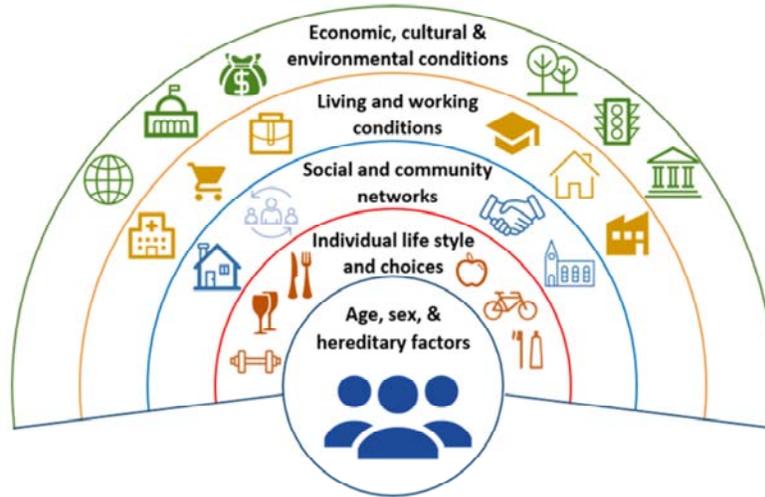


Connecticut State Innovation Model State Health Profile

*Preliminary Findings
presented to the
Population Health Council*

Anitha Nair, MPH
Connecticut Department of Public Health
September 22, 2016

Many Things Affect Our Health



Source: A. Smart, Determinants of Health

DPH Connecticut Department of Public Health

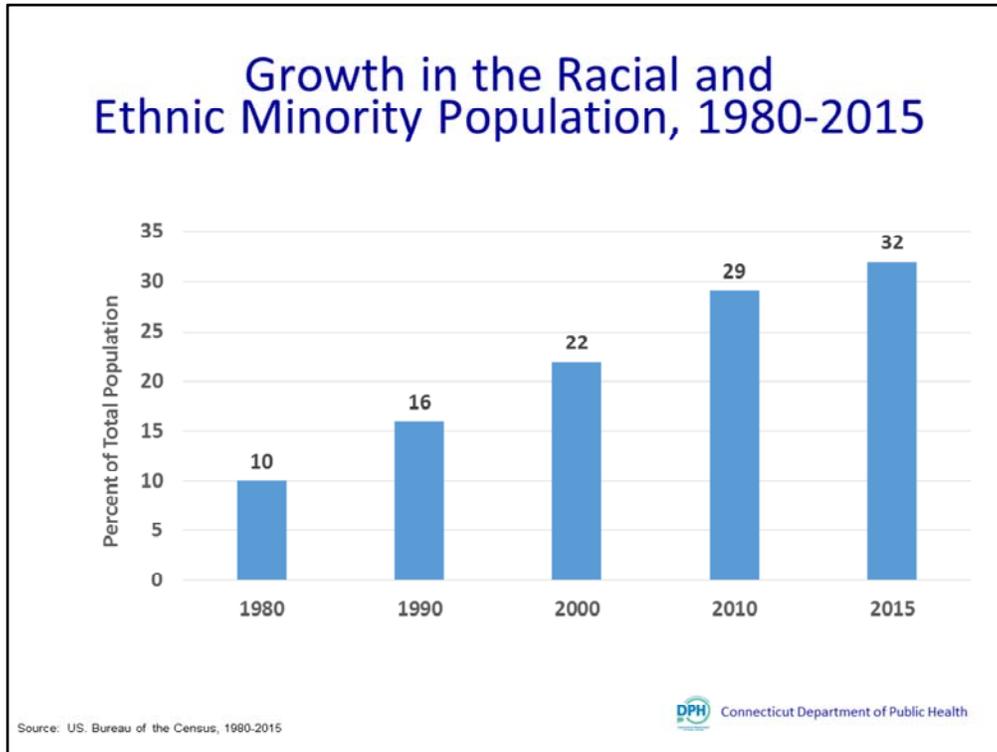
Our health is more than just what is noted in our medical records.

We know that our health is the product of many things shaped by our personal choices about diet, exercise and smoking; often influenced by social and community networks and our environment.

Who Lives in Connecticut



When we think about the health of Connecticut residents, knowing the population's characteristics can help put their health into perspective.



One of the most dynamic shifts in CT's population growth is the increase of racial and ethnic minority groups.

Over time in CT- Hispanics have shown the most growth in overall population numbers; but Asians have shown the most growth as an overall percent of that population. In the time period, between 2000-2010- the Asian population grew by ~ 64% followed by Hispanics/Latinos at ~ 50%.

One other point to mention is that there are sub-groups of minorities such as the SE Asians and Native American populations that cannot be captured because of data limitations for those groups.

Our population is getting younger and more diverse.



- Median Age:
 - Connecticut: 40.3 years
 - White: 45, Latino: 27.5
 - United States: 37.4 years
- People of color:
(Non-white, non-Hispanic):
 - Connecticut : 30.2%
 - United States: 37.2%
- Living in poverty
 - Connecticut: 10.5%
 - United States: 15.6%

Source: US Census Bureau, American Community Survey, 5-Year Estimates, 2010-2014.

 Connecticut Department of Public Health

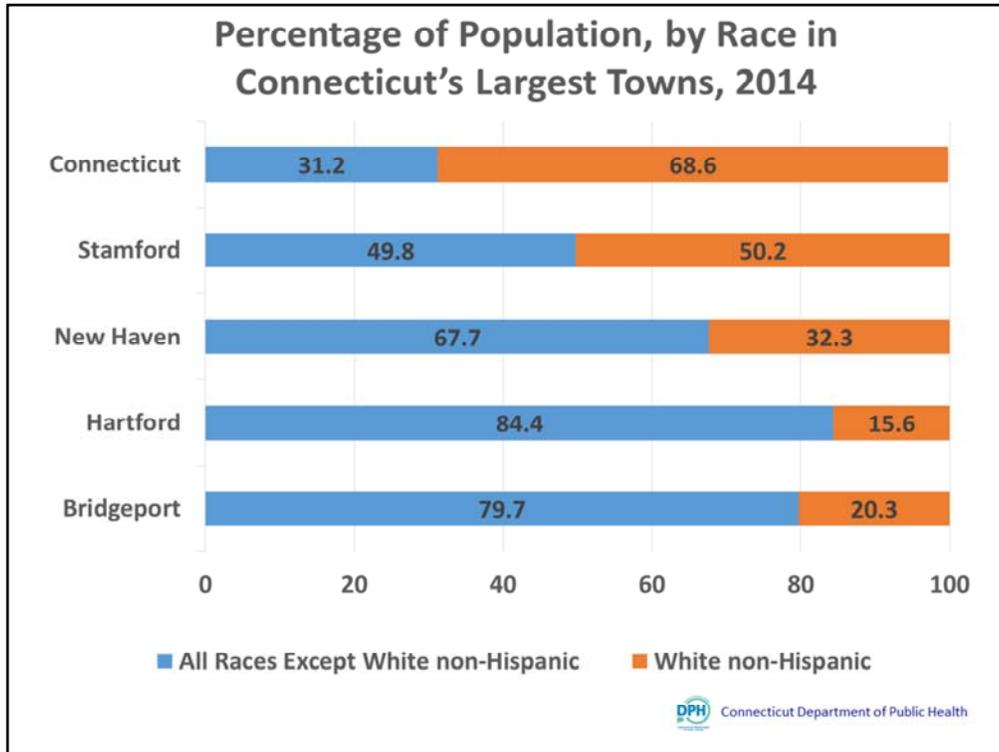
Connecticut, its towns, and its populations, are not balanced socially and economically, so state averages are not always meaningful.

Take age and cultural background for example. They're important because they can be barriers to access, use of medical care, and defining health needs.

Connecticut's population is about 3 years older on average than the US population, and our state is less culturally diverse than the US, even though our minority populations are growing.

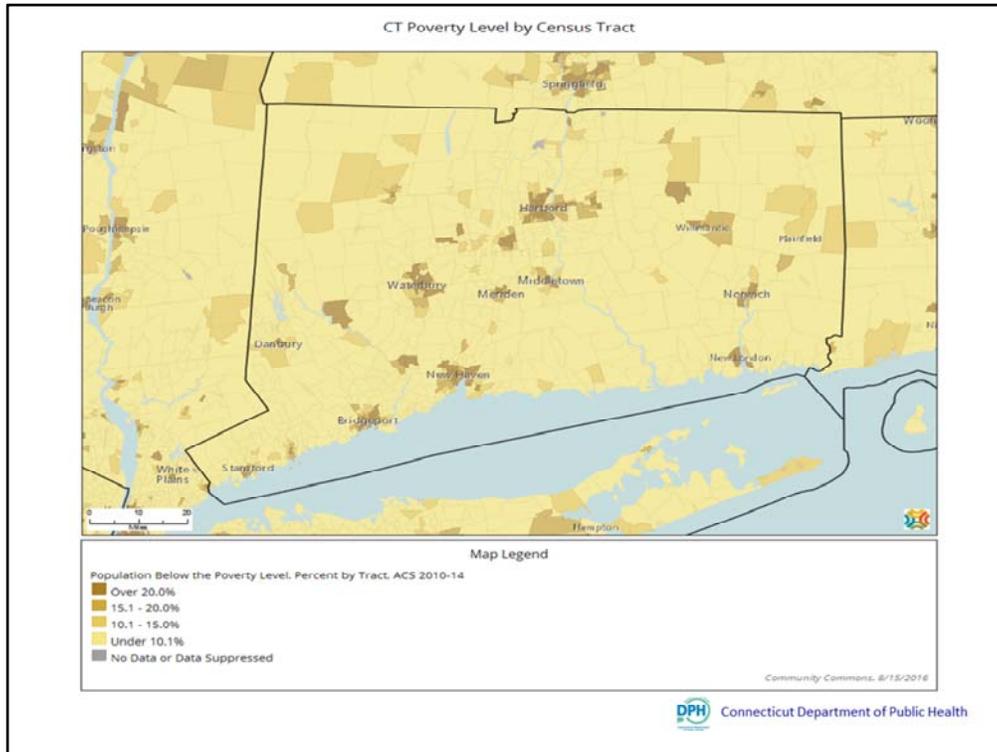
About 30% of our population is non-White and non-Hispanic. And while the median age statewide is about 40 years old, the median age of White non-Hispanics is 45 compared to for Hispanics it's 27 ½ years. Age is often correlated with education, and urban areas have large concentrations of young residents, therefore are at high risk for risky health behaviors.

Poverty also is associated with less access to health care and with poor health outcomes. About 10% of the Connecticut population lives below the federal poverty line, compared to over 15% nationwide. But there's great variation across towns. 35% of Hartford residents, for example, live in poverty, compared to 2% in New Canaan.



At 69% of the population being White non-Hispanic, CT is still predominately white. But statewide figures don't apply to all towns and all populations.

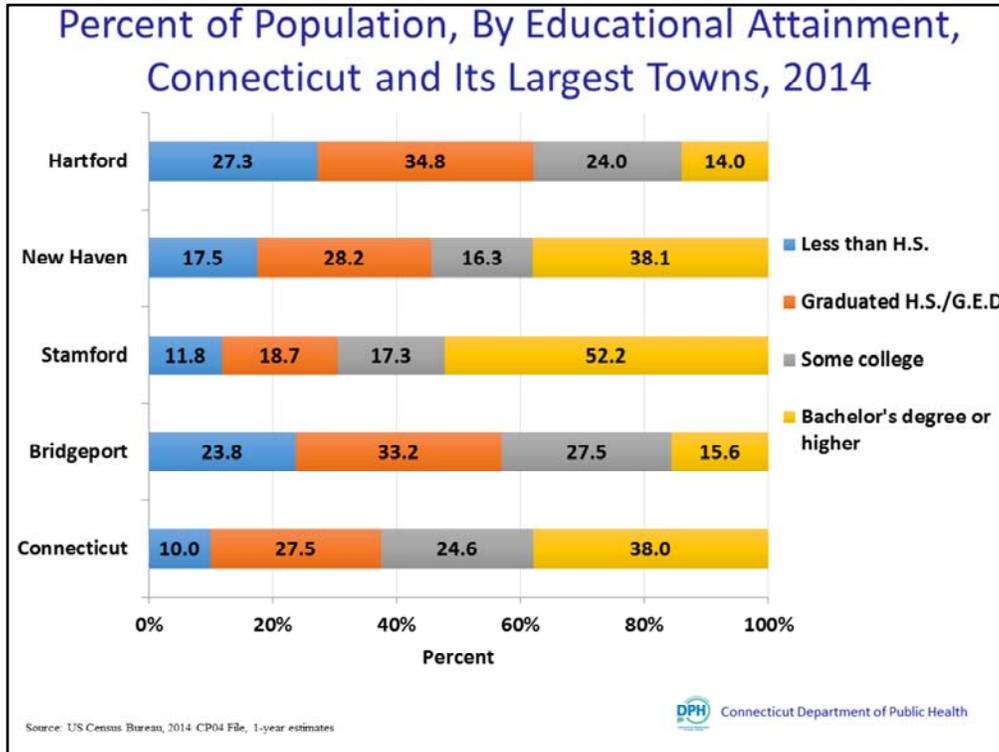
For example, if we look at Hartford 84% of residents are people of color, 68% in New Haven and 80% in Bridgeport.



This map displays the percentage of population below poverty line at the census tract level, with the darkest spots on the map indicating the most impoverished areas..

Not surprisingly, a greater proportion of the population in larger cities (Hartford, Waterbury, New haven, and Bridgeport) live under the poverty level. But poverty is not exclusive to those cities. Other cities such as Windham, Norwich, New London, Meriden, Middletown, and certain rural towns also have a higher portion of their population living under the poverty level. Pockets of poverty can also be found along the I-95, I-91, I-84 and I-395 corridors.

[Note: The federal poverty level is about \$11,100 for a single person and about \$23,000 for a family of 4.]

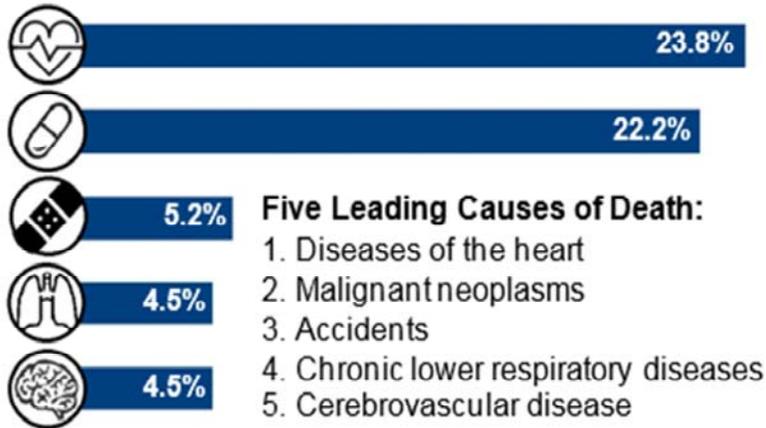


We know the value and impact of education, as a social determinant of health. But length and quality of education is cross-cutting- and it predicts employment and income- which often influences where someone can live and if they can afford health care.

Education is the single most modifiable social determinant of health. The educational attainment status of Connecticut adults is one of the highest in the nation.

90% of CT adults have graduated high school, and 62% have gone on to college. In Hartford= 62% have a high school education or less, in Bridgeport=57%we know that income and education are two big factors that correlate most strongly with life expectancy and most health status measures.

Leading Causes of Death, Connecticut, 2013



Source: DPH Connecticut Registration Report of Births, Deaths, and Marriages, Calendar Year 2013 (www.ct.gov/dph/registrationreport)

DPH Connecticut Department of Public Health

This graphic shows the top 5 leading causes of death.

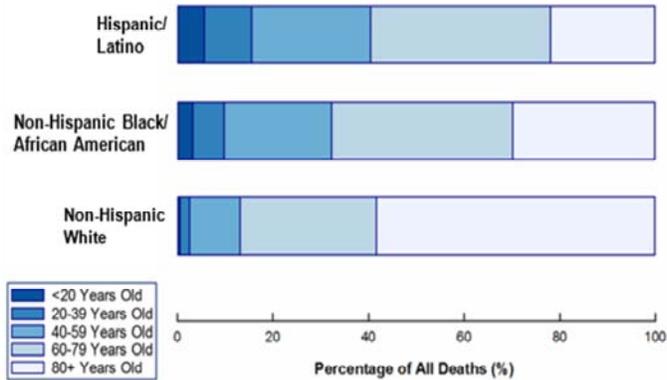
The majority are thought to be preventable, as they are often linked with modifiable risk factors such as smoking, physical inactivity, poor nutrition, and ultraviolet light exposure. There is enough research providing evidence to support the link between several modifiable risk factors and a reduced risk for heart disease and several types of cancers.

Percentage of All Deaths by Age and Race/Ethnicity, Connecticut, 2013

In 2013, deaths to residents over 80 years old represented:

- 58% of non-Hispanic White deaths;
- 30% of non-Hispanic Black/African American deaths; and
- 22% of Hispanic/Latino deaths.

The percentage of deaths among racial/ethnic minorities was greater than that among non-Hispanic Whites for all age groups under 80 years old.



Source: DPH Connecticut Registration Report of Births, Deaths, and Marriages, Calendar Year 2013 (www.ct.gov/dph/registrationreport)

DPH Connecticut Department of Public Health

The disparity ratio for resident deaths by race/ethnicity was consistently higher for both non-Hispanic African American and Hispanic residents compared to non-Hispanic White residents before the age of 80 years old: meaning that our racial and ethnic minority groups are dying younger than their white counterparts.

Connecticut's Specific Populations

Population Group	Number of Individuals	Percent of Population (%)
Veterans (18 years and older)	216,000	6.2
Prison Inmates	17,000	0.5
Sexual Minorities		
LGB Adults	116,000	3.3
LGB Youth (15-19 years old)	14,000	0.4
Disabled		
Less than 18 years old	30,000	0.8
18-64 years old	180,000	5.2
65 years and older	160,000	4.6

Sources: US Census Bureau, Selected Social Characteristics in the United States, American Community Survey, 3-yr Estimates, 2011-2013 (Veterans, Disability Status); CT Department of Correction, Research Unit, Average Confined Inmate Population and Legal Status, March, 1, 2013; Gates, G.J. 2006. Same-sex couples and the Gay, Lesbian, Bisexual Population: New Estimates from the American Community Survey. The Williams Institute (2009 estimate).

 Connecticut Department of Public Health

In addition to the traditional population break-outs by age, sex, race, and ethnicity, we also look at other groups that experience health inequities.

They include nearly 400 thousand people with disabilities, 200 thousand veterans, 100 thousand sexual minorities, and nearly 17,000 prison inmates.

Health data for these populations is extremely limited. Sexual minorities, veterans, and the prison population also have higher prevalence rates for some risk factors and suffer from many conditions at disproportionately high rates.

[NOTE: For the purpose of this presentation, all references to sexual minority high school students refers to students in grades 9-12 who had sexual contact with both sexes or only with the same sex. They also may be referred to as "bisexual" or "gay/lesbian" respectively.]

How Do We Compare

Now that we know a little about our population, let's look at how we fair.

Connecticut's Ranking for Selected Health Indicators Among all States and Territories in the US, Adults, 2014

Preventive Health Behaviors

CT ranked better than most states (Top 10) { Have had a Dental Visit in the past year (1st)
Screened for Colorectal Cancer, 50+ years (2nd)
Women having had a clinical Breast Exam (4th)

Health Risks

CT ranked better than most states with fewer: { Strokes
Cardiovascular Disease, 45+ years
Obesity
Cigarette Smoking

CT ranked worse than most states with more: { Special equipment use
Asthma
Cancer



Source: Connecticut Behavioral Risk Factor Surveillance System, 2016 (www.ct.gov/dph/BRFSS)

Overall, Connecticut meets most national targets for health and better health outcomes, compared to many other states for a range of indicators seen here.

However, it is important to note that while we rank well for some of these chronic conditions, they are still major contributors to premature death and are modifiable with patient education on management and personal behavioral choices.

At-Risk Adult Populations

- Hispanic/ Latino ethnicity
- Non-Hispanic Black/African American race
- Disabled
- Low household income (up to \$35,000 annually)
- No health insurance
- High school degree or less.



Source: CT DPH, http://www.ct.gov/dph/lib/dph/hisz/pdf/hfso2014_ct_report.pdf, 2016

 Connecticut Department of Public Health

To summarize the most at-risk populations in the data packet- it was notable that the following groups on the slide were significantly more likely to experience poor health outcomes, when compared to their counterparts in the state.

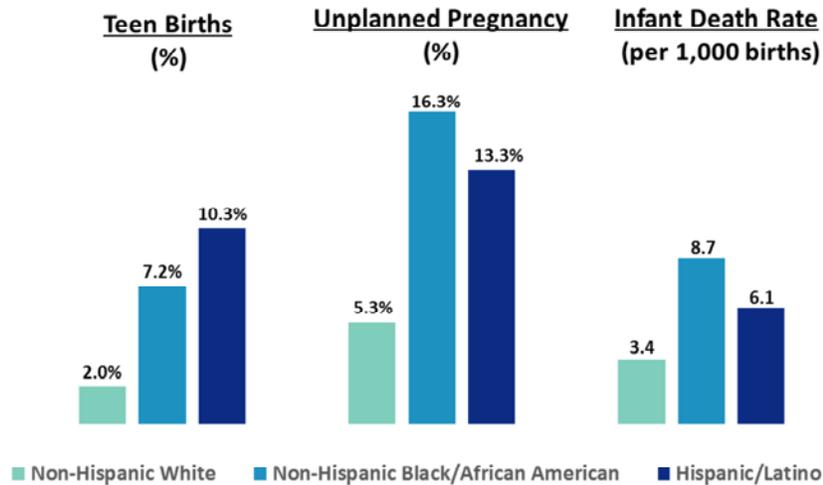
When compared to White non-Hispanics – Hispanics and Black non-Hispanics were at significantly greater risk of: Disability, limited healthcare coverage, no leisure time physical activity in the past week, wearing a seat belt, annual check up and dental visit, flu and pneumococcal vaccinations and permanent teeth extractions.

Maternal, Infant, and Child Health



The health and well-being of mothers, infants and children are good indicators of community health and future well-being.

Maternal Infant Child Health Racial and Ethnic Disparities, Connecticut, 2013



Source: DPH Connecticut Registration Report of Births, Deaths, and Marriages, Calendar Year 2013; Connecticut Pregnancy Risk Assessment Monitoring System (PRAMS), 2013

DPH Connecticut Department of Public Health

When looking at racial and ethnic disparities for maternal infant child health- it was noted that:

- 1) Teen mothers are 3 times more likely to be Hispanic than any other race in CT.
- 2) Black non-Hispanic women are more likely to deliver pre-term babies, and therefore account for 12.4 % of all low birth weight babies
- 3) The infant mortality rate for Black non-Hispanic women is about 3 times that of White non-Hispanic women

Our Environment: Health and Where We Live

Our environment— where we live, work, and play-- plays a major role in shaping our health.

Community Environmental Quality Concerns

Indoor Environment	Outdoor Environment
1) Mold and mildew	1) Ozone
2) Vapors, fumes & odors	2) Particulate matter
3) Insects, vermin, & other pests	3) Toxic chemicals & spills
4) Carbon monoxide	4) Pesticides
5) Secondhand tobacco smoke	5) Safe drinking water
6) Lead	6) Age of housing
7) Asbestos	7) Available & affordable healthy foods
8) Radon	8) Walkable communities & open space
	9) Wood burning boilers

Data Source: Environmental and Occupational Health Assessment Phone Log Database, Connecticut Department of Public Health, 2012

 Connecticut Department of Public Health

The environment isn't just confined to the outdoors. It's also what's inside our homes, schools, and workplaces. Physical, chemical, and biological pollutants in air, water, soil, and food can cause many illnesses, and sometimes can even be fatal.

This slide shows environmental concerns of CT residents that have called into health departments- notice several of which pertain to housing conditions, specifically.

Qualities of our environment, such as the age of our homes, and the availability and affordability of fresh fruits and vegetables also affect health and quality of life.

Connecticut's "Food Deserts"



Data Source: USDA Economic Research Service Food Access Research Atlas (<http://www.ers.usda.gov/data-products/food-access-research-atlas-go-to-the-atlas.aspx>)
Data Source for the population is U.S. Census Bureau, 2009-2013 5-Year American Community Survey

DPH Connecticut Department of Public Health

It's well established that natural foods and fresh fruits and vegetables protect against many diseases. But healthful foods aren't affordable and easy to get everywhere in Connecticut.

The green areas on this map are the locations of "food deserts," designated by the US Department of Agriculture. They're areas with a lot of fast food restaurants, bodegas, and other places that sell sugary, fatty foods, but where fresh, whole foods are expensive or not readily accessible.

There are food deserts all over Connecticut, but mostly in and around our larger towns and in rural areas in the eastern part of the state.

7.9% of the Connecticut population lives in census tracts that are food deserts (over 283,000 people).

Chronic Diseases and Their Risk Factors



Chronic diseases are long-lasting conditions, such as cancer, heart disease, and asthma, that can be controlled but not cured. They account for most of the leading causes of death in Connecticut, and many of them can be prevented.

It's well known that certain lifestyle and environmental factors can increase a person's chances of developing chronic illnesses.

Chronic Diseases and Their Risk Factors

Modifiable Risk Factors	Chronic Diseases					
	Cancer	Diabetes	Heart Disease	Stroke	Chronic Respiratory Diseases	Chronic Kidney Disease
Obesity/overweight	✓	✓	✓	✓		✓
Physical inactivity	✓	✓	✓	✓		✓
Tobacco use	✓		✓	✓	✓	✓
Unhealthy diet	✓	✓	✓	✓		✓
Excessive alcohol use	✓	✓	✓	✓		✓
Indoor/outdoor air quality (incl. secondhand smoke)	✓		✓	✓	✓	
High cholesterol			✓	✓		✓
High blood sugar (pre-diabetes)			✓	✓		✓
Occupational risk (Chemical, dust, exposure; repetitive joint use)	✓				✓	
Excessive sun exposure	✓					
Microbial agents (Unprotected sex, contaminated needles)	✓					
Ionizing radiation	✓					
Allergens					✓	

Source: Connecticut Department of Public Health, Public Health Systems Improvement. Compiled from various sources.

DPH Connecticut Department of Public Health

Here— highlighted in yellow-- we see 6 risk factors for one or more chronic diseases. These risk factors are: obesity, physical inactivity, smoking, poor diet, alcohol, and poor air quality.

The conditions of diseases and their risk factors listed above are highly prevalent in the population. Also, they are extremely costly. These conditions affect vulnerable populations disproportionately and are key drivers of health disparities.

The message from this table is that changing even one risky behavior--losing weight, getting more exercise, or quitting smoking-- can lower a person's chances of getting cancer, heart disease, stroke, and many other chronic conditions.

Tobacco

Currently, **15.4%** of adults smoke, which is approximately 400,000 Connecticut residents.



That is **1** out of every **6** people!

63% of adult smokers attempted to quit in 2014.



Source: Connecticut Behavioral Risk Factor Surveillance System, 2014 (www.ct.gov/dph/BRFSS)

 Connecticut Department of Public Health

Smoking is the single most preventable cause of disease, disability, and death. Cigarette smoking in Connecticut has been declining for more than a decade, and we now have some of the lowest smoking rates in the country.

But smoking rates for certain populations are different from the state average. For example, men, people 25-34 years old, people at the low end of income and education scales, and people with mental illness* are significantly more likely than others to smoke.

63% of adult smokers attempted to quit in a given year, indicating that tobacco policies and supportive programs can continue to drive trend downward.

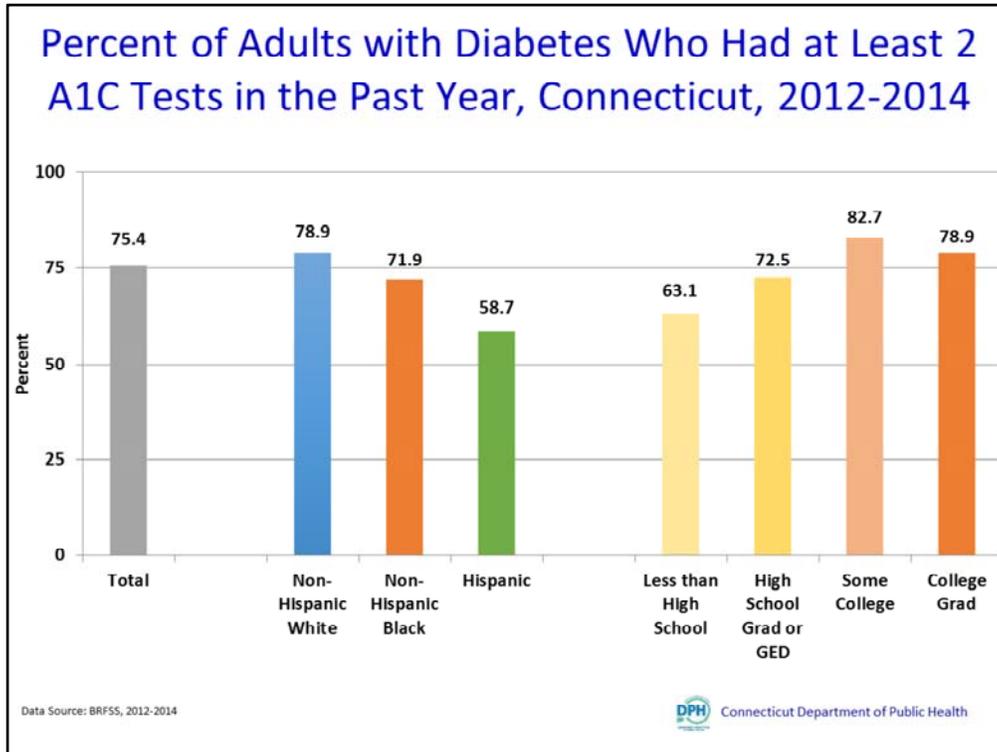
Nationally, smoking prevalence is also significantly higher among veterans, and people serving in the military. About 1 in 3 individuals in these groups smokes cigarettes.**

In Connecticut, one-third to more than half of sexual minority high school students are current smokers.

NOTES:

* *MMWR vol. 62, Feb. 5, 2013. Current cigarette smoking among adults aged >= 18 years with mental illness— United States, 2009-2011.*

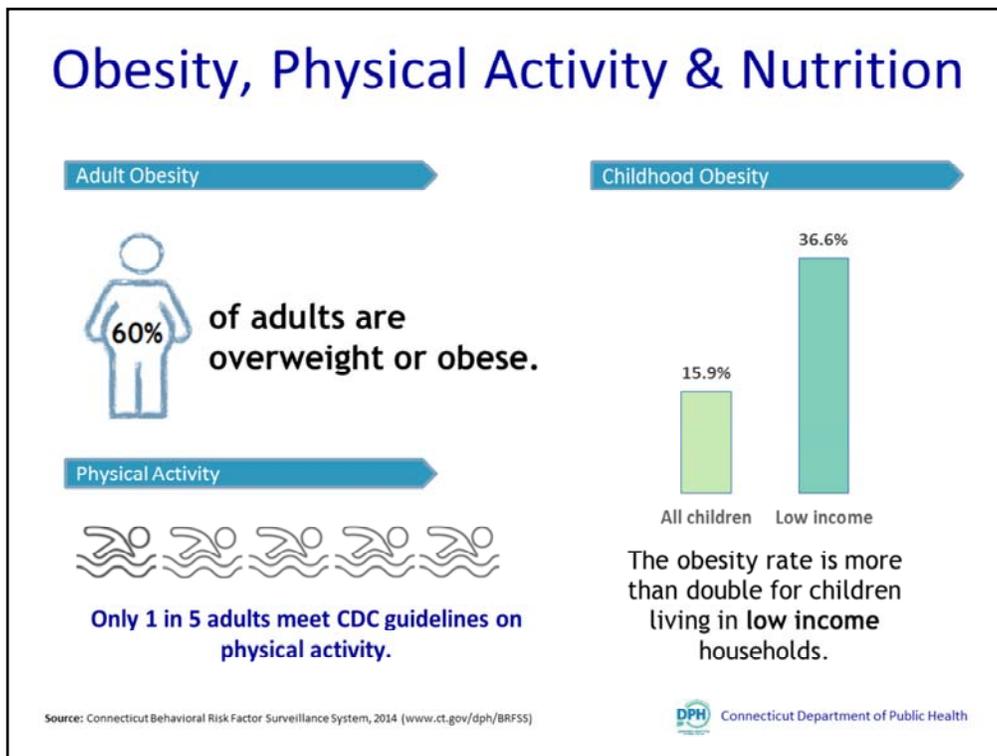
** *CDC. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion. Cigarette Smoking in the United States. Current Cigarette Smoking among US Adults Aged 18 Years and Older. www.cdc.gov/tobacco/campaign/tips/resources/data...*



The A1C test is a measure of how well a person’s blood sugar has been controlled over the previous 2 to 3 months and is a strong predictor of diabetes complications. The American Diabetes Association recommends performing the A1C test at least 2 times a year in persons with diabetes who are meeting treatment goals.

Hispanic adults are less likely to having had at least 2 A1C tests in the past year compared with White non-Hispanic adults. The differences in prevalence between non-Hispanic White and non-Hispanic Black adults did not reach statistical significance. Adults with higher levels of educational attainment are more likely to have had at least 2 A1C tests in the past year compared with adults with lower levels of educational attainment.

The lower percent of 2 or more A1C tests in the past year among adults in racial and ethnic minority groups and of lower educational attainment is of concern because these adults may be at greater risk for complications from diabetes. More frequent testing could help in monitoring diabetes control and adjusting therapy to prevent complications.



Obesity is a risk factor for nearly every chronic disease and condition. While smoking has been decreasing during the past decade, obesity has been increasing steadily.

Obesity rates are highest among African Americans, Hispanics, and people with the least education and lowest incomes. About one-third of the people in these groups are obese.

Nearly 16% of CT children ages 5-12 are obese, but the number is twice that in low-income households. (2008-2010 combined)

Only 1 in 5 adults meet CDC guidelines on physical activity, for lower income only 1 in 10.

[References: Ulrike Boehmer, Deborah J. Bowen, and Greta R. Bauer. Overweight and Obesity in Sexual-Minority Women: Evidence From Population-Based Data. American Journal of Public Health: June 2007, Vol. 97, No. 6, pp. 1134-1140. V.H. Taylor, et al. Canadian Journal of Psychiatry. January, 2012. Vol. 57, no. 1. Beyond Pharmacotherapy: Understanding the Links Between Obesity and Chronic Mental Illness]

*[Notes for reference: 1 in 5 third graders and 1 in 7 kindergarteners-- from CT Obesity Report]
 [Note for presenters: When we look at high school students, 1 in 10 white non-Hispanics, 1 in 7 Hispanics, and 1 in 4 black non-Hispanics are obese.]*

Asthma in Connecticut



1 in 10

adults and children
have asthma



Asthma is more common
in **women** than men.



12.1%

Of women have asthma

6.0%

Of men have asthma

34 people

The number of **deaths** due
to asthma in 2014.



Of the **4,300**
hospitalizations for
asthma in 2014
were potentially
preventable.

Source: Connecticut Behavioral Risk Factor Surveillance System, 2014 (www.ct.gov/dph/BRFSS); Connecticut Hospital Discharge Data, 2014; Connecticut DPH Registration Tables, Table 9, 2013

DPH Connecticut Department of Public Health

Asthma, when examined as a chronic respiratory condition that affects both adults and youth, is a growing concern when considering its' effects comprehensively.

About 1 in 10 Connecticut residents has asthma. Although it can be controlled with medications and by avoiding triggers that can cause an attack, two-thirds of people with asthma are NOT controlling it well. They end up going to Emergency Rooms for treatment and being hospitalized, which adds more than \$600 million in charges to our health care system every year.

Also, non-Hispanic African Americans are 2-3 times more likely to die from asthma than any other racial or ethnic group.

High Blood Pressure & Cholesterol

High Blood Pressure

Non-Hispanic African American adults are more likely to have high blood pressure compared with non-Hispanic White and Hispanic residents.



Cholesterol

Over one-third of Connecticut's adults have high cholesterol and are, therefore, at risk for coronary heart disease.



Source: CT DPH, http://www.ct.gov/dph/lib/dph/hisz/pdf/hfss2014_ct_report.pdf, 2016

 Connecticut Department of Public Health

High Blood Pressure

This higher prevalence of high blood pressure, puts Connecticut's non-Hispanic African American residents at higher risk for stroke.

High Cholesterol

Conversely, we did not find statistical significance by race/ethnicity for high cholesterol- yet is a strong risk factor for coronary heart disease.

Prevention of High Blood Pressure and High Cholesterol

Lifestyle modification such as increasing physical activity, adhering to dietary regulations, weight management is important in blood pressure and cholesterol control and management. Access to wellness resources, such as healthy food, safe places for physical activity, quality health services, and community & clinical-based programs that support prevention, self-management and control of diseases, is key in helping state residents make the necessary lifestyle modifications. Efforts aimed at making wellness resources equally available to all of Connecticut's residents can reduce the health disparities that racial and ethnic groups and other population groups face, and enable all residents to attain their full health potential.

Mental Health, Alcohol, and Substance Abuse

Mental health is a critical component of an individuals' overall health. However, the consequences and reach of the effects of mental illness and substance abuse touches the lives of families, communities and has a huge toll on society.

Hospitalizations and Emergency Department Visits for Mental Disorders, Connecticut, 2014

	Inpatient Hospitalizations	Emergency Department Visits	Combined Total
Number of Events	31,374	78,642	110,016
Total Charges (\$)	\$921 million	\$178 million	Over \$1 billion

Source: Connecticut Hospital Association, CHIME Emergency Department Database, 2014

 Connecticut Department of Public Health

Mental health conditions range from anxiety, depression, eating disorders, schizophrenia and dementia.

Mental disorders are one of the most common reasons for emergency room visits and hospitalizations in Connecticut.

They account for more than 78,000 emergency room visits and 31,000 hospitalizations a year, resulting in more than \$1 billion in hospital charges in 2014.

Adults 18 to 44 years old have the highest rates of emergency room visits and hospitalizations for mental disorders.

Binge Drinking in Connecticut

1 IN 6

Adults

&

1 IN 7

High School Students

BINGE DRINK IN CONNECTICUT

What is Binge Drinking?



4 DRINKS
in  **2 HOURS**



5 DRINKS
in  **2 HOURS**



Source: Connecticut Behavioral Risk Factor Surveillance System, 2014 (www.ct.gov/dph/BRFSS);
Connecticut School Health Survey, Youth Behavior Component, 2014.

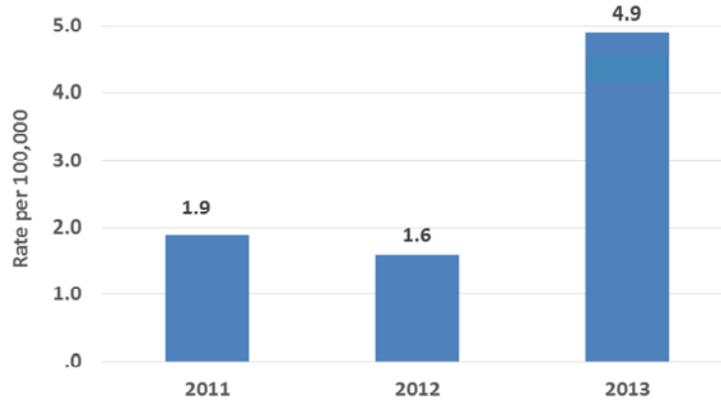
 Connecticut Department of Public Health

Binge drinking can be defined as when men have 5 or more drinks, or women have 4 or more drinks, in about 2 hours.

It's related to a host of health problems, notably falls, car accidents, homicides, and suicides. Alcohol also increases a person's chances of getting cancer and other chronic diseases.

In Connecticut, 1 in 6 adults and 1 in 7 high school students binge drink.

Rate of Unintentional Prescription Opioid Overdose Deaths per 100,000 Connecticut Residents, 2011-2013



Data Source: CT DPH Office of Injury Prevention, Mortality Data

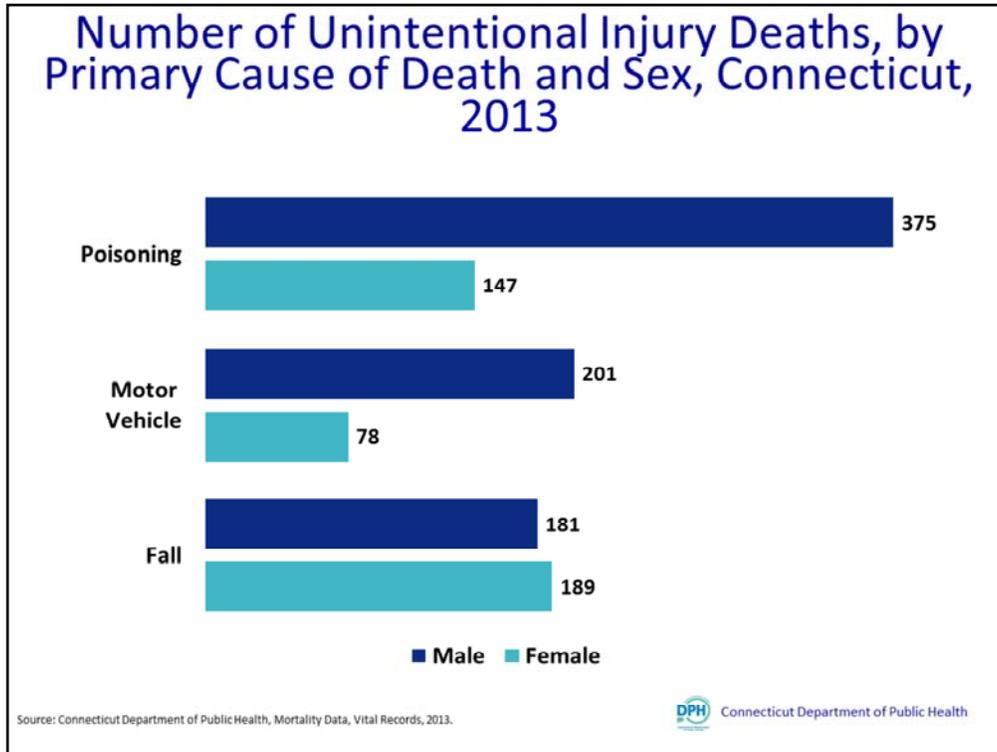
 Connecticut Department of Public Health

Non-medical use of prescription opioids is second only to marijuana as the most common drug problem in the US.

However, the misuse of prescription drugs is a problem in Connecticut. Most commonly seen in young adults ages 18-25, and the death rate has increased 4x between the years of 2011 and 2013.

Injury and Violence

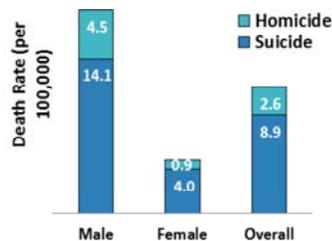
Accidental injuries and intentional injuries are especially important, because they're leading causes of death and premature death. Nearly all injuries can be prevented.



In 2013, 92% of male and 91% of female unintentional poisoning deaths were due to drug overdoses. And of those deaths, more females died from prescription opiates and more males died from heroin.

What else is interesting to note here is that the rate of falls used to be the number 1 unintentional injury, followed by motor vehicle traffic death rates. However, poisoning death rates have surpassed both of these in recent years.

Suicide and Homicide Deaths, 2013

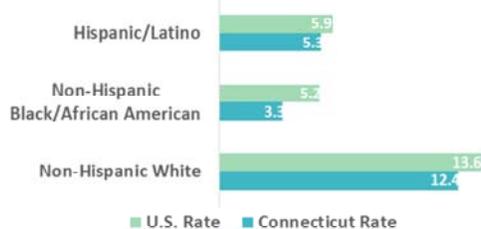


The male death rate for suicide or homicide is **4x** the rate for females.

416 suicide deaths in 2013, higher among those who are:

- Male
- White non-Hispanic
- 35-54 years old
- Residing in Middlesex or Litchfield County

Suicide Rates by Race/Ethnicity, Connecticut and U.S.



Source: DPH Connecticut Registration Report of Births, Deaths, and Marriages, Calendar Year 2013; CDC Wonder

DPH Connecticut Department of Public Health

Now let's look at deaths from intentional injuries.

Suicide kills more Connecticut residents than any other kind of injury, and the number of suicides each year has been climbing. We've had more than 3,000 suicide deaths since 2003.

- Men are about 4 times more likely than women to die from suicide or homicide.
- Suicide rates are significantly higher for non-Hispanic whites, compared to Connecticut residents overall.
- In contrast, Homicide rates are significantly higher for African Americans and Latinos.
- At least 1 in 6 suicide victims in Connecticut are Veterans.* People with disabilities also are believed to have more risk factors for suicide, compared to the general population.
- Gay, lesbian, and bisexual high school students in our state are significantly more likely than heterosexual students to have risk factors for suicide and actually to attempt suicide. They're also more than twice as likely to stay home from school because they feel unsafe.**

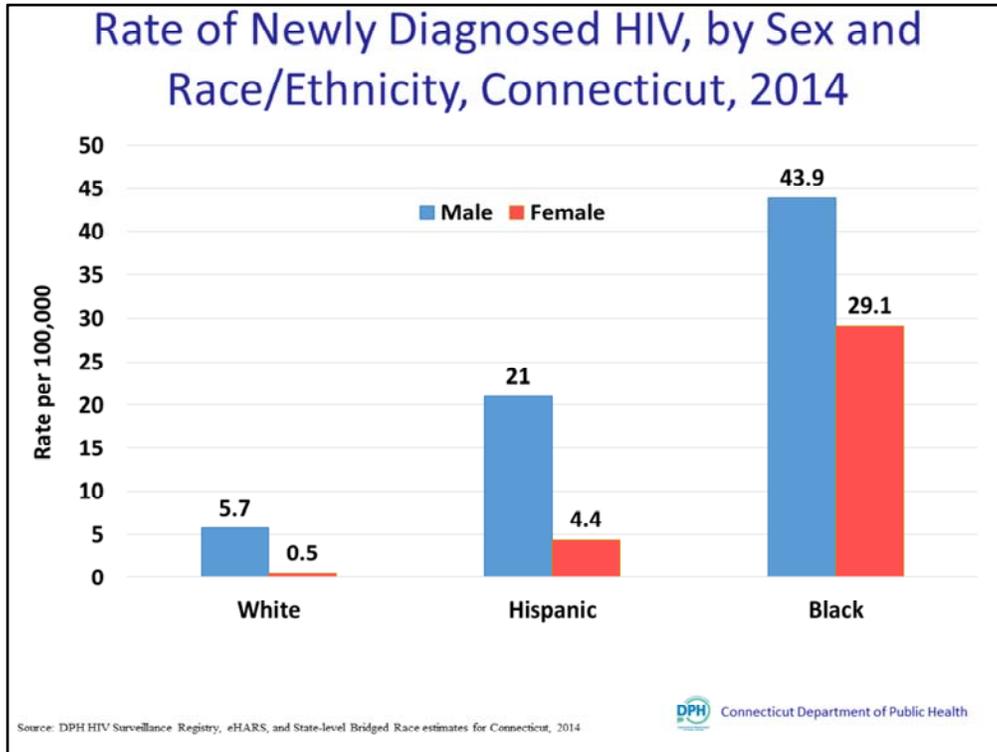
*[Source of veterans data: J. Kemp and R. Bossarte. *Suicide Data Report, 2012*, Dept. of Veterans Affairs, Mental Health Services, Suicide Prevention Program, page 21 (map).]

**[Source of LGB data: *MMWR*, vol. 60. June 6, 2011.]

Infectious Diseases

Infectious Diseases are illnesses caused by microorganisms. They can spread from person to person, or to people from insects or animals.

Many infectious diseases can be prevented, either by protective measures and behavior changes, or by vaccination.



Black males were diagnosed at a rate of approximately 8 times that of white males and Hispanic males were diagnosed at a rate approximately 4 times that of white males. The disparity among females was also significant with 72% of the females diagnosed were classified as black or African American.

New HIV cases continue to be disproportionately reported primarily among Black and Hispanic males and Black females. Concentrated efforts to work closely with these populations continue through the HIV Prevention and Health Care and Support Services (Ryan White) Units of the HIV Program.

Note: Reported numbers less than 12, which is the case for white females (and accompanying rates based on these numbers) should be interpreted with caution because the numbers have underlying relative standard errors greater than 30% and are considered unreliable.

Healthcare Associated Infection

HAI TYPE	# OF CONNECTICUT HOSPITALS THAT REPORTED DATA TO CDC'S NHSN, 2014* Total Hospitals in Connecticut: 41	2014 STATE SIR vs. 2013 State SIR	2014 STATE SIR vs. 2014 Nat'l SIR	2014 STATE SIR vs. Nat'l Baseline†	2014 STATE SIR	2014 NAT'L SIR
CLABSI Nat'l Baseline: 2008	31	↓ 20%	↓ 10%	↓ 55%	0.45	0.50
CAUTI Nat'l Baseline: 2009	31	↓ 5%	↑ 58%	↑ 57%	1.57	1.00
SSI, Abdominal Hysterectomy Nat'l Baseline: 2008	29	↓ 19%	↑ 3%	↓ 15%	0.85	0.83
SSI, Colon Surgery Nat'l Baseline: 2008	30	↑ 24%	↑ 44%	↑ 40%	1.40	0.98
MRSA Bacteremia Nat'l Baseline: 2011	32	↓ 13%	↓ 26%	↓ 35%	0.65	0.87
C. difficile Infections Nat'l Baseline: 2011	32	↑ 5%	↑ 17%	↑ 8%	1.08	0.92

*The number of hospitals that reported to NHSN 2014 are indicated by the # of hospitals. This number may vary across HAI types; for example, some hospitals do not use central lines or urinary catheters, or do not perform colon or abdominal hysterectomy surgeries. †For additional data points, refer to the technical data tables.
 ‡Nat'l baseline time period varies by HAI type. See first column of this table for specifics.

Source: <http://www.cdc.gov/hai/pdf/stateplans/factsheets/ct.pdf>



Healthcare-associated infections (HAIs) are infections patients can get while receiving medical treatment in a healthcare facility. Such infections may occur following surgical procedures, from the use of medical devices such as urinary catheters and from gastrointestinal infections that can spread quickly throughout facilities.

All can have serious consequences including death. CT exceeds the national average for three of these types of infections. Prevention measures include: antimicrobial stewardship and adherence to infection control practices in health care facilities. We have chosen to highlight *c. difficile* because it is the most actionable of them all.

The CT annual estimate is \$280-450 Million in direct healthcare costs.

Connecticut Hospitals Community Health Needs Assessments: Most Common Areas of Concern

<ul style="list-style-type: none">▪ Older Adult Health Issues<ul style="list-style-type: none">▪ Transportation▪ Availability/affordability of senior assisted housing▪ Social support systems▪ Engagement in medical decision-making▪ Repair/maintenance required of them to remain independent in their own homes▪ Burden of chronic diseases▪ Access to Care<ul style="list-style-type: none">▪ Health literacy▪ Cost of copays/medications▪ Absence of program/services tailored for special populations (homeless, mentally-ill, teens, ethnic and racial minorities)▪ Challenges navigating the insurance marketplace	<ul style="list-style-type: none">▪ Community Infrastructure<ul style="list-style-type: none">▪ Inadequate structures that fail to support physical activity▪ Accessibility to green spaces▪ Food deserts▪ Asthma<ul style="list-style-type: none">▪ Asthma management and prevention education▪ Environmental and housing conditions▪ Mental Health & Substance Abuse Services<ul style="list-style-type: none">▪ Ineffective existing programs▪ Limited treatment options (youth psychiatric and behavioral care)▪ Obesity<ul style="list-style-type: none">▪ Exercise and nutrition education▪ Heart disease and Diabetes
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A review of 26 CT hospital community health needs assessments revealed reoccurring themes of areas of need and concern by CT residents.

The emerging themes revolved around older adult health issues, access to care, community infrastructure, asthma, mental health and substance abuse services and obesity.

These areas require intervention at a higher level, in order to improve health at the community-level.

Preliminary Cost Data

Table 1: Annual Estimates of Six High Cost, High Burden Conditions in Connecticut

Condition (per CDC 6.18 Initiative)	CDC National Estimate (annual)	CT Calculated Annual Estimate*	Year	Brief Description
Smoking	\$300 Billion	\$3 Billion	2014	Includes direct healthcare costs and loss of productivity.
Blood Pressure	\$42.8 Billion	\$428 Million	2011	Includes direct healthcare costs for hypertension only (not CVD, stroke etc.)
Healthcare Associated Infection	\$28.4- 45 Billion	\$284-450 Million	2011	Includes direct healthcare costs only
Asthma	\$56 Billion	\$560 Million	2007	Includes direct healthcare costs only
Unplanned Pregnancy	\$21 Billion	\$210 Million	2010	Includes direct health care costs only
Diabetes	\$245 Billion	\$2.44 Billion	2012	Includes direct and indirect healthcare costs

Source: CDC 6/18 Initiative

* Calculation method: CDC National Estimate X 0.01, 0.01 is the CT proportion of the U.S. population (rounded to 100ths)



Connecticut Department of Public Health

We recognize consideration of cost implications is important for population health planning. In this slide we have developed cost estimates for key conditions.

It is difficult to make comparisons because data for several conditions are not likely available at the state level and methodological expertise is required.

This is a labor intensive process and we would like to further develop this capacity as part of population health planning.

Conclusions

- While our statewide population is aging and growing more diverse, our racial and ethnic minorities are growing younger- putting them into a high risk category for risk behaviors like smoking, drinking, having unsafe sex, etc.
- Chronic diseases, cancer and accidental injuries top the list of causes of premature death in Connecticut.
- Residents that have lower-income, are ethnic minorities, and specific age groups such as youth, young adults and older adults are more likely than their counterparts to have risk factors for many diseases.
- Limitations on accessing and collecting data on health costs for specific populations in a regional capacity, such as town-level data, remain a challenge for planning and policymaking.
- At- risk adults, sexual minorities, veterans, and the prison population also have higher prevalence rates for some risk factors and suffer from many conditions at disproportionately high rates.
- Opportunities exist to address obesity, smoking, and other risk factors for chronic diseases, and to prevent accidental and intentional injuries and infectious diseases.