Connecticut Maternal and Child Health Needs Assessment:

Health Status Data Report

Connecticut Department of Public Health

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Health Resources in Action
Advancing Public Health and Medical Research

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EXECUTIVE SUMMARY

INTRODUCTION
As part of the Title V Block grant program, the Connecticut Department of Public Health undertakes a MCH Needs Assessment for the state, examining the health status of Title V target populations of pregnant women, mothers, and infants; children and adolescents; and children and youth with special healthcare needs. This assessment is a systematic examination of the health behaviors, conditions, and risk factors of these populations, using indicators that can be tracked over time and for particular population subgroups. The Connecticut MCH Needs Assessment aims to serve as an important foundation for future data-driven planning efforts in the state.

METHODS
The MCH Needs Assessment and Planning process was nested within the larger Connecticut State Health Assessment and Planning process (*Healthy Connecticut 2020*) and engaged stakeholders and Connecticut residents throughout the process to understand maternal and child health in its broadest context. A total of 29 key informant interviews were conducted with leaders from state agencies, community service organizations, statewide organizations focused on specific population groups, the state legislature, academia, education, and business. Discussions explored leaders' perspectives on the current and emerging health issues in Connecticut, current state of health data, and feedback on important issues to consider. The list of indicators used for the MCH Needs Assessment was guided by existing initiatives (e.g., Healthy Connecticut 2020, National Prevention Strategy) and shaped by the feedback from stakeholders and partners. Additionally, direct public comment on findings from the State Health Assessment, including those pertaining to maternal and child health, was gathered at 8 county-level public forums. Input from these sessions was used to refine the content and framing of the assessment data.

Data sources for the MCH Needs Assessment were from a variety of sources, including the US Census, data managed by the Connecticut Department of Public Health (e.g., mortality data, Connecticut School Health Survey, and other sources such as the Substance Abuse and Mental Health Services Administration (SAMHSA) Survey on Drug Use and Health Model-Based Estimates, National Survey of Children's Health, and the Connecticut Department of Environmental Protection.

KEY FINDINGS

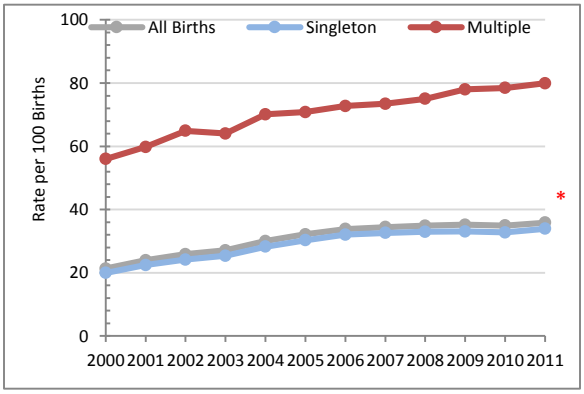
The following provides a brief overview of key findings that emerged from this assessment:

Women's and Maternal Health
- Nearly three quarters (74%) of women in Connecticut indicated that they had a **preventive medical visit or check-up** in the past year, while nearly 4% indicated it had been five or more years since their last visit.
- From 2000 to 2011, there was a significant annual 4.2% decline in the **rate of births per 1,000 teen women (15-19 years)**. 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).

- **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, 13.0% of pregnant women received **late or no prenatal care.** A significantly greater proportion of black non-Hispanic (20.9%) and Hispanic (19.4%) mothers received late or no prenatal care relative to white non-Hispanic mothers (8.8%).
- 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 northeastern Connecticut.

Cesarean Section (C-Section) Rates, By Plurality, Connecticut, 2000-2011

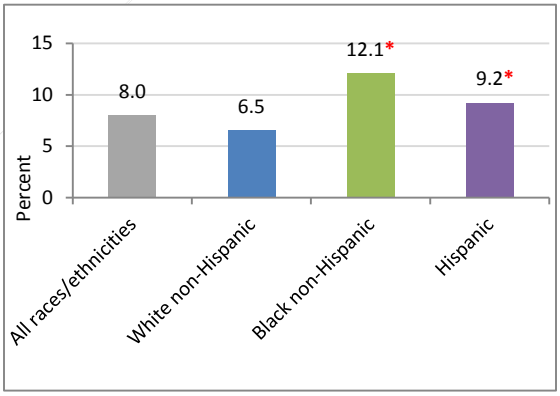


Note: * Indicates significant annual percent change for singleton births (p<0.05).
Source: Connecticut Department of Public Health.

Perinatal and Infant's Health

- In 2011, the proportion of **preterm births** for black non-Hispanic and Hispanic women was significantly higher than that for white non-Hispanic women. 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.
- Preterm birth was more heavily concentrated in and around Waterbury, Hartford, and New Haven and in Northern areas in Connecticut.

Percent Of Singleton Preterm Births, By Race And Ethnicity, Connecticut, 2011



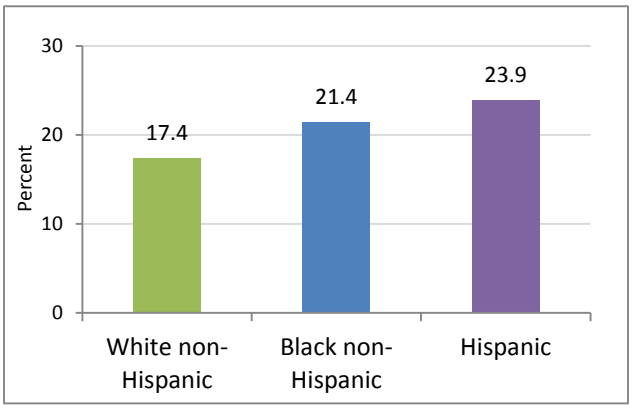
Note: * Indicates significantly higher percent preterm birth for black non-Hispanics and Hispanics (p<0.05).
Source: Connecticut Department of Public Health, Vital Statistics Registration Reports, 2011, Table 3.

- **Infant mortality** rates have continued to decline over the last 20 years (1990-2011) in Connecticut. 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.
- 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. The increase in NAS during the past decade largely occurred among white non-Hispanics and children born to women whose expected source of payment for the delivery was Medicaid
- 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.

Child Health

- Nine out of ten Connecticut children saw a health care provider for **preventative medical care** in the past year, and the prevalence of **vaccine series completion** among children 19 to 35 months was 78.2. More than nine in ten completed at least one dose of the measles, mumps, and rubella (MMR) vaccine.
- **Asthma** was the leading cause of preventable hospitalization among children, followed by gastroenteritis and urinary tract infections. The rate of preventable pediatric hospitalizations was lowest for white non-Hispanics for most of the leading causes.
- From 2002 to 2012, the number of children identified with a **blood lead level** of ≥10+ µg/dL appeared to decline by 70%.
- In 2012, 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.
- From 2007 to 2011, rates **of injury related hospital admissions** were greatest for persons 15 to 19 years of age, followed by those 0 to 4 years of age. In 2012 the rate of injury related hospital admissions for persons age 0 to 4 years eclipsed that of persons age 15 to 19.

Percent Of Children Ever Told They Have Asthma, By Race And Ethnicity, Connecticut, 2012

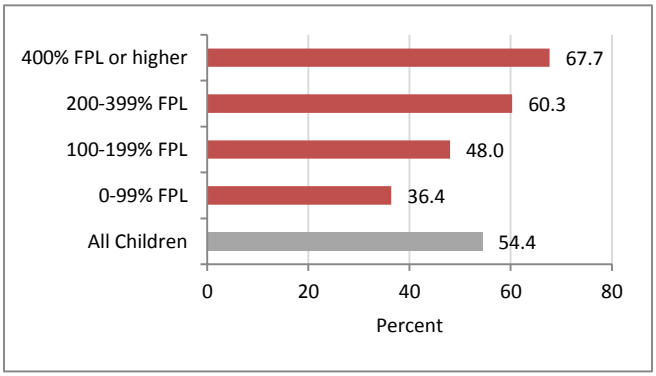


Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012.

Children with Special Health Care Needs

- In 2009-2010, 89.5% of children with special health care needs (CSHCN) had **at least one reported health condition**. Approximately 1 in 4 CSHCN had 2 conditions, 11.8% had 3 conditions, and 16.4% had 4 conditions or more.
- In 2009-2010, 87.1% of CSHCN were **screened early and continuously for special health care needs** and 70.4% of CSHCN had families who reported that they are partners in the decision-making process for their child's optimal health. In addition, 67.4% indicated that they received family-centered care and 66.8% reported that CSHCN could easily access community-based services.
- Less than half of respondents reported that CSHCN received **coordinated, ongoing, comprehensive care within a medical home** (46.0%) or reported that they received the services necessary to make **appropriate transitions to adulthood** (46.0%).

Percent Of Children With Medical Home, By Household Poverty Level, Connecticut, 2011-2012

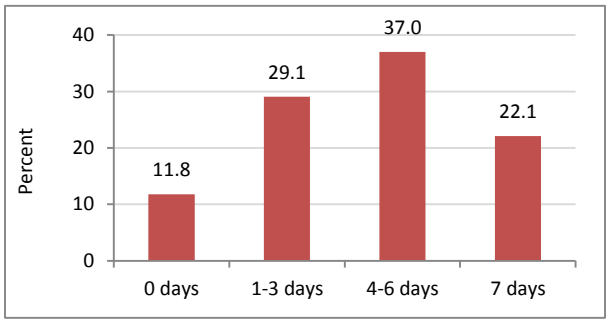


Note: FPL indicates "federal poverty level".
Source: Medical Home Performance Profile for All Children, National Survey of Children's Health, 2011-2012.

Adolescent Health

- In 2011-2012, 88.2% of youth age 12 to 17 engaged in **physical activity** that made them sweat or breathe hard for at least 20 minutes on at least one day per week. Thirty-seven percent reported engaging in physical activity 4-6 days per week, followed by 29.1% being physically active for 1-3 days per week, and 22.1% participating in physical activity for at least 20 minutes daily.
- In 2012, 43.6% of females completed 3 doses of the **HPV vaccine**, while only 8.5% of males completed 3 does of the vaccine.

Percent Of Youth (Age 12-17 Years) Who Engaged In Physical Activity For At Least 20 Minutes Per Day, By Number Of Days Per Week, Connecticut, 2011-2012



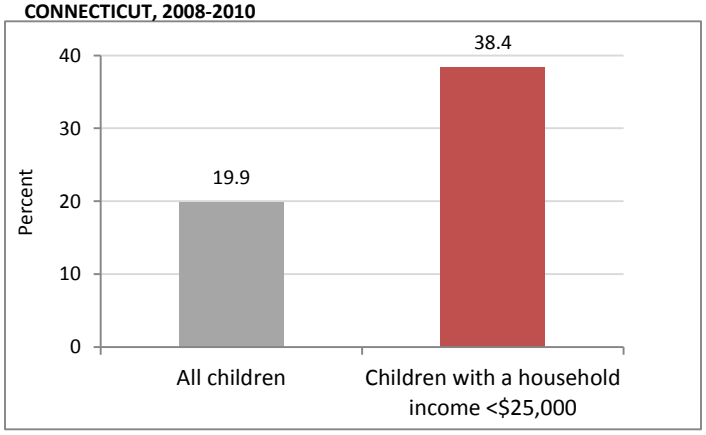
Source: National Survey of Children's Health, 2011-2012.

- 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 vaccine**, and 88.8% received at least one dose of **meningococcal conjugate vaccine**.
- The percent of high school students who reported **ever been bullied** on school property ranged from 25.9% of 9th grade students to 19.0% of students in 12th grade. The prevalence of **physical dating violence** among students in grades 9-12 has decreased significantly from 2005 to 2011, from 16.0% to 8.2%. From 2007 to 2011, a significant linear decrease (from 9.7% to 7.3%) occurred in the percent of students who were ever physically forced to have sexual intercourse when they did not want to.
- 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 larger 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.

Cross-Cutting or Life Course Issues

- In 2008-2010, combined, almost one-fifth (19.9%) of children 5 to 12 years of age in Connecticut were **obese** (Figure 76). 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%).

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



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

- 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.
- 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. In

2011-2012, 68.6% of children up to age 5, and 94.1% of youth 6 to 11 years of age received **preventive dental care** or cleanings in the past year.

CONCLUSIONS

Connecticut has made significant progress in improving the health of residents across the life course. For example, over the past decade, Connecticut has experienced declines in the rate of births to teen mothers, the infant mortality rate, the number of children identified with blood lead levels of ≥10+ µg/dL, and the prevalence of current cigarette use among middle and high school students. During this same period of health improvements, Connecticut has seen an increase in women experiencing non-adequate prenatal care utilization, neonatal abstinence syndrome among infants, and C-section rates.

The distribution of these health improvements, and persistent and new issues affecting maternal and child health are not equally distributed among subpopulations. Indeed, lower-income residents, black non-Hispanics, and Hispanics generally have less favorable health and health behavior profiles than their counterparts. Additionally, some health patterns among maternal and child health populations vary by sex, town, sexual identity, and special health care need status.

This needs assessment, developed through a participatory planning progress, highlights areas of progress in maternal and child health in Connecticut, as well as health issues necessitating a public health approach to improve the health of all Connecticut residents.

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INTRODUCTION

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. The Title V Maternal and Child Health Services Block Grant is the key source of support for promoting the health of mothers and children. Each state is required to conduct a statewide needs assessment every five years, with a focus on three target populations:

- Pregnant Women, Mothers and Infants (PWMI);
- Children and Adolescents (C & A); and
- Children and Youth with Special Health Care Needs (CYSHCN).

The Maternal and Child Health Bureau (MCHB) is the principal focus within Health Resources and Services Administration (HRSA) for all Maternal and Child Health (MCH) activities within the Department of Health and Human Services (HHS). MCHB's mission is to provide national leadership through working in partnership with states, communities, public/private partners, tribal entities and families to strengthen the MCH infrastructure, and to build knowledge and human resources. Its mission also includes ensuring continued improvement in the health, safety, and well-being of the MCH population. To achieve its mission, MCHB directs resources towards a combination of integrated public health services and coordinated systems of care for the MCH population. Within the MCHB, the Division of State and Community Health (DSCH) has the administrative responsibility for the Title V MCH Block Grant to States Program. DSCH is committed to being the Bureau's main line of communication with states and communities, in order to consult and work closely with both of these groups and others who have an interest in and contribute to the provision of a wide range of MCH programs and community-based service systems.

As part of the Title V Block grant program, the Connecticut Department of Public Health undertakes a MCH Needs Assessment for the state, examining the health status of Title V target populations of pregnant women, mothers, and infants; children and adolescents; and children and youth with special healthcare needs. This assessment is a systematic examination of the health behaviors, conditions, and risk factors of these populations, utilizing a wide-ranging set of indicators that can be tracked over time and for particular population subgroups. The Connecticut MCH Needs Assessment aims to serve as an important foundation for future data-driven planning efforts in the state.

PROCESS AND METHODOLOGY

The MCH Needs Assessment and Planning process was nested within the larger Connecticut State Health Assessment and Planning process (*Healthy Connecticut 2020*) and engaged stakeholders and Connecticut residents throughout the process. Community and stakeholder 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. The following section describes engagement process as well as framework and methodology used for the MCH Needs Assessment.

Goals and Framework for MCH Needs Assessment Process

The MCH Needs Assessment process was guided by a life course perspective to examine risk and protective factors across the lifespan, social determinants of health framework to explore the upstream factors that influence population health, and a health equity lens to identify differential patterns of health across population groups.

Life Course Perspective

The life course perspective builds on the social determinants of health and health equity frameworks to further our understanding of factors that promote health and contribute to health patterns.[1] The life course perspective facilitates an understanding of how risk and protective factors, such as social, economic, and environmental influences, experienced over the life course of an individual or population may contribute to current and subsequent health patterns across populations.[2] While the life course perspective provides insight into the effects of social, economic, and environmental exposures over the life course on health outcomes later in life, there is also strong recognition of the influence of interventions throughout the life course to reduce risk factors and enhance protective factors to improve the health and well-being of individuals and populations.

Social Determinants of Health

While the United States leads the world in medical research, health care services, and health care expenditures, the health of Americans lags behind that of other countries.[3] There are several opportunities for improving the health of individuals and populations, such as ensuring that everyone can afford to see a doctor when they are sick, improving opportunities for and affordability of preventative health care services such as screening for cancer and heart disease, and expanding how we think about health.[4] Health begins long before a disease or illness manifests or someone needs medical care and is influenced where we live, learn, work, and play.[5] Our families, neighborhoods, schools, and jobs have a profound influence on our health.[6] Thus, it is critical that efforts to promote and protect the health of Connecticut's residents not only improve access to health care services. These initiatives must also work to reduce risk factors and promote conditions that may enhance opportunities for residents to achieve their full potential of health and well-being by improving the conditions of where individuals, families, and communities live, learn, work, and play.[7]

Health Equity: Good Health for All of Connecticut's Residents

When compared to other states across the county, Connecticut is a healthy state, with numerous successes to celebrate. Over the past decade Connecticut has experienced generally high levels of immunizations, a decline in teen births, and a decrease in infant mortality. While we should celebrate Connecticut's favorable health profile, the health of Connecticut residents is not equal across groups. Particular regions in Connecticut and specific population groups consistently experience less favorable health outcomes compared to other regions in Connecticut or other populations. 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 in rural and urban areas, and persons with disabilities.

When we look beneath the state averages at many of the health outcomes included in this MCH Needs Assessment, we see striking health disparities by race, ethnicity, income, and geography. The influence of these factors on health patterns is often intertwined. For example, 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, factors that profoundly affect health. In this report, we present 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 give everyone an opportunity to live a healthy life.

Stakeholder Involvement

The MCH Needs Assessment and Planning process is an iterative, collaborative process that has engaged organizations, agencies, and residents across the state. The following section provides an overview of this process. During that process, an Advisory Council of 25 Connecticut leaders from statewide organizations was engaged during a 14-month period. A workgroup of organizations focused on maternal and child health issues across the state (e.g., March of Dimes, Planned Parenthood, Early Childhood Alliance, Life Focus Nutrition Centers, Connecticut Commission on Children, Hispanic Health Council) met regularly to discuss the data and provide insight into potential MCH priorities in the state. Additionally, an Indicators Work Group was convened that included epidemiologists, program officers, content experts, and data specialists. Members provided guidance on the topics and indicators to be incorporated into the State Health Assessment, many of which were coordinated and aligned with the MCH Needs Assessment.

Stakeholders from *Healthy Connecticut 2020* were re-engaged in the development of the MCH Needs Assessment. Over 50 stakeholders from a variety of organizations and agencies across the state reviewed and provided feedback on preliminary MCH Needs Assessment data and how these data could inform planning priorities in the state.

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 MCH Needs Assessment report.

Qualitative and Quantitative Methods

<u>Qualitative Methods: Interviews and Community Dialogues</u>
As the Connecticut MCH Needs Assessment was nested within the larger State Health Assessment process, key informant interviews and community input via dialogue sessions provided rich qualitative information throughout the process. A total of 29 key informant interviews were conducted with leaders around the state. The interviews included leaders from state agencies, community service organizations, statewide organizations focused on specific population groups, the state legislature, academia, education, and business. Discussions explored leaders' perspectives on the current and emerging health issues in Connecticut, current state of health data, and feedback on important issues to consider.

Community members provided input and feedback as the assessment was drafted. Preliminary data on the State Health Assessment, including MCH data, was published on the DPH website for the entire year that the full report was being developed. Additionally, direct public comment on findings was gathered in September and October 2013 at 8 county-level public forums held in Tolland, 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 assessment data.

Quantitative Methods: Review of Secondary Data

Data Sources

The list of indicators used for the MCH Needs Assessment was guided by existing initiatives (e.g., Healthy Connecticut 2020, National Prevention Strategy) and shaped throughout the process by the feedback from stakeholders and partners. During MCH-focused discussions for the Connecticut State Health Assessment, members of the Health Improvement Planning coalition, Advisory Council, and State Health Assessment Indicators Advisory Group provided data on specific topic areas.

Data sources for the MCH Needs Assessment were from a variety of sources. Indicators of the social and economic context are derived from the US Census. Health indicators such as birth outcomes, mortality, infectious diseases, reasons for hospitalization and emergency department visits, and supply of primary care, mental health, and oral health providers are managed by the Connecticut Department of Public Health. Indicators of self-reported chronic disease and health behaviors such as smoking and physical activity are based upon responses to the Connecticut School Health Survey (CSHS; also known as the Youth Risk Behavior Surveillance System) for youth in grades 6 to 8 and 9 to 12. Most data from the CSHS were analyzed by the Connecticut Department of Public Health. Other sources from which the health indicators were derived include, but are not limited to: Behavioral Risk Factor Surveillance System, National Immunization Survey, Substance Abuse and Mental Health Services Administration (SAMHSA) Survey on Drug Use and Health Model-Based Estimates, US Department of Health and Human Services Administration for Children and Families, Connecticut Department of Public Safety, Bureau of Labor Statistics, National Survey of Children's Health, National Survey of Children with Special Health Care Needs, and the Connecticut Department of Environmental Protection.

All data in this report are for calendar years, unless otherwise noted. For example, exceptions include most hospitalization data which are provided in fiscal year (October 1 – September 30). Also, for the BRFSS, an important data source on health risk factors, new sampling methods were used in 2011 to include cell phones for greater representativeness. This sampling method differed from previous years of the BRFSS and therefore more recent BRFSS data are not able to be directly compared to previous years. As such, BRFSS trend graphs show a break in the line over time.

Lastly, results are noted in the graphs and narrative when significance testing was conducted to identify whether there were statistically significant differences ($p<.05$) either over time or by population group. However, when statistical significance is not mentioned in the graphs or narrative, then tests for statistical significance were not conducted with those datasets.

Limitations of Data Sources

As with most health assessments, there are several limitations of the indicators presented in this report. First, indicators of the health status of Connecticut residents are derived from surveillance data and are often presented over a several year period, during which data collection or analysis techniques may have changed. Any changes in the collection or analysis of surveillance data are noted with the figure. Second, there is a time lag between when the indicators were collected and when they have been analyzed and are available for public report. As such, the MCH Needs Assessment includes the most recent year in which data were publicly available, but some data were not available for 2012 or 2013 at the time of the publication of this report. Third, different data sources may use a different indicator. For example, in an effort to provide a comprehensive snapshot of adolescent risk related behaviors in

Connecticut, this report includes data on hospitalizations via utilization data, self-reported behaviors via surveys, and mortality data via vital records. While some of these indicators are based on self-report, others are derived from mandatory reports to the Connecticut Department of Public Health. Together, these data sources provide insight into the range of issues affecting many MCH-focused populations. Fourth, some data are not available for specific populations of interest, such as towns or counties in Connecticut, or sub-population groups. This is often due to small sample or population sizes and limitations in the availability of data for marginalized populations. Fifth, some data, particularly those based on surveys such as the Behavioral Risk Factor Surveillance System, Connecticut School Health Survey, and National Immunization Survey are based upon self-report, which may lead to an over- or under-estimate of the prevalence of the health issue or health behavior. Despite these limitations, the indicators included in the MCH Needs Assessment can provide important insight into health issues affecting Connecticut mothers, infants, and children and can inform the health improvement planning process.

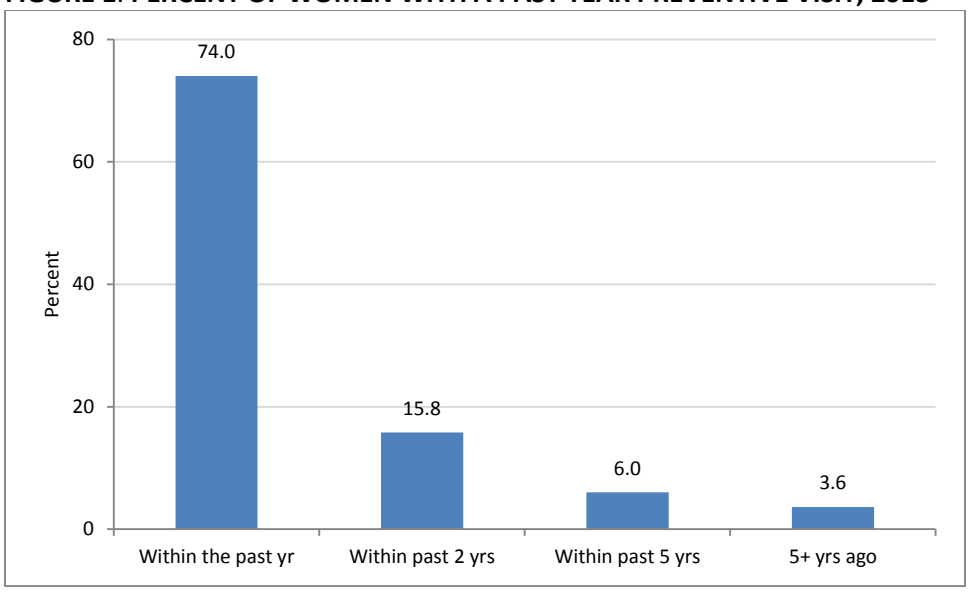
MATERNAL AND CHILD HEALTH POPULATION NEEDS

Women's and Maternal Health

Well Woman Care

In 2013, 74.0% of women in Connecticut had a preventive medical visit or check-up in the past year (Figure 1). Additionally, adults with health care coverage were significantly more likely to have had a check-up (75.2%), compared to uninsured adults (41.6%).

FIGURE 1. PERCENT OF WOMEN WITH A PAST YEAR PREVENTIVE VISIT, 2013

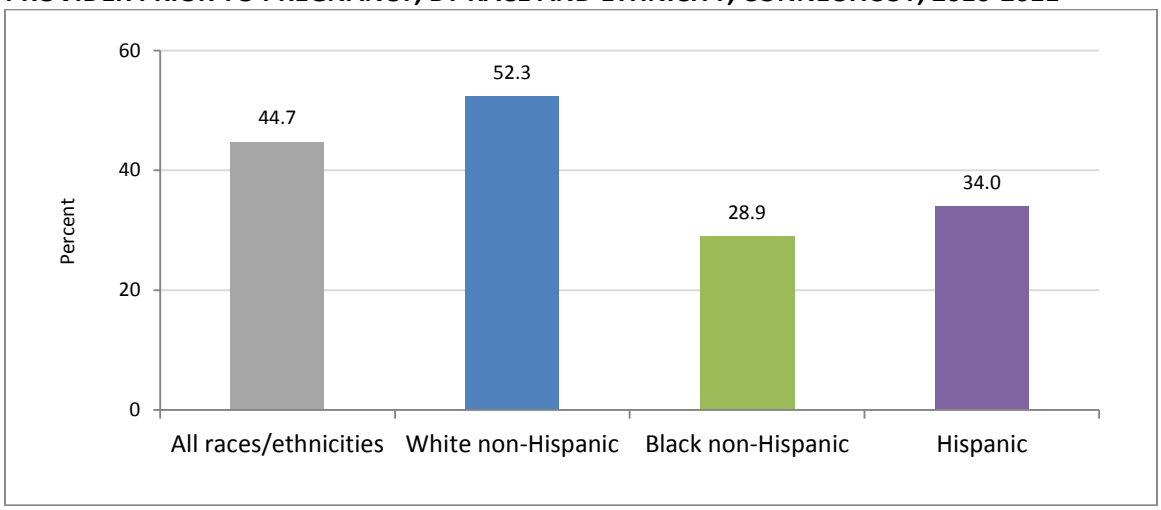


Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance Survey (BRFSS), 2013.

Health of Women of Reproductive Ave & Unplanned Pregnancies

In 2010 and 2011 (combined), 44.7% of women reported that they discussed preconception health with a health care provider prior to their pregnancy. More than half of white non-Hispanic women (52.3%) 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 (Figure 2).

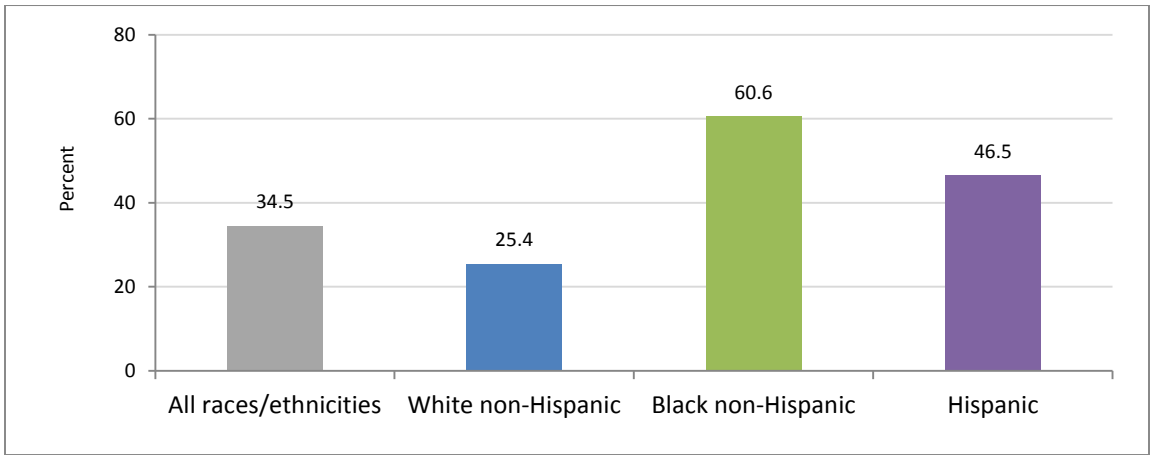
FIGURE 2. PERCENT OF WOMEN WHO DISCUSSED PRECONCEPTION HEALTH WITH A HEALTH CARE PROVIDER PRIOR TO PREGNANCY, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011



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

Slightly more than one-third of women (34.5%) reported that they had a planned pregnancy in 2010 and 2011, combined (Figure 3). 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 non-Hispanic women reported that they had an unplanned pregnancy.

FIGURE 3. PERCENT OF UNPLANNED PREGNANCIES, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011



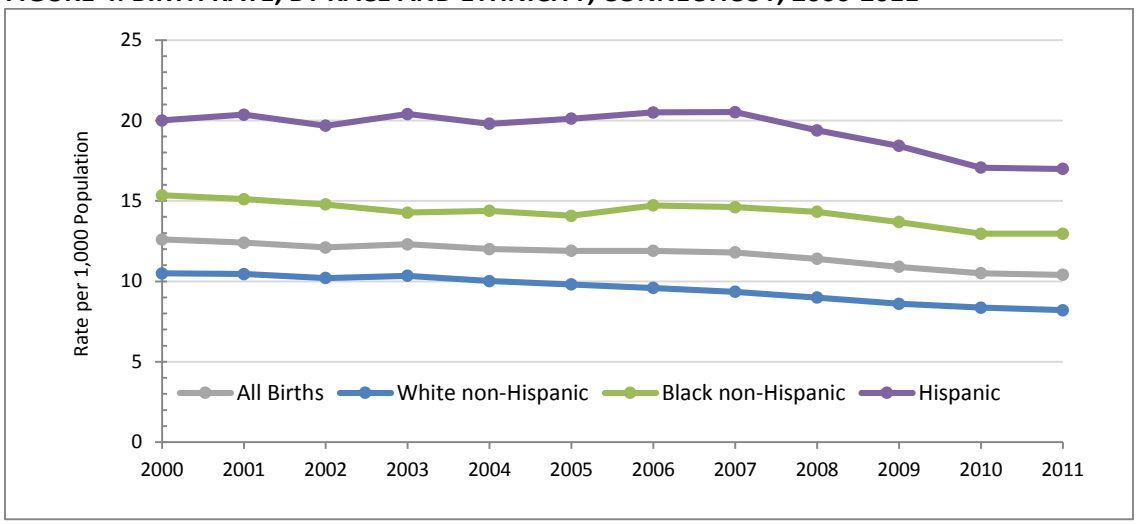
Source: Connecticut Department of Public Health, 2010-2011 Connecticut Pregnancy Risk Assessment and Tracking System (PRATS) Survey.

Birth Rates and Demographics of Birth Cohort

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 (Figure 4). From 2001 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.

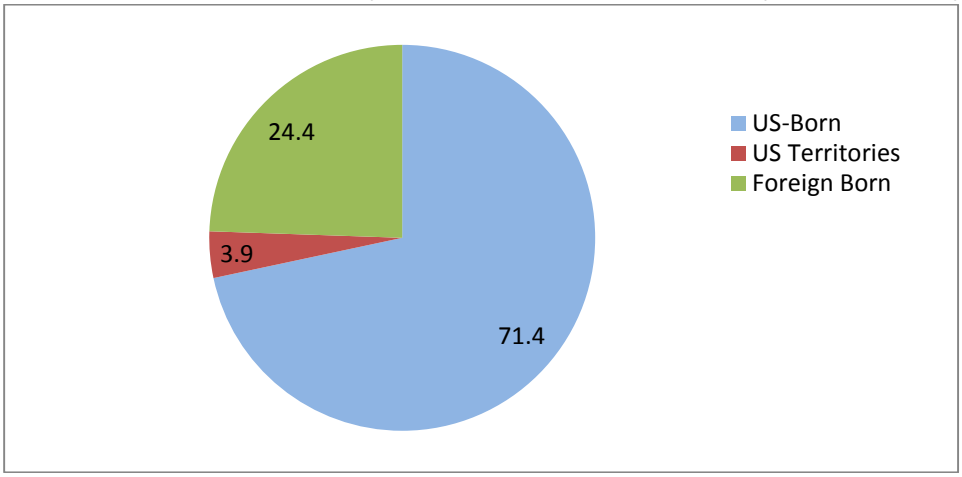
FIGURE 4. BIRTH RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011



Source: Connecticut Department of Public Health.

In 2011, over 1 in 4 Connecticut births occurred to a mother who was born outside of the continental United States (Figure 5).

FIGURE 5. PERCENT OF BIRTHS, BY MATERNAL PLACE OF BIRTH, CONNECTICUT, 2011

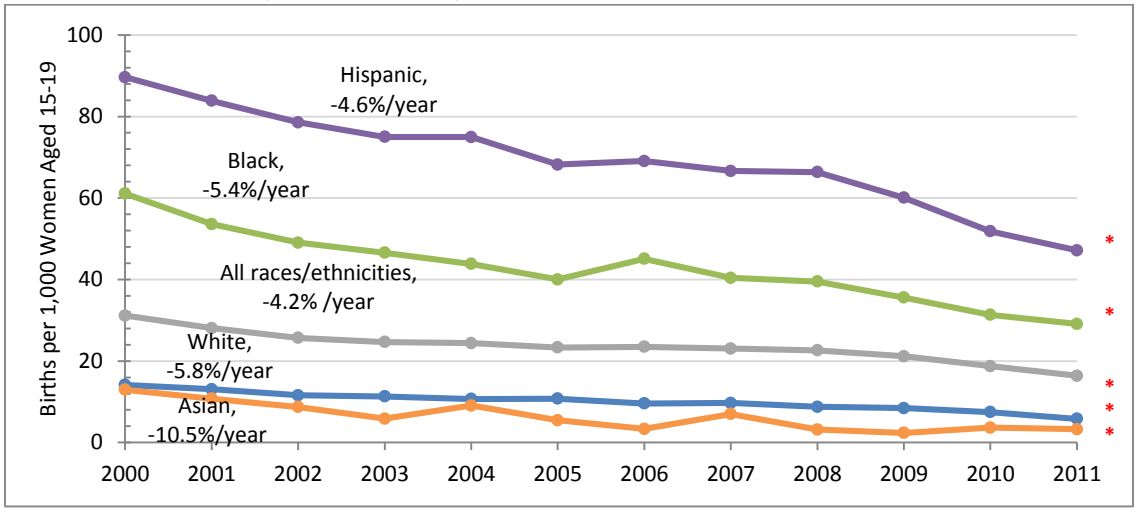


Source: Connecticut Department of Public Health.

Births to Teen Mothers

From 2000 to 2011, there was a significant annual 4.2% decrease in the rate of births per 1,000 teen women (Figure 6). 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). 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).

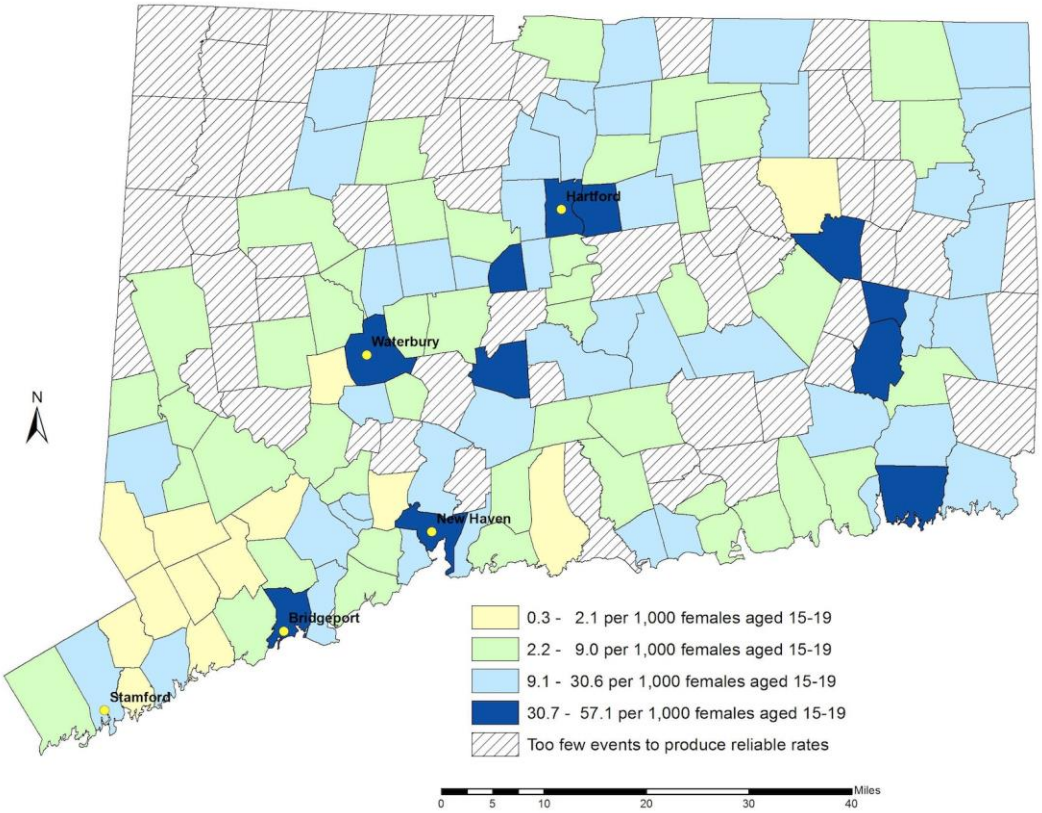
FIGURE 6. BIRTH RATE TO TEEN MOTHERS (15-19 YEARS OF AGE) AND ANNUAL PERCENT CHANGE, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011



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.

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 (Figure 7).

FIGURE 7. BIRTH RATE TO TEEN MOTHERS (15-19 YEARS OF AGE), BY TOWN, 2007-2011

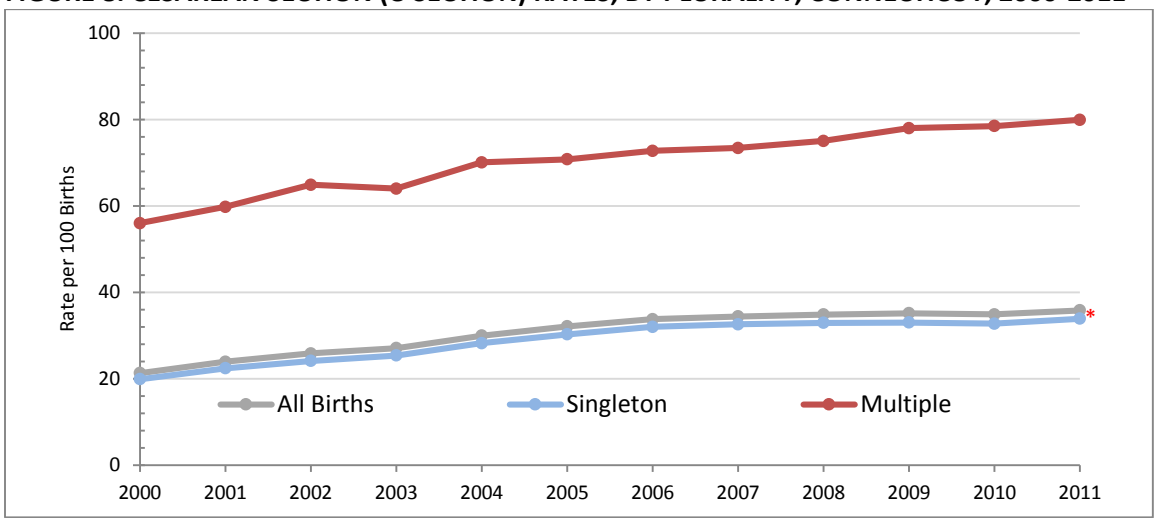


Source: Connecticut Department of Public Health, Health Statistics & Surveillance, Statistics & Analysis Reporting, 2007-2011.

Cesarean Section Deliveries

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 (Figure 8). From 2006 to 2011 the rates have leveled out at a 0.7% annual increase. In 2011, there were 33.9 C-sections per 100 births for singleton births, compared to 79.9 per 100 births for multiple births.

FIGURE 8. CESAREAN SECTION (C-SECTION) RATES, BY PLURALITY, CONNECTICUT, 2000-2011

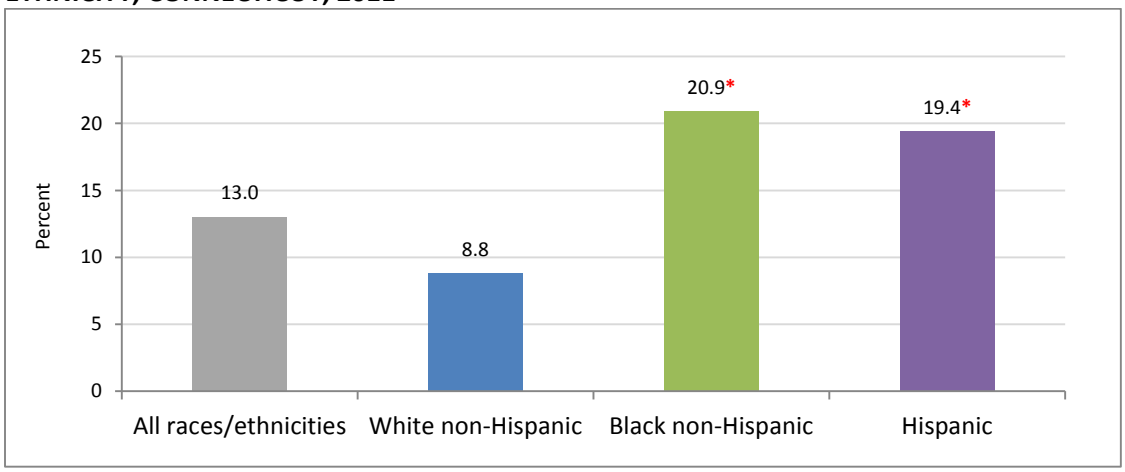


Note: * Indicates significant annual percent change for singleton births (p<0.05).
Source: Connecticut Department of Public Health.

Prenatal Care

In 2011, 13.0% of pregnant women received late or no prenatal care. Also 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 (Figure 9).

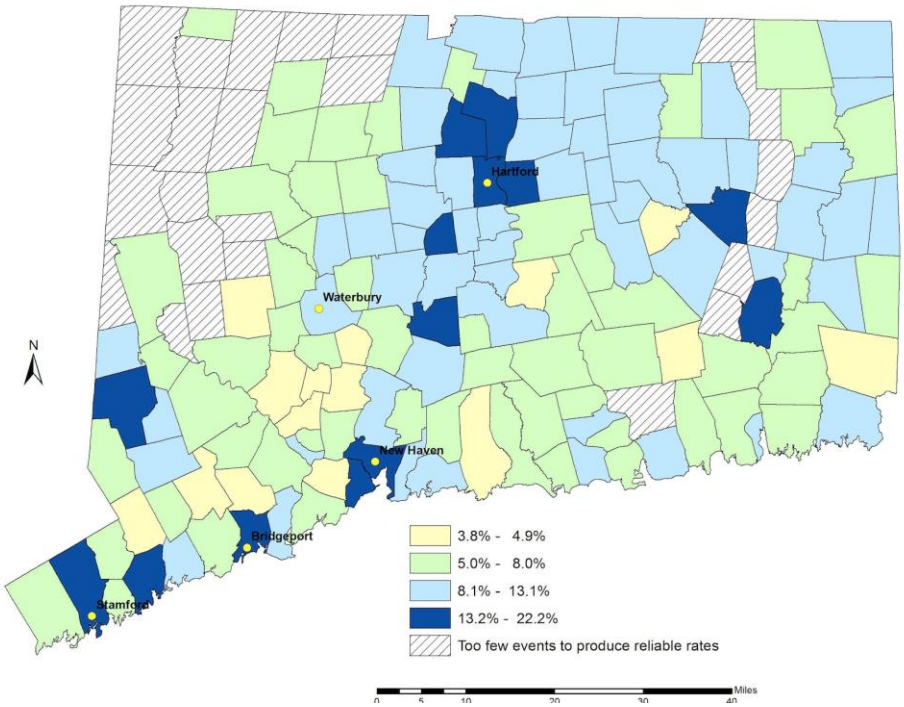
FIGURE 9. PERCENT OF MOTHERS WHO RECEIVED LATE OR NO PRENATAL CARE, BY RACE AND ETHNICITY, CONNECTICUT, 2011



Note: Late prenatal care refers to prenatal care that was initiated after the first trimester. * Indicates significantly higher % 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.

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 northeastern Connecticut (Figure 10).

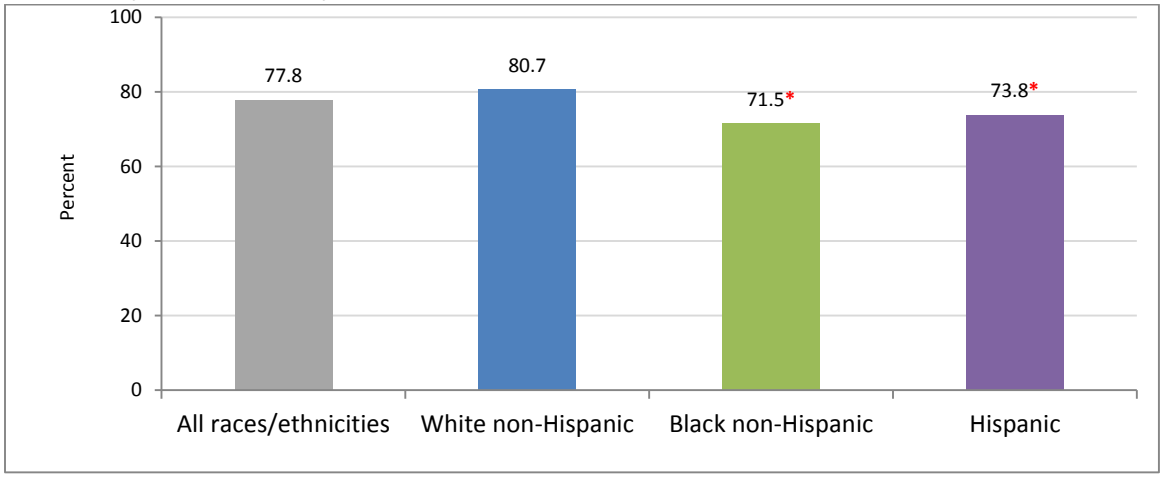
FIGURE 10. PERCENT OF MOTHERS WHO RECEIVED LATE PRENATAL CARE, BY TOWN, CONNECTICUT, 2007-2011



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

In 2011, 77.8% of women received adequate prenatal care. Compared to white non-Hispanic women (80.7%), a significantly lower proportion of black non-Hispanic (71.5%) and Hispanic (73.8%) women received adequate prenatal care (Figure 11).

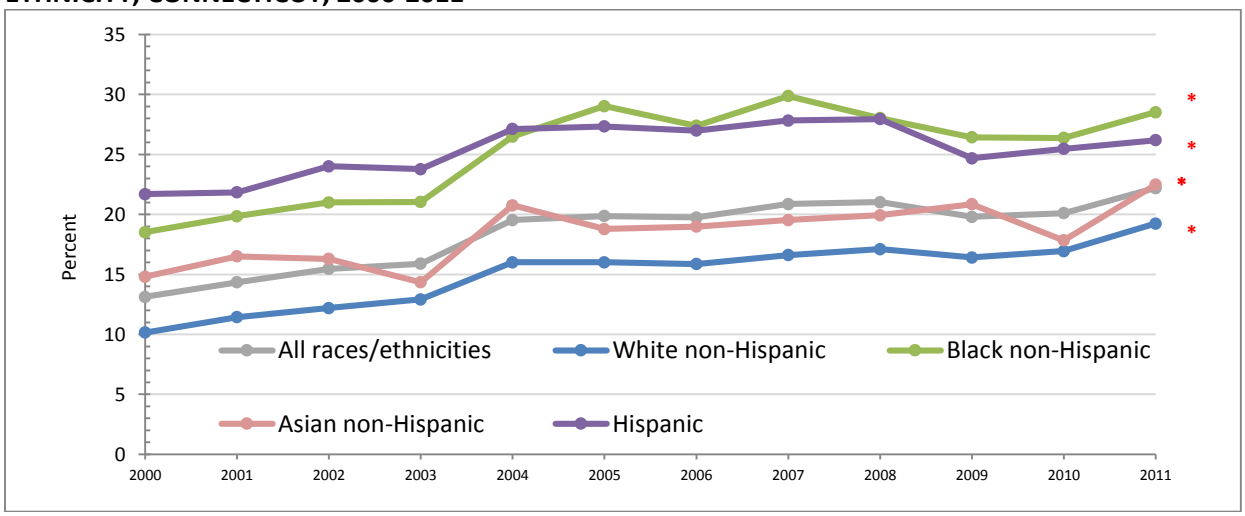
FIGURE 11. PERCENT OF WOMEN WHO RECEIVED ADEQUATE PRENATAL CARE, BY RACE AND ETHNICITY, CONNECTICUT, 2011



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.

The percent of women receiving non-adequate prenatal care increased significantly from 2000 through 2005, with an 8.9% annual increase over this period (Figure 12). From 2006 to 2011, the proportion of women receiving non-adequate prenatal care leveled off, with a 1.0% annual increase over this period. Both white non-Hispanic (11.1%) and black non-Hispanic (9.9%) 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 steadily from 2005 to 2011. The percent of Hispanic mothers receiving non-adequate prenatal care increased significantly from 2000 to 2005 (5.5% annual change), then leveled off from 2006 to 2011 (-1.3% annual change). From 2000 to 2011, there was a 2.9% annual increase in the proportion of Asian women who received non-adequate prenatal care.

FIGURE 12. PERCENT OF WOMEN WITH NON-ADEQUATE PRENATAL CARE UTILIZATION, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011

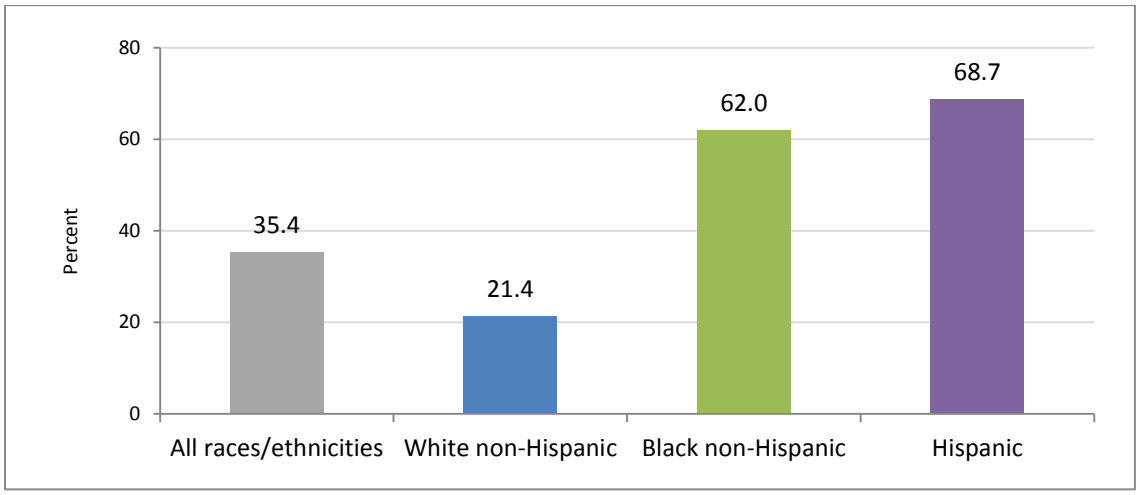


Note: * Indicates significant annual percent change within racial or ethnic groups (p<0.05). Source: Connecticut Department of Public Health, Vital Statistics (Registration Reports), Table 4, 2011.

WIC Enrollment and Prenatal Care by Medicaid Status

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 (Figure 13).

FIGURE 13. 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.

In 2010 39% of Connecticut births were paid for by Medicaid. This same year, mothers enrolled in Medicaid had a significantly higher risk of adverse exposures to late or non-adequate prenatal care and to smoking. The largest disparities were for late or no prenatal care, where Medicaid participants had a 2.5-fold risk and for maternal smoking where the risk was 6.2-fold higher than for non-Medicaid participants (
Table 1).

TABLE 1. PRENATAL CARE, 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

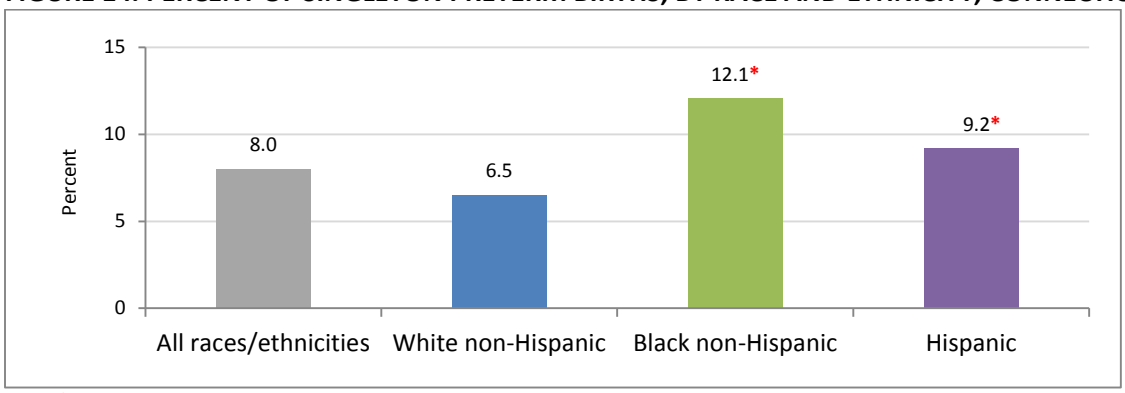
Note: * Indicates that all comparisons were significantly different ($p<0.05$).
Source: Connecticut Department of Public Health.

Perinatal and Infant's Health

Preterm Births and Low Birthweight Births

In 2011, 8.0% of singleton births were preterm in Connecticut. 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 (12.1%) was 1.9 times higher than that for white non-Hispanic women (6.5%). For Hispanics (9.2%), the proportion of singleton preterm births was 1.4 times higher than that for white non-Hispanics (6.5%) in 2011 (Figure 14). Additionally, 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.

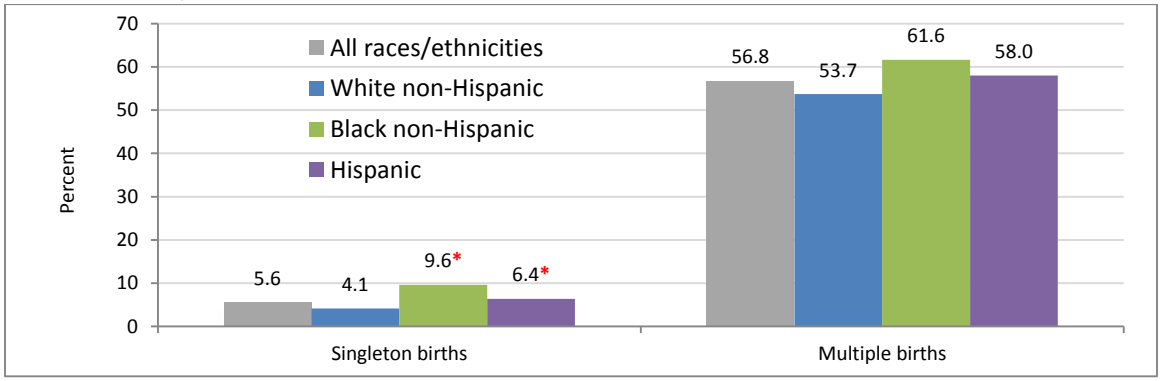
FIGURE 14. PERCENT OF SINGLETON PRETERM BIRTHS, BY RACE AND ETHNICITY, CONNECTICUT, 2011



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.

In 2011, 5.6% of singleton births were low birth weight in Connecticut. The proportion of low birthweight births in 2011 among black non-Hispanics (9.6%) and Hispanics (6.4%) was significantly higher than that for white non-Hispanics (4.1%) (Figure 15). Additionally, 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.

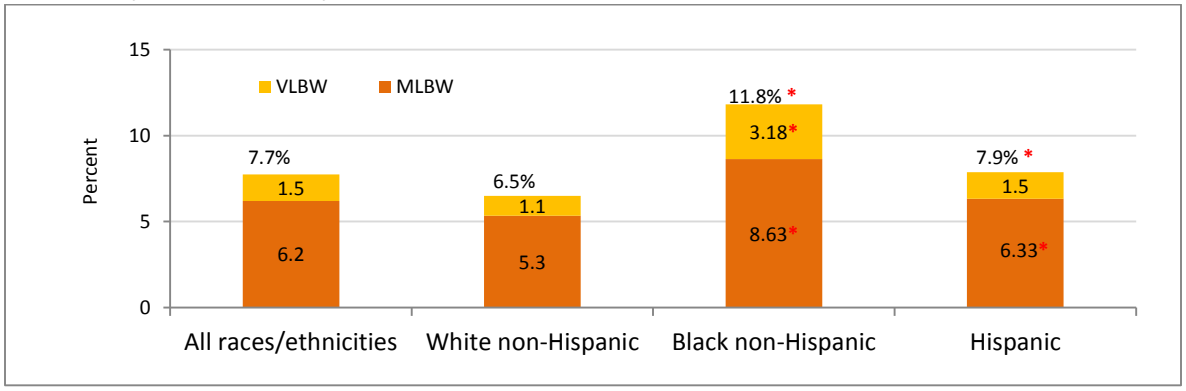
FIGURE 15. PERCENT OF LOW BIRTHWEIGHT BIRTHS, BY PLURALITY AND RACE AND ETHNICITY, CONNECTICUT, 2011



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.

In 2011, there was 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 (Figure 16).

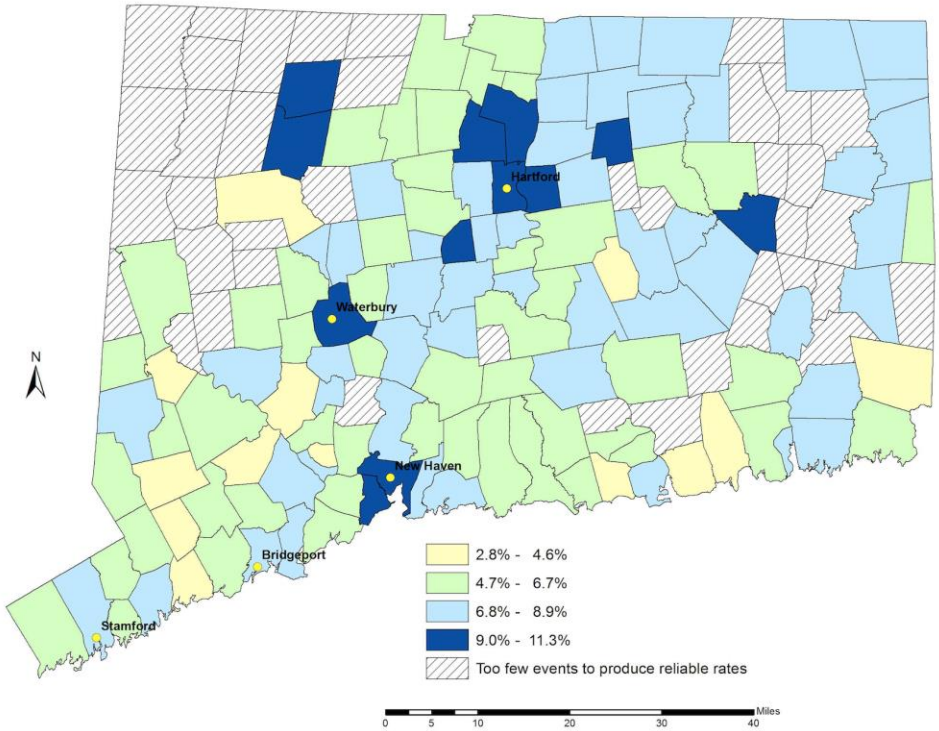
FIGURE 16 . PERCENT OF LOW BIRTHWEIGHT BIRTHS, BY LOW BIRTHWEIGHT STATUS AND RACE AND ETHNICITY, CONNECTICUT, 2011



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.

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 (Figure 17).

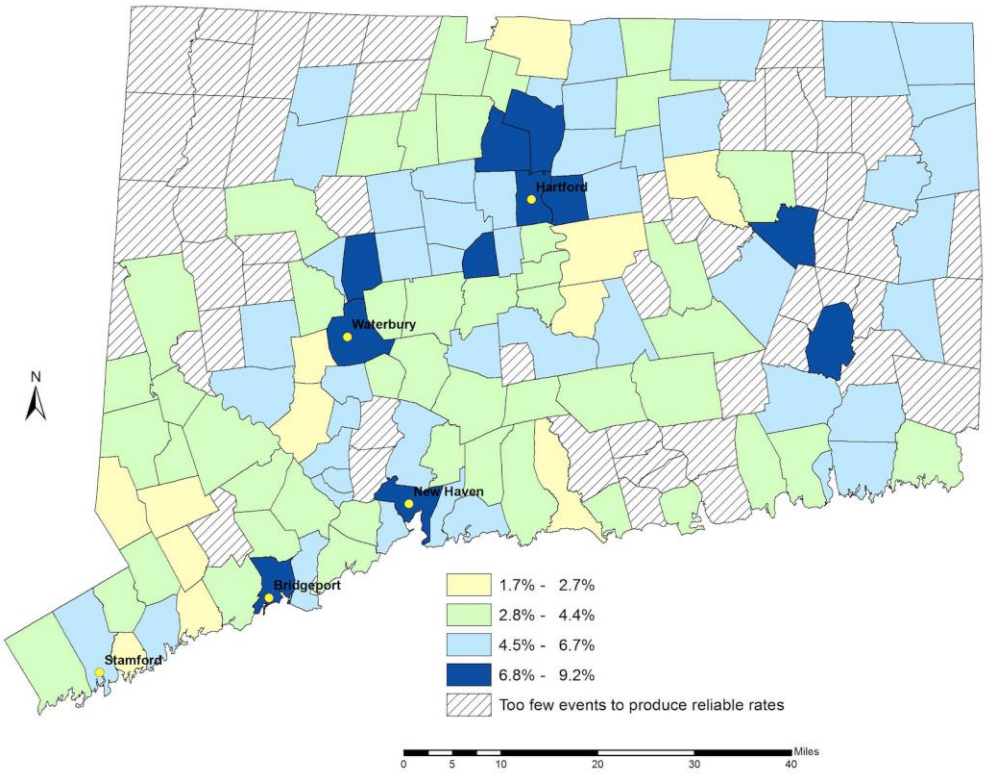
FIGURE 17. PERCENT OF PRETERM BIRTHS, BY TOWN, CONNECTICUT, 2007-2011



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

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 western region of Connecticut (Figure 18).

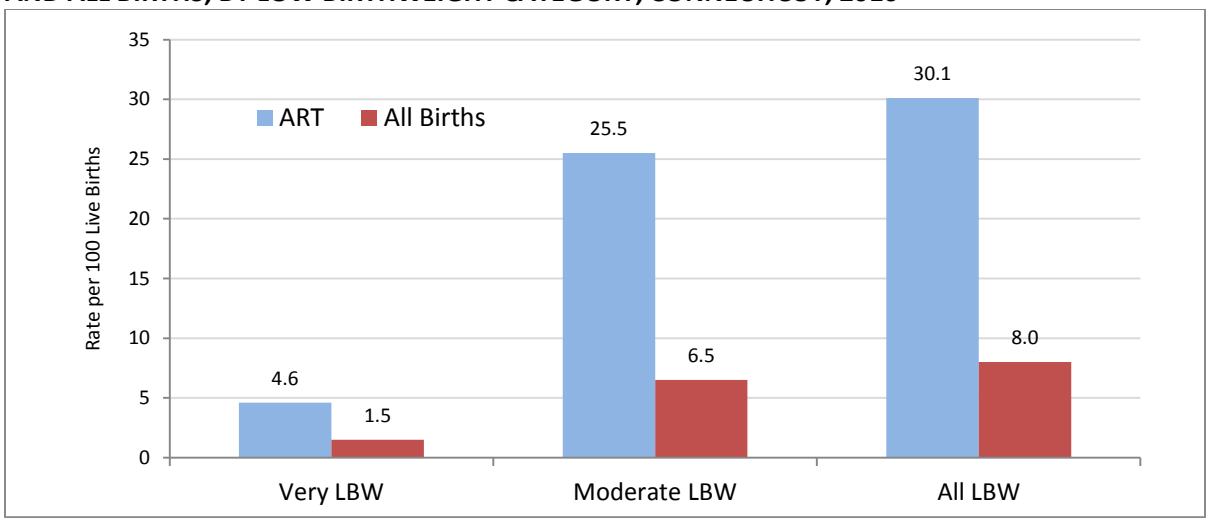
FIGURE 18. PERCENT OF LOW BIRTHWEIGHT BIRTHS, BY TOWN, CONNECTICUT, 2007-2011



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

The rate of low birthweight (<2,500 g) in Connecticut during 2010 was 8.0 per 100 live births, while the rate of low birthweight among women who received Assisted Reproductive Technology (ART) was nearly 4-fold higher (30.1 per 100 live births) (Figure 19). The rate of very low birthweight (<1,500g) among women receiving ART was 3-fold higher, and the rate of moderately low birthweight (1,500-2,499g) was nearly 4-fold higher than that for all births. These data indicate that ART contributes to both moderate and very low birth weight babies.

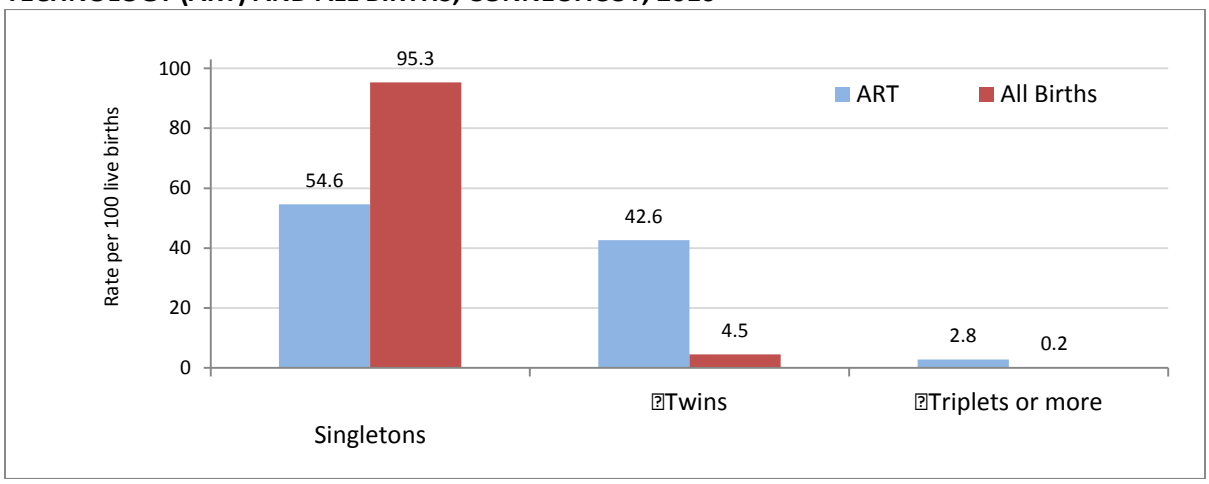
FIGURE 19. RATE OF LOW BIRTHWEIGHT BIRTHS FOR ASSISTED REPRODUCTIVE TECHNOLOGY (ART) AND ALL BIRTHS, BY LOW BIRTHWEIGHT CATEGORY, CONNECTICUT, 2010



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.

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 (Figure 20). 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.

FIGURE 20. RATE OF SINGLETON AND MULTIPLE INFANT BIRTHS FOR ASSISTED REPRODUCTIVE TECHNOLOGY (ART) AND ALL BIRTHS, CONNECTICUT, 2010



Source: Connecticut Department of Public Health.

Infants born to women with Medicaid coverage tended to have poorer outcomes, particularly very low birthweight births. For example, approximately 10% of infants born to women with Medicaid coverage were low birthweight (less than 2,500 grams) or preterm (less than 37 weeks gestation; Table 2).

TABLE 2. PREGNANCY OUTCOMES, BY MEDICAID ENROLLMENT STATUS, CONNECTICUT, 2010

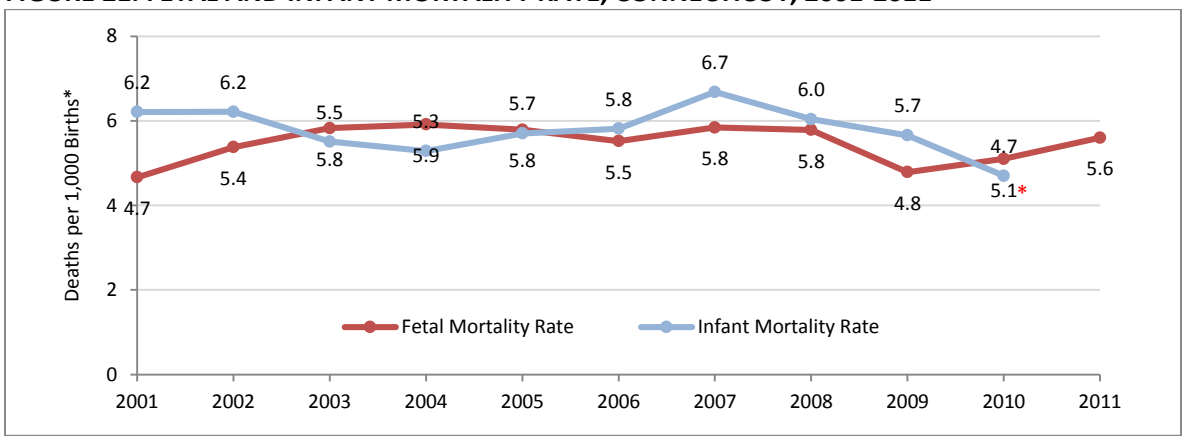
	Medicaid (%)	Non-Medicaid (%)	Ratio: Medicaid/Non-Medicaid*
Low birthweight	8.6	7.5	1.1
Very low birthweight	1.8	1.3	1.4
Preterm delivery	11.1	9.8	1.1

Note: * Indicates that all comparisons were significantly different (p<0.05).
Source: Connecticut Department of Public Health.

Fetal and Infant Mortality

Infant mortality rates have continued to decline over the last 20 years (1990-2011) in Connecticut (Figure 21). 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.

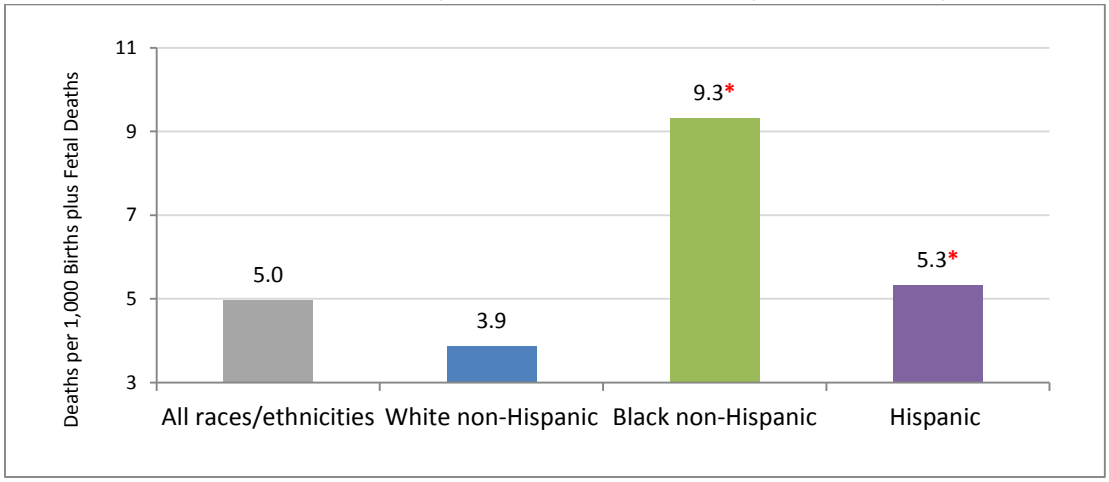
FIGURE 21. FETAL AND INFANT MORTALITY RATE, CONNECTICUT, 2001-2011



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.

In 2008 to 2010, combined, the fetal mortality rate for black non-Hispanics and Hispanics was significantly higher than that for white non-Hispanics (Figure 22). 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.

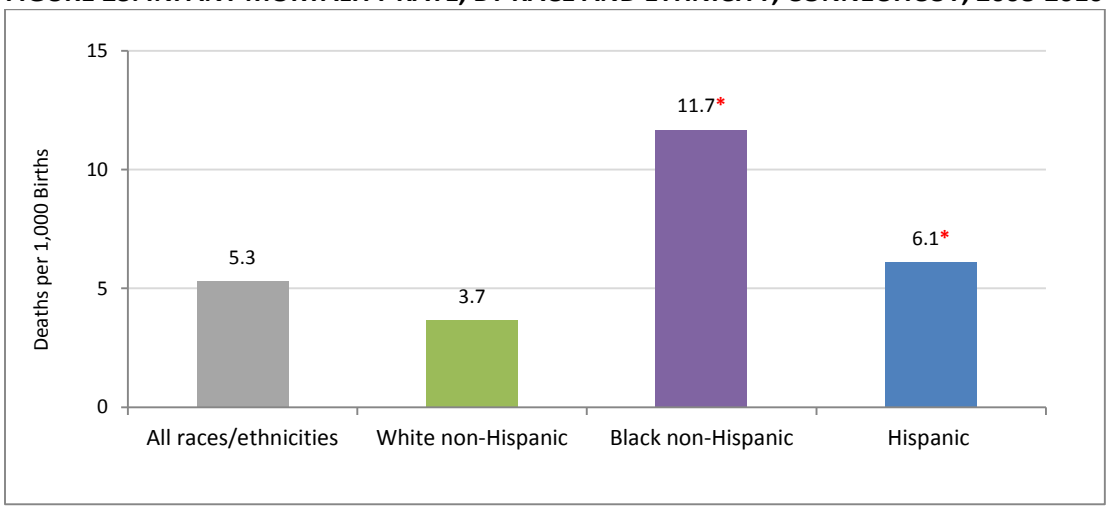
FIGURE 22. FETAL MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010



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

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 (Figure 23). These differences in the infant mortality rate by race and ethnicity were statistically significant.

FIGURE 23. INFANT MORTALITY RATE, BY RACE AND ETHNICITY, CONNECTICUT, 2008-2010

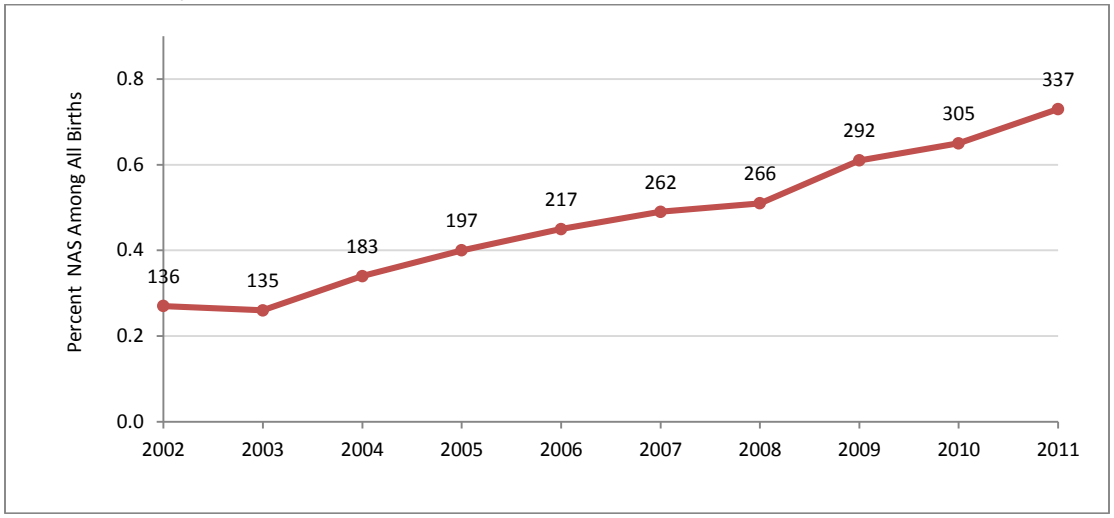


Note: * Indicates significantly higher infant mortality rate for black non-Hispanics and Hispanics ($p<0.05$).
Source: Connecticut Department of Public Health.

Neonatal Abstinence Syndrome

As with 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 (Figure 24).

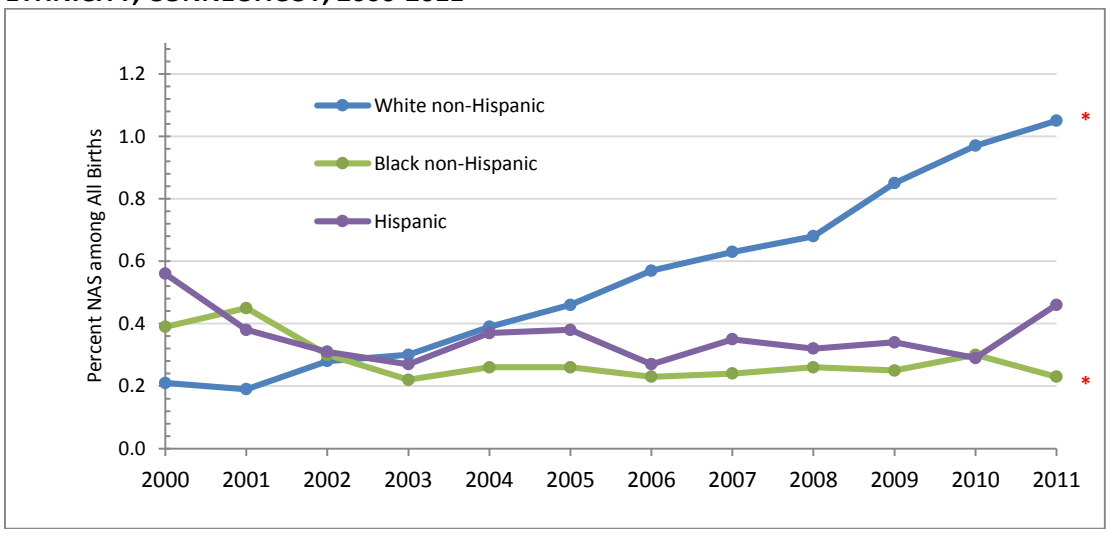
FIGURE 24. PERCENT AND NUMBER OF CHILDREN BORN WITH NEONATAL ABSTINENCE SYNDROME, CONNECTICUT, 2002-2011



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

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 of 0.08%, from a low of 0.21% in 2000 to a high of 1.05% in 2011 (Figure 25). 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.

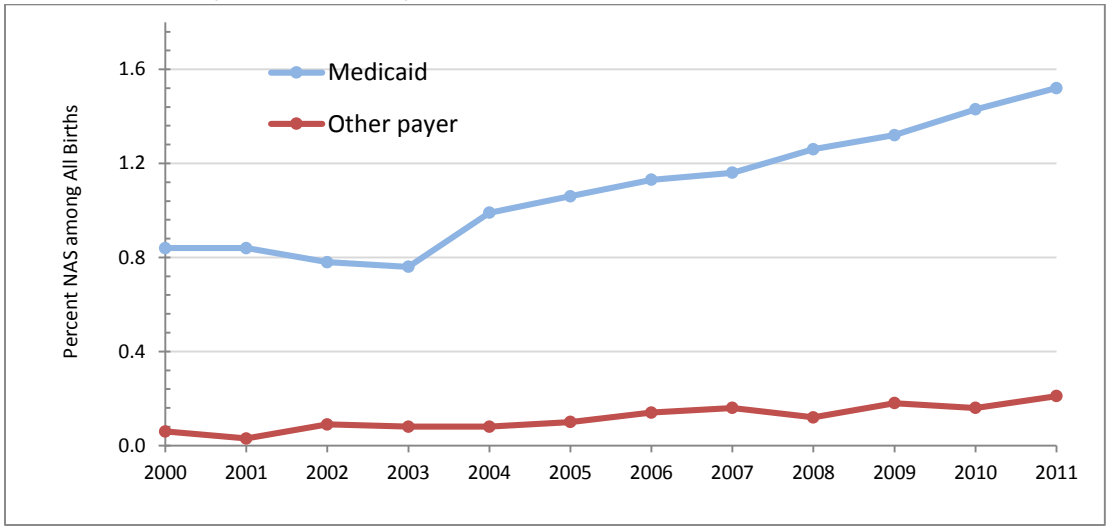
FIGURE 25. PERCENT OF CHILDREN BORN WITH NEONATAL ABSTINENCE SYNDROME, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011



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.

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 (Figure 26).

FIGURE 26. PERCENT OF CHILDREN BORN WITH NEONATAL ABSTINENCE SYNDROME, BY HEALTH INSURANCE TYPE, CONNECTICUT, 2000-2011

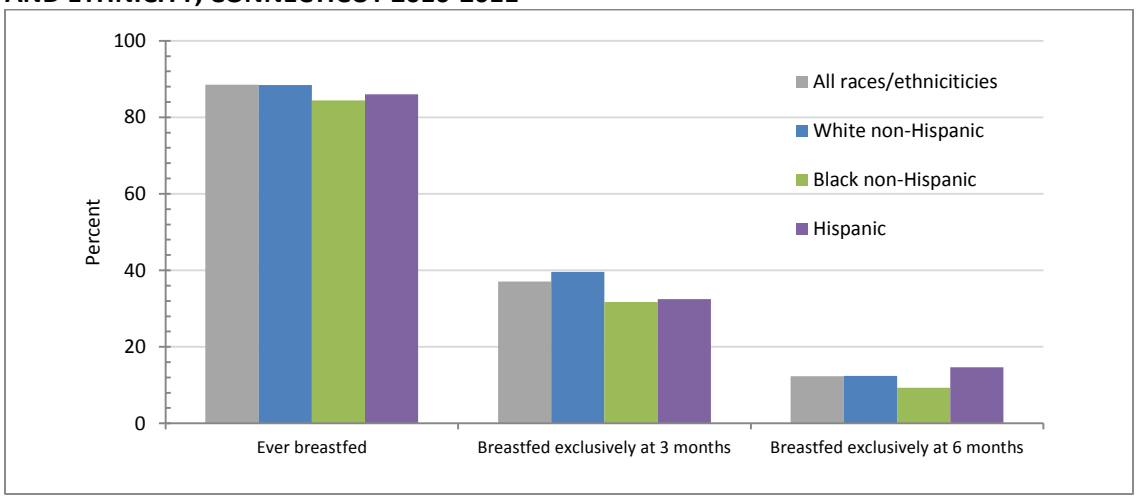


Source: Connecticut Department of Public Health.

Breastfeeding

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. 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 (Figure 27).

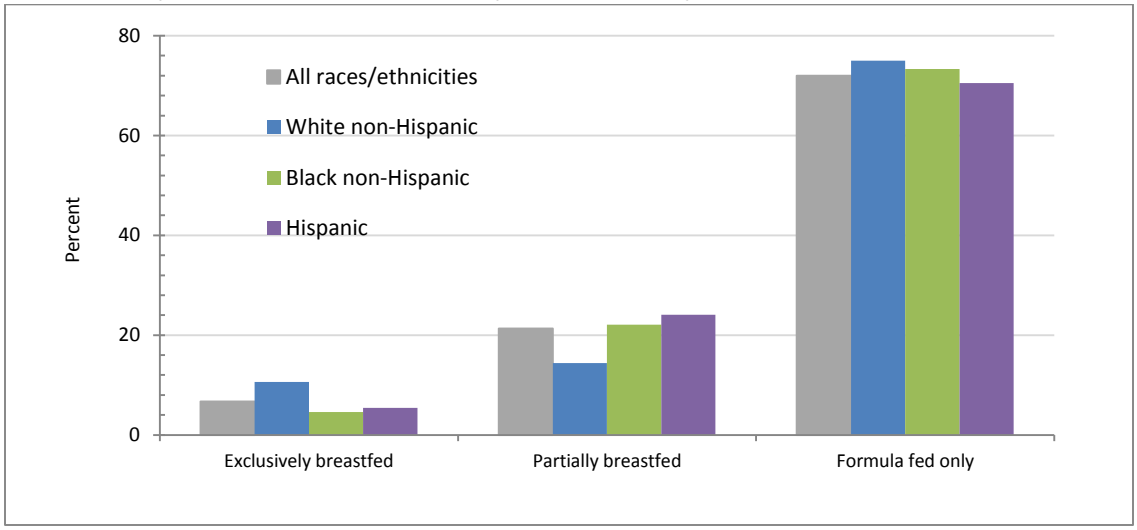
FIGURE 27. PERCENT OF INFANTS WHO WERE BREASTFED, BY DURATION, EXCLUSIVITY, AND RACE AND ETHNICITY, CONNECTICUT 2010-2011



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

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 enrolled in WIC were exclusively breastfed, compared to black non-Hispanic (4.6%) and Hispanic (5.4%) infants (Figure 28).

FIGURE 28. PERCENT OF INFANTS ENROLLED IN WIC WHO WERE BREASTFED, BY DURATION, EXCLUSIVITY, AND RACE AND ETHNICITY, CONNECTICUT, 2012

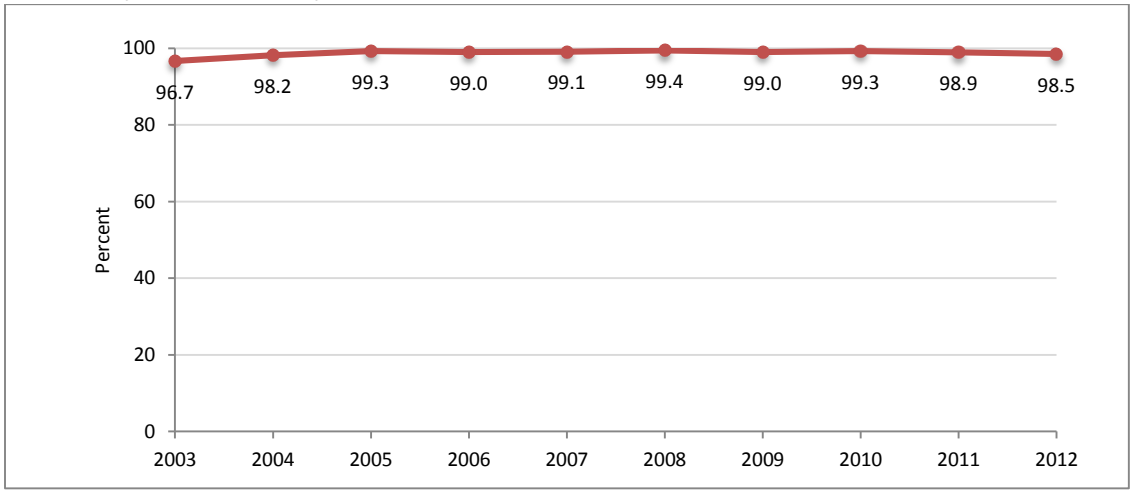


Source: Connecticut Department of Public Health.

Newborn Screening

Over the 2005 to 2012 period, performance of newborn screening before hospital discharge was at 98.5% or better (Figure 29). In 2012, Connecticut had a perfect track record (100%) for timely follow-up to definitive diagnosis and clinical management for condition(s) mandated by Connecticut newborn screening programs.

FIGURE 29. PERCENT OF NEWBORNS WHO HAVE BEEN SCREENED FOR HEARING BEFORE LEAVING HOSPITAL, CONNECTICUT, 2003-2012



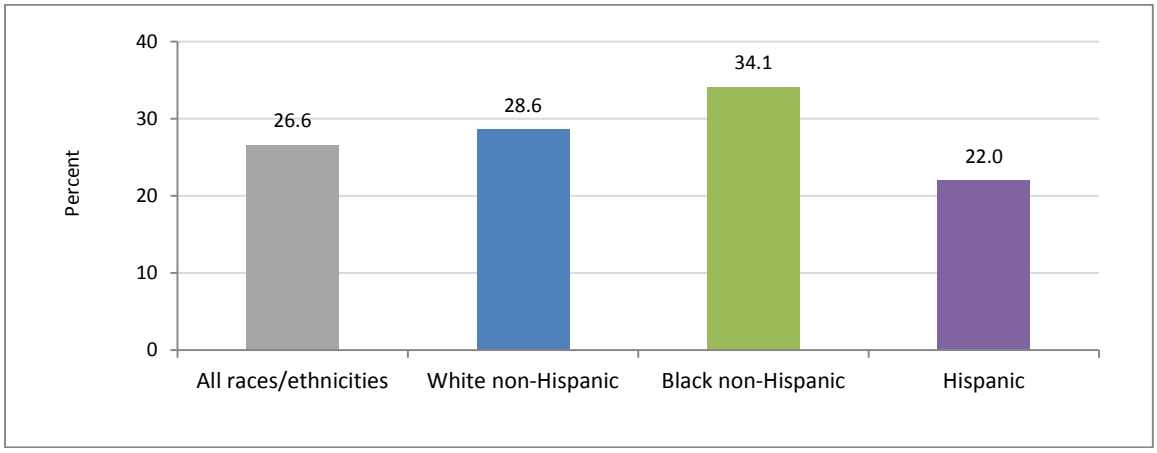
Source: Connecticut Department of Public Health, 2003-2007 and US DHHS HRSA Maternal and Child Health Title V Information System, National Performance Measure #01, Connecticut, 2008-2012.

Child Health

Developmental Screening, Well-Child Visits and Immunizations

In 2011-2012, only 26.6% of children age 10 months to 5 years were screened for being at risk for developmental, behavioral, and social delays using a parent-reported standardized screening tool during their health care visit. 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%) (Figure 30).

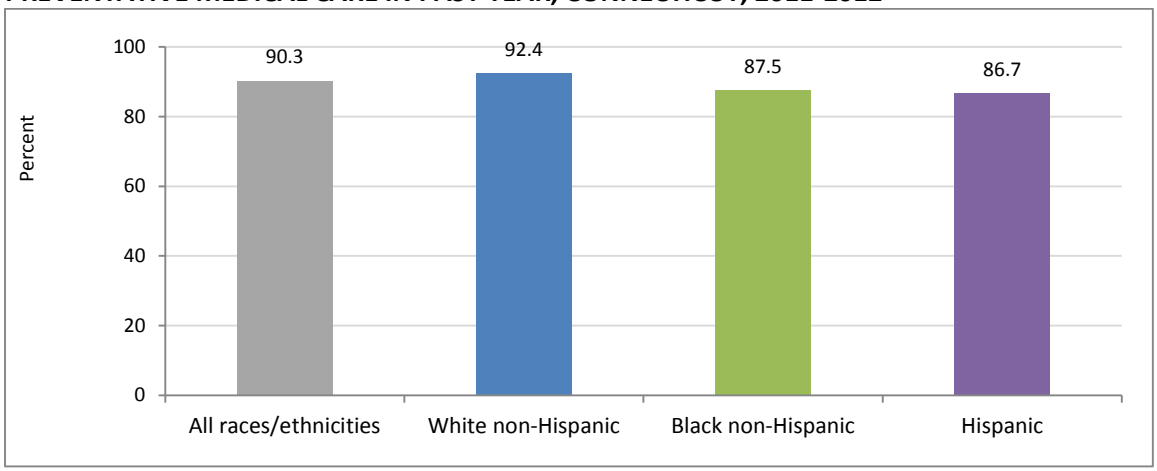
FIGURE 30. PERCENT OF CHILDREN (10 MONTHS TO 5 YEARS) WHO WERE SCREENED FOR BEING AT RISK FOR DEVELOPMENTAL, BEHAVIORAL, AND SOCIAL DELAYS USING A PARENT-REPORTED STANDARDIZED SCREENING TOOL DURING A HEALTH CARE VISIT IN PAST YEAR, CONNECTICUT, 2011-2012



Source: National Survey of Children's Health, 2011-2012.

Overall, 90.3% of children in Connecticut saw a health care provider for preventative medical care in the past year in 2011-2012 (Figure 31). 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.

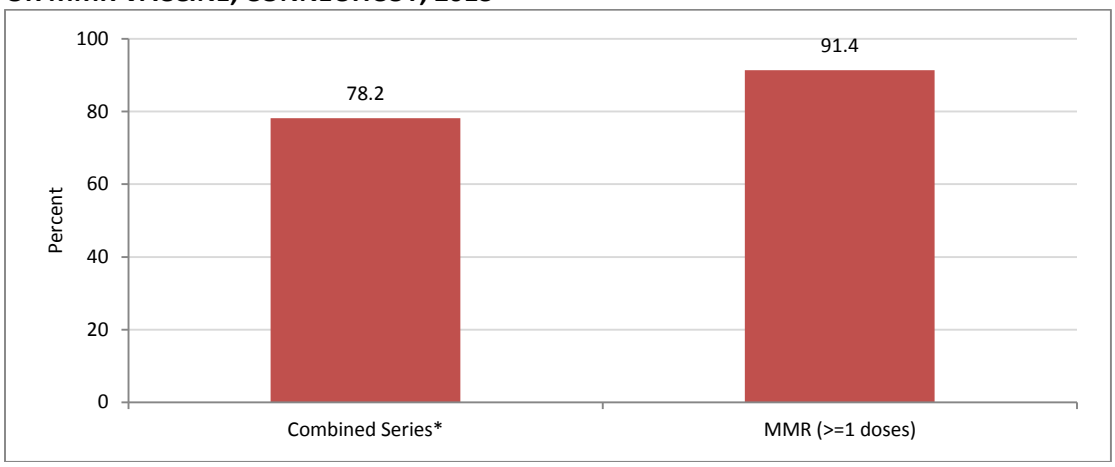
FIGURE 31. PERCENT OF CHILDREN (0 TO 17 YEARS) WHO SAW A HEALTH CARE PROVIDER FOR PREVENTATIVE MEDICAL CARE IN PAST YEAR, CONNECTICUT, 2011-2012



Source: National Survey of Children's Health, 2011-2012.

In 2013, the prevalence of vaccine series completion among children 19 to 35 months was 78.2, and 91.4% completed at least one dose of the measles, mumps, and rubella (MMR) vaccine (Figure 32)

FIGURE 32. PERCENT OF CHILDREN (19-35 MONTHS) WHO COMPLETED COMBINED VACCINE SERIES OR MMR VACCINE, CONNECTICUT, 2013

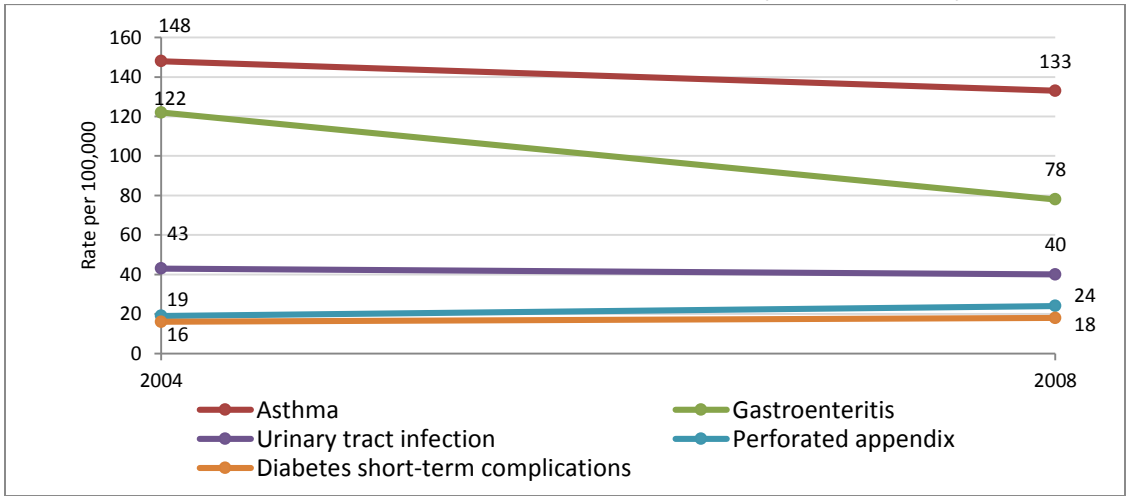


Source: Morbidity and Mortality Weekly Reports*, National, State, and Local Area Vaccination Coverage among Children Aged 19-35 Months, United States* – 2013, Table 3; National Immunization Survey.
Note: The combined (4:3:1:3*:3:1:4) vaccine series includes ≥4 doses of DTaP, ≥3 doses of poliovirus vaccine, ≥1 dose of measles-containing vaccine, full series of Hib vaccine (≥3 or ≥4 doses, depending on product type), ≥3 doses of HepB, ≥1 dose of varicella vaccine, and ≥4 doses of PCV. MMR indicates measles, mumps, and rubella vaccine.

Pediatric Preventable Hospitalizations

Asthma was the leading cause of preventable hospitalization among children, followed by gastroenteritis and urinary tract infections (Figure 33). 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%.

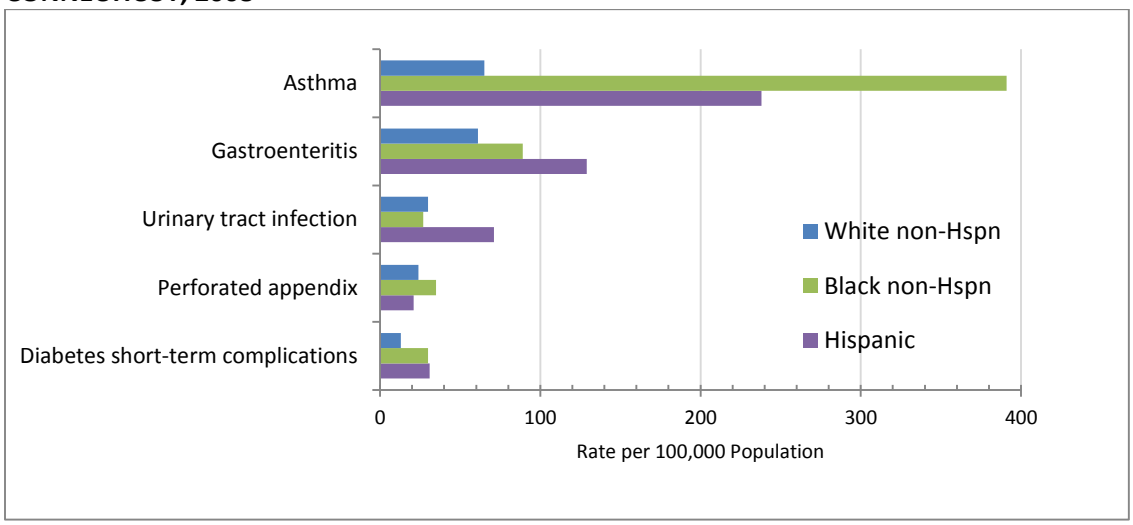
FIGURE 33. PEDIATRIC PREVENTABLE HOSPITALIZATION RATES, CONNECTICUT, 2004 VS. 2008



Source: Connecticut Department of Public Health, OHCA, January, 2010, *Preventable Hospitalizations in Connecticut: A Current Assessment of Access to Community Health Services*, Table 1.

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 (Figure 34).

FIGURE 34. PEDIATRIC PREVENTABLE HOSPITALIZATION RATES BY RACE AND ETHNICITY, CONNECTICUT, 2008

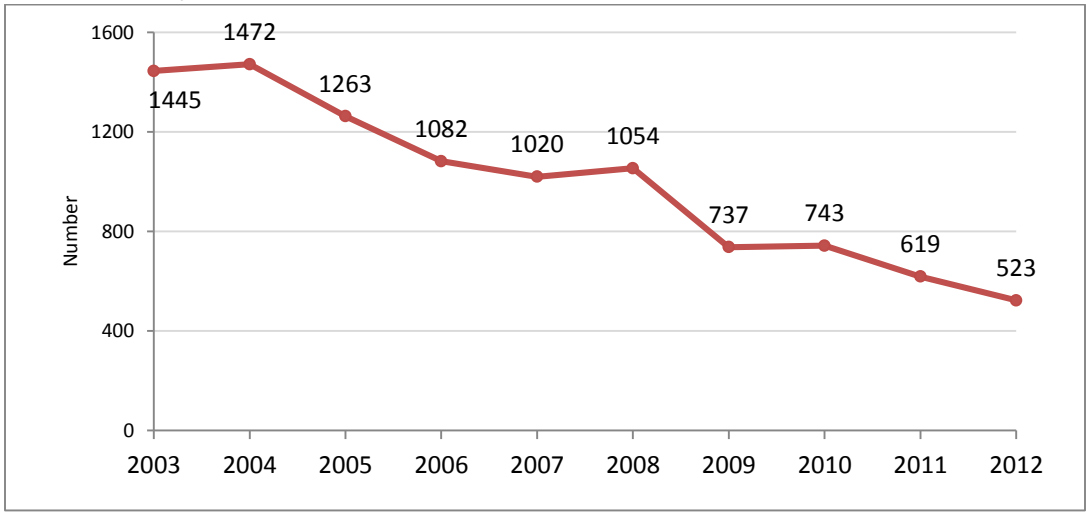


Source: Connecticut Department of Public Health, OHCA, January, 2010, *Preventable Hospitalizations in Connecticut: A Current Assessment of Access to Community Health Services*, Table 8.

Lead Poisoning

From 2002 to 2012, the number of children identified with a blood lead level of ≥10+ µg/dL appeared to decline by 70% (Figure 35).

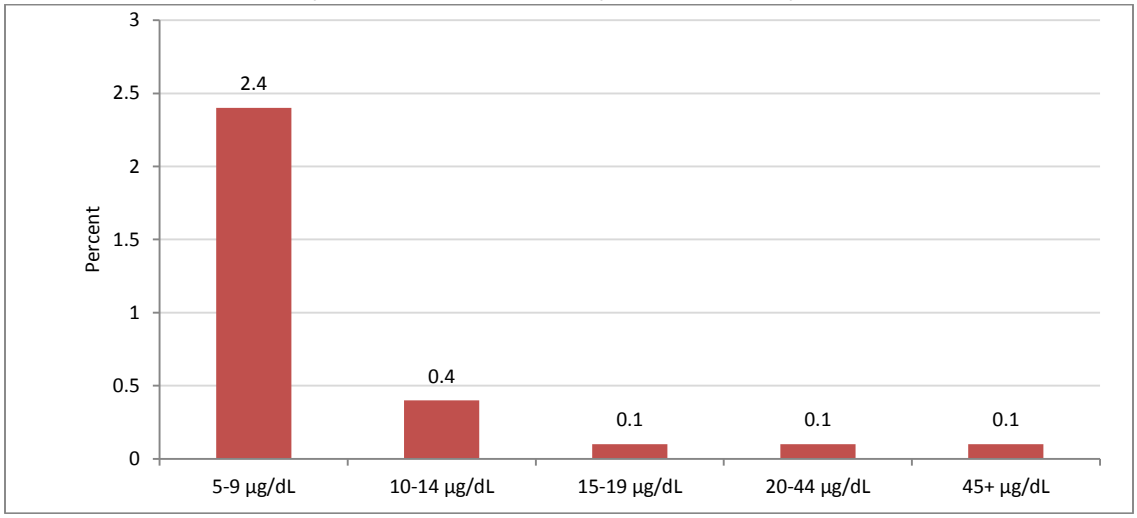
FIGURE 35. NUMBER OF CHILDREN <6 YEARS OF AGE WITH BLOOD LEAD LEVEL ≥10µG/DL, CONNECTICUT, 2003-2012



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

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 (Figure 36).

FIGURE 36. 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.

Since Healthy Homes inspections began in 2010, the number of initial healthy homes inspections has appeared to increase. In 2012, there were 45 initial inspections, and 32 re-assessments, totaling 77 inspections that year (Table 3).

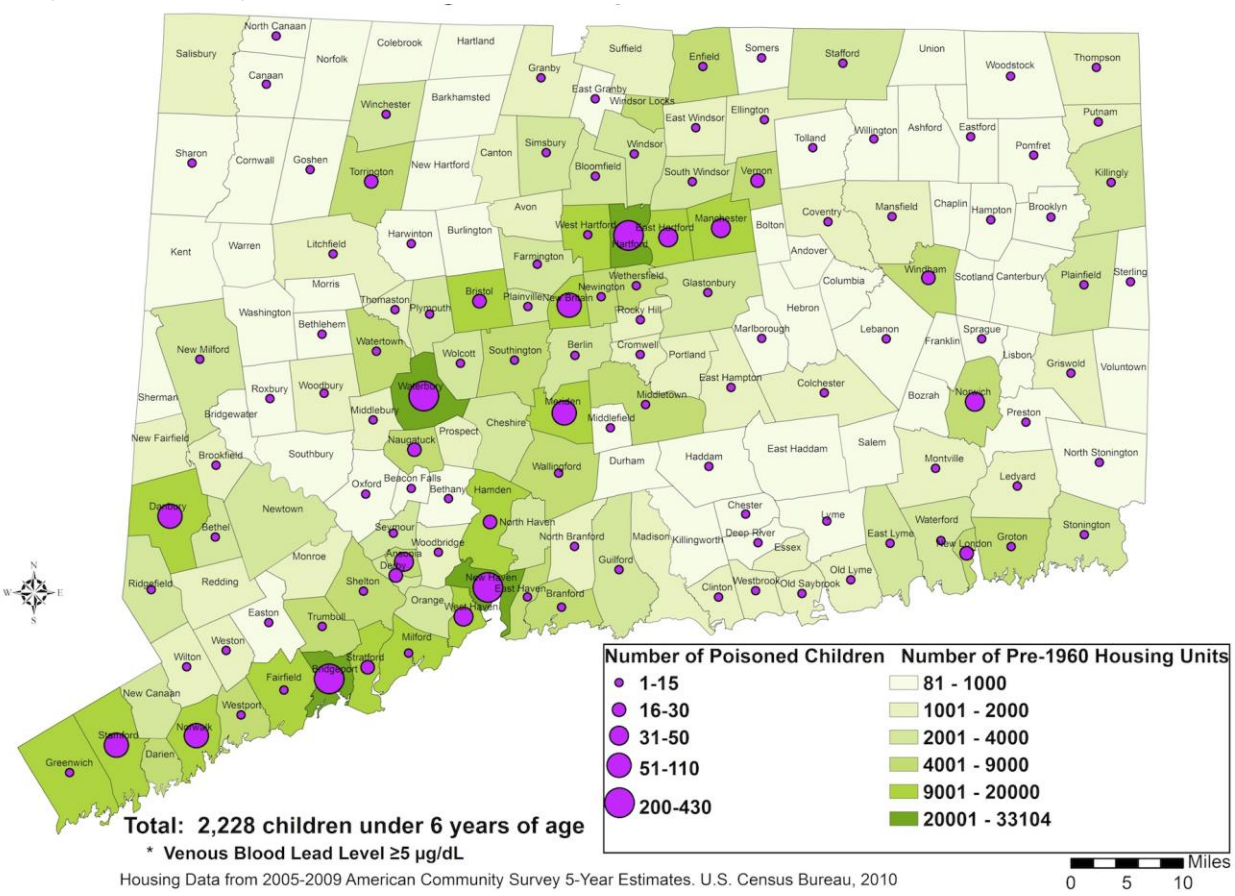
TABLE 3. NUMBER OF HEALTHY HOMES INSPECTIONS, CONNECTICUT, 2010-2012

	2010	2011	2012
Initial Healthy Homes Assessment	8	33	45
Healthy Homes Re-Assessment	0	25	32
Total	8	58	77

Source: Connecticut Department of Public Health.

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 (Figure 37).

FIGURE 37. NUMBER OF LEAD POISONED CHILDREN AND HOUSING UNITS CONSTRUCTED BEFORE 1960, CONNECTICUT, 2011

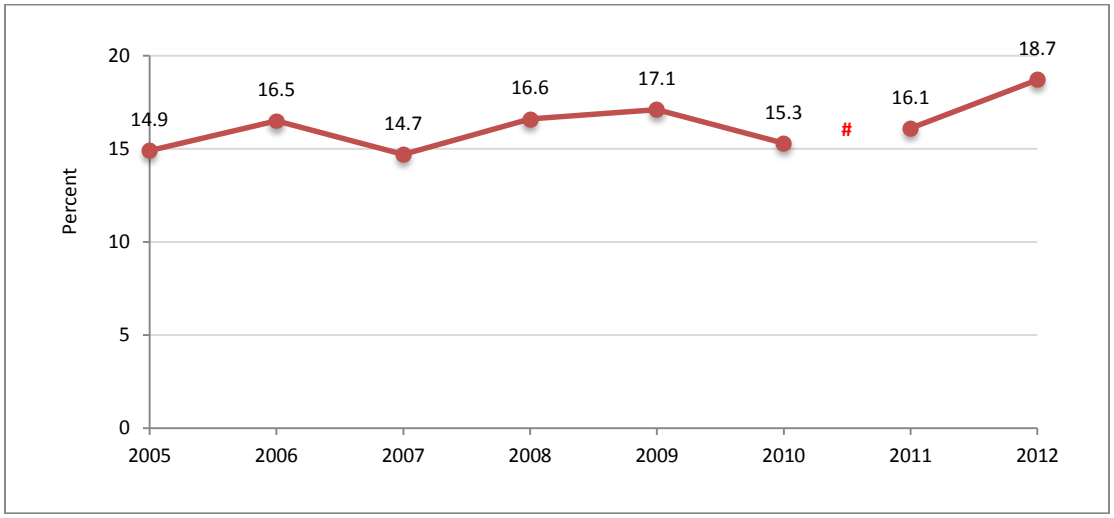


Source: Connecticut Department of Public Health.

Asthma

The proportion of children with asthma ranged from 14.9% in 2005 to 18.7% in 2012 (Figure 38). In 2012, asthma affected an estimated 400,000 adults.

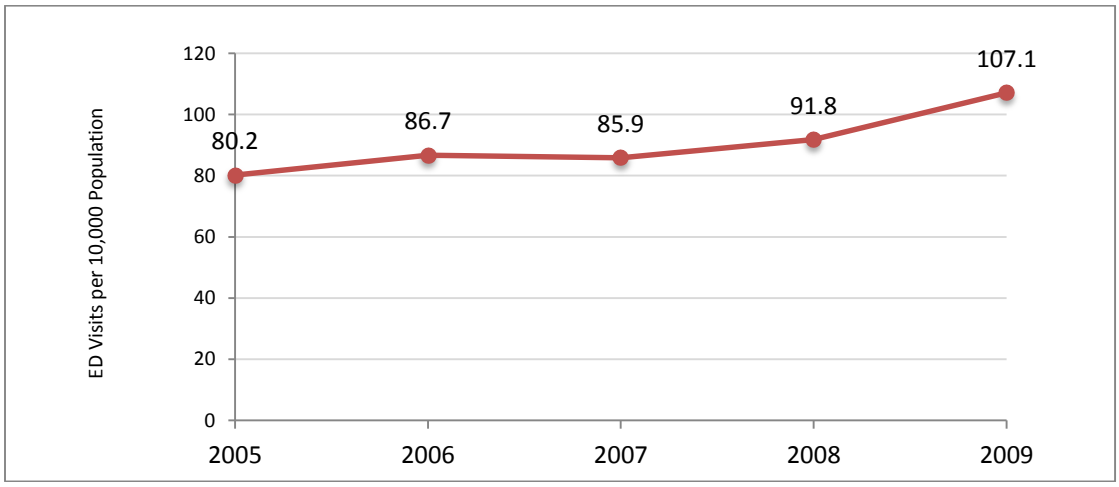
FIGURE 38. PERCENT OF CHILDREN AND ADULTS EVER TOLD THEY HAVE ASTHMA, CONNECTICUT, 2000-2012



Note: # Break in trend due to new weighting in 2011.
Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2005-2012.

The rate of emergency department visits due to asthma for children varied by 34% over the 2005 to 2009 period, though 5 time points may not constitute sufficient information to determine epidemiologic trends (Figure 39).

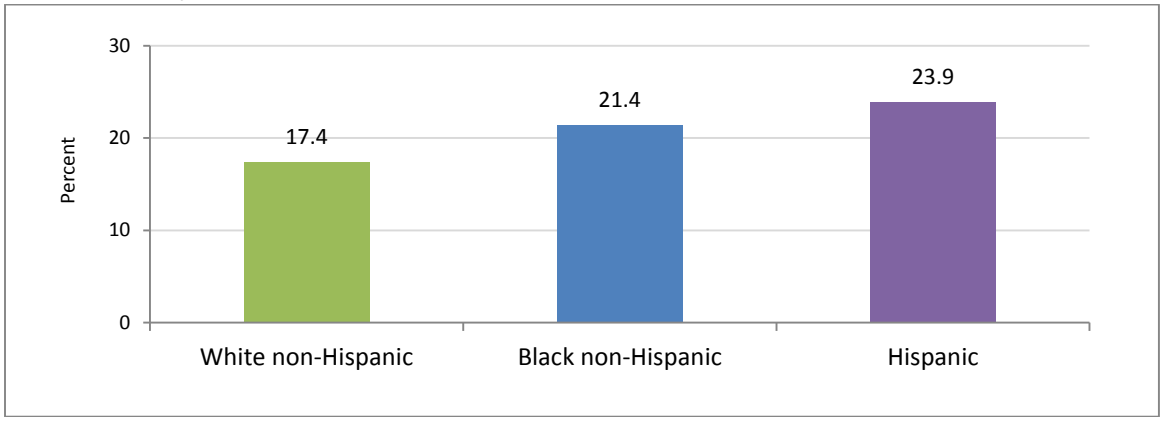
FIGURE 39. EMERGENCY DEPARTMENT VISITS FOR ASTHMA AMONG CHILDREN, CONNECTICUT, 2005-2009



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

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 (Figure 40).

FIGURE 40. PERCENT OF CHILDREN EVER TOLD THEY HAVE ASTHMA, BY RACE AND ETHNICITY, CONNECTICUT, 2012

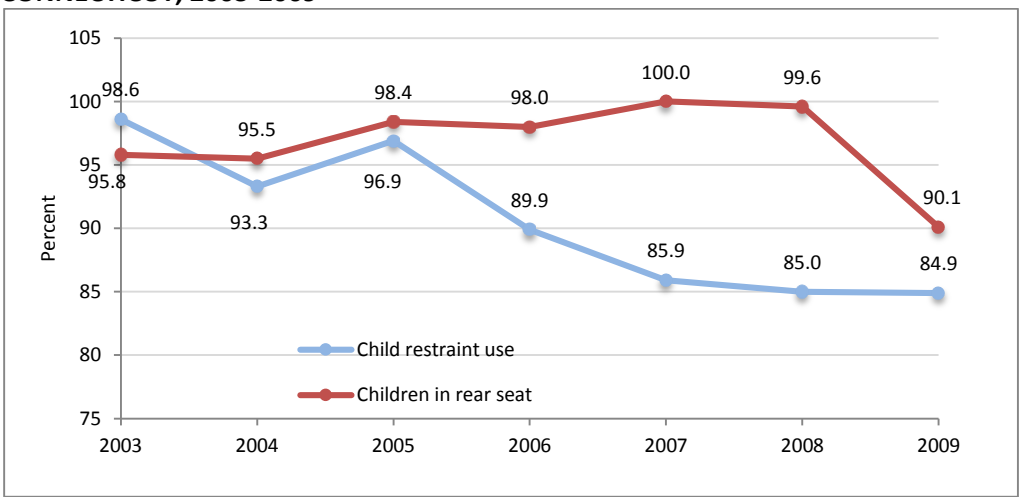


Source: Connecticut Department of Public Health, Connecticut Behavioral Risk Factor Surveillance System, 2012.

Unintentional Injury

Child restraint use varied from 98.6% in 2003 to 84.9% in 2009. The percent of children in the rear set of the car ranged from 95.8% in 2003 to 90.1% in 2009 (Figure 41).

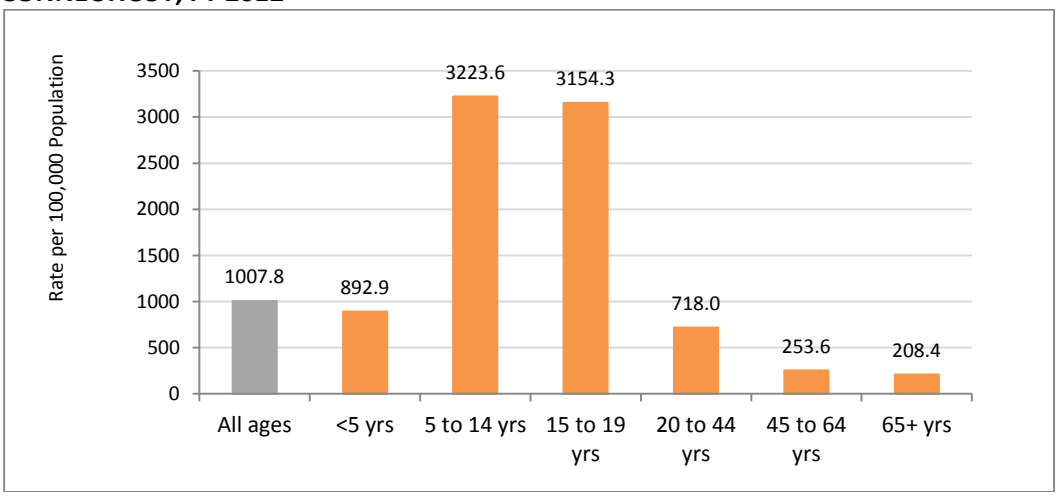
FIGURE 41. PERCENT OF CHILDREN UNDER 4 YEARS OF AGE IN RESTRAINT OR REAR SEAT OF CAR, CONNECTICUT, 2003-2009



Source: Connecticut Department of Transportation, *2012 Highway Safety Plan*, 2011, Table OP-1.

In FY 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 (Figure 42).

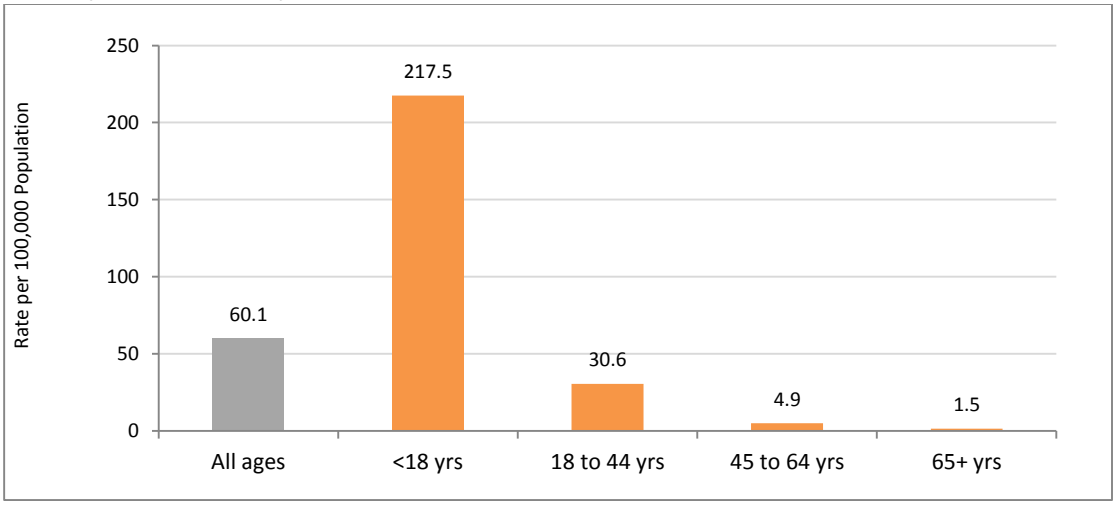
FIGURE 42. RATE OF EMERGENCY DEPARTMENT VISITS FOR SPORTS INJURY, BY AGE GROUP, CONNECTICUT, FY 2012



Source: Connecticut Department of Public Health, OHCA.

There were 60.1 emergency department (ED) visits per 100,000 population in FY 2012 in Connecticut. In FY 2012, the rate of ED visits due to traumatic brain injury varied from 217.5 per 100,000 population for persons 18 years of age to 1.5 per 100,000 population for persons at least 65 years of age (Figure 43).

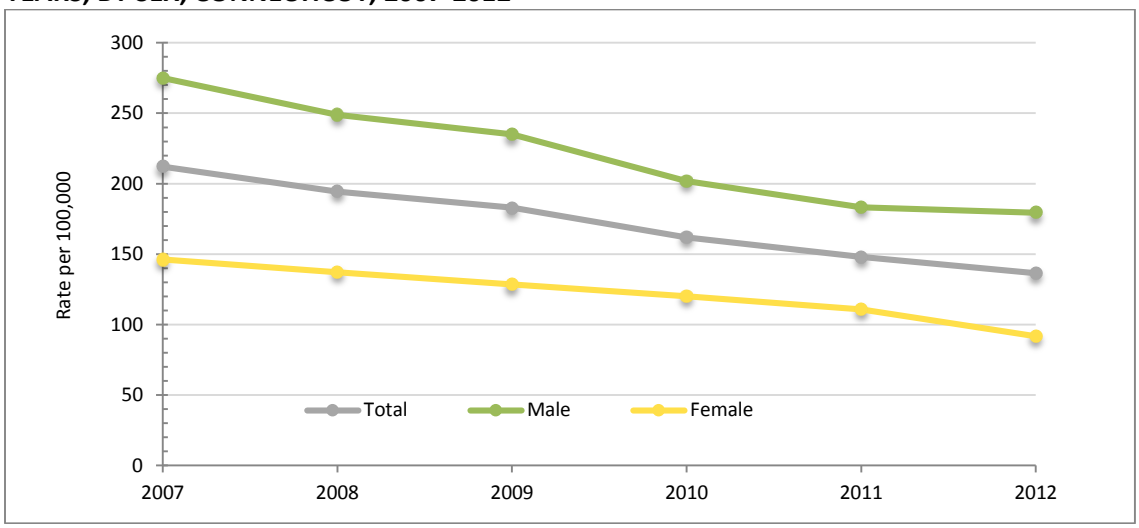
FIGURE 43. RATE OF EMERGENCY DEPARTMENT VISITS DUE TO TRAUMATIC BRAIN INJURY, BY AGE GROUP, CONNECTICUT, FY 2012



SOURCE: CONNECTICUT DEPARTMENT OF PUBLIC HEALTH, OHCA.

Trends suggest a decline in injury related hospital admissions for persons age 0 to 19 years of age, from 212.1 per 100,000 population in 2007, to 136.5 per 100,000 population (Figure 44). Over this period, the rate of injury related hospitalizations for males was greater than that for females. In 2012, there were 179.4 hospitalizations per 100,000 males age 0 to 19 years, and 91.7 per 100,000 females age 0-19 years.

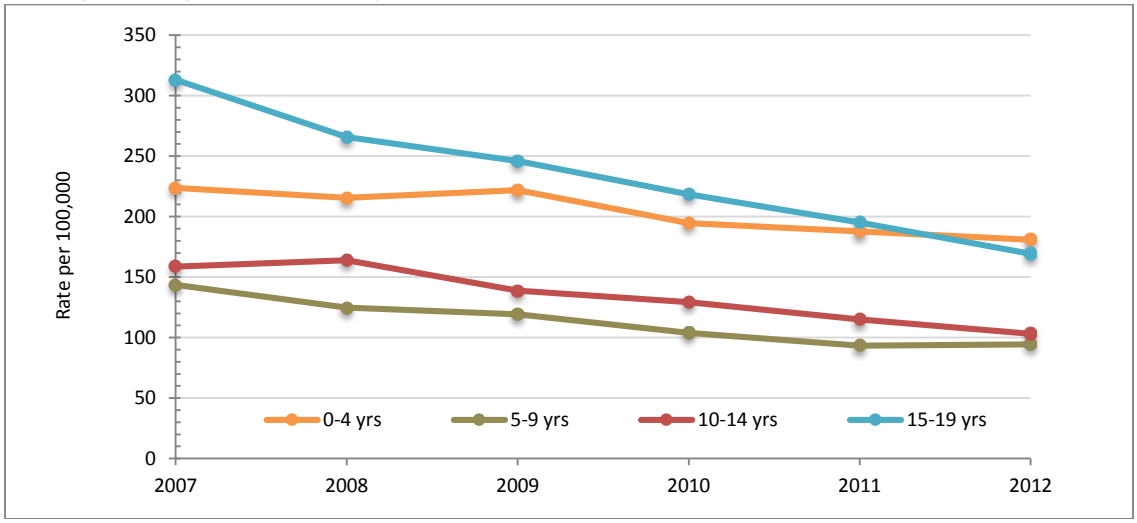
FIGURE 44. RATE OF INJURY RELATED HOSPITAL ADMISSIONS PER POPULATION AGED 0 THROUGH 19 YEARS, BY SEX, CONNECTICUT, 2007-2012



Source: Connecticut Department of Public Health, Office of Health Care Quality.

From 2007 to 2012, the rate of injury related hospital admissions appeared to decline for all age groups (Figure 45). Over this period, trends suggest a decrease in age-related differences in hospital admissions rates due to injury. From 2007 to 2011, rates of injury related hospital admissions were greatest for persons 15 to 19 years of age, followed by those 0 to 4 years of age. However, in 2012 the rate of injury related hospital admissions for persons age 0 to 4 years eclipsed that of persons age 15 to 19.

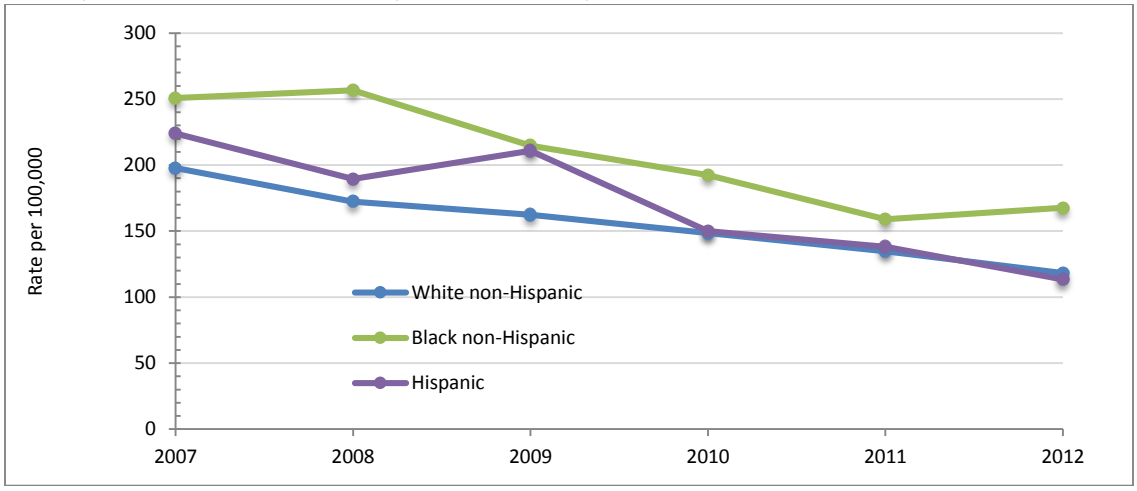
FIGURE 45. RATE OF INJURY RELATED HOSPITAL ADMISSIONS PER POPULATION AGED 0 THROUGH 19 YEARS, BY AGE, CONNECTICUT, 2007-2012



Source: Connecticut Department of Public Health, Office of Health Care Quality.

From 2007 to 2012, trends suggest that the rate of injury related hospital admissions declined for each racial and ethnic group (Figure 46). Over this period, the injury related hospitalization rate was highest for black non-Hispanics. Whereas from 2007 to 2009 trends suggest that Hispanics had a higher rate of injury related hospital admissions than white non-Hispanics, from 2010 to 2012 these rates were similar for Hispanics and white non-Hispanics. In 2012, for persons age 0-19 years, the rate of injury related hospitalizations varied from 167.7 per 100,000 black non-Hispanics, to 118.2 per 100,000 white non-Hispanics, and 113.3 per 100,000 Hispanics.

FIGURE 46. RATE OF INJURY RELATED HOSPITAL ADMISSIONS PER POPULATION AGED 0 THROUGH 19 YEARS, BY RACE AND ETHNICITY, CONNECTICUT, 2007-2012



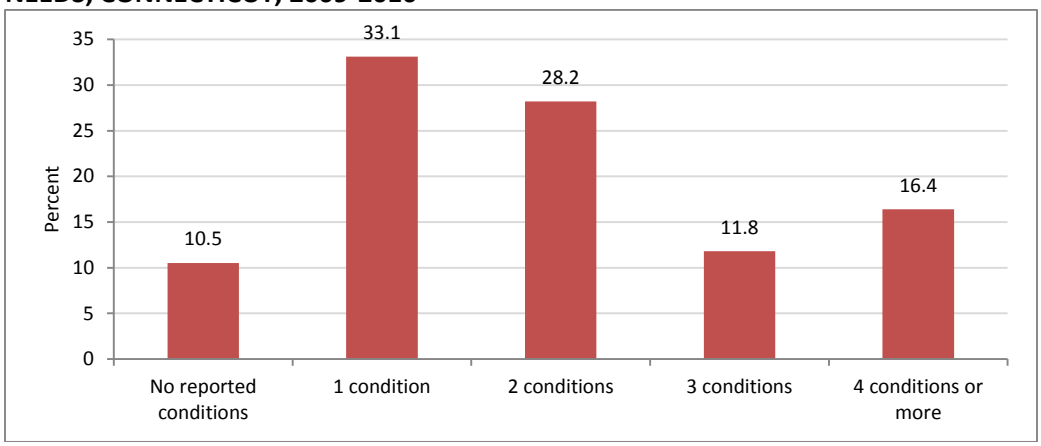
Source: Connecticut Department of Public Health, Office of Health Care Quality.

Children with Special Health Care Needs

Health Conditions

In 2009-2010, 89.5% of children with special health care needs had at least one reported health condition (Figure 47). Approximately 1 in 4 CSHCN had 2 conditions, 11.8% had 3 conditions, and 16.4% had 4 conditions or more. These conditions included ADD or ADHD, allergies, anxiety problems, arthritis or joint problems, asthma, autism or other autism spectrum disorders, behavioral or conduct disorders, blood problems, anemia, brain injury or concussion, Cerebral Palsy, Cystic Fibrosis, depression, developmental delay, diabetes, Down Syndrome, food allergies, migraine headaches, heart problem or heart disease, intellectual disability or mental retardation, Muscular Dystrophy, or epilepsy or seizure disorder.

FIGURE 47. NUMBER OF CHRONIC CONDITIONS AMONG CHILDREN WITH SPECIAL HEALTH CARE NEEDS, CONNECTICUT, 2009-2010



Source: Children with Special Health Care Needs Survey, 2009-2010.

As indicated in Table 4, allergies (45.3%), asthma (37.7%), and ADD or ADHD (29.0%) are the most prevalent health conditions among children with special health care needs.

TABLE 4. PREVALENCE OF HEALTH CONDITIONS AMONG CHILDREN WITH SPECIAL HEALTH CARE NEEDS, CONNECTICUT, 2009-2010

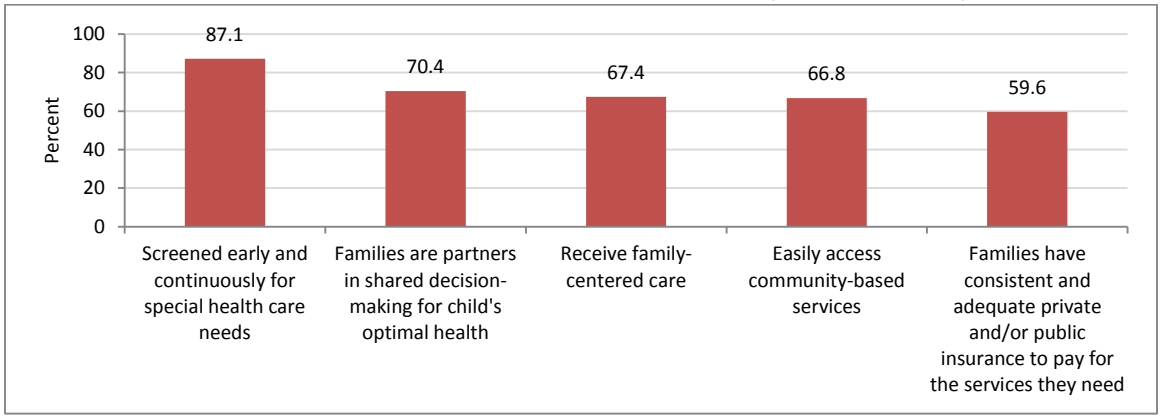
	Percent
Allergies	45.3
Asthma	37.7
ADD or ADHD	29.0
Anxiety	18.9
Developmental delay	18.0
Food allergies	13.7
Behavioral or conduct problems	12.1
Migraine headaches	10.3
Depression	8.3
Autism or autism spectrum disorder	7.8
Intellectual disability	5.8
Arthritis	2.9
Epilepsy or seizure disorder	2.8
Blood problems	1.9
Heart problem or heart disease	2.3
Diabetes	2.2
Cerebral Palsy	1.7
Brain injury or concussion	1.3
Down Syndrome	0.5
Muscular dystrophy	0.3

Source: Children with Special Health Care Needs Survey, 2009-2010.

Supporting and Screening Children with Special Health Care Needs

In Connecticut in 2009-2010, 17.3% of children were classified as having special health care needs. As shown in Figure 48, in 2009-2010, 87.1% of children with special health care needs (CSHCN) were screened early and continuously for special health care needs and 70.4% of CSHCN had families who reported that they are partners in the decision-making process for their child's optimal health. In addition, 67.4% indicated that they received family-centered care and 66.8% reported that CSHCN could easily access community-based services. Approximately 6 in 10 (59.6%) reported that CSHCN had consistent and adequate private and/or public health insurance to cover needed services.

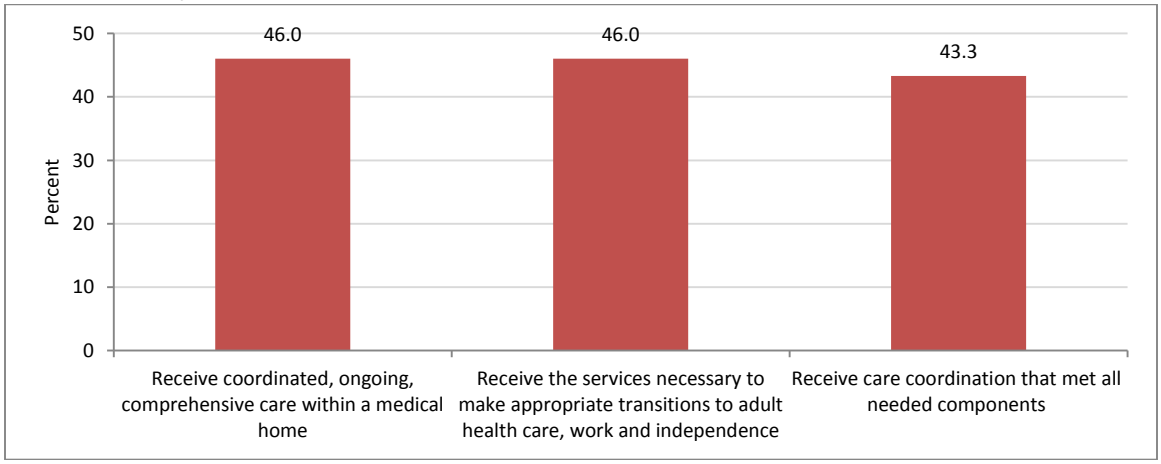
FIGURE 48. HEALTH CARE SCREENING, FAMILY INTEGRATION IN HEALTH CARE, AND HEALTH CARE ACCESS AMONG CHILDREN WITH SPECIAL HEALTH CARE NEEDS, CONNECTICUT, 2009-2010



Source: National Survey of Children with Special Health Care Needs, 2009-2010.

As shown in Figure 49, less than half of respondents reported that CSHCN received coordinated, ongoing, comprehensive care within a medical home (46.0%) or reported that they received the services necessary to make appropriate transitions to adulthood (46.0%). Four in ten reported that CSHCN received care coordination that met all needed components of care.

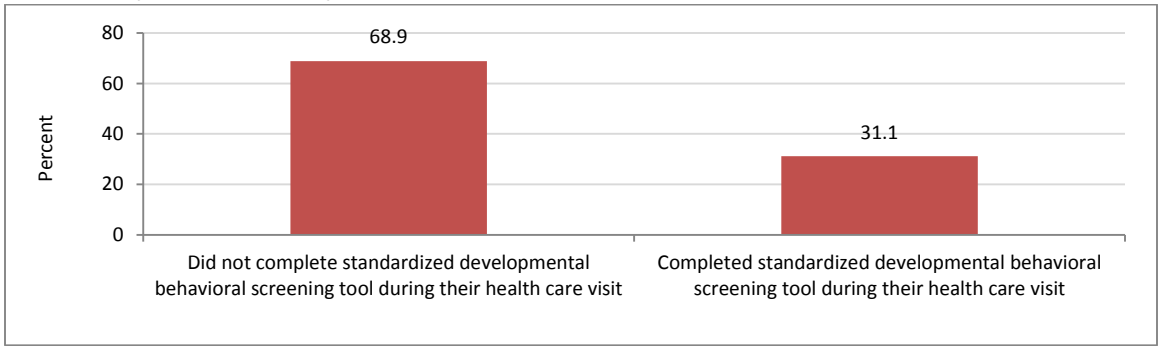
FIGURE 49. CARE COORDINATION AMONG CHILDREN WITH SPECIAL HEALTH CARE NEEDS, CONNECTICUT, 2009-2010



Source: National Survey of Children with Special Health Care Needs, 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 (Figure 50).

FIGURE 50. 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, CONNECTICUT, 2009-2010

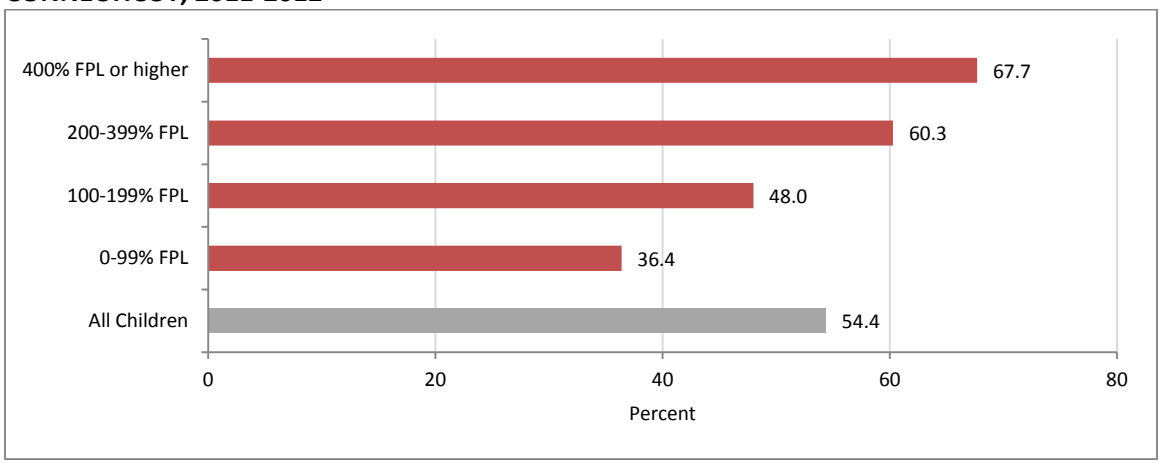


Source: Children with Special Health Care Needs Survey, 2009-2010.

Medical Home

In 2011-2012, 54.4% of Connecticut children across health care need statuses had a medical home (Figure 51). Generally, a greater proportion of children from higher-income households 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.

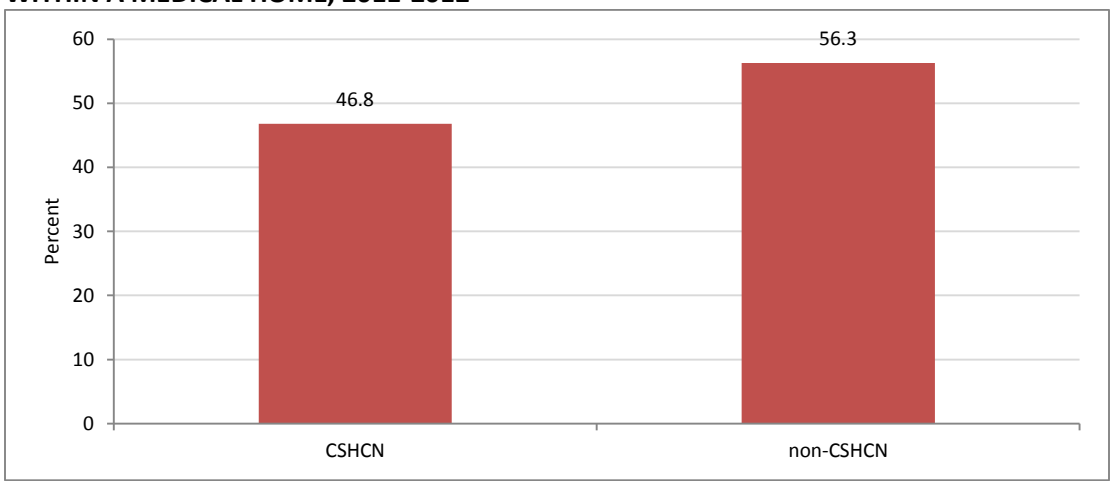
FIGURE 51. PERCENT OF CHILDREN WITH MEDICAL HOME, BY HOUSEHOLD POVERTY LEVEL, CONNECTICUT, 2011-2012



Note: FPL indicates "federal poverty level".
Source: Medical Home Performance Profile for All Children, National Survey of Children's Health, 2011-2012.

In 2011-2012, 46.8% of children with special health care needs had a medical home, compared to 56.3% of children who did not have a special health care need (Figure 52).

FIGURE 52. PERCENT OF CHILDREN WHO RECEIVE COORDINATED, ONGOING, COMPREHENSIVE CARE WITHIN A MEDICAL HOME, 2011-2012



Source: National Survey of Children's Health, 2011-2012.

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 (Table 5).

TABLE 5. NUMBER OF PRIMARY CARE MEDICAL HOME ORGANIZATIONS AND PROVIDERS, CONNECTICUT, 2013

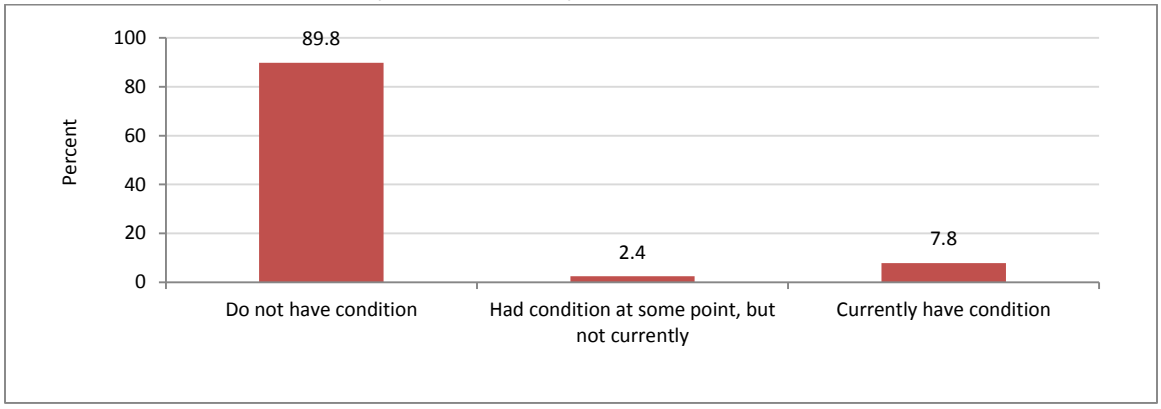
	Number
Joint Commission Accredited Organizations with Primary Care Medical Home Certification: CHC, Inc. and Southwest CHC[a]	3
Primary Care Medical Home Organizations, Joint Committee[b]	108
Providers recognized as Primary Care Medical Homes in compliance with 2011 criteria, National Committee on Quality Assurance[c]	186

Notes: [a]As of 6/5/2013; [b]As of 11/30/2013; [c]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.

Autism Spectrum Disorders

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 (Figure 53).

FIGURE 53. 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.

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 (Table 6).

TABLE 6. 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

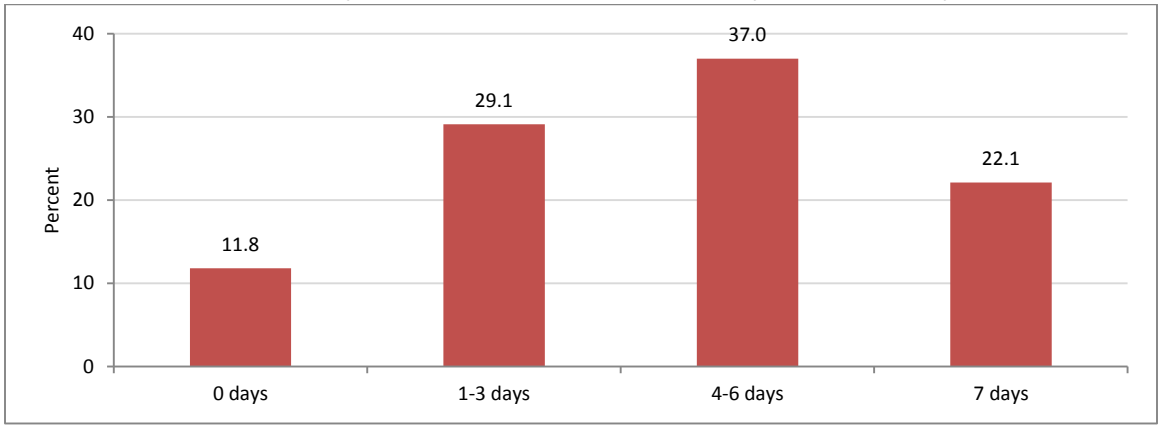
Source: Connecticut Birth to Three System. Connecticut Birth to Three System Year to Year Comparison: Referrals and Eligibility Rates by Program: 1st Quarter.

Adolescent Health

Physical Activity

In 2011-2012, 88.2% of youth age 12 to 17 engaged in physical activity that made them sweat or breathe hard for at least 20 minutes on at least one day per week (Figure 54). Thirty-seven percent reported engaging in physical activity 4-6 days per week, followed by 29.1% being physically active for 1-3 days per week, and 22.1% participating in physical activity for at least 20 minutes daily.

FIGURE 54. PERCENT OF YOUTH (AGE 12-17 YEARS) WHO ENGAGED IN PHYSICAL ACTIVITY FOR AT LEAST 20 MINUTES PER DAY, BY NUMBER OF DAYS PER WEEK, CONNECTICUT, 2011-2012

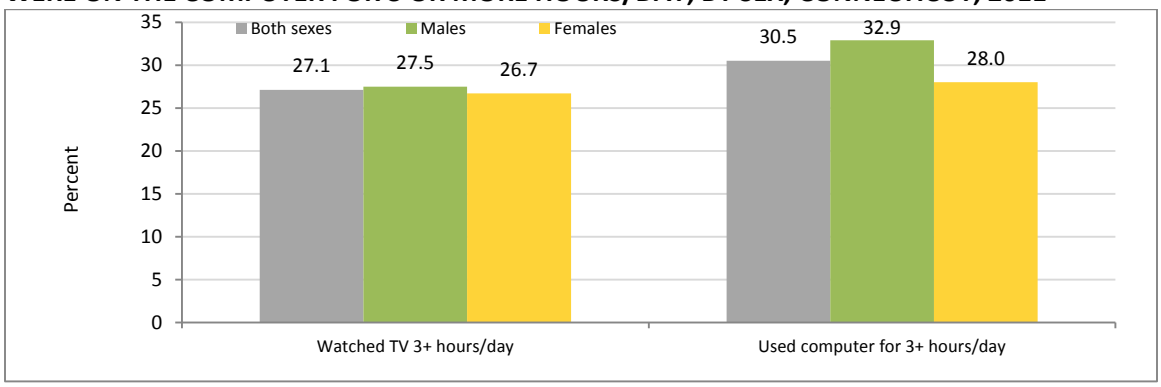


Source: National Survey of Children's Health, 2011-2012.

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. 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 (Figure 55).

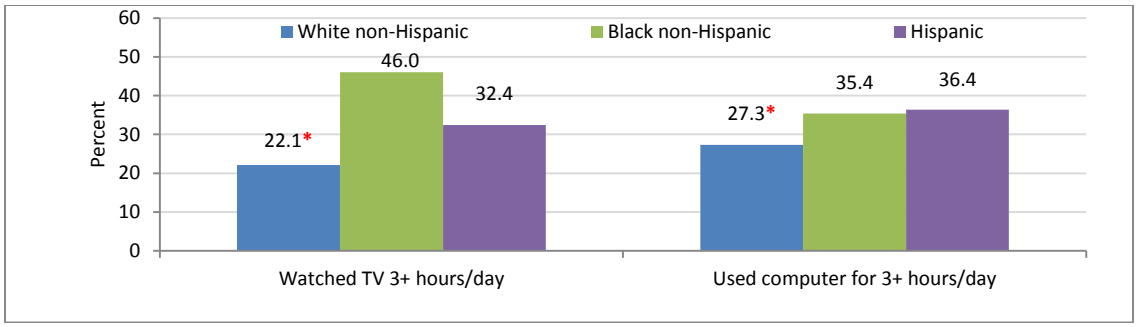
FIGURE 55. PERCENT OF STUDENTS (GRADES 9-12) WHO WATCHED TV, OR PLAYED VIDEO GAMES OR WERE ON THE COMPUTER FOR 3 OR MORE HOURS/DAY, BY SEX, CONNECTICUT, 2011



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

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 (Figure 56).

FIGURE 56. 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

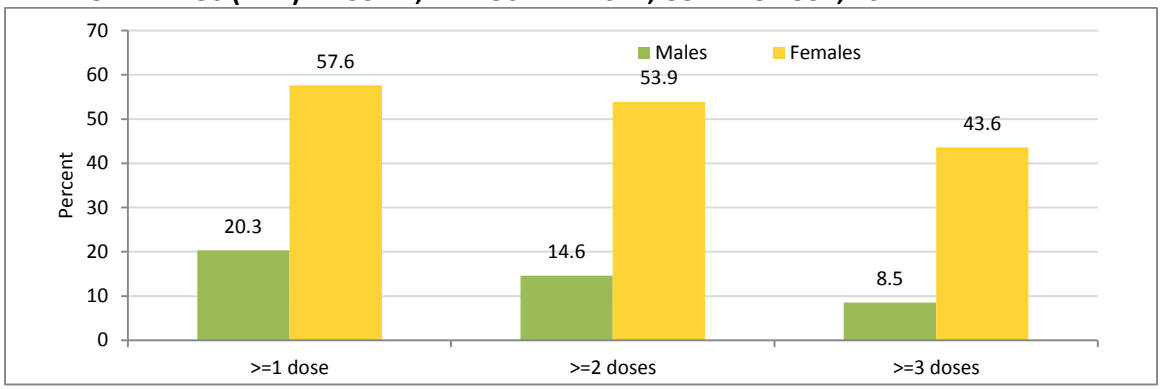


Note: * Indicates significantly greater proportion of black non-Hispanic and Hispanic students who watched TV or used computer for 3+ hours/day relative to white non-Hispanic students ($p<0.05$).
Source: Connecticut School Health Survey (CSHS), 2011.

Immunizations

In 2012, 57.6% of females 13 to 17 years of age and 20.3% of males 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 does of the vaccine (Figure 57).

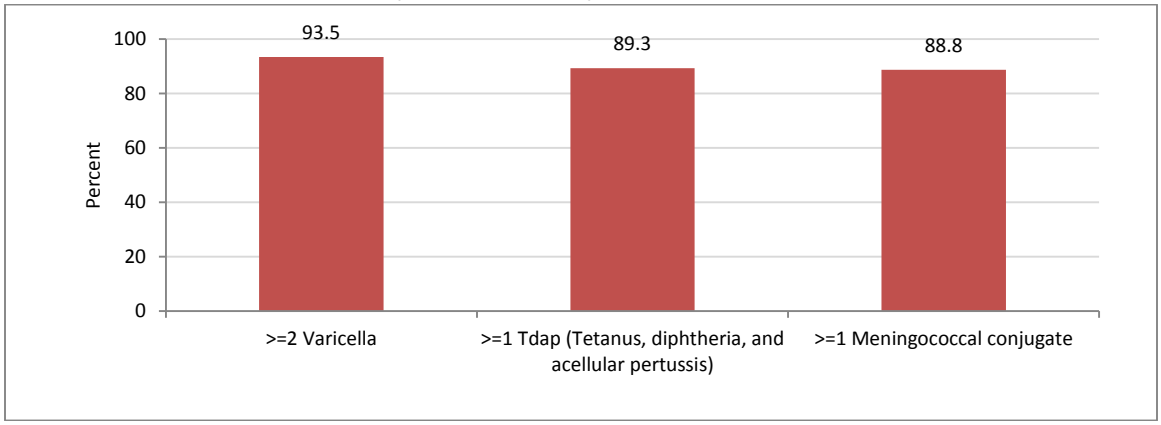
FIGURE 57. PERCENT OF PERSONS 13 TO 17 YEARS OF AGE WHO HAVE RECEIVED THE HUMAN PAPILLOMAVIRUS (HPV) VACCINE, BY DOSE AND SEX, CONNECTICUT, 2012



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.

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 (Figure 58).

FIGURE 58. PERCENT OF ADOLESCENTS (13 TO 17 YEARS OF AGE) WHO COMPLETED VARICELLA, TDAP, OR MENINGOCOCCAL VACCINES, CONNECTICUT, 2012

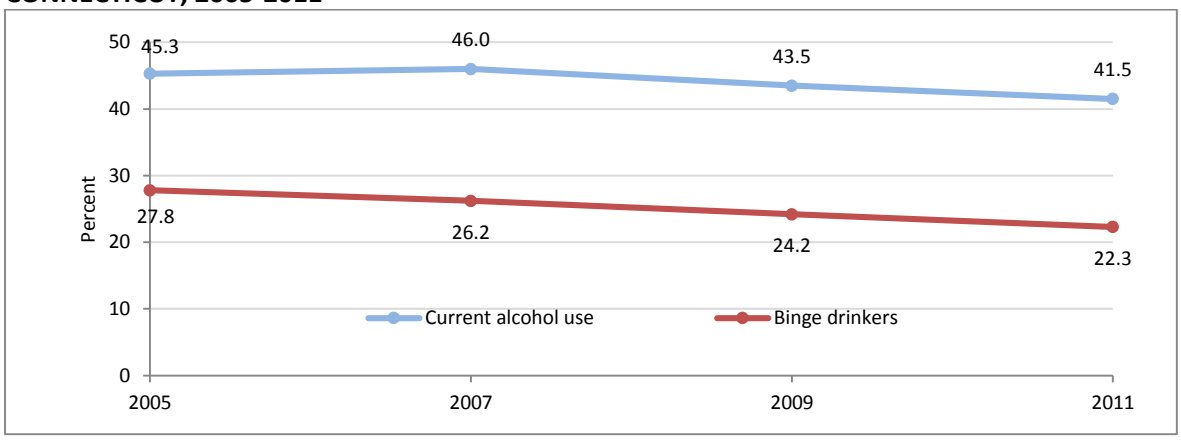


Source: National and State Vaccination Coverage among Adolescents Aged 13 to 17 Years: United States, 2012. *Morbidity and Mortality Weekly Report* (*MMWR*) 2013; 62(34): 685-693, Table 3.

Alcohol and Substance Use and Abuse

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 (Figure 59).

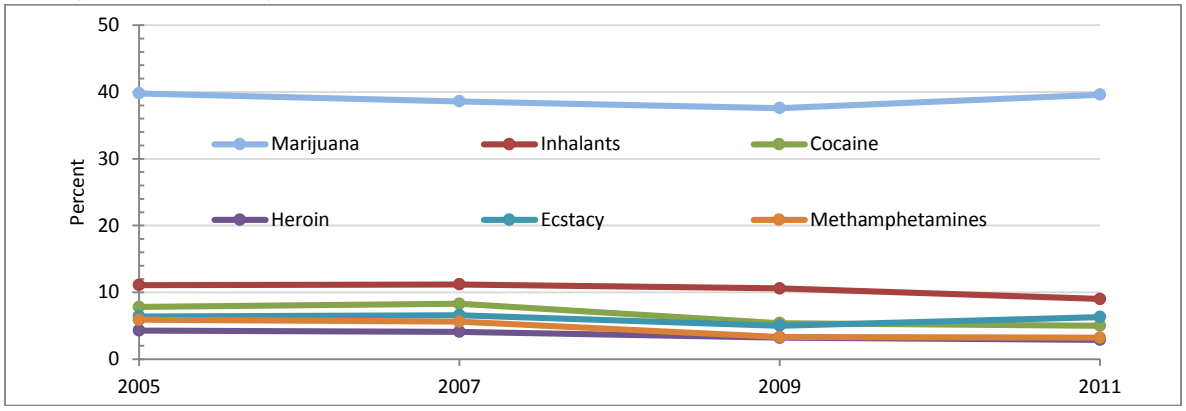
FIGURE 59. CURRENT ALCOHOL USE AND BINGE DRINKING AMONG STUDENTS (GRADES 9-12), CONNECTICUT, 2005-2011



Source: Connecticut School Health Survey (CSHS), 2005-2011.

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 linear 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 (Figure 60).

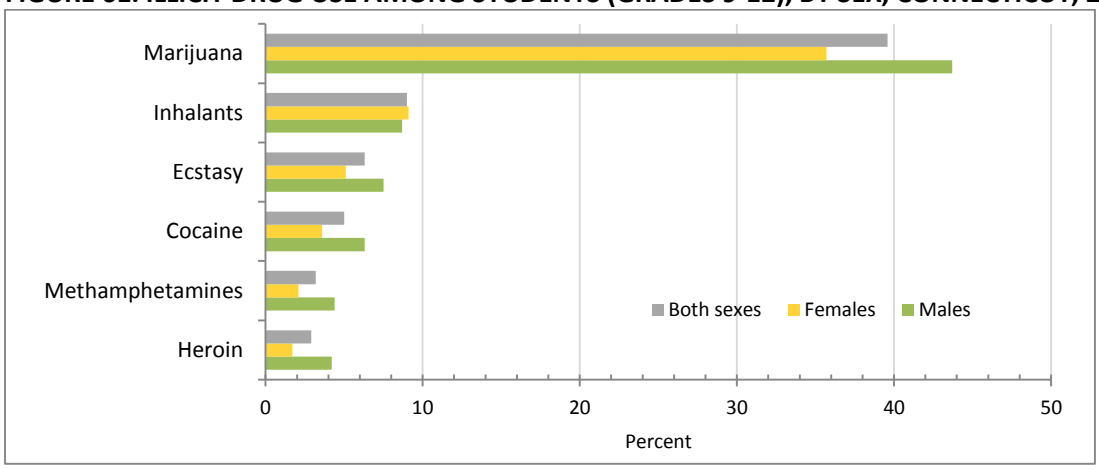
FIGURE 60. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE EVER USED ILLICIT DRUGS, BY TYPE OF DRUG, CONNECTICUT, 2005-2011



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

A greater proportion of male students have ever used marijuana, ecstasy, cocaine, methamphetamines, and heroin as compared to female youth. Fully 22% more male students used marijuana than female students (Figure 61). 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.

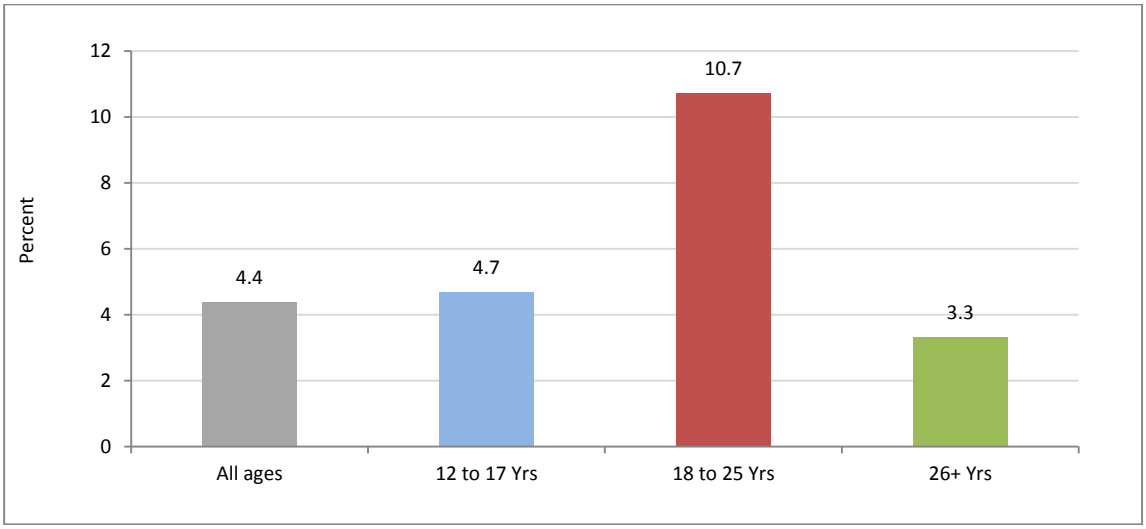
FIGURE 61. ILLICIT DRUG USE AMONG STUDENTS (GRADES 9-12), BY SEX, CONNECTICUT, 2011



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

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. 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 (Figure 62).

FIGURE 62. NONMEDICAL USE OF PAIN RELIEVERS IN PAST YEAR, BY AGE GROUP, CONNECTICUT, 2010-2011

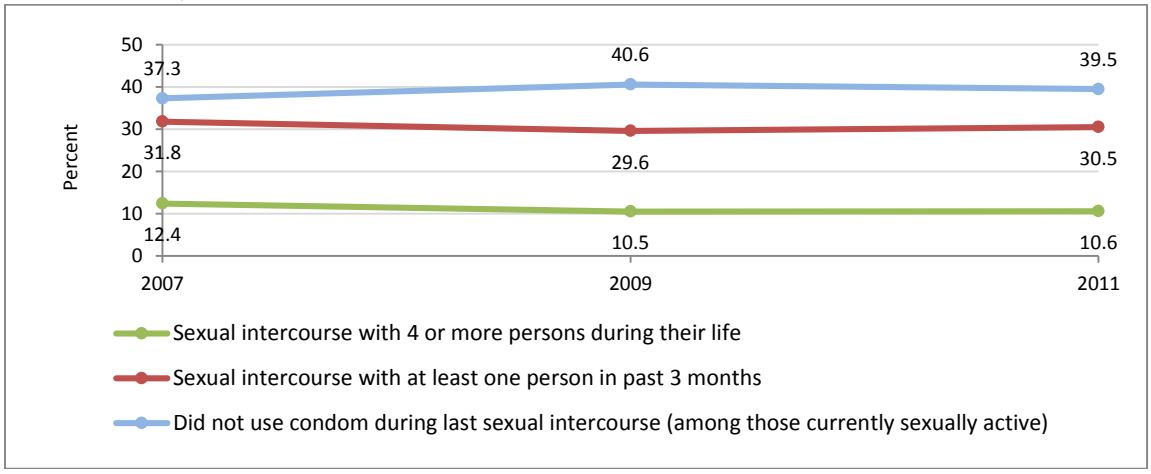


Source: Substance Abuse and Mental Health Services Administration (SAMHSA), Survey on Drug Use and Health Model-Based Estimates, 2010-2011.

Sexual Behaviors

From 2007 to 2011, there was not a statistically significant change in the percent of students in grades 9-12 who reported that they had 4 or more sexual partners over their lifetime. In 2011, 10.6% of students reported that they had sexual intercourse with 4 or more persons during their life. In 2011, 30.5% of students in grades 9-12 reported that they had sexual intercourse with at least one person in the past 3 months. From 2007 to 2011, there was not a significant change in the proportion of students in grades 9-12 who did not use a condom during last sexual intercourse. In 2011, 39.5% of students in grades 9-12 reported that they did not use a condom during last sexual intercourse (Figure 63).

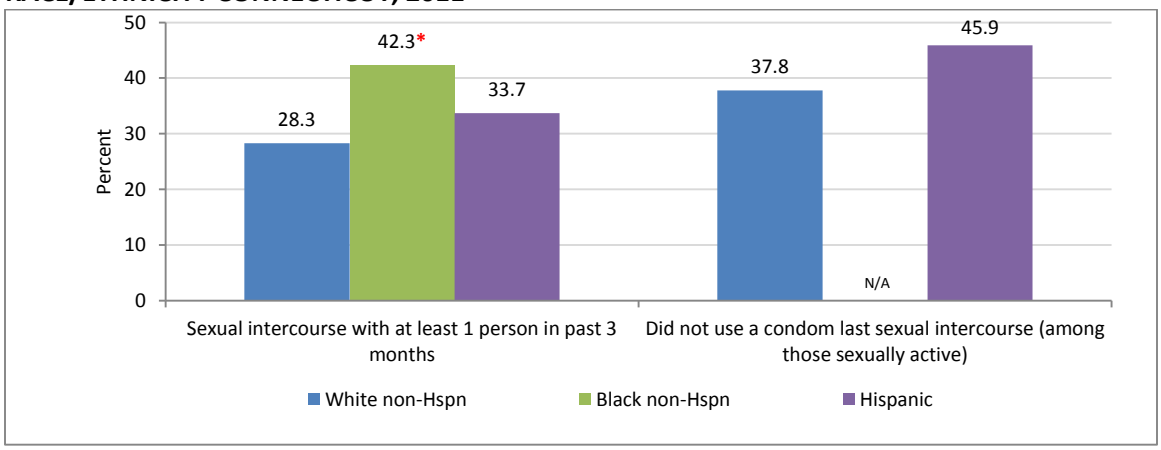
FIGURE 63. PREVALENCE OF SEXUAL RISK BEHAVIORS AMONG STUDENTS (GRADES 9-12), CONNECTICUT, 2007-2011



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

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 (Figure 64).

FIGURE 64. PREVALENCE OF SEXUAL RISK BEHAVIORS AMONG STUDENTS (GRADES 9-12), BY RACE/ETHNICITY CONNECTICUT, 2011

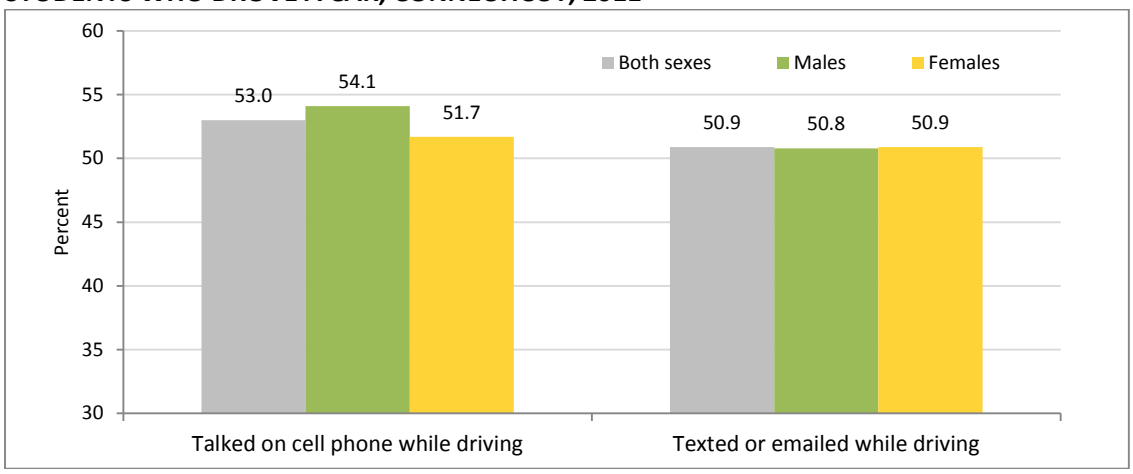


Note: N/A indicates data not available. All racial groups are non-Hispanic. * Indicates significant difference between black non-Hispanic and white non-Hispanic ($p<0.05$).
Source: Connecticut School Health Survey (CSHS), 2007-2011.

Unintentional Injury

On one or more of the 30 days preceding the survey, 54.1% of male students in grades 9-12 and 51.7% of female students in grades 9-12 who drive a car reported that they talked on a cell phone while they were driving. Fully 50.8% of male students and 50.9% of female students who drove a car reported that they texted or emailed while driving (Figure 65). There were no differences in unsafe driving behaviors among student by sex, race, ethnicity. However, talking on the phone while driving and texting or emailing while driving were significantly higher among drivers in grades 11 and 12 as compared to drivers in grade 10. Additionally, there were 10.5 deaths due to motor vehicle accidents per 100,000 for youth 14 years of age or younger.

FIGURE 65. PERCENT OF STUDENTS (GRADES 9-12) WHO ENGAGED IN UNSAFE DRIVING AMONG STUDENTS WHO DROVE A CAR, CONNECTICUT, 2011

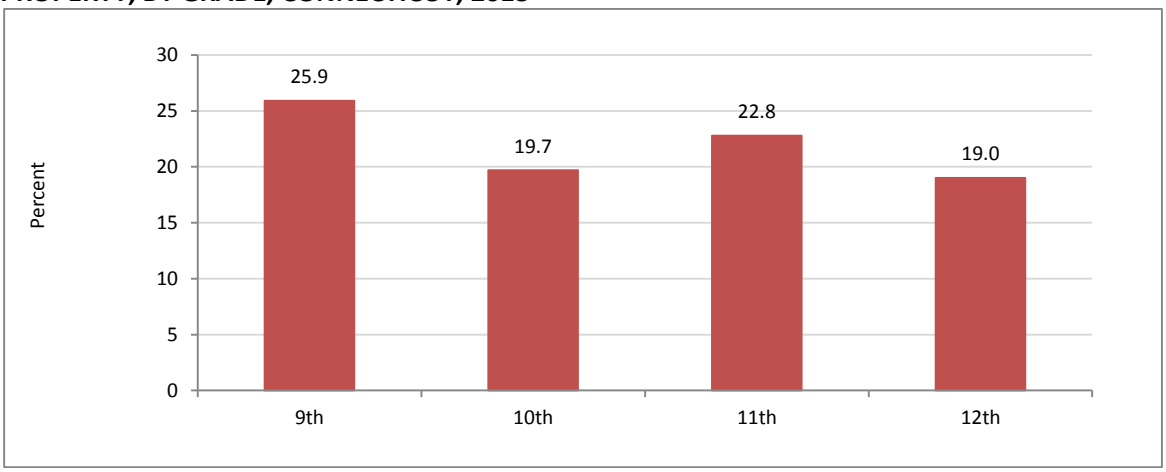


Source: Connecticut School Health Survey (CSHS), 2011.

Bullying

The percent of high school students who reported ever been bullied on school property ranged from 25.9% of 9th grade students to 19.0% of students in 12th grade (Figure 66).

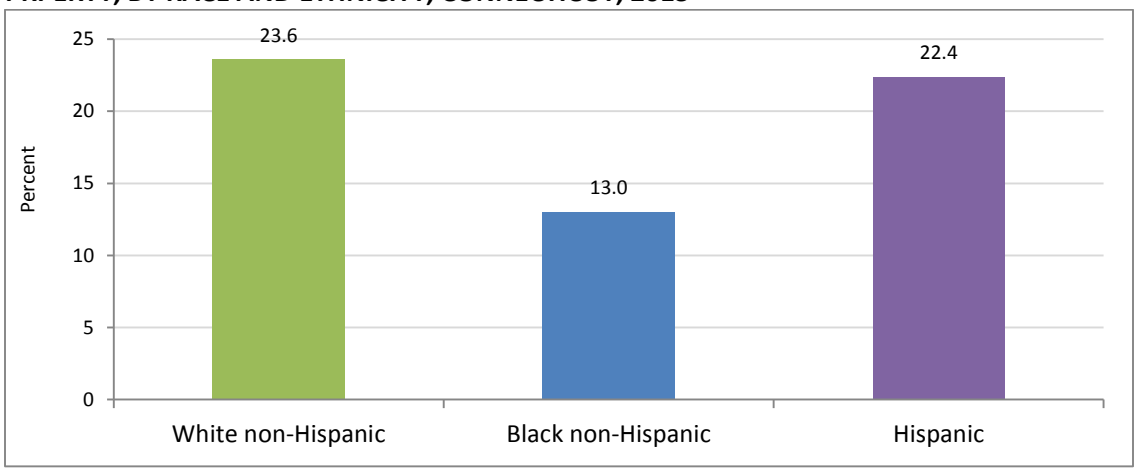
FIGURE 66. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE EVER BEEN BULLIED ON SCHOOL PROPERTY, BY GRADE, CONNECTICUT, 2013



Source: Connecticut School Health Survey (CSHS), 2013.

The percent of high school students who reported ever experiencing bullying on school property ranged from 13.0% of black non-Hispanic students to 23.6 of white non-Hispanic students and 22.4% of Hispanic students (Figure 67).

FIGURE 67. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE EVER BEEN BULLIED ON SCHOOL PRPERTY, BY RACE AND ETHNICITY, CONNECTICUT, 2013

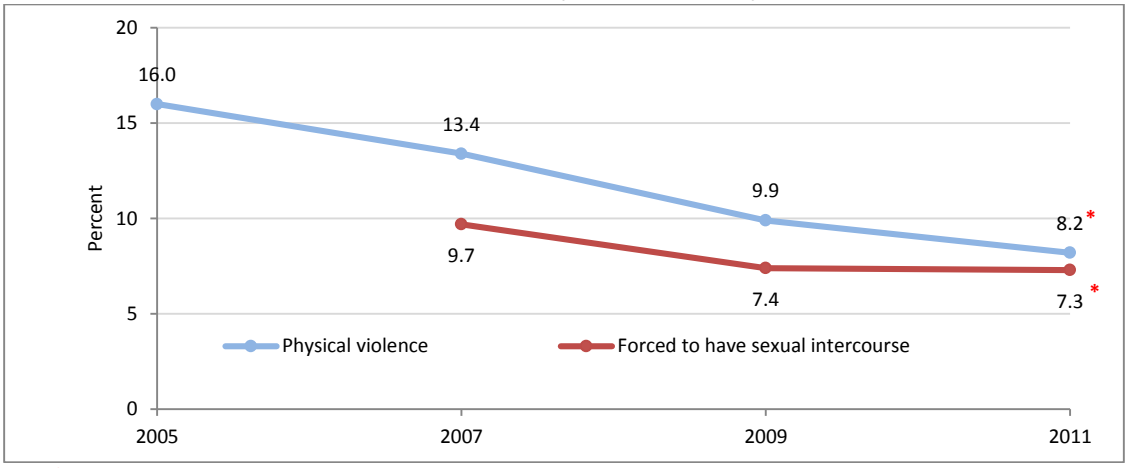


Source: Connecticut School Health Survey (CSHS), 2013.

Physical and Sexual Violence

The prevalence of physical dating violence among students in grades 9-12 has decreased significantly from 2005 to 2011, from 16.0% to 8.2%. From 2007 to 2011, a significant linear decrease (from 9.7% to 7.3%) occurred in the percent of students who were ever physically forced to have sexual intercourse when they did not want to (Figure 68).

FIGURE 68. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE BEEN PHYSICALLY ABUSED OR WERE EVER FORCED TO HAVE SEXUAL INTERCOURSE, CONNECTICUT, 2005-2011

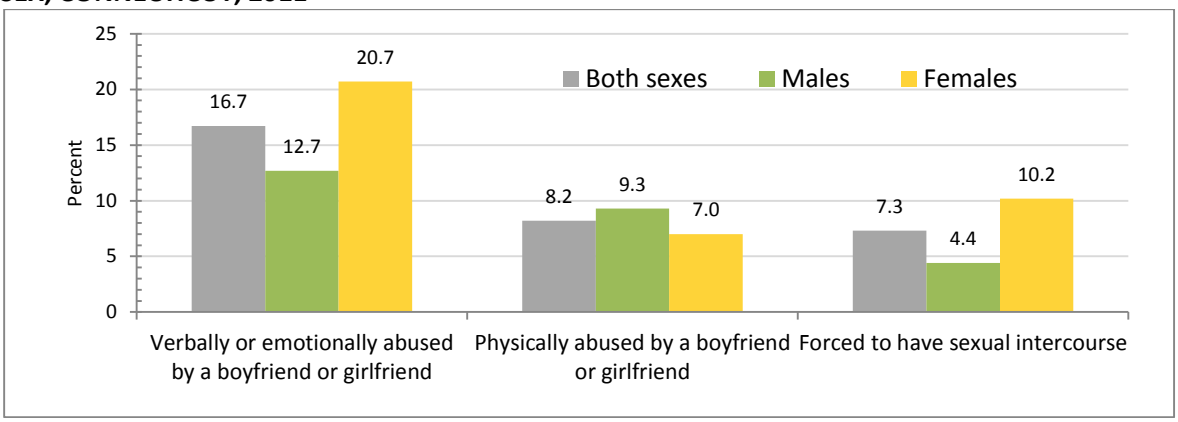


Note: * Indicates significant linear decrease over time for physical violence and forced sexual intercourse (p<0.05)
Source: Connecticut School Health Survey (CSHS), 2005-2011.

In 2011, 16.7% of students in grades 9-12 reported that they experienced verbal or emotional abuse from a boyfriend or girlfriend. Fully 8.2% reported an experience of physical abuse from a boyfriend or girlfriend and 7.3% were ever forced to have sexual intercourse. In 2011, the prevalence of students in grades 9-12 who reported ever being verbally or emotionally abused by their boyfriend or girlfriend was

significantly higher among female (20.7%) than among male (12.7%) students. In 2011, compared to their male counterparts (4.4%), a greater proportion of female students (10.2%) reported ever being physically forced to have sexual intercourse (Figure 69). Hispanic students were more likely to report ever being forced to have sexual intercourse than white non-Hispanic students.

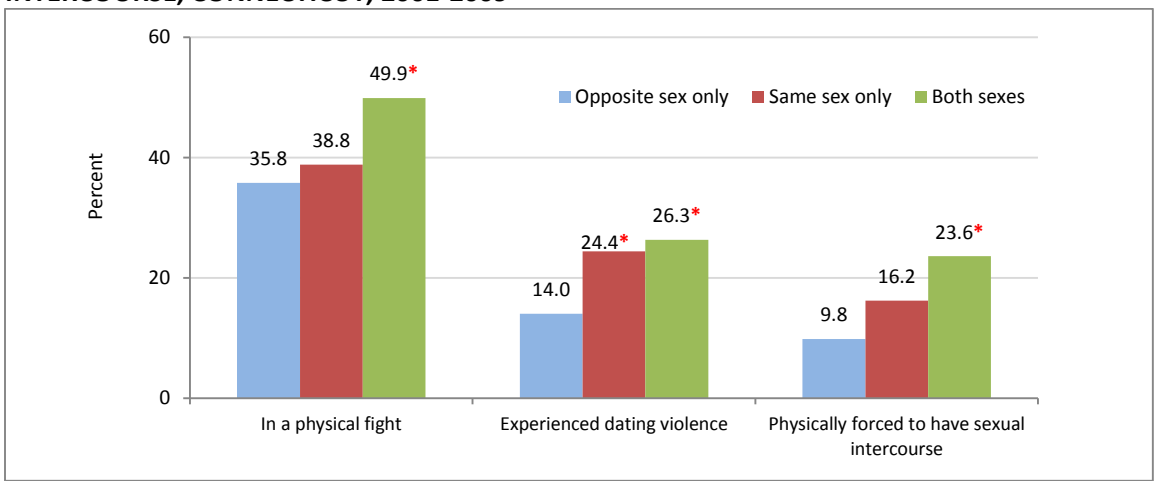
FIGURE 69. PERCENT OF STUDENTS (GRADES 9-12) WHO HAVE BEEN VERBALLY OR PHYSICALLY ABUSED BY A BOYFRIEND OR GIRLFRIEND OR WERE EVER FORCED TO HAVE SEXUAL INTERCOURSE, BY SEX, CONNECTICUT, 2011



Source: Connecticut School Health Survey (CSHS) 2011.

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 larger 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 (Figure 70).

FIGURE 70. 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 INTERCOURSE, CONNECTICUT, 2001-2009

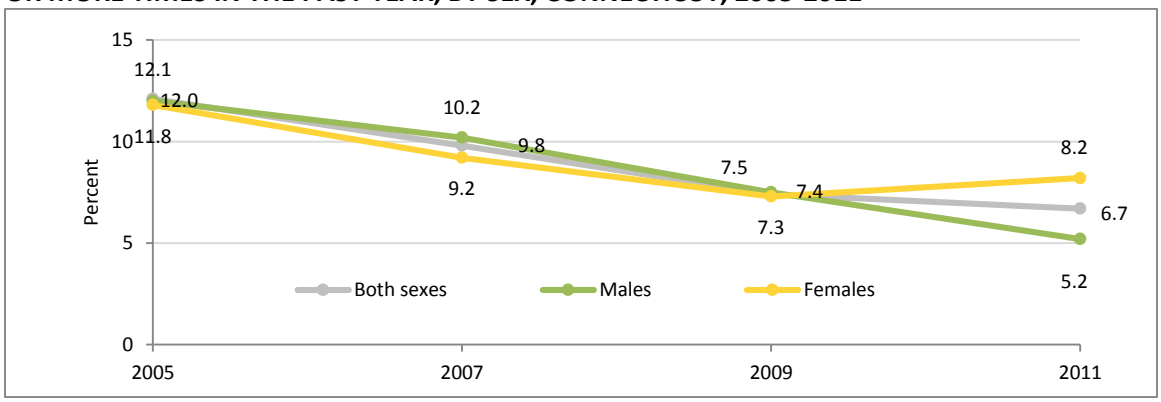


Note: * Indicates significantly higher prevalence than those with opposite sex only sexual contact ($p<0.05$).
Source: *Morbidity and Mortality Weekly Report (MWR)* 2011, Sexual Identity, Sex of Sexual Contacts, and Health-Risk Behavior among Students in Grades 9-12. Tables 11, 13, 14.

Suicide

While four time points may not constitute an epidemiologic trend, the proportion of students in grades 9-12 who reported in the Connecticut School Health Survey-Youth Behavioral Component that they attempted suicide 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. However, in 2011, female students (8.2%) were more likely than male students (5.2%) to report having attempted suicide one or more times in the past year (Figure 71).

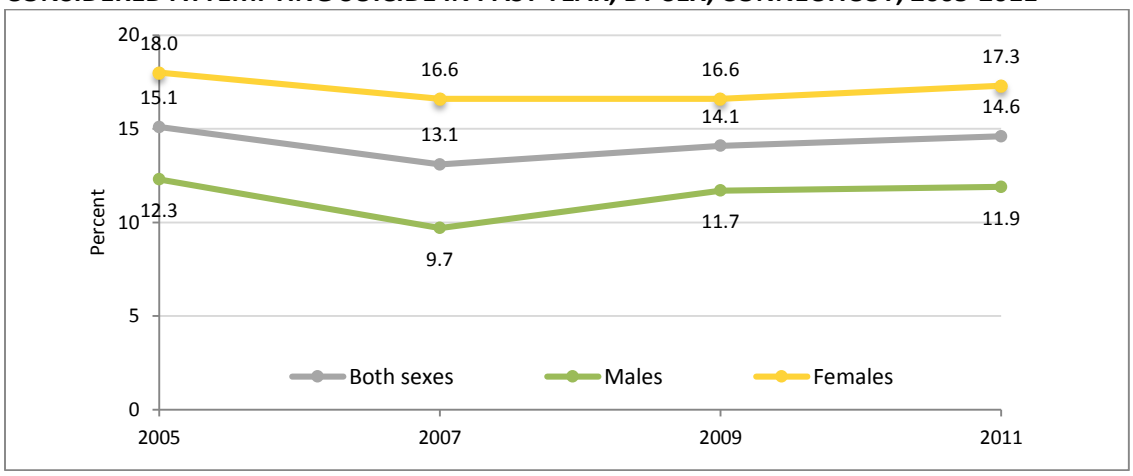
FIGURE 71. PERCENT OF STUDENTS (GRADES 9-12) WHO REPORT THAT THEY ATTEMPTED SUICIDE ONE OR MORE TIMES IN THE PAST YEAR, BY SEX, CONNECTICUT, 2005-2011



Source: Connecticut School Health Survey (CSHS), 2005-2011.

In 2011, 14.6% of students in grades 9-12 seriously considered attempting suicide during the 12 months preceding the survey. In 2011, 17.3% of female students reported that they seriously considered suicide relative to 11.9% of male students (Figure 72).

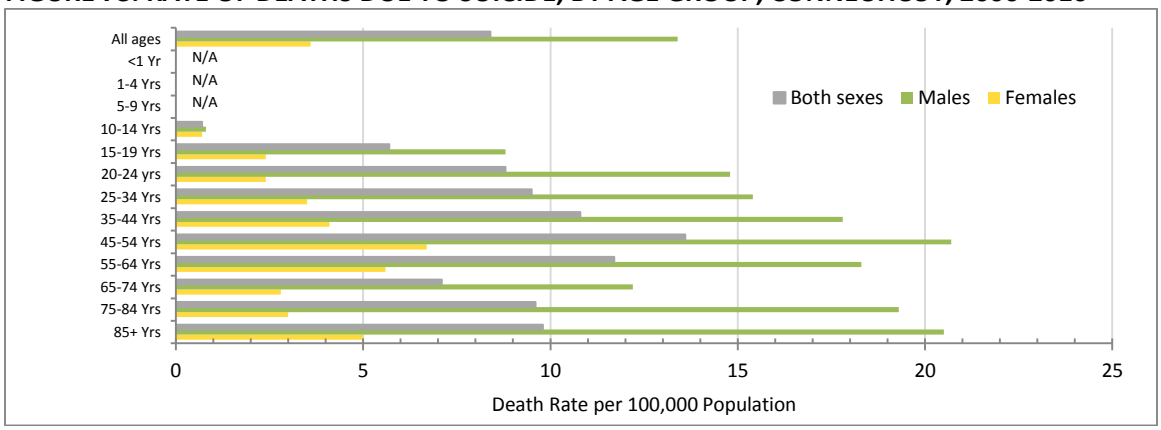
FIGURE 72. PERCENT OF STUDENTS (GRADES 9-12) WHO REPORTED THAT THEY SERIOUSLY CONSIDERED ATTEMPTING SUICIDE IN PAST YEAR, BY SEX, CONNECTICUT, 2005-2011



Source: Connecticut School Health Survey (CSHS), 2005-2011.

As shown in Figure 73, over the 2006 to 2010 period, 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).

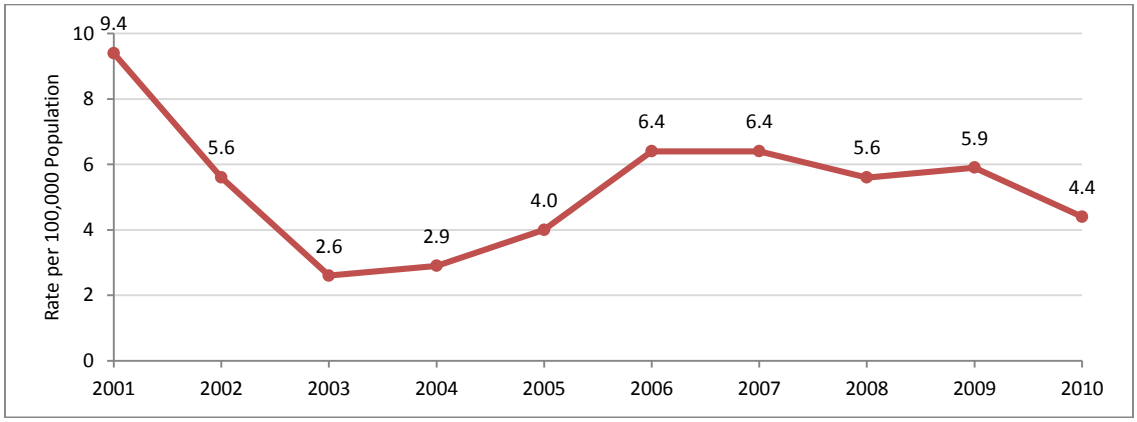
FIGURE 73. RATE OF DEATHS DUE TO SUICIDE, BY AGE GROUP, CONNECTICUT, 2006-2010



Note: N/A indicates data not available.
Source: Connecticut Department of Public Health.

As shown in Figure 74, the rate of suicide deaths among youth age 15 to 19 years ranged from 9.4 per 100,000 population in 2001 to 4.4 per 100,000 population in 2010.

FIGURE 74. RATE OF SUICIDE DEATHS AMONG YOUTH 15 TO 19 YEARS OF AGE, CONNECTICUT, 2001-2010

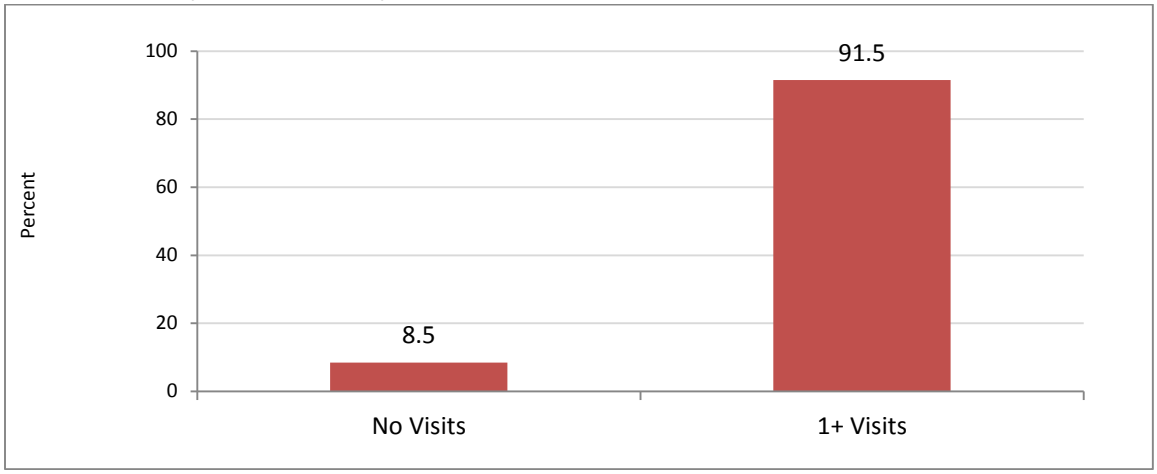


Source: Connecticut Department of Public Health, Mortality Tables, 2001-2010.

Adolescent Well-Visit

In 2011-2012, 91.5% of adolescents saw a doctor, nurse, or other health care provider for preventive medical services in the past year (Figure 75).

FIGURE 75. PERCENT OF ADOLESCENTS (AGE 12-17 YEARS) WHO RECEIVED PREVENTIVE SERVICES IN THE PAST YEAR, CONNECTICUT, 2011



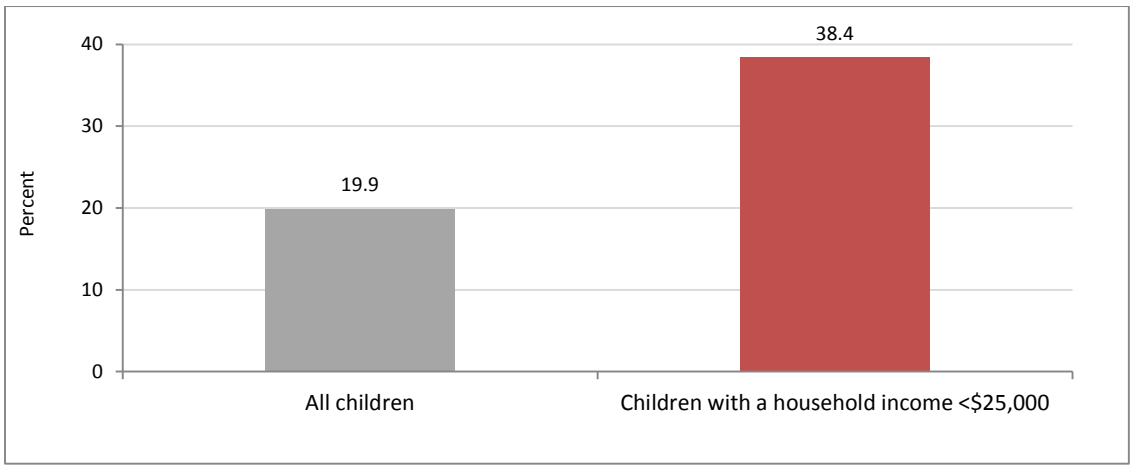
Source: National Survey of Children's Health, 2011-2012.

Cross-Cutting or Life Course Issues

Overweight and Obesity

In 2008-2010, combined, almost one-fifth (19.9%) of children 5 to 12 years of age in Connecticut were obese (Figure 76). 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%).

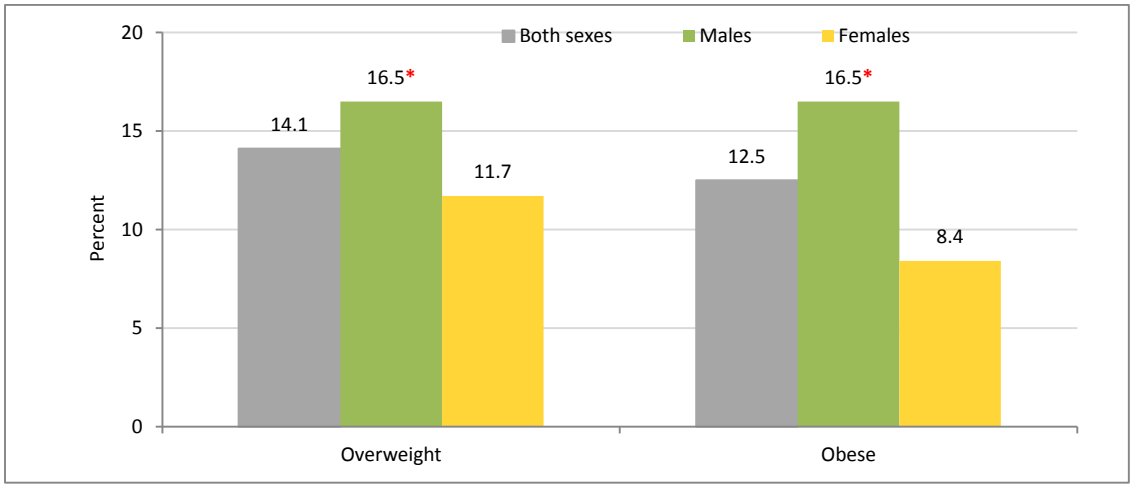
FIGURE 76. PERCENT OF CHILDREN (5-12 YEARS OF AGE), WHO WERE OBESE, CONNECTICUT, 2008-2010



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

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 (Figure 77). 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.

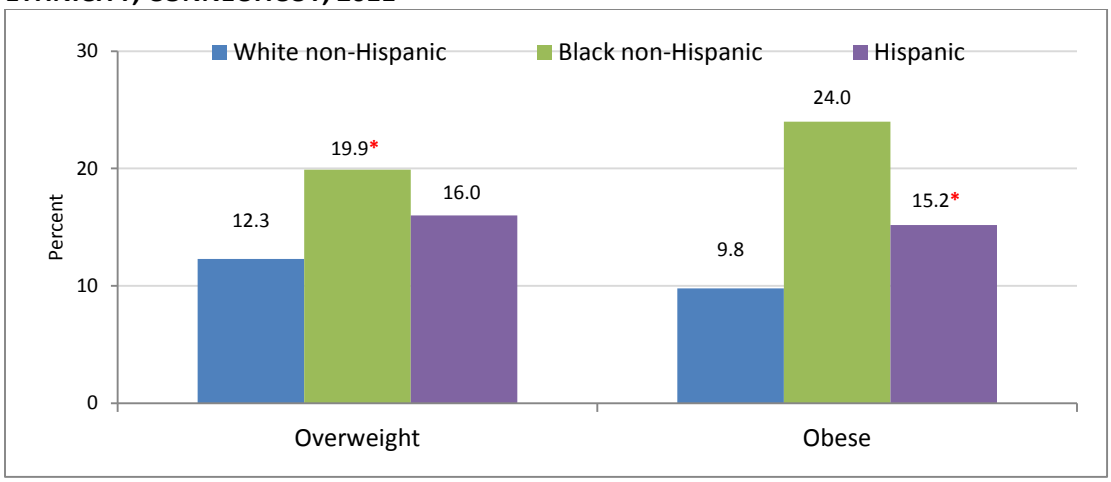
FIGURE 77. PERCENT OF OVERWEIGHT AND OBESE STUDENTS (GRADES 9-12), BY SEX, CONNECTICUT, 2011



Note: * Indicates significantly higher prevalence among males relative to females (p<0.05).
Source: Connecticut School Health Survey (CSHS), 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 (Figure 78).

FIGURE 78. PERCENT OF OVERWEIGHT AND OBESE STUDENTS (GRADES 9-12), BY RACE AND ETHNICITY, CONNECTICUT, 2011



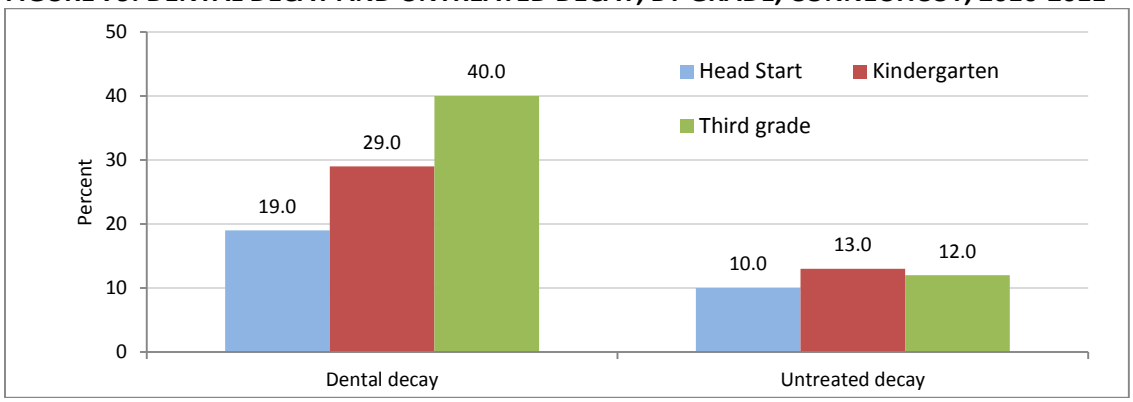
Note: * Indicates significantly higher prevalence of overweight among black non-Hispanic relative to white non-Hispanic students and a higher prevalence of obesity among Hispanic compared to white non-Hispanic students ($p<0.05$).
Source: Connecticut School Health Survey (CSHS), 2011.

Oral Health

In 2010-2011, 50.9% of women had a dental visit during pregnancy.

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 (Figure 79).

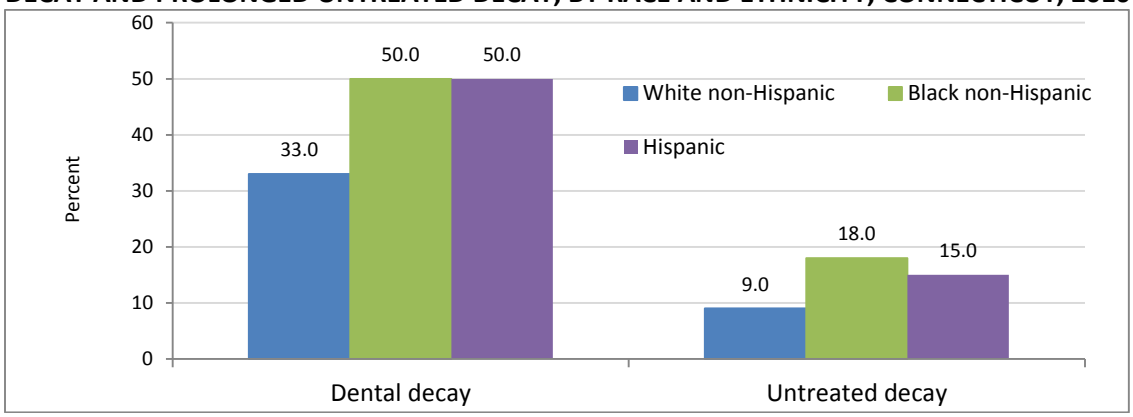
FIGURE 79. DENTAL DECAY AND UNTREATED DECAY, BY GRADE, CONNECTICUT, 2010-2011



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

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 3rd 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 (Figure 80).

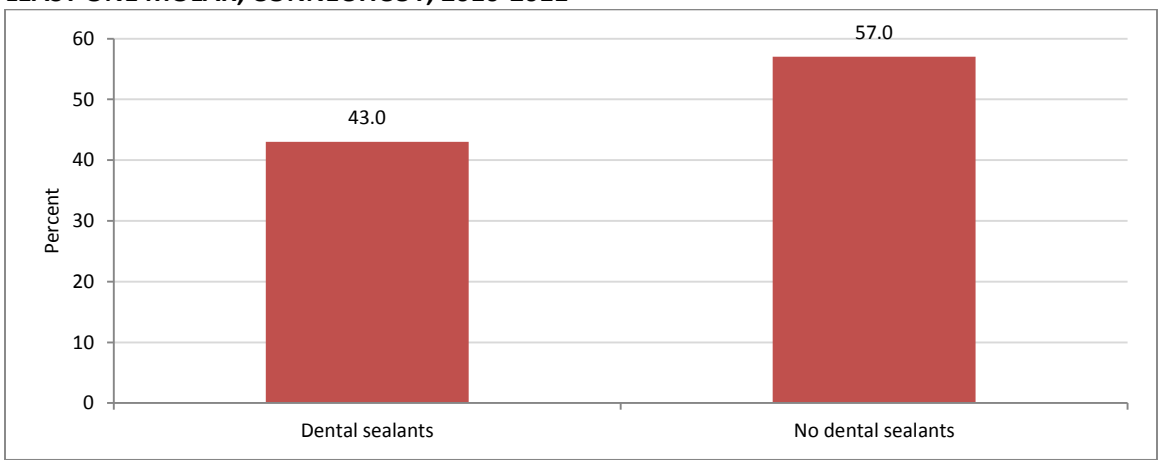
FIGURE 80. PERCENT OF CHILDREN (KINDERGARTEN AND 3RD GRADE) WHO EXPERIENCE DENTAL DECAY AND PROLONGED UNTREATED DECAY, BY RACE AND ETHNICITY, CONNECTICUT, 2010-2011



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

In 2010 and 2011, 43.0% of third grade children in Connecticut had received protective sealants on at least one molar (Figure 81).

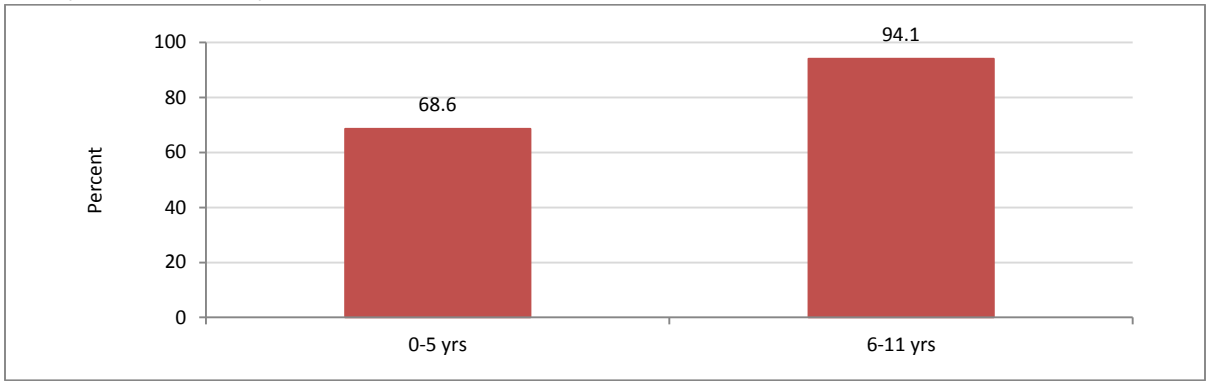
FIGURE 81. PERCENT OF THIRD GRADE CHILDREN WHO HAVE RECEIVED PROTECTIVE SEALANTS ON AT LEAST ONE MOLAR, CONNECTICUT, 2010-2011



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

In 2011-2012, 68.6% of children up to age 5, and 94.1% of youth 6 to 11 years of age received preventive dental care or cleanings in the past year (Figure 82).

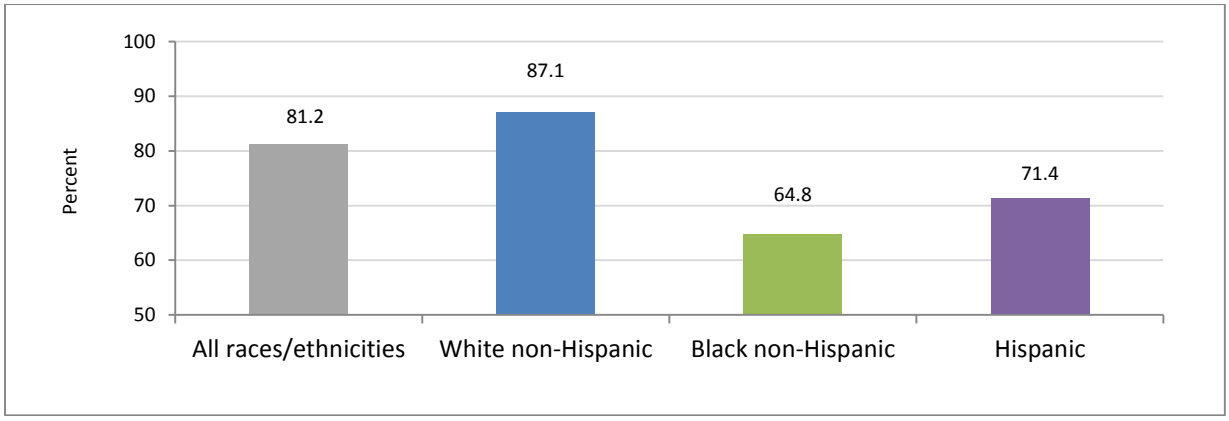
FIGURE 82. PERCENT OF INFANTS AND CHILDREN WHO HAD A PREVENTIVE DENTAL VISIT IN THE PAST YEAR, CONNECTICUT, 2011-2012



Source: National Survey Of Children's Health, 2011-2012.

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. 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 (Figure 83).

FIGURE 83. PERCENT OF STUDENTS (GRADES 9-12) WHO SAW A DENTIST IN THE PAST 12 MONTHS, CONNECTICUT 2011

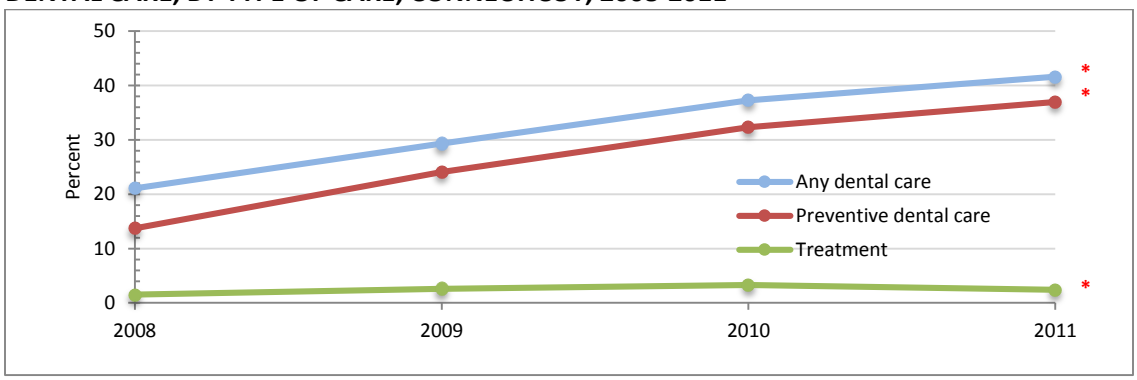


Source: Connecticut School Health Survey, 2011.

Dental Care Utilization among Children

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 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 (Figure 84).

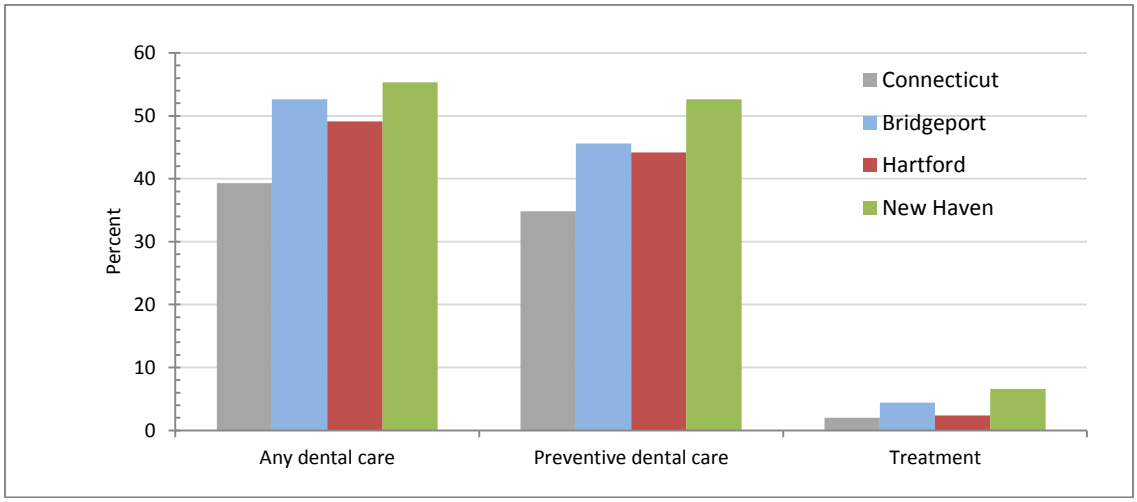
FIGURE 84. PERCENT OF CHILDREN UNDER 3 YEARS OF AGE WITH MEDICAID COVERAGE WHO USED DENTAL CARE, BY TYPE OF CARE, CONNECTICUT, 2008-2011



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.

In 2011, use of any type of dental care among children under 3 with Medicaid or primary care case management ranged from 49.1% in Hartford to 55.3% in New Haven (Figure 85). Use of preventive dental care appeared to be highest among children under 3 in New Haven (52.6%) compared to the towns of Bridgeport (45.6%) and Hartford (44.2%).

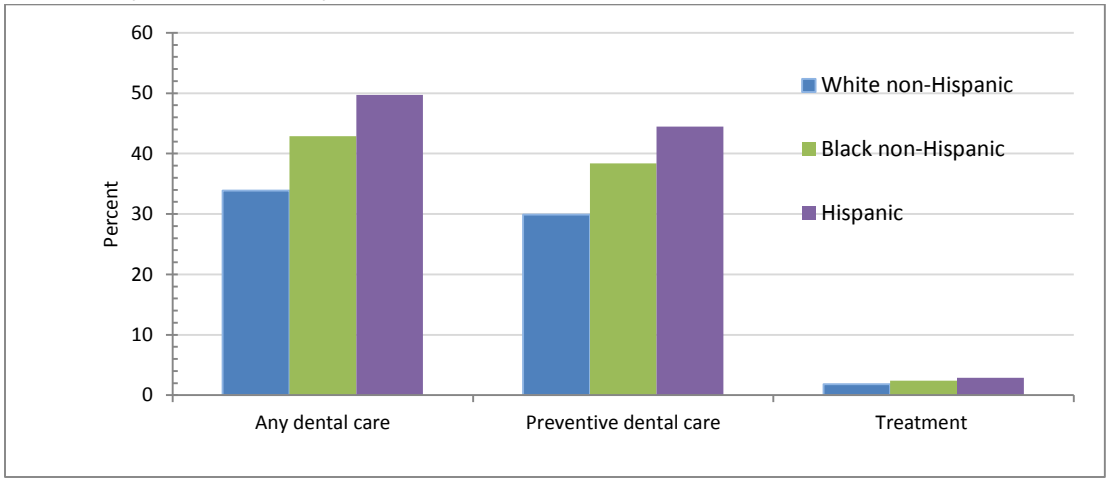
FIGURE 85. PERCENT OF CHILDREN UNDER 3 YEARS OF AGE WITH MEDICAID OR PRIMARY CARE CASE MANAGEMENT WHO USED DENTAL CARE, BY TYPE OF CARE, CONNECTICUT AND ITS LARGEST TOWNS, 2011



Source: Connecticut Voices for Children.

Use of any type of dental care or preventive dental care among children under 3 with Medicaid or primary care case management appeared to be highest for Hispanic children, followed by black non-Hispanic children and white non-Hispanic children (Figure 86).

FIGURE 86. 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

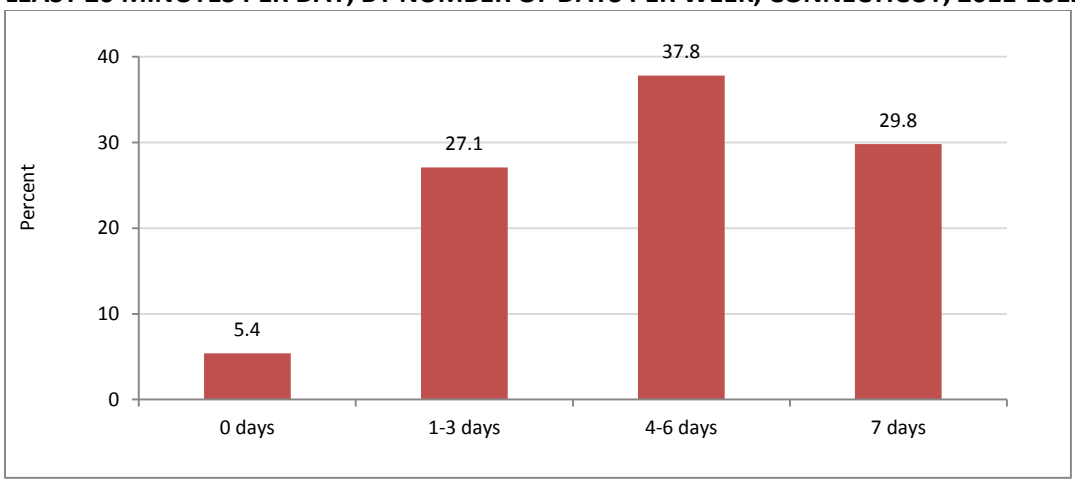


Source: Connecticut Voices for Children.

Physical Activity

In 2011-2012, 94.7% of children aged 6-11 engaged in physical activity that made them sweat or breathe hard for at least 20 minutes on one or more days per week. Fully 27.1% were physically active for 1-3 days per week, 37.8% were active 4-6 days per week, and 29.8% engaged in at least 20 minutes of physical activity every day of the week (Figure 87).

FIGURE 87. PERCENT OF CHILDREN (AGE 6-11 YEARS) WHO ENGAGED IN PHYSICAL ACTIVITY FOR AT LEAST 20 MINUTES PER DAY, BY NUMBER OF DAYS PER WEEK, CONNECTICUT, 2011-2012

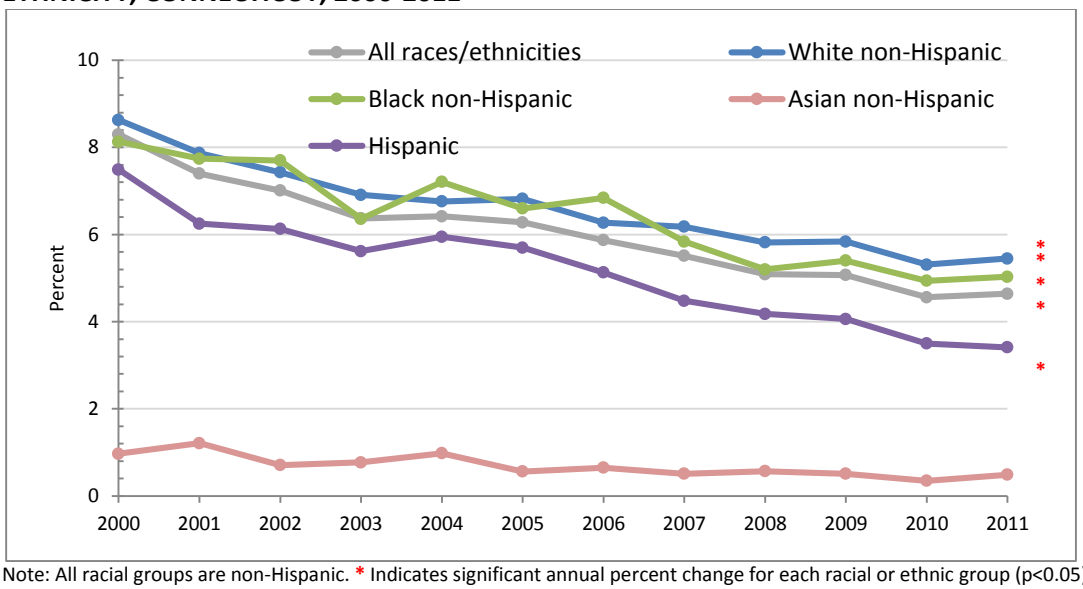


Source: National Survey of Children's Health, 2011-2012.

Smoke and Smoke Exposure among Students

From 2000 to 2011, there was a steady, significant decline by 5.1% annually 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. 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 (Figure 88).

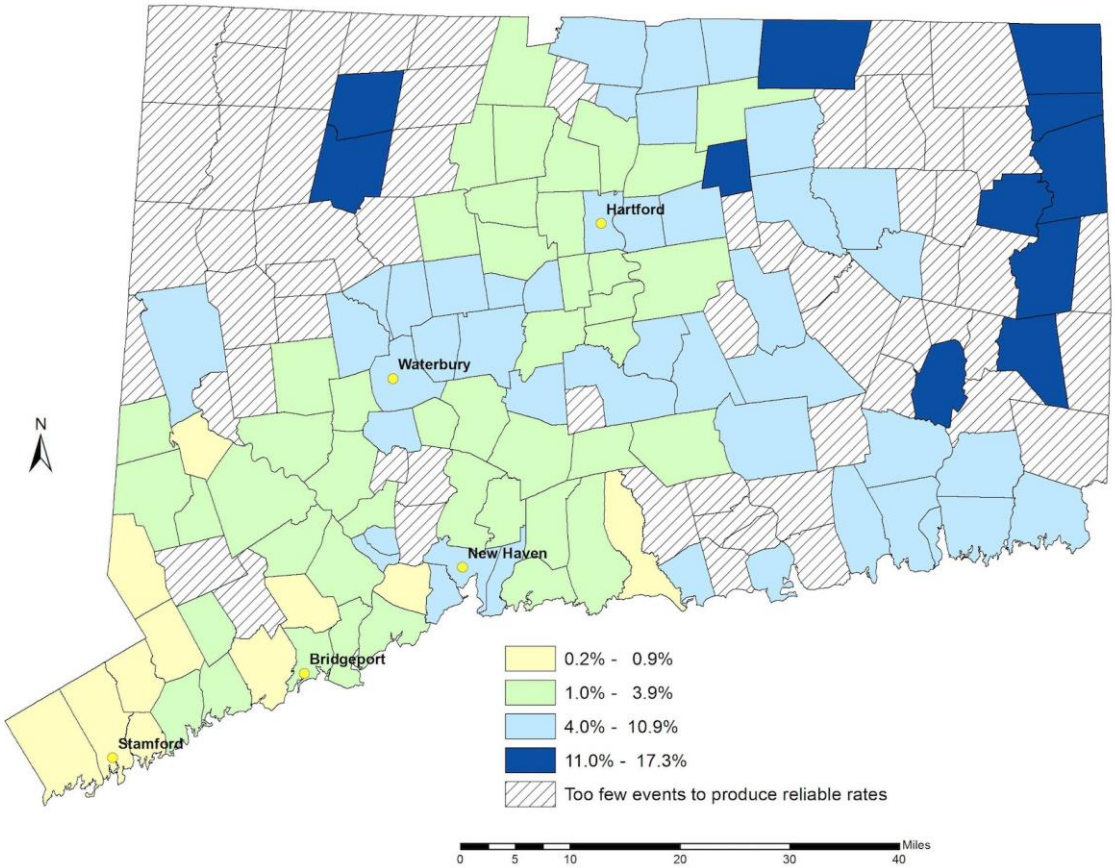
FIGURE 88. PERCENT OF WOMEN WHO USED TOBACCO DURING PREGNANCY, BY RACE AND ETHNICITY, CONNECTICUT, 2000-2011



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.

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 (Figure 89).

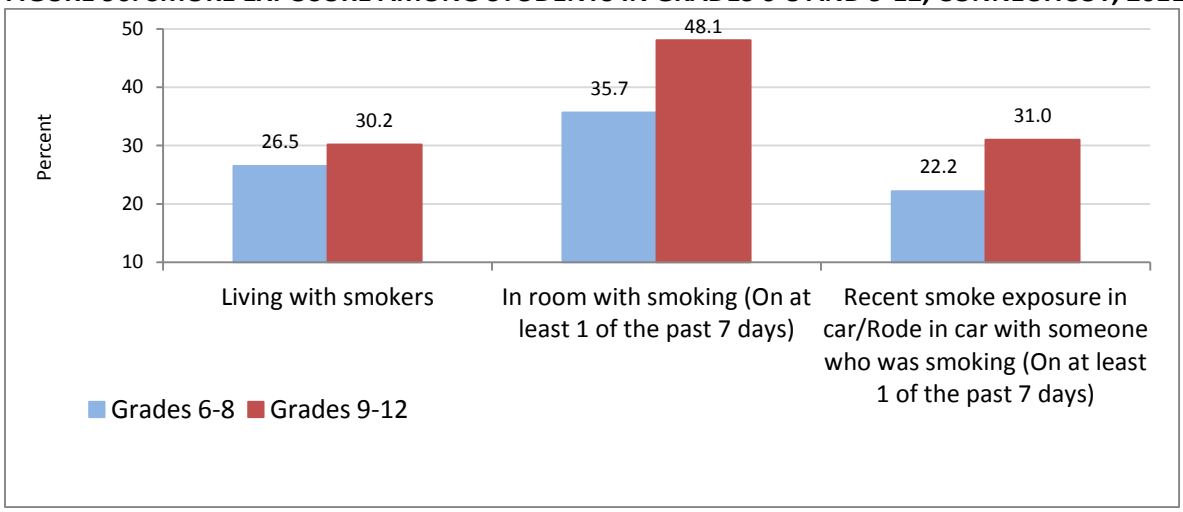
FIGURE 89. PERCENT OF WOMEN WHO REPORT THAT THEY SMOKED TOBACCO DURING PREGNANCY, BY TOWN, CONNECTICUT, 2006-2010



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

Compared to students in grades 6-8, a larger proportion of students in grades 9-12 reported smoke exposure at home, in a room with someone else who smoked, or in a car (Figure 90).

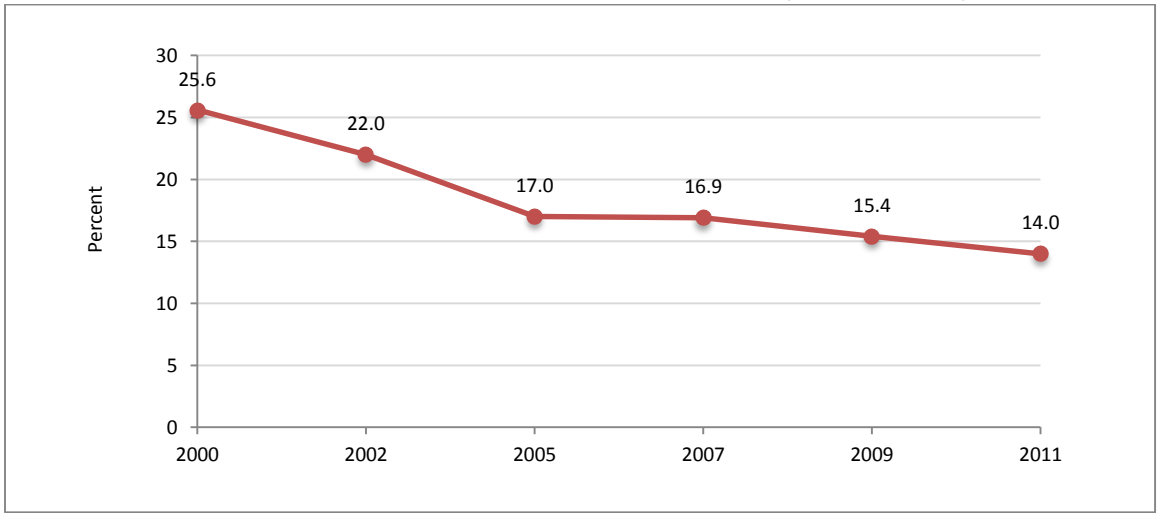
FIGURE 90. SMOKE EXPOSURE AMONG STUDENTS IN GRADES 6-8 AND 9-12, CONNECTICUT, 2011



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

From 2000 to 2011, there was a significant decrease in the percent of students in grades 6-8 (from 9.8% to 2.9%) and grades 9-12 (from 25.6% to 14.0%) who currently smoked cigarettes (Figure 91).

FIGURE 91. PERCENT OF CURRENT SMOKERS AMONG STUDENTS, GRADES 9-12, 2000-2011

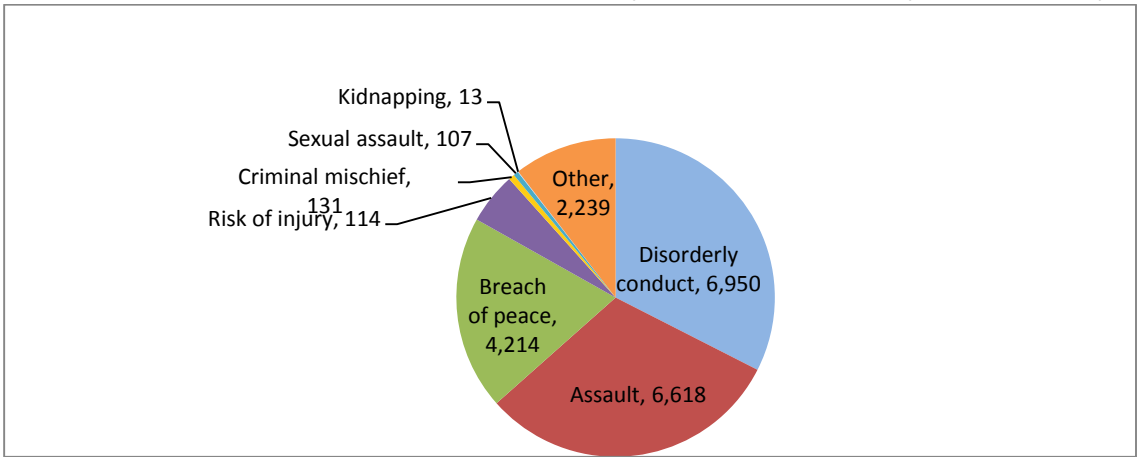


Source: Connecticut School Health Survey (CSHS) Youth Tobacco Component, 2000-2011.

Family Violence and Child Abuse and Neglect

In 2011, there were 21,386 family violence arrests. In 2011, the majority of arrests associated with family violence in Connecticut were due to disorderly conduct, assault, and breach of peace (Figure 92).

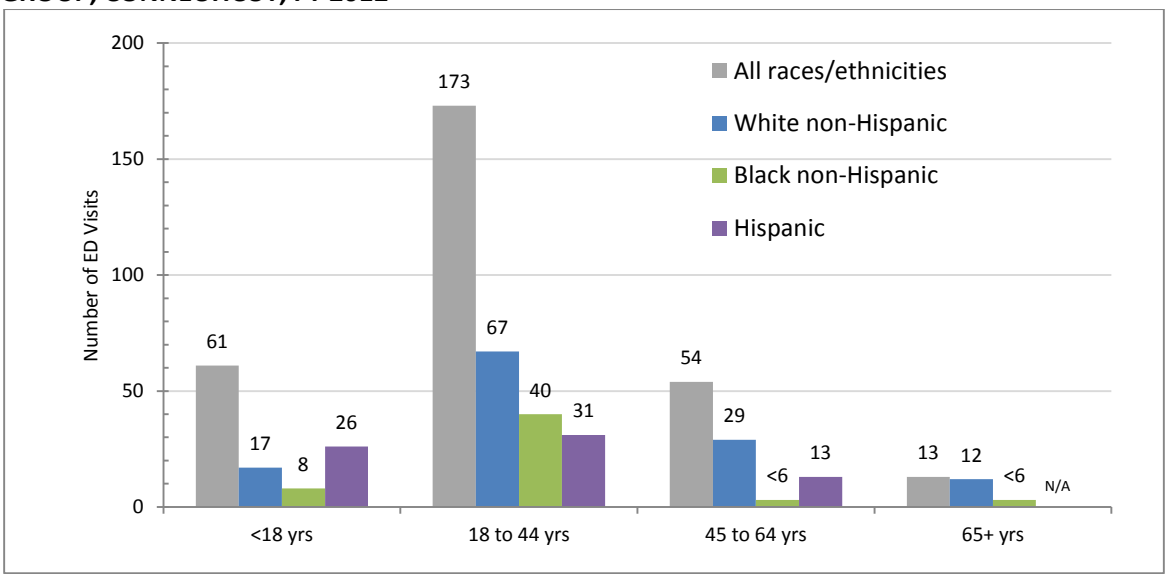
FIGURE 92. NUMBER OF FAMILY VIOLENCE ARRESTS, BY TYPE OF INCIDENT, CONNECTICUT, 2011



Source: State of Connecticut, Department of Emergency Services and Public Protection, Family Violence Arrests Annual Report, 2011.

In FY 2012, the number of ED visits was highest for persons 18 to 44 years of age, particularly for white non-Hispanics (Figure 93).

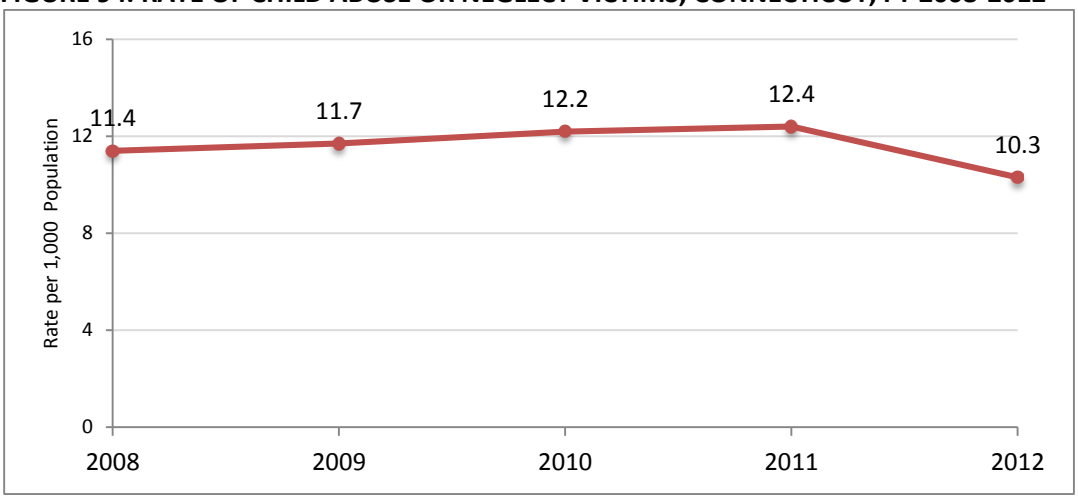
FIGURE 93. NUMBER OF EMERGENCY DEPARTMENT VISITS DUE TO DOMESTIC VIOLENCE, BY AGE GROUP, CONNECTICUT, FY 2012



Source: Connecticut Department of Public Health, OHCA.

In fiscal year 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 fiscal year 2008 to 10.3 per 1,000 children in fiscal year 2012 (Figure 94).

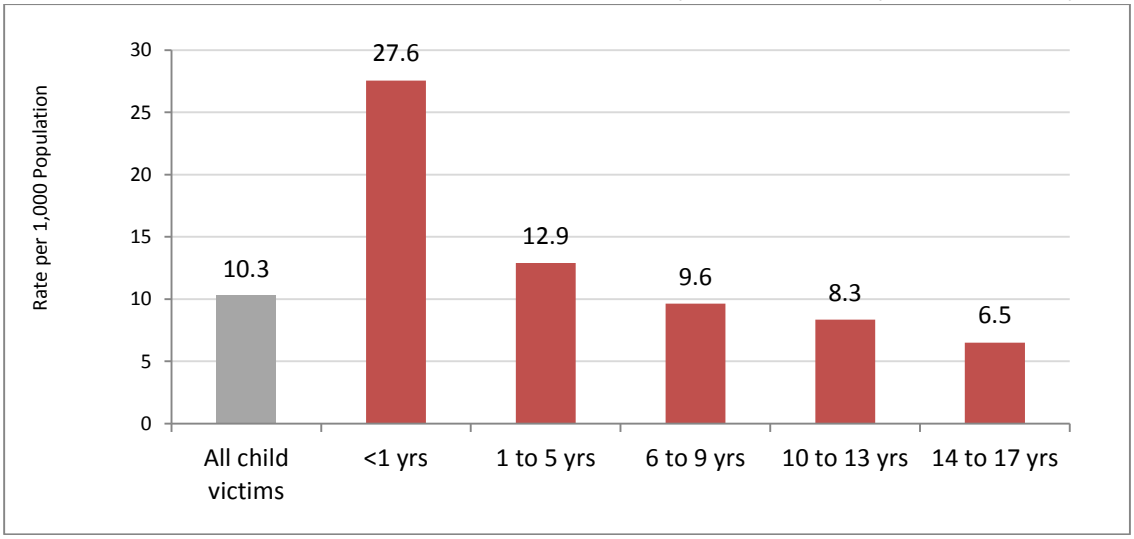
FIGURE 94. RATE OF CHILD ABUSE OR NEGLECT VICTIMS, CONNECTICUT, FY 2008-2012



Source: US DHHS, Administration on Children, Youth, and Families, Children's Bureau, *Child Maltreatment 2012.*

In fiscal year 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 1,00 population for persons 14 to 17 years of age. The rate of child abuse or neglect among children less than 1 year of age was 2.7 times that for all child victims in Connecticut (Figure 95).

FIGURE 95. RATE OF CHILD ABUSE OR NEGLECT VICTIMS, BY AGE GROUP, CONNECTICUT, FY 2012

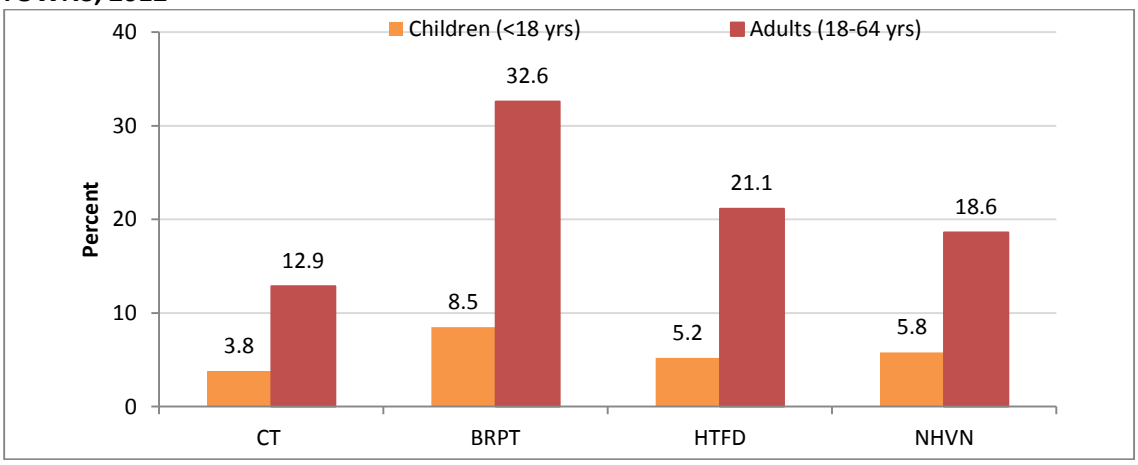


Note: Data are for unique cases.
Source: US DHHS, Administration on Children, Youth, and Families, Children's Bureau, Child Maltreatment 2012.

Health Insurance Coverage

In Connecticut and its largest towns, a greater proportion of adults lacked health insurance relative to children in 2012. In 2012, it appears 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 (Figure 96).

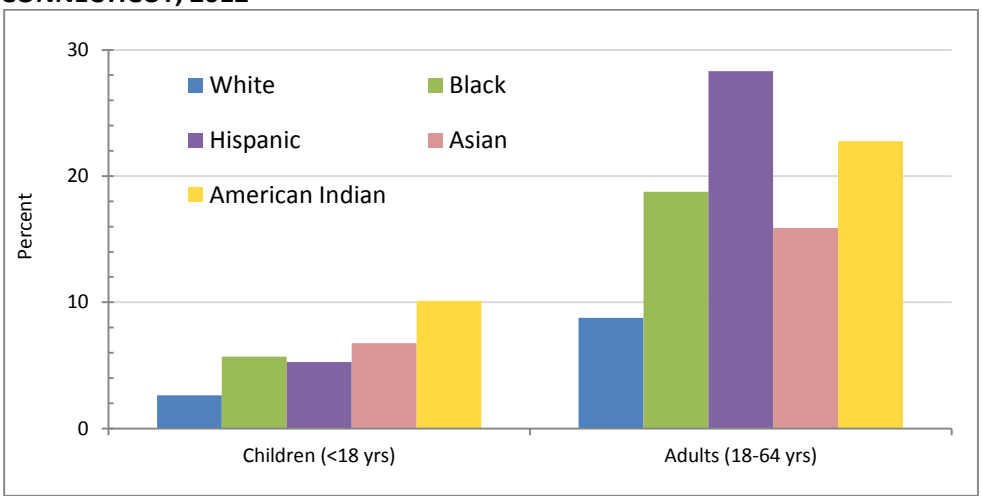
FIGURE 96. PERCENT OF UNINSURED CHILDREN AND ADULTS, CONNECTICUT AND ITS LARGEST TOWNS, 2012



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

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 (Figure 97).

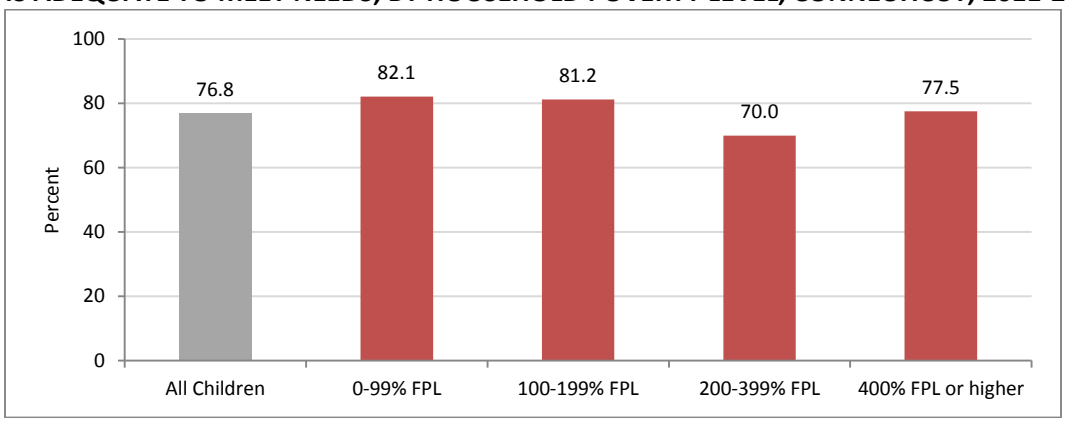
FIGURE 97. PERCENT OF UNINSURED CHILDREN AND ADULTS, BY RACE AND ETHNICITY, CONNECTICUT, 2012



Note: All racial groups are non-Hispanic.
Source: US Census Bureau, American Community Survey, 1-Year Estimates, 2012, B27001 Files.

In 2011-2012, 76.8% of Connecticut children had health insurance coverage that was adequate to meet their needs (Figure 98). Adequate health insurance coverage ranged from 82.1% among children in households with incomes below the federal poverty level (FPL), to 70.0% for children in households that have incomes 200-399% of the federal poverty level (FPL).

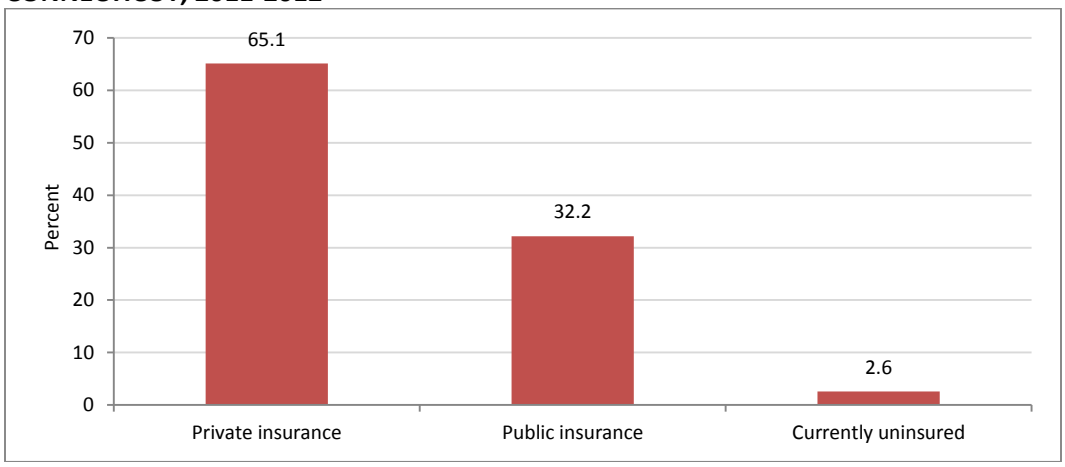
FIGURE 98. PERCENT OF CHILDREN (0-17 YEARS) WITH CURRENT HEALTH INSURANCE COVERAGE THAT IS ADEQUATE TO MEET NEEDS, BY HOUSEHOLD POVERTY LEVEL, CONNECTICUT, 2011-2012



Note: FPL indicates "federal poverty level".
Source: National Survey of Children's Health, 2011-2012.

In 2011-2012, 65.1% of children age 0-17 years had private insurance, 32.2% had public health insurance, and 2.6% were uninsured (Figure 99).

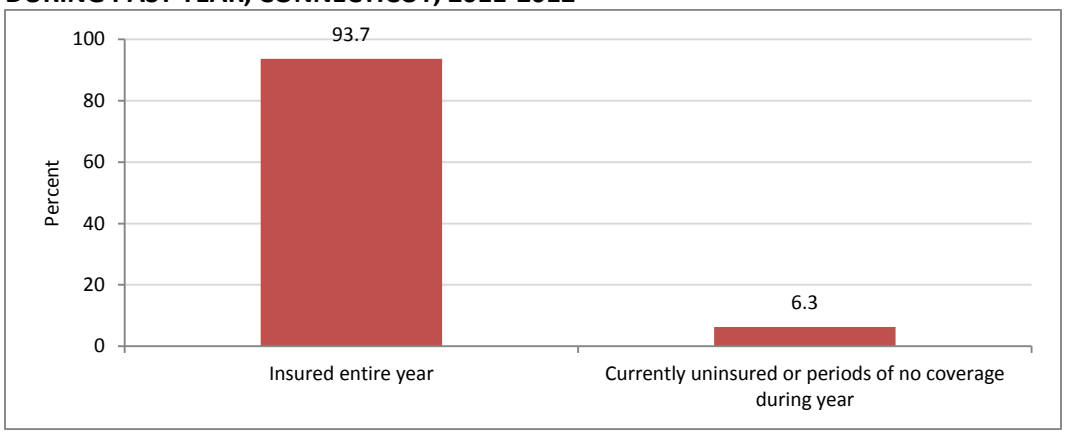
FIGURE 99. TYPE OF HEALTH INSURANCE COVERAGE AMONG CHILDREN (AGE 0-17 YEARS), CONNECTICUT, 2011-2012



Source: National Survey of Children's Health, 2011-2012.

As shown in Figure 100, in 2011-2012, 93.7% of children age 0 to 17 years had consistent health insurance coverage during the entire year.

FIGURE 100. CONTINUITY OF HEALTH INSURANCE COVERAGE AMONG CHILDREN (0 TO 17 YEARS) DURING PAST YEAR, CONNECTICUT, 2011-2012



Source: National Survey of Children's Health, 2011-2012.

CONCLUSION

Connecticut has made significant progress in improving the health of residents across the life course. Over the past decade, Connecticut has experienced declines in the rate of births to teen mothers, the infant mortality rate, the number of children identified with blood lead levels of ≥10+ µg/dL, the percent of high school students who reported being physically abused or forced to have sexual intercourse, the prevalence of current cigarette use among middle and high school students, and the percent of women who used tobacco during pregnancy. Additionally, Connecticut has experienced significant improvements in the percent of children under 3 years of age with Medicaid coverage who used dental care and the prevalence of newborn screening. Immunization rates remain high among adolescents. During this same period of health improvements, Connecticut has seen an increase in women experiencing non-adequate prenatal care utilization, neonatal abstinence syndrome among infants, and C-section rates. There has been no change in the proportion of high school students who reported engaging in current alcohol use or binge drinking, using of a condom during last sexual intercourse, or having 4 or more sexual partners in their lifetime. Additionally, half of high school students reported talking on a cell phone or texting or emailing while driving and two in ten reported experiencing bullying at school.

The distribution of these health improvements, and persistent and new issues affecting maternal and child health are not equally distributed among subpopulations. Indeed, compared to white non-Hispanic women, Black non-Hispanic and Hispanic women are more likely to experience late or no prenatal care. Geographically, women in Hartford, New Haven, Bridgeport, Stamford, and surrounding towns and towns in northeastern Connecticut are less likely to get late or no prenatal care. Additionally, the prevalence of preterm birth and low birthweight singleton birth, and the fetal and infant mortality rate is greater for black non-Hispanic and Hispanic women relative to white non-Hispanic women. Connecticut has also seen an increase in neonatal abstinence syndrome among infants born to white women or for births where the expected form of payment was Medicaid.

The prevalence of asthma, pediatric preventable hospitalizations, dental decay, obesity, and overweight is higher for black non-Hispanic and Hispanic youth relative to white non-Hispanic youth. Further, sedentary activities, such as watching TV or using the computer for 3 or more hours per day is more common among Hispanic and black non-Hispanic high school students relative to white non-Hispanic students. Additionally, obesity is more prevalent among children in lower income households relative to higher income households and among male high school students relative to female students.

Among CSHCN, less than half of respondents characterized care as coordinated, ongoing, or comprehensive; supportive of the transition to adult health care, work, and independence; or as meeting all needed components. Only half of CSHCN had a medical home. Further those with higher household incomes were more likely to have a medical home than their lower income counterparts.

This needs assessment, developed through a participatory planning progress, highlights areas of progress in maternal and child health in Connecticut, as well as health issues necessitating a public health approach to improve the health of all Connecticut residents. These data aim to provide a foundation to inform the planning and development of maternal and child health-related interventions across the state.

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