

# Asthma Prevalence

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The Behavioral Risk Factor Surveillance Survey (BRFSS) supplies data that are used to estimate lifetime and current asthma prevalence in Connecticut adults aged 18 years and older. Using the Random Child Selection component of the BRFSS, data are gathered to generate estimates of lifetime and current asthma prevalence in children. The information presented in this section is the result of analyses of 2007 - 2010 BRFSS data that were collected from a random sample of Connecticut residents.

## Lifetime Asthma Prevalence in Adults

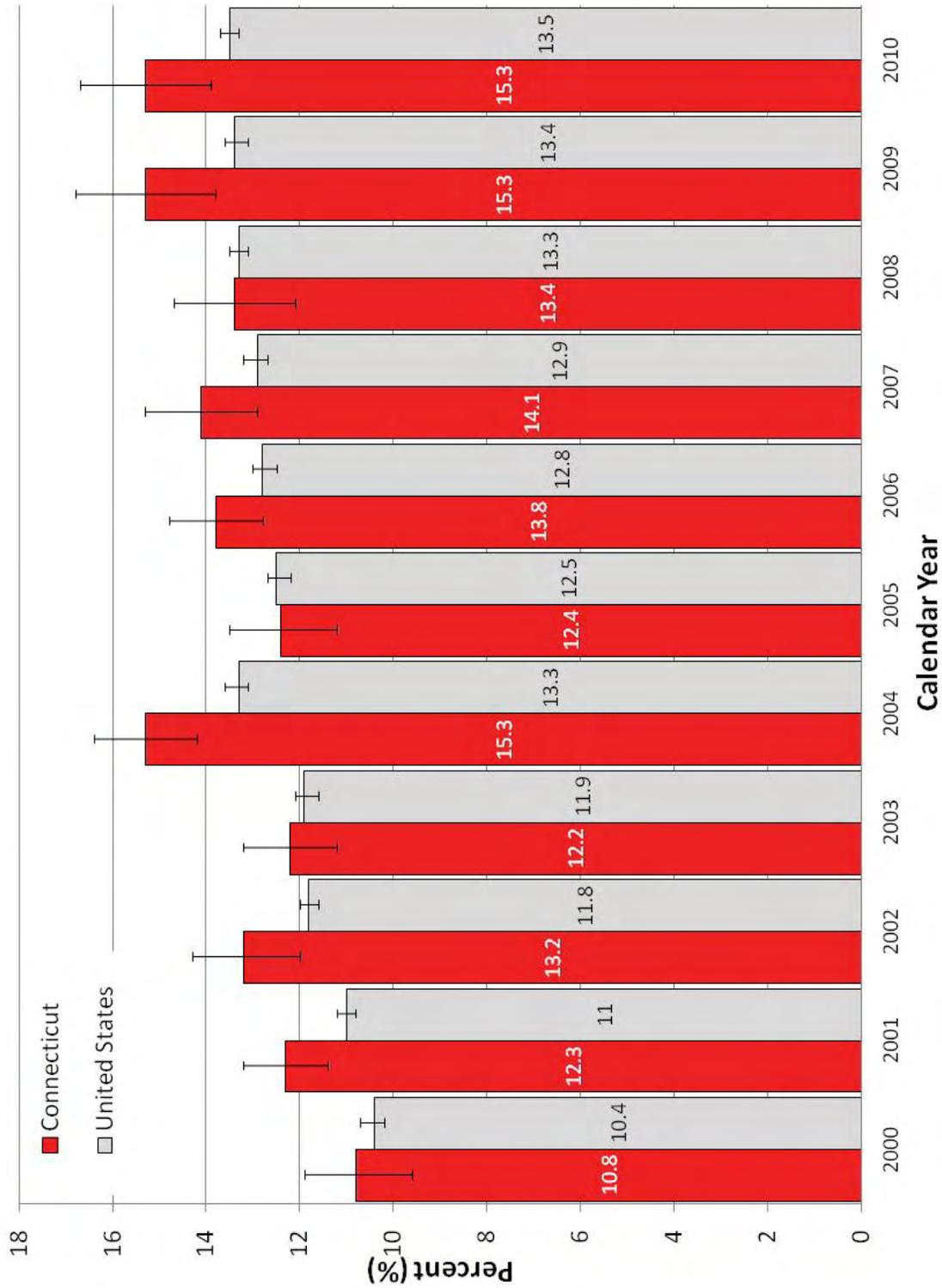
Lifetime asthma prevalence in adults  $\geq 18$  years old was estimated from responses to the BRFSS question: "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?".<sup>16</sup> The estimated lifetime prevalence of asthma in Connecticut adults in 2010 was 411,100 or 15.3% (95% Confidence Interval [CI], 13.9 - 16.7). During 2000 - 2010, the lifetime asthma prevalence in Connecticut adults was generally higher than the lifetime adult asthma prevalence for the nation as a whole (Figure 1). There was a 41.7% increase in Connecticut adult lifetime asthma prevalence from 10.8% in 2000 to 15.3% in 2010; and there was a 29.8% increase in the lifetime prevalence of asthma in U.S. adults from 10.4% in 2000 to 13.5% in 2010.

From 2005 - 2010, the lifetime asthma prevalence in Connecticut women was higher than that for Connecticut men, and increased 17.1% (from 14.6% in 2005 to 17.1% in 2010). During the same six-year period, the lifetime asthma prevalence for men increased 34.3% from 9.9% in 2005 to 13.3% in 2010. From 2005 - 2007, the lifetime prevalence of asthma among adult, non-Hispanic Blacks was higher than that for other racial/ethnic groups. In 2008, lifetime asthma prevalence was highest among Hispanics (19.3%) and lowest among non-Hispanic Others (12.5%). Sharp increases in lifetime asthma prevalence were observed among non-Hispanic Blacks and non-Hispanic Others in Connecticut from 2009 to 2010. In 2010, the non-Hispanic Black asthma prevalence rate was 23.2% compared to 19.1% for non-Hispanic Others, 18.9% for Hispanics, and 14.3% for non-Hispanic Whites. Refer to Appendix C for detailed tables on lifetime asthma prevalence in adults.

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<sup>16</sup> 2009 BRFSS questionnaire, Section 10, question 10.1

Figure 1. Lifetime Adult Asthma Prevalence by Year, Connecticut & United States, 2000 – 2010, with 95% Confidence Intervals



## Current Asthma Prevalence in Adults

Current asthma prevalence is estimated from responses to the BRFSS question, “Do you still have asthma?”<sup>17</sup> which immediately followed the probe about lifetime history of asthma. The estimated prevalence of current asthma among Connecticut adults in 2010 was 246,100 or 9.2% (95%CI, 8.1 - 10.2), with females (11.3%) experiencing higher prevalence than males (6.8%). The estimated prevalence of current asthma among Connecticut adults has been higher than that of U.S. adults since 2000, peaking at 9.7% in 2004 (Figure 2). There was a 17.9% increase in current asthma prevalence in Connecticut adults from 7.8% in 2000 to 9.2% in 2010. In the same period, there was a 19.4% increase in current asthma prevalence in U.S. adults from 7.2% in 2000 to 8.6% in 2010. In Connecticut adults from 2005 - 2010, current asthma prevalence was higher for females than males, higher for non-Hispanic Blacks compared to other racial/ethnic groups, and higher among adults 18 - 24 years old compared to other adult age groups.

Current asthma prevalence for female adults was consistently higher than current asthma prevalence for male adults from 2005 - 2010 (Figure 3). In 2008, there was a decrease in current asthma prevalence among females, but an increase in current asthma prevalence among males. In 2010, the current asthma prevalence for adult females was 11.3%, almost twice (1.7 times) that of the current asthma prevalence for males.

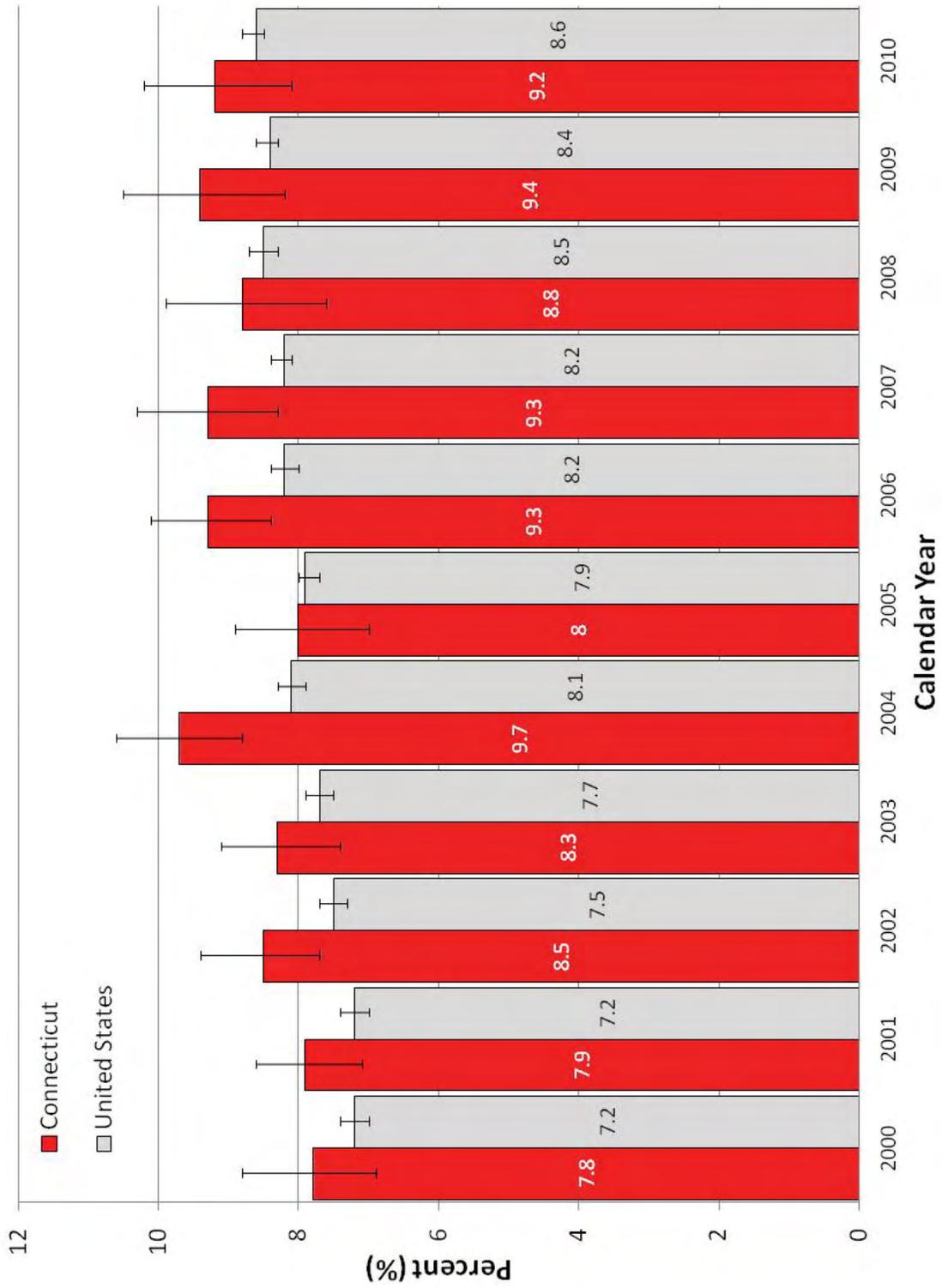
From 2005 - 2010, the prevalence of current asthma among adults was generally higher among non-Hispanic Blacks than other racial/ethnic groups (Figure 4). With the exception of the year 2008, non-Hispanic Blacks had the highest prevalence of current asthma among adults in Connecticut. The largest increase in current asthma prevalence among Connecticut adults was for those classified as non-Hispanic Others. For this group, current asthma prevalence doubled (115.8% increase) from 5.7% in 2005 to 12.3% in 2010. A sharp 73.2% increase in current adult asthma prevalence was observed in adult non-Hispanic Others from 2009 to 2010.

With respect to age, current asthma prevalence was consistently highest during 2005 - 2010 among adults aged 18 - 24 years and generally lowest among adults aged 65 or more years (Figure 5). Current asthma prevalence fluctuated for all age groups from 2005 - 2010. Between 2008 and 2010, there was a 27.7% decline in current asthma prevalence among 18 - 24 year olds (from 15.5% to 11.2%) and an 18.2% decline in current asthma prevalence among 23 - 34 year olds (from 12.1% to 9.9%). Meanwhile, there was a 42.3% increase in current asthma prevalence among 35 - 44 years olds (from 7.1% to 10.1%); a 21.9% increase in current asthma prevalence for 45 - 54 year olds (from 7.3% to 8.9%); and a 28.4% increase in current asthma prevalence for 55 - 64 year olds (from 6.7% to 8.6%). Current asthma prevalence among adults  $\geq$  65 years old was the same in 2008 and 2010.

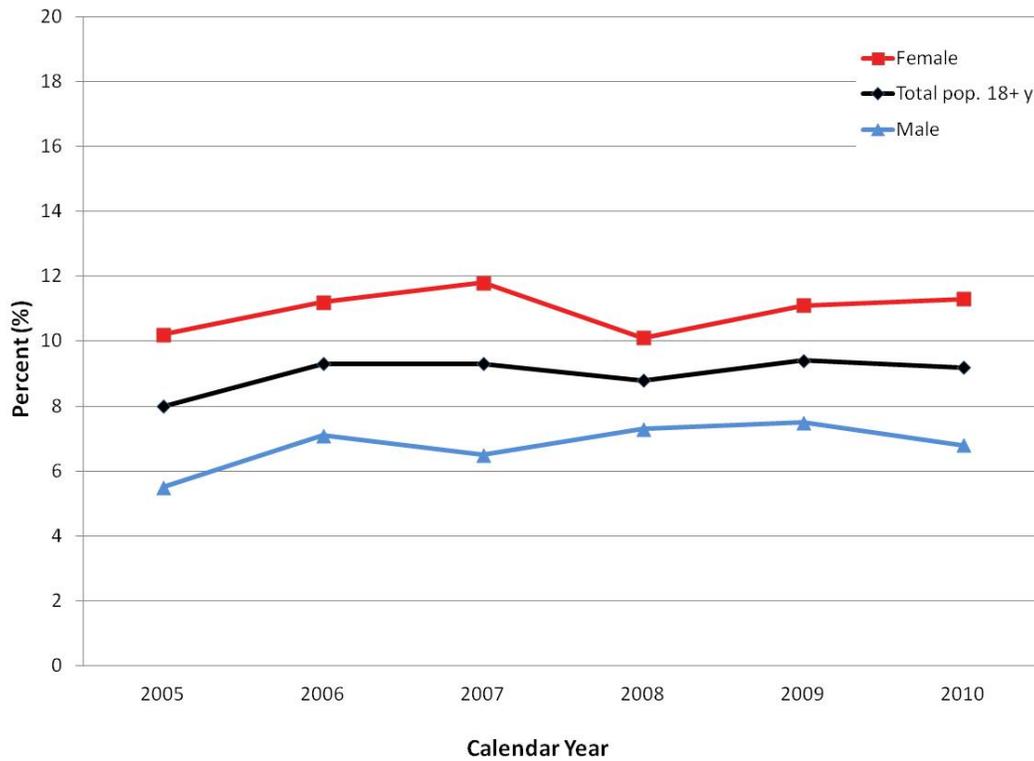
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<sup>17</sup> 2009 BRFSS questionnaire, Section 10, question 10.2

Figure 2. Current Adult Asthma Prevalence by Year, Connecticut & United States, 2000 – 2010, with 95% Confidence Intervals



**Figure 3. Current Adult Asthma Prevalence by Year and Sex, Connecticut, 2005 – 2010**



**Figure 4. Current Adult Asthma Prevalence by Year and Race/Ethnicity, Connecticut 2005 – 2010**

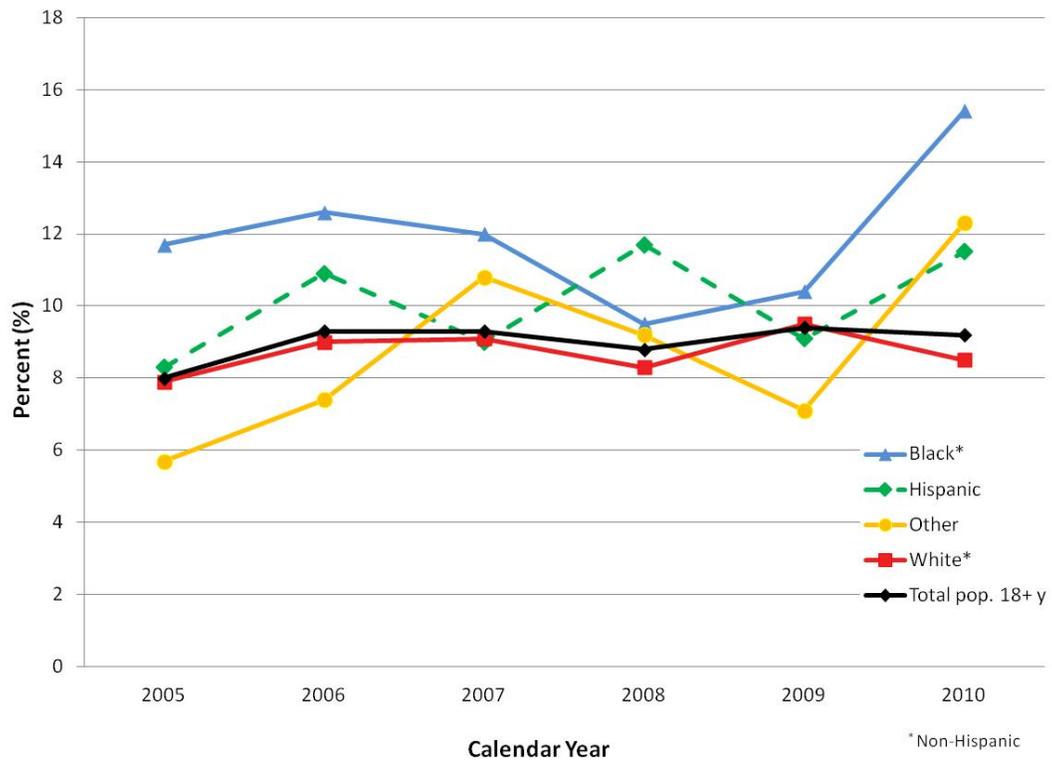
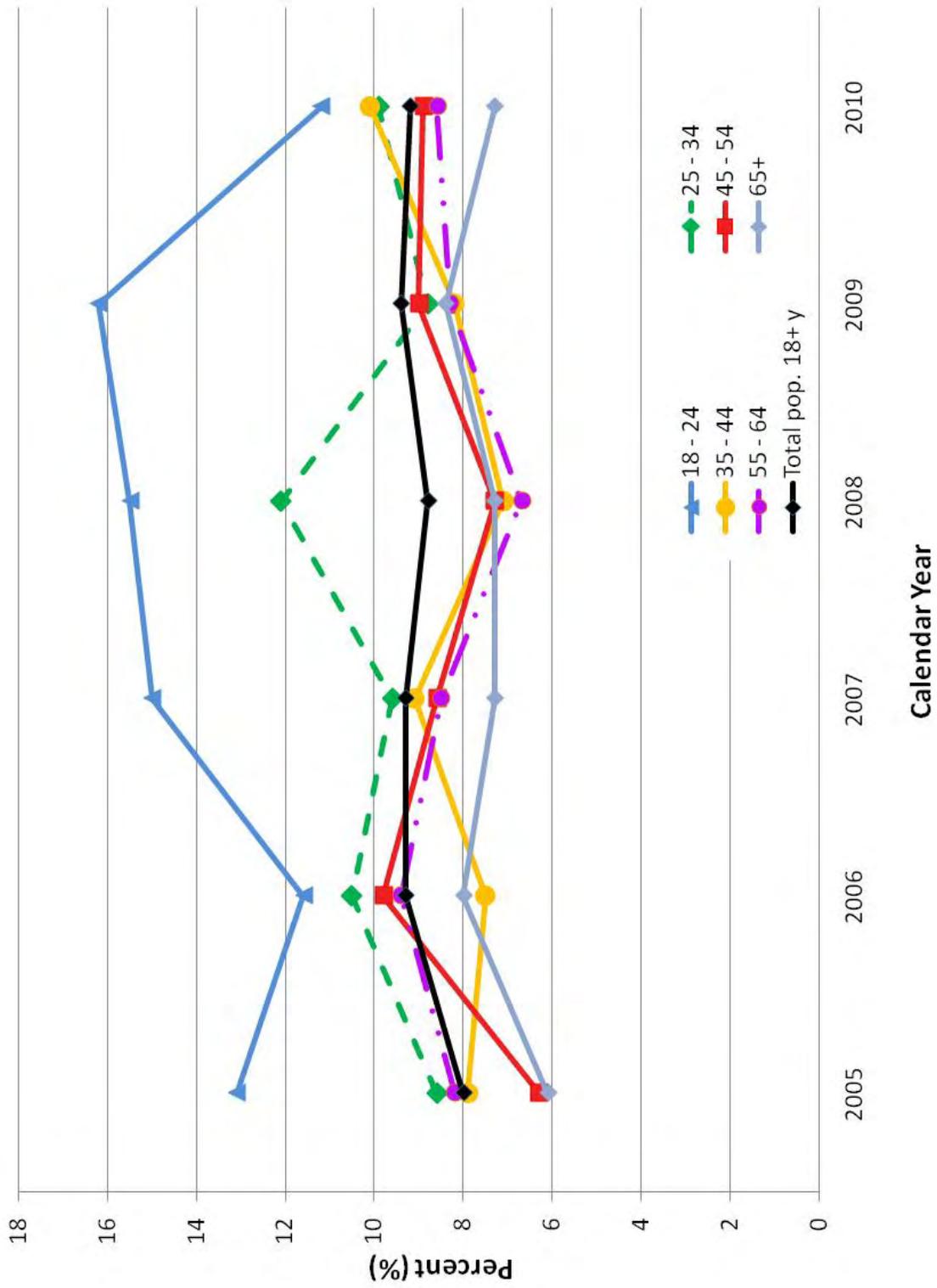


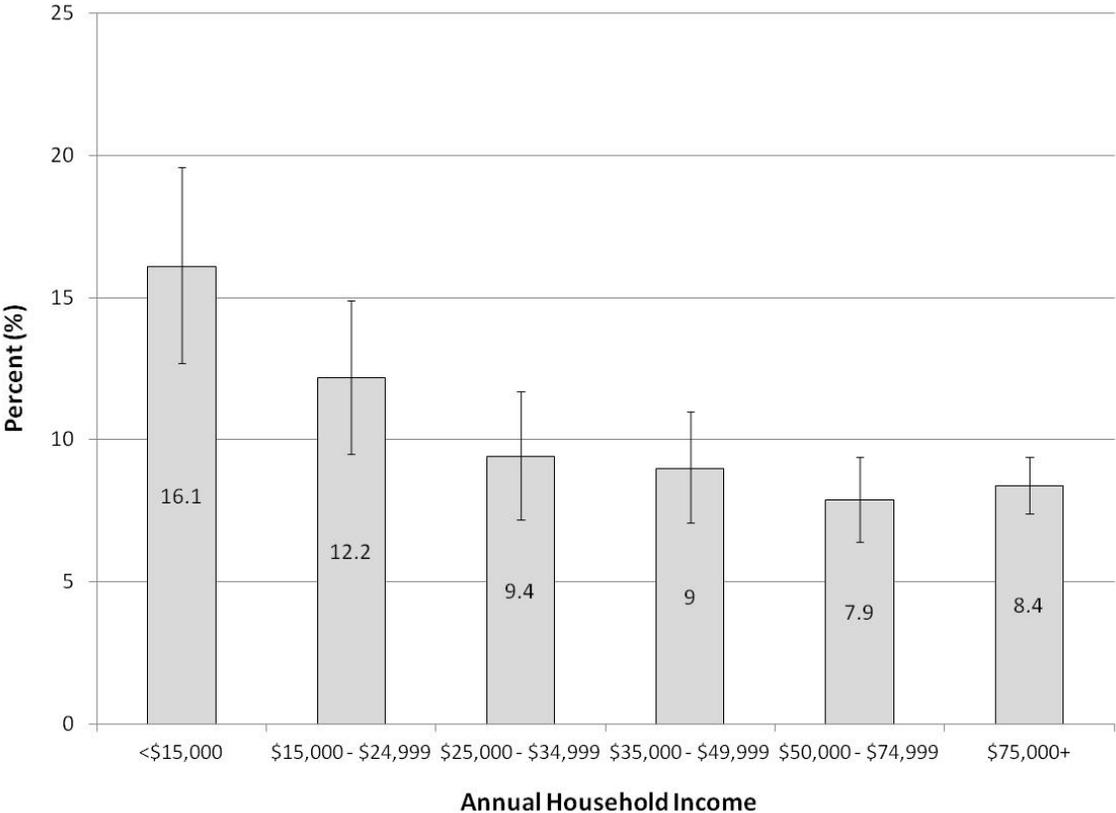
Figure 5. Current Adult Asthma Prevalence by Age Year and Age Group, Connecticut, 2005 – 2010



Analysis of 2008 - 2010 BRFSS survey data demonstrated that estimates of current asthma prevalence among Connecticut adults by marital status was: 13.2% among persons who were divorced or separated; 12.9% of persons who were never married; 11% of individuals who were part of an unmarried couple; 8.4% of widowed persons; and 7.3% of married people. With respect to employment status, current asthma prevalence was highest among adults who were unable to work (24.6%) and students (20.2%), followed by unemployed persons (12.3%), homemakers (9.3%), employed persons (7.8%), and retired persons (7.1%).

With respect to educational attainment, 2008 - 2010 BRFSS survey data estimates were that current asthma prevalence was highest for adults with less than a high school education (14.2%) and lowest for adults who were college graduates (7.8%). The current asthma prevalence for adults with household incomes less than \$15,000 per year was 16.1%, almost double the prevalence for adults with annual household incomes of \$75,000 or greater (Figure 6). With respect to geographic area of residence, the current asthma prevalence of adults in Windham County for 2008 - 2010 was 12.2%, followed by: New London County (10.4%); Middlesex County (10.3%); Hartford County (9.4%); New Haven County (9.1%); Tolland County (8.2%); Litchfield County (8.1%); and Fairfield County (8.1%).

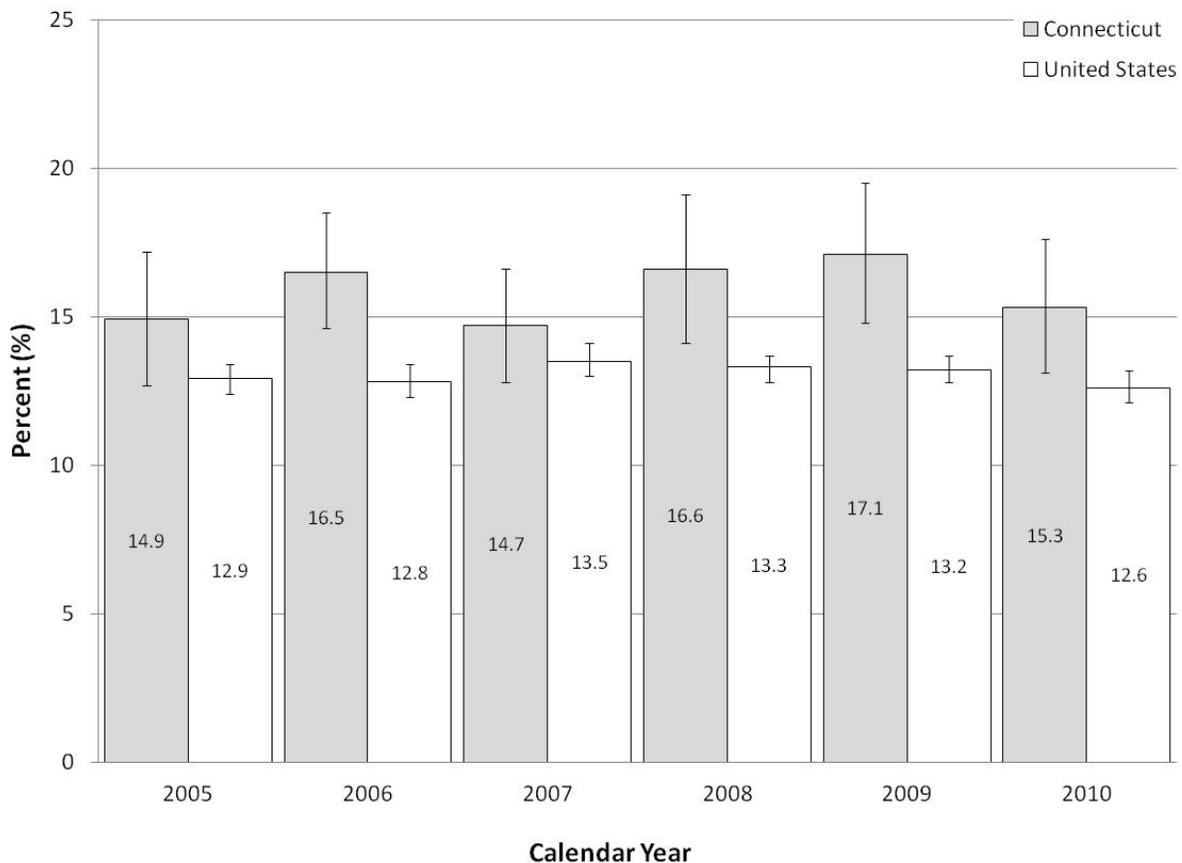
**Figure 6. Current Adult Asthma Prevalence by Household Income, Connecticut 2008 – 2010, with 95% Confidence Intervals**



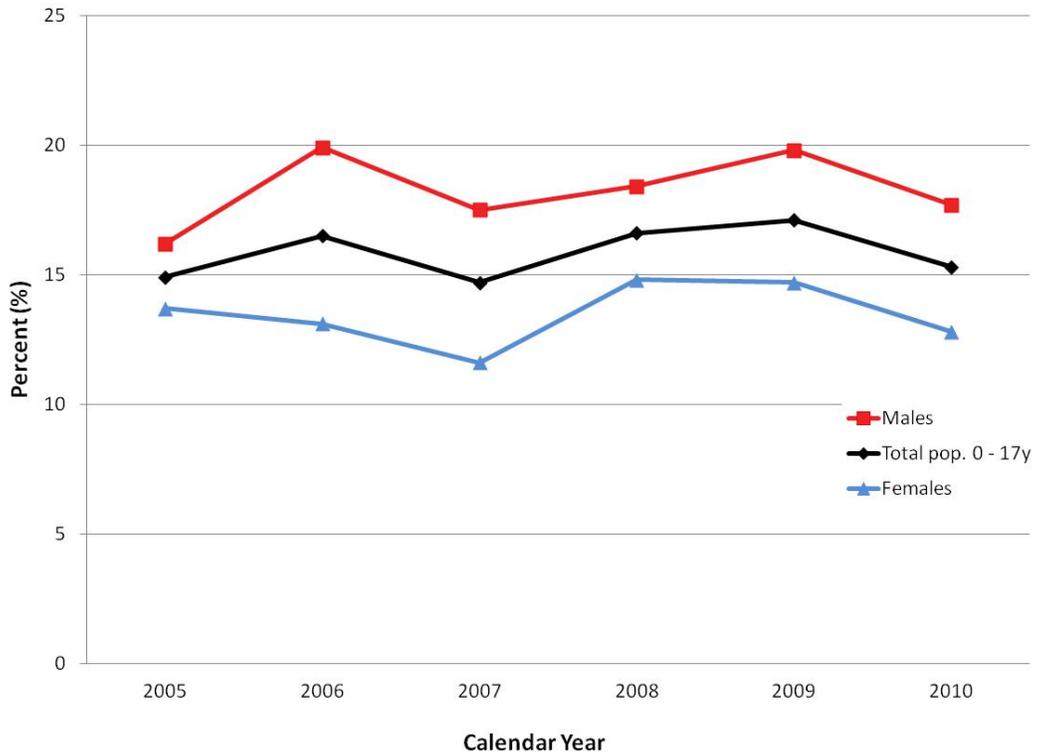
## Lifetime Asthma Prevalence in Children

In 2010, the estimated lifetime asthma prevalence in Connecticut children was 121,900 or 15.3% (95%CI, 13.1 - 17.6). From 2005 - 2008, the lifetime prevalence of asthma in Connecticut residents 0 - 17 years old was consistently higher than that among children in United States (Figure 7). Among boys, lifetime asthma prevalence was higher than the prevalence among girls from 2005 - 2010 (Figure 8). During the same six-year period, non-Hispanic Black and Hispanic children generally had higher lifetime asthma prevalence rates than other racial/ethnic groups. In 2008, 30.1% of non-Hispanic Black children had a history of asthma, the highest observed lifetime asthma prevalence in Connecticut children from 2005 - 2010 (Figure 9). In comparison, the lifetime asthma prevalence rates among Hispanic, non-Hispanic Other, and non-Hispanic White children in 2008 were 28.0%, 17.5%, and 13.6%, respectively. Refer to Appendix C for detailed tables on lifetime asthma prevalence in children.

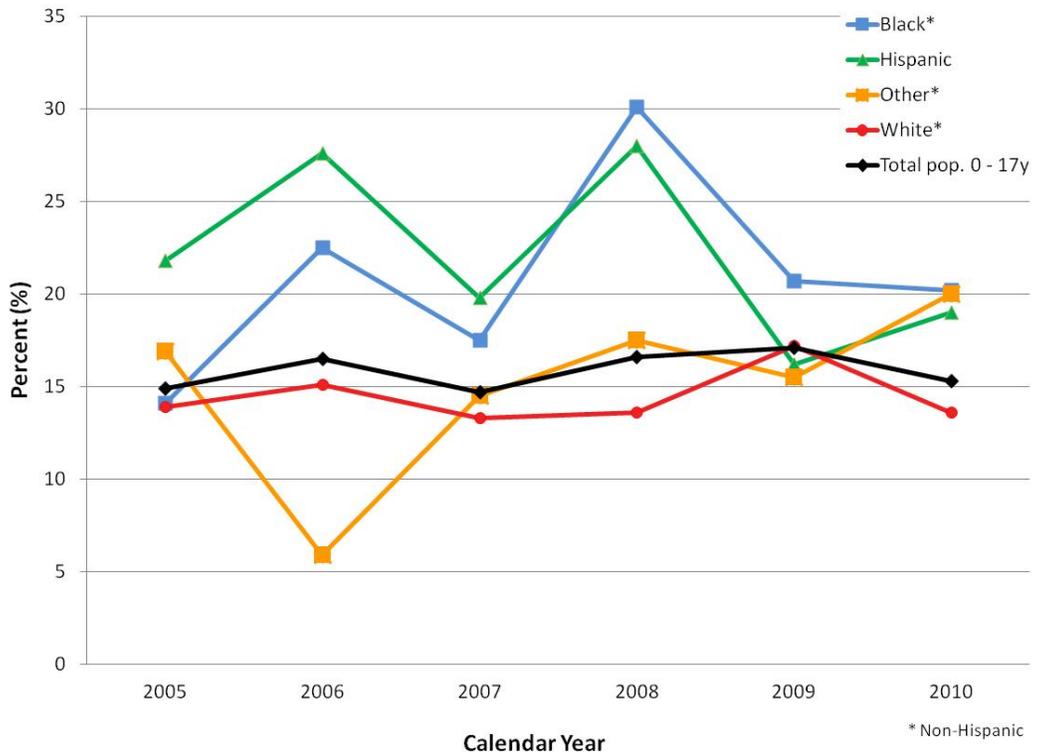
**Figure 7. Lifetime Child Asthma Prevalence by Year, Connecticut and United States, 2005 – 2010, with 95% Confidence Intervals**



**Figure 8. Lifetime Child Asthma Prevalence by Year and Sex, Connecticut, 2005 – 2010**



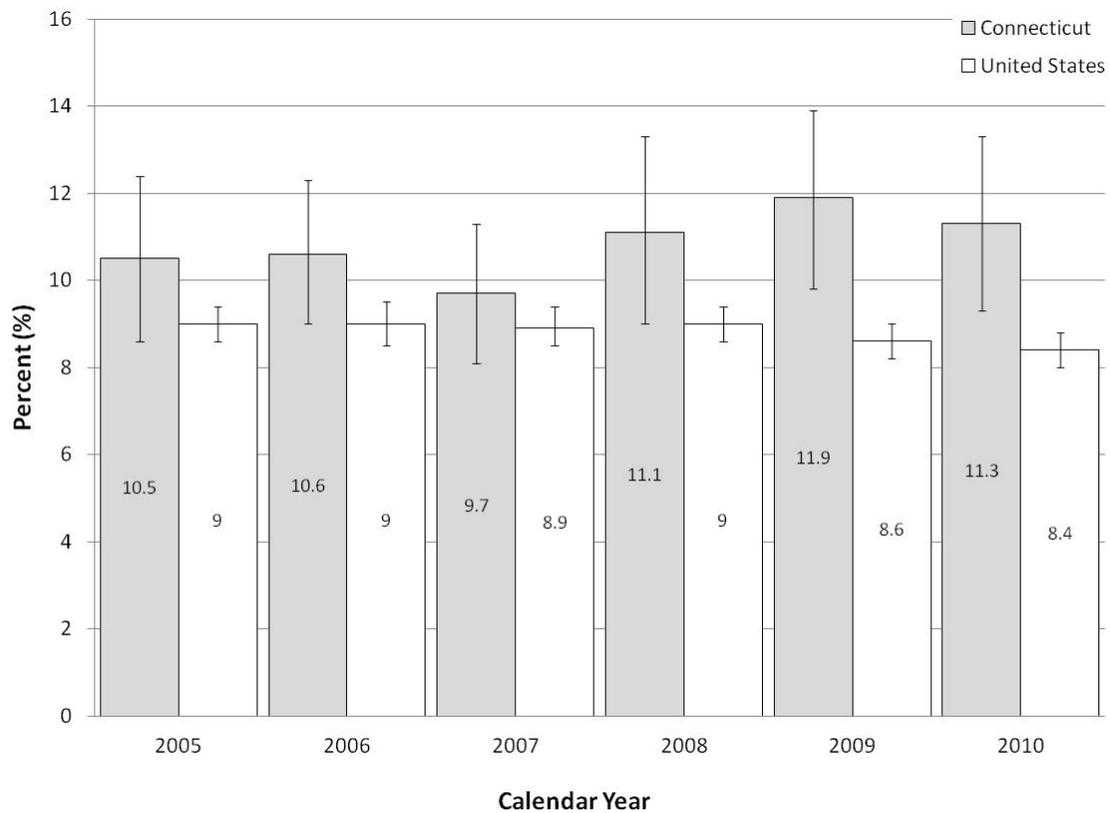
**Figure 9. Lifetime Child Asthma Prevalence by Year and Race/Ethnicity, Connecticut, 2005 – 2010**



## Current Asthma Prevalence in Children

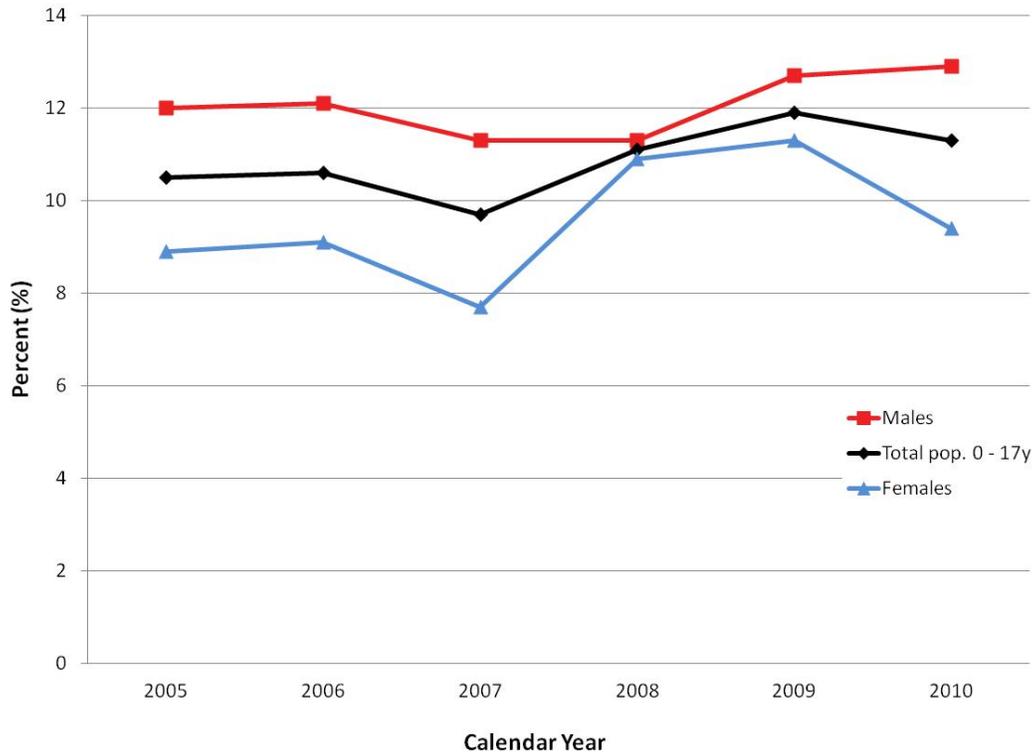
The current asthma prevalence estimate for asthma in Connecticut children in 2010 was 89,280 or 11.3% (95%CI, 9.3 - 13.3). From 2005 -2010, the prevalence of current asthma among Connecticut children was higher than the current asthma prevalence among Connecticut adults (9.2%) and U.S. children (8.4%). Between 2007 and 2010, Connecticut children experienced a 16.5% increase in the prevalence of current asthma. During the same period, a 5.6% decrease in the prevalence of current asthma among children was observed nationally (Figure 10).

**Figure 10. Current Asthma Prevalence in Children by Year, Connecticut and United States, 2005 – 2010, with 95% Confidence Intervals**

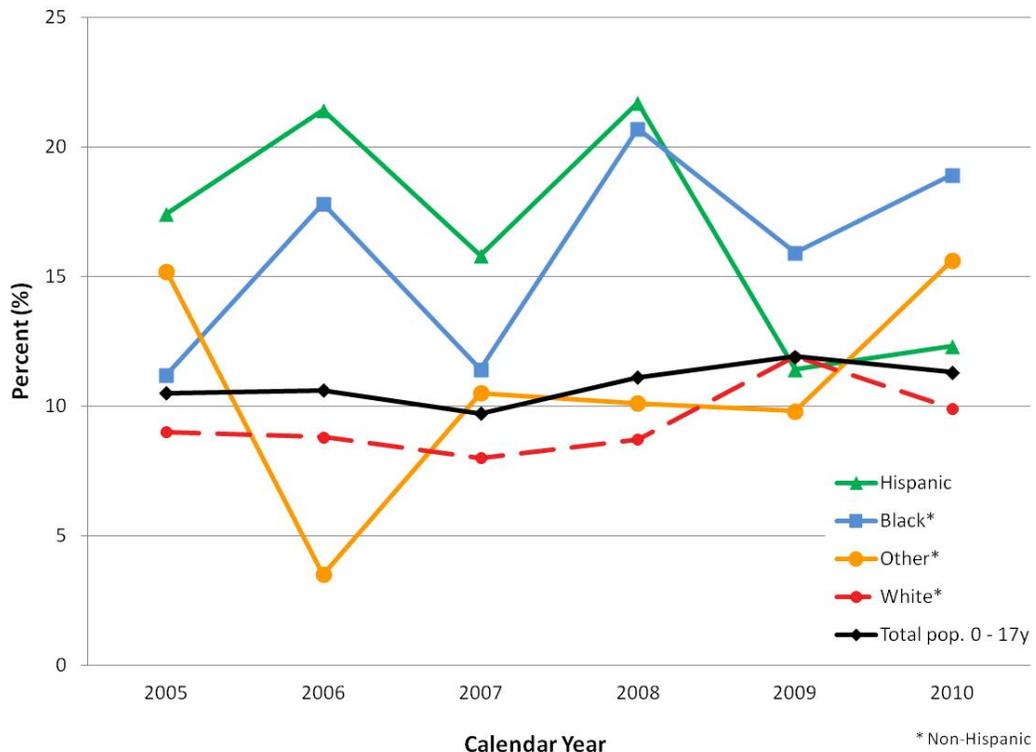


Among male children, current asthma prevalence was consistently higher than prevalence among female children from 2005 - 2010. In 2009, the peak of overall current child asthma prevalence in Connecticut, current asthma prevalence was 12.7% for boys and 11.3% for girls (Figure 11). In 2010, current asthma prevalence was highest among non-Hispanic Black children (18.9%), followed by non-Hispanic Others (15.6%), Hispanics (12.3%), and non-Hispanic Whites (9.9%) (Figure 12).

**Figure 11. Current Asthma Prevalence in Children by Year and Sex, Connecticut, 2005 – 2010**

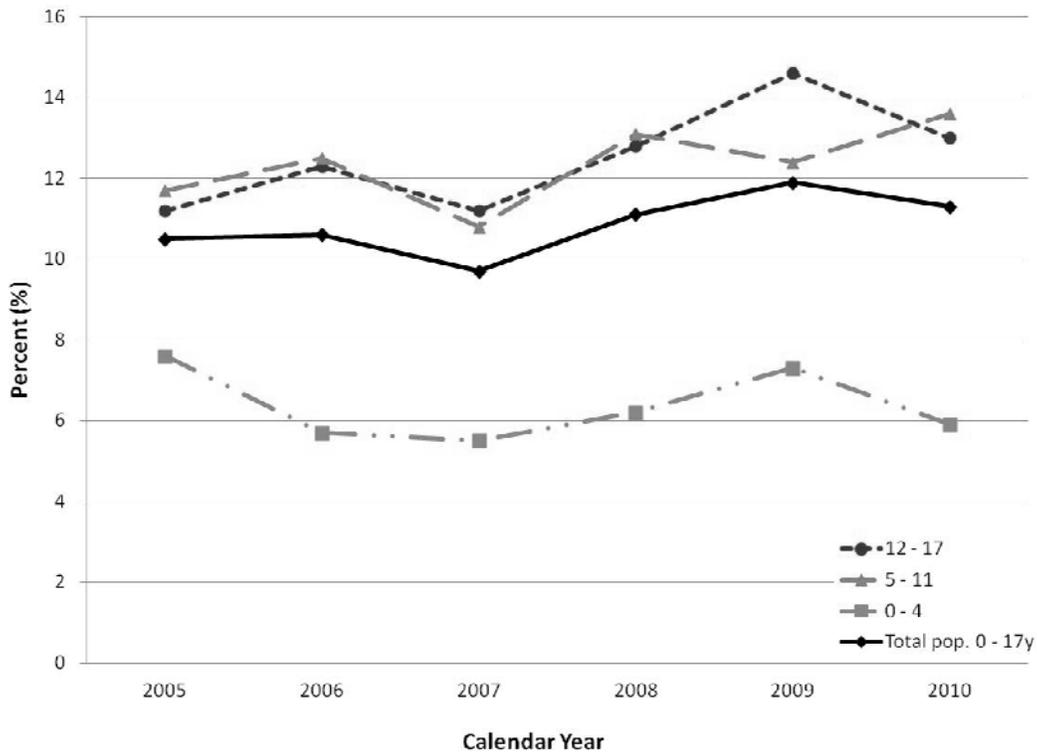


**Figure 12. Current Asthma Prevalence in Children by Year and Race/Ethnicity, Connecticut, 2005 – 2010**



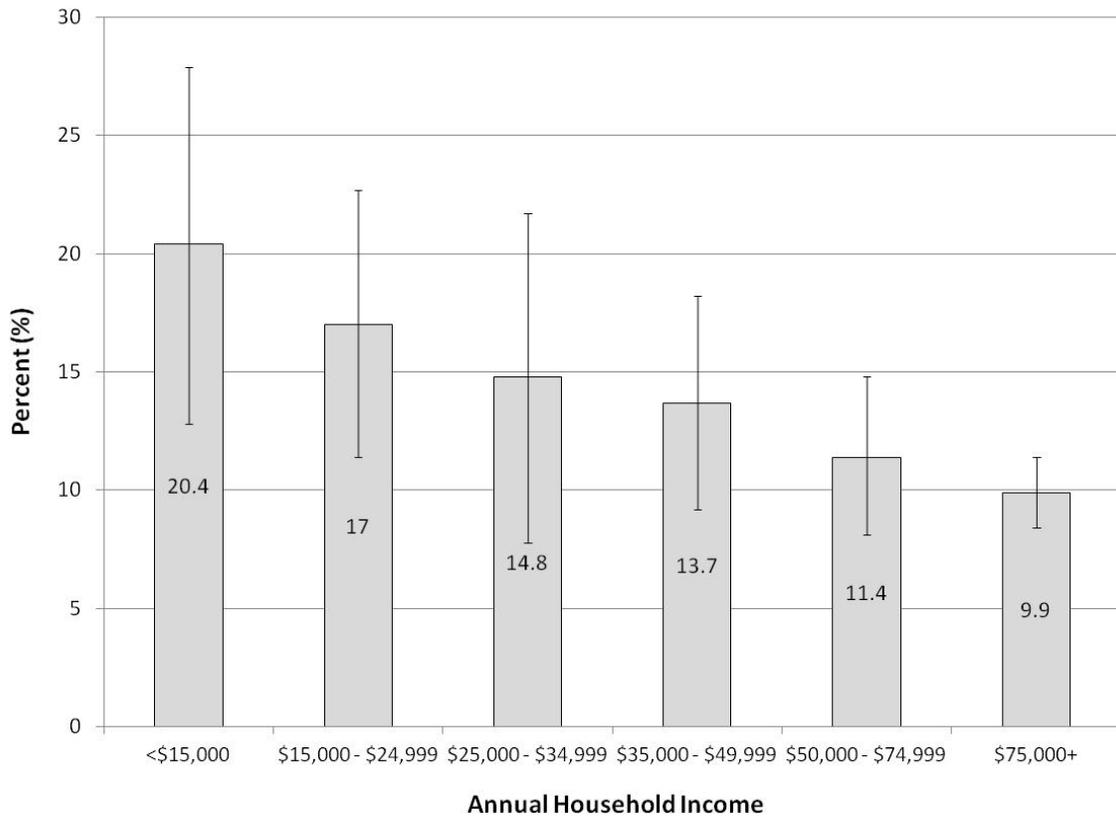
With respect to age, the prevalence of current asthma was highest among children 5 - 17 years old during 2005 - 2010. In 2010, current asthma prevalence was 13.6% for 5 - 11 year olds, 13% for 12 - 17 year olds (13%), and 5.9% for children less than five years old (5.9%).

**Figure 13. Current Asthma Prevalence in Children by Year and Age Group, Connecticut, 2005 – 2010**



According to 2008 - 2010 BRFSS data, current asthma prevalence among children with at least one parent who has current asthma was 28.5%, compared to 9.6% for children who did not have a parent with current asthma. An inverse relationship between household income and current asthma prevalence in Connecticut children was observed. The current asthma prevalence among children in households with annual incomes less than \$15,000 was double that of children living in households with incomes of \$75,000 and above (20.4% versus 9.9%) (Figure 14). Current asthma prevalence among children was highest for those residing in Windham County (18.9%) and lowest for children living in New London County (8.6%) (Table 3).

**Figure 14. Current Child Asthma Prevalence by Household Income, Connecticut, 2008 – 2010, with 95% Confidence Intervals**



**Table 3. Current Child Asthma Prevalence by County of Residence, Connecticut, 2008 – 2010**

County	Percent	95% CI Lower Limit	95% CI Upper Limit
Fairfield	10.4	8.1	12.7
Hartford	12	9.6	14.5
Litchfield	10.3	5.4	15.1
Middlesex	10.4	5.8	15
New Haven	12.1	9.6	14.7
New London	8.6	5.1	12
Tolland	11.9	6.8	16.9
Windham	18.9	10.6	27.2