Age-Adjusted Mortality Rate by Race and Ethnicity, 2006-2010.

**Fig. 205. RATE OF EMERGENCY DEPARTMENT VISITS FOR UNINTENTIONAL INJURY, BY TYPE OF INJURY AND SEX, CONNECTICUT, FFY 2012**



Source: Connecticut Department of Public Health, OHCA.

**Fig. 206. RATE OF EMERGENCY DEPARTMENT VISITS FOR SPORTS INJURY, BY AGE GROUP, CONNECTICUT, FFY 2012**



Source: Connecticut Department of Public Health, OHCA.

**Why Disparities in Unintentional Injuries are Important**

In the US, there are disparities in deaths from unintentional injury by age, sex, and geographic region. Unintentional injury is the leading cause of death for persons 1 to 42 years of age in the US.<sup>299</sup> Among elderly adults, falls are the leading cause of unintentional injury deaths.<sup>300</sup> Deaths due to injury are higher for males than females. Residents of rural areas also have higher risk of death due to unintentional injury than those in urban areas.<sup>301</sup>

**Findings in Connecticut**

In FFY 2012, injuries from motor vehicle accidents (1,045.2 per 100,000 population) contributed to the highest rate of emergency department (ED) visits, followed by injuries due to falls (275.3 per 100,000) and sports-related injuries (100.8 per 100,000).

*Disparities*

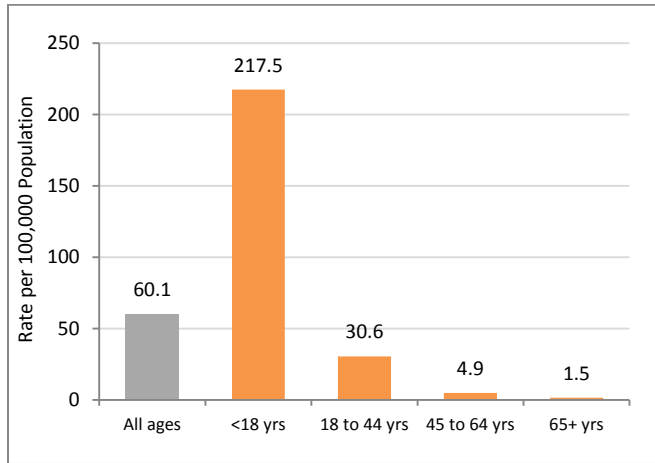
In 2006 to 2010, combined, there were 8.3 deaths per 100,000 due to motor vehicle accidents, 7.4 deaths per 100,000 due to falls, and 11.9 deaths per 100,000 for poisoning for the total Connecticut population. For these combined years, the age-adjusted mortality rate for unintentional injuries appeared to be highest for accidental poisoning for each racial and ethnic group. Deaths due to motor vehicle accidents also contributed to high mortality rates for most racial and ethnic groups. The mortality rate due to falls and accidental poisoning for white non-Hispanics was 1.7 and 1.3 times that for black non-Hispanics, respectively. The mortality rate due to fire was 3.2 times higher for black non-Hispanics relative to white non-Hispanics.

In FFY 2012, the ED visit rate for motor vehicle injuries for males (1,116.6 per 10,000 population) appeared to exceed that for females (977.3 per 10,000 population). The rate of ED visits for sports injuries for males (138.4 per 10,000 population) appeared to be higher than that for females (65.0 per 10,000 population). In contrast, the ED rate for falls appeared to be higher for females (297.8 per 10,000 population) compared to males (251.7 per 10,000 population)

In FFY 2012, the rate of ED visits due to sports-related injuries ranged from 3,223.6 per 100,000 population for persons 5 to 14 years of age and 3,154.3 per 100,000 population for those 15 to 19 years of age to 208.4 per 100,000 population for persons at least 65 years of age.

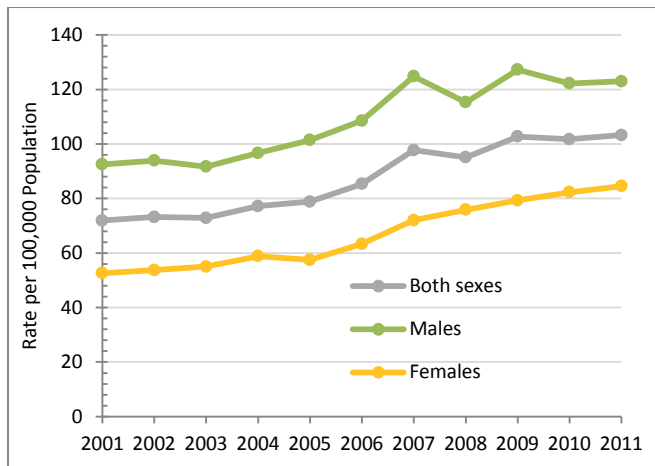
**TRAUMATIC BRAIN INJURY**

**Fig. 207. RATE OF EMERGENCY DEPARTMENT VISITS DUE TO TRAUMATIC BRAIN INJURY, BY AGE GROUP, CONNECTICUT, FFY 2012**



Source: Connecticut Department of Public Health, OHCA.

**Fig. 208. RATE OF HOSPITALIZATIONS DUE TO TRAUMATIC BRAIN INJURY, BY SEX, CONNECTICUT, 2001-2011**



Source: Connecticut Department of Public Health.

**Why Traumatic Brain Injury is Important**

Traumatic brain injury (TBI) occurs when damage to the brain results from a head injury such as an object hitting the head or the piercing of skull, which may damage brain tissue.<sup>302</sup> In the US, approximately 75% of TBIs are from concussions or other mild TBIs.<sup>303</sup> TBI contributes to 30% of injury-related deaths nationally.<sup>304</sup> Children younger than 5 years of age, persons 15 to 19 years of age, those 65 years of age and older, and males are at increased risk of TBI.<sup>305</sup> Adults at least 75 years of age have the highest rate of hospitalization and death due to TBI.<sup>306</sup> Many of the TBIs in this age group result from falls.

Disability due to TBI may vary depending on location and severity of the injury, but can include cognition, communication, sensory processing, and behavioral or mental health issues.<sup>307</sup> In 2000, TBI cost the US \$76.5 billion in direct medical costs and indirect costs.<sup>308</sup>

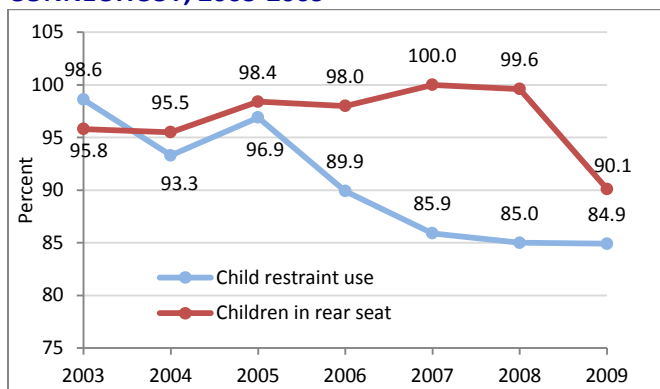
**Findings in Connecticut**

There were 60.1 emergency department (ED) visits per 100,000 population in FFY 2012 in Connecticut. The rate of ED visits due to traumatic brain injury varied from 217.5 per 100,000 population for persons less than 18 years of age to 1.5 per 100,000 population for 65 years of age and older.

From 2001 to 2011, the gap in traumatic brain injury hospitalization rate for males and females appeared to narrow. During this period, the rate of TBI hospitalizations for females varied by 61%, compared to a 33% variation in the TBI hospitalization rate for males. In 2011, there were 123.0 hospitalizations per 100,000 population for males, compared to 84.5 hospitalizations per 100,000 population for females. For females, the greatest number of TBI hospitalizations were among persons 85 years of age and older and may be attributed to falls.

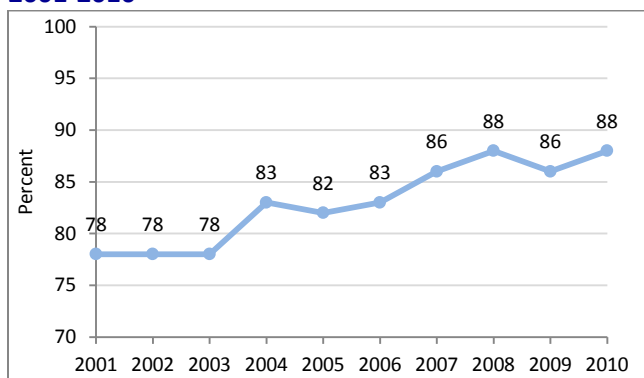
**TRANSPORTATION SAFETY**

**Fig. 209. PERCENT OF CHILDREN UNDER 4 YEARS OF AGE IN RESTRAINT OR REAR SEAT OF CAR, CONNECTICUT, 2003-2009**



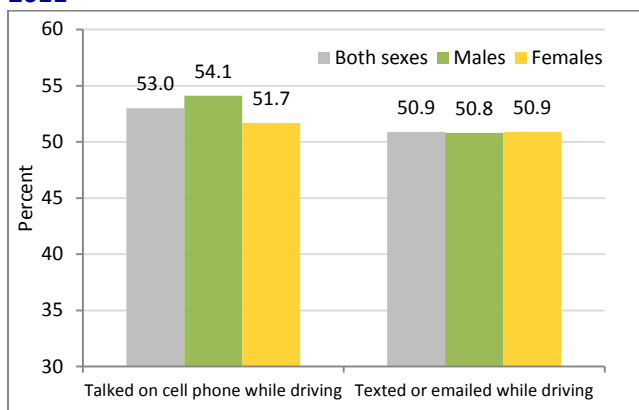
Source: Connecticut Department of Transportation, 2012 Highway Safety Plan, 2011, Table OP-1.

**Fig. 210. OBSERVED SEAT BELT USE, CONNECTICUT, 2001-2010**



Source: Connecticut Department of Transportation, 2012 Highway Safety Plan, 2011, Table OP-2.

**Fig. 211. PERCENT OF STUDENTS (GRADES 9-12) WHO ENGAGED IN UNSAFE DRIVING, AMONG STUDENTS WHO DROVE A CAR, CONNECTICUT, 2011**



Source: Connecticut School Health Survey (CSHS), 2011.

**Why Transportation Safety is Important**

Increasing the rate of observed statewide seat belt use and decreasing unrestrained occupant injuries and fatalities are objectives of the Connecticut Department of Transportation, in its efforts to prevent roadway fatalities and injuries related to motor vehicle crashes.<sup>309</sup>

**Findings in Connecticut**

*Trends*

The proportions of children in child restraint seats or in the rear seats of cars appear to be decreasing. The percent in child restraint seats ranged from 100% in 2007 to 84.9% in 2009. The percent of children in the rear seat of the car ranged from 95.8% in 2003 to 90.1% in 2009.

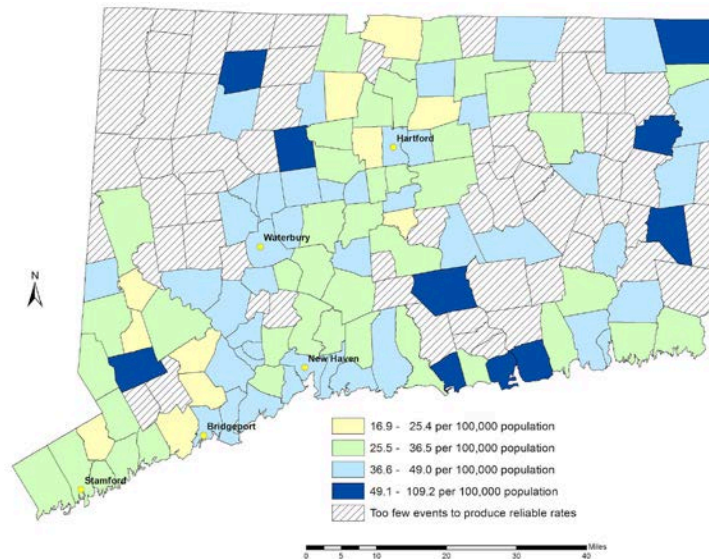
The observed seat belt use in Connecticut increased from 78% in 2001 to 88% in 2010.

Distracted driving, particularly talking on cell phones and texting or e-mailing while driving, is considered more dangerous than driving while intoxicated.<sup>310</sup>

In 2011, more than half of students in grades 9-2 reported that they had talked on a cell phone while driving or texted or e-mailed while driving on one of more of the past 30 days. There were no differences in unsafe driving behaviors among students by sex, race, or ethnicity, but there were differences by age. Proportions of students who reported talking on the phone while driving and texting or emailing while driving were significantly higher among drivers in grades 11 and 12, compared to drivers in grade 10.

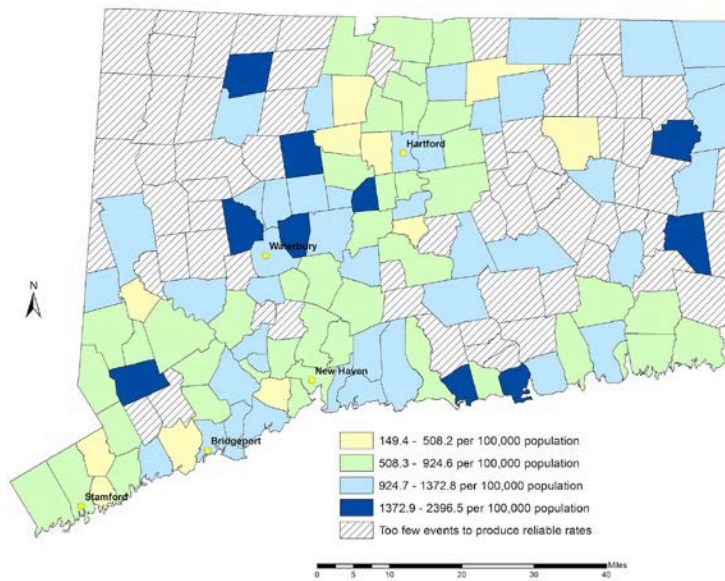
UNINTENTIONAL INJURIES ACROSS CONNECTICUT

Fig. 212. UNINTENTIONAL INJURY DEATH RATES, BY TOWN, CONNECTICUT, 2006-2010



Note: Rates were age adjusted (see Appendix B, Definitions).  
 Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

Fig. 213. PREMATURE DEATH RATES DUE TO UNINTENTIONAL INJURY, BY TOWN, CONNECTICUT, 2006-2010



Note: Premature death is measured as years of potential life lost before age 75.  
 Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2006-2010.

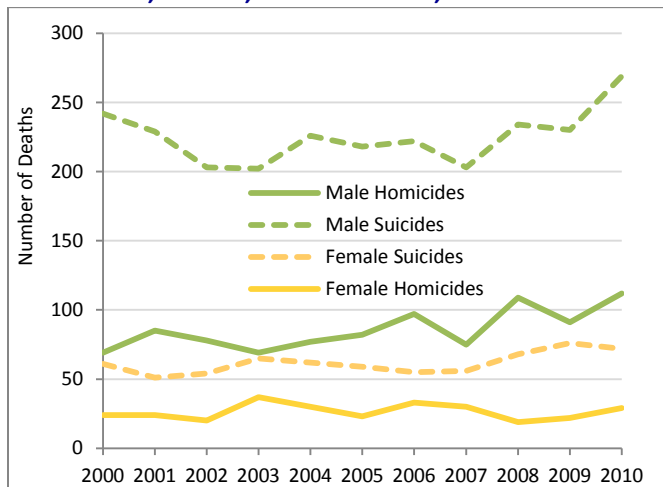
Findings in Connecticut

Although rates could not be calculated for several towns in western and eastern Connecticut due to small numbers of events, this map suggests that from 2006 to 2010, the age-adjusted unintentional injury mortality

rate was highest in central Connecticut, and in some of Connecticut’s larger towns and neighboring towns. The highest premature death rates occurred in many of the same towns.

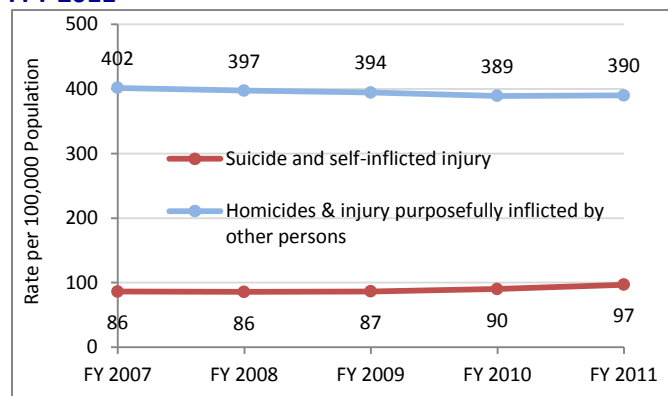
**INTENTIONAL INJURY**

**Fig. 214. NUMBER OF DEATHS DUE TO HOMICIDE OR SUICIDE, BY SEX, CONNECTICUT, 2000-2010**



Source: Connecticut Department of Public Health, Mortality Tables, Age-Adjusted Mortality Rate, 2000-2010.

**Fig. 215. RATE OF EMERGENCY DEPARTMENT VISITS FOR INTENTIONAL INJURY, BY TYPE OF INTENTIONAL INJURY, CONNECTICUT, FFY 2007-FFY 2011**



Source: Connecticut Department of Public Health, OHCA from Connecticut Hospital Association Chime, Inc. Emergency Department Database.

**Why Intentional Injury is Important**

Self-inflicted and other-inflicted intentional injuries, including suicides and homicides, are preventable and predictable.<sup>311</sup> Suicide accounts for more than 60% of costs due to violent deaths.<sup>312</sup> It is estimated that suicides result in \$3,056 in medical costs per person, and \$815,963 in work loss costs per person, resulting in a \$26.7 billion in total costs for the US.<sup>313</sup> On average, homicides incur approximately \$6,265 in medical costs and \$1 million in work loss costs, resulting in \$20 billion in total costs for the US.<sup>314</sup>

**Findings in Connecticut**

*Trends*

Between 2000 and 2010, the number of deaths due to homicide ranged from 69 deaths in 2000 to 112 in 2010 for males and from 24 in 2000 to 29 in 2010 for females. During this same period, the number of deaths due to suicide ranged from 242 deaths in 2000 to 269 deaths in 2010 for males, and 61 deaths in 2000 to 72 deaths in 2010 for females. Suicide is the leading cause of injury death in Connecticut.

While the number of suicides was higher than homicides in Connecticut, the rate of emergency department visits for homicide or injury intentionally inflicted by others was higher than that for suicide or self-inflicted injury for FFY 2007 through FFY 2011. In FY 2011, the number of emergency department visits due to homicide or injury purposefully inflicted by other persons was 4 times that for emergency department visits due to suicide and self-inflicted injury.

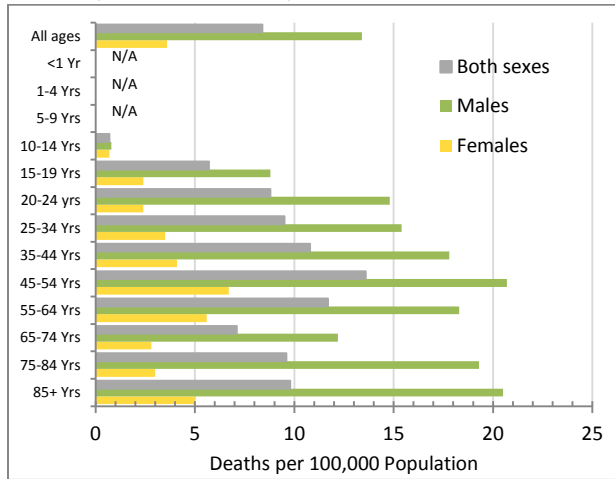
*Disparities*

Over the 2000 to 2010 period, males had a higher number of deaths due to suicide or homicide relative to females. In 2010, the number of deaths due to homicide for males was 3.9 times that for females in Connecticut and the number of deaths due to suicide for males was 3.7 times that for females in Connecticut.

In 2006 to 2010 (data not shown) rates of homicide deaths and premature deaths were significantly higher for black non-Hispanics and Hispanics, compared to white non-Hispanics. During the same period, rates of death and premature death for suicide were significantly higher for white non-Hispanics, compared to every other racial and ethnic group.

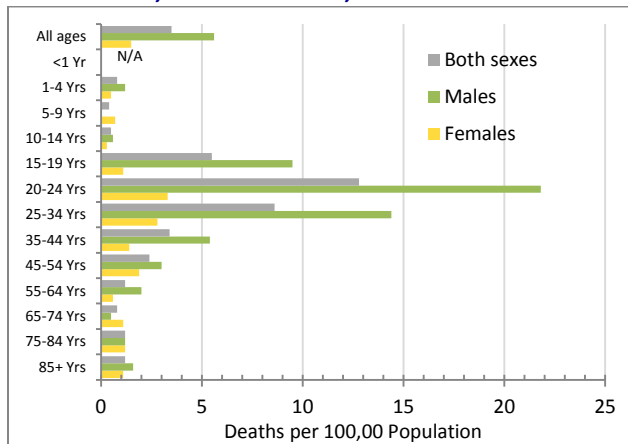
**INTENTIONAL INJURIES: AT-RISK POPULATIONS**

**Fig. 216. RATE OF DEATHS DUE TO SUICIDE, BY AGE GROUP, CONNECTICUT, 2006-2010**



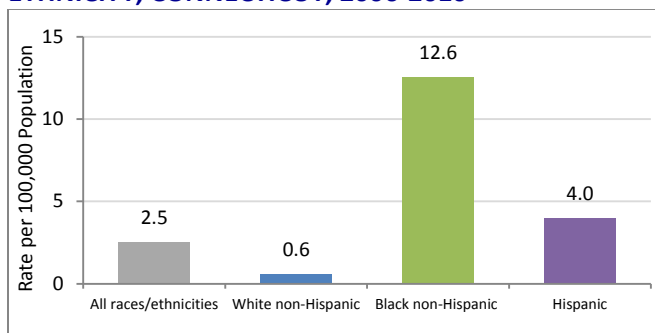
Note: N/A indicates data not available.  
Source: Connecticut Department of Public Health.

**Fig. 217. RATE OF DEATHS DUE TO HOMICIDE, BY AGE GROUP, CONNECTICUT, 2006-2010**



Note: N/A indicates data not available.  
Source: Connecticut Department of Public Health.

**Fig. 218. FIREARM HOMICIDE RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2006-2010**



Source: Connecticut Department of Public Health, Mortality Tables, Age-Adjusted Mortality Rate by Race and Ethnicity, 2006-2010.

**Why Disparities in Intentional Injuries are Important**

In the US, there are disparities in homicide mortality by age, race, ethnicity, and sex. Deaths due to homicide are highest among persons 15 to 34 years of age and males, particularly black non-Hispanic males.<sup>315</sup> There are also disparities in deaths due to suicide, with a higher suicide rate among males as compared to females.<sup>316</sup> In the US, suicide is the third-leading cause of death among persons 15 to 24 years of age, and second-leading cause of death for persons 25 to 34 years of age.<sup>317</sup> Suicide patterns for males and females differ by age, with highest rates for females 45 to 54 years of age, and for males 75 years and older.<sup>318</sup> In the US, suicide is the second leading cause of death among American Indians.<sup>319</sup>

**Findings in Connecticut**

During 2006 to 2010, combined, there were 8.4 deaths due to suicide per 100,000 Connecticut residents. The suicide rate was highest for persons 45 to 54 years of age (13.6 deaths per 100,000 population), followed by those 55 to 64 years of age (11.7 deaths per 100,000 population) and 35 to 44 years of age (10.8 deaths per 100,000 population). The suicide rate for males was 1.6 times that for females over this time period.

There were 3.5 deaths due to homicide per 100,000 population from 2006 to 2010, combined. The homicide rate was highest for persons 20 to 24 years of age (12.8 deaths per 100,000 population), followed by those 25 to 34 years of age (8.6 deaths per 100,000 population) and 15 to 19 years of age (5.5 deaths per 100,000 population). Over this period, the homicide rate for males was 3.7 times that for females.

*Firearm Homicides and Suicides*

In Connecticut, about two-thirds of all homicides and one-third of all suicides are committed with firearms.

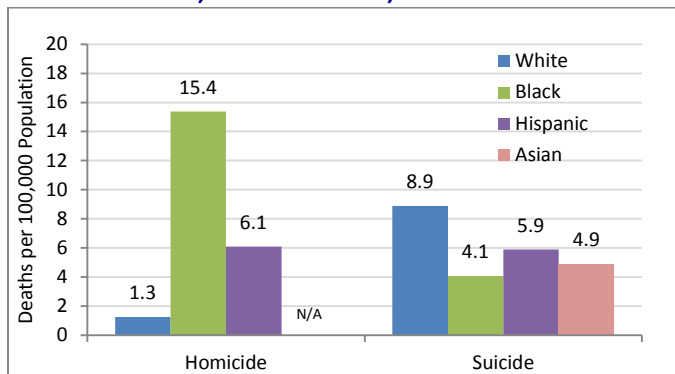
In 2006-2010, combined, the homicide rate due to firearms was 12.6 per 100,000 population for black non-Hispanics and 4.0 per 100,000 for Hispanics, compared to 0.6 per 100,000 for white non-Hispanics. The firearm homicide rates for black non-Hispanics and Hispanics were 21.6 and 6.8 times greater, respectively, than that for white non-Hispanics.

In 2008-2010 (data not shown) the firearm suicide rate was 10 times greater for males than for females (5.2 and 0.5 per 100,000, respectively).



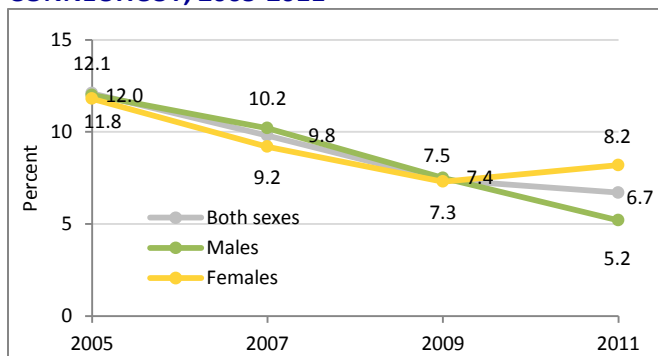
**INTENTIONAL INJURIES: AT-RISK POPULATIONS (CONTINUED)**

**Fig. 219. AGE-ADJUSTED MORTALITY RATE FOR INTENTIONAL INJURY, BY TYPE OF INJURY, RACE AND ETHNICITY, CONNECTICUT, 2006-2010**



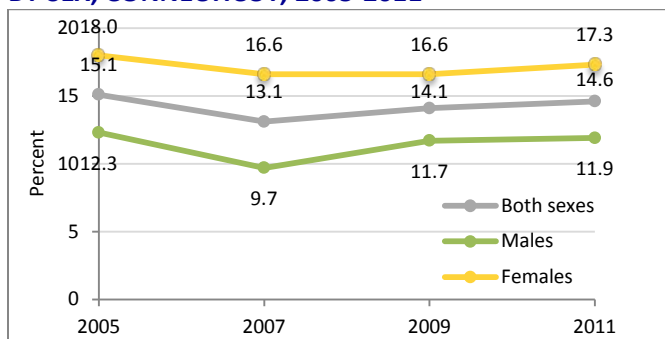
Note: All racial groups are non-Hispanic. N/A indicates data not available. Source: Connecticut Department of Public Health, Mortality Tables, Age-Adjusted Mortality Rate by Race and Ethnicity, 2006-2010.

**Fig. 220. PERCENT OF STUDENTS (GRADES 9-12) WHO REPORTED THAT THEY ATTEMPTED SUICIDE ONE OR MORE TIMES IN THE PAST YEAR, BY SEX, CONNECTICUT, 2005-2011**



Source: Connecticut School Health Survey (CSHS), 2005-2011.

**Fig. 221. PERCENT OF STUDENTS (GRADES 9-12) WHO REPORTED THAT THEY SERIOUSLY CONSIDERED ATTEMPTING SUICIDE IN PAST YEAR, BY SEX, CONNECTICUT, 2005-2011**



Source: Connecticut School Health Survey (CSHS), 2005-2011.

**Findings in Connecticut (Continued)**

From 2006-2010 combined, the age-adjusted death rate for homicide was highest for black non-Hispanics--12 times the rate for white non-Hispanics—and the rate for Hispanics was 4.9 times the rate for white non-Hispanics. During the same period, the age-adjusted death rate for suicide was highest for white non-Hispanics, 2.2 times that for black non-Hispanics.

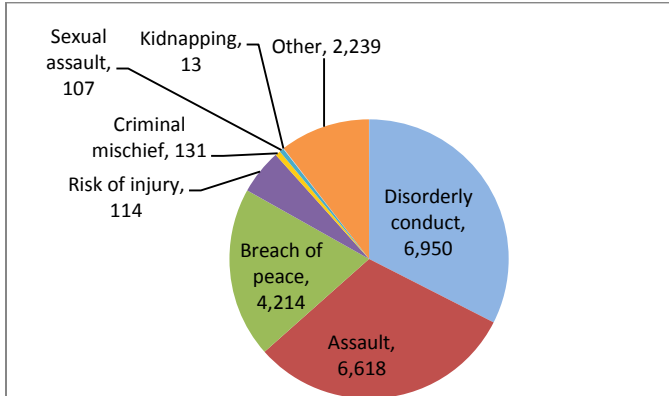
*Attempted Suicide by High School Students*

The proportion of students in grades 9-12 who reported that they attempted suicide one or more times in the past year ranged from 12.1% in 2005 to 6.7% in 2011. From 2005 to 2009, the proportion of students who reported that they attempted suicide was similar for males and females. In 2011, however, female students were 1.6 times more likely than male attempt suicide.

In 2011, more than 1 in 7 students in grades 9-12 said they seriously considered attempting suicide during the previous 12 months. Female students were 1.5 times more likely than male students to consider suicide.

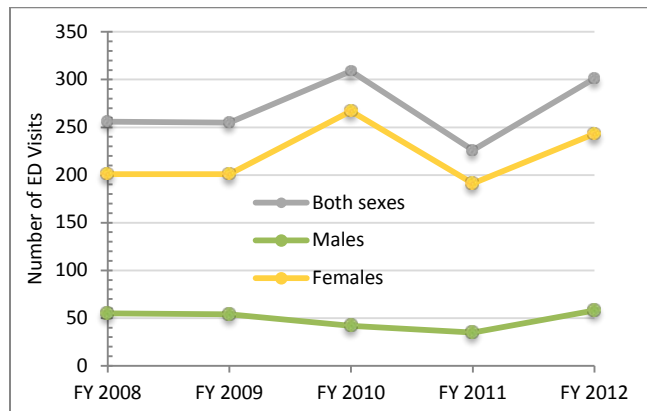
**FAMILY VIOLENCE**

**Fig. 222. NUMBER OF FAMILY VIOLENCE ARRESTS, BY TYPE OF INCIDENT, CONNECTICUT, 2011**



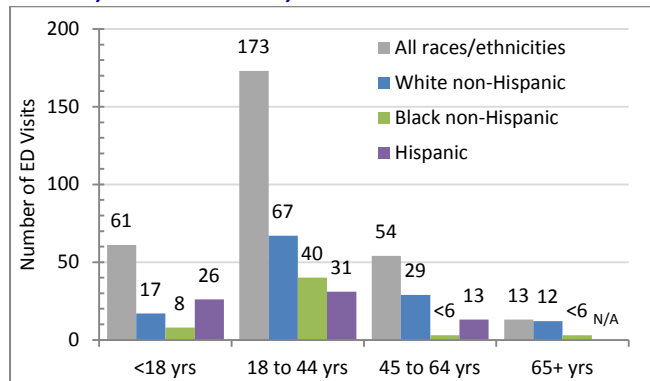
Source: State of Connecticut, Department of Emergency Services and Public Protection, Family Violence Arrests Annual Report, 2011.

**Fig. 223. NUMBER OF EMERGENCY DEPARTMENT VISITS DUE TO DOMESTIC VIOLENCE, BY SEX, CONNECTICUT, FFY 2008-2012**



Source: Connecticut Department of Public Health, OHCA.

**Fig. 224. NUMBER OF EMERGENCY DEPARTMENT VISITS DUE TO DOMESTIC VIOLENCE, BY AGE GROUP, CONNECTICUT, FY 2012**



Source: Connecticut Department of Public Health, OHCA.

**Why Family Violence is Important**

Family or domestic violence is a serious public health issue that results in substantial societal and financial costs, and the effects can last a lifetime. Persons who experience domestic violence may experience lost work days, physical injury, mental trauma, and even death.<sup>320</sup> In addition, persons who witness domestic violence are at greater risk of perpetrating violent behavior than those who did not witness domestic violence.<sup>321</sup> While most cases are not reported to the police, nonfatal domestic violence is greatest among females 20 to 24 years of age.<sup>322</sup> The financial costs of intimate partner violence—one type of domestic violence—exceeds \$5.8 billion annually, \$4.1 billion of which is attributed to medical and mental health costs.<sup>323</sup>

**Findings in Connecticut**

*Trends*

In 2011, there were a total of 21,386 family violence arrests in Connecticut. The greatest proportions of arrests associated with family violence were for disorderly conduct, assault, and breach of peace.

The number of emergency department (ED) visits due to a domestic violence-related injury varied from 256 in FFY 2008 to 301 in FFY 2012.

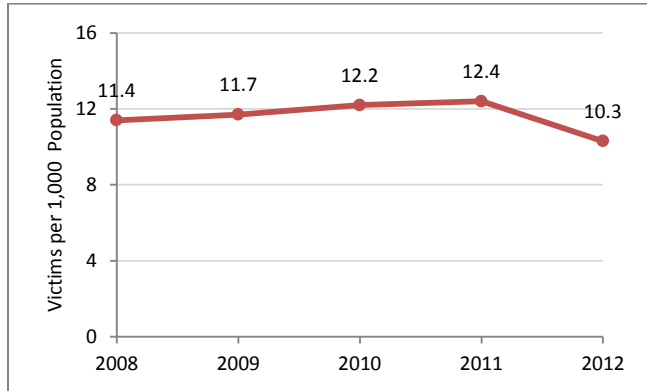
*Disparities*

The number of ED visits due to domestic violence consistently was higher for females than for males. Females were more than 4 times more likely than males to get emergency care as a result of domestic violence in FFY 2012.

In FFY 2012, the number of ED visits was highest for persons 18 to 44 years of age, particularly for white non-Hispanics.

**CHILD ABUSE AND NEGLECT**

**Fig. 225. CHILD ABUSE OR NEGLECT RATES, CONNECTICUT, FFY 2008-2012**



Source: US DHHS, Administration on Children, Youth, and Families, Children’s Bureau, *Child Maltreatment 2012*.

**Fig. 226. CHILD ABUSE OR NEGLECT RATES, BY AGE GROUP, CONNECTICUT, FFY 2012**



Note: Data are for unique cases.

Source: US DHHS, Administration on Children, Youth, and Families, Children’s Bureau, *Child Maltreatment 2012*.

**Why Child Abuse and Neglect are Important**

Child abuse and neglect is an important public health issue and the effects can last a lifetime. It is estimated that on average, child abuse costs each survivor \$210,012 in childhood health care costs, adult medical costs, productivity losses, and expenses for child welfare, criminal justice, and special education.<sup>324</sup> The estimated lifetime cost of child maltreatment cases that are reported in a single year is \$124 billion.<sup>325</sup>

**Findings in Connecticut**

*Trends*

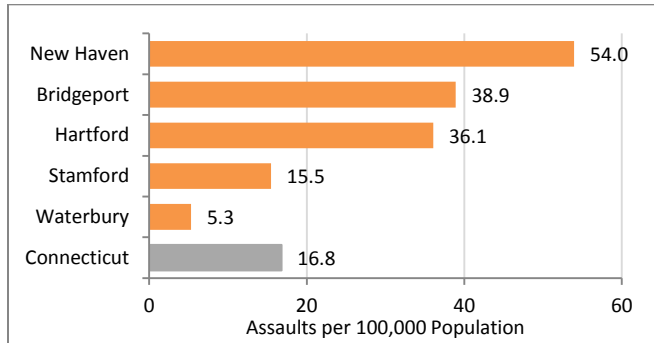
In FFY 2012, there were 8,151 cases of child abuse or neglect in Connecticut. The rate of substantiated child maltreatment or neglect cases ranged from 11.4 cases per 1,000 children in FFY 2008 to 10.3 per 1,000 children in FFY 2012.

*Disparities*

The vast majority of neglected or abused children are less than 6 years of age. In FFY 2012, the rate of child abuse and neglect ranged from 27.6 cases per 1,000 population for children less than 1 year of age to 6.5 cases per 1,000 population for children 14 to 17 years of age. The rate of child abuse or neglect among infants less than 1 year of age was nearly 3 times that for all child victims in Connecticut.

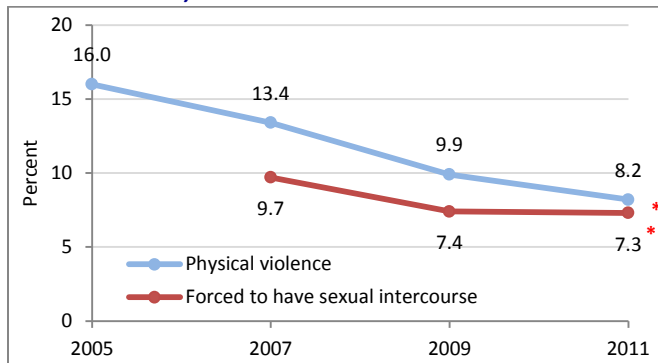
**SEXUAL VIOLENCE**

**Fig. 227. SEXUAL ASSAULT RATE, BY TOWN, CONNECTICUT 2010**



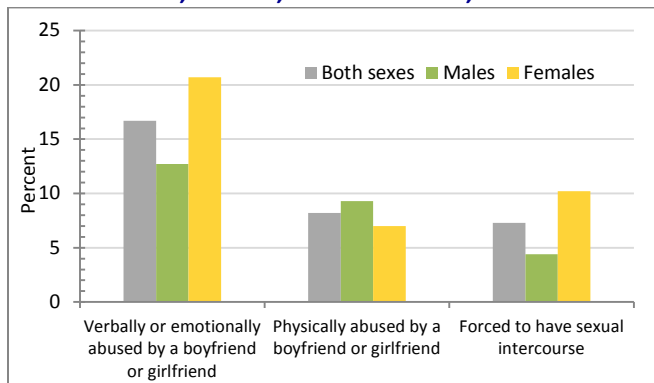
Source: Connecticut Department of Public Safety *Uniform Crime Reports: Offense Statistics*, 2010.

**Fig. 228. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE BEEN PHYSICALLY ABUSED OR WERE EVER FORCED TO HAVE SEXUAL INTERCOURSE, CONNECTICUT, 2005-2011**



Note: \* Indicates significant linear decrease over time for physical violence and forced sexual intercourse ( $p < 0.05$ )  
 Source: Connecticut School Health Survey (CSHS), 2005-2011.

**Fig. 229. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE BEEN VERBALLY OR PHYSICALLY ABUSED BY A BOYFRIEND OR GIRLFRIEND OR WERE EVER FORCED TO HAVE SEXUAL INTERCOURSE, BY SEX, CONNECTICUT, 2011**



Source: Connecticut School Health Survey (CSHS) 2011.

**Why Sexual Violence is Important**

Sexual violence contributes to sizable social and financial costs over the life course of the survivor, and also has ripple effects on spouses, families, and friends. Estimates indicate that each rape costs \$151,423 per survivor, which includes expenses incurred by survivors and justice costs.<sup>326</sup> Survivors of sexual assault experience barriers to educational and occupational attainment and lifetime income losses, particularly for sexual assaults experienced in adolescence.<sup>327</sup>

**Findings in Connecticut**

*Trends*

In 2010, there were 16.8 sexual assaults per 100,000 Connecticut residents.

The Connecticut Sexual Assault Crisis Center provided services for 4,202 female and 735 male victims of sexual assault, ranging in age from less than 10 to more than 65 years, in SFY 2013 (data not shown).

The prevalence of physical dating violence among students in grades 9-12 decreased significantly from 2005 to 2011. From 2007 to 2011, the percent of students who were ever physically forced to have sexual intercourse when they did not want to also decreased significantly.

In 2011, 1 in 6 students in grades 9-12 reported that they experienced verbal or emotional abuse from a boyfriend or girlfriend, 1 in 12 reported an experience of physical abuse from a boyfriend or girlfriend and 1 in 13 reported ever being forced to have sexual intercourse.

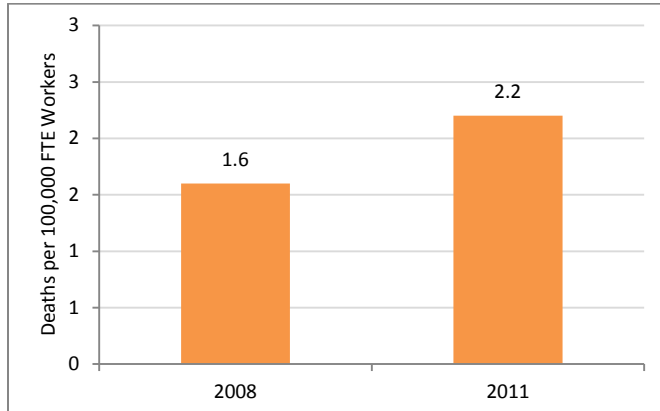
*Disparities*

In 2010, the sexual assault rates in New Haven, Bridgeport, and Hartford exceeded the rate for Connecticut overall and other towns. The rate was highest in New Haven and more than 3 times the rate for Connecticut overall.

In 2011, female students in grades 9-12 were significantly more likely to report ever being verbally or emotionally abused by their boyfriend or girlfriend or ever being physically forced to have sexual intercourse. Hispanic students were more likely than white non-Hispanic students to report ever being forced to have sexual intercourse.

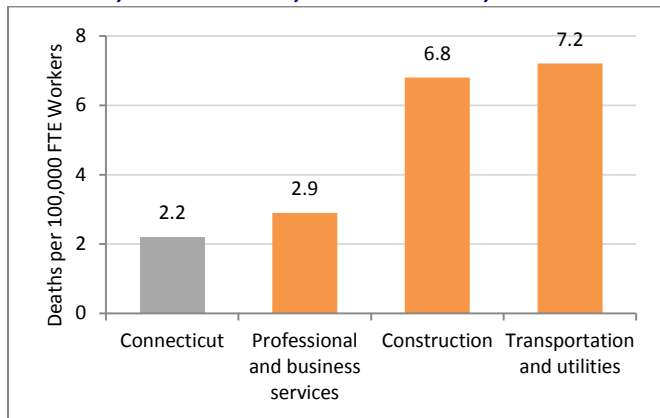
**OCCUPATIONAL INJURIES**

**Fig. 230. DEATH RATES FOR WORK-RELATED INJURIES, CONNECTICUT, 2008 AND 2011**



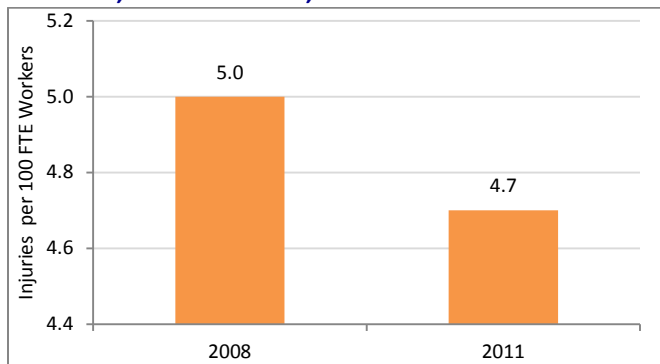
Note: FTE is full-time equivalent workers.  
 Source: Bureau of Labor Statistics, *Census of Fatal Occupational Injuries. Fatal Work Injury Rates. Connecticut, 2008 & 2011.*

**Fig. 231. DEATH RATES FOR WORK-RELATED INJURIES, BY INDUSTRY, CONNECTICUT, 2011**



Note: FTE is full-time equivalent workers.  
 Source: Bureau of Labor Statistics, *Census of Fatal Occupational Injuries. Fatal Work Injury Rates. Connecticut, 2008 & 2011.*

**Fig. 232. INCIDENCE RATES FOR WORK-RELATED INJURIES, CONNECTICUT, 2008 AND 2011**



Note: FTE is full-time equivalent workers.  
 Source: Bureau of Labor Statistics, Table 6, *Incidence Rates of Nonfatal Occupational Injuries and Illnesses by Industry and Case Types, Connecticut, 2008 & 2011.*

**Why Occupational Injury is Important**

Work affects health and health can affect work. American workers spend approximately half of their waking hours at work or commuting to and from work.<sup>328,329</sup> Work and the workplace can affect health through exposures to adverse physical conditions, but also can serve as a setting where employees can engage in health-promoting activities.<sup>330</sup> While occupational safety and health have improved over the last several decades, work-related injuries, illnesses, and deaths persist.<sup>331</sup> It is estimated that non-fatal occupational injury or illness results in at least one day of work loss cost of \$745 per employed worker in Connecticut, or \$867 million.<sup>332</sup> Further, employers pay an estimated \$1 billion per week for direct workers' compensation.<sup>333</sup> Fatal injuries cost the State of Connecticut an estimated \$88 million.<sup>334</sup>

**Findings in Connecticut**

*Trends*

In 2011, there were 37 deaths due to occupational injuries in Connecticut. Occupational deaths are primarily due to motor vehicle crashes, falls, and homicides. In 2008, there were 1.6 deaths per 100,000 full-time workers, and in 2011 there were 2.2 deaths per 100,000 full-time workers.

On average, since 2010, one worker has died each week in Connecticut from a traumatic injury sustained on the job.

In 2011, the death rates for work-related injuries exceeded the overall state rate in transportation and utility, construction, and professional and business services industries. The rate for transportation and utilities was 3.3 times that for Connecticut overall, and the rate for those in the construction industry were 3.1 times greater than the state rate.

In 2011, there were 29,905 hospital discharges for which Workers Compensation was listed as payer; total charges for these hospitalizations were \$140.5 million.

The incidence rates for work-related injuries were 5.0 per 100 full-time workers in 2008 and 4.7 per 100 full-time workers in 2011. Workers at Connecticut hospitals and nursing homes, police, firemen, and construction and utility workers were most likely to be injured.



# 6

## MENTAL HEALTH, ALCOHOL, AND SUBSTANCE ABUSE



## MENTAL HEALTH, ALCOHOL, AND SUBSTANCE USE

Mental health is critical to overall well-being of individuals and the US as a whole.<sup>335</sup> Mental and physical health is intricately connected.<sup>336</sup> Mental illness is among the leading causes of disability in the US.<sup>337</sup> Likewise, substance abuse affects individuals, families, and communities and exacts substantial social, physical, and mental health costs.<sup>338</sup> Definitions of the indicators in this section are given in detail *in Appendix B: Definition of Measures*.

Data regarding suicides are presented in the Injury and Violence Prevention section of this report.

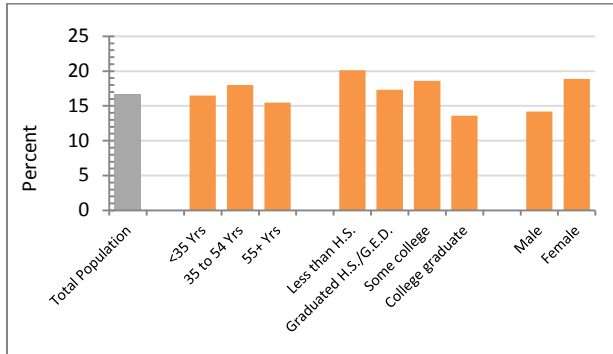
This section includes the following topic areas:

- Mental Health and Mental Disorders
- Mental Health Care
- Autism Spectrum Disorders
- Alcohol Use and Abuse
- Substance Use and Abuse
- Prescription Drug Misuse and Abuse
- Exposure to Trauma



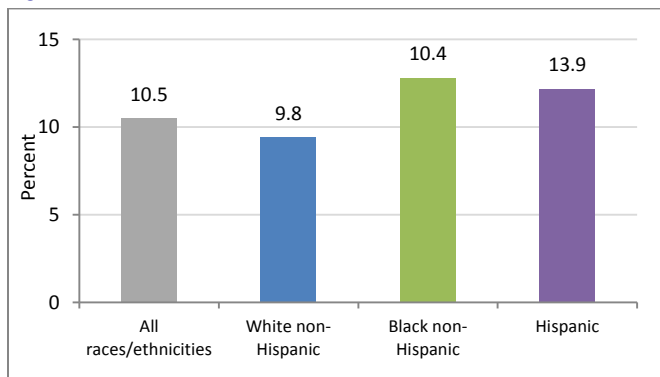
**MENTAL HEALTH AND MENTAL DISORDERS**

**Fig. 233. PERCENT OF ADULTS WHO HAVE BEEN TOLD BY A HEALTH CARE PROVIDER THAT THEY HAVE A DEPRESSIVE DISORDER, BY AGE, EDUCATION, AND SEX, CONNECTICUT, 2012**



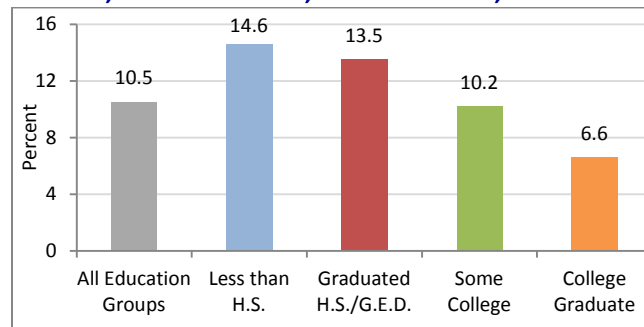
Source: Behavioral Risk Factor Surveillance System.

**Fig. 234. PERCENT OF ADULTS WHO HAD AT LEAST 14 POOR MENTAL HEALTH DAYS IN THE PAST MONTH, BY RACE AND ETHNICITY, CONNECTICUT, 2012**



Source: Behavioral Risk Factor Surveillance System.

**Fig. 235. PERCENT OF ADULTS WHO HAD AT LEAST 14 POOR MENTAL HEALTH DAYS IN THE PAST MONTH, BY EDUCATION, CONNECTICUT, 2012**



Source: Behavioral Risk Factor Surveillance System.

**Why Mental Health and Mental Disorders are Important**

Mental and physical health is intricately connected. Mental disorders are among the leading causes of disability in the United States.<sup>339</sup> Mental health disorders can affect individuals’ mental health treatment, maintenance of physical health, and engagement in health-promoting behaviors.<sup>340,341</sup> Social, environmental, and genetic factors across the lifespan, as well as physical health, such as chronic illnesses, are risk factors for mental disorders such as depression and anxiety.<sup>342,343</sup> In Connecticut, mental health service expenditures totaled \$675 million in 2010.<sup>344</sup>

**Findings in Connecticut**

*Trends*

In 2012, 16.7% of Connecticut adults had been told by a health care provider that they have a depressive disorder.

Fully 10.5% of Connecticut adults had at least 14 poor mental health days in the past month as reported in 2012.

*Disparities*

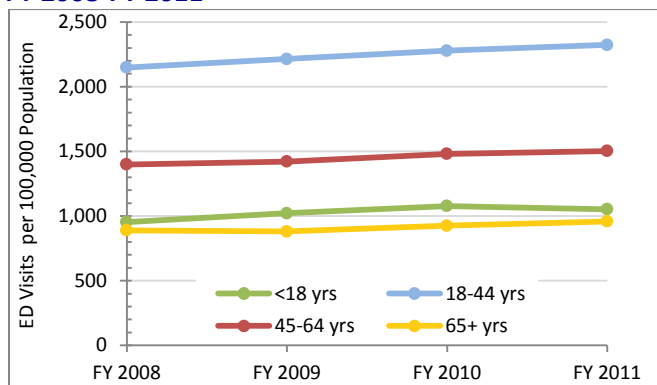
In 2012, the proportion of adults who have ever been told by a health care provider that they have a depressive disorder ranged from 16.5% for persons younger than 35 years of age to 15.5% for persons 55 years of age or older. In 2012, 20.1% of adults with less than a high school degree had been told they have a depressive disorder compared to 13.6% of college graduates. Fully 19.0% of female adults were told by a health care provider that they have a depressive disorder compared to 14.2% of males.

The proportion of adults who had at least 14 poor mental health days in the past month ranged from 9.8% for white non-Hispanics to 13.9% for black non-Hispanics in 2012.

In 2012, the proportion of adults who experienced at least 14 poor mental health days in the past month decreased with increasing educational attainment. Fully 14.6% of adults with less than a high school education experienced at least 14 poor mental health days, compared to only 6.6% of adults with a college degree.

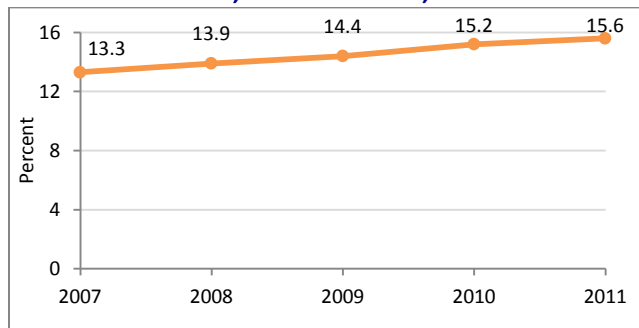
**MENTAL HEALTH AND MENTAL DISORDERS:  
AT-RISK POPULATIONS**

**Fig. 236. RATE OF MENTAL HEALTH EMERGENCY DEPARTMENT VISITS, BY AGE, CONNECTICUT, FY 2008-FY 2011**



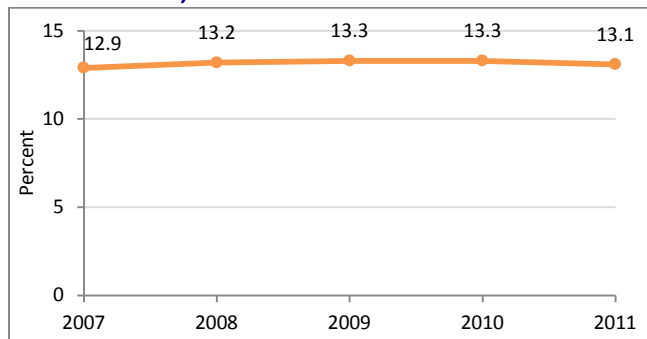
Source: Connecticut Department of Public Health, OHCA from Connecticut Hospital Association Chime, Inc. Emergency Department Database.

**Fig. 237. PERCENT OF MEDICARE BENEFICIARIES WITH DEPRESSION, CONNECTICUT, 2007-2011**



Source: Centers for Medicaid and Medicare Services, State-Level Chronic Conditions Reports, 2007-2011.

**Fig. 238. PERCENT OF MEDICARE BENEFICIARIES WITH DEMENTIA OR ALZHEIMER'S DISEASE, CONNECTICUT, 2007-2011**



Source: Centers for Medicaid and Medicare Services, State-Level Chronic Conditions Reports, 2007-2011.

**Why Disparities in Mental Health and Mental Disorders are Important**

Mental disorders such as depression and anxiety are unequally distributed in the US. A greater proportion of females and persons between the ages of 45 to 64 have depression, and anxiety is also more common among females.<sup>345</sup> In addition, veterans and persons in communities exposed to psychological trauma are also at risk of mental health disorders.<sup>346</sup> Dementias, or the loss of cognitive abilities such as thinking, remembering, and reasoning, affect activities of daily living, problem-solving abilities, and memory.<sup>347</sup> Risk factors for early onset dementia include alcohol intoxication, stroke, use of anti-psychotics, depression, and family history of dementia.<sup>348</sup> Persons with dementia are at greater risk for disability and falls.<sup>349</sup> In the US, Alzheimer's disease, the most common type of dementia, is the sixth leading cause of death among persons at least 18 years of age.<sup>350</sup> Alzheimer's disease among persons 65 years of age and older is expected to double by 2050.<sup>351</sup> In 2010, dementia care totaled \$215 billion in the US and by 2040, dementia costs are estimated to exceed \$379 billion.<sup>352</sup>

**Findings in Connecticut**

*Trends*

The prevalence of depression among Medicare beneficiaries ranged from 13.3% in 2007 to 15.6% in 2011.

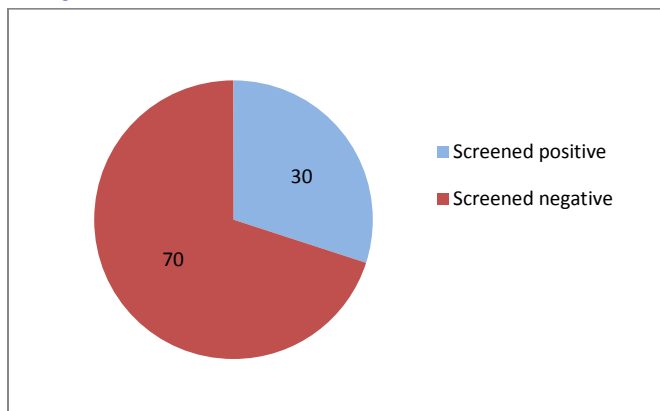
Approximately 13% of Medicare beneficiaries had dementia or Alzheimer's disease from 2007 to 2011.

*Disparities*

The rate of mental health emergency department (ED) visits was highest among persons 18 to 44 years of age, followed by those 45 to 64 years. In FY 2011, the rate of mental health ED visits for persons 18 to 44 years was 2.4 times that for persons at least 65 years. The mental health ED visit rate for persons 45 to 64 years was 1.6 times that for those at least 65 years of age in FY 2011.

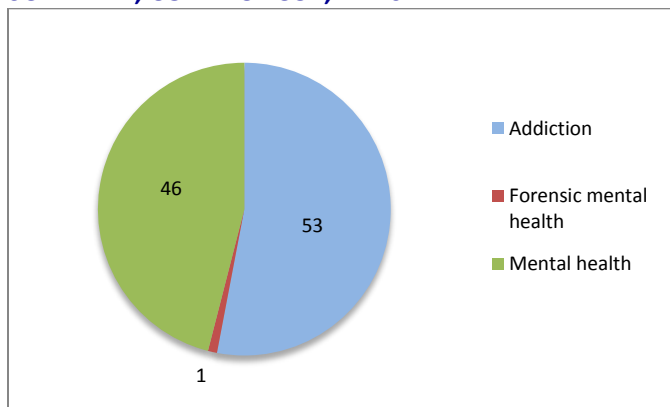
**MENTAL HEALTH CARE**

**Fig. 239. PERCENT OF DEPARTMENT OF MENTAL HEALTH AND ADDICTION SERVICES (DMHAS) CLIENTS WHO SCREENED POSITIVE FOR TRAUMA OR SYMPTOMS OF TRAUMA, CONNECTICUT, FY 2011**



Source: Department of Mental Health and Addiction Services. *DMHAS Clients Who Screen Positive for Trauma in SFY11.*

**Fig. 240. PROGRAMS IN WHICH DEPARTMENT OF MENTAL HEALTH AND ADDICTION SERVICES (DMHAS) CLIENTS WHO SCREENED POSITIVE FOR TRAUMA OR SYMPTOMS OF TRAUMA WERE SCREENED, CONNECTICUT, FY 2011**



Source: Department of Mental Health and Addiction Services. *DMHAS Clients Who Screen Positive for Trauma in SFY11.*

**Why Mental Health Care is Important**

Trauma exposure is an issue that is gaining public health attention and is increasingly prevalent.<sup>353</sup> Special populations affected by trauma include veterans and members of communities who have experienced large-scale psychological trauma from events such as natural disasters, or other stressors concentrated in their communities.<sup>354</sup> Understanding the influence of trauma on individuals and communities is critical for the provision of appropriate mental health and other social services.

Information about trauma exposures among veterans is located in the Health of High Risk Populations section of the report.

**Findings in Connecticut**

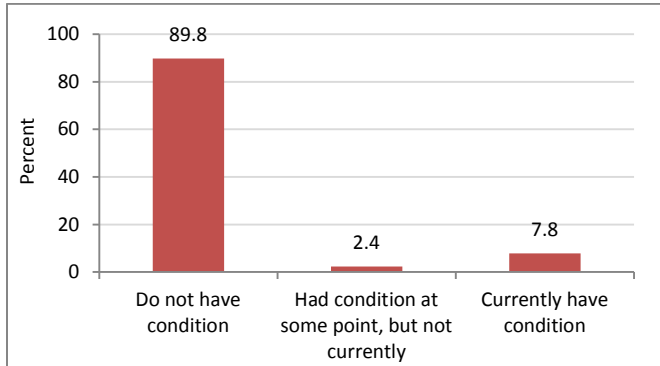
*Trends*

In FY 2011, there were 25,085 clients at the Department of Mental Health and Addiction Services who were screened for trauma or symptoms of trauma. Of these clients, 30% screened positive for trauma or symptoms of trauma.

In FY 2011, of the DMHAS clients who screened positive for trauma or symptoms of trauma, 53% were screened by addiction programs to which they were admitted, 46% were screened by mental health programs, and 1% were screened by forensic mental health programs.

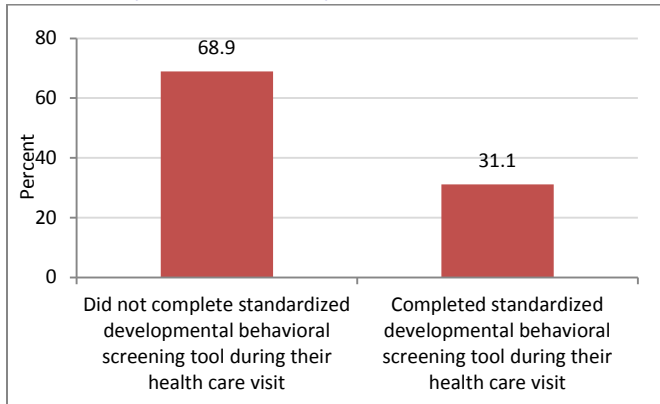
**AUTISM SPECTRUM DISORDERS**

**Fig. 241. PERCENT OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS WHO CURRENTLY HAVE AN AUTISM SPECTRUM DISORDER, CONNECTICUT, 2009-2010**



Note: Conditions included autism, Asperger’s Disorder, or Pervasive Developmental Disorder.  
 Source: Children with Special Health Care Needs Survey, 2009-2010.

**Fig. 242. PERCENT OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS WHO’S PARENTS COMPLETED A STANDARDIZED DEVELOPMENTAL BEHAVIORAL SCREENING TOOL DURING A HEALTH CARE VISIT IN PAST YEAR, CONNECTICUT, 2009-2010**



Source: Children with Special Health Care Needs Survey, 2009-2010.

**Table 15. NUMBER OF REFERRALS TO BIRTH TO THREE AUTISM-SPECIFIC PROGRAMS, CONNECTICUT, FY 2009 VS. FY 2010**

|                     | Number |
|---------------------|--------|
| FY 2009 (Quarter 1) | 9      |
| FY 2010 (Quarter 1) | 21     |

Source: Connecticut Birth to Three System. Connecticut Birth to Three System Year to Year Comparison: Referrals and Eligibility Rates by Program: 1<sup>st</sup> Quarter.

**Why Autism Spectrum Disorders are Important**

The Centers for Disease Control and Prevention defines Autism Spectrum Disorders as developmental disabilities that are associated with social, communication, and behavioral challenges.<sup>355</sup> In the US, approximately 1 in 88 children has an Autism Spectrum Disorder (ASD).<sup>356</sup> Boys and persons with genetic or chromosomal disorders are at greater risk for ASDs.<sup>357</sup> The majority (62%) of children registered in the CDC’s Autism and Developmental Disabilities Monitoring Network do not have an intellectual disability.<sup>358</sup>

**Findings in Connecticut**

*Trends*

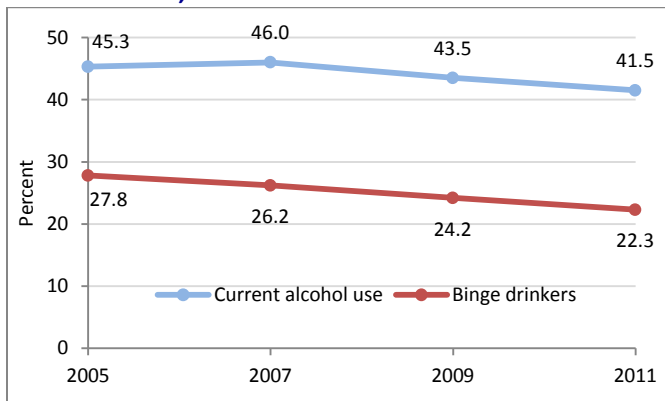
In 2009-2010, 7.8% of children with special health care needs that were 2 to 17 years of age had autism, Asperger’s Disorder, or pervasive developmental disorder (PDD). It is estimated that 10,435 children in Connecticut had one of these conditions in 2009-2010.

In 2009-2010, only 31.1% of parents of children with special health care needs completed a standardized developmental behavioral screening tool during their child’s health care visit in the past year.

In 2009, there were 9 referrals to autism-specific Birth to Three programs in the first quarter of the year, compared to 21 referrals in the first quarter of 2010.

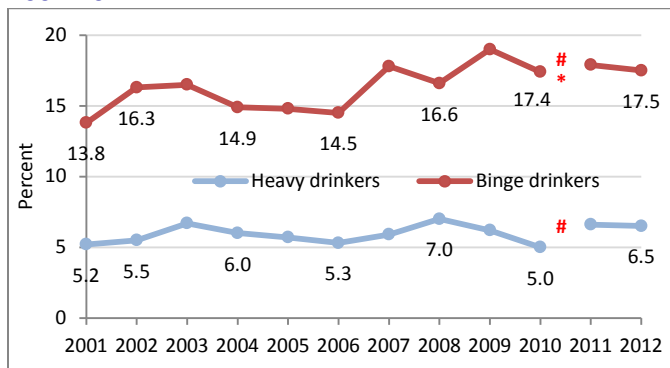
**ALCOHOL USE AND ABUSE**

**Fig. 243. CURRENT ALCOHOL USE AND BINGE DRINKING AMONG STUDENTS (GRADES 9-12), CONNECTICUT, 2005-2011**



Source: Connecticut School Health Survey (CSHS), 2005-2011.

**Fig. 244. PERCENT OF ADULTS CONSIDERED HEAVY DRINKERS OR BINGE DRINKERS, CONNECTICUT, 2001-2012**



Note: \* Indicates that the trend in binge drinking was statistically significant for 2001-2010 (p<0.05). # Break in trend due to new weighting in 2011.

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2001-2012.

**Why Alcohol Use and Abuse are Important**

Heavy alcohol use increases the risk of death due to injury, violence, and chronic conditions such as cancer, heart disease, stroke, and chronic liver disease.<sup>359</sup> Alcohol abuse adversely affects individuals, families, and communities.<sup>360</sup> High school students whose parents do not have a college education and those from rural areas are more likely than their counterparts to consume 15 or more alcoholic beverages in a row.<sup>361</sup> Substance abuse, including alcohol abuse, is linked to public health issues such as teen pregnancy, sexually transmitted infections, domestic violence, child abuse, motor vehicle crashes, fights, crime, homicide, and suicide.<sup>362</sup> Costs associated with excessive alcohol consumption in the US total \$224 billion annually, or \$1.90 per alcoholic beverage, including costs associated with health care, criminal justice, and loss of productivity.<sup>363</sup>

**Findings in Connecticut**

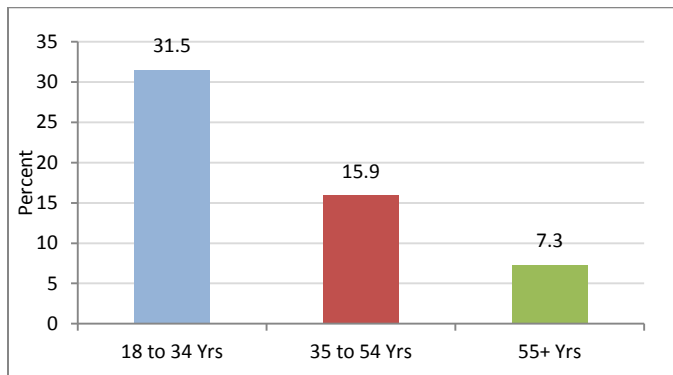
*Trends*

The prevalence of current alcohol use among students in grades 9-12 ranged from 45.3% in 2005 to 41.5% in 2011. This change in current alcohol use among students was not statistically significant. Binge drinking among students also varied over this period, from 27.8% in 2005 to 22.3% in 2011.

The percent of adults who engaged in binge drinking of alcoholic beverages increased from 13.8% in 2001 to 17.4% in 2010. This increase was significant. The percent of adults who reported being heavy drinkers varied from 5.2% in 2001 to 6.5% in 2012 but the increase was not significant. In 2012, more adults engaged in binge drinking (17.5%) than heavy drinking (6.5%). In 2012, binge and heavy drinking affected an estimated 470,000 and 170,000 adults, respectively.

### ALCOHOL USE AND ABUSE: AT-RISK POPULATIONS

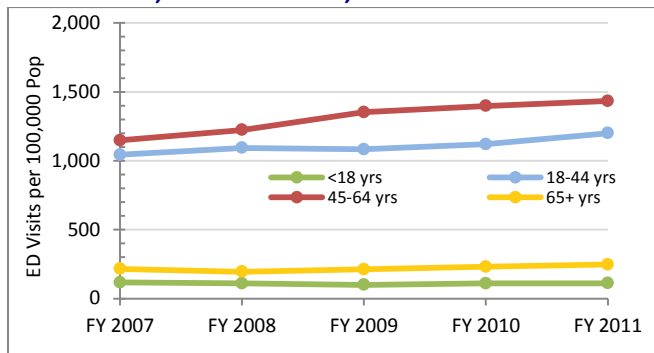
**Fig. 245. PERCENT OF ADULTS WHO BINGE DRINK ALCOHOLIC BEVERAGES, BY AGE, CONNECTICUT 2010**



Note: \* Indicates a significant decrease in binge drinking with age (p<0.05).

Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2010.

**Fig. 246. RATE OF EMERGENCY DEPARTMENT VISITS FOR ALCOHOL ABUSE OR DEPENDENCE BY AGE GROUP, CONNECTICUT, FY 2007-2011**



Source: Connecticut Department of Public Health, OHCA from Connecticut Hospital Association CHIME, Inc. Emergency Department Database.

### Why Disparities in Alcohol Use and Abuse are Important

In the United States, alcohol abuse differs by age and household income. Binge drinking and alcohol abuse is highest among persons aged 18 to 24 and persons from wealthy households.<sup>364</sup> While binge drinking is less prevalent among persons aged 65 and older and those from low-income households, binge drinking is more frequent among members of these populations who do binge drink.<sup>365</sup>

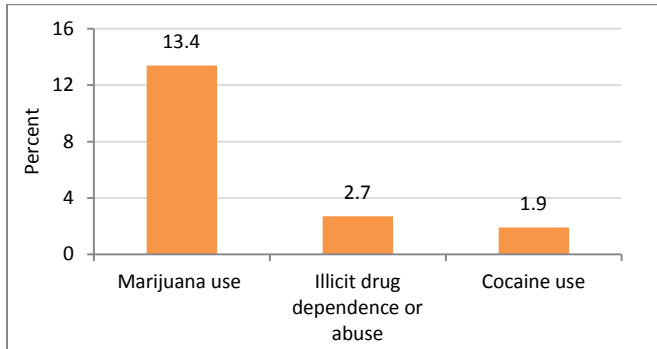
### Findings in Connecticut

In 2010, binge drinking behavior decreased significantly with age, with 31.5% of persons 18 to 34 years of age engaging in binge drinking, followed by 15.9% of persons 35 to 54 years of age and 7.3% of persons at least 55 years of age

In 2011, there were 219.0 ED visits per 100,000 Connecticut residents. While 5 time points may not be sufficient to establish epidemiologic trends, emergency department (ED) visits for alcohol abuse or dependence varied from FY 2007 to FY 2011 for persons 18 to 44 years of age (from 1,043 per 100,000 in FY 2007 to 1,200 per 100,000 in FY 2011) and for persons 45 to 64 years of age (from 1,147 per 100,000 population in FY 2007 to 1,433 per 100,000 population). Over the FY 2007 to FY 2011 period, the rate of ED visits for alcohol abuse or dependence was highest among persons 45 to 64 years of age, 12.9 times higher than that for persons younger than 18 years of age.

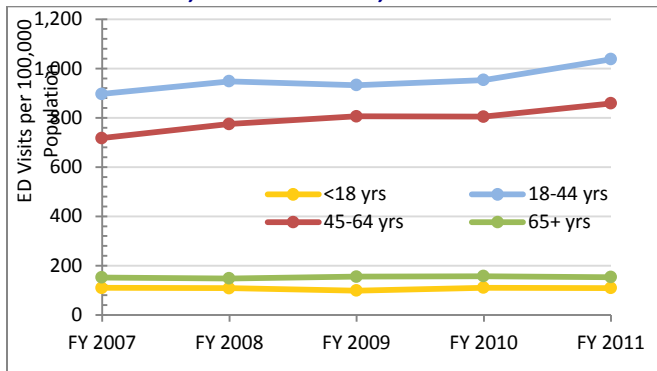
**SUBSTANCE USE AND ABUSE**

**Fig. 247. ILLICIT DRUG USE IN PAST YEAR, AMONG PERSONS AGED 12 AND OLDER, CONNECTICUT, 2010-2011**



Source: Substance Abuse and Mental Health Services Administration (SAMHSA), Survey on Drug Use and Health Model-Based Estimates, 2010-2011.

**Fig. 248. RATE OF EMERGENCY DEPARTMENT VISITS FOR SUBSTANCE ABUSE OR DEPENDENCE, BY AGE GROUP, CONNECTICUT, FY 2007-FY 2011**



Source: Connecticut Department of Public Health, OHCA from Connecticut Hospital Association Chime, Inc. Emergency Department Database.

**Why Substance Use and Abuse are Important**

Substance use and abuse exerts a significant toll on health, safety, quality of life, families, and communities, and contributes to crime, incarceration, family violence, and unintentional injuries.<sup>366</sup> Illegal drug use costs the US \$161 billion annually.<sup>367</sup> In the US, deaths due to unintentional drug overdose have increased, and this increase is driven by the use of opioid pain relievers.<sup>368</sup>

**Findings in Connecticut**

*Trends*

In 2010 and 2011, 13.4% of persons 12 years of age and older used marijuana in the past year, 2.7% abused or were dependent on illicit drugs, and 1.9% used cocaine in the past year.

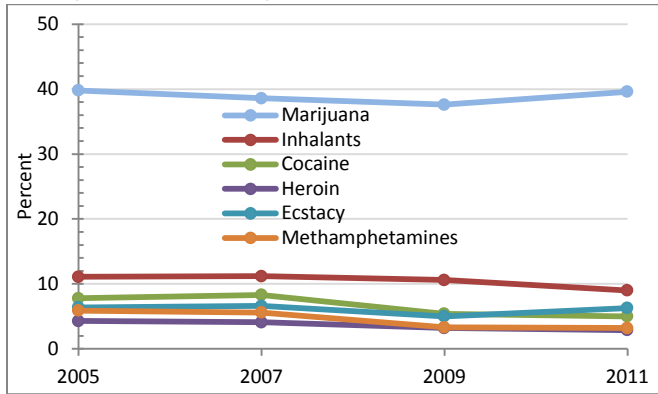
While 5 time points may not be sufficient to establish an epidemiologic trend, from FY 2007 to FY 2011, the rate of emergency department (ED) visits for substance abuse or dependence ranged from 897 per 100,000 population in FY 2007 to 1,037 per 100,000 population in FY 2011 for persons 18 to 44 years of age and for those 45 to 64 years of age varied from 717 per 100,000 population in FY 2007 to 858 per 100,000 population in FY 2011.

*Disparities*

ED visits for substance abuse or dependence was highest for persons 18 to 44 years of age and those 45 to 64 years of age. The substance abuse or dependence ED visit rate for persons 18 to 44 years of age was 9.5 times that for persons less than 18 years of age. The emergency department visit rate for persons 45 to 64 years of age was 7.9 times that for persons less than 18 years of age.

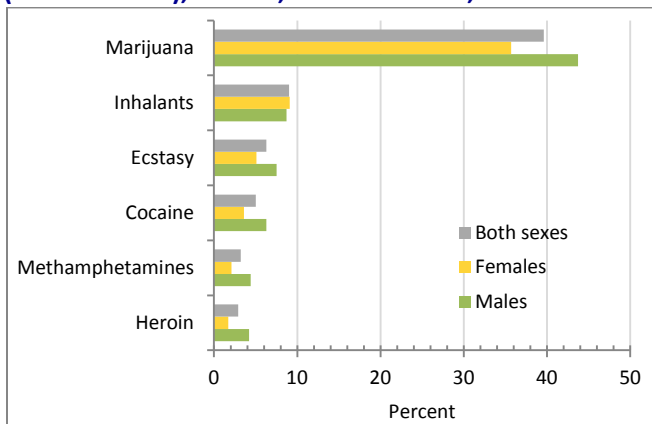
**SUBSTANCE USE AND ABUSE: YOUTH**

**Fig. 249. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE EVER USED ILLICIT DRUGS, BY TYPE OF DRUG, CONNECTICUT, 2005-2011**



Source: Connecticut School Health Survey (CSHS), 2011.

**Fig. 250. ILLICIT DRUG USE AMONG STUDENTS (GRADES 9-12), BY SEX, CONNECTICUT, 2011**



Source: Connecticut School Health Survey (CSHS), 2011.

**Why Disparities in Substance Use and Abuse are Important**

Substance use and abuse patterns differ by age, sex, geography, race, ethnicity, and mental health status and these patterns are shifting. Use of illicit drugs is highest among persons 16 to 25 years of age and males.<sup>369</sup> In the US, opioid pain reliever misuse and overdose mortality are highest among males, persons 20 to 64 years of age, white non-Hispanics, poor and rural populations, and persons with mental illness.<sup>370</sup> While drug overdose mortality rates are higher among males, they have increased for females.<sup>371</sup> Among youth, use of methamphetamines has declined,<sup>372</sup> while prescription drug use has increased.<sup>373</sup>

**Findings in Connecticut**

*Trends*

In 2011, 27.8% of students in grades 9-12 were offered, sold, or given an illegal drug on school property within the past year.

In 2011 the most common drugs used by students in grades 9-12 were marijuana, over-the-counter drugs, prescription drugs, and inhalants. From 1997 to 2011 there was a significant linear decrease (from 44.9% to 39.6%) in the percent of students who used marijuana one or more times during their life. However, the percent of students reporting that they are current marijuana smokers did not change during the same time frame. From 1997 to 2011, there was a significant decrease (from 19.1% to 9.0%) in the percent of students who sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high one or more times during their lifetime.

*Disparities*

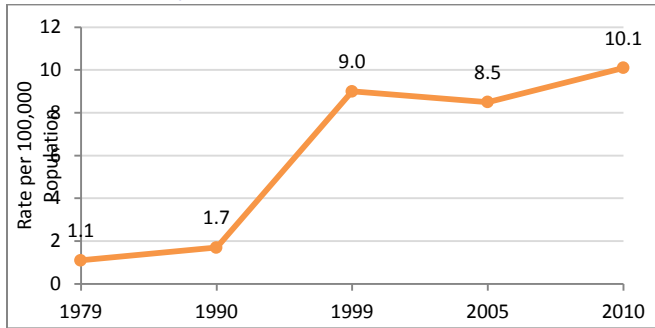
A greater proportion of male students have ever used marijuana, ecstasy, cocaine, methamphetamines, and heroin as compared to female youth. In 2011, 22% more male students used marijuana than female students.

During the 12 months before the survey, a greater proportion of male students (32.3%) than female students (23.3%) were offered, sold, or given an illegal drug on school property.



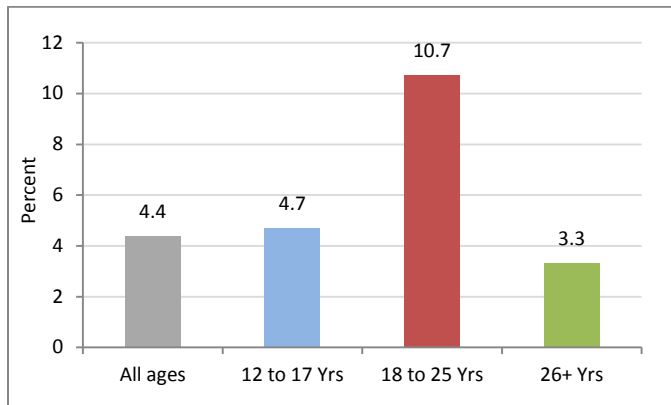
**PRESCRIPTION DRUG MISUSE AND ABUSE**

**Fig. 251. DRUG OVERDOSE MORTALITY RATE, CONNECTICUT, 1979-2010**



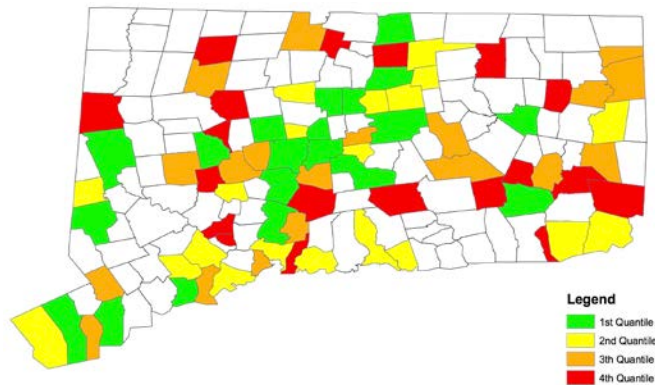
Source: Trust for America’s Health. *Prescription Drug Abuse: Strategies to Stop the Epidemic*. October, 2013. Trust for America’s Health. Based on data from the CDC Wonder Online Database.

**Fig. 252. NONMEDICAL USE OF PAIN RELIEVERS IN PAST YEAR, BY AGE GROUP, CONNECTICUT, 2010-2011**



Source: Substance Abuse and Mental Health Services Administration (SAMHSA), Survey on Drug Use and Health Model-Based Estimates, 2010-2011.

**Fig. 253. RATE OF DEATHS DUE TO OVERDOSE OF PRESCRIPTION PAIN KILLERS, CONNECTICUT, 2009**



Source: Traci Green, PhD, Warren Alpert School of Medicine, Brown University Rhode Island Hospital.

**Why Prescription Drug Abuse is Important**

The misuse and abuse of medication for pain, Attention Deficit Hyperactivity Disorder (ADHD), anxiety, and sleep disorders is an increasing public health concern in the US and Connecticut.<sup>374</sup> Misuse and abuse of these drugs includes taking these medications in a higher quantity than prescribed, for a purpose other than that for which it was prescribed, or taking a medication that was prescribed for another person.<sup>375</sup> Prescription drugs are the fastest growing abused substance in the US.<sup>376</sup> In the US, emergency department visits for misuse or abuse of opioid pain relievers have more than doubled for females since 2004.<sup>377</sup> In Connecticut, residents are more likely to die from an unintentional drug overdose than a motor vehicle accident.<sup>378</sup> The majority of these deaths are attributable to overdose of prescription opioid painkillers.<sup>379</sup>

**Findings in Connecticut**

*Trends*

In Connecticut, the number of deaths due to drug overdose per 100,000 Connecticut residents has increased by 818% from 1979 to 2010, and 12% from 1999 to 2010. In 2010, there were 10.1 deaths due to drug overdose, per 100,000 Connecticut residents.

In 2010-2011, 4.4% of persons 12 years of age and older reported use of pain relievers for nonmedical purposes in the past year.

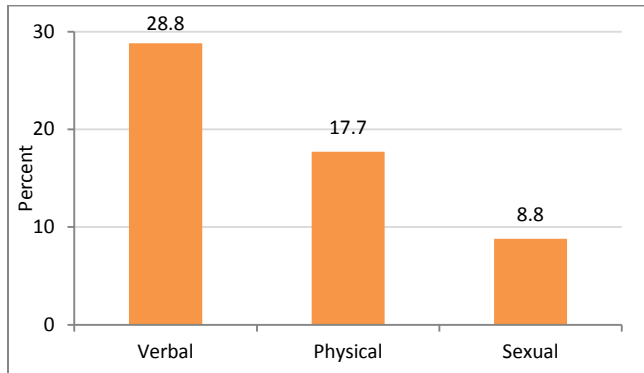
*Disparities*

Nonmedical use of pain relievers in the past year ranged from 10.7% for persons 18 to 25 years of age to 3.3% for persons at least 26 years of age.

In 2009, the rate of deaths due to overdose of prescription pain killers was higher in the suburbs and in rural regions of Connecticut.

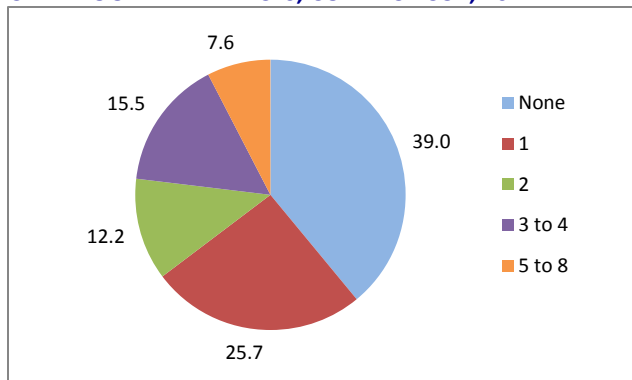
**EXPOSURE TO TRAUMA**

**Fig. 254. PERCENT OF ADULTS WHO EXPERIENCED ABUSE DURING CHILDHOOD, BY TYPE, CONNECTICUT, 2012**



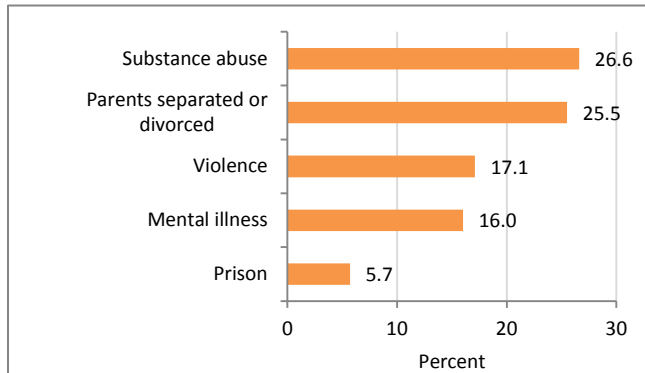
Source: Connecticut Department of Public Health, *Adverse Childhood Experiences in Connecticut*, 2013.

**Fig. 255. PERCENT OF ADULTS WHO REPORT ADVERSE CHILDHOOD EXPERIENCES, BY NUMBER OF ADVERSE CHILDHOOD EXPERIENCES, CONNECTICUT, 2012**



Source: Connecticut Department of Public Health, *Adverse Childhood Experiences in Connecticut*, 2013.

**Fig. 256. PERCENT OF ADULTS WHO EXPERIENCED HOUSEHOLD DYSFUNCTION, BY TYPE, CONNECTICUT, 2012**



Source: Connecticut Department of Public Health, *Adverse Childhood Experiences in Connecticut*, 2013.

**Why Exposure to Trauma is Important**

Exposure to trauma may affect mental health, physical health, and functioning in the family, at school, or among peers.<sup>380,381,382</sup> Traumatic events include experiences of sexual abuse, physical abuse, domestic violence, community and school violence, medical trauma, motor vehicle accidents, acts of terrorism, war, natural disasters, suicides, and other events.<sup>383</sup> Persons exposed to trauma may experience threat of injury, death, or personal integrity that causes feelings of fear, terror, or helplessness. Exposure to trauma varies by race and ethnicity, poverty status, and sex.<sup>384</sup> While those who may need treatment for trauma exposure may not receive adequate services due to limitations in accessing mental health services, family, cultural, and community strengths, as well as governmental supports, may help to promote recovery and resilience among those affected.<sup>385</sup>

**Findings in Connecticut**

In 2012, 28.8% of Connecticut adults reported experiencing verbal abuse, 17.7% reported physical abuse, and 8.8% reported sexual abuse during childhood.

In 2012, 61.0% of adults reported experiencing at least one adverse childhood experience, affecting 1.6 million residents. Fully 7.6% of adults in Connecticut reported experiencing at least 5 adverse childhood experiences, affecting 200,000 residents in Connecticut.

More than one-quarter of adults in Connecticut grew up in a household where there was substance abuse (26.6%) or where their parents were separated or divorced (25.5%).

# 7

## HEALTH SYSTEMS



## HEALTH SYSTEMS

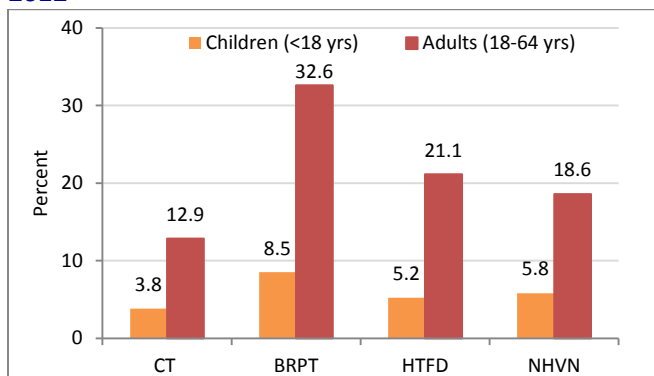
Equitable access to quality health care is important for eliminating health inequities, reducing health care costs, and improving quality of life.<sup>386</sup> Improvements in health insurance coverage, quality of and access to health care, the size and diversity of the health care workforce, and communication between public health-related organizations are critical to enhancing health systems and reducing health care expenditures.<sup>387</sup> Health care spending in Connecticut exceeds national estimates by approximately 20%, totaling \$22 billion or \$6,344 per person.<sup>388</sup> Estimates indicate that if health care spending in Connecticut continues at this rate to exceed that of the US, spending could reach \$26.4 billion in 2017, or \$15,721 per person.<sup>389</sup> In addition to reducing health care expenditures, bolstering the capacity and coordination within the public health infrastructure will be important in these changing times. For example, emergency and community preparedness is a core public health service to build community resiliency in overcoming public health challenges such as climate change, weather-related incidents, or other environmental disasters. Definitions of the indicators in this section are given in detail *in Appendix B: Definition of Measures*.

This section includes the following topic areas:

- Health Insurance Coverage
- Medical Home & Source of Ongoing Care
- Non-Urgent Emergency Department Visits
- Preventable Hospitalizations and Hospital Readmissions
- Health Care Workforce
- Primary Care Workforce
- Diversity of Health Care Workforce
- Health Care in Community-Based Settings
- Public Health Infrastructure
- Health Information Technology
- Health Communication, Health Literacy, & Limited English Proficiency

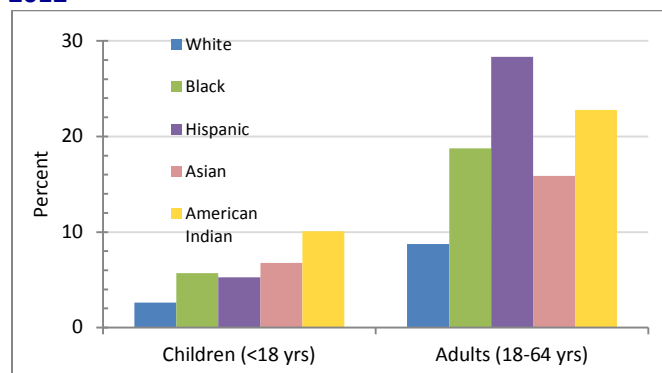
**HEALTH INSURANCE COVERAGE**

**Fig. 257. PERCENT OF UNINSURED CHILDREN AND ADULTS, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, American Community Survey, 1-Year Estimates, 2012, DP03 File.

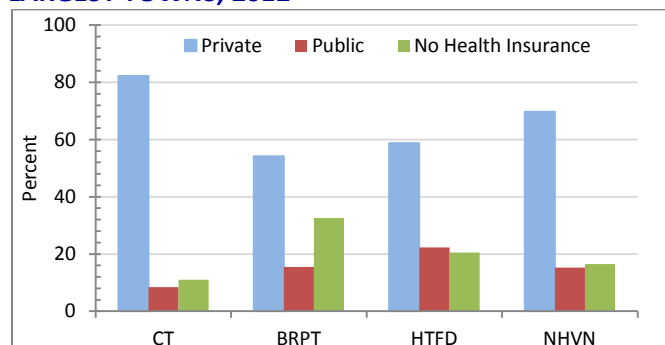
**Fig. 258. PERCENT OF UNINSURED CHILDREN AND ADULTS, BY RACE AND ETHNICITY, CONNECTICUT, 2012**



Note: All racial groups are non-Hispanic.

Source: US Census Bureau, American Community Survey, 1-Year Estimates, 2012, B27001 Files.

**Fig. 259. TYPE OF HEALTH INSURANCE AMONG EMPLOYED ADULTS, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, American Community Survey, 1-Year Estimates, 2012, DP03 File.

**Why Health Insurance is Important**

Persons without health insurance coverage are less likely to receive needed medical care, more likely to have poor health, and more likely to experience premature mortality than those with health insurance.<sup>390</sup> Similarly, inadequate health insurance coverage may burden persons with large medical bills and barriers to accessing needed health care services.<sup>391</sup> Under the Patient Protection and Affordable Care Act (ACA), many more Americans will have health insurance than previously, with the aim of improving access to preventative health services.<sup>392</sup> In accordance with the ACA, Connecticut began enrolling residents in the health insurance exchange on October 1, 2013. The percent of Connecticut residents who do not have health insurance is expected to decline with the implementation of the ACA.

**Findings in Connecticut**

*Trends*

In Connecticut and its largest towns, a greater proportion of adults lacked health insurance relative to children in 2012.

In 2012, approximately 8 out of 10 employed adults in Connecticut had private health insurance, 1 out of 10 did not have health insurance, and almost 1 out of 10 had public health insurance.

*Disparities*

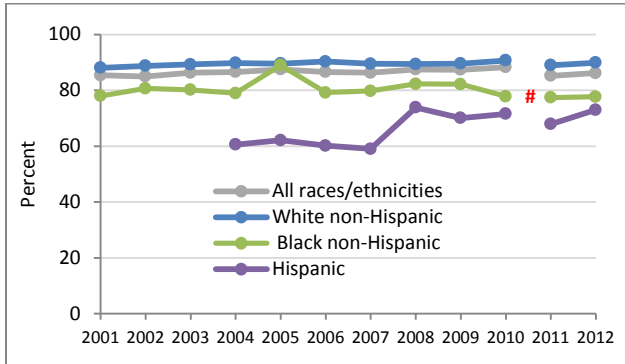
In 2012, it appeared that a greater proportion of children and adults in Bridgeport, Hartford, and New Haven lacked health insurance as compared to children and adults in Connecticut overall.

In 2012, it appeared that a greater proportion of American Indian children and Hispanic adults were uninsured, followed by Asian non-Hispanic and black non-Hispanic children, and American Indian non-Hispanic, black non-Hispanic, and Asian non-Hispanic adults.

The proportion of employed adults who had public health insurance was greater for adults in Connecticut’s largest towns as compared to the state overall. In Bridgeport and Hartford, 20% or more of employed adults lacked health insurance in 2012.

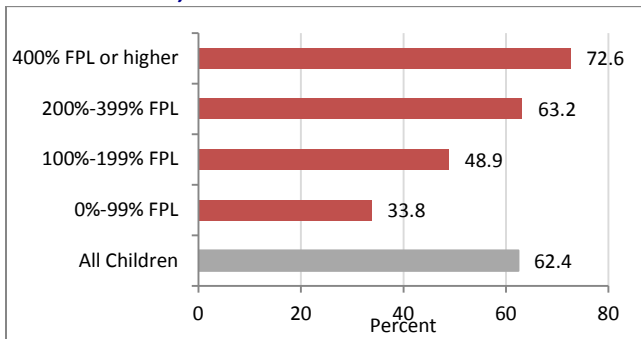
**MEDICAL HOME AND SOURCE OF ONGOING CARE**

**Fig. 260. PERCENT OF ADULTS WITH AT LEAST ONE PERSONAL DOCTOR, BY RACE AND ETHNICITY, CONNECTICUT, 2001-2012**



Note: # Indicates break in trend due to new weighting in 2011.  
 Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System Core Questions Data Report, 2001-2012.

**Fig. 261. PERCENT OF CHILDREN WITH MEDICAL HOME, BY HOUSEHOLD POVERTY LEVEL, CONNECTICUT, 2007**



Note: FPL indicates “federal poverty level”.  
 Source: Medical Home Performance Profile for All Children, 2007 National Survey of Children’s Health.

**Table 16. NUMBER OF PRIMARY CARE MEDICAL HOME ORGANIZATIONS AND PROVIDERS, CONNECTICUT, 2013**

|   | Number |
|---|--------|
| Joint Commission Accredited Organizations with Primary Care Medical Home Certification: CHC, Inc. and Southwest CHC <sup>a</sup>          | 3      |
| Primary Care Medical Home Organizations, Joint Committee <sup>b</sup>   | 108    |
| Providers recognized as Primary Care Medical Homes in compliance with 2011 criteria, National Committee on Quality Assurance <sup>c</sup> | 186    |

Notes: <sup>a</sup>As of 6/5/2013; <sup>b</sup>As of 11/30/2013; <sup>c</sup>As of 12/22/2013  
 Source: The Joint Commission, “62 Joint Commission Accredited Organizations (690 sites) with Primary Care Medical Home (PCMH) Certification (by State) As of 6/5/2013.” Joint Commission Accredited Organization with Primary Care Medical Home Certification by State and National Committee on Quality Assurance Recognition Directory.

**Why Medical Homes and Sources of Ongoing Care are Important**

Having a usual and ongoing source of health care is important for improving quality and use of health services and reducing health care costs.<sup>393</sup> Compared to persons with a usual source of health care, persons with an ongoing source of care have greater trust in providers, better patient-provider communication, more favorable health outcomes, and lower health costs.<sup>394</sup> In 2007, 62.4% of Connecticut’s children, compared to 57.5% nationally, had a Medical Home where a child’s three basic criteria for health care in a medical home were met: (1) usual provider and place for care; (2) family-centered care; and (3) referral and coordination of health services, if needed for children ages 0-17.<sup>395</sup>

**Findings in Connecticut**

*Trends*

While the percent of Hispanics with at least one personal doctor varied from 60.6% in 2004 to 73.0% in 2012, the percent of black non-Hispanics with at least one personal doctor varied little from 78.0% in 2001 to 77.7% in 2012. Similarly, the percent of white non-Hispanics with at least one doctor varied from 88.1% in 2001 to 89.9% in 2012.

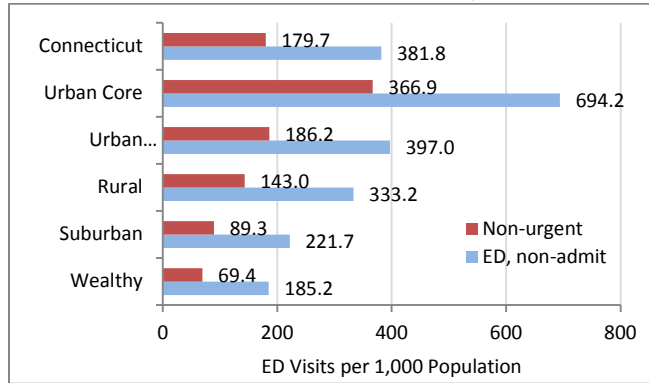
Three Joint Commission Accredited Organizations in Connecticut have achieved Primary Care Medical Home (PCMH) certification: CHC, Inc, Cornell Scott Hill Health Corporation, and Southwest CHC. In 2013, there were 108 accredited primary care medical homes that met the Joint Commission’s accreditation requirements that were created in 2011. Fully 186 providers were recognized as primary care medical homes in compliance with 2011 criteria, according to the National Committee on Quality Assurance.

*Disparities*

In 2007, 62.4% of children had a medical home. Generally, a greater proportion of children from higher-incomes had a medical home. Connecticut has a system of care for Children with Special Health Care Needs, the Connecticut Medical Home Initiative. This system provides care coordination and family support services through 47 community-based medical homes (e.g., community health centers, hospital clinics, and pediatric and family practices). There are 5 care coordination network contractors. Technical assistance is provided to 16 additional practices implementing medical homes.

### NON-URGENT EMERGENCY DEPARTMENT VISITS

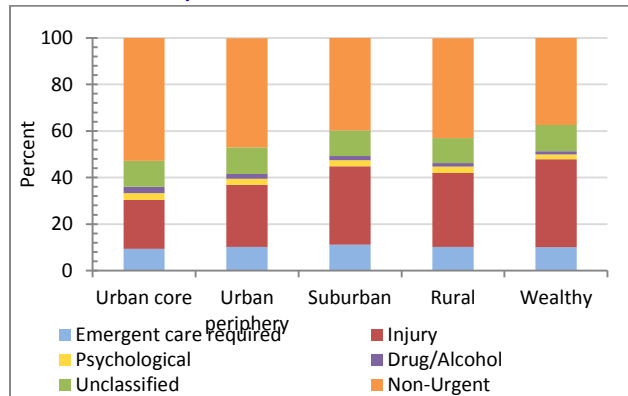
**Fig. 262. RATES OF EMERGENCY DEPARTMENT NON-URGENT VISITS AND NON-ADMITS FOR CONNECTICUT AND TOWNS IN “THE FIVE CONNECTICUTS” \* TOWN GROUPINGS, FY 2009**



Note: Groupings of towns based on socioeconomic factors (by Connecticut State Data Center).

Source: Connecticut Department of Public Health, OHCA, 2010. *Profile in Emergency Department Visits Not Requiring Inpatient Admission to a Connecticut Acute Care Hospital Fiscal Year 2006-2009*, Chart 7.

**Fig. 263. PERCENT OF EMERGENCY DEPARTMENT NON-ADMITS BY VISIT CLASSIFICATION AND “THE FIVE CONNECTICUTS” TOWN GROUPINGS CONNECTICUT, FY 2009**



Note: Groupings of towns based on certain socioeconomic factors by Connecticut State Data Center, 2009.

Source: Connecticut Department of Public Health, OHCA, 2010. *Profile in Emergency Department Visits Not Requiring Inpatient Admission to a Connecticut Acute Care Hospital, Fiscal Year 2006-2009*, Chart 8.

### Why Non-Urgent Emergency Department Visits are Important

Many emergency department (ED) visits are for non-urgent health conditions. Non-urgent ED visits are an important indicator of inadequate access to or quality of primary care.<sup>396</sup> Reducing non-urgent ED visits can result in savings in health care expenditures.<sup>397</sup>

### Findings in Connecticut

#### Trends

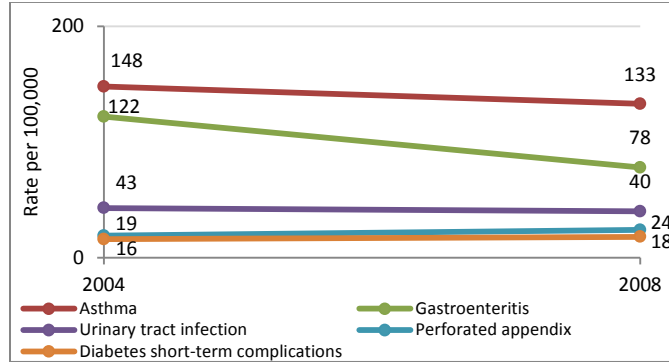
Across all five socioeconomic groupings, the majority of emergency department visits that did not result in hospital admission were for non-urgent issues, followed by injury-related causes.

#### Disparities

The rate of non-urgent emergency department visits and emergency department non-admits was highest in the urban core, followed by the urban periphery and rural regions. Wealthy and suburban regions had the lowest rates of non-urgent emergency department visits and emergency department non-admits.

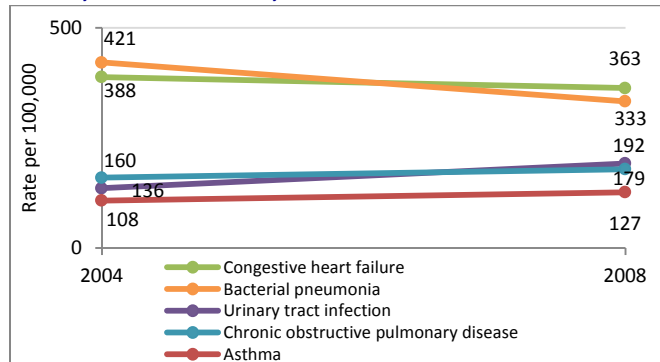
## PREVENTABLE HOSPITALIZATIONS AND HOSPITAL READMISSIONS

**Fig. 264. PEDIATRIC PREVENTABLE HOSPITALIZATION RATES, CONNECTICUT, 2004 VS. 2008**



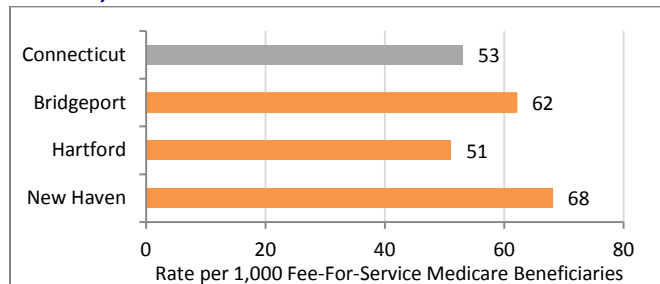
Source: Connecticut Department of Public Health, OHCA, January, 2010, *Preventable Hospitalizations in Connecticut: A Current Assessment of Access to Community Health Services*, Table 1.

**Fig. 265. ADULT PREVENTABLE HOSPITALIZATION RATES, CONNECTICUT, 2004 VS. 2008**



Source: Connecticut Department of Public Health, OHCA, January, 2010, *Preventable Hospitalizations in Connecticut: A Current Assessment of Access to Community Health Services*, Table 1.

**Fig. 266. RATE OF 30-DAY HOSPITAL READMISSIONS AMONG MEDICARE BENEFICIARIES, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: Qualidigm Care Transitions Initiative, Community Report on Hospital Outcomes, 2013, Bridgeport, Hartford, and New Haven reports.

### Why Preventable Hospitalizations and Hospital Readmissions are Important

Preventable hospitalizations are hospitalizations that could have been prevented with appropriate primary or preventative care.<sup>398</sup> Health conditions with high rates of preventable hospitalizations signal areas for improvement in the health care system.<sup>399</sup> In the US, hospital costs for preventable hospitalizations for adults totaled \$31.9 billion in 2010.<sup>400</sup>

Hospital readmissions are one indicator of quality of health care. Many hospital readmissions are preventable and are attributed to differences in patient health, quality of hospital care, hospital discharge planning, and patient care coordination, and local primary care access and quality.<sup>401</sup>

### Findings in Connecticut

#### Trends

Asthma was the leading cause of preventable hospitalization among children, followed by gastroenteritis and urinary tract infections. While two time points may not constitute an epidemiologic trend, the hospitalization rate varied from 2004 to 2008 for hospitalizations due to the three leading causes. The greatest variation in pediatric preventable hospitalizations over this period was for gastroenteritis, which changed by 38%.

Among adults in 2008, congestive heart failure was the leading cause of preventable hospitalization, followed by bacterial pneumonia, and urinary tract infections. While two time points may limit the establishment of epidemiologic trends, the rate of preventable hospitalizations among adults varied for nearly half of the leading causes. The greatest change in adult preventable hospitalizations was for urinary tract infections, which varied by 45%. The rate of hospitalizations due to bacterial pneumonia changed from the leading cause of preventable hospitalizations in 2004 to the second-leading cause in 2008.

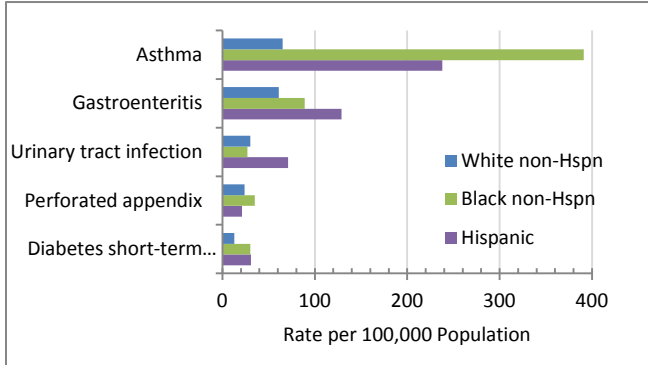
#### Disparities

In 2012, the rate of 30-day hospital readmissions among Medicare beneficiaries in Bridgeport (62 per 1,000 Medicare beneficiaries) and New Haven (68 per 1,000 Medicare beneficiaries) exceeded that for the state (53 per 1,000 Medicare beneficiaries).



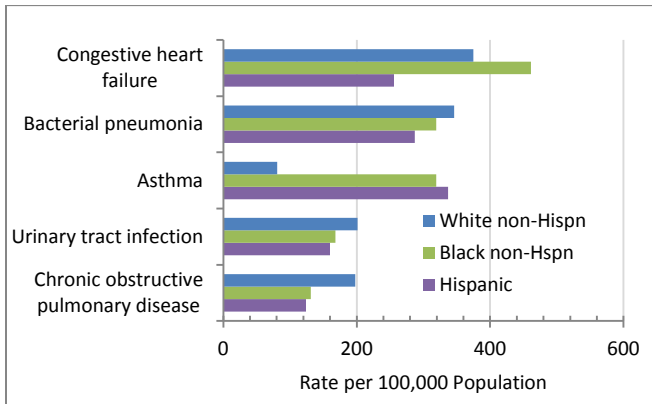
**PREVENTABLE HOSPITALIZATIONS: AT-RISK POPULATIONS**

**Fig. 267. PEDIATRIC PREVENTABLE HOSPITALIZATION RATES BY RACE AND ETHNICITY, CONNECTICUT, 2008**



Source: Connecticut Department of Public Health, OHCA, January, 2010, *Preventable Hospitalizations in Connecticut: A Current Assessment of Access to Community Health Services*, Table 8.

**Fig. 268. ADULT PREVENTABLE HOSPITALIZATION RATES BY RACE AND ETHNICITY, CONNECTICUT, 2008**



Source: Connecticut Department of Public Health, OHCA, January, 2010, *Preventable Hospitalizations in Connecticut: A Current Assessment of Access to Community Health Services*, Table 8.

**Why Disparities in Preventable Hospitalizations are Important**

Black non-Hispanics, Hispanics, and residents of lower-income neighborhoods are more likely to experience preventable hospitalizations.<sup>402</sup> It is estimated that eliminating income-related disparities in preventable hospitalizations would save \$6.7 billion in health care expenditures annually.<sup>403</sup>

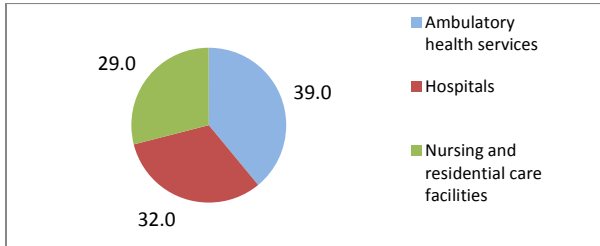
**Findings in Connecticut**

The rate of preventable pediatric hospitalizations was lowest for white non-Hispanics for most of the leading causes. Black non-Hispanics had the highest rates of pediatric hospitalization for asthma and perforated appendices. Hispanics had the highest rates of pediatric hospitalizations for gastroenteritis, urinary tract infections, and diabetes short-term complications. The pediatric hospitalization rate for asthma was 6 times higher for black non-Hispanics as compared to white Non-Hispanics.

For the three leading causes of preventable hospitalization, black non-Hispanic adults had a higher rate of hospitalization for congestive heart failure than white non-Hispanics and Hispanics. White non-Hispanic adults had the highest rates for hospitalizations for bacterial pneumonia, urinary tract infections, and chronic obstructive pulmonary disease. The rate of asthma-related hospitalizations for Hispanics was approximately four-times the rate for white non-Hispanics.

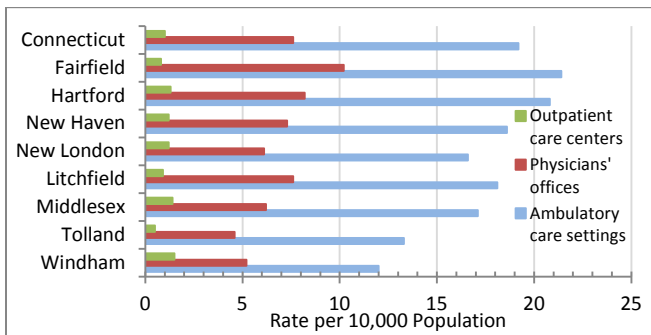
**HEALTH CARE WORKFORCE**

**Fig. 269. PERCENT OF HEALTH CARE WORKFORCE, BY EMPLOYMENT SETTING, CONNECTICUT, 2011**



Source: University of Connecticut, Center for Public Health and Health Policy, Connecticut Health Care Workforce Scan, 2013, Fig. 1. From US Census County Business Patterns.

**Fig. 270. RATE OF AMBULATORY CARE ESTABLISHMENTS, BY COUNTY, CONNECTICUT, 2011**



Source: University of Connecticut, Center for Public Health and Health Policy, Connecticut Health Care Workforce Scan, 2013, Fig. 2. From US Census County Business Patterns.

**Table 17. NUMBER AND RATE OF SELECTED LICENSED PRACTITIONERS, CONNECTICUT, 2012**

| Practitioner Type                   | CT Licensed | Mean age (years) | 60 years of age and older (%) | Rate per 100,000 population |
|-------------------------------------|-------------|------------------|-------------------------------|-----------------------------|
| Advanced practical registered nurse | 3,664       | 48.7             | 19%                           | 102.5                       |
| Certified alcohol/drug counselor    | 286         | 53.9             | 29%                           | 8.0                         |
| Dental hygienist                    | 3,654       | 45.4             | 11%                           | 102.2                       |
| Dentist                             | 3,385       | 50.7             | 29%                           | 94.7                        |
| Licensed alcohol/drug counselor     | 773         | 54.3             | 33%                           | 21.6                        |
| Licensed practical nurse            | 13,249      | 47.8             | 24%                           | 370.7                       |
| Physician assistant                 | 1,867       | 40.5             | 7%                            | 52.2                        |
| Physician/surgeon/osteopath         | 17,154      | 51.7             | 27%                           | 480.0                       |
| Psychologist                        | 1,879       | 53.4             | 35%                           | 52.6                        |
| Registered nurse                    | 57,429      | 48.8             | 22%                           | 1,606.8                     |

Source: Connecticut Department of Public Health, Office of Health Care Access, Statewide Health Care Facilities and Services Plan, October, 2012, Table 2.2.

**Why the Health Care Workforce is Important**

Ambulatory care, or health care in settings such as physicians' offices, dentists' offices, outpatient centers, medical and diagnostic laboratories, home health services, and other ambulatory services, is an important component of the delivery of health care across Connecticut.<sup>404</sup> In 2011, there were 219,725 health professionals and support staff in Connecticut's health care industry, 85,594 of whom worked in ambulatory care settings in Connecticut.<sup>405</sup> Recently, the number of health professionals in nursing and residential care facilities has increased, and is anticipated to continue to increase given the aging of the population.<sup>406</sup>

**Findings in Connecticut**

*Trends*

In 2011, 39.0% of the health care workforce was employed in ambulatory health services, followed by 32.0% of which was employed in hospitals. Nearly 3 in 10 members of Connecticut's health care workforce were employed in nursing and residential care facilities.

In 2011, across all counties in Connecticut, the number of ambulatory care settings per 10,000 Connecticut residents exceeded the rate of physicians' offices per 10,000 Connecticut residents and outpatient care centers per 10,000 residents.

*Disparities*

Windham, Tolland, and New London Counties had lower rates of ambulatory care settings per 10,000 residents than other counties and the rate for the state. Compared to other counties, Windham and Tolland Counties also had the lowest rate of physicians' offices per 10,000 residents.

In 2012, there were 1,606.8 registered nurses; 480.0 physicians, surgeons, or osteopaths; 370.7 licensed practical nurses, 102.5 advanced practical registered nurses; and 102.2 dental hygienists per 100,000 Connecticut residents. There were fewer than 100 dentists, physician assistants, and psychologists per 100,000 population, and only 8.0 certified alcohol or drug counselors, and 21.6 licensed alcohol or drug counselors per 100,000 population.

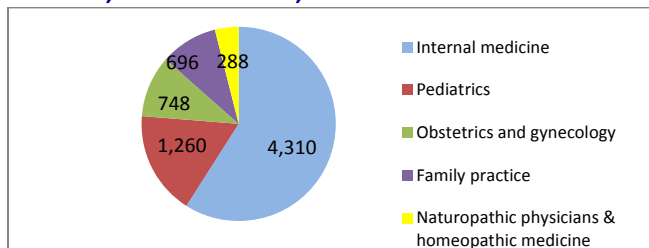
**PRIMARY CARE WORKFORCE**

**Table 18. SUPPLY OF PRIMARY CARE PRACTITIONERS CONNECTICUT, 2012**

| Primary care practitioner type      | Number with current license | Rate per 100,000 population |
|-------------------------------------|-----------------------------|-----------------------------|
| Physicians (MD and DO)              | 7,302                       | 204.3                       |
| Licensed nurse midwives             | 217                         | 6.1                         |
| Advanced practice registered nurses | 3,664                       | 102.5                       |
| Physician assistants                | 1,867                       | 52.2                        |
| TOTAL                               | 13,050                      | 365.1                       |

Source: Connecticut Department of Public Health, Office of Health Care Access, *Statewide Health Care Facilities and Services Plan*, October 2012, Table 9.1.

**Fig. 271. NUMBER OF PRIMARY CARE PHYSICIANS, BY TYPE, CONNECTICUT, 2012**



Source: Connecticut Department of Public Health, Office of Health Care Access, *Statewide Health Care Facilities and Services Plan*, October 2012, Chapter 9, Table 9.1.

**Table 19. MEDICALLY UNDERSERVED AREAS OR POPULATIONS (MUA/P) AND HEALTH PROFESSIONAL SHORTAGE AREAS (HPSA), CONNECTICUT, 2013**

| County        | # of MUA/P Designations | # of HPSA Designations |              |               |
|---------------|-------------------------|------------------------|--------------|---------------|
|               |                         | Dental                 | Primary Care | Mental Health |
| Fairfield     | 6                       | 9                      | 7            | 8             |
| Hartford      | 7                       | 9                      | 4            | 10            |
| Litchfield    | 1                       | 2                      | 2            | 2             |
| Middlesex     | 1                       | 1                      | 1            | 3             |
| New Haven     | 8                       | 7                      | 6            | 7             |
| New London    | 3                       | 4                      | 3            | 5             |
| Tolland       | 1                       | 2                      | 1            | 2             |
| Windham       | 2                       | 3                      | 2            | 3             |
| Tribal Nation | *                       | 2                      | 1            | 1             |
| Connecticut   | 29                      | 39                     | 27           | 41            |

Note: \*Tribal nations have their own special designation.  
 Source: Connecticut Department of Public Health, Primary Care Office, October 1, 2013.

**Why the Supply of Primary Care Workforce is Important**

Primary care providers are critical sources of ongoing medical care.<sup>407</sup> Primary care providers' routine and more frequent interactions with patients in the context of family and community health settings can facilitate their development of trusted relationships with patients.<sup>408</sup> Persons with a primary care provider whom they see for ongoing care are more likely to trust their provider, experience good patient-provider communication, and receive appropriate health care.<sup>409</sup> While primary care providers are important to addressing the health of communities, there has been a decline in the number of medical students interested in careers in primary care.<sup>410</sup>

**Findings in Connecticut**

*Trends*

In 2012, there were 204.3 primary care physicians, 102.5 advanced practice registered nurses, and 52 physician assistants per 100,000 Connecticut residents.

In 2012, there were 7,302 primary care physicians in Connecticut. The majority of primary care physicians practiced internal medicine, followed by pediatrics, and obstetrics and gynecology.

*Disparities*

Although New Haven, Hartford, and Fairfield Counties have the most health professional shortage areas (HPSAs) relative to other counties in Connecticut, one really needs to take a closer look at town and Census tract level designations to get a true picture of the disparities that exist in Connecticut. In the past, Connecticut had not had any county designations, however, in the past 3 years there have been 5 whole counties as designated HPSAs.

## DIVERSITY OF HEALTH CARE WORKFORCE

**Table 20. PERCENT OF HEALTH PRACTITIONERS, BY SEX, CONNECTICUT, 2007-2010**

|   | Male | Female |
|---|------|--------|
| Physician and surgeon (2010)                | 63.7 | 36.3   |
| MD (2010)                                   | 68.2 | 31.8   |
| DO (2010)                                   | 62.0 | 38.0   |
| Family Medicine and General Practice (2009) | 63.8 | 36.2   |
| Internal Medicine (2009)                    | 63.3 | 36.7   |
| Obstetrics and Gynecology                   | N/A  | N/A    |
| Pediatrics (2009)                           | 47.1 | 52.9   |
| Physician Assistant (2010)                  | 31.9 | 67.8   |
| Registered Nurse (2010)                     | 7.5  | 92.5   |
| Licensed Nurse (2010)                       | 8.5  | 91.5   |
| Nurse Practitioner                          | N/A  | N/A    |
| Psychiatrist                                | N/A  | N/A    |
| Psychologists (2010)                        | 32.4 | 67.5   |
| Mental Health Counselor (2010)              | 30.8 | 69.2   |
| Dentist (2007)                              | 83.7 | 16.3   |
| Dental Hygienist (2010)                     | 4.3  | 95.9   |
| Pharmacist (2010)                           | 49.0 | 51.0   |

Note: N/A indicates data not available.

Source: University of Connecticut, Center for Public Health and Health Policy, Connecticut Health Care Workforce Scan, 2013, Table 9.

**Table 21. PERCENT OF HEALTH PRACTITIONERS, BY RACE AND ETHNICITY, CONNECTICUT, 2009-2010**

|   | White | Black | Hispanic | Asian | Other |
|---|-------|-------|----------|-------|-------|
| Physician and surgeons (2010)               | 71.8  | 4.9   | 5.0      | 17.0  | 1.2   |
| Family Medicine and General Practice (2009) | 85.3  | 1.5   | 3.7      | 9.6   | N/A   |
| Internal Medicine (2009)                    | 83.6  | 1.7   | 0.9      | 13.8  | N/A   |
| Pediatrics (2009)                           | 86.4  | 2.6   | 3.2      | 7.8   | N/A   |
| Physician Assistant (2010)                  | 73.7  | 7.2   | 11.4     | 6.9   | 0.9   |
| Registered Nurse (2010)                     | 82.3  | 7.8   | 3.5      | 5.3   | 1.0   |
| Licensed Nurse (2010)                       | 68.1  | 23.3  | 5.1      | 1.8   | 1.6   |
| Psychologist (2010)                         | 90.8  | 2.1   | 4.9      | 0.8   | 1.4   |
| Mental Health Counselor (2010)              | 68.4  | 18.6  | 7.5      | 1.2   | 2.2   |
| Dentist (2010)                              | 75.3  | 3.3   | 7.5      | 10.2  | 3.7   |
| Dental Hygienist (2010)                     | 88.3  | 2.6   | 7.9      | 0.0   | 1.4   |
| Pharmacist (2010)                           | 77.0  | 2.1   | 2.9      | 16.7  | 0.9   |

Note: N/A indicates data not available. All racial groups are non-Hispanic.

Source: University of Connecticut, Center for Public Health and Health Policy, Connecticut Health Care Workforce Scan, 2013, Table 10.

### Why the Diversity of the Health Care Workforce is Important

Improving the diversity of the health care workforce is important for ensuring the delivery of culturally competent health care for the nation's increasingly diverse population.<sup>411</sup> In addition, increasing the diversity of the health care workforce will help to expand health care to underserved populations.<sup>412</sup> Non-white physicians provide care to the majority of racial and ethnic minority, non-English speaking, and underserved populations.<sup>413</sup>

Connecticut's health care workforce is less diverse than the state's population. Fewer than 1 in 10 health care professionals in Connecticut are people of color, compared to 3 in 10 Connecticut residents.<sup>414</sup>

### Findings in Connecticut

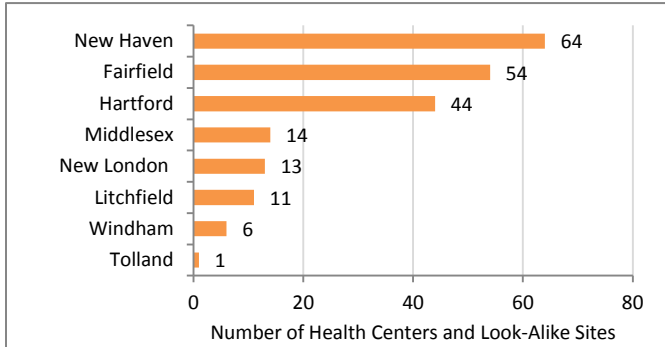
#### Disparities

Several health care practitioner roles have unequal representation by sex. In 2010, the majority of physicians with an MD (68.2%) or DO (62.0%) were male. In 2010, an overwhelming proportion of registered nurses (92.5%) and dental hygienists (95.9%) were female. Fully 83.7% of dentists were male in 2007.

The majority of health care practitioners were white non-Hispanic, across health care roles and fields. In 2010, for most health practitioner roles, the proportion of practitioners who identified as black non-Hispanic, Asian, Hispanic, or who identified as another racial group comprised 10% or less of the health care workforce. Exceptions include 23.3% of licensed nurses who were black non-Hispanic, 18.6% of mental health counselors who were black non-Hispanic, and 16.7% of pharmacists who were Asian.

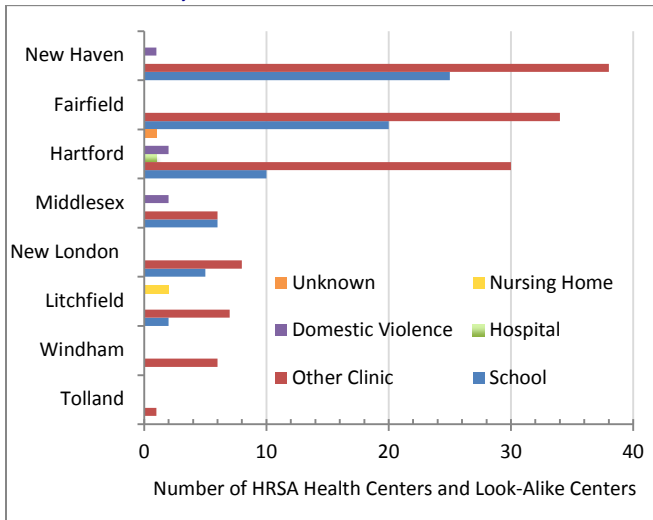
**Health Care in Community-Based Settings**

**Fig. 272. NUMBER OF FEDERALLY QUALIFIED HEALTH CENTERS (FQHCs), BY COUNTY, CONNECTICUT, 2013**



Source: US DHHS Health Resources and Services Administration Data Warehouse Report Tool, HRSA Health Center and Look-Alike Site Directory. Accessed May 15, 2013.

**Fig. 273. NUMBER OF FEDERALLY QUALIFIED HEALTH CENTERS (FQHCs), BY TYPE AND COUNTY, CONNECTICUT, 2013**



Source: US DHHS Health Resources and Services Administration Data Warehouse Report Tool, HRSA Health Center and Look-Alike Site Directory. Accessed May 15, 2013.

**Why Health Care in Community-Based Settings are Important**

Health care in community-based settings such as federally qualified health care centers, school-based health clinics, and dental clinics are important resources for improving access to health care.<sup>415</sup> These systems are important sources of health care for vulnerable populations that experience inequities in health care access, including low-income, racial, and ethnic minority populations.<sup>416</sup> Safety net systems are generally characterized by a more diverse staff and may have programs or policies that support working with diverse populations.<sup>417</sup>

**Findings in Connecticut**

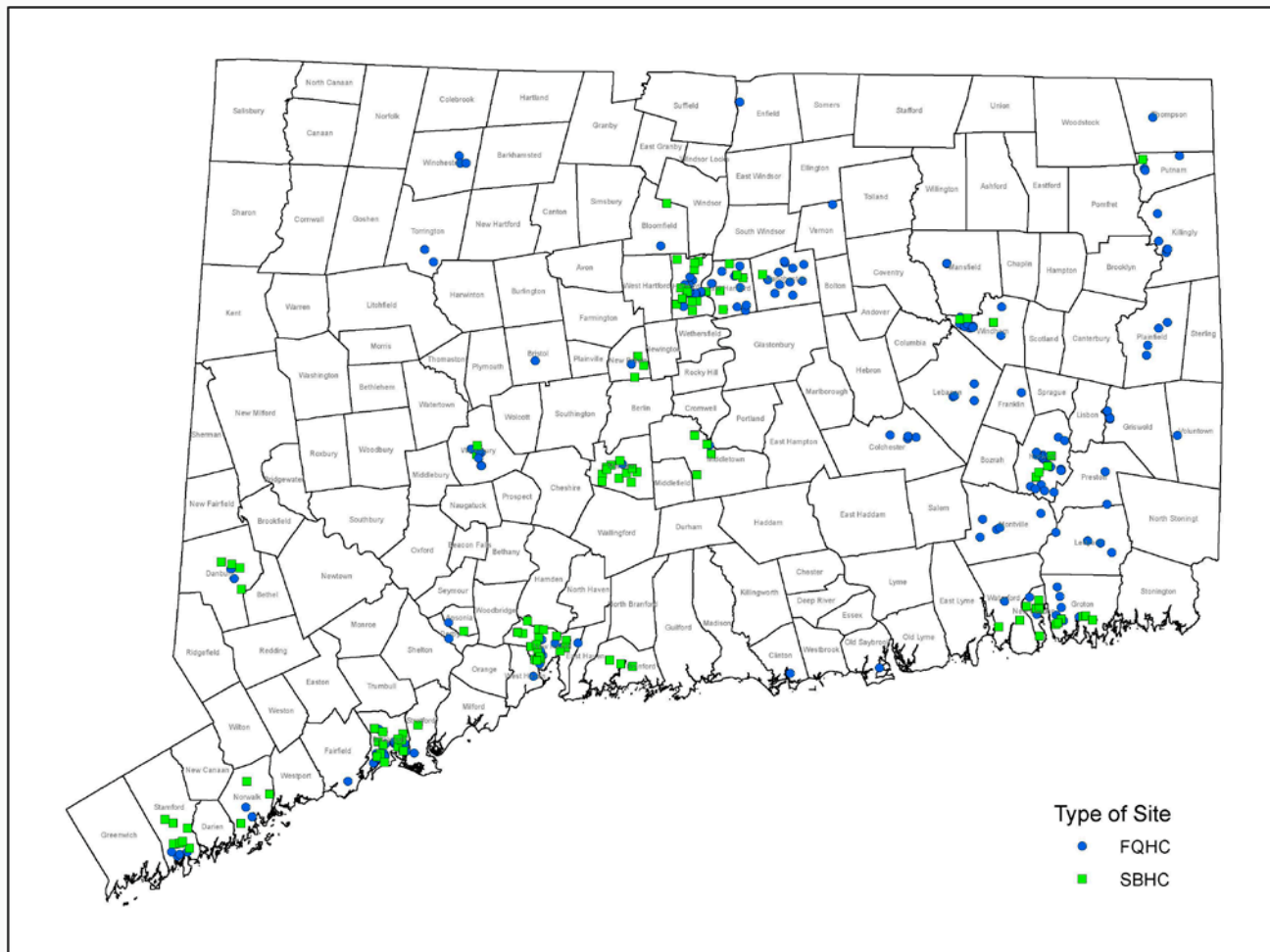
There are more Federally Qualified Health Centers (FQHCs) in New Haven, Fairfield, and Hartford Counties.

The majority of health centers in Connecticut were classified as ‘other’ clinics, followed by school-based health centers or FQHC look-alike health centers.

New models of community based care are emerging. Waterbury Health Access Program (WHAP) and Project Access of New Haven (PA-NH) also serve underserved populations. WHAP, which opened in 2004, is a multi-institutional collaboration of health organizations in Waterbury, Connecticut that serves the health care needs of underinsured and uninsured residents in Waterbury and 21 surrounding towns. PA-NH is a coordinated system of hospitals and community organizations working together to provide specialty health care for low-income, uninsured individuals through a network of volunteer physicians that donate care and local hospitals that donate services. The program is based on a model that was developed in 1996 in Asheville, North Carolina and has been replicated in more than 50 communities across the United States, provides timely access to specialty care, ancillary services, and coordinates the delivery of comprehensive care to the uninsured. PA-NH partners with local primary care centers and emergency departments to link patients in need of specialty and/or ancillary medical care with their expanded network of providers.

HEALTH CARE IN COMMUNITY-BASED SETTING

Fig. 274. FEDERALLY QUALIFIED HEALTH CENTER AND SCHOOL-BASED HEALTH CENTER LOCATIONS, CONNECTICUT, 2014



Note: FQHC indicates Federally Qualified Health Center, SBHC indicates School-Based Health Center.  
 Source: Connecticut Department of Public Health.

Findings in Connecticut

In 2014, there were 253 Federally Qualified Health Centers (FQHCs) and satellites and 121 School-Based Health Centers (SBHCs). There are approximately 31 Community Health Center Dental Clinics, 14 hospital-based dental clinics, and 4 clinics at dental hygiene schools as of March 2013. FQHCs and SBHCs are generally concentrated in Connecticut’s largest towns and in the southeastern region of Connecticut. FQHCs are also distributed across Connecticut’s eastern region and in some areas in western Connecticut.

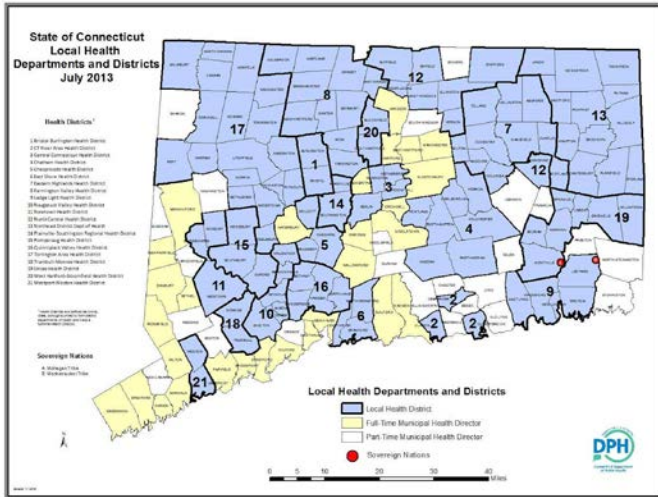
**PUBLIC HEALTH INFRASTRUCTURE**

**Table 22. NUMBER OF FULL- AND PART-TIME LOCAL HEALTH DEPARTMENTS, CONNECTICUT, 2013**

|                  | No. Towns  | Population       | Percent    |
|------------------|------------|------------------|------------|
| <b>Full-time</b> | <b>145</b> | <b>3,326,893</b> | <b>94</b>  |
| Municipal        | 29         | 1,661,979        | 46         |
| Districts (21)   | 116        | 1,714,914        | 48         |
| <b>Part-time</b> | <b>24</b>  | <b>203,816</b>   | <b>6</b>   |
| <b>Total</b>     | <b>169</b> | <b>3,580,709</b> | <b>100</b> |

Note: Population estimates are from 2011.  
 Source: Connecticut Department of Public Health, as of July 29, 2013.

**Fig. 275. LOCAL HEALTH DEPARTMENTS AND DISTRICTS, CONNECTICUT, 2013**



Source: Connecticut Department of Public Health.

**Why the Public Health Infrastructure is Important**

A strong public health infrastructure protects against the spread of disease and environmental and occupational hazards. It provides the capacity to prepare for and respond to emerging and ongoing threats to health. However, infrastructure varies both in Connecticut as well as across the nation.

**Findings in Connecticut**

The Connecticut Department of Public Health is designated as the lead state agency for statewide health planning activities and overall responsibility for protection of the public’s health. Connecticut residents are served by one of 74 local health departments. Of these, 24 are part time, with limited staffing and resources. Of the remaining 50 full-time local health departments, 21 are districts that may contain from 2 to 18 towns. Local health districts are governed by a Board of Health. Municipal health departments are under the jurisdiction of the municipality. Depending on local charters, an advisory board of health may be established for municipal health departments. There are currently 36 Boards of Health in Connecticut, 21 of which have governing authority.<sup>418</sup> Connecticut public health code provides the framework for the basic local health services.

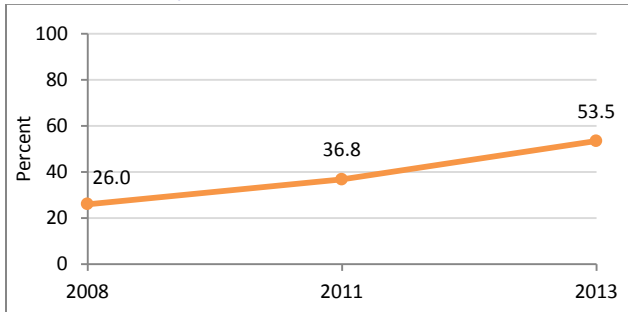
Connecticut has two sovereign nations, the Mashantucket Pequot Tribal Nation and the Mohegan Tribe of Connecticut, both located in Southeastern Connecticut. These nations have independent governments. Established health departments provide public health and health services to their members with direct support from the federal government and other sources.

State and local public health agencies in Connecticut, as well as across the nation, are undertaking efforts to standardize services and improve performance as part of preparing for a voluntary national accreditation program administered by the Public Health Accreditation Board.

No public health agencies in Connecticut have received accreditation status.

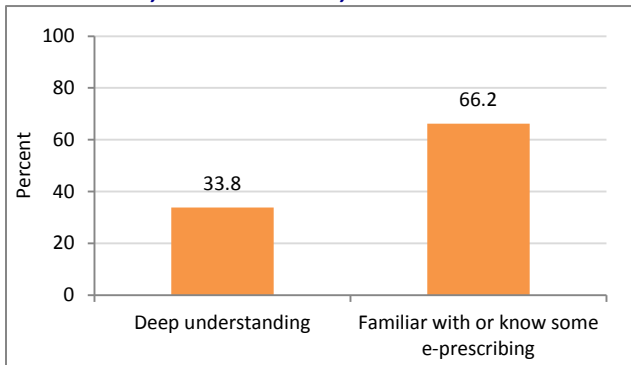
**HEALTH INFORMATION TECHNOLOGY**

**Fig. 276. PERCENT OF PRACTICES THAT HAVE IMPLEMENTED ELECTRONIC HEALTH RECORDS, CONNECTICUT, 2008-2013**



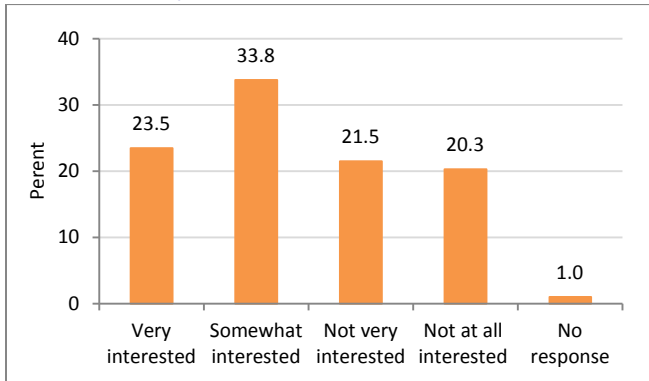
Source: Connecticut Department of Public Health, Connecticut’s Health Information Technology Exchange Evaluation Process: Baseline Assessments & Updates, 2011 and Connecticut Department of Public Health, Personal Communication.

**Fig. 277. PERCENT OF PHARMACISTS WHO HAVE EXPERIENCE WITH E-PRESCRIBING, BY LEVEL OF EXPERIENCE, CONNECTICUT, 2013**



Source: University of Connecticut Health Center, Connecticut Institute for Clinical and Translational Science, Pharmacy Survey, 2013.

**Fig. 278. PERCENT OF RESIDENTS WHO ARE INTERESTED IN PERSONAL HEALTH RECORDS, CONNECTICUT, 2011-2013**



Source: University of Connecticut Health Center, Connecticut Institute for Clinical and Translational Science, Consumer Survey, 2011-2013.

**Why Health Information Technology is Important**

In 2009, the Health Information Technology for Economic and Clinical Health Act (HITECH Act) was passed, intending to assist with the adoption and utilization of electronic health records (EHRs) among providers.<sup>419</sup> The HITECH Act also seeks to facilitate health-related coordination within and between states and between public health agencies in case of an emergency, and to train the public health workforce to use EHRs.<sup>420</sup> From January, 2011 to August, 2013, Connecticut has received \$164,550,295 from the Medicare and Medicaid EHR incentive program.<sup>421</sup>

Increasingly, health care providers are using the internet and other technologies to deliver health information and services to patients, altering how people receive and evaluate health information.<sup>422</sup> Health information technology can assist in delivering patient-centered health information and services, as well as assist with managing and archiving complex health information.<sup>423</sup> Users with limited experience using the internet or limited literacy skills may experience challenges in using health information technology.<sup>424</sup>

**Findings in Connecticut**

*Trends*

From 2008 to 2013, the percent of physicians who have implemented electronic health records into their practice ranged from 26.0% in 2008 to 53.5% in 2013, a variation of 106% over that period.

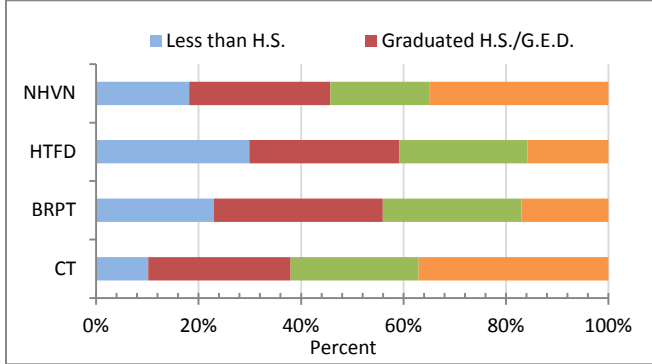
In 2013, only 33.8% of Connecticut pharmacists reported having a deep understanding of e-prescription processes, while 66.2% of pharmacists reported that they were familiar with or knew something about e-prescribing.

From 2011 to 2013, combined, only 23.5% of Connecticut residents indicated that they were interested in personal health records and 33.8% reported that they were somewhat interested in personal health records. Fully 41.8% of Connecticut reported that they were not very interested or not interested at all in personal health records.



**HEALTH COMMUNICATION, HEALTH LITERACY, AND LIMITED ENGLISH PROFICIENCY**

**Fig. 279. PERCENT OF POPULATION, BY EDUCATIONAL ATTAINMENT, CONNECTICUT AND ITS LARGEST TOWNS, 2012**



Source: US Census Bureau, 2012 American Community Survey 1-Year Estimates, DP02 File.

**Table 23. NUMBER AND PERCENT OF PERSONS WHO SPEAK A LANGUAGE OTHER THAN ENGLISH AT HOME, CONNECTICUT, 2000 vs. 2012**

| Year | Number  | Percent |
|------|---------|---------|
| 2000 | 583,913 | 18.3    |
| 2012 | 755,297 | 22.2    |

Source: US Census Bureau, American Community Survey, 1-Year Estimates, 2000 and 2011, DP02 File.

**Table 24. NUMBER AND PERCENT OF PERSONS OVER AGE 5 WHO SPEAK ENGLISH LESS THAN VERY WELL, CONNECTICUT, 2000 vs. 2012**

| Year | Number  | Percent |
|------|---------|---------|
| 2000 | 234,799 | 7.4     |
| 2012 | 288,142 | 8.5     |

Source: US Census Bureau, American Community Survey, 1-Year Estimates, 2000 and 2011, DP02 File.

**Why Health Communication, Health Literacy, and Limited English Proficiency are Important**

Health communication influences the way people understand and use health information and may influence health-related decisions.<sup>425</sup> Communication styles, understanding of health information, and responses to health information influence health literacy, or the extent to which individuals have access to, process, and understand health-related information in order to make informed health decisions.<sup>426,427</sup> The literacy skills of 90 million adults are too low to effectively navigate the US health system.<sup>428</sup> About 90% of adults may have difficulty using everyday health information.<sup>429</sup> Literacy levels are lowest among the elderly, persons with lower education, low-income and minority populations, and persons with limited English proficiency (LEP).<sup>430</sup> Persons with lower health literacy are more likely to use costly health care services such as emergency department (ED) visits and hospitalizations.<sup>431</sup> Limited health literacy costs the US \$1.6 to 3.6 trillion annually.<sup>432</sup> Health literacy is one form of health communication that is important to address to improve quality of care, reduce health care costs, and reduce health disparities.<sup>433</sup> Efforts to improve health literacy require cross-disciplinary approaches.<sup>434,435</sup>

The CDC defines persons with limited English proficiency (LEP) as those who may not be able to communicate effectively in English because their primary language is not English and they are not fluent in English.<sup>436</sup> Persons with LEP may experience challenges when reading or speaking English.<sup>437</sup> Strategies for ensuring proper communication with patients and clients who may have LEP include the use of interpreters and the provision of documents in their primary language.<sup>438</sup>

**Findings in Connecticut**

*Trends*

The percent of persons who spoke a language other than English increased, from 18.3% in 2000 to 22.2% in 2012.

In 2000, 7.4% of persons 5 years of age and older spoke English less than very well. In 2012, 8.5% of persons aged 5 and older spoke English less than very well.

*Disparities*

In 2012, 10.2% of adults had less than a high school education, and high school was the highest level of education for 27.8% of adults.



# THE HEALTH OF SPECIFIC POPULATIONS



## THE HEALTH OF SPECIFIC POPULATIONS

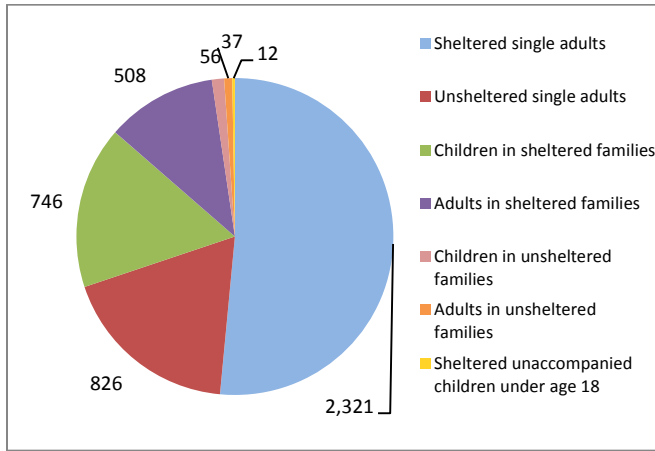
Specific populations include those that experience excess risk for poor health and who may be less well integrated into public health and health care services, relative to other groups. For purposes of this section, specific populations include homeless residents, residents of rural areas, lesbian, gay, bisexual, and transgender (LGBT) residents, incarcerated residents, veterans, and persons with a disability. Members of these populations may experience even greater health disparities when they are members of multiple social categories who are more likely to experience inequities. Some examples are persons who are LGBT and homeless persons, or veterans with a disability. The health of specific racial and ethnic populations is addressed within each of the seven Focus Areas. In addition to understanding increased risk for health, it is also important to consider resilience and health-promoting features of these populations, such as having a strong social networks within their communities.<sup>439</sup>

This section includes the following topic areas:

- Homeless Population
- Rural Population
- LGBT Population
- Incarcerated Population
- Veteran Population
- Population with Disability

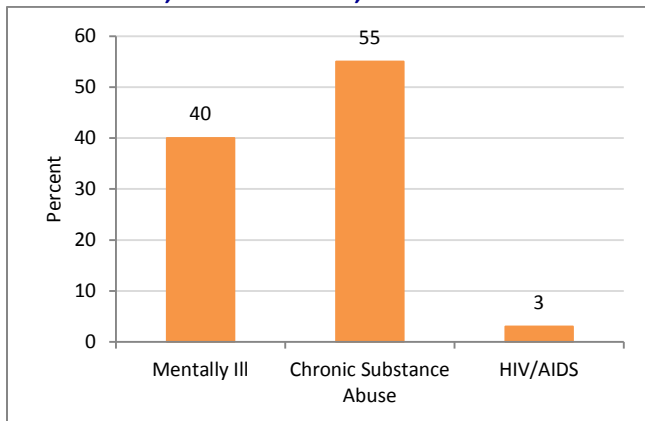
### Homeless Population in Connecticut

**Fig. 280. HOMELESS POPULATION, CONNECTICUT, 2013**



Source: Connecticut Coalition to End Homelessness, 2013 *Homeless Point in Time Count*, 2013.

**Fig. 281. HEALTH ISSUES AFFECTING HOMELESS POPULATION, CONNECTICUT, 2013**



Source: Connecticut Coalition to End Homelessness, 2013 *Homeless Point in Time Count*, 2013.

### Why the Health of the Homeless Population is Important

Poor health can contribute to homelessness and homelessness can contribute to poor health.<sup>440</sup> Homeless populations often lack health insurance coverage and experience barriers to health care access.<sup>441</sup> Health issues concentrated among homeless persons include mental health problems, substance abuse, bronchitis, pneumonia, and skin and wound infections.<sup>442</sup>

### Findings in Connecticut

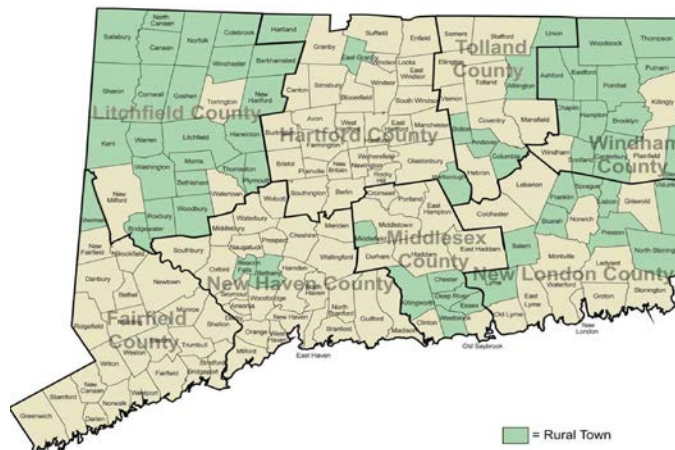
There were an estimated 4,506 homeless persons in Connecticut in 2013.

In January, 2013, a census of the homeless population in Connecticut identified 4,506 homeless persons. Among this total, 2,321 homeless persons were single adults who had shelter, followed by 826 unsheltered single adults, and 746 children in sheltered families, and 508 adults in sheltered families.

Among the homeless population surveyed in January, 2013, 40% had a mental illness, 55% experienced chronic substance abuse, and 3% had HIV/AIDS.

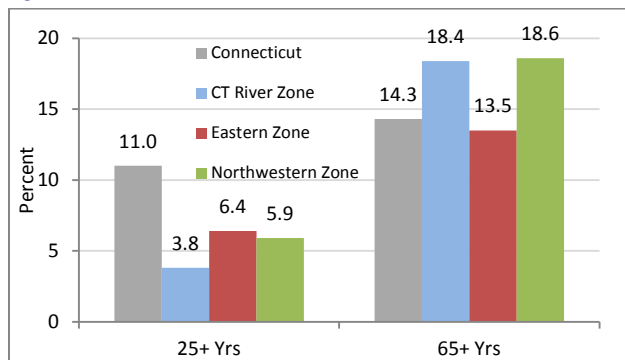
### Rural Population in Connecticut

**Fig. 282. RURAL TOWNS ACROSS CONNECTICUT, 2010**



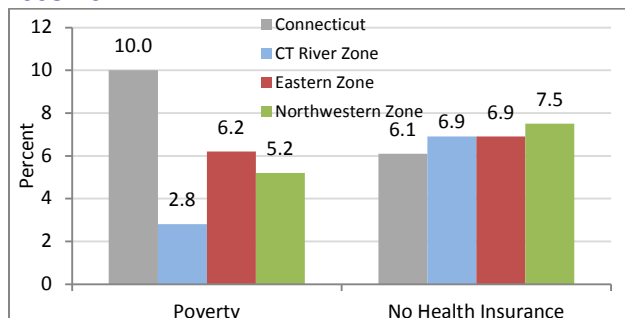
Source: Connecticut State Office of Rural Health, based on 2010 Census data and OMB designations.

**Fig. 283. PERCENT OF POPULATION, BY AGE GROUP, CONNECTICUT AND RURAL ZONES, 2008-2012**



Source: US Census Bureau, American Community Survey 2008-2012, 5-Year Estimates, DP05 File.

**Fig. 284. PERCENT OF POPULATION BELOW THE POVERTY LEVEL AND WITH NO HEALTH INSURANCE, CONNECTICUT AND RURAL ZONES, 2008-2012**



Source: US Census Bureau, American Community Survey 2008-2012, 5-Year Estimates, DP03 File.

### Why the Health of the Rural Populations is Important

The Connecticut Office of Rural Health defines rural towns as those in a designated Micropolitan Statistical Area with fewer than 15,000 residents and towns in Metropolitan Statistical Areas with fewer than 7,000 residents.<sup>443</sup> Connecticut has 61 towns that are classified as rural.<sup>444</sup>

Compared to Connecticut overall, the rate of alcohol-related motor vehicle accidents and mortality due to alcohol-related motor vehicle accidents is greater in Connecticut’s rural region.<sup>445</sup> In addition, transportation and access to health care, including mental health care, are major issues facing Connecticut’s rural population.<sup>446</sup>

### Findings in Connecticut

Rural towns are more common in Connecticut’s northwestern and eastern regions.

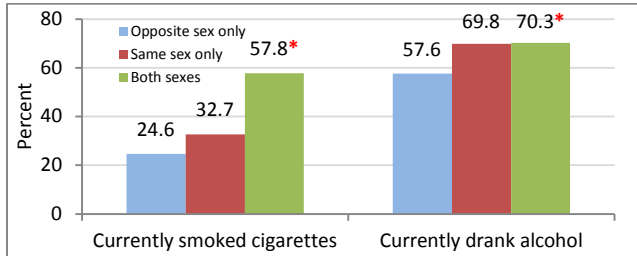
In 2008 to 2012 combined, compared to Connecticut overall, a smaller proportion of the population in the rural regions of Connecticut, including the Connecticut River Zone, Eastern Zone, and Northwestern Zone were 25 years of age or older, and a greater percent were at least 65 years of age.

In 2008 to 2012 combined, a smaller proportion of resident’s in Connecticut’s Connecticut River Zone, Eastern Zone, and Northwestern Zone had incomes below the federal poverty level.

The proportion of persons with no health insurance in Connecticut’s rural regions ranged from 6.9% in the Connecticut River Zone and Eastern Zone to 7.5% in the Northwestern Zone.

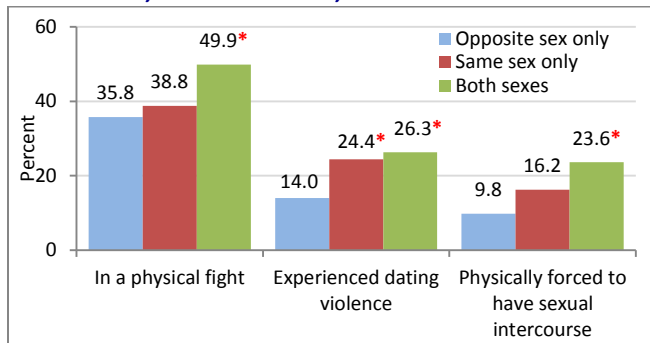
### LGBT Population in Connecticut

**Fig. 285. PERCENT OF STUDENTS (GRADES 9-12) WHO SMOKE CIGARETTES AND DRINK ALCOHOL, BY SEX OF SEXUAL CONTACTS, CONNECTICUT, 2001-2009**



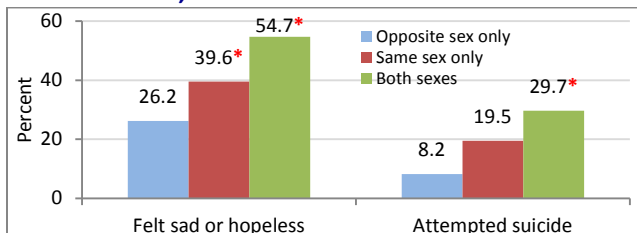
Note: \*Indicates significantly higher smoking for those with both sex sexual contact compared to others and significantly higher alcohol use for those with both sex sexual contact than opposite sex only (p<0.05).  
Source: *MMWR* 2011, Sexual Identity, Sex of Sexual Contacts, and Health-Risk Behavior among Students in Grades 9-12. Tables 27 & 38.

**Fig. 286. PERCENT OF STUDENTS (GRADES 9-12) WHO WERE IN A PHYSICAL FIGHT, EXPERIENCED DATING VIOLENCE, OR WERE FORCED TO HAVE SEXUAL INTERCOURSE, BY SEX OF SEXUAL CONTACTS, CONNECTICUT, 2001-2009**



Note: \* Indicates significantly higher prevalence than those with opposite sex only sexual contact (p<0.05).  
Source: *MMWR* 2011, Sexual Identity, Sex of Sexual Contacts, and Health-Risk Behavior among Students in Grades 9-12. Tables 11, 13, 14.

**Fig. 287. PERCENT OF STUDENTS (GRADES 9-12) WHO FELT SAD OR HOPELESS OR ATTEMPTED SUICIDE, BY SEX OF SEXUAL CONTACTS, CONNECTICUT, 2001-2009**



Note: \* Indicates significantly higher prevalence than those with opposite sex only sexual contact (p<0.05).  
*MMWR* 2011, Sexual Identity, Sex of Sexual Contacts, and Health-Risk Behavior among Students in Grades 9-12. Tables 19 & 22.

### Why the Health of the LGBT Population is Important

Lesbian, gay, bisexual, and transgender (LGBT) persons face heightened stigma and discrimination due to their sexual minority status and have fewer human rights protections than non-sexual minority populations.<sup>447</sup> Discrimination against LGBT persons is associated with high rates of psychiatric disorders, substance abuse, and suicide.<sup>448</sup> In addition, acceptance of their sexuality and gender identity can influence the mental health and physical safety of LGBT persons.<sup>449</sup> Other health disparities experienced by LGBT populations include HIV, sexually transmitted infections, and suicide.<sup>450</sup>

### Findings in Connecticut

From 2001 to 2009, 52.9% of students in grades 9-12 reported having sexual contact with the opposite sex only, while 2.5% had sexual contact with the same sex, 4.8% had sexual contact with both sexes, and 39.8% had never had sexual contact.

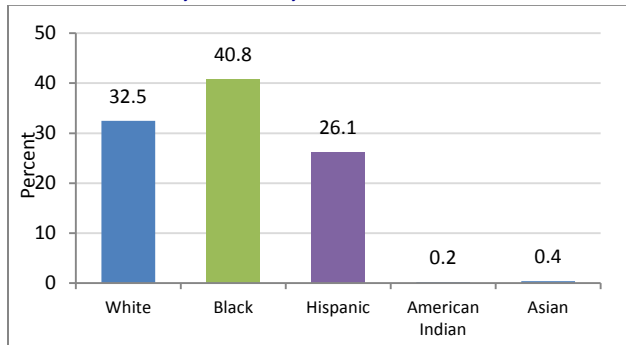
Current use of cigarettes was significantly higher for persons who reported sexual contact with both males and females relative to persons who reported sexual contact with the opposite sex only or same sex only. A significantly greater proportion of students who reported sexual contact with both males and females reported current consumption of alcohol relative to persons who had sexual contact with the opposite sex only.

Compared to persons who reported sexual contact with persons of the opposite sex only, a significantly higher proportion of students who had sexual contact with both males and females reported being in a physical fight, experiencing dating violence, or being forced to have sexual intercourse. A significantly greater percent of students who had sexual contact only with the same sex reported experiencing dating violence relative to persons who only had sexual contact with the opposite sex.

A significantly higher percent of students who had sexual contact with the same sex only or with both males and females reported feeling sad or hopeless almost every day for 2 or more weeks in a row in the past year compared to those who only reported sexual contact with the opposite sex. A significantly higher proportion of persons who had sexual contact with both males and females reported attempting suicide in the past year.

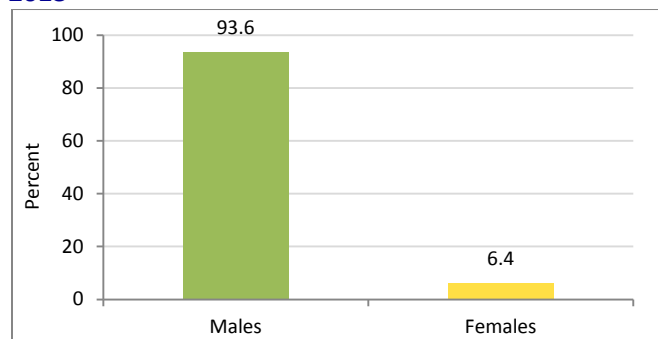
### Incarcerated Population in Connecticut

**Fig. 288. PERCENT OF THE INCARCERATED POPULATION, BY RACE AND ETHNICITY, CONNECTICUT, MARCH, 2013**



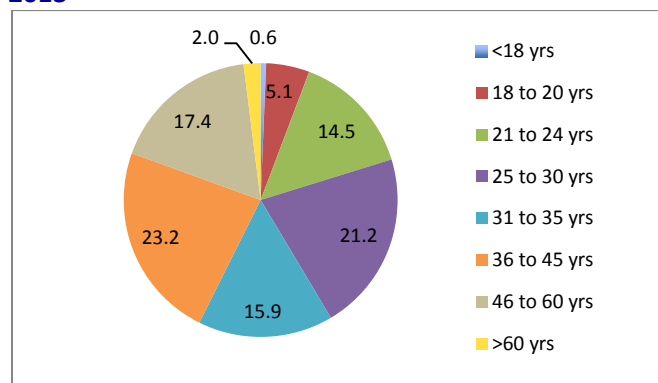
Note: All racial groups are non-Hispanic.  
 Source: Connecticut Department of Corrections – Research, Racial Distribution Among Correctional Facilities Population Confined March 1, 2013.

**Fig. 289. PERCENT OF INCARCERATED POPULATION, BY SEX, CONNECTICUT, MARCH, 2013**



Source: Connecticut Department of Corrections – Research, Gender Distribution Among Correctional Facilities Population Confined March 1, 2013.

**Fig. 290. PERCENT OF INCARCERATED POPULATION, BY AGE, CONNECTICUT, MARCH, 2013**



Source: Connecticut Department of Corrections – Research, Age Distribution Among Correctional Facilities Population Confined March 1, 2013.

### Why the Health of the Incarcerated Population is Important

Law enforcement and criminal justice practices may contribute to the differential incarceration of vulnerable populations such as racial and ethnic minorities, particularly black non-Hispanic and Hispanic males.<sup>451</sup> Incarceration is associated with negative effects on physical and mental health due to many circumstances in prisons, such as overcrowding, violence, enforced solitude, lack of privacy, lack of meaningful activities, disruption of social networks, uncertainty about the future, and limited health care access.<sup>452</sup>

### Findings in Connecticut

In March, 2013, about 4 in 10 incarcerated individuals in Connecticut was black non-Hispanic, followed by white non-Hispanic (32.5%) and Hispanic (26.1%). Of note, compared to their representation in Connecticut’s non-institutionalized population, black non-Hispanics and Hispanics are overrepresented in the incarcerated population in Connecticut.

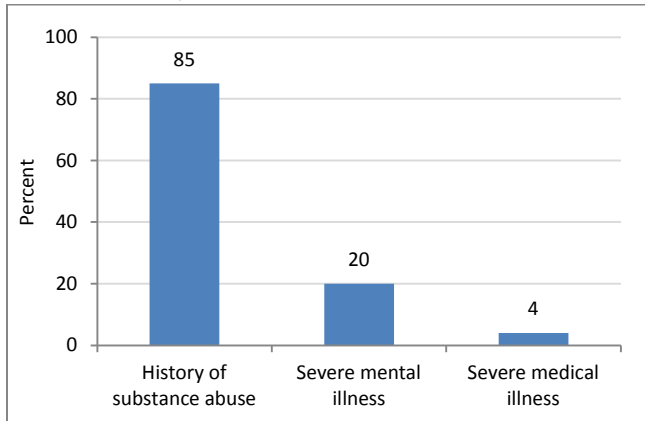
Males comprised the overwhelming majority of the incarcerated population in Connecticut at 93.6%.

As of March 2013, approximately 1 in 5 incarcerated persons was under 21 years old. About 1 in 4 was between the ages of 36-45 years old, the largest age group in Connecticut prisons.



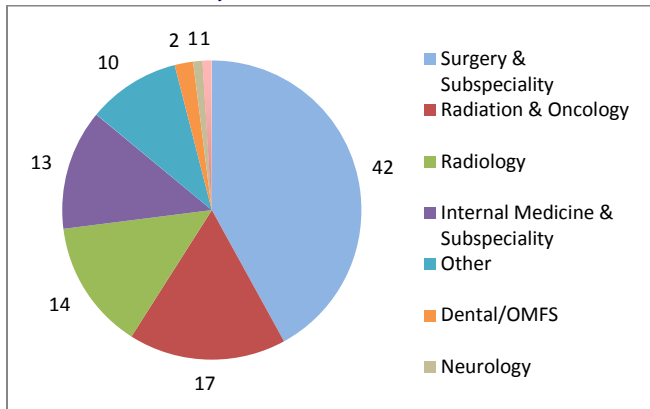
### Incarcerated Population (Continued)

**Fig. 291. PERCENT OF INCARCERATED PERSONS WITH A HISTORY OF SUBSTANCE ABUSE, SEVERE MENTAL ILLNESS, OR SEVERE MEDICAL ILLNESS, CONNECTICUT, 2011**



Source: Department of Correction, Health Services Unit Report.

**Fig. 292. PERCENT OF DEPARTMENT OF CORRECTIONS OUTPATIENT VISITS, CONNECTICUT, JUNE-NOVEMBER, 2011**



Source: Department of Correction Health Services Unit Report.

### Findings in Connecticut

Approximately 25,830 incarcerated persons return to Connecticut communities from Connecticut Department of Corrections facilities annually.<sup>453</sup>

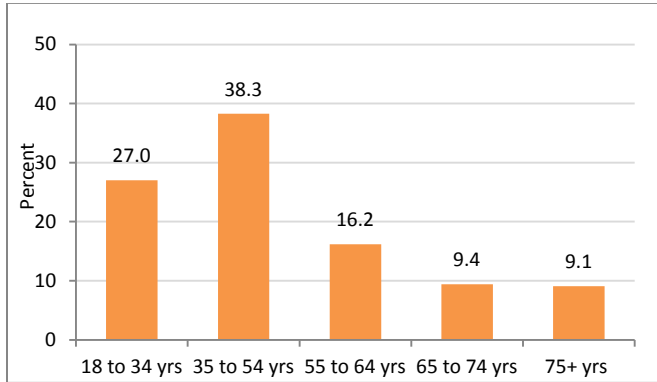
About 85% of incarcerated persons in Connecticut had a history of substance abuse, 20% had a severe mental illness, and 4% had a severe medical illness.

Of the 1,741 Department of Correction outpatient visits from June to November, 2011, 42% were for surgery and related subspecialty visits, followed by 17% for radiation and oncology visits, 14% for radiology visits, and 13% for internal medicine and related subspecialty visits.

In FY 2011, 13% of Connecticut’s incarcerated population received dental care from Correctional Managed Health Care.<sup>454</sup>

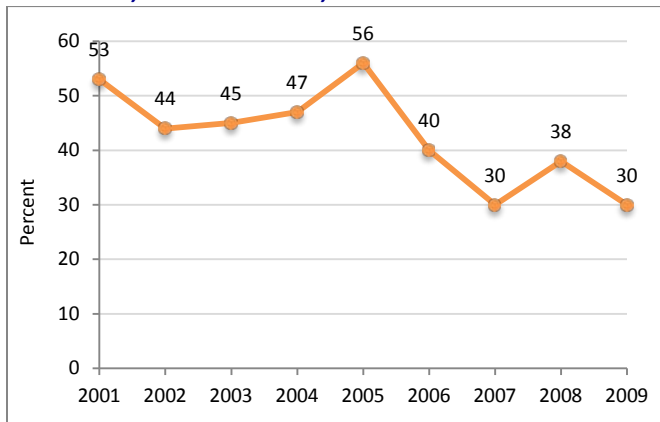
### Veteran Population in Connecticut

**Fig. 293. VETERAN POPULATION BY AGE GROUP, CONNECTICUT, 2008-2012**



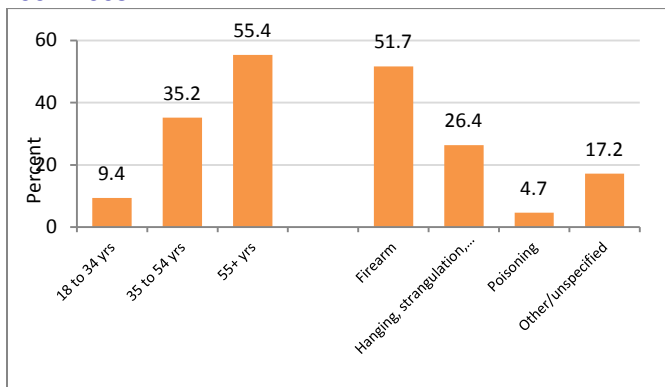
Source: US Census Bureau, 5-Year Estimates (2008-2012), S2101 File.

**Fig. 294. NUMBER OF SUICIDES AMONG VETERANS, CONNECTICUT, 2001-2009**



Source: Veterans Affairs Health Care, Connecticut Veteran Suicide Fact Sheet, Table 2.

**Fig. 295. SUICIDE AMONG VETERANS, BY AGE GROUP AND SUICIDAL MEANS, CONNECTICUT, 2001-2009**



Source: Veterans Affairs Health Care, Connecticut Veteran Suicide Fact Sheet, Table 1.

### Why the Health of the Veteran Population is Important

In 2012, veterans comprised 7.7% percent of the Connecticut population.<sup>455</sup> There are several occupational exposures that may uniquely influence the health of veterans, such as exposure to trauma in the field, readjusting to civilian life after a period of service, and other adverse exposures associated within the military institution, such as sexual assault.

Unwanted sexual contact in the military is a persisting and important issue for active duty service members and veterans. Almost one-quarter of females in the military and approximately 4% of males report experiencing unwanted sexual contact since joining the military.<sup>456</sup> Further, the unwanted sexual contact rate among active duty female service members increased from FY 2010 to FY 2012.<sup>457</sup>

### Findings in Connecticut

In 2008-2012, combined, 27.0% of veterans in Connecticut were 18 to 34 years of age, 38.3% were 35 to 54 years of age, 16.2% were 55 to 64 years of age, and fewer than 10% were 65 to 74 years of age or 75 years of age or older.

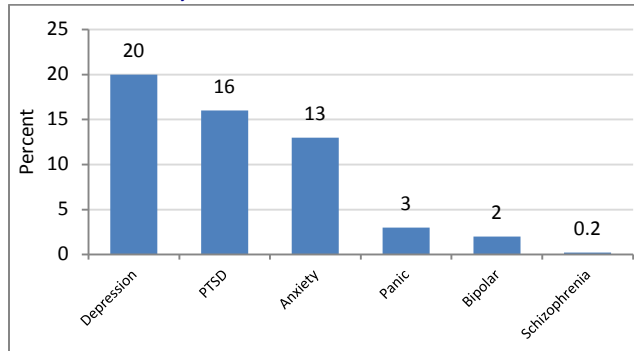
Approximately 16.8% to 20.3% of all reported suicides in Connecticut are among veterans.<sup>458</sup> The number of suicides among veterans in Connecticut ranged from 53 suicides in 2001 to 30 suicides in 2009.

The majority of suicides committed by veterans in Connecticut from 2001 to 2009 were among persons at least 55 years of age (55.4%), followed by those 35 to 54 years of age (35.2%) and 18 to 34 years of age (9.4%). More than half of suicides among veterans in Connecticut from 2001 to 2009 were committed using a firearm (51.7%), followed by hanging, strangulation, or suffocation (26.4%).

In 2008, there were approximately 3,000 to 3,300 homeless veterans in Connecticut.<sup>459</sup> At the end of 2008, 7.3% of veterans who have served since 2001 were unemployed, compared to 5.6% of non-veterans who were unemployed.<sup>460</sup>

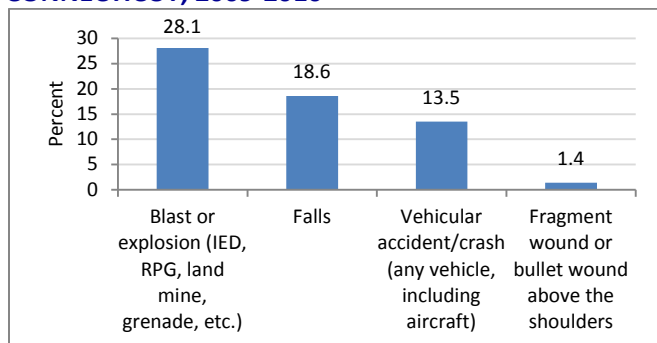
### Veterans: Mental Health Status and Exposure to Violence

**Fig. 296. PERCENT OF OIF AND OEF VETERANS DIAGNOSED WITH MENTAL HEALTH CONDITION DURING OR AFTER MILITARY SERVICE, CONNECTICUT, 2009-2010**



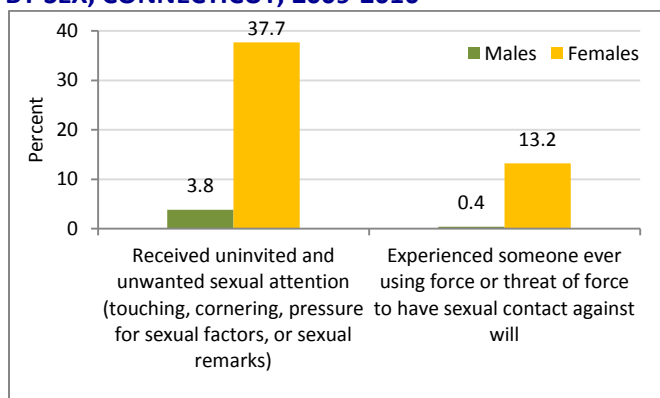
Source: Connecticut Department of Veteran Affairs. Connecticut Veteran’s Needs Assessment Study, 2011, Table 5.

**Fig. 297. EXPOSURE TO MILITARY COMBAT OR ACCIDENTS AMONG OIF AND OEF VETERANS, CONNECTICUT, 2009-2010**



Source: Connecticut Department of Veteran Affairs. Connecticut Veteran’s Needs Assessment Study, 2011.

**Fig. 298. PERCENT OF OIF AND OEF VETERANS WITH EXPOSURE TO MILITARY SEXUAL TRAUMA, BY SEX, CONNECTICUT, 2009-2010**



Source: Connecticut Department of Veteran Affairs. Connecticut Veteran’s Needs Assessment Study, 2011.

### Why Mental Health Status and Exposure to Violence among Veterans are Important

The enduring wars of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) and multiple deployments among many service members contribute to exposure to trauma and combat among veterans.

#### Findings in Connecticut

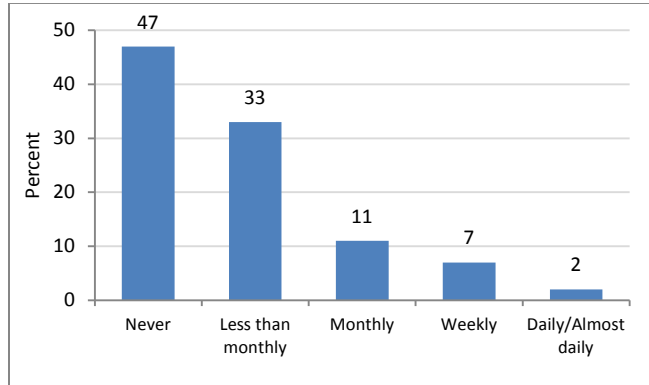
Among OEF and OIF veterans, depression, Post Traumatic Stress Disorder (PTSD), and general anxiety disorder were the most common mental health conditions that veterans were diagnosed with or treated for during or after their military service. Approximately 1 in 5 veterans indicated that they were diagnosed with or treated for depression during or after their service.

Among veterans of OIF and OEF, experiencing a blast or explosion (28.1%), fall (18.6%), or vehicle accident (13.5%) were the leading causes of accidents or exposure to military combat. Fully 1.4% of OIF and OEF veterans experienced a fragment wound or bullet wound above the shoulders.

Compared to male veterans of OIF and OEF, a greater proportion of female veterans reported receiving uninvited and unwanted sexual attention and that someone used force or threat of force to have sexual contact. Nearly 4 in 10 female veterans reported receiving uninvited and unwanted sexual attention and 13.2% experienced forced sexual contact or sexual contact with the threat of force. Among male veterans, 3.8% reported receiving uninvited and unwanted sexual attention, and less than 0.4% reported being forced to have sexual contact.

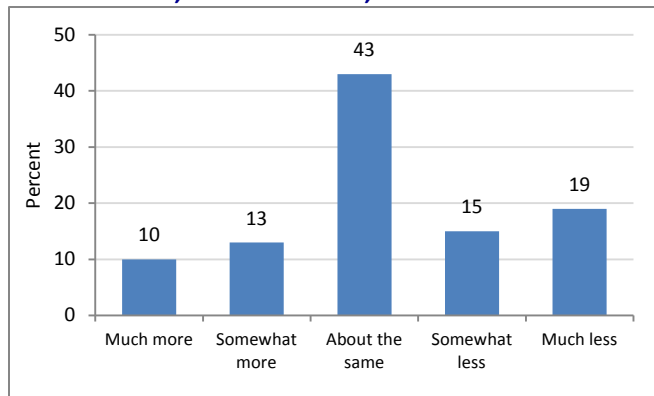
### Veterans: Alcohol and Substance Use and Abuse

**Fig. 299. FREQUENCY OF BINGE DRINKING (6 OR MORE DRINKS) AMONG OIF AND OEF VETERANS, CONNECTICUT, 2009-2010**



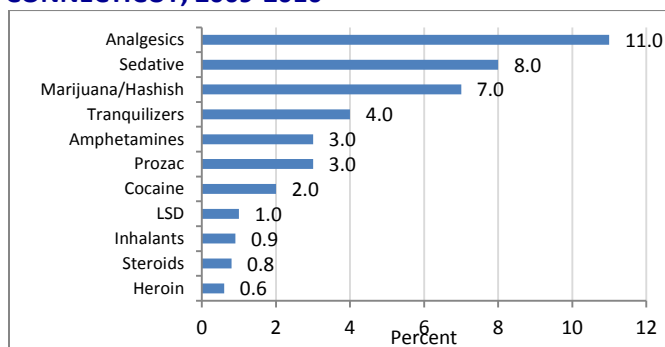
Source: Connecticut Department of Veteran Affairs. Connecticut Veteran’s Needs Assessment Study, 2011, Table 6.

**Fig. 300. DRINKING HABITS AMONG OIF AND OEF VETERANS SINCE RETURNING FROM DEPLOYMENT, CONNECTICUT, 2009-2010**



Source: Connecticut Department of Veteran Affairs. Connecticut Veteran’s Needs Assessment Study, 2011, Table 6.

**Fig. 301. ILLICIT AND PRESCRIPTION DRUG USE BY TYPE, AMONG OIF AND OEF VETERANS, CONNECTICUT, 2009-2010**



Source: Connecticut Department of Veteran Affairs. Connecticut Veteran’s Needs Assessment Study, 2011, Fig. 5.

### Why Alcohol and Substance Use and Abuse among Veterans are Important

Veterans and persons in communities exposed to psychological trauma are at risk of mental health disorders.<sup>461</sup> Veterans are also at risk of substance use and abuse.<sup>462</sup>

#### Findings in Connecticut

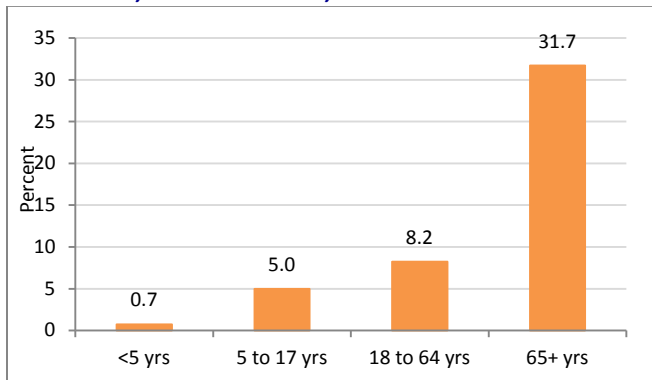
Among OIF and OEF veterans who indicated that they drank, one-third reported binge drinking less than monthly, while approximately 1 in 10 reported binge drinking monthly, and almost 1 in 10 indicated that they engaged in binge drinking weekly or daily/almost daily.

Almost one-quarter of OIF and OEF veterans reported that they drank alcohol much more or somewhat more since returning from deployment as compared to before their deployment.

Among OIF and OEF veterans, the most common drugs used include analgesics, sedatives, and marijuana.

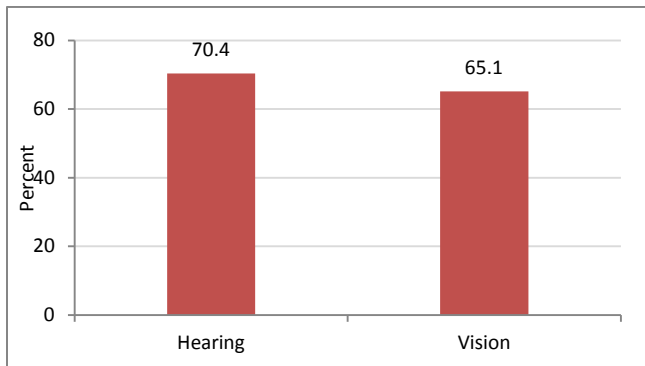
### Population with Disability in Connecticut

**Fig. 302. PERCENT OF POPULATION WITH DISABILITY, CONNECTICUT, 2012**



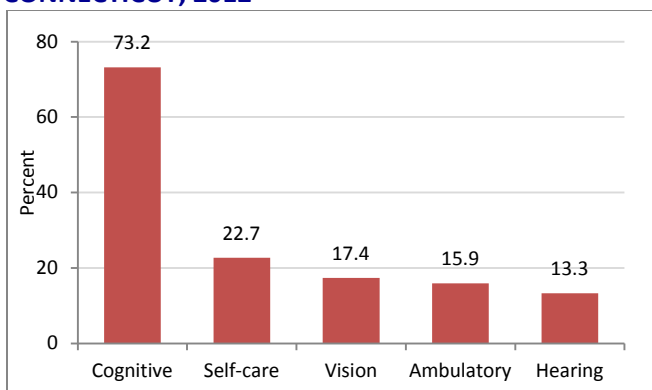
Source: US Census, American Community Survey, 2012, 1-Year Estimates, S1810 File.

**Fig. 303. TYPE OF DISABILITY AMONG CHILDREN <5 YEARS OF AGE WITH A DISABILITY, CONNECTICUT, 2012**



Source: US Census, American Community Survey, 2012, 1-Year Estimates, S1810 File.

**Fig. 304. TYPE OF DISABILITY AMONG PERSONS 5 TO 17 YEARS OF AGE WITH A DISABILITY, CONNECTICUT, 2012**



Source: US Census, American Community Survey, 2012, 1-Year Estimates, S1810 File.

### Why Disability is Important

Disability can affect persons at any point in the life course.<sup>463</sup> Relative to persons without a disability, persons with a disability have greater risk of unemployment, physical inactivity, tobacco use, overweight or obesity, high blood pressure, and psychological distress.<sup>464</sup> In addition, persons with a disability may experience barriers to health care and are less likely than persons who do not have a disability to have an annual dental visit, mammogram in the past 2 years, or Pap test in the past 3 years.<sup>465</sup> Public health interventions that include persons with a disability and facilitate the engagement of persons with a disability in everyday activities are critical for improving opportunities, health, and well-being of persons with a disability.<sup>466</sup>

### Findings in Connecticut

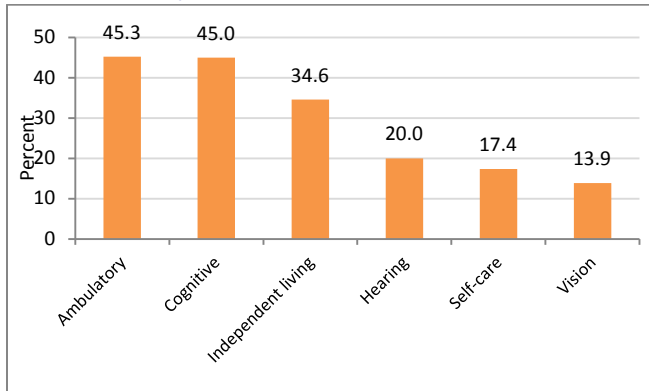
In 2012, the proportion of the population with a disability increased with age. Less than 1% of children younger than 5 years of age had a disability, followed by 5.0% of children 5 to 17 years of age, 8.2% of persons 18 to 64 years of age, and 31.7% of persons at least 65 years of age.

The most common disability type depended on age. In 2012, among children younger than 5 in Connecticut who had a disability, hearing (70.4%) and vision (65.1%) were the most common types of disability.

For persons 5 to 17 years of age with a disability in 2012, the majority had a cognitive disability (73.2%), self-care (22.7%), vision (17.4%), ambulatory (15.9%), and hearing (13.3%).

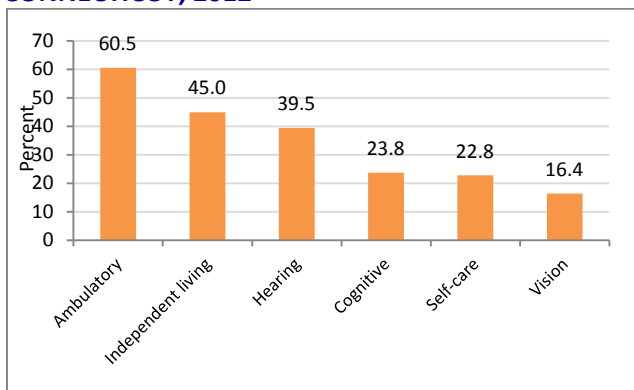
### Adults with Disability in Connecticut

**Fig. 305. TYPE OF DISABILITY AMONG PERSONS 18 TO 64 YEARS OF AGE WITH A DISABILITY, CONNECTICUT, 2012**



Source: US Census, American Community Survey, 2012, 1-Year Estimates, S1810 File.

**Fig. 306. TYPE OF DISABILITY AMONG PERSONS 65 YEARS AND OLDER WITH A DISABILITY, CONNECTICUT, 2012**



Source: US Census, American Community Survey, 2012, 1-Year Estimates, S1810 File.

### Findings in Connecticut

In 2012, among persons 18 to 64 years of age who had a disability, 45.3% had an ambulatory disability, and 45.0% had a cognitive disability. Approximately one-third (34.6%) had a disability that affected independent living.

Among Connecticut residents 65 years of age and older who had a disability in 2012, the majority had an ambulatory disability (60.5%), followed by a disability that affected independent living (45.0%), and disabilities affecting hearing (39.5%).

# APPENDICES

## APPENDIX A:

### PARTNERS AND ORGANIZATIONS

Administrators' Association of Health and Physical Education  
African-American Affairs Commission  
All Our Kin, Inc.  
Alzheimer's Association, Connecticut Chapter  
American Academy of Pediatrics, Connecticut Chapter  
Asian Pacific American Affairs Commission  
Brain Injury Alliance of Connecticut  
Bridgeport Health Department  
Bridgeport Hospital  
Central Area Health Education Center, Inc.  
Community Health Center Association of Connecticut  
Connecticut Academy of Nutrition & Dietetics  
Connecticut AIDS Resource Coalition  
Connecticut Association for Community Action  
Connecticut Association for Homecare and Hospice  
Connecticut Association of Directors of Health  
Connecticut Association of Health, Physical Education, Recreation and Dance  
Connecticut Association of Local Boards of Health  
Connecticut Association of School Based Health Centers  
Connecticut Business and Industry Association  
Connecticut Cancer Partnership  
Connecticut Center for Patient Safety  
Connecticut Children's Medical Center  
Connecticut Coalition for Environmental Justice  
Connecticut Commission on Aging  
Connecticut Commission on Health Equity  
Connecticut Conference of Municipalities  
Connecticut Council on Developmental Disabilities  
Connecticut Council for Occupational Safety & Health  
Connecticut Dental Health Partnership  
Connecticut Department of Agriculture  
Connecticut Department of Children and Families  
Connecticut Department of Consumer Protection  
Connecticut Department of Correction  
Connecticut Department of Education  
Connecticut Department of Energy and Environmental Protection  
Connecticut Department of Mental Health and Addiction Services  
Connecticut Department of Motor Vehicles  
Connecticut Department of Transportation  
Connecticut Department of Veterans Affairs  
Connecticut Emergency Medical Services Advisory Board  
Connecticut Environmental Health Association  
Connecticut Fair Housing Center  
Connecticut Food Specialty Association  
Connecticut General Assembly  
Connecticut Health Foundation  
Connecticut Health Policy Project  
Connecticut Hospital Association



Connecticut Legal Services  
Connecticut Nurses Association  
Connecticut Office of Policy and Management  
Connecticut Office of Protection and Advocacy for Persons with Disabilities  
Connecticut Office of the Child Advocate  
Connecticut Office of the Healthcare Advocate  
Connecticut Oral Health Initiative  
Connecticut Public Health Association  
Connecticut State Dental Association  
Connecticut State Department of Education  
Connecticut State Medical Society  
Connecticut Suicide Advisory Board  
Connecticut-Rhode Island Public Health Training Center  
Day Kimball Healthcare  
Donaghue Foundation  
Early Childhood Alliance  
Ethnic Marketing Solutions  
Fairhaven Community Health Center  
Foodshare  
Hartford Foundation for Public Giving  
Hartford Health Department  
Kids As Self Advocates  
March of Dimes  
Mohegan Health Department  
Murtha Cullina, LLP  
New England Dairy and Food Council  
New Haven Health Department  
Northeast District Department of Health  
Northern Connecticut Black Nurses Association  
Northwest Connecticut Chamber of Commerce  
Omega Foundation  
Ovation Benefits  
Partnership for Strong Communities  
Planned Parenthood of Southern New England  
Qualidigm  
Saint Francis Hospital, Center for Health Equity  
Saint Vincent's College  
Sickle Cell Disease Association of America, Southern Connecticut Chapter  
South Central Connecticut Regional Water Authority  
Southern Connecticut State University  
Southwest Community Health Center, Inc.  
Southwestern Connecticut Agency on Aging  
Torrington Area Health District  
Uncas Health District  
University of Connecticut, School of Dental Medicine  
University of Connecticut, Connecticut Area Health Education Center Network Program  
University of Connecticut, School of Community Medicine and Health Care  
University of Hartford  
Winding Trails, Inc.  
Yale New Haven Health System

## APPENDIX B: DPH CONTRIBUTORS

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Kathy Graff

Laurie Greci  
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Margaret Hynes  
Lynn Hudak  
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Carol Stone  
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Brian Toal  
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Krista Veneziano  
Danny White  
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## APPENDIX C: DEFINITION OF MEASURES

### DEMOGRAPHIC CHARACTERISTICS

#### Population Characteristics: Race, Ethnicity, and Age

*Change in Population Characteristics:* indicates the number of residents, median age, proportion of residents aged 65 and older, and racial and ethnic distribution of the Connecticut population in 2000 and 2010, based on Census estimates. The percent change in the population over this time period for each of these indicators is also presented.

*Percent of Population by Race and Ethnicity:* is the racial and ethnic distribution (percent) of the population for Connecticut and Connecticut's largest towns in 2012.

*Percent of Population by Age Group:* is the percent of residents by age group for Connecticut and Connecticut's largest towns in 2012.

*Population Distribution by Age, Sex, Race and Ethnicity:* shows the distribution of Connecticut's population by sex and age category for each racial or ethnic group in 2010.

#### Country of Birth and Language Use

*Percent of Population Born in US vs. Outside of US:* is the percent of residents who were born in the United States compared to those born outside of the United States, for Connecticut and its largest towns in 2012.

*World Region of Birth for Connecticut Residents Born Outside of United States:* is the percent of Connecticut residents who were born outside of the United States, by world region world region of birth, based on estimates from 2012.

*Percent of Population Who Speak a Language Other Than English at Home among Persons at Least 5 Years of Age:* is the percent of Connecticut residents who speak a language other than English at home among persons 5 years of age in Connecticut and its largest towns in 2012.

#### Socioeconomic Groups across the State: The Five Connecticut

*Five Connecticut Regions, by Socioeconomic Groupings:* is a map that shows the distribution of the "Five Connecticut", or town classifications, across Connecticut, based on the income level, poverty rates, and population density, using 2009 estimates.

#### Socioeconomic Status

*Percent of Population, by Educational Attainment:* shows the proportion of residents who have less than a high school education, graduated high school or received a GED, completed some college, or have a bachelor's degree or higher, among persons at least 25 years of age, for Connecticut and its largest towns in 2012.

*Median Household Income:* is the median household income (in 2012 inflation-adjusted dollars) in Connecticut and its largest towns in 2012.

*Percent of Individuals Below the Federal Poverty Level:* is the proportion of residents whose income in the past 12 months was below the federal poverty level, for Connecticut and its largest towns in 2012.

#### Unemployment Rate

*Unemployment Rate:* is the annual unemployment rate in Connecticut from 2003 to 2013. The unemployment rate for 2013 includes preliminary data from December, 2013.

*Unemployment Rate, Connecticut and Metropolitan Areas:* is the unemployment rate in Connecticut and metropolitan areas in 2012.

#### Housing Characteristics

*Percent of Housing, By Year of Construction:* is the proportion of houses in Connecticut that were constructed before 1950, between 1950 and 1979, between 1980 and 1999, or in or after 2000, for Connecticut and its largest towns, based on 2012 estimates.

*Percent of Houses that are Owner-Occupied or Renter-Occupied:* is the proportion of occupied housing units in Connecticut that are owner-occupied or renter-occupied, in Connecticut and its largest towns in 2012.

*Median Rent:* is the median rent for occupied units paying rent in 2012, for Connecticut and its largest towns.

### **Transportation**

*Means of Transportation for Persons 16 Years of Age and Older Who Commuted to Work:* is the percent of residents who drove alone, carpooled, used public transportation, worked from home, walked, or used another means to commute in Connecticut in 2012.

*Percent of Households with a Vehicle, by Number of Vehicles:* is the percent of households with no vehicles, 1 vehicle, 2 vehicles, or 3 or more vehicles in Connecticut in 2012.

## **MORTALITY AND HOSPITALIZATION**

### **Leading Causes of Mortality**

*Age-Adjusted Mortality Rate for Leading Causes of Death:* is the mortality rate per 100,000 Connecticut residents, adjusting for age, for the leading causes of death in Connecticut, from 2000 to 2010.

*Number of Deaths for Leading Causes of Death, by Sex:* is the total number of deaths registered with the State of Connecticut for a health event that resulted in death for conditions that contributed to the most deaths in Connecticut in the given year, 2010. This indicator is presented for males and females, separately.

*Age-Adjusted Premature Mortality (Years of Potential Life Lost) for Leading Causes of Death:* is the number of years of potential life lost (YPLL) due to premature death. This indicator is an estimate of the number of years that a person would have lived if he or she had not died prematurely, before 75 years of age. This indicator is presented for the leading causes of premature mortality in Connecticut in 2010.

### **Mortality: At-Risk Populations**

*Age-Adjusted Mortality Rates for Leading Causes of Death, by Race and Ethnicity:* indicates the number of deaths due to a particular cause, scaled to the size of the population (per 100,000 population), adjusting for age for the conditions that contributed to the most deaths in Connecticut over the 2006-2010 period. This indicator is presented for the largest racial and ethnic groups for the leading causes of death. Aggregating the number of deaths from 2006-2010 allows for the presentation of the number of cases for each racial and ethnic group, including populations with a small number of deaths for a particular cause of death.

*Number of Deaths for Leading Causes of Death, by Race and Ethnicity:* is the total number of deaths registered with the State of Connecticut for a health event that resulted in death for conditions that contributed to the most deaths in Connecticut aggregated over the 2006 to 2010 period. This indicator is presented by race and ethnicity.

### **Age-Specific Death Rates**

*Age-Specific Death Rates, With Average Annual Percent Change Estimates:* is the death rate per 100,000 population for each age group, for three-year time intervals, from 1991-2011. This Fig. also presents the average annual percent change for each age group over the 20-year period, which summarizes the trend over this period.

### **Mortality and Premature Mortality Across Connecticut**

*All-Cause Mortality:* this map indicates the distribution of all-cause mortality aggregated over the 2006-2010 period, by town. Towns where the all-cause mortality rate per 100,000 population was the highest for the State are indicated in dark blue. Towns where the all-cause mortality rate was lowest are shown in yellow.

*All-Cause Premature Mortality (Years of Potential Life Lost), by Town: Distribution of Years of Potential Life Lost due to All Causes:* this map presents the distribution of all-cause premature mortality, or

years of potential life lost (YPLL) before age 75 over the 2006 to 2010 period, by town. Towns where the YPLL per 100,000 residents was highest are shown in dark blue. Towns where the all-cause premature mortality rate was lowest are shaded yellow.

### **Premature Mortality: At-Risk Populations**

*Age-Adjusted Rates for Leading Causes of Premature Mortality (Years of Potential Life Lost Before 75 Years of Age), for Females:* measured by years of potential life lost (YPLL) due to premature death, this indicator is an estimate of the average years a person would have lived if she had not died prematurely, per 100,000 population, adjusting for age. In this graph, it is the years of potential life lost before 75 years of age, adjusting for age for deaths in Connecticut in 2010. YPLL is presented separately for females, by race and ethnicity, for the 2006-2010 period combined so as to allow for a sufficient number of cases to generate estimates of YPLL.

*Age-Adjusted Rates for Leading Causes of Premature Mortality (Years of Potential Life Lost Before 75 Years of Age), for Males:* measured by years of potential life lost (YPLL) due to premature death, this indicator is an estimate of the average years a person would have lived if he had not died prematurely, per 100,000 population, adjusting for age. In this graph, it is the years of potential life lost before 75 years of age, adjusting for age for deaths in Connecticut in 2010. YPLL is presented separately for males, by race and ethnicity, for the 2006-2010 period combined so as to allow for a sufficient number of cases to generate estimates of YPLL.

### **Life Expectancy**

*Life Expectancy at Birth, by Sex:* is an estimate of the average number of years that would be expected for a baby to live, assuming that current mortality rates remain stable. Data are presented for three-year time intervals for the 1991 to 2011 period, by sex.

*Life Expectancy at Birth, by Sex and Race and Ethnicity:* is an estimate of the average number of years that would be expected for a baby to live, assuming that current mortality rates remain stable. Data are presented for two-year time intervals, from 1997 to 2011, by sex and race and ethnicity. All racial groups are non-Hispanic.

### **Hospitalizations and Emergency Department Visits**

*Number of Hospitalizations:* indicates the number of hospitalizations in 2011 for a given cause of hospitalizations. This includes discharges from non-federal, short-stay, acute-care, and general hospitals in Connecticut.

*Hospitalization Rate, by Race and Ethnicity:* is the total number of hospitalizations in 2011 for a given cause of hospitalization, per 100,000 Connecticut residents, adjusting for age, and presented for Connecticut's largest racial and ethnic groups. This includes discharges from non-federal, short-stay, acute-care, and general hospitals in Connecticut.

*Rate of Emergency Department Visits:* is the number of emergency department visits in 2011 for a given cause of emergency department visit, per 100,000 population.

## **MATERNAL, INFANT, AND CHILD HEALTH**

### **Birth Rate and Demographics of Birth Cohort**

*Birth Rate, by Race and Ethnicity:* indicates the number of births in the Connecticut per 1,000 residents in a given year, from 2000 to 2011, and also for Connecticut's largest racial and ethnic groups over this period.

*Percent of Births, by Country of Birth:* is the percent of births in 2011 that were to women born in the US, US territories, or women born outside of the US.

### **Births to Teen Mothers**

*Birth Rate to Teen Mothers (15-19 Years of Age) and Annual Percent Change, by Race and Ethnicity:* is the number of births per 1,000 women 15 to 19 years of age, from 2000 to 2011. The annual percent change is the average annual percent change in the birth rate among women 15 to 19 years of age from

2000 to 2011. This indicator is presented for the total population and also by race and ethnicity.

*Birth Rate to Teen Mothers (15-19 Years of Age), by Race and Ethnicity:* indicates the number of births to women 15 to 19 years of age, per 1,000 women in this age group in Connecticut in 2011. This indicator is presented for the total population and by race and ethnicity.

#### **Births to Teen Mothers Across Connecticut**

*Birth Rate to Teen Mothers (15-19 Years of Age), by Town:* this map shows the birth rate to women 15 to 19 years of age, aggregated for the 2007-2011 period for each town in Connecticut. Towns with the highest birth rate to teen mothers are shaded in dark blue; towns with the lowest highest teen birth rate are shaded in yellow.

#### **Preterm Birth and Low Birthweight Births**

*Percent of Singleton Preterm Births, by Race and Ethnicity:* is the proportion of live born infants who were younger than 37 completed weeks of gestation when they were born in 2011. This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups.

*Percent of Low Birthweight Births, by Plurality and Race and Ethnicity:* is the percent of live born infants whose birthweight was less than 2,500 grams (5.5 pounds) at birth, regardless of gestational age, for births in 2011. This indicator is presented by plurality (singleton births vs. multiple births) and for the total population and Connecticut's largest racial and ethnic groups.

*Percent of Low Birthweight Births, by Low Birthweight Status and Race and Ethnicity:* is the percent of low (<2,500 grams), moderately low (1,500-2,499 grams), and very low birthweight (227-1,499 grams) births in Connecticut in 2011. This indicator is presented for the total population and by race and ethnicity.

#### **Preterm Birth and Low Birthweight Births Across Connecticut**

*Percent of Preterm Births, By Town:* This map indicates the proportion of preterm births (<37 weeks gestation), by town, aggregated over the 2007 to 2011 period. Towns with the highest proportion of preterm births are shown in dark blue. Towns where the proportion of preterm births was lowest are shaded yellow.

*Percent of Low Birthweight Births, by Town:* this map shows the proportion of low birthweight births (<2,500 g), by town, aggregated over the 2007 to 2011 period. Towns with the highest proportion of low birthweight births are indicated in dark blue. Those with the lowest proportion of low birthweight births are shown in yellow.

#### **Preconception Health, Unplanned Pregnancies, and Cesarean Sections**

*Percent of Women Who Discussed Preconception Health with a Health Care Provider Prior to Pregnancy, by Race and Ethnicity:* is the proportion of women who discussed with a doctor, nurse, or other health care provider ways to prepare for a healthy pregnancy and baby prior to getting pregnant with their new baby. This indicator is presented for all respondents who completed the survey in 2010 and 2011, and also for Connecticut's largest racial and ethnic groups.

*Percent of Unplanned Pregnancies, by Race and Ethnicity:* is the percent of women who indicated that thinking back to just before they got pregnant with their new baby felt that they did not want to be pregnant then or at any time in the future (unwanted pregnancy) or wanted to be pregnant later (mistimed pregnancy). This indicator is presented for all respondents who completed the survey in 2010 and 2011, and also for Connecticut's largest racial and ethnic groups.

*Cesarean Section (C-Section) Rates, by Plurality:* is the number births delivered by cesarean section (C-section) per 100 births in Connecticut from 2000 to 2011. This indicator is presented for all births, singleton births, and multiple births in 2011.

## **Prenatal Care**

*Percent of Mothers Who Received Late or No Prenatal Care, by Race and Ethnicity:* is the proportion of pregnant women in Connecticut who received late prenatal care, defined as prenatal care that began after their first trimester, or no prenatal care in 2011. This indicator is presented for the total population and for each of Connecticut's largest racial and ethnic populations.

*Percent of Women Who Received Adequate Prenatal Care, by Race and Ethnicity:* is a summary measure of prenatal care initiation and the number of prenatal visits in 2011, according to the Adequacy of Prenatal Care Utilization (APNCU) Index. This indicator depicts the proportion of pregnant women who received adequate prenatal care and is presented for the total population and each of Connecticut's largest racial and ethnic populations for 2011.

*Percent of Women with Non-Adequate Prenatal Care Utilization, by Race and Ethnicity:* is the percent of women who received non-adequate prenatal care in 2011, according to the Adequacy of Prenatal Care Utilization (APNCU) Index, based on prenatal care initiation and the number of prenatal visits. This indicator depicts the percent of pregnant women who received non-adequate prenatal care and is presented for the total population and for Connecticut's largest racial and ethnic groups, for 2000 to 2011.

## **Late Prenatal Care Across Connecticut**

*Percent of Mothers Who Received Late Prenatal Care, by Town:* this map indicates the proportion of pregnant women who experienced late initiation of prenatal care, meaning their prenatal care began in the second or third trimester. This indicator is shown by town, aggregated for the 2007-2011 period. Towns with the highest proportion of women who experienced late initiation of prenatal care are indicated in dark blue. Those towns with the lowest proportion of women who received late prenatal care are shaded yellow.

## **Smoking During Pregnancy**

*Percent of Women Who Used Tobacco During Pregnancy, by Race and Ethnicity:* indicates the proportion of women in Connecticut who smoked while they were pregnant. This indicator is presented for all racial and ethnic groups and by race and ethnicity for the 2000 to 2011 period.

*Percent of Women Who Used Tobacco During Pregnancy, by Race and Ethnicity:* is the percent of women in Connecticut who smoked while they were pregnant in 2011. This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups.

## **Smoking among Pregnant Women Across Connecticut**

*Percent of Women Who Report that They Smoked Tobacco During Pregnancy, by Town:* is the proportion of women who reported on their child's birth certificate that they smoked, presented by town for the 2006 to 2010 period (combined). Towns shaded in dark blue had the highest proportion of pregnant women who smoked. Towns shaded in yellow had the lowest proportion of pregnant women who smoked over this period. Towns shaded in stripes were suppressed because there were too few events to produce reliable estimates.

## **Prenatal Care and Pregnancy Disparities**

*Percent of Women Enrolled in Supplemental Nutrition Program for Women, Infant, and Children (WIC) During Pregnancy, by Race and Ethnicity:* is the proportion of women who were enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) while they were pregnant. This indicator is presented for all racial and ethnic groups and by race and ethnicity for Connecticut's largest racial and ethnic groups, for 2010-2011, combined.

*Prenatal Care and Pregnancy Outcomes, by Medicaid Enrollment Status:* is the percent of women who received late (after first trimester) or no prenatal care, non-adequate prenatal care

(according to the Adequacy of Prenatal Care Utilization), smoked during pregnancy, delivered a low birthweight (<2,500 grams) birth, delivered a very low birth weight (227-1,499 grams) birth, or had a preterm delivery (<37 weeks gestation), by Medicaid enrollment status (Medicaid vs. Non-Medicaid) for 2010. This table also shows the ratio of risk factors during pregnancy and birth outcomes for women with Medicaid as compared to women who are not enrolled in Medicaid.

### **Neonatal Abstinence Syndrome**

*Percent and Number of Children Born with Neonatal Abstinence Syndrome:* indicates the percent of children born in Connecticut with Neonatal Abstinence Syndrome (NAS), from 2002 to 2011. The line shows the percent of NAS cases, while the number above the trend line indicates the number of discharges due to NAS.

*Percent of Children Born with Neonatal Abstinence Syndrome, by Race and Ethnicity:* is the percent of children in Connecticut born with neonatal abstinence syndrome (NAS), presented for Connecticut's largest racial and ethnic groups for the 2000 to 2011 period.

*Percent of Children Born with Neonatal Abstinence Syndrome, by Health Insurance Type:* is the percent of children born in Connecticut with neonatal abstinence syndrome (NAS), presented for children born to women enrolled in Medicaid, and those not enrolled in Medicaid, for the 2000 to 2011 period.

### **Assisted Reproductive Technology Use**

*Rate of Assisted Reproductive Technology (ART) Utilization:* indicates the number of women who utilized assisted reproductive technology (ART), per million women aged 15 to 44, in Connecticut and the US in 2010.

*Rate of Low Birthweight Births for Assisted Reproductive Technology (ART) and All Births, by Low Birthweight Category:* is the number of low birthweight births (<2,500 grams) per 100 live births in Connecticut in 2010, presented by low birthweight category for births due to ART and all

births. This rate is also presented for very low birthweight (<1,500 grams) and moderate low birthweight (1,500-2,499 grams) births.

*Rate of Singleton and Multiple Infant Births for Assisted Reproductive Technology (ART) and All Births:* indicates the number of singleton and multiple infant births (twins or triplets or more) per 100 live births in Connecticut in 2010 for births due to assisted reproductive technology (ART) and all births.

### **Fetal and Infant Mortality**

*Fetal and Infant Mortality Rate:* presents the fetal mortality rate, which is the number of fetal deaths at 20 weeks of gestation or more, per 1,000 live births plus fetal deaths for the 2001 to 2011 period. In addition, this Fig. presents the infant mortality rate, which is the number of infant deaths before 1 year of age, per 1,000 live births in Connecticut for the 2001 to 2011 period. Infant mortality rates are based on the linked birth infant death files. These rates are based on the year of birth, while the infant deaths are those that occurred within 365 days of the date of birth. Fetal death rates are based on calendar year births and death data.

*Fetal Mortality Rate, by Race and Ethnicity:* is the number of fetal deaths at 20 weeks of gestation or more, per 1,000 live births plus fetal deaths for 2008 to 2010 (combined). This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups.

*Infant Mortality Rate, by Race and Ethnicity:* is the number of infant deaths before 1 year of age, per 1,000 live births in Connecticut for 2008-2010 (combined). This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups.

### **Breastfeeding**

*Percent of Infants Who Were Breastfed, by Duration, Exclusivity, and Race and Ethnicity:* shows the percent of infants born in 2010-2011 (combined) who were breastfed, presented by duration and exclusivity of breastfeeding.



Indicators include infants who were ever breastfed, breastfed exclusively at 3 months, or breastfed exclusively at 6 months. Exclusive breastfeeding means that other than breast milk, infants did not receive any other foods or liquids. This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups.

*Percent of Infants Enrolled in WIC Who Were Breastfed, by Duration, Exclusivity, and Race and Ethnicity:* is the percent of infants enrolled in the Supplemental Nutrition Program for Women, Infants, and Children (WIC) who were exclusively breastfed, partially breastfed, or formula fed only. Exclusive breastfeeding means that other than breast milk, infants did not receive any other foods or liquids. This indicator is presented for the total population and Connecticut's largest racial and ethnic groups for 2012.

#### **Newborn Screening, Developmental Screening, and Well-Child Visits**

*Percent of Newborns who Have been Screened for Hearing before Leaving Hospital:* is the percent of newborns that were screened for hearing impairments before leaving the hospital after their birth in Connecticut, from 2003 to 2012.

*Percent of Children (10 Months to 5 Years) Who were Screened for Being at Risk for Developmental, Behavioral, and Social Delays During a Health Care Visit in the Past Year:* is the percent of children (10 months to 5 years of age) who were screened for being at risk for developmental, behavioral, and social delays using a parent-reported standardized screening tool during a health care visit in 2011. This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups.

*Percent of Children (0 to 17 years) Who Saw a Health Care Provider for Preventative Medical Care in Past Year:* is the percent of children who received one or more preventative medical care visits such as a physical exam or well-child checkup from a doctor, nurse, or other health care provider in the past year in Connecticut in 2011. This indicator is presented

for the total population and for Connecticut's largest racial and ethnic groups.

#### **Dental Care Utilization among Children**

*Percent of Children Under 3 Years of Age with Medicaid Coverage Who Used Dental Care, by Type of Care:* is the percent of children in Connecticut under 3 years of age who had Medicaid coverage and used dental services. This indicator is presented for those who used any dental services, preventive dental care, or dental treatment in Connecticut from 2008 to 2011.

*Percent of Children Under 3 Years of Age with Medicaid or Primary Care Case Management Who Used Dental Care, by Type of Care:* is the percent of children in Connecticut under 3 years of age who had Medicaid or Primary Care Case Management (HUSKY programs) and used dental services. This indicator is presented by type of dental service: any dental services, preventive dental care, or dental treatment, for Connecticut and its largest towns in 2011.

*Percent of Children Under 3 Years of Age Enrolled in Medicaid or Primary Care Case Management Who Used Dental Care Services, by Type of Care and Race and Ethnicity:* is the percent of children under 3 years of age who had Medicaid or Primary Care Case Management (HUSKY programs) and used dental services. This indicator is presented by type of dental service: any dental services, preventive dental care, or dental treatment, for Connecticut's largest racial and ethnic groups for 2011.

#### **Childhood Conditions**

Topics pertaining to the health of children, including immunizations, obesity, asthma, oral health, suicide, injury, and children with special health care needs are located in other sections of this report.

#### **ENVIRONMENTAL RISK FACTORS AND HEALTH**

##### **Outdoor Air Quality**

*Daily Air Quality Index:* is a time series that shows the daily Air Quality Index (AQI) for ozone (Max O3) and fine particles <2.5 µm in diameter (Max PM2.5)

in Connecticut, from 2005 to 2012. The AQI is a color coded and numerical guide (see Fig. below) that tells us how clean or polluted the air is, and what associated health effects might be a concern. The AQI is calculated for four air pollutants: ground level ozone, particle pollution, carbon monoxide, and sulfur dioxide. For each of these pollutants, the Environmental Protection Agency (EPA) has established national air quality standards to protect public health.



*Ozone (O<sub>3</sub>) and Fine Particulate (PM<sub>2.5</sub>) Exceedance Days and Maximum Design Values:* is the number of days that ozone or fine particulate matter levels exceeded national standards and the ozone maximum design values and ozone 2008 National Ambient Air Quality Standards (NAAQS) for Connecticut from 1983 to 2013.

*Air Quality Index Trends:* shows the number of days in which the Air Quality Index (AQI) was unhealthy for sensitive groups, unhealthy, or very unhealthy, from 2005 to 2012. “Unhealthy for sensitive groups” indicates an AQI of 101-150, in which the general public may not be affected by this AQI range, but sensitive groups such as people with lung disease, older adults, and children are at a greater risk from exposure to ozone, or persons with heart and lung disease, older adults, and children are at greater risk from the presence of particles in the air. “Unhealthy” indicates an AQI between 151-200, at which everyone may begin to experience adverse health effects and persons from sensitive groups may experience more serious health effects. “Very unhealthy” indicates that the AQI ranged from 201-300, a range at which everyone may experience

more serious health effects. See the Fig. above for the Environmental Protection Agency’s (EPA’s) AQI Guidelines. The AQI is a color-coded and numerical guide (see Fig. below) that tells us how clean or polluted the air is, and what associated health effects might be a concern. The AQI is calculated for four air pollutants: ground level ozone, particle pollution, carbon monoxide, and sulfur dioxide. For each of these pollutants, the EPA has established national air quality standards to protect public health.

### Indoor Air Quality

*Smoke Exposure among Students (Grades 9-12):* indicates the percent of students in grades 9-12 who reported that they were in the same room with someone who was smoking cigarettes on at least 1 day in the past 7 days, rode in a car with someone on at least 1 day in the past 7 days, or lived with someone who smoked cigarettes, based on interviews completed among Connecticut students from 2005 to 2011.

*Smoke Exposure among Non-Smoking Students in Grades 6-8 and 9-12:* is a measure of the percent of students in grades 6-8 and grades 9-12 who reported that they were in the same room with someone who was smoking cigarettes on at least 1 of the past 7 days, rode in a car with someone who was smoking cigarettes on at least 1 day in the past 7 days, or lived with someone who smoked cigarettes, based on interviews completed in 2011.

### Water Quality

*Number of People Served by Public Water Systems, by County:* indicates the number of people in Connecticut who were served by public water systems in 2010, by county.

*Percent of Water Companies that Delivered Water that Met Health Standards:* is the percent of water companies that delivered water in Connecticut that met health standards, from 2003-2012.

*Percent of Rivers and Streams Classified as Suitable for Swimming:* indicates the percent of assessed rivers and streams in Connecticut that fully support

recreation, per their classification as suitable for swimming in 2012.

### **Lead Poisoning**

*Number of Children <6 Years of Age with Blood Lead Level  $\geq 10\mu\text{g}/\text{dL}$ :* indicates the number of children who had blood lead levels at or above 10  $\mu\text{g}/\text{dL}$  in Connecticut, from 2003 to 2012.

*Percent of Lead Poisoned Children among the Total Number of Children <6 Years of Age Screened, by Blood Level:* is the percent of children less than 6 years of age who were screened for elevated blood lead levels in 2012 with elevated blood levels presented by blood level category, including 5-9  $\mu\text{g}/\text{dL}$ , 10-14  $\mu\text{g}/\text{dL}$ , 15-19  $\mu\text{g}/\text{dL}$ , 20-44  $\mu\text{g}/\text{dL}$ , and 45+  $\mu\text{g}/\text{dL}$ .

*Number of Healthy Homes Inspections:* indicates the number of initial Healthy Homes assessments and re-assessments in Connecticut from 2010, when Healthy Homes inspections began, to 2012.

### **Lead Poisoning Across Connecticut**

*Properties Associated with Lead Poisoning among Children and Housing Units Constructed before 1960:* depicts towns where childhood lead poisoning cases ( $> 10 \mu\text{g}/\text{dL}$ ) have been reported in 2011. Also demonstrated in this map is the prevalence of housing units that were constructed before 1960, based on the 2005-2009 American Community Survey. The dark green indicates areas with the greatest concentration of housing units built before 1960.

### **Radon**

*Potential Radon Levels, by County:* the map indicates counties with a potential for high ( $>4 \text{ pCi}/\text{L}$ ), moderate (2-4  $\text{ pCi}/\text{L}$ ), and low ( $<2 \text{ pCi}/\text{L}$ ) levels of radon, as estimated in 1988.

*Number of Radon Mitigation Systems Installed in Homes, by Type:* is the number of radon mitigation systems installed in Connecticut homes by qualified radon mitigation contractors, by type of mitigation system (air or water), in Connecticut from January, 2009 through December, 2011.

*Percent of Child Day Care Centers and Group Day Care Homes that Use Basement or Ground Floor of a Building with Elevated Radon Levels:* is the percent of child day care centers and group day care homes that used a basement or ground floor of a building that were tested for radon as a requirement for licensure ( $n=1,714$ ), and had elevated radon levels, by level, in Connecticut from 2008 to 2010.

### **Asbestos**

*Number of Asbestos Abatement Notifications, Demolitions, and Alternative Work Practice Applications:* is the number of asbestos abatement notifications, demolitions, and alternative work practice applications in Connecticut from 2008 to 2012. An alternative work practice application is a subset of the asbestos notifications in which a licensed project designer requests an alternative method on behalf of the contractor. If the proposed removal methods meet or exceed the state and federal asbestos standards, then the Department of Public Health can approve the alternative work practice proposed.

*Number of Asbestos Abatement Notifications, by Type of Facility:* is the number of asbestos abatement notifications received by the Connecticut Department of Public Health Asbestos Program from 2008 to 2012, by facility type (school, residential facility or nonresidential facility).

## **CHRONIC DISEASE PREVENTION AND CONTROL**

### **Tobacco Use**

*Percent of Current Smokers among Adults and Students (Grades 9-12):* depicts the percent of adults, 18 years of age or older, who reported that they currently smoked cigarettes some days or every day, based on interviews completed from 2000 to 2012. This Fig. also indicates the percent of youth (grades 9-12) who reported smoking at least 1 day in the past 30 days, based on interviews conducted from 2000 to 2011.

*Percent of Current Smokers among Adults, by Educational Attainment:* is the percent of persons

18 years of age or older who reported that they currently smoked cigarettes, presented by educational attainment, or the highest level of education reported by respondents for 2000 and 2010.

*Percent of Current Smoking among Adults, by Age Group:* is the proportion of persons at least 18 years of age who indicated that they currently smoked cigarettes, presented by age group for 2000 and 2010.

### **Physical Activity: Adults**

*Percent of Adults Who Met Aerobic Exercise and Muscle Strengthening Guidelines, by Income:* is an indicator of the percent of adults, 18 years of age or older, who met recommendations for aerobic exercise and muscle strengthening, based on interviews conducted in 2011. Guidelines for aerobic exercise include engaging in moderate-intensity physical activity for at least 150 minutes per week or vigorous-intensity physical activity for 75 minutes/week. It is recommended that adults engage in moderate- or high-intensity muscle strengthening exercises and involve all major muscle groups on 2 or more days/week. This indicator is presented based upon the respondent's reported income and for all income groups.

*Percent of Adults Who Met Aerobic Exercise and Muscle Strengthening Guidelines, by Age Group:* is an indicator of the percent of adults, 18 years of age or older, who met recommendations for aerobic exercise and muscle strengthening, based on interviews conducted in 2011. Guidelines for aerobic exercise include engaging in moderate-intensity physical activity for at least 150 minutes per week or vigorous-intensity physical activity for 75 minutes/week. It is recommended that adults engage in moderate- or high-intensity muscle strengthening exercises and involve all major muscle groups on 2 or more days/week. This indicator is presented based upon the respondent's age group.

### **Physical Activity: Adolescents**

*Percent of Students Who Watched TV, or Played Video Games, or Were on the Computer for 3 or More Hours per Day, by Sex:* is the proportion of students (grades 9-12) who watched TV for 3 or more hours per day on an average school day; who played video games or computer games; or were on the computer for something that was not school work for 3 or more hours per day on an average school day, based on interviews completed in 2011. Data are presented for males and females separately and for both sexes.

*Percent of Students Who Watched TV, or Played Video Games, or Were on the Computer for 3 or More Hours per Day, by Sex:* is the proportion of students (grades 9-12) who watched TV for 3 or more hours per day on an average school day; who played video games or computer games; or were on the computer for something that was not school work for 3 or more hours per day on an average school day, based on interviews completed in 2011. Data are presented for the largest racial and ethnic groups in Connecticut.

### **Nutrition**

*Percent of Adults Who Consume Fruits and Vegetables Less than Once Daily, by Income:* is the proportion of adults, 18 years of age and older, who consumed fewer than one serving of fruit or vegetables on a daily basis, as reported in 2011. This indicator is presented based upon the respondent's reported income and is presented for all income groups and by income category.

*Low Income Census Tracts Considered "Food Desserts":* are indicated in red on the map to characterize areas where residents in low-income neighborhoods have low access to a supermarket or large grocery store, based on data from 2009.

## **Overweight and Obesity: Adults**

*Percent of Obese Adults, by Sex:* For adults, body mass index (BMI), which is calculated based upon a person's height and weight, is used to classify weight status. Adults with a BMI  $\geq 30$  are considered obese. This indicator is presented for obese adults, 18 years of age and older, for the total population and by sex for the 2000 to 2012 period.

*Percent of Overweight or Obese Adults:* is the percent of persons at least 18 years of age who are classified as overweight (BMI between 25.0 and 29.9) or obese (BMI  $\geq 30$ ), combined, presented by sex and for the total population, from 2000 to 2012.

*Percent of Overweight or Obese Adults, by Educational Attainment:* is the proportion of persons at least 18 years of age who are classified as overweight (BMI between 25.0 and 29.9) or obese (BMI  $\geq 30$ ), combined, presented also by educational attainment for 2012.

## **Overweight and Obesity: Children and Youth**

*Percent of Children (5-12 Years of Age), Who Were Obese:* is the proportion of children 5 to 12 years of age who were obese in Connecticut, aggregated over the 2008 to 2010 period. This indicator is presented for the total population and for children with a household income  $< \$25,000$ . Children classified as obese have a BMI (calculated based on their weight and height) that is at or above the 95<sup>th</sup> percentile for their sex- and age-specific growth charts.

*Percent of Overweight and Obese Students (Grades 9-12), by Sex:* indicates the proportion of students (Grades 9-12) who exceed a healthy weight. For children and adolescents (aged 2-17), weight status classifications are assessed by the percentile ranking, which is based on age- and sex-specific reference data from the 2000 CDC growth charts. Children and adolescents  $\geq 95^{\text{th}}$  percentile are classified as obese. Children and adolescents  $\geq 85^{\text{th}}$  and  $< 95^{\text{th}}$  percentile are classified as overweight. The prevalence of obesity and overweight among students in grades 9-12 is presented for both sexes and by sex for 2011.

*Percent of Overweight and Obese Students (Grades 9-12), by Race and Ethnicity:* is the percent of overweight or obese students in grades 9-12, presented for Connecticut's largest racial and ethnic groups in 2011. For children and adolescents (aged 2-17), weight status classifications are assessed by the percentile ranking, which is based on age- and sex-specific reference data from the 2000 CDC growth charts. Children and adolescents  $\geq 95^{\text{th}}$  percentile are classified as obese. Children and adolescents  $\geq 85^{\text{th}}$  and  $< 95^{\text{th}}$  percentile are classified as overweight.

## **Heart Disease**

*Heart Disease Age-Adjusted Mortality Rate:* is the number of persons in Connecticut who have died due to heart disease per 100,000 population, adjusting for age, from 2000 to 2010. This indicator is presented for the total population and by sex.

*Heart Disease Age-Adjusted Hospitalization Rate:* illustrates the number of persons in Connecticut who were hospitalized for heart disease per 100,000 population, accounting for age, from 2001 to 2011. This indicator is presented for the total population and by sex.

*Percent of Adults Ever Told by a Provider that They Had High Blood Pressure or High Cholesterol:* indicates the proportion of adults, 18 years of age and older, who were told by a doctor, nurse, or other health professional that they had high blood pressure and the percent of adults, age 18 and over, who had ever had their cholesterol checked and were told by a doctor, nurse, or other health professional that they had high cholesterol, as reported from 2001 to 2011.

## **Stroke**

*Stroke Age-Adjusted Mortality Rate:* is the number of persons in Connecticut who died due to stroke per 100,000 population, adjusting for age, from 2001 to 2010. This indicator is presented for the total population and by sex.

*Stroke Age-Adjusted Hospitalization Rate:* is the number of persons in Connecticut who were

hospitalized due to stroke per 100,000 population, adjusting for age, from 2001 to 2011. This indicator is presented for the total population and by sex.

### **Heart Disease and Stroke: At-Risk Populations**

#### *Heart Disease and Stroke Age-Adjusted*

*Hospitalization Rate:* is the number of persons in Connecticut who were hospitalized for heart disease or stroke, per 100,000 population, adjusting for age. This indicator is presented for Connecticut's largest racial and ethnic groups, adjusting for age, for 2011.

*Percent of Adults Ever Told by a Health Care Provider that They Had High Blood Pressure or High Cholesterol, by Race and Ethnicity:* is the percent of persons at least 18 years of age who were told by a doctor, nurse, or other health professional that they had high blood pressure and the percent of adults, age 18 and over, who had ever had their cholesterol checked and were told by a doctor, nurse, or other health professional that they had high cholesterol. This indicator is presented for Connecticut's largest racial and ethnic groups, as reported in 2011.

*Percent of Adults Ever Told by a Health Care Provider that They Had High Blood Pressure or High Cholesterol, by Educational Attainment:* is the proportion of persons 18 years of age or older who were told by a doctor, nurse, or other health professional that they had high blood pressure and the percent of adults, age 18 and over, who had ever had their cholesterol checked and were told by a doctor, nurse, or other health professional that they had high cholesterol. This indicator is presented by educational attainment, as reported in 2011.

### **Premature Mortality Due to Heart Disease and Stroke Across Connecticut**

*Premature Mortality due to Heart Disease, Years of Potential Life Lost (YPLL) Under Age 75, by Town:* this map indicates the distribution of premature mortality due to heart disease per 100,000 population, as assessed by years of potential life lost (YPLL) under age 75. This indicator is shown by town, aggregated for the 2006-2010 period. Towns

in shaded in dark blue had the highest premature mortality rate per 100,000 population. Towns shaded in yellow had the lowest premature mortality rate per 100,000 population. The towns depicted by stripes were suppressed for this indicator due to the small number of cases.

*Premature Mortality due to Stroke, Years of Potential Life Lost (YPLL) Under Age 75, by Town:* this map indicates the distribution of premature mortality due to stroke per 100,000 population, as assessed by years of potential life lost (YPLL) under age 75. This indicator is shown by town, aggregated for the 2006-2010 period. Towns shaded in dark blue had the highest premature mortality rate per 100,000 population. Towns shaded in yellow had the lowest premature mortality rate. The towns depicted by stripes were suppressed for this indicator.

### **Diabetes**

*Diabetes Age-Adjusted Mortality Rate:* illustrates the number of persons in Connecticut who have died due to diabetes per 100,000 population, from 2001 to 2010, adjusting for age. This indicator is presented by sex.

*Percent of Adults Ever Told by a Provider that They Have Diabetes:* is estimated by the percent of adults, 18 years of age and older, who indicated that they were told by a doctor, nurse or health professional that they have diabetes, based on interviews completed from 2000 to 2012.

*Diabetes Emergency Department Visits by Age:* depicts the number of persons in Connecticut who were treated in an emergency department for diabetes-related complications over the fiscal years 2007 to 2011, by age group, per 100,000 population.

### **Diabetes: At-Risk Populations**

*Percent of Adults Ever Told by a Provider that They Had Diabetes, by Income:* is the proportion of persons at least 18 years of age who were told by a doctor, nurse or health professional that they have

diabetes, based on surveys completed in 2012. This indicator is presented by income.

*Percent of Adults Ever Told by a Provider that They Had Diabetes, by Race and Ethnicity:* is the proportion of persons at least 18 years of age who were told by a doctor, nurse or health professional that they have diabetes, based on surveys completed in 2012. This indicator is presented for Connecticut's largest racial and ethnic groups.

Diabetes Emergency Department Visits, by Race and Ethnicity: depicts the number of persons in Connecticut who were treated in an emergency department for diabetes-related complications over the fiscal years 2007 to 2011, combined, for Connecticut's largest racial and ethnic groups.

## **Cancer**

*Number of New Cancer Cases, by Sex and Cancer Site:* indicates the number of new cancer cases in Connecticut in 2010, by cancer site, for the most prevalent cancers, and for all other cancers. This indicator is presented by sex.

*Number of Deaths Due to Cancer, by Sex and Cancer Site:* is the number of deaths due to cancer, by cancer site, for the most prevalent cancers, and for all other cancers, in Connecticut in 2010. This indicator is presented by sex.

*Cancer Incidence and Mortality Rate for All Invasive Cancers, by Race and Ethnicity:* The cancer incidence rate is the number of persons in Connecticut who were diagnosed with cancer, for all invasive cancers, per 100,000 Connecticut residents, in 2010. The cancer mortality rate is the number of persons who have died due to cancer for all invasive cancers, per 100,00 population, for 2008-2010. This indicator is presented for the total population and for the largest racial and ethnic groups in Connecticut.

## **Cancer Stage and Cancer Survival**

*Stage of Cancer Diagnosis for All Invasive Cancers:* indicates the stage of cancer diagnosis for all invasive cancers diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary

Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Cancer Survival for All Invasive Cancers, by Cancer Stage, for Persons Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a cancer patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for persons diagnosed with cancer between 2004 and 2009, and indicates the survival rate as of December, 2010.

## **Breast Cancer**

*Female Breast Cancer Incidence and Mortality Rate, by Race and Ethnicity:* is the number of females in Connecticut who were diagnosed with breast cancer, for per 100,000 population, in 2008 to 2010 (combined). This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups. The breast cancer mortality rate is the number of females who have died due to breast cancer, per 100,00 population, for 2008-2010, combined.

*Stage of Breast Cancer Diagnosis:* is the stage of cancer diagnosis for breast cancers diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Breast Cancer Survival, by Cancer Stage, for Females Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a breast cancer

patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for females diagnosed with breast cancer between 2004 and 2009, and indicates the survival rate as of December, 2010.

### **Cervical Cancer**

*Cervical Cancer Incidence and Mortality Rate, by Race and Ethnicity:* is the number of females in Connecticut who were diagnosed with cervical cancer, for per 100,000 population, in 2008 to 2010 (combined). This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups. The cervical cancer mortality rate is the number of females who have died due to cervical cancer, per 100,00 population, for 2008-2010, combined.

*Stage of Cervical Cancer Diagnosis:* is the stage of cancer diagnosis for cervical cancers diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Cervical Cancer Survival, by Cancer Stage, for Females Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a cervical cancer patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for females diagnosed with cervical cancer between 2004 and 2009, and indicates the survival rate as of December, 2010.

### **Prostate Cancer**

*Prostate Cancer Incidence and Mortality Rate, by Race and Ethnicity:* is the number of males in Connecticut who were diagnosed with prostate cancer, for per 100,000 population, in 2008 to 2010

(combined). This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups. The prostate cancer mortality rate is the number of males who have died due to prostate cancer, per 100,00 population, for 2008-2010, combined.

*Stage of Prostate Cancer Diagnosis:* is the stage of cancer diagnosis for prostate cancers diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Prostate Cancer Survival, by Cancer Stage, for Males Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a prostate cancer patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for males diagnosed with prostate cancer between 2004 and 2009, and indicates the survival rate as of December, 2010.

### **Lung Cancer**

*Lung Cancer Incidence and Mortality Rate, by Race and Ethnicity:* is the number of persons in Connecticut who were diagnosed with lung cancer, for per 100,000 population, in 2008 to 2010 (combined). This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups. The lung cancer mortality rate is the number of persons who have died due to lung cancer, per 100,00 population, for 2008-2010, combined.

*Stage of Lung Cancer Diagnosis:* is the stage of cancer diagnosis for lung cancers diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The



regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Lung Cancer Survival, by Cancer Stage, for Persons Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a lung cancer patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for persons diagnosed with lung cancer between 2004 and 2009, and indicates the survival rate as of December, 2010.

### **Colorectal Cancer**

*Colorectal Cancer Incidence and Mortality Rate, by Race and Ethnicity:* is the number of persons in Connecticut who were diagnosed with colorectal cancer, for per 100,000 population, in 2008 to 2010 (combined). This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups. The colorectal cancer mortality rate is the number of persons who have died due to colorectal cancer, per 100,00 population, for 2008-2010, combined.

*Stage of Colorectal Cancer Diagnosis:* is the stage of cancer diagnosis for colorectal cancers diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Colorectal Cancer Survival, by Cancer Stage, for Persons Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a colorectal cancer patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for persons diagnosed with colorectal cancer between 2004 and

2009, and indicates the survival rate as of December, 2010.

### **Melanoma**

*Melanoma Incidence and Mortality Rate, by Race and Ethnicity:* is the number of persons in Connecticut who were diagnosed with melanoma, for per 100,000 population, in 2008 to 2010 (combined). This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups. The melanoma mortality rate is the number of persons who have died due to melanoma, per 100,00 population, for 2008-2010, combined.

*Stage of Melanoma Diagnosis:* is the stage of diagnosis for melanoma diagnosed between 2004 and 2009. Cancer stages are based on SEER Summary Stage 2000 definitions. Localized cancer indicates that the malignancy is restricted to the organ in which the cancer originated. The regional stage indicates that the tumor has extended beyond the organ. The distant stage indicates that the tumor cells have traveled to other parts of the body, away from the primary tumor and have begun to grow in a new organ.

*Five-Year Relative Melanoma Survival, by Cancer Stage, for Persons Diagnosed 2004-2009, Followed Through 2010:* is the ratio of a melanoma patient's chance of surviving their cancer over a five-year time period relative to that of a person of the same age and sex in the general US population. This indicator is presented for persons diagnosed with melanoma between 2004 and 2009, and indicates the survival rate as of December, 2010.

### **Cancer Screening Behaviors**

*Breast and Cervical Cancer Screening:* is the proportion of females 50 years of age and older who had a mammogram in the past 2 years, based on surveys conducted from 2000 to 2012, and the percent of females 18 years of age and older, who had a Pap smear test conducted in the past 3 years, based on interviews conducted from 2002 to 2012.

*Prostate Cancer Screening Behaviors, Among Males at Least 40 Years of Age:* is the proportion of males, 40 years of age and older, who received a PSA test within the past two years, based on interviews completed from 2002 to 2012.

*Colorectal Cancer Screening:* depicts the proportion of persons 50 years of age and older, who had a blood stool test in the past 2 years, and the percent of adults, 50 years of age and older, who have ever had a sigmoidoscopy or colonoscopy, based on interviews completed from 2002 to 2012.

### **Chronic Kidney Disease**

*Percent of Medicare Beneficiaries with Chronic Kidney Disease:* is an indicator of the prevalence of chronic kidney disease among Medicare beneficiaries in Connecticut enrolled in Medicare Part A and Part B for the entire year, over the 2007-2011 period. The prevalence is based on Medicare administrative claims indicating that beneficiaries received a service or treatment for chronic kidney disease.

*Percent of Adults Who Have Chronic Kidney Disease:* indicates the proportion of persons 18 years of age and older, who reported that a doctor, nurse or other health care provider told them that they have chronic kidney disease, based on interviews conducted in 2011. This indicator is presented for the total population and based on the respondent's reported income.

### **Arthritis and Osteoporosis**

*Percent of Adults Ever Told by A Provider that They Have Arthritis:* indicates the percent of adults 18 years of age and older, who have ever been told by a doctor, nurse, or other health care provider that they have arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia, based on interviews completed from 2000 to 2012.

*Percent of Medicare Beneficiaries with Rheumatoid Arthritis/Osteoarthritis and Osteoporosis:* is a measure of the prevalence of rheumatoid arthritis/osteoarthritis and osteoporosis among Medicare beneficiaries in Connecticut who were

enrolled in Medicare Part A and Part B for the entire year, over the period of 2007-2011. These estimates are based on Medicare administrative claims indicating that Medicare beneficiaries received a service or treatment for arthritis/osteoarthritis or osteoporosis.

### **Asthma**

*Percent of Children and Adults Ever Told They Have Asthma:* indicates the proportion of children (17 years of age and younger) and adults (at least 18 years of age) who have ever been told that they have asthma, based on interviews completed from 2000 to 2012.

*Age-Adjusted Hospitalization Rate Due to Asthma, by Sex:* is the number of hospitalizations due to asthma, per 100,000 population, presented for the total population and by sex for hospitalizations in 2011.

*Age-Adjusted Asthma Emergency Department Visits:* depicts the number of children (aged 17 and younger) and adults (18 years of age and older) who went to the emergency department for asthma complications, per 10,000 population and adjusting for age, from 2005 to 2009.

### **Asthma: At-Risk Populations**

*Percent of Children and Adults Ever Told They Have Asthma, by Race and Ethnicity:* is the proportion of children (0 to 17 years of age) and adults (18 years of age and older), who have ever been told they have asthma, presented for Connecticut's largest racial and ethnic groups, based on interviews conducted in 2012.

*Age-Adjusted Rate of Asthma ED Visits by Race and Ethnicity:* is the number of asthma-related emergency department visits per 10,000 population, presented by race and ethnicity for Connecticut's largest racial and ethnic groups for 2009.

*Rate of Asthma ED Visits and Hospitalization for Connecticut and Connecticut's Largest Towns:* indicates the number of Connecticut residents who went to the emergency department or were

hospitalized for asthma complications, per 10,000 population in 2009 for the State of Connecticut and Connecticut's largest towns

### **Chronic Obstructive Pulmonary Disease (COPD)**

*Percent of Adults Ever Told They Have COPD, Emphysema, or Chronic Bronchitis, by Income:* is the proportion of adults, 18 years of age and older, who have been told by a doctor, nurse or other health care provider that they have chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis, based on interviews completed in 2012. This indicator is presented for the total population and based on the self-reported income of respondents.

*Age-Adjusted Chronic Obstructive Pulmonary Disease Hospitalization Rate, by sex:* is the number of hospitalizations for chronic obstructive pulmonary disease, per 100,000 population in 2011, presented for the total population and by sex.

### **Chronic Lower Respiratory Disease Across Connecticut**

*Age-Adjusted Mortality Rate Due to Chronic Lower Respiratory Disease, by Town:* is the number of deaths due to chronic lower respiratory disease, presented by town, aggregated over the 2006 to 2010 period. Towns shaded in dark blue had the highest number of deaths due to chronic lower respiratory disease per 100,000 population. Towns shaded in yellow had the lowest mortality rate due to chronic lower respiratory disease. Towns shaded with stripes had too few cases to generate estimates.

*Premature Mortality due to Chronic Lower Respiratory Disease, by Town:* this map indicates the distribution of premature mortality due to chronic lower respiratory disease by town in Connecticut, as assessed by years of potential life lost due to mortality from chronic lower respiratory disease. Towns shaded in dark blue had the highest premature mortality rate due to chronic lower respiratory disease. Towns shaded in yellow had the lowest premature mortality rate. Towns shaded

with stripes had too few cases to generate estimates.

### **Oral Health: Children and Youth**

*Percent of Children Who Experience Dental Decay and Untreated Decay, by Grade:* is an indicator of children's oral health for children. Dental decay, or caries, is a disease process that may result in tooth decay. Untreated dental decay is a cavity or hole in the tooth that is at least ½ mm in size and has brown to dark-brown coloration on the walls of the cavity. This indicator is presented by grade for 2010 to 2011, combined.

*Percent of Children (Kindergarten and 3<sup>rd</sup> Grade) Who Experience Dental Decay and Prolonged Untreated Decay, by Race and Ethnicity:* is the proportion of children up to third grade who experienced dental decay or untreated decay in 2010 to 2011. Dental decay, or caries, is a disease process that may result in tooth decay. Untreated dental decay is a cavity or hole in the tooth that is at least ½ mm in size and has brown to dark-brown coloration on the walls of the cavity. This indicator is presented for Connecticut's largest racial and ethnic groups.

*Percent of Students (Grades 9-12) Who Saw a Dentist in the Past 12 Months:* indicates the proportion of Connecticut students in grades 9-12 who reported visiting a dentist in the past 12 months in 2011. This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups.

## **Oral Health: Adults**

*Percent of Adults 65+ Years of Age Who Have Had All of Their Natural Teeth Extracted:* indicates the proportion of adults at least 65 years of age, who have had all of their natural teeth extracted, based on interviews completed from 2002 to 2012.

*Percent of Adults Who Visited the Dentist or Dental Clinic in the Past Year for Any Reason:* is the percent of Connecticut adults, 18 years of age or older, who have visited the dentist or a dental clinic within the past year for any reason, based on self-report from 2002 to 2012.

## **Vision and Hearing**

*Percent of Adults Ever Told They Have Vision Impairment, by Age Group:* indicates the percent of adults, 18 years of age and older, who have ever been told by a doctor, nurse, or health care provider that they have a vision impairment, presented for the total population and by age group, based on interviews conducted in 2012.

*Percent of Connecticut Residents with Hearing Difficulty, by Age Group:* is the percent of Connecticut residents who had hearing difficulty in 2011, presented for the total population and by age group.

## **INFECTIOUS DISEASE PREVENTION AND CONTROL**

### **Sexual Risk Behaviors**

*Prevalence of Sexual Risk Behaviors among Students (Grades 9-12):* is the percent of students in grades 9-12 who had sexual intercourse with 4 or more persons during their lifetime, had sexual intercourse with at least 1 person in the past 3 months, or who did not use a condom during their last sexual intercourse (among those who were currently sexually active) in Connecticut over the 2007 to 2011 period.

*Prevalence of Sexual Risk Behaviors among Students (Grades 9-12), by Race and Ethnicity:* is the percent of students in grades 9-12 who had sexual intercourse with 4 or more persons during their

lifetime, had sexual intercourse with at least 1 person in the past 3 months, or who did not use a condom during their last sexual intercourse (among those who were currently sexually active), presented for Connecticut's largest racial and ethnic groups for 2011.

### **Sexually Transmitted Infections**

*Number of New Cases of Chlamydia, Gonorrhea, and Syphilis:* indicates the number of new cases of chlamydia and primary and secondary syphilis in Connecticut over the 2002 to 2012 period, and the number of new cases of gonorrhea from 2002 to 2013. The number of new cases of gonorrhea in 2013 is based on preliminary data.

*Percent of Youth 13 to 17 Years of Age Who Have Received the Human Papillomavirus (HPV) Vaccine, by Dose and Sex:* is the proportion of youth, 13 to 17 years of age who have had the human papillomavirus HPV vaccine (quadrivalent or bivalent), by number of doses ( $\geq 1$ ,  $\geq 2$ , or  $\geq 3$ ) and sex, in Connecticut in 2012.

### **Sexually Transmitted Infections: At-Risk Populations**

*Rate of New Chlamydia and Gonorrhea Cases, by Age:* is the number of new chlamydia and gonorrhea cases per 100,000 Connecticut residents, by age group in Connecticut in 2011.

*Rate of New Chlamydia and Gonorrhea Cases, by Race and Ethnicity:* is the number of new cases of chlamydia and gonorrhea, by race and ethnicity, per 100,000 population for Connecticut in 2011.

*Rate of New Cases of Chlamydia and Gonorrhea Connecticut and Its Largest Towns:* is the number of new cases of chlamydia and gonorrhea in Connecticut and its largest towns, per 100,000 population, in 2011.

### **HIV**

*Number of New HIV Cases:* is the number of new cases of HIV that were diagnosed in Connecticut, over the 2002 to 2011 period.

*Percent of HIV Cases that Met the AIDS Definition within 12 Months of Diagnosis, by Transmission Category:* is the percent of new HIV cases that progressed to meet the AIDS definition within 12 months of diagnosis, by transmission category, for 2011.

*Number of People Living with HIV and Number of Deaths among Persons Known to be Living with HIV:* is the number of persons living with HIV and the number of deaths among persons known to be living with HIV in Connecticut over the 2002 to 2011 period. For 2011, the number of deaths is based on preliminary reports and is for deaths for which HIV was the primary cause of death or a contributing factor. While historically deaths were reported to the Connecticut Department of Public Health Vital Records, starting in 2008 additional deaths were identified through the use of national death directories to include deaths for cases that moved out of Connecticut. The estimate of the number of persons living with HIV in more recent years may be more accurate, as the CDC has increased the frequency with which duplicate cases of HIV reported in more than one state are de-duplicated.

#### **HIV: At-Risk Populations**

*Distribution of New HIV/AIDS Cases, by Age and Sex:* indicates the proportion of new HIV/AIDS cases that were diagnosed in Connecticut in 2011, by age and sex.

*Rate of New HIV/AIDS Cases, by Race and Ethnicity:* is the number of new HIV/AIDS cases diagnosed in Connecticut, aggregated over the 2007 to 2011 period (combined), by race and ethnicity, for Connecticut's largest racial and ethnic groups, per 100,000 population.

#### **Tuberculosis**

*Rate of New Tuberculosis Cases:* indicates the number of new tuberculosis cases in Connecticut per 100,000 residents, over the 2002 to 2011 period.

*Number of New Tuberculosis Cases, by Race and Ethnicity and Place of Birth:* is the number of new

tuberculosis cases in Connecticut in 2011, presented by race and ethnicity and place of birth (US-born vs. born outside of the US) for Connecticut's largest racial and ethnic groups.

#### **Hepatitis B**

*Number of Cases of Acute Hepatitis B:* is the number of cases of acute hepatitis B in Connecticut over the 2002 to 2011 period.

*Chronic Hepatitis B, by Town:* is a map that shows the distribution of number of cases of chronic hepatitis B, by town in Connecticut in 2011. These numbers are based upon the town of residence upon first report of hepatitis B. Chronic hepatitis B is defined as two laboratory reports of positive HBsAg, HBeAg or HBV DNA at least six months apart or one positive test of the aforementioned tests with an IgM anti-HBc negative report.

#### **Hepatitis C**

*Rate of Hepatitis C Cases (Past or Present):* indicates the number of past or present hepatitis C cases in Connecticut over the 2007 to 2011 period, per 100,000 population. The hepatitis C rate includes past or present cases that are laboratory confirmed and do not meet the classification of acute hepatitis C.

*Number of Cases of Acute Hepatitis C:* is the number of cases of acute hepatitis C in Connecticut, from 2007 to 2011.

*Hepatitis C, Past or Present, by Town:* is a map that shows the number of cases of hepatitis C, past or present, in Connecticut in 2011, by town. This number includes past or present cases that are laboratory confirmed and do not meet the classification of acute hepatitis C.

#### **Immunizations for Vaccine-Preventable Diseases: Children and Adolescents**

*Percent of Children (19-35 Months) Who Completed Recommended Vaccine Series:* indicates the proportion of children (19-35 months) who completed the recommended vaccine series in Connecticut, over the 2002 to 2011 period. The

recommended vaccine series includes:  $\geq 4$  doses DTaP/DT/DTP,  $\geq 3$  doses of poliovirus vaccine,  $\geq 1$  dose of any measles-containing vaccine,  $\geq 3$  doses of HepB,  $\geq 1$  dose of varicella vaccine, and  $\geq 4$  doses of PCV; *Haemophilus influenzae* type B vaccine is excluded.

*Percent of Adolescents (13 to 17 Years of Age) Who Completed Varicella, Tdap, or Meningococcal Vaccines:* is the percent of persons 13 to 17 years of age who completed at least 2 doses of the varicella vaccine, at least 1 dose of the Tdap (tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis), and at least 1 dose of the meningococcal conjugate (MenACWY), as reported in 2012.

#### **Immunizations for Vaccine-Preventable Diseases: Adults**

*Percent of Adults Who Received Flu Shot in Past Year, by Age Group:* is the percent of adults 18 years of age or older, who received the influenza vaccine, either by shot or nasal spray, in the past year, for the total population and by age group, for 2001 and 2012.

*Percent of Adults Who Received Flu Shot in Past Year, by Race and Ethnicity:* is the percent of adults 18 years of age or older who received the influenza vaccine, either by shot or nasal spray, in the past year, for the total population and by race and ethnicity, for Connecticut's largest racial and ethnic groups in 2012.

*Percent of Adults 65 Years of Age and Older Who Ever Received Pneumonia Vaccine in Their Lifetime:* indicates the percent of adults 65 years of age and older ever received the pneumonia vaccine over their lifetime, as reported in 2012. This indicator is presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups.

#### **Vaccine-Preventable Diseases**

*Number of Cases of Invasive Pneumococcal Disease:* is the number of reported cases of invasive pneumococcal disease in Connecticut, from 2006 to 2012.

*Number of Cases of Pertussis and Varicella:* indicates the number of reported cases of pertussis and varicella in Connecticut, from 2006 to 2012.

#### **Food- and Water-borne Infections**

*Number of Cases of Food- and Water-borne Infections, by Type:* indicates the number of reported cases of *Campylobacter*, *Cyclospora*, *Cryptosporidium*, *E. coli* O157:H7, listeriosis, salmonellosis, shigellosis, non-O157 shiga-toxin-producing *E. coli*, *Vibrio*, and *Yersinia* in Connecticut, from 2006 to 2012.

*Number of Foodborne Norovirus Outbreaks:* is the number of foodborne norovirus outbreaks in Connecticut from 2003 to 2012, including suspected and lab-confirmed outbreaks.

#### **Other Reportable Diseases**

*Number of Animal Cases of Rabies and Human Cases of West Nile Virus:* is the number of reported cases of rabies in animals, and West Nile virus in Connecticut, from 2006 to 2012.

*Type and Number of Animals Tested for Rabies and Percent Found Positive for Rabies:* is the type of animals that were tested for rabies over the 2002 to 2012 period (combined), for which there were at least 100 animals tested. This table also presents the percent of animals for that animal group that were found positive for rabies over the 2002 to 2012 period, combined.

#### **Lyme Disease and West Nile Virus Across Connecticut**

*Average Annual Incidence of Lyme Disease, by Town:* is the average annual incidence of Lyme disease in Connecticut, by town, for the 2002 to 2012 period (combined). The average annual incidence was higher in towns shaded in dark brown.

*Number of Cases of Reported West Nile Virus, by Town:* is the number of cases of reported West Nile virus, by town, in Connecticut for the 2000 to 2012 period, combined. The number of cases was highest in towns shaded in dark red.

## Healthcare-Associated Infections

*Number of Central Line Associated Blood Stream Infections (CLABSIs), by Setting:* indicates the number of central line associated bloodstream infections (CLABSIs) in intensive care units (ICUs) in Connecticut in 2012, as reported by hospitals. This indicator is presented for all acute care hospital ICUs, and for pediatric ICUs and neonatal ICUs.

*Percent of Pathogens Associated with Central Line Associated Blood Stream Infections (CLABSIs) Reported in 2012:* indicates the pathogens that contributed to the greatest number of central line associated blood stream infections (CLABSIs) in intensive care units (ICUs) in Connecticut's hospitals that were reported in 2012. The percent of CLABSIs that were attributed to each of the leading pathogens are presented.

*Number of Surgical Site Infections (SSIs) and Standardized Infection Ratio, by Procedure:* is the number of surgical site infections (SSIs) by procedure (colon surgery or abdominal hysterectomy) in 2012. Also presented in this table is the standardized infection ratio (SIR) for each type of procedure in 2012. The SIR is a statistical measure used to assess healthcare-associated infections (HAIs) across facilities and locations over time. The SIR is the number of observed infections divided by the predicted number of infections for a given operative procedure. The predicted number of infections is derived from an estimate of HAIs based on infections reported to the National Healthcare Safety Network (NHSN) across the country from 2006 to 2008. This indicator adjusts for several factors that have been associated with variation in infection rates. A SIR of 1 indicates that the number of infections reported to the NHSN is the same as the number of predicted infections. A SIR of less than 1 indicates that there were fewer infections reported than were predicted based on baseline data. A SIR greater than 1 indicates that there were more infections than expected based on baseline data.

## Multidrug-Resistant Organisms

*Incidence of Methicillin-Resistant staphylococcus aureus (MRSA) Infections by Place of Onset:* is the number of new cases of methicillin-resistant staphylococcus aureus (MRSA) infections per 100,000 Connecticut residents by place of onset (e.g., hospital onset, healthcare-associated community onset, or community-associated onset) from 2001-2012.

*Number of Methicillin-Resistant Staphylococcus aureus (MRSA) Infections:* is the number of cases of methicillin-resistant staphylococcus aureus (MRSA) infections from January 2012 to December 2012. Not all of these cases may have been healthcare-associated infections.

Vancomycin-resistant enterococcus (VRE) incidence rate: is the number of new cases of vancomycin-resistant enterococcus (VRE) per 100,000 Connecticut residents from 2000 to 2011.

## INJURY AND VIOLENCE PREVENTION

### Unintentional Injury

*Number of Deaths Due to Unintentional Injury:* is the total number of deaths registered with the State of Connecticut for the leading causes of death due to unintentional injury, including motor vehicle accidents, falls, accidental poisoning, drowning and fire that resulted in death for the 2001 to 2010 period.

*Number of Deaths Due to Unintentional Injury, by Cause of Death and Sex:* is the number of deaths due to unintentional injury that are registered with the State of Connecticut in 2010, presented by sex.

*Number of Deaths due to Unintentional Injury, by Age Group:* is the number of deaths due to unintentional injury that are registered with the State of Connecticut in 2010, presented by age group.

## Accidental Poisoning

*Rate of Hospitalizations for Poisoning, by Sex:* indicates the number of hospitalizations for poisoning per 100,000 population, presented for the total population and by sex, adjusting for age. This indicator is presented for hospitalizations in 2011.

*Number of Calls from Hospitals and Emergency Responders to Connecticut Poison Control Center:* is the number of calls from clinicians at hospitals to the Connecticut Poison Control Center for treatment and guidance related to poisoning. This Fig. also presents the number of calls from emergency responders, including 911 dispatchers, EMTs and paramedics, and fire personnel on rescue vehicles to the Connecticut Poison Control Center. This indicator is presented for calls to the Connecticut Poison Control Center for 2002 to 2012.

## Unintentional Injuries: At-Risk Populations

*Age-Adjusted Mortality Rate for Unintentional Injury, by Type of Unintentional Injury and Race and Ethnicity:* is the number of deaths due to unintentional injuries, including motor vehicle accidents, falls, accidental poisoning, drowning, and fire that resulted in death, per 100,000 population, aggregated over the 2006-2010 period, adjusting for age. This indicator is presented for Connecticut's largest racial and ethnic groups.

*Rate of Emergency Department Visits for Unintentional Injury, by Type of Unintentional Injury and Sex:* is the number of emergency department visits per 10,000 population for motor vehicle injury, falls, and sports injuries in Connecticut in fiscal year 2012. This indicator is presented for the total population and by sex.

*Rate of Emergency Department Visits for Sports Injury, by Age Group:* is the number of emergency department visits for sports injury per 100,000 population, for the total population and by age group in Connecticut in fiscal year 2012.

## Traumatic Brain Injury

*Rate of Emergency Department Visits Due to Traumatic Brain Injury, by Age Group:* is the number of emergency department visits due to traumatic brain injury, per 100,000 population in Connecticut in fiscal year 2012. This indicator is presented for the total population and by sex.

*Rate of Hospitalizations Due To Traumatic Brain Injury, by Sex:* is the number of hospitalizations due to traumatic brain injury per 100,000 population. This indicator is presented for the total population and by sex for the 2001 to 2011 period in Connecticut.

## Transportation Safety

*Percent of Children Under 4 Years of Age in Restraint or Rear Seat of Car:* is the percent of children 0 to 3 years of age who were in a child safety restraint or the rear seat of a car over the 2003 to 2009 period in Connecticut.

*Observed Seat Belt Use:* is the percent of persons observed wearing a seat belt in Connecticut, from 2001 to 2010.

*Percent of Students (Grades 9-12) Who Engaged in Unsafe among Students Who Drove a Car:* indicates the percent of youth in grades 9-12 who drove a car and reported that they talked on a cell phone while driving or texted or emailed while driving within 30 days before completing the Connecticut School Health Survey. This Fig. is based on interviews completed in 2011.

## Unintentional Injury Across Connecticut

*Age-Adjusted Unintentional Injury Mortality Rate, by Town:* shows variation in the unintentional injury mortality rate per 100,000 population by town in Connecticut, from 2006 to 2010, adjusting for age. Towns in dark blue are those in which the accident mortality rate was highest. Towns shaded in yellow the lowest unintentional injury mortality rate. Those towns indicated by stripes had data suppressed.



*Years of Potential Life Lost Before Age 75 Due to Unintentional Injury, by Town:* shows the variation in the number of years of potential life lost (YPLL) before age 75 due to unintentional injury for Connecticut residents from 2006 to 2010, combined. YPLL is an indicator of the estimated number of years that a person would have lived, had they not died prematurely. Towns shaded in dark blue had the highest number of YPLL. Towns shaded in yellow had the lowest number of YPLL. Towns with the striped shading had too few events of premature mortality due to unintentional injury to generate estimates.

### **Intentional Injury**

*Number of Deaths Due to Homicide or Suicide, by Sex:* is the number of deaths due to homicide and suicide registered with the State of Connecticut over the 2000 to 2010 period, presented by sex.

*Rate of Emergency Department Visits for Intentional Injury, by Type of Intentional Injury:* is the number of emergency department visits due to suicide or self-inflicted harm or homicide and injury purposefully inflicted by another person, per 100,000 Connecticut residents, over the 2007 to 2011 fiscal years.

### **Intentional Injuries: At-Risk Populations**

*Rate of Deaths Due to Suicide, by Age Group:* is the number of deaths due to suicide per 100,000 Connecticut residents for the 2006 to 2010 period, combined. This indicator is presented for all ages (combined) and by age group.

*Rate of Deaths Due to Homicide, by Age Group:* is the number of deaths due to homicide per 100,000 Connecticut residents for the 2006 to 2010 period, combined. This indicator is presented for all ages (combined) and by age group.

*Age-Adjusted Firearm Homicide Rate, by Race and Ethnicity:* is the number of deaths due to firearms per 100,000 population, presented for the total population and by race and ethnicity for Connecticut's largest racial and ethnic groups for the 2006 to 2010 period, combined.

### **Intentional Injuries: At-Risk Populations**

*Age-Adjusted Mortality Rate for Intentional Injury, by Race and Ethnicity:* is the number of deaths due to homicide and suicide registered with the State of Connecticut, per 100,000 Connecticut residents, adjusting for age. This indicator is presented by race and ethnicity for Connecticut's largest racial and ethnic groups, aggregated for the 2006 to 2010 period.

*Percent of Students (Grades 9-12) Who Report that They Attempted Suicide One or More Times in the Past Year, by Sex:* indicates the proportion of students (grades 9-12) who indicated that they attempted suicide one or more times in the past 12 months, as reported by students in the Connecticut School Health Survey over the 2005 to 2011 period. This indicator is presented for the total population and by sex.

*Percent of Students (Grades 9-12) Who Reported that They Seriously Considered Attempting Suicide in Past Year, by Sex:* is the percent of students (grades 9-12) who reported that they seriously considered attempting suicide during the past 12 months, as reported by students from 2005 to 2011. This indicator is presented for the total population and by sex.

### **Family Violence**

*Number of Family Violence Arrests, by Type of Incident:* is the number of family violence arrests for incidents that resulted in injury or presented danger in Connecticut in 2011, for disorderly conduct, assault, breach of peace, risk of injury, criminal mischief, sexual assault, homicide, kidnapping, and other types of family violence.

*Number of Emergency Department Visits Due to Domestic Violence, by Sex:* is the number of visits to the emergency department for domestic violence-related injuries. This indicator is presented for the total population and by sex for Connecticut for fiscal years 2008 through 2012.

*Number of Emergency Department Visits Due to Domestic Violence, by Age Group:* is the number of

emergency department visits for injury due to domestic violence. This indicator is presented for the total population and by age group for fiscal year 2012 in Connecticut.

### **Child Abuse and Neglect**

*Rate of Child Abuse or Neglect Victims:* is the number of substantiated cases of child maltreatment or neglect, per 1,000 children in Connecticut, for fiscal years 2008-2012, as reported by the State of Connecticut, for reports addressed by child protective services (CPS).

*Rate of Child Abuse or Neglect Victims, by Age Group:* is the number of children who have experienced child abuse or neglect, per 1,000 children in Connecticut in the fiscal year 2012, presented by age group, as reported by the State of Connecticut for fiscal year 2012, for reports addressed by child protective services (CPS).

### **Sexual Violence**

*Sexual Assault Rate, by Town:* is the number of sexual assaults reported to law enforcement agencies in victim, police, or witness reports per 100,000 residents in 2010 for Connecticut and some of Connecticut's largest towns.

*Percent of Students (Grades 9-12) Who Have Been Physically Abused or Were Ever Forced to Have Sexual Intercourse:* is the percent of youth in grades 9-12 who report having ever been hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend in the past year, among students in Connecticut from 2005 to 2011. This Fig. also includes the percent of students who report ever having been forced to have sexual intercourse, from 2007 to 2011.

*Percent of Students (Grades 9-12) Who Have Been Verbally or Physically Abused by a Boyfriend or Girlfriend or Were Ever Forced to Have Sexual Intercourse, by Sex:* indicates the proportion of students in grades 9-12 who report having been emotionally abused (e.g., called names, made fun of in front of others, ridiculed about their body or looks, or told they are no good or worthless) by

their boyfriend or girlfriend, physically abused (e.g., hit, slapped, or physically hurt on purpose) by their boyfriend or girlfriend in the past year, or who reported ever being physically forced to have sexual intercourse when they did not want to. This indicator is presented for the total population and by sex, as reported in 2011.

### **Occupational Injuries**

*Mortality Rate for Work-Related Injuries:* estimates the rate of fatal injuries per 100,000 full-time equivalent workers in Connecticut for 2008 and 2011, based on data from the Current Population Survey (CPS). This indicator is calculated by dividing the number of fatal work injuries by the total hours worked by all employees during the calendar year, multiplied by 200,000,000 (the base for 100,000 full-time equivalent workers who would work 40 hours/week, for 50 weeks per year). This indicator is also presented for the State of Connecticut overall.

*Mortality Rate for Work-Related Injuries, by Industry:* is the rate of fatal injuries per 100,000 full-time equivalent workers in Connecticut in 2011, based on data from the Current Population Survey (CPS). This indicator is calculated by dividing the number of fatal work injuries by the total hours worked by all employees during the calendar year, multiplied by 200,000,000 (the base for 100,000 full-time equivalent workers who would work 40 hours/week, for 50 weeks per year). This indicator is presented for select industries for 2011, as reported by the Bureau of Labor Statistics.

*Incidence Rate for Work-Related Injuries:* depicts the number of injuries and illnesses per 100 full-time workers in Connecticut for 2008 and 2011. This indicator is calculated by dividing the number of work-related injuries or illnesses by the total number of hours worked by all employees during the calendar year, multiplied by 200,000, which is the base for 100 full-time equivalent workers (working 40 hours/week for 50 weeks/year).

## **MENTAL HEALTH, ALCOHOL, AND SUBSTANCE ABUSE**

### **Mental Health and Mental Disorders**

*Percent Of Adults Who Have Been Told By A Health Care Provider That They Have A Depressive Disorder, By Age, Education, and Sex:* is the proportion of adults at least 18 years of age in Connecticut who reported that they have been told by a doctor or other health care provider that they have a depressive disorder (including depression, major depression, dysthymia, or minor depression) in 2012. This indicator is presented for the total population and by age group, educational attainment, and sex. H.S. indicates high school education.

*Percent Of Adults Who Had At Least 14 Poor Mental Health Days In The Past Month, By Race and Ethnicity:* is the percent of adults at least 18 years of age in Connecticut who reported that they experienced at least 14 poor mental health days in the past month, which includes stress, depression, and problems with emotions. This indicator is presented for the total population and for Connecticut's largest racial and ethnic groups in 2012.

*Percent Of Adults Who Had At Least 14 Poor Mental Health Days In The Past Month, By Education:* is the proportion of adults at least 18 years of age in Connecticut who reported that they experienced at least 14 poor mental health days in the past month, which includes stress, depression, and problems with emotions. This indicator is presented for the total population and by level of educational attainment for adults in Connecticut in 2012. H.S. indicates high school education.

### **Mental Health and Mental Disorders: At-Risk Populations**

*Rate of Mental Health Emergency Department Visits, by Age:* is the number of mental health-related emergency department visits per 100,000 population, over the period of fiscal year 2008 through 2011. This indicator is presented by age group.

*Percent of Medicare Beneficiaries with Depression:* is an indicator of the prevalence of depression among Medicare Beneficiaries in Connecticut enrolled in Medicare Part A and Part B for the entire year, over the 2007 to 2011 period. The prevalence is based on Medicare administrative claims indicating that beneficiaries received a service or treatment for depression.

*Percent of Medicare Beneficiaries with Dementia or Alzheimer's Disease:* is an indicator of the prevalence of dementia or Alzheimer's disease among Medicare Beneficiaries in Connecticut enrolled in Medicare Part A and Part B for the entire year, over the 2007-2011 period. The prevalence is based on Medicare administrative claims indicating that beneficiaries received a service or treatment for dementia or Alzheimer's disease.

### **Mental Health Care**

*Percent of Department of Mental Health and Addiction Services (DMHAS) Clients Who Screened Positive for Trauma or Symptoms of Trauma:* indicates the outcome for trauma screening among Department of Mental Health and Addiction Services clients who were screened for trauma or symptoms of trauma. The outcome of the screening was a positive or negative screening for trauma or symptoms of trauma. These data are based on screenings completed in FY 2011.

*Programs in Which Department of Mental Health and Addiction Services (DMHAS) Clients Who Screened Positive for Trauma or Symptoms of Trauma were Screened:* Indicates the Department of Mental Health and Addiction Services program in which clients that screened positive for trauma or symptoms of trauma were screened in FY 2011. These programs included addiction services, forensic mental health, and mental health.

### **Autism Spectrum Disorders**

*Percent of Children with Special Health Care Needs Who Currently Have an Autism Spectrum Disorder:* is the percent of Connecticut children with special health care needs who were 2 to 17 years of age who had autism, Asperger's Disorder, or pervasive

developmental disorder (PDD) at the time of interview in 2009-2010, those that previously had one of these conditions, and those who did not have one of these conditions.

*Percent of Children with Special Health Care Needs Whose Parents Completed a Standardized Developmental Behavioral Screening Tool During a Health Care Visit in Past Year:* is the percent of Connecticut children with special health care needs whose parents completed a Standardized Developmental Behavioral Screening tool during their child's health care visit in the past year, as reported in 2009-2010.

*Number of Referrals to Birth To Three Autism-Specific Programs:* is the number of children who were referred to autism-specific Birth to Three programs in Connecticut in the first quarter of fiscal year 2009 and 2010.

### **Alcohol Use and Abuse**

*Current Alcohol Use and Binge Drinking among Students (Grades 9-12):* indicates the proportion of students (Grades 9-12) who indicated that they had at least one drink of alcohol on at least one day in the past 30 days (current alcohol use), and those who reported that they had at least five or more drinks in a row within a couple of hour on at least 1 day during the past 30 days (binge drinking), based on self-reported interviews completed over the 2005 to 2011 period.

*Percent of Adults Considered Heavy Drinkers or Binge Drinkers:* is the percent of adults, 18 years of age or older, who indicated that they were heavy drinkers or engaged in binge drinking in the past 30 days, based on self-reports completed over the 2001 to 2012 period. Heavy drinking is defined as adult males having more than two drinks per day and adult females having more than one drink per day. Binge drinking is defined as adult males having five or more drinks on one occasion or adult females having four or more drinks on one occasion.

### **Alcohol Use and Abuse: At-Risk Populations**

*Percent of Adults Who Binge Drink Alcoholic Beverages, by Age:* is the prevalence of binge drinking for persons 18 years of age or older, presented by age, for 2010. Binge drinking is defined as adult males having five or more drinks on one occasion or adult females having four or more drinks on one occasion.

*Rate of Emergency Department Visits for Alcohol Abuse or Dependence by Age:* indicates the number of persons admitted to the emergency department for alcohol abuse or dependence, per 100,000 population in Connecticut for the fiscal years 2007 through 2011. This indicator is presented by age group.

### **Substance Use and Abuse**

*Illicit Drug Use in Past Year:* indicates the proportion of Connecticut residents, 12 years of age or older, who used marijuana or cocaine in the past year, or were dependent on or abused illicit drugs in the past year in 2010 and 2011 (combined). Illicit drugs included marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically. This indicator is presented by age group.

*Rate of Emergency Department Visits for Substance Abuse or Dependence, by Age:* indicates the number of Connecticut residents who were admitted to the emergency department for substance abuse or dependence, per 100,000 population, for the fiscal year 2007 to 2011 period. This indicator is presented by age group.

### **Substance Use and Abuse: Youth**

*Percent of Students (Grades 9-12) Who Have Ever Used Illicit Drugs, by Type of Drug:* indicates the proportion of students in grades 9-12 who report ever using marijuana, inhalants, cocaine, heroin, ecstasy, or methamphetamines one or more times in their life, from 2005 to 2011. Use of inhalants includes ever sniffing glue, breathing contents of aerosol spray cans, or inhaling any paints or sprays to get high one or more times during their life.

*Illicit Drug Use among Students (Grades 9-12), by Sex:* is the proportion of students in grades 9-12 who indicated that they had ever used illicit drugs, including marijuana, inhalants, ecstasy, cocaine, methamphetamines, and heroin, by drug type, as reported in 2011. This indicator is presented for the total population and by sex.

### **Prescription Drug Misuse and Abuse**

*Drug Overdose Mortality:* indicates the number of deaths due to drug overdose per 100,000 population, in Connecticut from 1979 to 2010.

*Nonmedical Use of Pain Relievers in Past Year by Age Group:* is the percent of Connecticut residents, aged 12 and older, who used pain relievers for non-medical purposes in the past year in 2010 and 2011 (combined). This indicator is presented by age group.

*Deaths Due to Overdose of Prescription Pain Killers:* is a map showing the rate of deaths due to prescription drug overdose in Connecticut in 2009. Quartile 1 indicates rates  $\leq 5.152$  per 100,000 population; Quartile 2 indicates rates between 5.153 and 8.121; Quartile 3 indicates rates between 8.122 and 12.697 per 100,000 population; Quartile 4 indicates rates between 12.698-46.642 per 100,000 population. Areas that are not shaded had no deaths in 2009.

### **Exposure to Trauma**

*Percent of Adults Who Experienced Abuse during Childhood, by Type:* is the proportion of Connecticut adults 18 years of age or older who experienced violence during childhood, presented by type of violence experienced, including verbal, physical, and sexual violence. This indicator is weighted to make inferences to the Connecticut population and is based on interviews completed in 2012.

*Percent of Adults Who Report Adverse Childhood Experiences, By Number of Adverse Childhood Experiences:* is the percent of adults 18 years of age or older in Connecticut in 2012 who reported adverse childhood experiences, presented by number of adverse childhood experiences.

*Percent of Adults Who Experienced Household Dysfunction, by Type:* indicates the percent of Connecticut adults 18 years of age or older that experienced conditions in their household that put them at risk for adverse exposures, by type of risk factor. This indicator is weighted to make inferences to the Connecticut population and is based on interviews completed in 2012.

## **HEALTH SYSTEMS**

### **Health Insurance Coverage**

*Percent of Uninsured Children and Adults:* is the percent of children (less than 18 years of age) and adults (18 to 64 years of age) in the civilian non-institutionalized population who did not have health insurance in 2012, based on Census estimates for Connecticut and its largest towns.

*Percent of Uninsured Children and Adults, by Race and Ethnicity:* is the percent of children (younger than 18 years of age) and adults (18 to 64 years of age) in the civilian non-institutionalized population who did not have health insurance in 2012, based on Census estimates, for Connecticut's largest racial and ethnic groups.

*Type of Health Insurance among Employed Adults:* indicates the type of health insurance among employed adults (18 to 64 years of age) in the civilian non-institutionalized population in Connecticut and its largest towns in 2010-2012 (combined), based on Census estimates. Categories include private, public, and no health insurance.

### **Medical Home and Source of Ongoing Care**

*Percent of Adults with at Least One Personal Doctor, By Race and Ethnicity:* indicates the proportion of adults in Connecticut who indicated that they have one or more personal doctors or health care providers, presented for Connecticut's largest racial and ethnic groups, over the 2001 to 2012 period.

*Percent of Children with Medical Home, by Household Poverty Level:* is the percent of children (<18 years of age) in Connecticut who have a medical home, as reported in 2007. The construct of a medical home is based upon a composite score

that includes 5 topics: the child had at least one personal doctor or nurse, received family-centered care in the past 12 months (e.g., preventative medical care, preventative dental care, mental health care, or care from specialist doctors), received needed referrals, has a usual source(s) of care, and experienced effective care coordination. This indicator is presented for the total population of children in Connecticut, and by household income relative to the federal poverty level.

*Number of Primary Care Medical Home Organizations and Providers:* presents the number of Joint Commission Accredited Organizations with Primary Care Medical Home certification as of 6/5/2013; the number of organizations in Connecticut that met certification for Primary Care Medical Homes as of November 30, 2013, according to the Joint Commission; and the number of providers in Connecticut that are recognized as Primary Care Medical Homes, in compliance with new criteria in 2011, according to the National Committee on Quality Assurance as of 12/22/2013. HRSA has 3 basic criteria that a provider has to meet to be considered a Medical home (1) usual provider and place for care; (2) family-centered care; and (3) referral and coordination of health services, if needed.

### **Non-Urgent Emergency Department Visits**

*Rates of Emergency Department Non-Urgent Visits and Non-Admits for Connecticut and Towns in “The Five Connecticut” Town Groupings:* indicates the number of emergency department visits that were classified as non-urgent (e.g., treatment in a primary care setting may have been more appropriate) and emergency department non-admits per 1,000 Connecticut residents during the 2009 fiscal year. This indicator is presented for Connecticut and towns classified in “The Five Connecticut” socioeconomic groupings.

*Percent of Emergency Department Non-Admits by Visit Classification and “The Five Connecticut” Town Groupings:* is the proportion of emergency department non-admits by visit classification, including non-urgent visits, unclassified visits, drugs

or alcohol, psychological issues, injury, and emergent care required, for the fiscal year 2009.

### **Preventable Hospitalizations and Hospital Readmissions**

*Pediatric Preventable Hospitalization Rates:* is the number of potentially preventable hospitalizations per 100,000 population for children (<18 years of age), for the leading causes of hospitalization in Connecticut for 2004 and 2008.

*Adult Preventable Hospitalization Rates:* indicates the number of hospitalizations per 100,000 Connecticut residents for adults (age 18 or older), for the leading causes of potentially preventable hospitalization in Connecticut for 2004 and 2008.

*Rate of 30-Day Hospital Readmissions among Medicare Beneficiaries:* is the number of hospital readmissions within 30 days of discharge, per 1,000 fee-for-service Medicare beneficiaries in Connecticut and its largest towns in 2012.

### **Preventable Hospitalizations: At-Risk Populations**

*Pediatric Preventable Hospitalization Rates by Race and Ethnicity:* is the number of potentially preventable hospitalizations per 100,000 population for children (<18 years of age), for the leading causes of hospitalization in Connecticut in 2008. This indicator is presented by race and ethnicity for Connecticut’s largest racial and ethnic groups.

*Adult Preventable Hospitalization Rates, by Race and Ethnicity:* indicates the number of hospitalizations per 100,000 Connecticut residents for adults (age 18 or older), for the leading causes of potentially preventable hospitalization in Connecticut in 2008. This indicator is presented by race and ethnicity for Connecticut’s largest racial and ethnic groups.

### **Supply of Health Care Workforce**

*Percent of Health Care Workforce, by Employment Setting:* presents the distribution of the health care workforce, by health care setting, for Connecticut in 2011.

*Rate of Ambulatory Care Establishments, by County:* is the number of ambulatory care establishments per 10,000 Connecticut residents, by setting in 2011, including ambulatory care settings, physician's offices, and outpatient care settings.

*Number and Rate of Selected Licensed Practitioners:* is the number of licensed practitioners, by type, in Connecticut in 2012, the rate per 100,000 population, median age of each category of practitioners and percent that are at least 60 years of age.

### **Primary Care Workforce**

*Supply of Primary Care Practitioners:* indicates the number of physicians (including MDs and DOs), licensed nurse midwives, advanced practice nurses, and physician assistants that were licensed to practice in Connecticut in 2012. The number of primary care practitioners per 100,000 population is also presented. This rate was calculated based upon population estimates.

*Number of Primary Care Physicians, by Type:* indicates the number of primary care physicians by specialty, including internal medicine, pediatrics, obstetrics and gynecology, and family practice in Connecticut in 2012.

*Medically Underserved Areas or Populations (MUA/P) and Health Professional Shortage Areas (HPSA):* is the number of medically underserved areas or populations and health professional shortage areas in Connecticut, by County, as of October, 2013. These constructs are indicators of the potential demand for primary care-related services. A medically underserved area or population pertains to an area with too few primary care providers, high infant mortality, high poverty, and/or a large elderly population. A health professional shortage area is classified as one in which there is a shortage of primary medical care, dental, or mental health providers and may be a shortage for a particular geographic region, demographic population, or institution.

### **Diversity of Health Care Workforce**

*Percent of Health Practitioners, by Sex:* is the distribution or percent of health care practitioners in Connecticut, by type and sex, for 2007 through 2010, depending on the health practitioner type (as indicated in the table).

*Percent of Health Practitioners, by Race and Ethnicity:* is the distribution or percent of health care practitioners in Connecticut, by type and race and ethnicity, for 2009 and 2010, depending on the health practitioner type (as indicated in the table).

### **Health Care in Community-Based Settings**

*Number of Federally Qualified Health Centers (FQHCs), by County:* indicates the number of HRSA-designated health centers in Connecticut, presented by county, as of May, 2013. These centers are designated by HRSA through a formal application process.

*Number of Federally Qualified Health Centers (FQHCs) by Type and County:* is the number of HRSA-designated health centers and look-alike health centers in Connecticut, presented by county, and by health center type, including school-based health centers, hospitals, domestic violence centers, nursing home centers, other types of clinics, and centers whose type is unknown. The number of health centers as of May, 2013 are presented.

### **Health Care in Community-Based Settings Across Connecticut**

*Federally Qualified Health Center and School-Based Health Center Locations:* shows the location of federally qualified health centers and school-based health centers across Connecticut in 2014.

### **Public Health Infrastructure**

*Number of Full- and Part-Time Local Health Departments:* is the number of municipal health departments and health districts in Connecticut in 2013, and the number of full-time and part-time health departments.

*Local Health Departments and Districts:* shows the jurisdiction of local health departments and health

districts across Connecticut in 2013, and indicates which health departments are part-time or full-time departments.

### **Health Information Technology**

*Percent of Practices that Have Implemented Electronic Health Records:* is the proportion of physicians in Connecticut, based on survey responses, who indicated that they have implemented electronic health records in their practice. This indicator is presented for 2008 through 2013.

*Percent of Pharmacists Who Have Experience with E-Prescribing, by Level of Experience:* is the level of familiarity with e-prescribing reported by pharmacists in Connecticut in 2013 in response to a survey.

*Percent of Residents Who Are Interested in Personal Health Records:* is the level of interest in personal health records, reported by Connecticut residents in response to a survey that was conducted from 2011 to 2013. Responses for 2011 to 2013 are combined for this indicator due to small sample sizes.

### **Health Communication, Health Literacy, and Limited English Proficiency**

*Percent of Population, by Educational Attainment, Connecticut and Its Largest Towns:* is the percent of Connecticut residents, 25 years of age or older, who have not completed high school, have a high school degree or received their GED, completed some college education, or received a bachelor's degree or higher. This indicator is presented for Connecticut and Connecticut's largest towns for 2012.

*Number and Percent of Persons Who Speak a Language Other than English at Home:* indicates the number and percent of persons who speak a language other than English at home, as estimated by Census data for Connecticut in 2000 and 2012.

*Percent Over Age 4 Who Speak English Less than Very Well:* indicates the percent of persons in

Connecticut over 4 years of age who speak English less than very well in 2000 and 2012.

### **Health of High-Risk Populations**

#### **Homeless Population in Connecticut**

*Snapshot of Homeless Population:* is the number of homeless persons in Connecticut identified during a census of the homeless population on January 29, 2013. This Fig. shows the number of homeless persons, by age group (e.g., adult, child), family status, and shelter status.

*Health Issues Affecting Homeless Population:* indicates the proportion of the homeless population surveyed on January 29, 2013 who indicated that they had a mental illness, experienced chronic substance abuse, or had HIV/AIDs.

#### **Rural Population in Connecticut**

*Rural Towns Across Connecticut:* indicates the location of rural towns in Connecticut, which were defined as Micropolitan Statistical Areas with fewer than 15,000 residents or Metropolitan Statistical Areas with less than 7,000 residents. These classifications of rural towns are based on 2010 Census data and OMB designations.

*Percent of Population, by Age Group, Connecticut and Rural Zones:* is the percent of Connecticut residents who are at least 25 years of age, and at least 65 years of age, respectively, for 2008 to 2012, combined. This indicator is presented for Connecticut and three rural regions: the Connecticut River Zone, Eastern Zone, and Northwestern Zone.

*Percent of Population Below the Poverty Level and With No Health Insurance, Connecticut and Rural Zones:* is the percent of Connecticut residents who have incomes below the poverty level and the percent of residents with no health insurance, for 2008 to 2012, combined. This indicator is presented for Connecticut and three rural regions: the Connecticut River Zone, Eastern Zone, and Northwestern Zone.



## **LGBT Population in Connecticut**

*Current Smoking and Alcohol Use, by Sex of Sexual Contacts among Students (Grades 9-12):* is the percent of students in grades 9-12 who indicated that they currently smoked cigarettes or currently drank alcohol within the past 30 days, by sex of sexual contact (sexual contact with persons of the opposite sex only, same sex only, or both sexes), as reported from 2001 to 2009, combined.

*Percent of Students (Grades 9-12) Who Were in a Physical Fight, Experienced Dating Violence, or Were Forced to Have Sexual Intercourse, by Sex of Sexual Contacts:* is the percent of students in grades 9-12 who indicated that they were in a physical fight, experienced dating violence, or were physically forced to have sexual intercourse, presented by sex of sexual contact (sexual contact with persons of the opposite sex only, same sex only, or both sexes), as reported from 2001 to 2009, combined.

*Percent of Students (Grades 9-12) Who Felt Sad or Hopeless or Attempted Suicide, by Sex of Sexual Contacts:* is the percent of students in grades 9-12 who reported that they felt sad or hopeless almost every day for at least 2 weeks in a row in the past year and percent of students who reported that they attempted suicide in the past year, presented by sex of sexual contacts (sexual contact with persons of the opposite sex only, same sex only, or both sexes), for 2001 to 2009, combined.

## **Incarcerated Population in Connecticut**

*Percent of Incarcerated Population, by Race and Ethnicity:* is the percent of the incarcerated population in Connecticut, presented by race and ethnicity, as captured in March, 2013.

*Percent of Incarcerated Population, by Sex:* is the percent of the incarcerated population in Connecticut, presented by sex, as captured in March, 2013.

*Percent of Incarcerated Population, by Age:* is the percent of the incarcerated population in Connecticut, shown by age group, based on data from March, 2013.

## **Incarcerated Population Health**

*Percent of Incarcerated Persons with a History of Substance Abuse, Severe Mental Illness, or Severe Medical Illness:* is the percent of persons who are incarcerated in Connecticut who have a history of substance abuse, severe mental illness, or severe medical illness.

*Percent of Department of Corrections Outpatient Visits:* is the percent of outpatient visits for persons registered with the Department of Corrections, by type of outpatient visits, captured for June to November.

## **Veteran Population in Connecticut**

*Veteran Population by Age Group:* is the percent of Connecticut residents who are veterans, presented by age group for 2008 to 2012, combined.

*Number of Suicides among Veterans:* is the number of suicides among veterans in Connecticut for 2001 to 2009.

*Suicides among Veterans, by Age Group and Suicidal Means:* is the percent of suicides among veterans, presented by age group and suicidal means for the 2001 to 2009 period, combined.

## **Veterans: Mental Health Status and Exposure to Violence**

*Percent of OIF and OEF Veterans Diagnosed with Mental Health Condition During or After Military Service:* is the percent of Connecticut veterans who were deployed since 2003 for Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) who indicated that they were treated for or diagnosed with depression, post-traumatic stress disorder (PTSD), general anxiety disorder, panic disorder, bipolar disorder, or schizophrenia during or after their military service. These estimates are based on responses to the Connecticut Veterans Needs Assessment Study that was conducted in 2009-2010.

*Exposure to Military Combat or Accidents among OIF and OEF Veterans:* indicates the percent of Connecticut veterans deployed since 2003 for

Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) who indicated that they were exposed to combat and/or trauma, including blast from an explosion (e.g., IED, RPG, land mine, grenade, etc.) during their military deployments. These estimates are based on responses to the Connecticut Veterans Needs Assessment Study that was conducted in 2009-2010.

*Percent of OIF and OEF Veterans with Exposure to Military Sexual Trauma by Sex:* is the proportion of Connecticut veterans deployed since 2003 for Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) who reported experiencing uninvited and unwanted sexual attention (e.g., touching, cornering, pressure for sexual favors, or sexual remarks) or being forced to have sexual contact against their will. These estimates are based on responses to the Connecticut Veterans Needs Assessment Study that was conducted in 2009-2010.

#### **Veterans: Alcohol and Substance Use and Abuse**

*Frequency of Binge Drinking (6 or More Drinks) among OIF and OEF Veterans:* indicates the frequency of binge drinking among veterans of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) who indicated that they drank alcohol. Binge drinking was defined as consuming 6 alcoholic drinks or more on one occasion. This indicator is presented as the percent of veterans who engaged in binge drinking never, less than monthly, monthly, weekly, or daily/almost daily. These estimates are based on responses to the Connecticut Veterans Needs Assessment Study that was conducted in 2009-2010.

*Drinking Habits among OIF and OEF Veterans Since Returning from Deployment:* indicates changes in the frequency of alcohol use among veterans of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) who indicated that they drank alcohol. This indicator is presented as the percent of veterans who drank much more, somewhat more, about the same, somewhat less, or much less than before they were deployed. These estimates are based on responses to the

Connecticut Veterans Needs Assessment Study that was conducted in 2009-2010.

*Illicit and Prescription Drug Use by Type, Among OIF and OEF Veterans:* indicates the percent of veterans of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) who indicated that they used illicit or prescription drugs in the last 12 months, by type of drug, for illicit and prescription medication that was not prescribed for the respondent by a doctor or that was used in a way other than what was prescribed by a doctor. Drugs included: analgesics, sedatives, marijuana/hashish, tranquilizers, amphetamines, Prozac, cocaine, LSD, inhalants, steroids, and heroin. These estimates are based on responses to the Connecticut Veterans Needs Assessment Study that was conducted in 2009-2010.

#### **Population with Disability in Connecticut**

*Percent of Population with Disability:* is the percent of Connecticut residents who have a disability, presented by age group for 2012.

*Type of Disability among Children <5 Years of Age with a Disability:* is the percent of children younger than 5 who have a disability, presented by type of disability.

*Type of Disability among Persons 5 to 17 Years of Age with a Disability:* is the percent of persons 5 to 17 years of age who have a disability, presented by type of disability.

#### **Adults with Disability in Connecticut**

*Type of Disability among Persons 18 to 64 Years of Age with a Disability:* is the percent of persons 18 to 64 years of age who have a disability, presented by type of disability.

*Type of Disability among Persons 65 Years of Age and Older with a Disability:* is the percent of persons at least 65 years of age who have a disability, presented by type of disability.

## APPENDIX D: REFERENCES AND NOTES

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