T

2014

Community Health
Action Response
Team (CHART)

TOLLAND COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT

The Community Health Needs Assessment (CHNA) describes the health of the community, by presenting relevant information on socioeconomic and demographic factors affecting health, personal health-related lifestyle practices, health status indicators, community health resources, and studies of current local health issues.

Table of Contents

Introduction

The 2014 Tolland County Community Health Needs Assessment (CHNA) represents the collaborative efforts of the Eastern Highlands Health District/Tolland County Community Transformation Grant (CTG) ACHIEVE Coalition to begin to assess and prioritize health needs in our community and to collectively develop strategies and mobilize resources to improve the health of county residents.

The CTG Program is funded by the Centers for Disease Control and Prevention (CDC). The CTG Program's overarching goal is to create healthier communities by making healthy living easier and more affordable. The CTG program aims to improve the the health of all Americans by improving weight, nutrition, physical activity, tobacco use, emotional well-being, and overall mental health. By promoting healthy lifestyles and communities, especially among population groups experiencing the greatest burden of chronic disease, CTGs help improve health, reduce health disparities, and lower health care costs.(1)

Tolland County is one of five counties in the state awarded CTG funding in partnership with the Connecticut Department of Public Health (CTDPH) to build capacity to support healthy lifestyles in a combined county population of over 889,000 including a rural population of 306,000. Connecticut's CTG Program targets evidence-based strategies to promote tobacco-free living, active living and healthy eating, quality clinical and other preventive services, healthy and safe physical environments, and social and emotional wellness.

The CTG Program is closely aligned with two other nationwide health promotion initiatives, the National Prevention Strategy and the Million Hearts Campaign™. The National Prevention Strategy is a comprehensive plan to increase the number of Americans who are healthy at every stage of life. The Prevention Strategy recognizes that good health comes not just from receiving quality medical care, but also from clean air and water, safe outdoor spaces for physical activity, safe worksites, healthy foods, violence-free environments and healthy homes. Prevention should be woven into all aspects of our lives, including where and how we live, learn, work and play.(2) The Million Hearts™ Campaign aims to prevent one million heart attacks and strokes over the next five years. Million Hearts™ brings together communities, health systems, nonprofit organizations, federal agencies, and private-sector partners from across the country to fight heart disease and stroke.(3)

Conducting a community health needs assessment is the first step to developing a community health improvement plan. The CHNA describes the health of the community, by presenting relevant information on socioeconomic and demographic factors affecting health, personal health-related lifestyle practices, health status indicators, community health resources, and studies of current local health issues. The CHNA identifies population groups that may be at increased risk for poor health outcomes, assesses the larger community environment and how it impacts health, and identifies areas where additional or better information is needed. The assessment process is highly collaborative, involving a broad spectrum of community stakeholders.

The leading health issues in Tolland County, as in the state and the nation, result from many underlying factors which can be controlled or modified. Harmful lifestyle behaviors such as smoking, overeating, poor nutrition, lack of physical activity, and substance abuse have major impacts on individual health. Economic and language/cultural factors present barriers to access and utilization of medical care and preventive health services. Income, employment status, educational attainment, housing, and other social factors impact health or limit access to care. Uncontrollable factors, including inherited health conditions or increased susceptibility to disease, also significantly influence health.

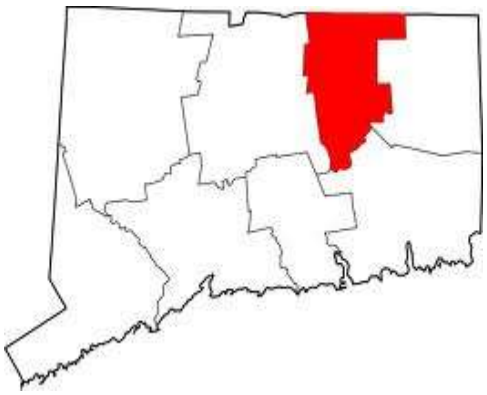
Poverty underlies many of the social factors that contribute to poor health. Differences for many health indicators are also apparent by gender, race/ethnicity, age, and geographic area of residence. This information will be used to guide the development of programs and services to meet identified health needs.

Recent trends in health indicators for county residents show improvement in overall mortality rates for many leading causes of death. There are indications of improvement in personal health habits such as smoking and activity rates and accessing screening services for early detection of certain diseases. However, disparities in health care access and health status in certain populations persist. Expanded joint planning and coordination of programs and services among community partners can reduce health disparities and improve the health of all county residents.

The intent is for the Community Health Needs Assessment to have significant value for the community, and to be widely used to advance health-related service planning by a diverse constituency of private and public agencies. We welcome your comments and reactions to this report, and invite you to join in the assessment process going forward.

Section I: EHHD/Tolland County Population and Demographic Overview

Situated in the mid northern area of Connecticut, Tolland County occupies 410 square miles in the state and includes 13 municipalities. According to the 2010 Census, the total population of the county was 146,979, with the average population density calculated to be 372 persons per square mile. The projected 10-15 year growth in population is estimated to be 0.3% per year.



Tolland County, CT
Source: Google images

In 2010, as reported by the Census, there were 54,452 households in the county, with the median age being 37 years. Twenty percent of the population is under the age of 18 and 12% are persons aged 65 and over. Tolland County has the distinction of being ranked the top county in Connecticut in health outcomes, according to the 2012 County Health Rankings developed by the University of Wisconsin population Health Institute. Health outcomes represent how healthy a county is, while health factors represent what influences the health of a county. Tolland County ranks number two among all Connecticut counties based on health factors.

Overall, Tolland County's population is relatively non-diverse; the Census 2010 show that 90.7% is White and 3.7 % Black or African American, 3.6 % Asian, 0.2% American Indian, and 4.6% Hispanic or Latino. However, as noted in Table 3, the towns of Mansfield, Union, and Ellington have experienced the greatest percentage change in population.

According to the U.S. Census American Community Survey (ACS) 5-Year estimates for 2006-2010, the predominant ancestries in the county were: 22% Irish, 17% Italian, 14% English, 14% German and 11% French, and 10% Polish. Only 6.7% of the county's population is foreign-born. The vast majority of county residents speak English (91%); 9.9% of residents have a primary language other than English. It is important to note that Census ACS data are estimates based on a sample and therefore subject to sampling variability. In contrast, the decennial Census data are official population and housing counts. Additional information on the sampling methodology used in the ACS is available at www.census.gov.(4)

Overall levels of educational attainment by Tolland County residents surpass the state average - 92% of county residents are high school graduates, and 37% attained a bachelor's degree or higher.

The median income per household in the county as estimated by the 2006-2010 ACS was $ 77,175, and 6.4% of the county's population was living in poverty, well below the state average of 9.2%. High poverty areas exist in certain communities, and poverty is most common in female-headed households with children under 18 years of age.
Related to housing characteristics, the majority of Tolland County residents own their own homes (76.4%). Homeownership in the county is well above the state average. According to CERC Town Profiles there are over 4,209 subsidized housing units in the county.

Tolland County and Town Designations and Governance

There are 13 municipalities in Tolland county, including: Andover, Bolton, Columbia, Coventry, Ellington, Hebron, Mansfield, Somers, Stafford, Tolland, Union, Vernon, and Willington. Of these 13 towns, five are classified as rural by the Connecticut State Office of Rural Health. The University of Connecticut- Storrs student population (approximately 22,000 undergraduate and graduate students) is a contributing factor influencing health statistics and demographics within the county profile.

Although Connecticut is divided geographically into eight counties, these counties do not have any associated government structure. The Connecticut General Assembly abolished all county governments in the state in 1960. The 169 towns of Connecticut are the principal units of local government in the state and have full municipal powers including: corporate powers, eminent domain, ability to levy taxes, public services (low cost housing, waste disposal, fire, police, ambulance, street lighting), public works (highways, sewers, cemeteries, parking lots, etc.), regulatory powers (building codes, traffic, animals, crime, public health), environmental protection, and economic development.

Under Connecticut's Home Rule Act, any municipality in CT is permitted to adopt its own local charter and choose its own structure of government. The three principal municipal government structures used in the state are: 1) selectman–town meeting, 2) mayor–council, and 3) manager–council.

Three Regional Planning Organizations (RPOs) serve Tolland County municipalities including the Capitol, Northeastern and Windham Region Council of Governments. Through local ordinance, the municipalities within each of these planning regions have voluntarily created one of the three types of RPOs permitted under CT statute to carry out a variety of regional planning and other activities on their behalf.

Tolland County Municipality Population and Demographic Highlights

2000-2010 Census Comparisons, Growth Projections, and Ethnic/Racial Composition

As noted in Table 1, the county's two most populated urban centers are Vernon (2010 population – 28,548), and Mansfield (2010 population – 27,033, inclusive of UConn Students living in Mansfield).(5) Seven of the county's 13 municipalities have populations of 10,000 or greater; the least populated town in the county is Union, with 723 residents. Population projections from the CT State Data Center show an overall net growth rate in the county of 1.5%, for the 15 year period 2015-2030, with the highest growth rate projected in Tolland and Andover.(6)

Table 1: 2010 Census Population and Projections for Tolland County Municipalities, 2015-2030

Municipality	Census 2010 Population	2015	2020	2025	2030	% Change 2015-2030
Andover	3,303	3,613	3,799	3,989	4,144	**3.8%**
Ashford*	4,528	4,721	4,917	5,101	5,256	**3.0%**
Bolton	4,908	5,229	5,235	5,267	5,249	**0.4%**
Chaplin*	2,479	2,576	2,694	2,813	2,912	**3.2%**
Columbia	5,485	5,752	6,007	6,268	6,494	**3.3%**
Coventry	12,435	12,812	13,181	13,495	13,711	**1.9%**
Ellington	15,602	15,264	15,994	16,744	17,435	**3.7%**
Hebron	9,686	10,320	10,901	11,464	11,944	**3.2%**
Mansfield	26,543	27,112	27,140	27,253	27,417	**0.3%**
Scotland*	1,880	2,037	2,203	2,358	2,502	**5.7%**
Somers	11,444	11,196	11,467	11,697	11,889	**1.7%**
Stafford	12,087	11,888	12,017	12,140	12,172	**0.8%**
Tolland	15,052	15,970	16,849	17,671	18,383	**4.0%**
Union	854	722	729	742	755	**0.9%**
Vernon	29,179	28,988	29,371	29,775	29,770	**0.8%**
Willington	6,041	6,575	6,665	6,703	6,708	**1.0%**
Tolland County	149,309	148,421	149,507	150,321	150,656	**1.5%**
Connecticut	3,574,097	3,573,885	3,622,774	3,669,990	3,702,400	**3.6%**

* Denotes towns not included in Tolland County but members of EHHD

*Sources: CERC Town Profiles, accessed at http://www.cerc.com and Connecticut State Data Center, University of Connecticut, http://ctsdc.uconn.edu/*based on census 2000 projections.

Changes in the ethnic and racial composition of the county by municipality over the past decade compiled by the CT State Data Center are shown in Tables 2 and 3. Overall, the county has become slightly more diverse from 2000 – 2010. Based on the overall population numbers, the greatest increase in percentage of population change, occurred in Mansfield (28%), followed by Union (23%) and Ellington (21%).(6)

Table 2: Tolland County Municipality Census 2000 and 2010 Population Counts by Race/Ethnicity*

Municipalities	Total Population		White		Black		American Indian		Asian		Pacific Islander		Other		Hispanic or Latino	
	2000	2010	2000	2010	2000	2010	2000	2010	2000	2010	2000	2010	2000	2010	2000	2010
Andover	3036	3303	2934	3169	28	36	10	4	14	37		0	21	17	47	53
Ashford	4098	4317	3922	4062	41	45	11	16	42	58		1	18	46	82	152
Bolton	5017	4980	4903	4764	33	53	3	6	24	70	2	0	15	12	83	151
Chaplin	2250	2305	2189	2184	16	26	6	6	8	6		0	7	31	44	110
Columbia	4971	5485	4843	5327	19	36	4	6	35	36	3	0	28	31	84	159
Coventry	11504	12435	11153	11910	66	128	29	30	70	107	1	1	46	68	198	325
Ellington	12921	15602	12434	14369	128	301	21	29	167	517	1	3	57	110	181	406
Hebron	8610	9686	8411	9367	50	48	11	17	48	95	3	4	17	26	92	224
Mansfield	20720	26543	17387	21590	1010	1409	41	33	1482	2227	10	9	389	620	893	1606
Scotland	1556	1726	1520	1676	7	10	1	4	8	6	3	0	8	4	36	58
Somers	10417	11444	8643	9565	1023	994	57	17	65	90	6	3	417	660	844	850
Stafford	11307	12087	10956	11546	72	84	29	19	103	133		1	57	90	187	347
Tolland	13146	15052	12720	14249	101	173	10	12	156	353	2	4	51	99	151	336
Union	693	854	683	812	0	4	0	3	1	4	0	0	0	8	0	32
Vernon	28063	29179	25243	24825	1120	1697	68	68	745	1263	10	10	342	584	1005	1907
Willington	5959	6041	5605	5632	58	48	7	20	180	202	5	1	37	42	108	206
Tolland County		149,309		133,970		4,224		37						5,893		5,285
Connecticut	3,405,565	3,574,097	2,780,355	2,772,410	309,843	362,296	9,639	11,256	82,313	135,565	1,366	1,428	147,201	198,466	320,323	479,087

** Note: Hispanic or Latino population counts include persons of any race, therefore there is overlap in other categories.*

Source: CT State Data Center, University of Connecticut, http://ctsdc.uconn.edu/

Table 3: Tolland County Municipality Census 2000 and 2010 Numeric and Percent Population Change

Municipalities	Total Population		White		Black		Asian		Hispanic or Latino	
	# Change	% Change	# Change	% Change	# Change	% Change	# Change	% Change	# Change	% Change
Andover	267	8.79	235	8.01	8	28.57	23	164.29	6	12.77
Ashford	219	5.34	140	3.57	4	9.76	16	38.1	70	85.37
Bolton	-37	-0.74	-139	-2.83	20	60.61	46	191.67	68	81.93
Chaplin	55	2.44	-5	-0.23	10	62.5	-2	-25	66	150
Columbia	514	10.34	484	9.99	17	89.47	1	2.86	75	89.28
Coventry	931	8.09	757	6.79	62	93.94	37	52.86	127	64.14
Ellington	2681	20.75	1935	15.56	173	135.16	350	209.58	225	124.31
Hebron	1076	12.5	956	11.37	-2	-4	47	97.92	132	143.48
Mansfield	5823	28.10	4203	24.17	399	39.50	745	50.27	713	79.84
Scotland	170	10.92	156	10.26	3	42.86	-2	-25	22	61.11
Somers	1027	9.86	922	10.68	-29	-2.83	25	38.46	6	0.71
Stafford	780	6.9	590	5.38	12	16.67	30	29.13	160	85.56
Tolland	1906	14.5	1529	12.02	72	71.29	197	126.28	185	122.52
Union	161	23.23	129	18.89	4		3	300	32	
Vernon	1116	3.98	-418	-1.66	577	51.52	518	69.53	902	89.75
Willington	82	1.38	27	0.48	-10	-17.24	22	12.22	98	90.74
Connecticut	165,532	4.9	-7,945	-2.9	52,453	16.9	53,252	64.7	158,764	49.6

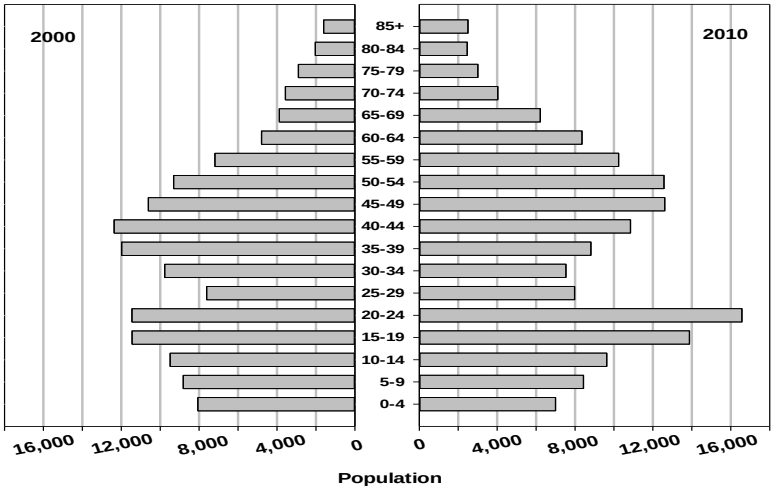
** Note: Hispanic or Latino population counts include persons of any race.*

Source: CT State Data Center, University of Connecticut, http://ctsdc.uconn.edu/

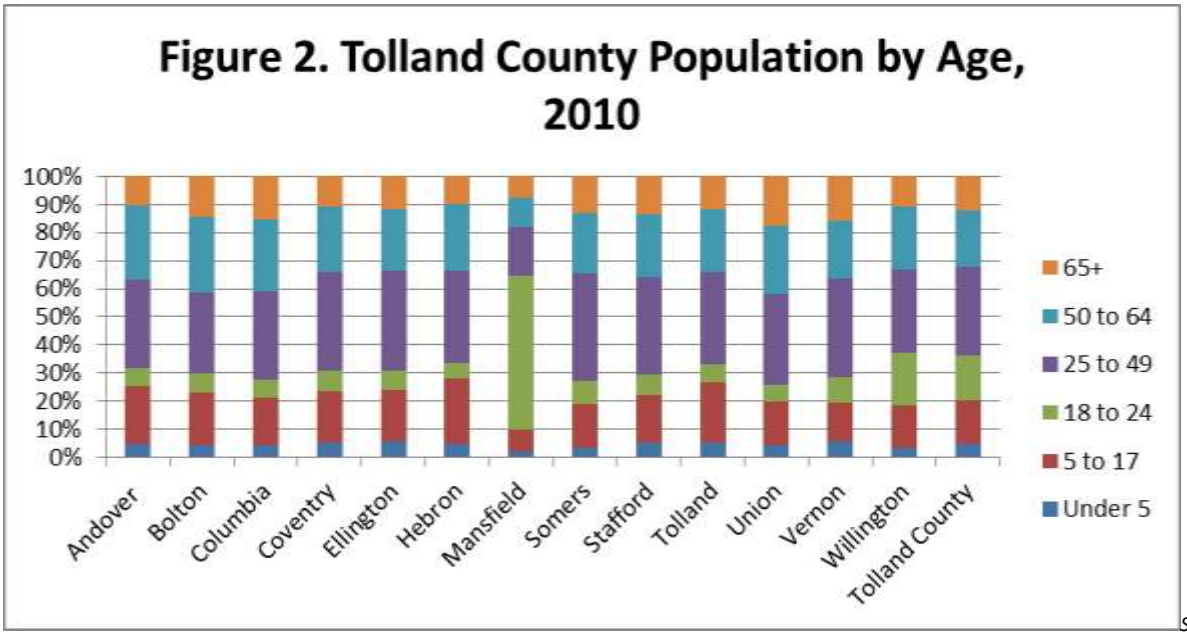
Age Distribution

Figure 1 graphically shows the increases and shifts in the county population, with a significant increase of the population in the age groups of 15-19 and 20-24 from 2000-2010. Based on Census 2010 data, the age distribution of individual municipalities compared to the overall county is shown in Figure 2.(7)(5)

Figure 1
Population of Tolland County
2000-2010, by Age Group

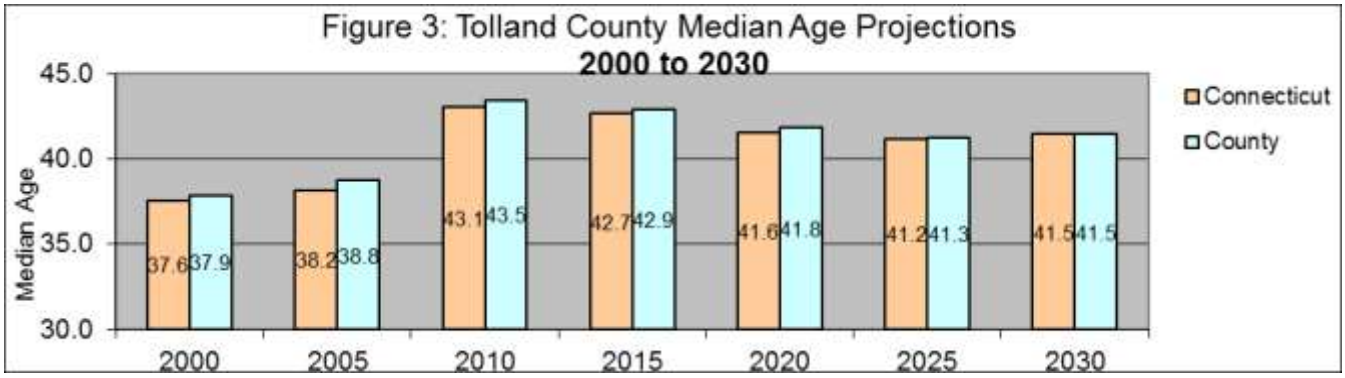


Source: U.S. Census, Decennial Census by Age, Race, Sex, Ethnicity, provided courtesy of HISR, Connecticut Department of Public Health *http://www.ct.gov/dph/cwp/view.asp?a=3132&q=488832*), accessed May 2, 2012.



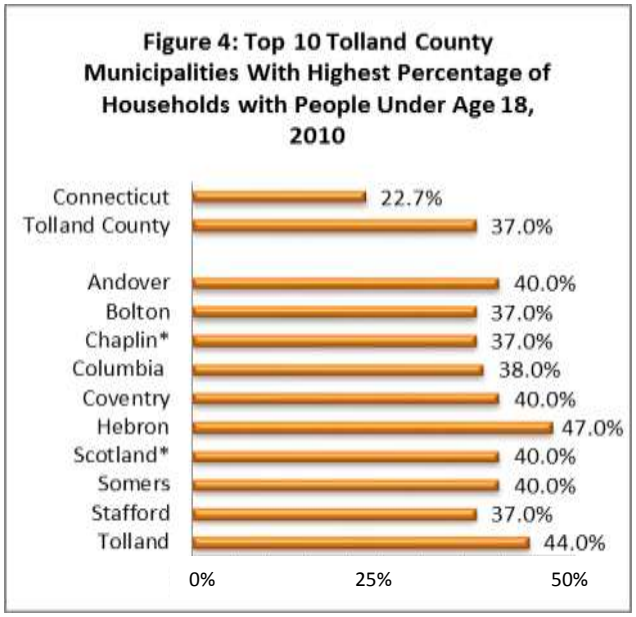
Source: CERC Town Profiles, http://www.cerc.com

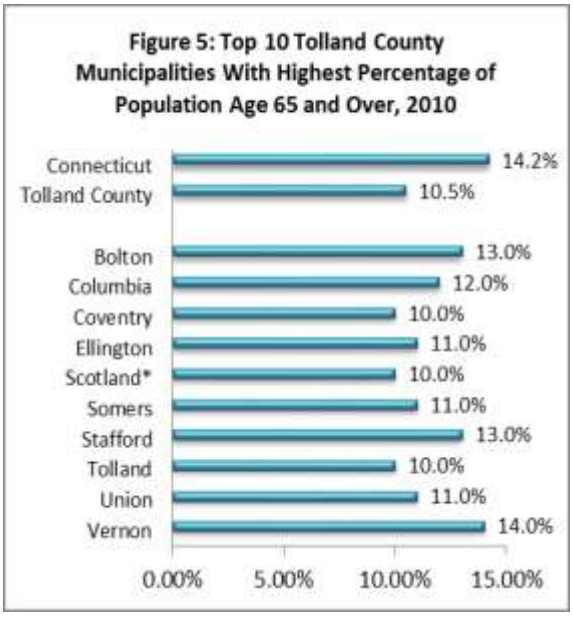
Shifts in population demographics are noteworthy as the need for health care and support services by residents generally increases with advancing age. The percentage of 17-24 age group members in the county may vary or remain stable over time. The CT State Data Center projects the median age in the county will continue to decrease from 2010 until 2030, as shown in Figure 3.(6)



Source: Connecticut State Data Center, University of Connecticut, http://ctsdc.edu/projections/ct_towns.html

With the exception of having a higher percentage of residents ages 18-24, overall the percentage of residents for all other age groups in the county closely mirrors the state averages. At the municipal level, the top 10 communities with the highest percentage of residents under the age of 18 and residents ages 65 and over are shown graphically in Figures 4 and 5.(5) This information is important as it has broad implications for health, education, housing, and human services planning.





Source: CERC Town Profiles www.cerc.com
**denotes a town not officially located in the county*

Educational Attainment

Advancing levels of education are strongly associated with increased income and the related benefits of improved socioeconomic status. According to the National Center for Educational Statistics, young adults with a bachelor's degree earned more than twice as much as those without a high school diploma or its equivalent in 2009, 50 percent more than young adult high school completers, and 25 percent more than young adults with an associate's degree. In 2009, the median earnings of young adults with a master's degree or higher was $ 60,000, one-third more than the median for young adults with a bachelor's degree.(8)

Socioeconomic status and health are strongly correlated, with persons of higher socioeconomic status generally experiencing better health status and access to health care. Persons with higher socioeconomic status are also more likely to live in safe neighborhoods, be steadily employed at higher paying jobs with health benefits, and practice healthy lifestyle behaviors. There is a growing body of research suggesting that socioeconomic factors underlie many of the observed racial, ethnic, and gender inequalities in health status, and that socioeconomic factors are powerful predictors of health status and health outcomes.

As indicated in Table 4, from 2000-2010 there was a favorable upward trend in the percentage of Tolland County residents completing high school and attaining a bachelor's degree.(9)' (5)

Table 4: Educational Attainment in Tolland County Residents Ages 25 and Over, Census 2000 and 2010

Municipality	High School Graduate or Higher		Bachelor's Degree or Higher	
	Census 2000 (%)	Census 2010 (%)	Census 2000 (%)	Census 2010 (%)
Andover	93.4	95.0	34.0	38.0
Ashford	87.2	91.0	34.8	39.0
Bolton	94.0	95.0	36.7	41.0
Chaplin	84	88.0	20.3	23.0
Columbia	94.1	96.0	36.0	40.0
Coventry	91.7	93.0	28.2	33.0
Ellington	91.8	94.0	32.1	37.0
Hebron	93.8	95.0	43.0	47.0
Mansfield	91.3	95.0	54.1	59.0
Scotland	87.7	91.0	22.0	24.0
Somers	83.6	89.0	23.0	29.0
Stafford	82.5	88.0	16.7	23.0
Tolland	93.3	96.0	42.5	47.0
Union	89.3	94.0	26.4	32.0
Vernon	85.8	90.0	26.8	32.0
Willington	87.6	67.0	34.1	39.0
County	89.2	92.2	32.8	36.8
Connecticut	84.0	89.0	31.4	35.2

Sources: U.S. Census Bureau, 2000 Census of Population and Housing. Summary Social, Economic and Housing Characteristics. U.S. Census 2010 Connecticut and CERC 2011 Town Profiles.

The overall county average for high school completion exceeds the state average. Not surprisingly, lower levels of educational attainment are found in Willington, which also presents on of the higher poverty rates and lower median household incomes in the county, as shown in table 7.

The Connecticut State Department of Education's (CSDE) Comprehensive Plan for Education includes high school reform to assure all students graduate and are prepared for lifelong learning and careers in the global competitive economy. As noted in Table 5, the Bolton School District achieved a 98.4% high school completion and 1.4% high school dropouts for the class of 2008 (the most recent published data). Stafford School district had the lowest graduation rate (88.7%), Regional District 19 (Ashford, Mansfield, Willington) had the highest cumulative dropout rate at 10.2%.(9) All districts in the county achieved the *Healthy People 2020* target of 82.4% of students graduating from high school.

Table 5: High School Graduation Rates and Dropout Rates, School Districts in Tolland County, 2008

District Name	Graduation Rate, Class of 2008	Cumulative Dropout Rate (%)
Bolton School District	98.4	1.4
Coventry School District	96.4	3.3
Ellington School District	92.9	7.1
***Regional School District 11 (Chaplin, Hampton, Scotland)**	94.6	4.2
Regional School District 8 (Andover, Hebron, Marlborough)	92.4	7.0
Regional School District 19 (Ashford, Mansfield, Willington)	89.7	10.2
Somers School District	94.7	4.5
Stafford School District	88.7	7.5
Tolland School District	99.5	0.5
Vernon School District	90.6	6.8
Connecticut	92.1	6.8

Consistent with some of the local demographic and educational trends, there was a slight increase in the minority population in the Ellington, Mansfield, Vernon, and Region 19 School Districts.

The Stafford School District had the most dramatic increase in students not fluent in English.

There is considerable variation in the minority population by school in some school districts.(10)

Table 6: Percent of Minority and ELL Students Enrolled by School District, Tolland County 2008-2010

	Minority (%)		Not Fluent in English (%)	
District Name	**2008-2009**	**2009-2010**	**2008-2009**	**2009-2010**
Andover School District	6.9	4.8	1.0	1.6
Ashford School District				
Bolton School District	7.1	8.8	0.1	0.3
Chaplin School District				
Columbia School District	5.3	5.4	0.1	0.1
Coventry School District	5.3	5.4	0.1	0.1
Ellington School District	9.4	11.1	0.8	1.2
Hebron School District	3.7	4.2	0.5	0.2
Mansfield School District	20.8	19.6	1.9	1.3
Scotland School District				
Regional School District 8	3.8	4.5	0.1	0.1
Regional School District 19	11.7	13.9	0.9	0.9
Somers School District	5.7	5.8	0.6	0.6
Stafford School District	6.7	1.0	0.8	7.3
Tolland School District	7.3	7.3	0.6	0.4
Union School District	3.8	1.3	0.0	0.0
Vernon School District	27.8	29.7	1.9	1.7
Willington School District	7.6	7.9	0.0	0.4
Connecticut			5.2	5.4

Source: CSDE http://sdeportal.ct.gov/Cedar/WEB/ResearchandReports/SSPReports.aspx

Economic Stability – Income, Poverty, and Unemployment

There have been a large number of studies and research that support the idea that health and a state of well being are directly connected to the way that people take care of themselves and have access to health care and social and economic opportunities. Children and adults who receive recommended check ups on a timely basis are in a much better position to address and prevent illnesses and remain healthy most of their lives. Conversely, in areas where individuals who are less fortunate and live in overcrowded environments where the quality of basic needs such as water, food and air are compromised, social interactions are marred by violence and crime and economic opportunities hampered by lack of local investment and high unenployment, show higher rates of disease. Healthy People 2020, a CDC initiative that provides science-based objectives for improving the health of all Americans, emphasizes the inseparable connections between health and the environments in which individuals are born, live, work and play.

The relationship between poverty and health is particularly strong. It is well documented that low income persons are more likely to be uninsured, have fragmented health care, and have higher rates of tobacco use, substance abuse, mental illness and certain chronic diseases such as obesity and diabetes. In addition, poor persons are more likely to have low levels of education, live in substandard housing and unsafe neighborhoods, be unemployed, and be victims of crime.(11)

Considerable income inequalities exist among the 13 Tolland County municipalities. The median household income in 2009-2010 was $74,269. As shown in Table 7, Tolland County residents generally have median incomes above the state($65,686) and well above the national average ($50,046), and poverty rates lower than the state and national averages. and in 2010 income ranged from a low of $54,393 in Vernon to a high of $100,636 in Tolland. Three municipalities have median household incomes below the state average –Stafford, Vernon and Willington. None are below the national average. Two municipalities – Mansfield and Willington - have poverty rates that exceed the state and national average.

A concerning finding is that slightly more than half of the county's muncipalities experienced a decline in the household median income from 2009-2010, likely related to the economic recession and rise in unemployment.(12),(13), (14)

Table 7: Economic Characteristics of Tolland County Municipalities, 2009-2010

	Median Household Income ($) in 2009	Median Household Income ($) in 2010	Poverty Rate (%) in 2009
Andover	88,350	80,803	2.5
Ashford*	68,131	68,199	4.4
Bolton	84,766	87,503	2.9
Chaplin*	64,866	63,321	4.5
Columbia	89,002	84,539	3.9
Coventry	81,253	80,308	5.3
Ellington	78,125	78,252	3.4
Hebron	96,295	99,250	1.9
Mansfield	61,897	71,017	17.3
Scotland*	72,184	65,833	2.2
Somers	81,081	85,914	6.5
Stafford	67,056	62,969	4.5
Tolland	98,918	100,636	2.3
Union	72,428	74,426	3.0
Vernon	60,028	54,393	7.9
Willington	65,140	64,960	16.2
Tolland County	74,520	74,269	6.6
CT	68,055	65,686	8.7
US	50,221	50,046	14.3

**Please note, these towns are not part of the county, however, are included because they are members of the EHHD.*
*Note: Ten most populated towns are listed in **bold type**.*
Sources: CERC town profiles www.cerc.com and U.S. Census http://www.census.gov/prod/2010pubs/p60-238.pdf
Municipal 2009 & 2010 Median Income: http://pschousing.org/files/HC_2010_CTAffordability_Study.pdf
2009 U.S. Median Income: http://www.census.gov/newsroom/releases/archives/income_wealth/cb10-144.html
CT Median Income 2010: http://www.ers.usda.gov CT Median Income 2009: http://www.census.gov/compendia/statab/cats/income_expenditures_poverty_wealth/income_and_poverty--state_and_local_data.html

In examining median income and poverty rates, it is important to note significant inequalities in income and poverty rates exist statewide and within Tolland County by ethnicity, race, gender, and household composition. The Partnership for Strong Communities report, *2010 Housing in Connecticut: The Latest Measures of Affordabili*ty, indicates that the income disparity in Connecticut ranks second in the nation and has grown faster than any state in the nation, according to the CT Department of Economic and Community Development (DECD).(15)

As noted in CT Department of Public Health's *2009 Connecticut Health Disparities Report*, Hispanic or Latino and Black or African American CT residents were 2 to 3 times more likely to live in poverty than White residents.(16) In terms of household composition, according to U.S. Census ACS estimates, nearly one in four female-headed households (no husband present) in the county with children under

the age of 18 live in poverty (23%); for female-headed households with children under the age of 5, this figure jumps to one in two (51%). current minimum wage.(17)

An additional consideration is that in areas with a high cost of living, families living well above the poverty level often struggle financially. The fair living wage in the county is double the current minimum wage.

A timely indicator of financial hardship in the community is the percentage of school-age children who are eligible for free or reduced school meals. The income eligibility for free meals is 130% of the federal poverty level or below; for reduced meals it is more than 130% up to 185% of the federal poverty level. It is important to note that while the data indicate that all school districts in the county fall below the statewide average for free or reduced price meal eligibility, there has been an increase in the past two years in the proportion of eligible children in the majority of Tolland County districts, with the highest percentage increases in Vernon and Willington.(18)

Table 8: Students Eligible for free/reduced price school meals, rank order by school district, 2009-2011

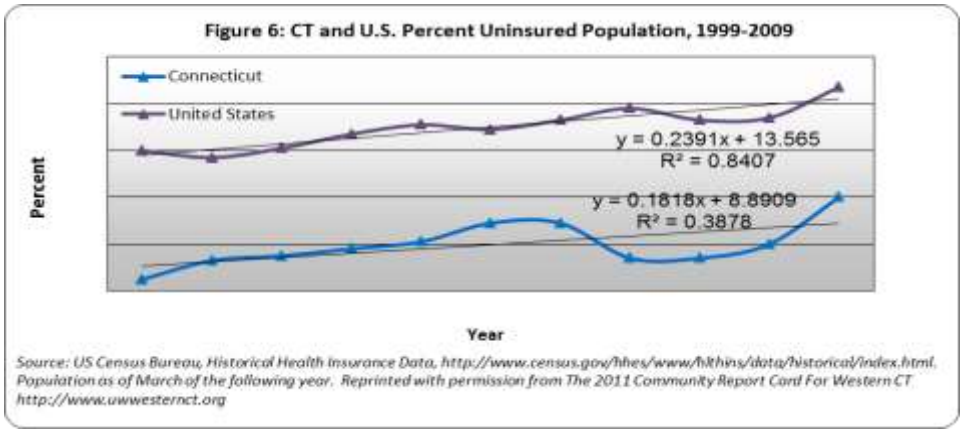
District Name	2009-2010 Eligible for Free/ Reduced Lunch (%)	2010-2011 Eligible for Free/ Reduced Lunch (%)
Vernon School District	27.9	33.5
Stafford School District	25.5	27.5
Mansfield School District	19.7	23.1
Willington School District	13.4	18.2
Coventry School District	16.0	17.1
Regional School District 19	12.1	13.0
Andover School District	10.1	11.7
Bolton School District	8.8	11.3
Columbia School District	7.0	10.9
Ellington School District	7.6	8.4
Regional School District 8	6.2	6.4
Somers School District	5.8	5.3
Hebron School District	3.9	4.8
Tolland School District	3.7	4.5
Union School District	1.3	3.7
Connecticut	32.9	34.4

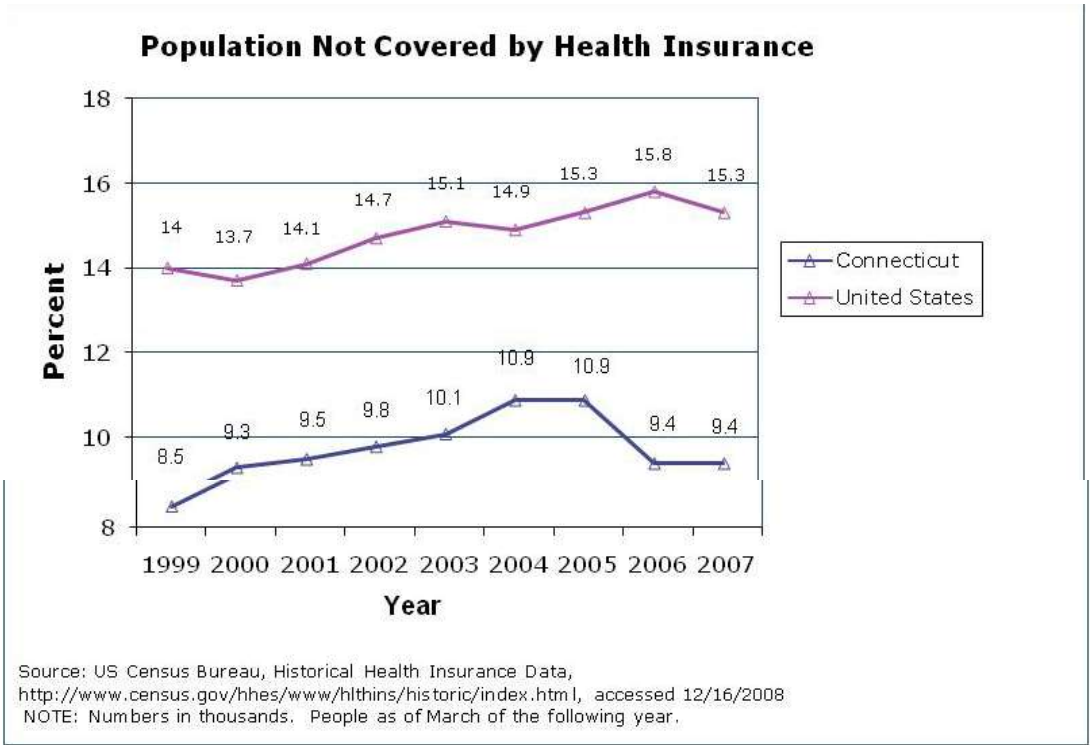
Source: Connecticut State Department of Education, Student Need Data, http://sdeportal.ct.gov/Cedar/WEB/ct_report/StudentNeedDT.aspx

Fortunately Connecticut counties and municipalities have experienced a decline in the unemployment rate over the past year. According to the CT Department of Labor, the state's unemployment rate in March 2011 was 9.2%, and as of March 2012 this had declined to 8.1%, slightly below the national rate of 8.4%. In May 2012, unemployment rates in Tolland County ranked 7th among the 8 Connecticut counties at 6.7%. Unemployment rates ranged from a low of 4.5% in Union to a high of 8.0% in Vernon.(19) Unskilled workers, persons with low educational attainment, and minorities are historically at higher risk for unemployment.

Health Insurance Coverage

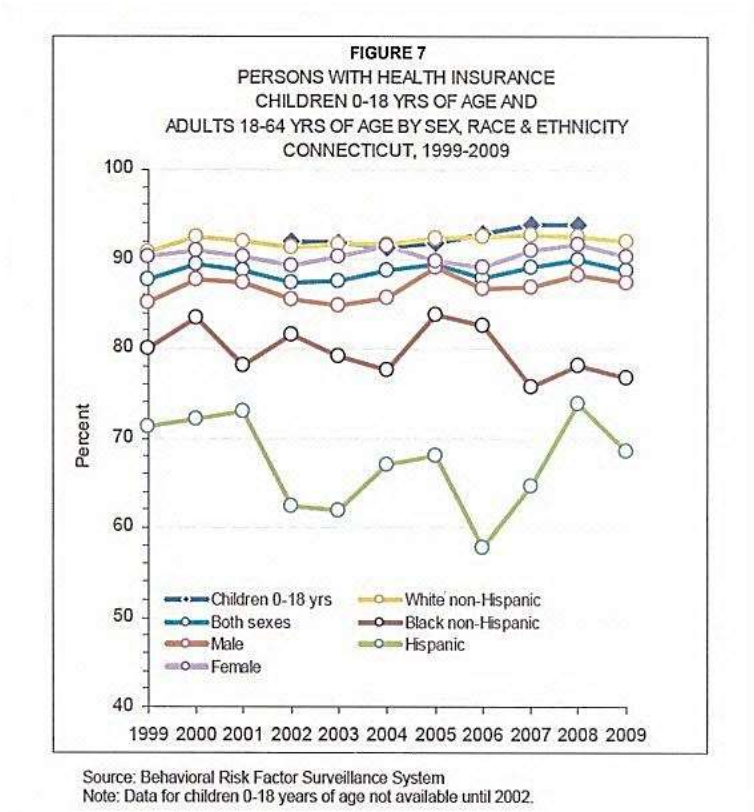
Having public or private health insurance coverage is a strong predictor of both access to and regular use of all types of health care services. Studies demonstrate that individuals lacking health insurance are far more likely to receive fragmented health care and experience delayed access to health screenings and diagnosis and treatment for disease. As shown in Figure 6, the percentage of CT residents who are uninsured is well below the national average. From 2007-2009, however, this percentage increased at a faster rate in CT than in the U.S. as a whole.(9) This information pre-dates the Affordable Care Act implementation.





The CT Department of Public Health's (DPH) report, *Healthy Connecticut 2010*, indicates that the likelihood of being insured in our state varies considerably by population subgroup.(20) As shown in Figure 7, children in Connecticut are more likely than adults to have health insurance, females are more likely than males, and white non-Hispanic residents are significantly more likely than non-Hispanic Black and Hispanic residents to have coverage. HUSKY Health is Connecticut's comprehensive public health insurance program, designed to reduce the number of uninsured individuals and families and increase access to preventive care and diagnostic and treatment services.

As reported by the CT Voices for Children in *Uninsured Children in Connecticut, 2010*, the estimated percentage of uninsured persons in Tolland County in 2010 based on U.S. Census ACS data, was 5.1% for persons of all ages and 0.7% for children under age 18.(21) These percentages compare favorably with the 2010 CT rate of 9.1% overall and 3.0 % for children. The report also cites the impact of HUSKY in containing the numbers of uninsured children in spite of the recent economic downturn.



Source: Healthy Connecticut 2010

Housing and Homelessness

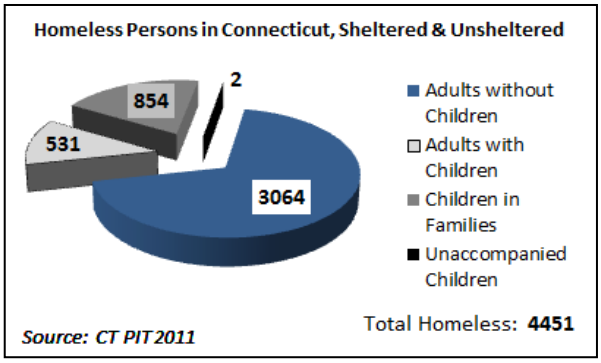
The U. S. Department of Housing and Urban Development defines cost-burdened renters or homeowners as those who pay more than 30% of their income for rent or mortgage payments.(22) In many instances, this leaves little money for other necessities such as food, clothing, transportation, utilities, and healthcare. For renters, the situation is typically worst, as the median household income for renters is substantially less on average than for homeowners. According to U.S. Census 2006-2010 American Community Survey data, 48% of renter households in the county are cost-burdened and 41% of households who are paying a home mortgage are cost-burdened.(9)

The National Low Income Housing Coalition's *2012 Out of Reach Study* indicates that Connecticut is the 7th most expensive state in the nation for housing. In Connecticut, the hourly wage needed to afford a two-bedroom fair market rate apartment is $23.58 per hour, 2.9 times the minimum wage ($8.25 hour).(23)

According to the 2010 U.S. Census, 76.4% of Tolland County residents own their homes. There is considerable variation by muncipality, with the proportion of residents who rent highest in Vernon and the Mansfield/University of Connecticut – Storrs area. The number of subsidized housing units in Vernon is 1,987, and in Mansfield it is642; the lowest number is in Union (8). The proportion of pre-1950 housing stock is highest in Stafford (38.9%) compared to Tolland as the lowest (8.6%).(5) Lead-based paint was banned from consumer use in 1978. Since most homes in New England were built before 1978, they may contain lead. Lead is extremely toxic to humans and affects the liver, kidneys, reproductive system, and nervous system. Children are the most at-risk for lead exposure and the worst effects may impact their motor skills and interfere with their cognitive development. Lead-based paint hazards create a serious impediment for low income families .Housing affordable to these families is skewed to the oldest, lowest quality on the market. That same housing has the highest likelihood for lead hazards – construction before 1950 when lead-based paint was frequently used, lack of cash flow for property maintenance, lack of knowledge about lead hazards by owners and tenants, etc. Low income families often face the choice between housing unsafe for their young children or no housing.(24)

Since 2007, Connecticut has conducted a statewide standardized and coordinated "census" of homelessness, to enumerate homelessness both in shelters and on the street. Each January, the Connecticut Coalition to End Homelessness coordinates a Point-In-Time Count, to collect data on the exact number of persons experiencing homelessness on a single night in defined geographic areas in the state. According to Point-In-Time Count data for 2011, the number of homeless individuals in Connecticut was 4,451, an 8% increase since 2009. The breakdown by type is shown in Figure 8.

Figure 8



The CT Coalition to End Homelessness reports that emergency shelters have been at capacity for over two years, and as a result, there has been a 37% increase in the number of unsheltered homeless statewide.(25)

Homeless shelters in the county are operated by the Cornerstone Shelter (Rockville), and Tri-Town Shelter Services (Vernon).(26)

Community Safety

The Uniform Crime Reporting Program (URC) measures the extent, fluctuation, and distribution of crime in communities across the United States. Seven offenses were chosen to form the Crime Index, including the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of arson, burglary, larceny-theft, and motor vehicle theft. The Connecticut Department of Emergency Services and Public Protection has all 102 CT police departments participating in the UCR Program.

As shown in Table 9, Tolland County's overall 2010 crime index compares favorably with the state total average and the state average for non-urban (population < 100,000) areas, with the exception of arson.

Table 9 –Tolland County and CT Crime Rates, 2010

Index Offense	Tolland County		Connecticut Non-Urban		Connecticut Total	
	#	Rate	#	Rate	#	Rate
Murder	0	0	54	1.8	132	3.7
Rape	17	11.9	401	13.7	599	16.8
Robbery	30	21.0	1,308	44.6	3,554	99.4
Aggravated Assault	50	34.9	2,564	87.4	5,792	162.1
Burglary	406	283.7	10,161	346.2	15,158	424.1
Larceny	994	694.6	40,903	1,393.7	56,705	1,586.6
Motor Vehicle Theft	76	53.1	3,371	114.9	6,656	186.2
Arson	29	20.3	281	9.6	424	11.9
Crime Index Total[1]	1,573	1,099.2	58,762	2,002.2	88,596	2,478.8

Note: [1]Arson not included. Rates are per 100,000 residents.
Rate of rape per 100,000 female residents is 23.0.
Source: http://www.dpsdata.ct.gov/dps/ucr/data/2010

Indicators of community safety from the CT Health Equity Index (a composite score based on crimes against persons and crimes against property) show considerable variation by community. In examining crime index rates by municipality, the lowest rate in crimes against persons was found in Tolland and Union, the highest in Vernon. The lowest rate of crimes against property was found in Tolland, Ellington, and Andover, the highest in Union. It should be noted that due to the small population size of many Tolland County municipalities, rates may vary considerably from one year to the next.

Low levels of community safety are also correlated with certain undesirable health outcomes such as lower life expectancy, higher rates of accidents, and mental illness. Socioeconomic factors such as unemployment rates, educational attainment, and income levels are strongly associated with both the prevalence and types of crime in communities.(27)

Domestic abuse crosses all socioeconomic levels and is chronically underreported in crime statistics. The Centers for Disease Control and Prevention estimates that one in four women will be a victim of domestic abuse in their lifetime. The 2000-2009 Report on the Findings and Recommendations from the Connecticut Domestic Violence Fatality Review Committee listed Mansfield, Vernon, Coventry, and Hebron as locations of intimate partner domestic violence fatalities.

Community Health-Related and Environmental Assets

Community Health –Related Assets

Tolland County is home to two acute care hospitals: Johnson Memorial Hospital in Stafford, and Rockville General in Vernon. Some key statistics related to each hospital are provided in Table 10.

Table 10

Hospital	Licensed Beds	2010 Patient Days	2010 ED Visits
Johnson Memorial	101	17,737	19,421
Rockville General	118	14,180	26,009

Each day represents a unit of time during which the services of the hospital are used by a patient, so 50 patients in a hospital in one day would represent 50 patient days. In FY 2010 Johnson Memorial Hospital reported 3,437 discharges and 17,737 patient days. Rockville General Hospital reported 3,380 discharges and 14,180 patient days. Rockville General is an affiliate of the Eastern CT Health Network. Its network of affiliates includes Manchester Memorial Hospital and Woodlake at Tolland Rehabilitation and Nursing Center. Both hospitals are a not-for-profit health care systems, serving many Tolland County towns (with overlap).(28)

Of the two hospitals in Tolland County, Johnson Memorial is the only one that provides intrapartum care through its small maternity department of six birthing suites. The maternity care department at Johnson Memorial is affiliated with Hartford Hospital, which provides families requiring more specialized care, with access to high-level perinatologists and neonatologists.

Through its well established Maternity Care Center, Rockville General has been providing holistic prenatal and postpartum care services to uninsured and underinsured women, regardless of ability to pay. Their intrapartum care is generally delivered at the Family Birthing Center in the nearby Manchester Memorial Hospital, which is not technically in Tolland County, but which serves many Tolland County residents. Tolland County residents also avail themselves of the services and care provided by the small maternity care unit at the nearby Windham Hospital, in Windham County. None of these hospitals are accredited as Baby-Friendly facilities. The UNICEF-led Baby-Friendly designation certifies health care facilities' compliance with a series of institutional policies and procedures that have been shown to have positive effects on breastfeeding initiation, duration, and exclusivity rates.(29)

With the ratio of population to primary care physicians (PCP ratio) for Tolland county being 1,119:1, the county ranks 7th of the 8 state counties. The overall PCP ratio in Connecticut is 729:1, the National benchmark is 631:1. Having access to care requires not only having financial coverage but also access to providers. Sufficient availability of primary care physicians is essential so that people can get preventive and primary care, and when needed, referrals to appropriate specialty care. (30)

There is not a federally qualified health center located within the county, although there is a satellite office in Vernon for a FQHC located in Hartford County. Federally qualified health centers (FQHC) receive federal funding support to provide preventive, primary, and specialty care services in medically underserved areas. FQHC patients without insurance pay for care based on their income, using a sliding fee scale, however no one is refused care based on inability to pay.

It is notable that there is also no School-based Health Center (SBHC) in any Tolland County town. SBHC are comprehensive primary healthcare facilities licensed as outpatient clinic in grades pre-K through 12, and provide primary medical and mental health services to students

regardless of ability to pay or insurance coverage.

Muncipalities within the county are served by 4 full-time health districts. The majority (7 of 13) of the county's muncipalities are served by the Eastern Health District (EHHD), including Andover, Bolton, Columbia, Coventry, Mansfield, Tolland, and Willington. The towns of Ellington, Vernon, and Stafford are represented by the North Central Health District. The Northeast District Department of Health includes the town of Union, and the Chatham Health District includes the town of Hebron. Somers is served by a part-time health department. Phone, email, and website contact information for all health department/districts is available at https://www.han.ct.gov/local_health/localmap.asp?cfilter=litchfield&bar=1&debug (31)

Upon being awarded an ACHIEVE grant in January 2009, the Eastern Highlands Health District formed a Community Health Action Response Team (CHART) comprised of key individuals and agencies in the community, taking an interdisciplinary approach to the group's composition.Encompassing ten small towns, the district facilitates communication related to health and wellness across political boundaries, bringing the communities together for a common purpose. In August 2011 the group sponsored the *CT ACHIEVE Action Institute: Implementing Policy and Environmental Changes to Reduce the Risk of Cancer and Chronic Disease*.

There are a wide variety of additional health-related resources within the county. United Way of CT Infoline 2-1-1 maintains an up-to-date online searchable community resource database of health and human service providers, agencies, and organizations, available at http://www.211ct.org/referweb/search.aspx . (26) United Way also publishes an annual report, *The 2-1-1- Barometer - Identifying Unmet Needs in CT*, highlighting gaps between service requests and available resources in the community. This report can be accessed at: http://www.ctunitedway.org/Media/Barometer/June2011.pdf(32)

Environmental Assets

With its sizable land mass and low population density, the County abounds in open space areas for recreation. Seven state parks, five state forests, and one state recreation area lie within its borders. In addition, the county offers countless opportunities for year-round outdoor recreation through greenways, trails, conservation areas, and numerous lakes, ponds, rivers, and streams. However, access to many of these resources is limited to residents with private transportation. According to the Census 2006-2010 ACS, only 0.8% of Tolland County residents use public transportation to commute to work, and 4.4% walk to work. Mean travel time to commute to work was estimated to be 25 minutes.

Tolland County Boat Launches, www.ct.gov

In terms of public transportation, there are several regional transit systems providing modest access to some of the county's towns. The Windham Regional Transit District (WRTD) provides linkages up and down Hwy 195 from the Four Corners area of Mansfield south into Willimantic. This service is available at no charge to Mansfield residents with proof of residency.(33) The Northeastern CT Transit District provides limited bus service to Tolland County residents of Union.(34) It is expected that a bus terminal located in Storrs will provide transportation to and from Providence, RI and Hartford, CT.(35) In addition, the Megabus system will be serving the University of CT campus with direct service to Hartford and New York City in the near future.

Park and Ride options are available in Andover, Bolton, Columbia, Vernon, Coventry, Tolland, Mansfield through CT Transit.(36) The Connecticut Department of Transportation provides a resource that identifies park and ride lots across the county as well as services provided through this location (bus or other) at: http://www.ct.gov/dot/cwp/view.asp?a=1390&Q=259406(37) Additionally, Dial-A-Ride services are available to most Tolland County residents who are at least 60 years of age, or any disabled adult Monday through Friday. This service is offered through the WRTD to residents of Columbia, Coventry, Mansfield, and Willington. The Hockanum Valley Community Council serves residents of Ellington, Tolland, and Vernon. (38)

Due to the rural character of many of the county's town centers and roadways, there is limited existing infrastructure such a sidewalks, street lights, or bike lanes to promote walking or biking as a mode of transportation within and among county communities.

Special Populations

Within Tolland County, key vulnerable groups include residents experiencing financial hardships, language and social barriers, and difficulty accessing health care; perinatal women; the very young and very old; persons with disabilities; and persons residing in group quarters.

Each town within Tolland County faces unique challenges with regards to special populations. The burden of financial hardship is documented in this report for Mansfield and Willington; this community assessment is uncovering a significant burden in sections of Vernon (the most populated town in Tolland County) that include the highest rate of crimes against persons according to indicators of community safety from the CT Health Equity Index.(27)

Additionally, although only 5 of the 13 towns in Tolland County are classified as rural, most of the towns retain the classic rural nature of the area with the associated challenges that come with rural life; in fact, at an average of 372 persons per square mile, each man, woman and child has the equivalent of 1.5 football fields of land mass (twice as much as an average resident of Connecticut). Furthermore, large areas of the county contain less than 250 persons per square mile.(9) This rural nature is visible as you travel throughout Tolland County: traditional neighborhoods are not the norm, roads are often narrow, winding, and hilly making walking and bicycling, difficult. While contributing to the rural charm, the distance between homes and services creates barriers to resources that contribute to healthy communities, and these barriers only compound the issues the county's vulnerable population faces with respect to health equity.

Persons in group quarters are in a group living arrangement that is owned or managed by an independent entity. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, homeless shelters, and correctional facilities.

Tolland County has a total of 528 beds in four skilled nursing facilities (average occupancy of 89%). These facilities are located in Mansfield, Stafford Springs, Tolland, and Vernon.(39) Additionally, there is one group housing facility for seniors and disabled adults in Willington, with capacity for 36 residents.

There are two correctional facilities in Tolland County, the Osborn Correctional Institution and Northern Correctional Institution, both in Somers. Combined, these facilities house almost 2200 inmates. Tolland County is also home to one residential college, the University of Connecticut, with approximately 12,500 students living in resident halls at the Storrs campus.

Related to maternal, infant, and child health, the DPH *Maternal, Infant, and Early Childhood Home Visiting Needs Assessment* examined existing services and compared data to relevant risk factors of families of young families. Vernon was found to have a high need for services.(28)

Section II: Health Status of County Residents

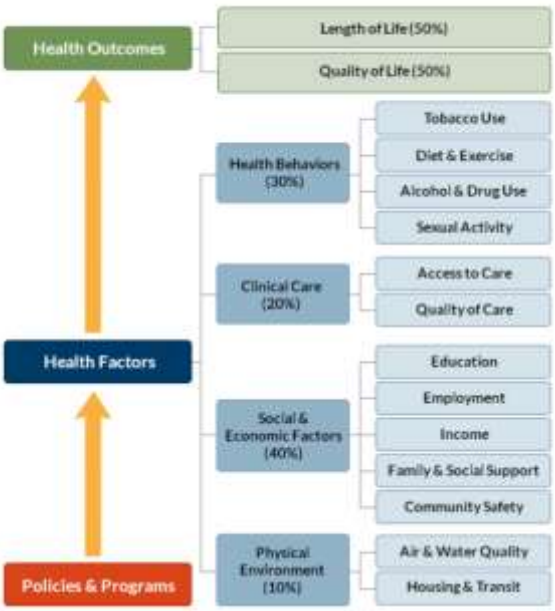
A number of indicators are used to describe the health status of residents in a specific geographic area. These include the presence or absence of health promoting behaviors; access to and utilization of health screenings, primary care and specialized health care services; the incidence and prevalence of chronic and communicable diseases; and the leading causes of premature death and disability.

State and County Health Rankings

According to the United Health Foundation, in 2011 **Connecticut** ranked third highest in health status in the nation, a continued positive trend from a rank of seventh in 2009 and fourth in 2010. Specific strengths cited include low rates of smoking, a lower prevalence of obesity when compared to other states in the nation, a low percentage of children in poverty, a low rate of uninsured population, high immunization coverage, and relatively high proportion of primary care physicians. Areas where improvements are needed include a moderate level of **binge drinking** (percentage of adults who self-report having 4 or more (women) or 5 or more (men) alcoholic beverages on at least 1 occasion in the last month(40), **low high school graduation rate** and **large disparities in health status by educational attainment**.(41)

The report indicates that CT has demonstrated success in reducing deaths from cardiovascular disease and some cancers and, in the past ten years, smoking prevalence has decreased in a significant fashion. While Connecticut has one of the lowest smoking rates in the nation, almost 450,000 adults still smoke.(41)

Figure 9



The 2013 County Health Rankings, a collaboration of the University of Wisconsin's Population Health Institute and the Robert Wood Johnson Foundation, ranks CT counties based on health outcomes and health factors. Counties receive a Health Outcome rank based on mortality and morbidity and a Health Factor rank based on health behaviors, clinical care, social-economic factors, and the physical environment. Figure 9 shows the weighting structure used to calculate the rankings. This quantifies the interconnectedness of personal health behaviors, clinical care, social and economic factors and the physical environment in which we live.

Within CT, counties are ranked from 1 to 8 on health factors and outcomes, with a rank of one being the "healthiest". Health outcomes represent the overall health of the county; health factors represent what influences the health of the county.

Health outcomes are based on an equal weighting of mortality (proportion of deaths to population) and morbidity (incidence of disease) factors. **Tolland County ranked 1st out of the eight CT Counties for health outcomes.** Health outcomes represent how healthy a county is while health factors represent what influences the health of the county.

Health factors rankings are based on the weighted average for the four different types of factors (% used for weighting are shown in parentheses in Figure 9). **Tolland County ranked 2nd out of the eight counties for health factors** (based on weighted scores for health behaviors, clinical care, social and economic factors, and the physical environment).

Rank	Health Outcomes	Rank	Health Factors
1	Tolland	1	Middlesex
2	Fairfield	2	Tolland
3	Middlesex	3	Litchfield
4	Litchfield	4	Fairfield
5	New London	5	New London
6	Hartford	6	Hartford
7	Windham	7	New Haven
8	New Haven	8	Windham

Selected findings specific to Tolland County, with CT and U.S. comparisons follow.

Table 11 – Tolland County Health Indicators, 2012

INDICATOR	Tolland County	Error Margin	National Benchmark*	CT
Premature death	4,371	3,983 – 4,760	5,317	5,388
Poor or fair health	9%	8-10%	10%	11%
Poor physical health days	2.7	2.4-3.1	2.6	2.9
Poor mental health days	3.0	2.6-3.4	2.3	3.1
Adult smoking	15%	13-18%	13%	15%
Adult obesity	23%	20-25%	25%	23%
Physical inactivity	19%	17-22%	21%	23%
Excessive drinking	19%	17-22%	7%	19%
Preventable hospital stays	60	56-64	47	60
Diabetic screening	88%	83-93%	90%	85%
Mammography screening	74%	69 - 79%	73%	71%
Access to recreational facilities	10		16	14
Limited access to healthy foods	9%		1%	4%
Fast food restaurants	36%		27%	37%

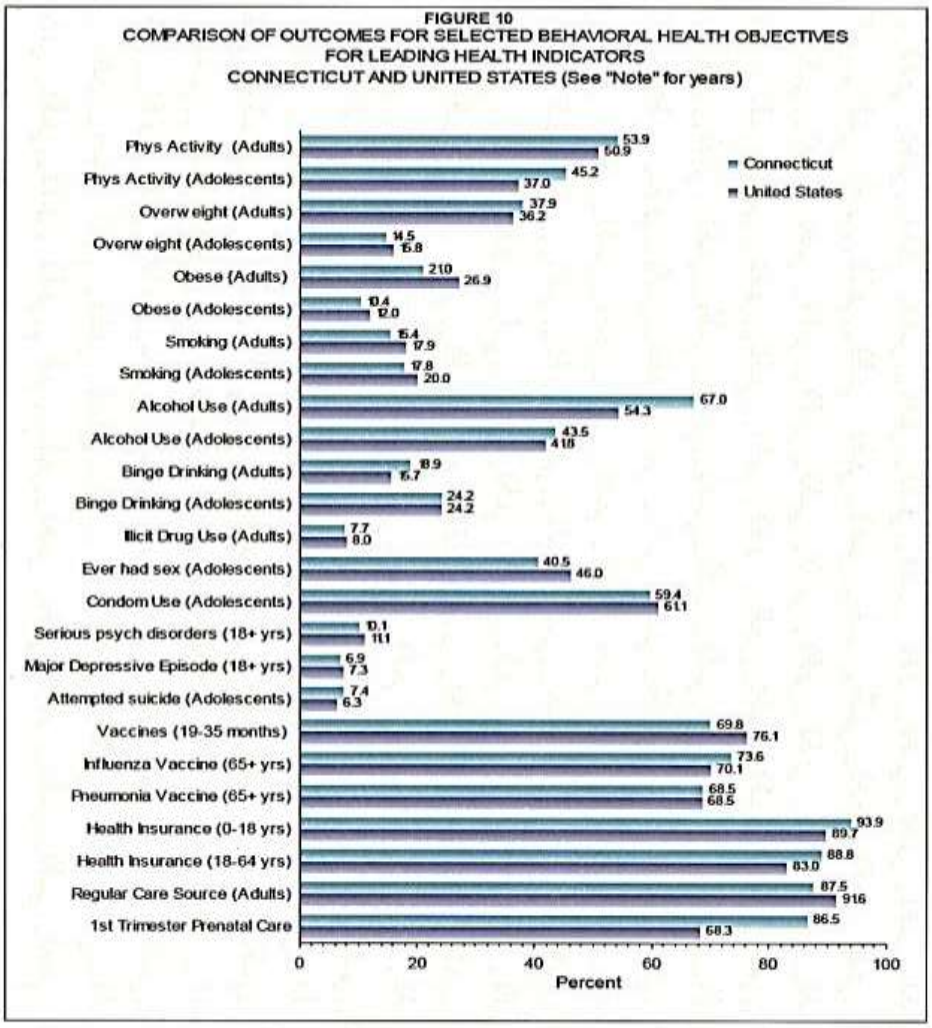
* 90th percentile, i.e., only 10% are better
Note: Blank values reflect unreliable or missing data
Source: http://countyhealthrankings.org

As noted in Table 11, Tolland County meets National Benchmarks and compares favorably to the state on a number of indicators including: premature death, residents reporting poor or fair health, prevalence of physical inactivity, and mammography screening. County indicators that do *not* meet

National Benchmarks include poor physical and mental health days, adult smoking, excessive drinking (defined as adults who self-report having 4 or more (women) or 5 or more (men) alcoholic beverages on at least 1 occasion in the last month) preventable hospital stays, access to recreational facilities, access to healthy foods, and percentage of fast food restaurants.

Of note is the fact that Tolland County houses the campus of the University of Connecticut Storrs campus which contributes to a population increase of 17,528 undergraduate students and approximately 5,000 graduate students per semester. The proximity to a college campus of this size and the experimental nature of college students with regard to alcohol consumption may play a part on the Tolland county ranking for this indicator.

Lifestyle Behaviors and Risk Factors



Sources: Behavioral Risk Factor Surveillance System, Connecticut School Health Survey, Youth Risk Behavior Survey, National Immunization Survey, National Survey on Drug Use and Health.

Notes: Data years: Physical Activity, Overweight, Obese, Smoking, Alcohol Use, Binge Drinking (Adults 2009, Adolescents 2009); Illicit Drug Use, Serious Psychological Disorders, Major Depressive Episode (2006-2007); Sex, Condom Use (during last sexual intercourse), Attempted Suicide (2009); Vaccines (2009); Health Insurance (Children 2007-2008, Adults 18-64 yrs 2009).

As stated in *Healthy People 2020*, individual behaviors and social-environmental factors account for about 70% of premature deaths in the U.S. Health promoting lifestyle behaviors such as avoiding tobacco, illicit drug, and excessive alcohol use; healthy eating; regular physical activity; and managing stress are key to reducing the burden of chronic disease and premature death in county residents.

The CT DPH report, *Healthy Connecticut 2010,* compares outcomes in U.S. and CT residents for selected behavioral health objectives related to *Healthy People 2010* leading health indicators - physical activity, overweight/obesity, tobacco use, substance abuse, sexual behaviors, mental

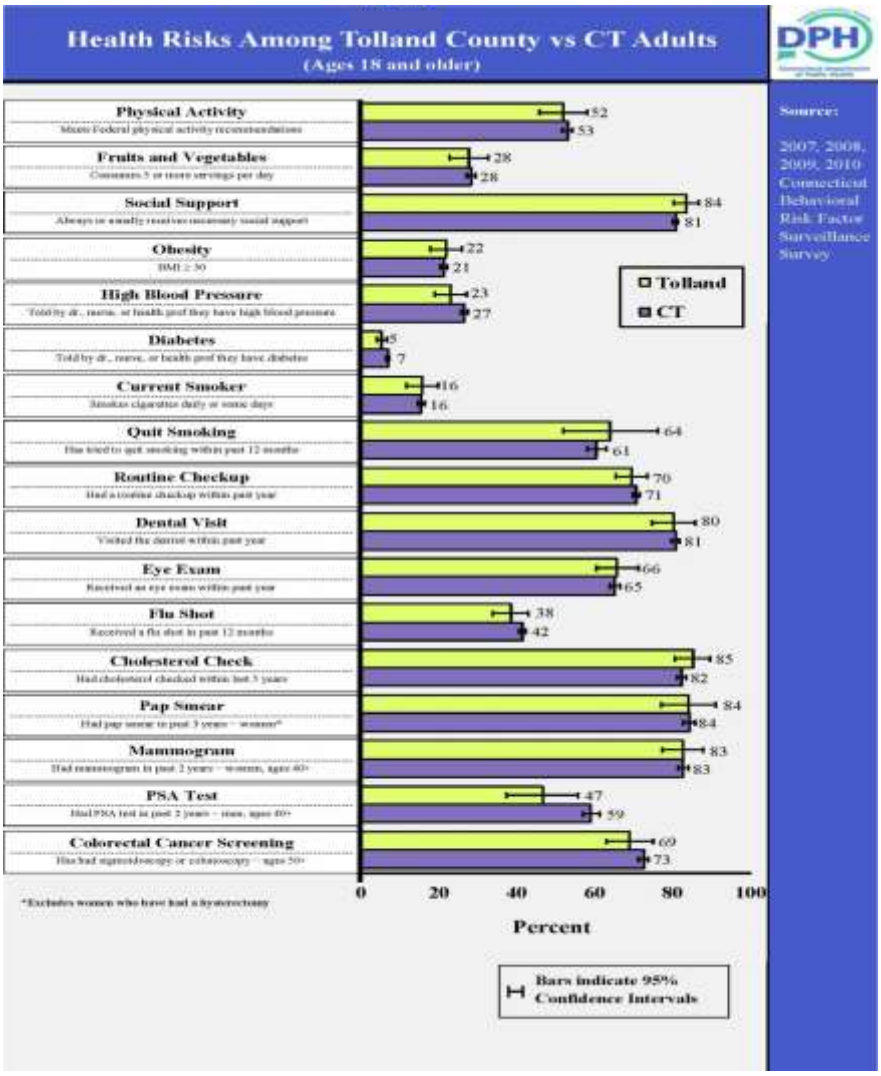
health, injury and violence, environmental quality, immunization, and access to health care. Key findings are presented in Figure 10.

In general, CT residents had a lower prevalence of most behavioral risk factors than the average U.S. resident and were more likely to be physically active, not be obese, and not smoke. In contrast, there was a higher prevalence of alcohol use in both teens and adults, and overweight and binge drinking in adults.

The Centers for Disease Control and Prevention (CDC) Community Transformation and the national Million Hearts™ initiatives both target reduction of major risk factors for heart disease and stroke, which are leading causes of death and disability in the nation, state, and county. These risk factors include tobacco use, poor diet, physical inactivity, and unhealthy weight. In addition, control of high blood pressure and high cholesterol are imperative for maintaining cardiovascular health.

Behavioral Risk Factor Surveillance

Figure 11



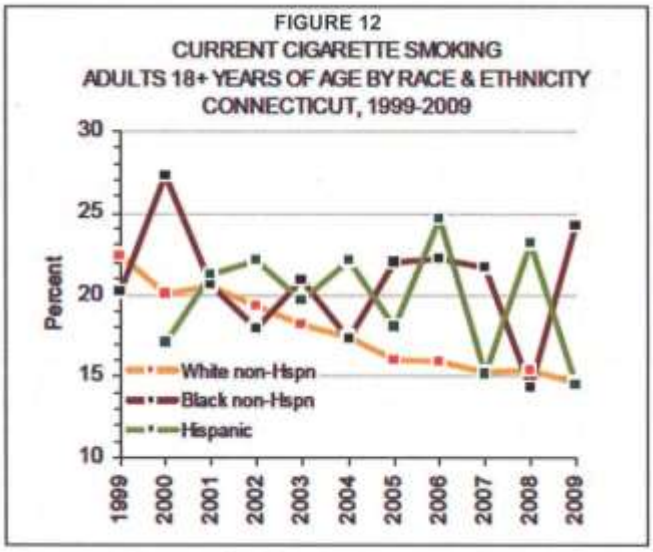
The CDC Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing random telephone survey of adults ages 18 and over conducted in all 50 states. The BRFSS originally collected data on health behaviors related to the leading causes of death, but has since expanded to include survey questions related to health care access, utilization of preventive health services, and emerging health issues.

Comparative BRFSS data for Tolland County and the state for the years 2007-2010 are presented in Figure 11. In general, Tolland County residents had similar rates (identical or within 1 point) to the state related to physical activity, fruit and vegetable consumption, prevalence of obesity, number of current smokers, having routine medical, dental, and eye check-ups, women receiving regular pap smears (within the past three years), and mammography.

County residents reported having more social support, lower prevalence of high blood pressure and diabetes, more frequent attempts to stop smoking than state residents as a whole, and more frequent cholesterol checks.

County residents were less likely to participate in influenza vaccination, PSA testing (in men), and colorectal cancer screening. None of the differences were statistically significant.

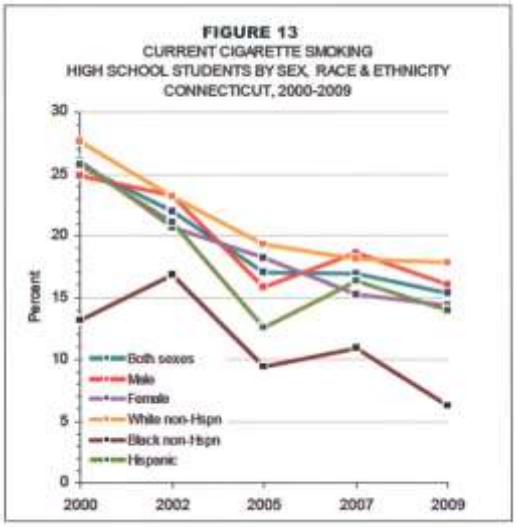
Tobacco Use



Source: Behavioral Risk Factor Surveillance System

Smoking is the single most avoidable cause of chronic disease and death. Smoking increases the risk for many types of cancers including lung, bronchus, trachea, and esophageal cancer as well as, heart disease, stroke, and chronic lung diseases. As reported in *Healthy Connecticut 2010*, over 5,000 CT adults die each year due to smoking and from exposure to secondhand smoke. As reported in the *2011 United Health Foundation's Health Rankings*, Connecticut has one of the lowest rates of current smoking in adults, and in 2011, ranked 3rd lowest among U.S. states (13.2% compared to 17.3% nationally).

Smoking among Connecticut adults has declined by 40% over the past 20 years, with the greatest decrease occurring during the last decade. As shown in Figure 12, smoking prevalence has decreased for all adult groups other than Black non-Hispanics since 1999. *Source :* *http://www.ct.gov/dph/lib/dph/state_health_planning/healthy_people/hct2010_final_rep_jun2010.pdf.*

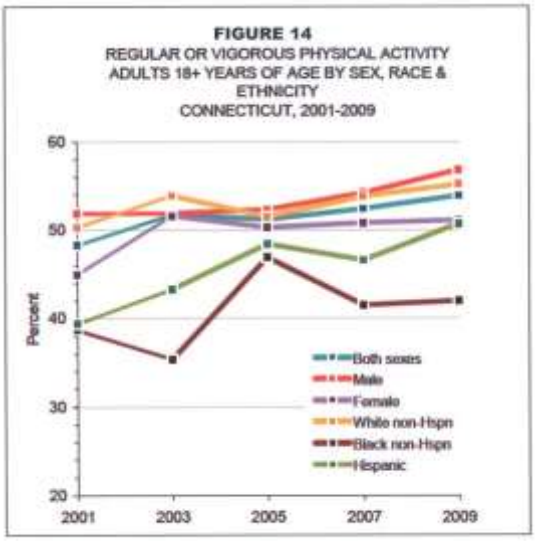


Source: Connecticut Youth Tobacco Survey

In spite of these positive trends, continued efforts to avoid tobacco use are imperative to future reductions in morbidity and mortality from cancer, respiratory, and cardiovascular diseases. In CT adults, smoking prevalence is highest in males, persons ages 18-24, those with less than a high school education, and those with incomes below $25,000 (26.4%). Based on BRFSS age-adjusted rates, Tolland County ranked seventh in smoking prevalence among CT counties in 2007-2009.

Healthy Connecticut 2010 reports smoking rates in adolescents have also shown a dramatic decline from 2000-2009 (66% among middle school and 40% among high school students). In middle school, Hispanic or Latino students had the highest smoking rates, while in high school, white non-Hispanics had the highest smoking rates.

Physical Activity, Healthy Eating, and Healthy Weight



Source: Behavioral Risk Factor Surveillance System

Regular or vigorous physical activity is important to overall health and weight management. Regular activity reduces the risk of obesity, heart disease and stroke, colorectal and breast cancers, type 2 diabetes and metabolic syndrome, high cholesterol, high blood pressure, and osteoporosis. Activity also improves mental health and mood and lowers the overall risk of premature death. As shown in Figure 14, physical activity among CT adults increased from 2001-2009, with the greatest gains in Hispanic residents. There was significant disparity in the reported level of activity for Black and White non-Hispanics.

Based on 2007-2009 BRFSS data, adults more likely to meet physical activity recommendations were male, white non-Hispanic, ages 18-24, and those with higher education and income levels. Based on age-adjusted data, Tolland County ranked the highest among CT counties in the percentage of adults *not* meeting recommended requirements (moderate physical activity for 30 minutes or more 5 times per week or vigorous physical activity for 20 minutes or more 3 times a week).

According to the National Survey of Children's Health, in 2007 CT children were more likely than their counterparts nationwide to be physically active for at least four days per week (36.2% versus 34.4%), and less likely to spend one hour or more a day in front of a television or computer screen (42.7% versus 50.1%).(42)

The CT DPH *2009 CT School Health Survey - Youth Behavior Component* report indicates that the percentage of adolescents who are physically *inactive* increases by grade from 11.2% in grade 9 to 19.9% in grade 12; female and Black or Hispanic students are much more likely to be inactive.

Another measure of the level of physical fitness in youth is the percentage of students in local school districts passing all four components of state physical fitness tests. These standardized tests include four areas of fitness: aerobic endurance, flexibility, muscular strength and endurance.

The results for K-12 students enrolled in school districts within the county are presented in Table 12. In general, less affluent districts in the county scored lowest. There is also a trend towards lower percentages in Regional middle schools and high schools when compared with their elementary school "home town" districts. Of concern for most communities in the county is the low percentage of 4th grade children passing all four fitness test.

Table 12 – Percentage of Students Passing All Four Physical Fitness Test Components, 2010-2011

Table 11 - Percentage of Students Passing All Four Physical Fitness Test Components, 2010-2011		
District	**% K-12 Students Passing (Listed in Rank Order)**	**% 4th grade Students Passing**
Union School District	87.5	80
Columbia School District	72.8	67
Hebron School District	72.3	73.8
Regional School District 11	70.8	n/a
Andover School District	70.0	68.6
Regional School District 19	66.8	n/a
Regional School District 8	66.0	n/a
Somers School District	65.7	40.2
Mansfield School District	64.3	58.4
Willington School District	64.0	54.0
Tolland School District	60.0	37.6
Bolton School District	59.0	53.0
Ellington School District	56.8	52.2
Vernon School District	55.5	48.3
Coventry School District	51.5	41%
Stafford School District	40.7	18.2
Connecticut	51.0	50.9

Note: Data for Explorations unavailable. Source: CSDE http://sdeportal.ct.gov/Cedar/WEB/ct_report/PhysicalFitnessDTViewer.aspx

Available county level BRFSS survey data (2007-2009) on healthy eating are limited to fruit and vegetable consumption. Survey findings indicate that only 28.4% of CT adults consume the recommended 5 or more servings of fruits and vegetables per day. Eating the recommended amount of fruits and vegetables is more common in females, White non-Hispanics, persons ages 65 and over, and those with higher education and income levels. Based on age-adjusted data, Tolland ranks fifth among CT counties in the percentage of persons consuming less than the recommended quantity of fruits and vegetables. Related to healthy eating by youth, the *CT School Health Survey - Youth Behavior Component* (2009) reports that overall only 21% of CT high school students consume 5 or more servings of fruits and vegetables, and male students are more likely than female students to consume the recommended amounts (at statistically significant levels).(43)

Figure 15: Tolland County 2012-2013 Kindergarten BMI

Summary of Children's BMI-for-Age			
	Boys	Girls	Total
Number of children assessed:	602	613	**1215**
Underweight (< 5th %ile)	4%	3%	**3%**
Normal BMI (5th - 85th %ile)	65%	68%	**67%**
Overweight or obese (≥ 85th %ile)*	31%	29%	**30%**
Obese (≥ 95th %ile)	*12%*	*13%*	***13%***

*Terminology based on: Barlow SE and the Expert Committee. Expert committee recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity: summary report. Pediatrics. 2007;120 (suppl 4):s164-92.

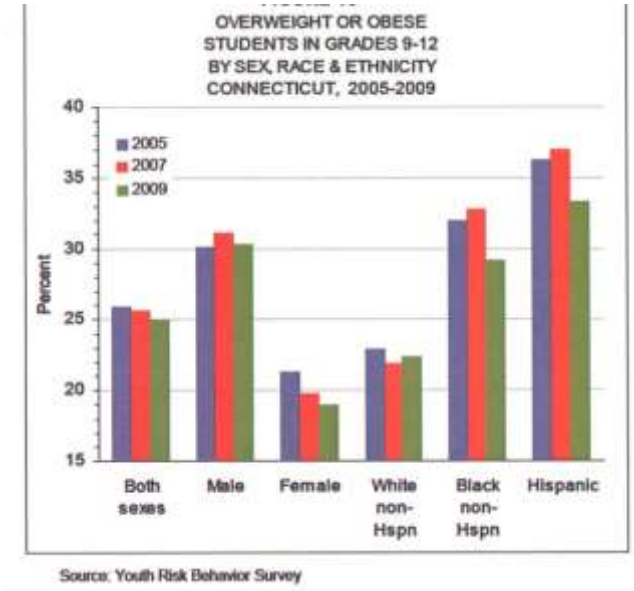
Obesity and overweight in children, adolescents, and adults have reached epidemic proportions in the U.S. According to CDC, the prevalence of childhood and adolescent obesity has more than tripled in the past 30 years. The percentage of children aged 6–11 years in the nation who were obese increased from 7% in 1980 to nearly 20% in 2008. Over this same time period, the percentage of adolescents aged 12–19 years who were obese increased from 5% to 18%.

Based on data collected locally from the schools' health intake from (aka "the yellow or the blue form") in Tolland County public schools, current BMI measurements were calculated on over 1200 kindergarten children enrolled in the 2012-2013 school year. As seen in figure 15, this data revealed that 30% of the children are overweight or obese.

The long-term health consequences of childhood and adolescent obesity are serious. Youth who are obese are more likely to experience social and psychological problems due to poor self-esteem. They are more likely to be overweight adults, and consequently at a greater risk for developing heart disease, hypertension, type 2 diabetes, stroke, osteoarthritis, and certain types of cancer.(44)

According to the National Survey of Children's Health, in 2007 approximately 95,000 Connecticut children ages 10-17 years (25.7%) were considered overweight or obese according to Body Mass Index (BMI) for age standards. Hispanic/Latino (40.4%) and Black/African American (38.1%) children in Connecticut are almost two times more likely than White children (21.8%) to be overweight or obese.

Figure 16



Healthy Connecticut 2010 reports racial and ethnic disparities in overweight and obesity in adolescents and adults, as shown in Figure 16. In high school students, obesity is more prevalent in males and in Hispanic students followed by Black non-Hispanic students. In adults, obesity is more prevalent in these same groups, with rapid rise in obesity in Hispanic adults from 2007-2009. Based on 2007-2009 BRFSS data, 22.5% of adults in the county are obese. Obesity is also more common in adults with lower educational and income levels. Tolland County ranked fourth highest among CT counties in the age-adjusted rate of obesity in adults.

The Burden of Chronic Disease

According to the Centers for Disease Control and Prevention (CDC), 7 out of 10 deaths among Americans each year are the result of chronic diseases, and almost 1 out of every 2 adults has at least one chronic illness. Chronic diseases are also estimated to be responsible for 75% of health care costs in the U.S.

The burden of chronic disease is not shared equally among population subgroups in our nation, state or county – significant disparities exist. *Healthy People 2020* defines a *health disparity* as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion." Powerful, complex relationships exist between health and biology, genetics, and individual behavior, and between health and health services, socioeconomic status, the physical environment, discrimination, racism, literacy levels, and legislative policies. These factors, which influence an individual's or population's health, are known as *determinants of health*.

The burden of chronic disease in county residents is assessed in several ways – through examination of disease surveillance data, health care utilization data (such as emergency department visit and hospitalization rates by type of diagnosis), and mortality data.

The most prevalent category of chronic diseases in the U.S. are cardiovascular diseases (CVD).

Major cardiovascular diseases include coronary heart disease (CHD), cerebrovascular disease (stroke), and heart failure. CVD is the leading cause of death in Connecticut, accounting for about one-third of all resident deaths. More than half (55%) of these deaths are among females. Risk factors for CVD may be modifiable or non-modifiable.

Modifiable risk factors include high blood pressure, high blood cholesterol, smoking, diabetes, obesity, and physical inactivity. Non-modifiable risk factors include increasing age and family history of heart disease and stroke. The age-adjusted mortality rates for CVD have declined significantly for CT residents over the past decade. However, there are considerable disparities in mortality rates from CVD, with Black or African American residents having the highest rates.(45)

High blood pressure and elevated cholesterol levels are both major risk factors for CVD. Data from the 2007-2010 BRFSS show that more than one in four (27%) CT adults have been told they have high blood pressure by a health professional. High blood pressure is more common in males, Black non-Hispanic adults, persons ages 65 and over, and in persons with lower education and income levels. Based on BRFSS data from 2007-2009, Tolland County ranks second lowest among CT counties in the prevalence of high blood pressure in adult residents (23.3%).

Data from the 2007-2010 BRFSS show that the majority of CT (82%) and county adults (85%) had their cholesterol checked in the past 5 years. BRFSS data from 2007-2009 indicate that adults most likely to have their cholesterol checked were female, white non-Hispanic, ages 65 and over, (95% vs. 40% in persons ages 18-24), and adults with higher education and income levels. Adults most frequently reporting they had <u>*never*</u> had their cholesterol checked were Hispanic or Latino (31%), and persons with less than a high school education and annual incomes below $25,000. Based on age-adjusted rates, Tolland County ranked lowest in the percentage of adults who reported <u>*never*</u> having their cholesterol checked (13.4%).

Data on the prevalence of elevated cholesterol in adults compiled from the 2007-2009 BRFSS show that 37.8% of CT adults have been told by a health professional that their blood cholesterol is high. High blood cholesterol is more common in males, White non-Hispanic residents, persons ages 65 and over, and persons with less education and income. Based on age-adjusted rates, Tolland County

residents have the second lowest prevalence of high cholesterol among CT counties (31.0%).

The second most frequent type of chronic disease in CT is malignant neoplasms or cancer. The incidence rate of new cancer cases and mortality rates have been steadily decreasing. This is the result of increased primary prevention efforts, earlier detection and improved treatment options.(46) In 2008, the age-adjusted cancer incidence rate in Connecticut was estimated at 499.8 per 100,000 people, a decrease from the 2007 rate of 502.5 per 100,000 people.(47) In Connecticut (2007-2009 BRFSS data), an estimated 6.9% or approximately 186,000 adults aged 18 and older reported being diagnosed with diabetes. An additional 93,000 adults are estimated to have undiagnosed diabetes. The prevalence of type 2 diabetes in CT and in the nation has increased significantly. Type 2 diabetes typically develops later in life and is strongly associated with overweight and obesity.(48)

As reported in the 2007-2009 BRFSS, diabetes is twice as prevalent in Black non-Hispanic adults as in White non-Hispanic adults, and prevalence increases with age. Diabetes also occurs most frequently in adults with less education and lower incomes, who also experience disproportionately higher rates of obesity. The age-adjusted prevalence of diabetes in county adults ranks second lowest among CT counties (5.8%).

Utilization of health care services, including emergency department (ED) visit and hospitalization rates are important measures of the burden of chronic disease. Frequent use of ED services for primary care conditions also indicates that a community may have an insufficient quantity of primary care providers or health providers serving the uninsured.

Table 13 depicts ED visit rates for CT and for Tolland County. These rates represent ED visits by residents to any hospital within CT (visits to hospitals outside CT are excluded). Overall, ED visit rates for county residents are favorable to those for CT residents. There are notable differences by race/ethnicity and diagnostic group. The ED visit rates for White-non Hispanic residents are fairly comparable, however are well above the state average for Hispanic Latino residents, and fall well below the state average for Black-non Hispanic residents. Lower ED visit rates for Black-non Hispanic residents may be explained in part due to underreporting of this ethnicity on ED intake records.

By diagnostic group, county residents overall had similar ED visit rates for cancer (all sites and lung/bronchus) and for liver disease, including cirrhosis. Tolland County residents had higher ED visit rates for major CVD, coronary heart disease, acute myocardial infarction (MI), congestive heart failure, and stroke. Black non-Hispanics had disproportionately high rates for cancer (all sites), major CVD, congestive heart failure, chronic obstructive pulmonary disease, and asthma. County residents overall had lower ED visit rates for diabetes, alcohol and drug abuse, chronic obstructive pulmonary disease, asthma, and liver disease, including cirrhosis. Hispanic Latino residents has disproportionately high rates for all categories other than cancer (oral cavity & pharynx and lung/bronchus). ED visits for most chronic conditions increased with advancing age, with the exception of asthma which is highest in children four years of age and under.

Table 14 shows hospitalization rates for the state and county for the same diagnostic categories. County rates are below the state rates for the majority of diagnostic categories, including all diagnostic groups, cancer (all sites, oral cavity & pharynx and lung/bronchus), diabetes, alcohol and drug abuse, major CVD, CHD, CHF, stroke, COPD, asthma, and liver disease, including cirrhosis.

Table 13 - State and County Age-Adjusted ED Visit Rates per 100,000 Residents by Gender, Race, and Ethnicity, 2005-2009

Connecticut							Tolland County						
Diagnostic Group*	Total	Female	Male	White N/H	Black N/H	Hispanic Latino	Diagnostic Group	Total	Female	Male	White N/H	Black N/H	Hispanic Latino
All	36,400.8	38,135.6	34,626.8	24,064.9	46,846.4	55,649.1	All	29,893.5	32,913.9	27,566.6	26,015.3	28,383.5	93,506.6
Cancer, all sites	11.7	10.4	13.6	7.8	17.2	19.0	Cancer, all sites	12.0	10.7	13.0	7.9	28.8	55.6
Oral Cavity & Pharynx	0.3	0.1	0.5	0.2	0.7	0.6	Oral Cavity & Pharynx	-	-	-	-	-	-
Lung & Bronchus	2.4	2.0	3.0	1.7	3.4	2.9	Lung & Bronchus	2.6	2.3	3.1	1.7	-	a
Diabetes	182.0	162.8	202.7	93.4	487.9	452.4	Diabetes	119.8	111.0	130.3	93.6	200.2	892.2
Alcohol & Drug Abuse	775.9	420.8	1,140.1	560.0	1,018.2	1,077.9	Alcohol & Drug Abuse	461.7	397.6	531.1	446.4	211.5	852.0
Major CVD	388.0	349.2	433.3	267.1	616.8	509.9	Major CVD	414.6	379.3	463.5	342.6	450.3	2,972.9
CHD	37.1	23.3	53.0	29.6	19.7	40.5	CHD	67.2	44.7	93.2	56.0	a	827.2
Acute MI	20.4	11.7	30.3	17.3	8.6	17.5	Acute MI	40.5	25.0	58.2	34.5	a	398.2
CHF	36.2	31.0	43.3	24.1	72.6	57.7	CHF	44.9	41.4	51.2	38.9	63.5	169.7
Stroke	19.0	16.9	21.6	14.6	15.2	18.8	Stroke	27.2	28.3	27.2	23.4	a	118.2
COPD	984.2	1,085.2	877.1	549.1	1,602.5	2,094.0	COPD	823.3	1,005.3	662.9	685.4	1,244.2	3,207.9
Asthma	663.2	732.3	587.7	320.6	1,218.6	1,545.2	Asthma	428.0	530.2	338.6	339.7	851.0	1,074.7
LD & Cirrhosis	5.2	2.7	7.8	3.5	4.0	12.7	LD & Cirrhosis	4.5	2.2	6.7	3.5	-	54.6

Notes: Acute MI = Myocardial Infarction (Heart Attack); CHD – Coronary Heart Disease; CHF = Congestive Heart Failure; COPD = Chronic Obstructive Pulmonary Disease; LD =Liver Disease

a= data suppressed due to confidentiality. A dash (-) represents the number zero. Source: Data compiled by CT DPH [Add citation]

Table 14 - State and County Age-Adjusted Hospitalization Rates per 100,000 Residents by Gender and Race/Ethnicity, 2005-2009

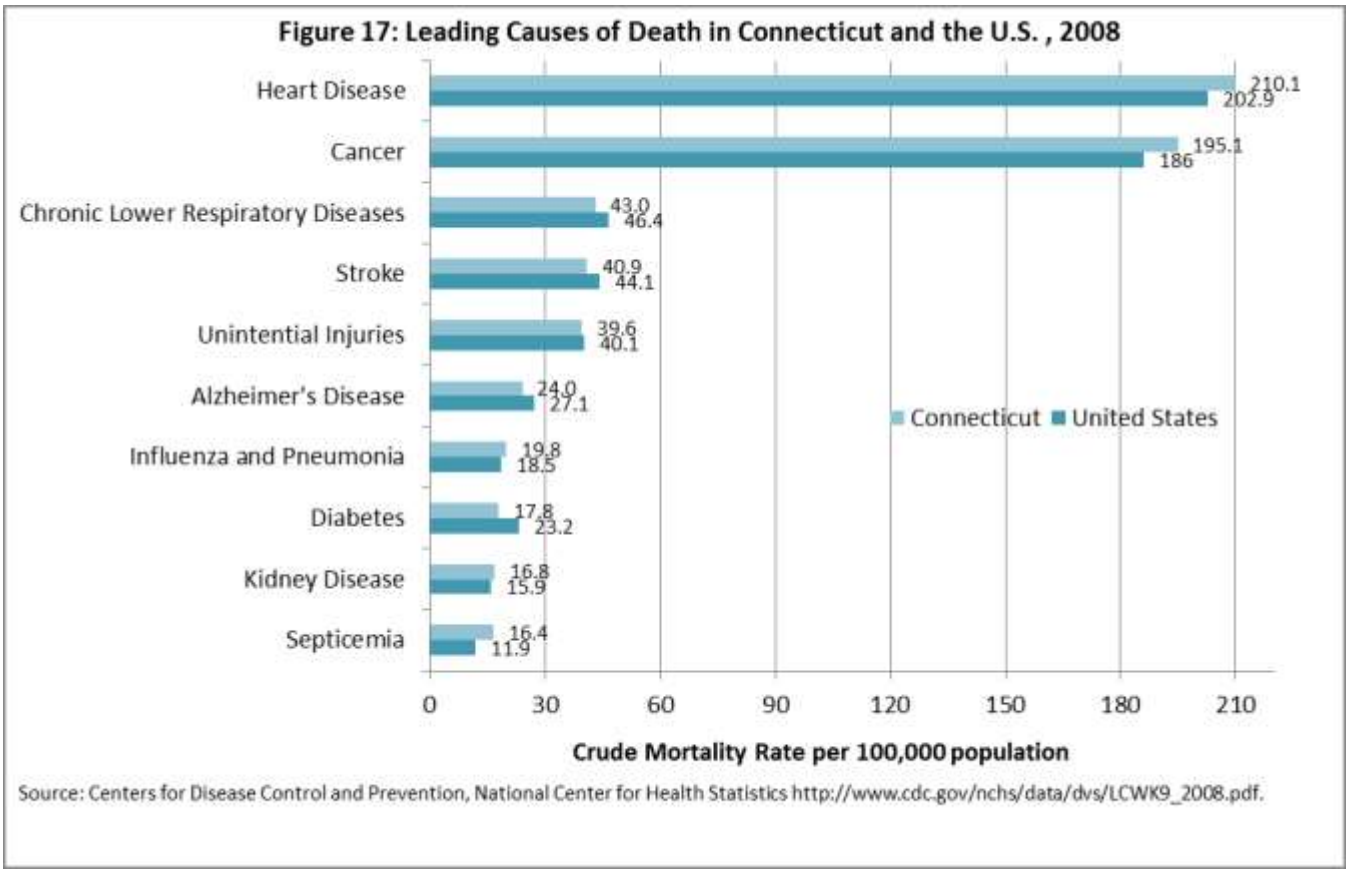
Connecticut							Tolland County						
Diagnostic Group*	Total	Female	Male	White N/H	Black N/H	Hispanic Latino	Diagnostic Group	Total	Female	Male	White N/H	Black N/H	Hispanic Latino
All	10,036.5	11,180.6	9,078.6	9,114.1	14,351.4	11,583.8	All	8,620.8	10,156.3	7,625.1	7,852.5	6,274.0	32,670.9
Cancer, all sites	377.1	368.6	398.5	363.5	450.2	302.1	Cancer, all sites	363.6	356.5	384.5	303.3	246.4	1,006.5
Oral Cavity & Pharynx	6.4	3.8	9.4	6.2	8.3	4.1	Oral Cavity & Pharynx	4.5	3.6	5.1	4.3	-	a
Lung & Bronchus	42.9	38.4	49.6	42.7	46.7	26.2	Lung & Bronchus	38.5	35.3	42.9	33.1	-	224.9
Diabetes	132.9	112.6	157.1	97.3	403.5	249.6	Diabetes	88.7	66.0	114.0	80.5	191.4	406.1
Alcohol & Drug Abuse	139.3	84.8	196.4	143.3	160.1	129.5	Alcohol & Drug Abuse	72.6	56.8	89.6	62.9	a	551.8
Major CVD	1,401.8	1,111.2	1,773.9	1,313.4	1,986.6	1,509.6	Major CVD	1,381.8	1,071.5	1,768.1	1,257.7	1,186.2	7,274.3
CHD	406.5	265.9	578.4	392.3	396.8	427.1	CHD	164.7	137.9	204.8	417.9	216.9	768.7
Acute MI	163.0	115.9	221.9	158.0	153.0	180.0	Acute MI	173.6	125.2	231.4	162.3	119.4	371.5
CHF	172.8	144.3	214.2	154.6	306.7	230.6	CHF	164.7	137.9	204.8	147.9	275.9	1,055.7
Stroke	183.8	158.7	216.9	169.9	290.3	182.7	Stroke	177.7	152.0	212.6	159.6	177.5	1,054.8
COPD	277.8	297.6	258.2	222.8	515.9	548.5	COPD	200.1	214.6	192.0	177.5	203.3	1,848.2
Asthma	136.9	157.9	112.5	83.3	363.7	378.0	Asthma	74.0	89.6	59.5	63.4	120.4	764.3
LD & Cirrhosis	27.4	18.1	37.6	24.2	28.5	63.3	LD & Cirrhosis	18.3	9.0	27.7	17.2	a	53.1

The rates provided in Table 14 represent admissions to any CT hospital. Hospitalization rates for county residents are higher than state rates for acute MI. Within the county, hospitalization rates are higher for males for most diagnoses, and for Hispanic Latino residents than other racial/ethnic groups. The overall low hospitalization rates for Black-non Hispanic county residents may in part reflect underreporting of this ethnicity on hospital records. As expected, hospitalization rates for chronic diseases generally rise with advancing age and are highest in persons ages 65 and over. The notable exception is again asthma, with the highest rates in children ages birth to four.

Mortality and Leading Causes of Death

Mortality data is highly useful in providing insight about priority health issues in a community by identifying the underlying causes of disease and monitoring changes in the leading causes of death over time. The leading causes of death in the county, state, and nation are closely linked to personal health behaviors, environmental and social factors, and the availability, accessibility, and utilization of quality preventive, primary, and specialty health care services.

Figure 17 presents the leading causes of death in the United States and Connecticut for 2008, based on crude rates. Although the 10 causes of death are not in the same exact rank order, the underlying causes remain chronic conditions which are related to behavioral risk factors. Individuals, who maintain a physical activity schedule, pay attention to healthy eating habits, avoid tobacco use, alcohol and drug abuse, manage their stress levels and adopt other preventive lifestyle behaviors tend to live longer and avoid chronic conditions.



It is noteworthy that there are differences in the rank order of the leading causes of death in CT by gender and race/ethnicity. For example, in 2009 the leading cause of death for males of all races/ethnicities was cancer and for females it was heart disease. For both White males and females, the leading cause of death was heart disease, followed by cancer. For Black or African American and Hispanic or Latino residents, the leading cause of death was cancer for both genders, followed by heart disease.(49)(50)(51)(52)

Figure 17 reflects crude mortality rates, which have not been age-adjusted. Crude mortality rates are useful in assessing the magnitude of the absolute number of deaths in a population, however they do not account for differences in rates that are attributable to differences in the age composition of the resident population. Municipalities in Tolland County with a higher proportion of older residents, such as Vernon, would be expected to have higher crude mortality rates from chronic diseases, as the incidence and prevalence of these diseases increase with age. Age-adjusted mortality rates (AAMR) correct for differences in age distribution of communities, and therefore give a more accurate representation of excess disease mortality.

A recent review of the National Vital Statistics System showed that Tolland County has an increasing rate of lung cancer mortality for women. While from 2005 to 2009, the overall state rate for women's deaths from lung cancer was stable (and in several counties was falling), Tolland County was the only county with a rising trend.

Significant disparities in health status, including mortality rates from the leading causes of death and premature death, measured as Years of Potential Life Lost (YPLL) exist in the U.S., CT, and the county. A major goal of *Healthy People 2020* is to achieve health equity, eliminate

disparities, and improve the health of all population groups.

AAMR and YPLL data for Tolland County for the five year period 2005-2009, with state and county comparisons, follow in Tables 15 and 16.

Table 15 - State and County Age-Adjusted Mortality Rates per 100,000 Residents by Gender and Race/Ethnicity, 2005-2009

	Connecticut						Tolland County						
Cause of Death	Total	Male	Female	White N/H	Black N/H	Hispanic Latino	Cause of Death	Total	Male	Female	White N/H	Black N/H	Hispanic Latino
All	687.7	829.0	583.1	679.5	809.3	529.0	All	643.2	736.1	566.6	648.0	593.0	475.9
Malignant Neoplasms	170.1	206.2	147.1	171.9	190.5	108.4	Malignant Neoplasms	161.0	183.5	146.4	163.0	188.8	68.8
Diabetes Mellitus	16.7	19.7	14.4	15.1	35.9	24.5	Diabetes Mellitus	12.1	14.1	10.7	11.9	23.5	11.2
Alzheimer's Disease	16.6	13.8	17.8	17.1	15.1	8.9	Alzheimer's Disease	15.7	11.1	18.2	16.0	0.0	0.0
Major CVD	217.4	264.4	182.1	216.4	253.2	157.5	Major CVD	227.0	254.1	203.3	228.1	204.8	142.6
Pneumonia & Influenza	17.2	21.0	15.0	17.2	18.0	13.7	Pneumonia & Influenza	12.4	14.0	11.4	12.6	7.3	0.0
CLRD	34.5	38.9	31.9	35.9	24.4	20.5	CLRD	36.8	39.4	35.0	37.5	14.4	15.1
CLD & Cirrhosis	7.2	10.0	4.7	7.1	6.3	11.0	CLD & Cirrhosis	6.7	8.3	4.9	6.9	0.0	9.8
Nephritis, nephrotic syndrome, nephrosis	13.3	17.8	10.7	12.3	26.9	12.3	Nephritis, nephrotic syndrome, nephrosis	10.7	12.6	9.2	10.3	30.1	0.0
Accidents	32.9	47.1	20.4	33.9	32.0	29.4	Accidents	27.2	40.5	15.0	28.1	15.1	15.4
Alcohol Induced	5.1	7.8	2.6	5.2	4.6	5.2	Alcohol Induced	4.7	7.3	2.1	4.9	0.0	0.0
Drug Induced	11.1	15.1	7.1	12.2	10.3	10.0	Drug Induced	8.1	10.0	6.1	8.1	10.4	8.4

Data compiled by State of CT Department of Public Health- www.ct.gov/dph/cwp/view.asp?a=3132&q=397432

Age-adjusted all-cause mortality rates for the county were lower as compared to the state, including rates for male, female, White-non Hispanic, Black-non Hispanic, and Hispanic Latino. County rates are lower than state rates for many causes including malignant neoplasms, diabetes mellitus, Alzheimer's disease, pneumonia and influenza, kidney diseases, accidents, and drug induced deaths, and comparable to the state for chronic liver disease including cirrhosis and alcohol induced deaths. County mortality rates are above the state for major CVD and chronic lower respiratory disease.

Within county AAMR comparisons by gender and race/ethnicity indicate higher mortality rates for males for all causes of death, and for White non-Hispanics (both genders) for all causes, Alzheimer's disease, major CVD, pneumonia and influenza, chronic lower respiratory disease, accidents, and alcohol induced deaths. Within the county, Black non-Hispanic residents have higher mortality rates from malignant neoplasms, diabetes mellitus, kidney diseases, and drug induced deaths. Hispanic or Latino residents have higher mortality rates from chronic liver disease including cirrhosis.

Table 15 represents the years of potential life lost to age 75, or premature death, based on the leading causes of death in the state and county. By cause of death, the largest impact in the state and county is manifested by malignant neoplasms, followed by accidents, major CVD, and drug-induced deaths. Males and Black-non Hispanic residents have the highest rate of premature death in the county overall.

Table 16 - State and County Age-Adjusted Years of Potential Life Lost to Age 75 by Gender and Race/Ethnicity, 2005-2009

Connecticut							Tolland County						
Cause of Death	Total	Male	Female	White N/H	Black N/H	Hispanic Latino	Cause of Death	Total	Male	Female	White N/H	Black N/H	Hispanic Latino
All	5,315.0	6,710.9	3,956.3	4,766.3	8,827.5	5,705.6	All	4,032.5	4,924.7	3,118.4	4,049.2	5,180.7	3,611.4
Malignant Neoplasms	1,161.6	1,208.5	1,121.5	1,149.3	1,579.0	954.4	Malignant Neoplasms	1,005.5	977.2	1,036.0	1,018.8	1,343.2	398.5
Diabetes Mellitus	103.9	136.5	73.0	86.9	254.8	144.3	Diabetes Mellitus	54.5	55.1	54.3	54.4	0.0	89.1
Alzheimer's Disease	7.1	8.3	6.0	7.4	2.2	11.3	Alzheimer's Disease	1.4	1.9	0.8	1.4	0.0	0.0
Major CVD	904.6	1,273.9	557.5	830.1	1,757.1	888.8	Major CVD	651.4	909.7	386.7	659.9	1,137.3	306.4
Pneumonia & Influenza	51.5	58.3	45.5	42.1	108.5	70.2	Pneumonia & Influenza	20.2	13.3	27.5	18.5	173.6	0.0
CLRD	108.9	113.2	105.1	105.7	160.5	76.7	CLRD	81.5	96.8	66.8	84.5	38.3	40.3
CLD & Cirrhosis	110.2	154.5	68.2	110.5	93.4	160.8	CLD & Cirrhosis	96.4	145.4	46.6	101.6	0.0	130.0
Nephritis, nephrotic syndrome, nephrosis	53.7	66.4	41.9	38.5	170.0	94.9	Nephritis, nephrotic syndrome, nephrosis	20.8	22.5	19.4	19.7	122.6	0.0
Accidents	840.5	1,243.9	435.3	870.8	832.7	837.1	Accidents	620.5	964.9	263.2	656.3	447.3	481.9
Alcohol Induced	110.5	162.1	61.4	116.2	80.8	112.4	Alcohol Induced	89.5	142.9	35.5	96.2	0.0	0.0
Drug Induced	397.8	557.8	237.8	454.8	312.1	330.2	Drug Induced	271.3	352.6	184.2	267.5	403.7	353.2

Data compiled by CT DPH [Add citation]

Healthy People 2020 Leading Health Indicators

Healthy People 2020 includes 26 Leading Health Indicators (LHIs) which will be tracked, measured, and reported regularly throughout the next decade at the national and state level. Baseline data and targets related to the Community Transformation Strategic Directions are provided below for future reference.

The most recent available county and/or state baseline data indicate that the following *Healthy People 2020* LHI targets have been met: 1) persons with a primary care provider, 2) adult colorectal screening, 3) children exposed to secondhand smoke (proxy measure), 4) adults meeting current physical activity guidelines, 5) adult obesity, 6) adolescent obesity, 7) high school graduation rates, 8) adult binge drinking, and 9) adolescents smoking cigarettes in the past 30 days. Data indicate the following targets have not yet been achieved: 1) persons with medical insurance, 2) adolescents using alcohol or any illicit drugs during the past 30 days, and 3) current adult cigarette smokers. An overview of these healthy People 2020 indicators can be seen in Table 17.

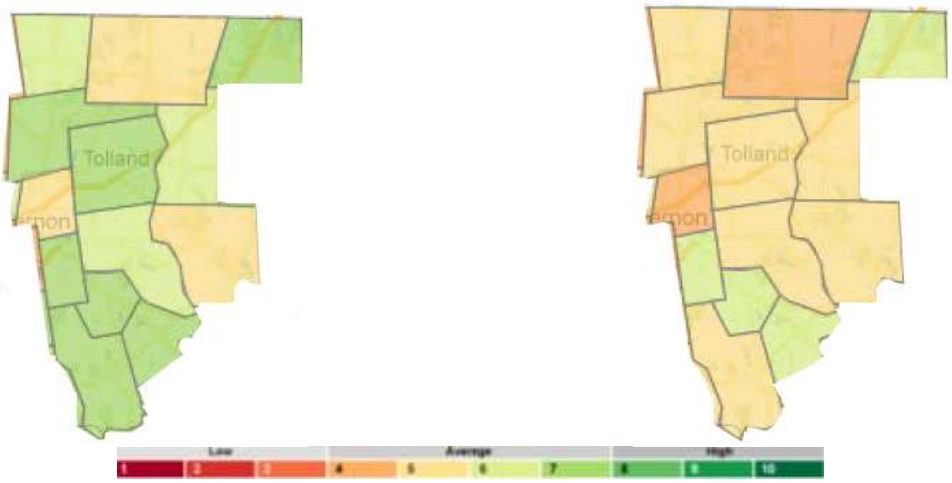
Table 17

HEALTHY PEOPLE 2020 INDICATOR (LHI Reference Number)	Target	National Baseline	CT/County Baseline
Access to Health Services:			
Persons with medical insurance (AHS-1.1)	100.0	83.2	90.8/91.2
Persons with a usual primary care provider (AHS-3)	83.9	76.3	87.5 (CT) Adults
Clinical Preventive Services:			
Adults who receive a colorectal cancer screening based on the most recent guidelines (C-16)	70.5	54.2	73.0/75.0
Adults with hypertension whose blood pressure is under control (HDS-12)	61.2	43.7	n/a
Adult diabetic population with an A1c value greater than 9 percent (D-5.1)	14.6	16.2	n/a
Environmental Quality:			
Children aged 3 to 11 years exposed to secondhand smoke (TU-11.1)	47.0	52.2	37.1 (CT) MS students
Nutrition, Physical Activity, and Obesity:			
Adults who meet current Federal physical activity guidelines for aerobic physical activity and muscle-strengthening activity (PA-2.4)	20.1	18.2	53.1/52.2
Adults who are obese (NWS-9)	30.6	34.0	21.4/22.7
Children and adolescents who are considered obese (NWS-10.4)	14.6	16.2	10.4 (CT) HS students
Total vegetable intake for persons aged 2 years and older (NWS-15.1)	1.1 cup equivalent/ 1,000 calories	0.8 cup equivalent/ 1,000 calories	n/a
Social Determinants:			
Students who graduate with a regular diploma 4 years after starting 9th grade (AH-5.1)	82.4	74.9	92.1 (CT)
Substance Abuse:			
Adolescents using alcohol or any illicit drugs during the past 30 days (SA-13.1)	16.5	18.3	43.5 (CT) HS Students
Adults engaging in binge drinking during the past 30 days (SA-14.3)	24.3	27.0	18.0/17.0
Tobacco:			
Adults who are current cigarette smokers (TU-1.1)	12.0	20.6	18.0/16.0
Adolescents who smoked cigarettes in the past 30 days (TU-2.2)	16.0	19.5	15.3 (CT) HS Students

Sources: http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=1#11; CTDPH Healthy Connecticut 2010; BRFSS 2007-2010; 2009 CT Youth Behavior and Tobacco Components; 2012 County Health Rankings. MS= Middle School; HS=High School.

Section III: EHHD/Tolland County Health Disparities & Inequities

Social Determinants **Health Outcomes**



The Health Equity Index (HEI) was used to examine common social determinants of health across all towns in Tolland County as well as identify areas (health categories, social determinants, and census tracts) in need of attention through the Community Transformation process. Health equity is an important aspect of the community health needs assessment since health-related lifestyle behaviors, health status, and outcomes are all strongly influenced by the social conditions that exist within a given community.

These conditions, known as the social determinants of health, include such factors as civic involvement, community safety, economic security, education, employment, environmental quality, and housing. The Health Equity Index (HEI) is a web-based assessment tool developed by the Connecticut Association of Directors of Health (CADH) that can be used to identify the social, economic, political, and environmental conditions within a community that are most strongly associated with specific health outcomes. The cross-sector indicators in the HEI facilitate collaboration among public health, community and civic leaders, and residents to collectively develop and implement strategies to improve community-level policies and practices that impact health. The HEI provides data, scores, correlations and GIS mapping for all 169 towns in Connecticut. The scores for each social determinant and health outcome are calculated on a 10 point scale (based on decile values) with 1 (red) indicating the least desirable and 10 (green) indicating the most desirable. A score of 5 is the median value for the state. Correlations between social determinants and health outcomes are based on Spearman's Rank Correlation Coefficient (R_s), and while these do not imply a cause and effect relationship, values above 0.3 (positive or negative) are considered statistically significant and could warrant further exploration of contributing factors.

Although overall Tolland County appears to be average or above average, several towns can be identified as communities of need. Based on the scoring of social determinants of health aligned with the health categories as seen in Table 17, six towns (Coventry, Ellington, Mansfield, Stafford, Vernon, and Willington) have two or more scores at 5 or below in the category of social determinants. Of these, Vernon and Mansfield each have four out of six social determinants of health at 4 or below on the

Health Equity Index (HEI scale. These are the two largest populated communities in the county and contain the most diverse populations.

Focusing on the three strategic directions for the Community Transformation process (healthy eating and active living; tobacco use and exposure; and quality preventive health screenings) for this report, ten of the health categories identified in the HEI are of interest: Access to Health Care, Cancer, Cardiovascular Disease, Childhood Illness, Diabetes, Liver Disease, Life Expectancy, Perinatal Care, Renal Disease, and Respiratory Illness. Table 18 reflects the health outcomes in individual Tolland County towns, many of which score in the low end of the HEI in the health categories that are associated with these strategic directions.

As seen in Table 18, two towns (Union and Bolton) have scores for perinatal care that require further assessment. With a Health Equity Index at 1 and 3 respectively, it will be important to learn more about the local situation that contributes to this ranking. Also of concern is that all towns in Tolland County have average scores (7 and below) relating to access to health care, with three of the County's towns scoring a 5 or less (Vernon, Stafford, and Hebron). Six of the 13 towns in the county have a low ranking (3) for liver disease, and although the possible cause is alcohol abuse, it is becoming more common to see liver disease as a result of other issues including prescription medications used for cardiovascular disease (compromised liver function is a side effect), overuse of medications containing acetaminophen, undiagnosed hepatitis C, as well as steatosis (fatty liver disease), all of which can lead to cirrhosis. Also of concern, seven towns scored a ranking of 4 or below for renal disease and six towns scored a ranking of 5 or below for cardiovascular disease, with two of these a low score of 3 (Stafford and Vernon).

TABLE 17: Social Determinants by Town

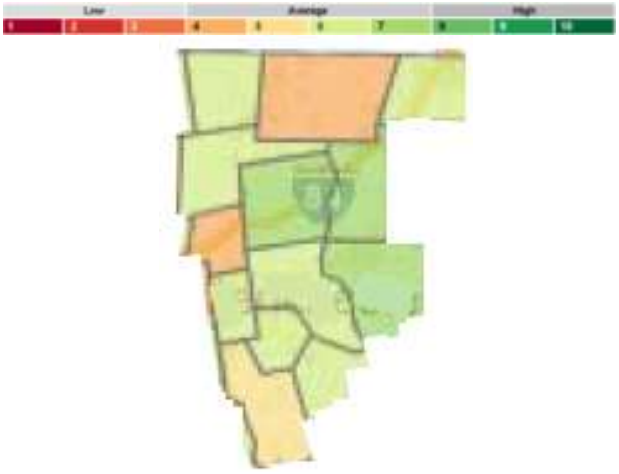
Town	Civic Involvement	Community Safety	Economic security	Education	Employment	Housing
Andover	7	7	7	6	7	6
Bolton	9	7	7	8	7	6
Columbia	7	8	7	6	6	8
Coventry	5	6	6	5	6	6
Ellington	4	10	6	7	7	5
Hebron	5	8	8	8	8	8
Mansfield	2	6	4	9	4	3
Somers	2	7	7	7	6	7
Stafford	6	n/a	4	5	5	5
Tolland	6	10	7	8	7	7
Union	10	7	6	5	6	8
Vernon	6	4	4	4	6	4
Willington	5	9	4	7	6	5

The following maps highlight a few of the health equity issues identified by the HEI for Tolland County. Included in the section are tables that present the social determinants that are related to the health outcome including the R_s value.

TABLE 18: Health Outcomes by Town

Town	Health care access	Cancer	Cardiovascular	Childhood illness	Diabetes	Liver Disease	Life Expectancy	Perinatal Care	Renal Disease	Respiratory illness
Andover	6	6	7	5	6	7	6	7	7	3
Bolton	6	4	7	8	5	3	7	3	7	5
Columbia	6	6	8	5	8	5	9	6	3	6
Coventry	6	4	5	5	4	4	7	7	4	5
Ellington	6	4	5	6	5	3	6	6	4	6
Hebron	5	5	6	7	5	4	7	6	5	6
Mansfield	7	5	9	7	5	3	10	8	6	6
Somers	6	6	5	7	5	4	9	7	4	5
Stafford	4	4	3	4	5	3	4	6	3	3
Tolland	7	5	6	6	5	4	6	5	3	4
Union	6	7	5	6	8	7	9	1	7	6
Vernon	4	4	3	4	4	3	4	5	3	3
Willington	7	6	8	4	5	3	8	8	6	5

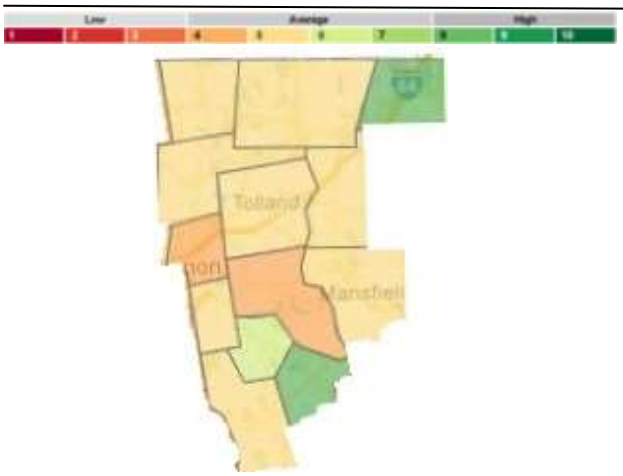
Health Care Access



Related Social Determinants	
Determinant	**R_s**
Economic Security	0.60
Education	0.52
Housing	0.51
Community Safety	0.50
Civic Involvement	0.49
Employment	0.47
Healthcare data source: CT Hospital Association, CHIME Hospital Discharge Data FY 2005-2010	

Indicators of health care access in the index include the number of emergency department visits for primary care services, and the number of births that have had delayed or inadequate prenatal care. A number of community conditions strongly correlate to a lack of health care access in the county as shown below.

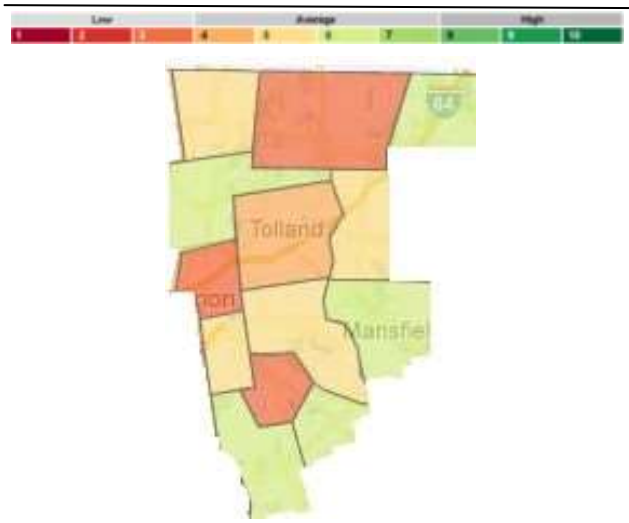
Diabetes



The Diabetes Index score for each municipality represents the age-adjusted mortality and premature death rates for the disease. Diabetes is correlated to a number or community conditions with education levels having the strongest correlation.

Related Social Determinants	
Determinant	**R_s**
Education	0.51
Economic Security	0.47
Civic Involvement	0.42
Diabetes data sources: CTDPH Office of Vital Records – Death Cert. (2005 – 08) & Nielsen Claritas (2007)	

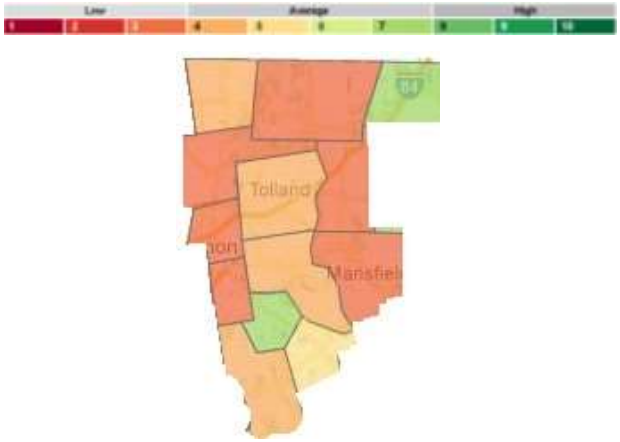
Respiratory Illness



Index scores for death rates and YPLL from chronic lower respiratory disease are below the state average for several Tolland County towns including three towns (Vernon, Stafford, and Andover) with a score of 3. The community conditions that most strongly correlate with respiratory illness are economic security and education.

Related Social Determinants	
Determinant	**R_s**
Economic Security	0.42
Education	0.41
Civic Involvement	0.31
Respiratory data sources: CTDPH Office of Vital Records – Death Cert. (2005 – 08) & Nielsen Claritas (2007)	

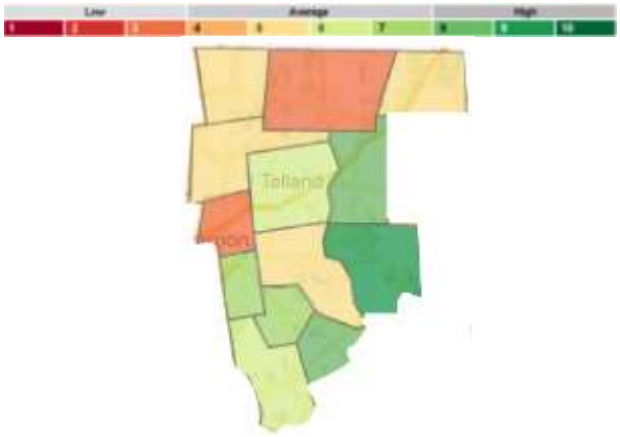
Liver Disease



Low index scores due to AAMR and premature deaths from chronic liver disease and cirrhosis are concerns for most of the communities in Tolland County. Social determinants associated with liver disease include civic involvement and environmental quality.

Related Social Determinants	
Determinant	**R_s**
Civic Involvement	0.33
Environmental Quality	0.32
Community Safety	0.31
Liver disease data sources: CTDPH Office of Vital Records – Death Cert. (2005 – 08) & Nielsen Claritas (2007)	

Cardiovascular Disease



Index scores for cardiovascular disease are calculated using mortality (AAMR) and premature death rates (YPLL). In Tolland County, four towns had average scores (5), while Vernon and Stafford had low scores (3). Social determinants aligned closely with this health outcome are education and economic security.

Related Social Determinants	
Determinant	**R_s**
Education	0.51
Economic Security	0.47
Civic Involvement	0.42
Cardiovascular disease data sources: CTDPH Office of Vital Records – Death Cert. (2005 – 08) & Nielsen Claritas (2007)	

It is important to note that for each of the social determinants as well as the health outcomes, there are detailed data for each town, often at the census tract level. This report provides not only a snapshot in time, but also an overview of the analysis for Tolland County.
A deeper look into town data and census tract level indicators has further identified pockets of inequity within towns that will need to be addressed as an implementation plan is developed. These census track level data often reveal neighborhoods with very low scores surrounded by areas of average or high scores – the result at the town level can be an average score (5 or 6), concealing serious issues within the community.

Furthermore, as is often needed when working at a community level, the HEI data will be used as a starting point for the investigation into the related community issues. Learning the "story behind the numbers" will enable the Tolland County Community Transformation coalition to make informed decisions.

Section IV: EHHD/Tolland County Local Health Related Programs & Services

Public Health Resources

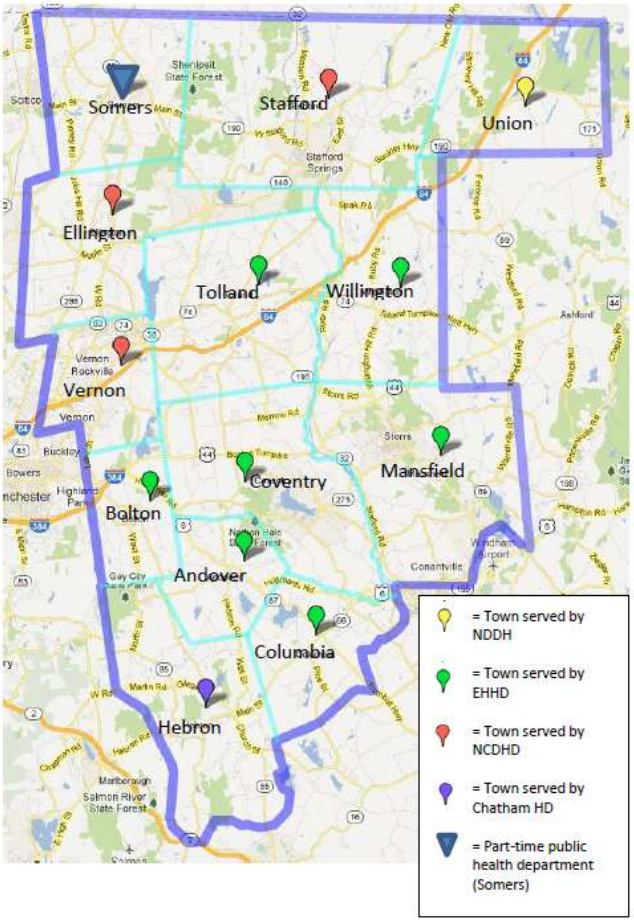
As previously noted, Connecticut lacks a county governance structure, therefore health-related programs and services are provided at the municipal, regional, or state level. This includes a range of programs and services provided by local public health departments serving Tolland County. As seen in Figure 1, the majority of the county's 13 towns are served by the Eastern Highlands Health District (EHHD): Andover, Bolton, Columbia, Coventry, Mansfield, Tolland, and Willington. Three towns are in the North Central District Health Department (NCDHD): Ellington, Stafford, and Vernon. One town is served by the Northeast District Department of Health (NDDH): Union and one is in the Chatham Health District: Hebron. A single town is served by a part-time health department (Somers).

Local health departments and districts provide essential public health services at the municipal level throughout Connecticut. These governmental entities are separate from the CT Department of Public Health (CTDPH), but are linked by state statute in several important ways, and receive state funding for prevention and education programs and services to promote and improve the health of residents in their communities.

Core services provided by all local health authorities serving Tolland County residents include (either directly or by contract): childhood lead poisoning prevention and control; communicable disease prevention and control (TB, STD, etc.); licensing and inspections for food service establishments and vendors; public health emergency planning including mass dispensing/ vaccination; enforcement of public health codes and regulations, including inspections for compliance with health standards; and health information, education, and screening services.

Over the past 5 years, seven of the county's towns have received support through the EHHD from grants to bring sustainable resources to the towns for improved access to opportunities for physical activity and healthy eating. These grant funds (CTDPH HEAL, CTDPH Women's Healthy Heart, and CDC ACHIEVE) have significantly enriched the resources available to residents in these communities.

Figure 18: Tolland County Local Public Health



Community Resources

There are a variety of additional health-related programs and services provided by other agencies and organizations within the county. The United Way of CT Infoline 2-1-1 maintains an online searchable community resource database of health and human service providers, agencies, and organizations. This database contains information for over 4,600 service sites across Connecticut. Infoline 2-1-1 is the most comprehensive database available and is updated regularly. The system is, however, dependent on service providers supplying comprehensive and up-to-date information. As part of the Tolland County CTG Coalition assessment activities, the Infoline 2-1-1 database, as well as community internet searches were used to identify community assets (programs and services) aligned with the CTG Strategic Directions:

- Tobacco-free living
- Active Living & Healthy Eating
- Quality Clinical and other Preventive Services

The following geographical asset maps provide a visual representation of the location and density of resources throughout Tolland County. The maps outline the county border and include major roads and bodies of water, but not individual town boundaries. Separate maps and descriptions are provided for each of the Strategic Directions. A full listing of programs, services, and policies as they pertain to each strategic direction can be found in Table 1.

Healthy Eating

EHHD Healthy Dining Certification

Restaurants that have formally agreed to meet the criteria identified by the EHHD are designated as *Healthy Dining Certified* establishments. These establishments offer opportunities for healthy serving sizes, and fresh fruits and/or vegetables through:

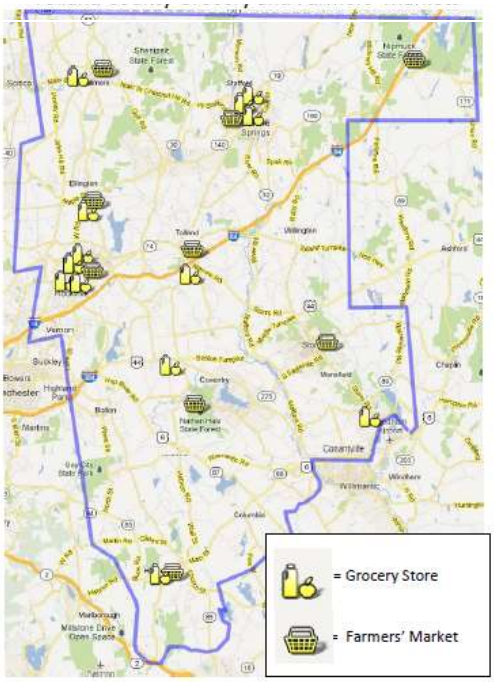
- Portion controlled sizes, an option to split a meal with another, and/or an opportunity to have half the meal placed in a box for take-out before the meal is served, **and**
- Offer as a side item (or a la carte) fresh, uncooked fruits and/or vegetables.

Resources that support healthy eating in Tolland County include both sources for nutrient-dense foods as well as environments that support healthy eating (through programming, education, or community-wide campaigns). One key resource for supporting healthy eating in any community is access to grocery stores that provide a wide range of food products at an affordable price. Tolland County has a total of 13 large grocery stores which are marked in figure 2.

Also identified are the area farmers' markets, although they are often seasonal. Not included in the map are temporary or limited resources for healthy

foods such as farm stands and boutique health food stores, as well as institutional settings where meals are guided by regulations such as schools, prisons, and health care facilities.

Figure 19: Tolland County Grocery & Farmers' Markets



The Eastern Highlands Health District has developed several initiatives for member towns to promote healthy eating and active living as indicated in Figure 3. These include the 9-5-2-1-0 for Health! Campaign in 2010; the Produce of the Week campaign in 2008; and Be Well, an employee wellness program provided as a contracted service to several member towns and Boards of Education, with selected initiatives offered to all member towns through a grant. The EHHD also implemented a healthy dining certification program in 2005, which was revised in 2008 to better reflect healthy options (access to fresh fruits and vegetables and appropriate serving sizes). A map of participating establishments is in Figure 21.

Figure 20: Healthy Eating & Active Living Promotion

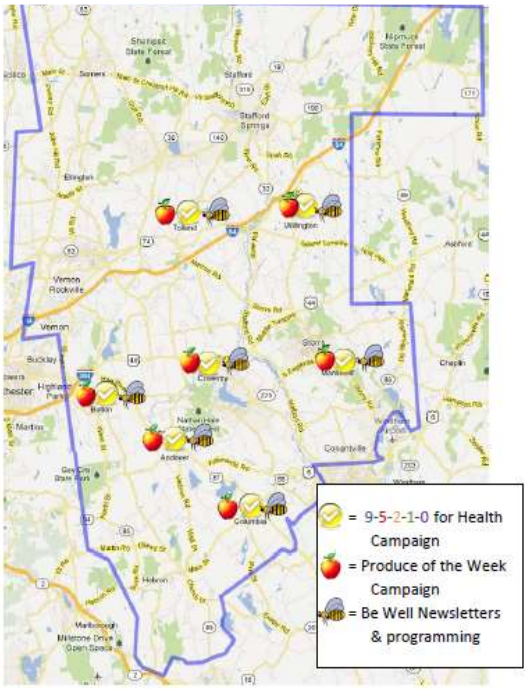
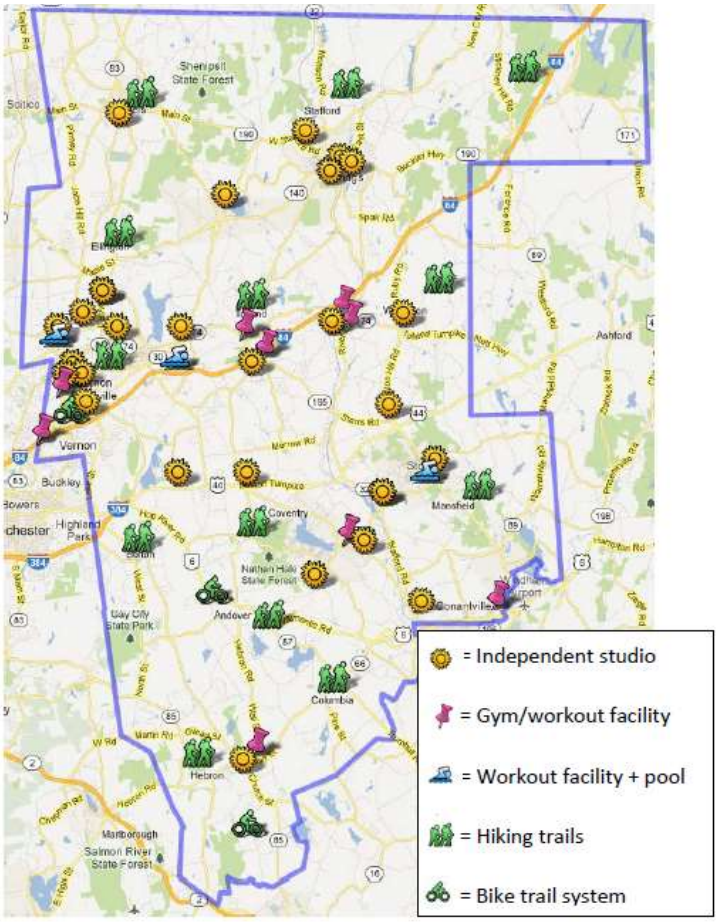


Figure 21: EHHD Healthy Dining Establishments

Active Living

The rural nature of Tolland County creates an abundance of outdoor recreational opportunities - both organized and informal. These range from state and local park land with hiking trails, playgrounds, and numerous bodies of water (lakes, streams, rivers), to sport fields that support team activities. While each town in Tolland County has varying degrees of resources and coordination to provide recreational opportunities, two extremes would be Union with no designated Parks and Recreation Department or resources, and Coventry which has been designated as a Playful City by KaBOOM. With the exception of Union, all towns have Parks and Recreation departments that offer a broad range of programming.

Figure 22: Tolland County Active Living Resources



There are about 40 fitness clubs and studios in Tolland County offering a wide range of programs (swimming facilities, cardio equipment, yoga and other fitness classes). Two large facilities are managed by not-for-profit groups: a YMCA in Ellington, and the Mansfield Community Center which is a Town-supported resource. All of these resources are indicated in Figure 5. While not labeled on the map, another asset in most towns across the county is the local senior center: many have extensive resources for physical activity available to senior residents. Additionally, the NDCHD offers low-cost fitness classes at central locations to all residents of member towns.

Tobacco-free Living

Various state and federal provisions support tobacco-free communities. Public and private school campuses are required to be tobacco-free pursuant to Connecticut General Statutes Section 19a-342. In addition, the Child Nutrition and WIC Reauthorization Act of 2004 and Public Law 108-265 Section 204 mandate schools to establish a school wellness committee and policies focused on a comprehensive approach to school health which includes tobacco-free living. Furthermore, in accordance with the Indoor Clean Air Act provisions, Connecticut statues also prohibit tobacco use in all municipal facilities, health care facilities, child care and group day care facilities, public college dormitories, theaters, public transportation, restaurants, and bars, and businesses with 5 or more employees.

On a local level, currently there are few if any programs offered in Tolland County that encourage or support tobacco cessation, although there is a state-wide effort to support cessation through the Connecticut *QuitLine* (1-800-Quit-Now) which is promoted through local public health across the county.

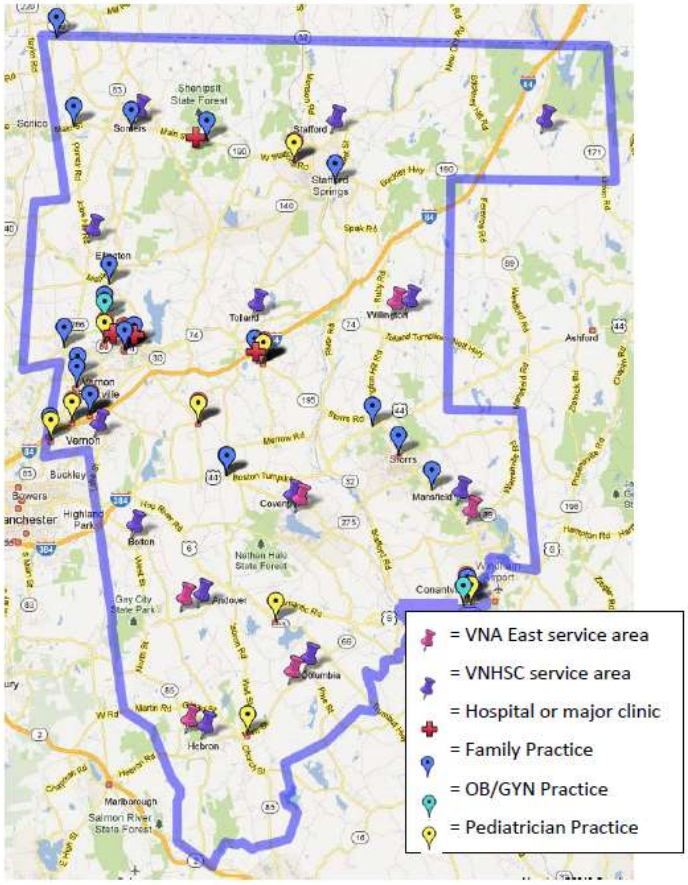
Additionally, local health departments serving Tolland County residents offer some support to for tobacco-free communities. The NDDH has a lending library of videos available to residents of their district, including Union which is part of Tolland County. EHHD promotes resources on its website and through its employee wellness program titled Be Well since 2007 as part of their employee wellness programming. The NCDHD provides referrals upon request and the Chatham Health District provides general information about the dangers of smoking through a link to the CDC on its website.

Quality Clinical Preventive Services

Health screening and chronic disease detection services are provided across Tolland County primarily by the two acute care hospitals in the county, one walk-in clinic, one satellite office of a Community Health Center, two Visiting Nurse Associations (VNA), and numerous private practice physicians serving in family practice, pediatrics, and obstetrics/gynecology which are located in seven of the county's thirteen towns, all of which are indicated in Figure 23.

Many rural communities in Eastern Connecticut rely on basic screenings (blood pressure, glucose, cholesterol) provided through service agreements between Towns and area VNA groups. With two regional VNA organizations, all Tolland County towns have VNA services available. These services complement other basic screening opportunities provided at town Senior Centers throughout the year. While there are several retail establishments in Tolland County providing a-la-carte preventive services (flu shots, blood pressure checks, immunizations), due to the variability of their services, they are not represented on this map.

Figure 23: Tolland County Clinical Preventive Services



It is noteworthy that two of the county's public health districts have provided health screening services over the past year (or longer) through special programming that is dependent on grants or contracts: The Northeast District Department of Health provided over 150 health screenings to women participating in the

The Eastern Highlands Health District has been providing health screenings (cholesterol, blood pressure, and glucose) to member town schools and town halls through grants and contracts.

Table 19: Policies, Programs, and Assets by Town and Strategic Direction

Town	Healthy Eating/Active Living	Tobacco-free living	Quality clinical preventive services and screenings
Andover	• Senior center offers regular classes and opportunities for physical activity ranging from exercise to using a Wii Fit, to line dancing • Parks & Recreation offers seasonal programming • School worksite receives Be Well newsletter & promotional activities • Multiple hiking trails and outdoor recreation opportunities	• Andover, Hebron, Marlborough Youth and Family Services, Inc. conducts survey on tobacco use by youth. A detailed report is provided (here)	• Senior center offers basic health screenings through the VNA and provides medical transportation for health appointments • Visiting Nurse Association community resources
Bolton	• Bolton Schools Be Healthy Program commitment to wellness and healthy living through our high school graduation requirements which include all students must completing a Health and Fitness Portfolio. (click here) • Social Services offers rides to seniors to the grocery • Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • Multiple hiking trails and outdoor recreation opportunities • 1 Independent studio		• Transportation is provided on a scheduled space available basis for medical appointments • Senior/social services provides blood pressure screening, flu clinics, foot care clinics, skin screenings (more info here) • Visiting Nurse Association community resources • Designated as a HeartSafe Community by CT DPH
Columbia	• The town operates a community garden at Szegda Farm which can accommodate up to 8 10' X 20' plots. More information can be found here. • Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • Multiple hiking trails and outdoor recreation opportunities	• Town employee no smoking policy in and around town buildings and vehicles (click here).	• Transportation is provided on a scheduled space available basis for medical appointments • Visiting Nurse Association community resources • 1 Pediatrician office
Coventry	• Parks & Recreation offers extensive programming throughout the year including a free loaner program for kayaks and canoes • Senior Center offers regular classes and opportunities for physical activity • Farmers' Market • 1 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 1 Gym/workout facility • 3 Independent studios	• Town employee no smoking policy in and around town buildings and vehicles	• Senior Services, offers Health Programs (Wellness Nurse and Blood Pressure/Diabetes Testing, Foot Care Clinics, Wellness Presentations, Reflexology • Transportation for medical services offered through a van service. There is also a mileage reimbursement program for those who assist the elderly and senior wellness trips are provided several times per year. (click here) • Visiting Nurse Association community resources • 1 Pediatrician office • 1 Family Practice office • Designated as a HeartSafe Community by CT DPH

Town	Healthy Eating/Active Living	Tobacco-free living	Quality clinical preventive services and screenings
Ellington	• Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • 1 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 4 Independent studios • YMCA facility		• Senior center offers diabetic screening, blood pressure screening, podiatry clinic (see calendar here). • Visiting Nurse Association community resources • 1 Family Practice office • Designated as a HeartSafe Community by CT DPH
Hebron	• Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • Senior center operates a 'community café' (see menu here) • 1 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 1 Gym/workout facility • 1 Independent studio	• Smoking prohibited in dial-a-ride vehicles. • Chatham health district provides information on smoking cessation	• Health screenings and presentations provided by the senior center include diabetes presentations, blood pressure and cholesterol checks, flu/pneumonia vaccinations. • Town has a dial-a-ride program taking seniors and adult disabled individuals to medical appointments and pharmacy. • Visiting Nurse Association community resources • 1 Pediatrician office • Designated as a HeartSafe Community by CT DPH
Mansfield	• Parks & Recreation offers extensive programming throughout the year including a free loaner program for kayaks • Town Community Center provides full spectrum of fitness options including indoor pool, gym and walking track • Senior Center offers regular classes and opportunities for physical activity • Town operates a farmer's market continuously throughout the year. • Dedicated plots for community gardens • 1 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 2 Gyms/workout facilities • 4 Independent studios	• Town employee no smoking policy in and around town buildings and vehicles	• Volunteer driver program for seniors and eligible residents with priority given to those needing a ride for medical appointments. • VNA East provides blood pressure, cholesterol and blood sugar screenings. Foot and ear care also provided. • Visiting Nurse Association community resources • 1 Pediatrician offices • 1 OB/Gyn offices • 4 Family Practice offices(including UConn Student Health Services) • Designated as a HeartSafe Community by CT DPH
Somers	• Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • Town operates a farmer's market • 1 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 1 Independent studio		• Senior Center offers Bus Service, taking seniors and disabled passengers to their medical appointments & shopping • Senior center organizes/supports men's and women's health week (click here for senior center brochure) • Visiting Nurse Association community resources • 3 Family Practice offices • Designated as a HeartSafe Community by CT DPH

Town	Healthy Eating/Active Living	Tobacco-free living	Quality clinical preventive services and screenings
Stafford	• Dietician from the Community Renewal Team comes to the Senior Center every 3 months • Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • Parks & Recreation offers seasonal programming • Senior Center offers regular classes and opportunities for physical activity • Stafford Senior Bus is used for in-town grocery shopping • 3 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 4 Independent studios		• Senior Center offers Health screenings, blood pressure screenings & glucose screenings, with special clinics every 3 months, (Cholesterol Screenings, Anemia Screenings etc.) • Family Services Department, the town provides medical transportation. The driver/attendant will pick ambulatory seniors aged 55 and older, up at their homes and transport them to their medical appointment. • Acute care hospital: Johnson Memorial • Visiting Nurse Association community resources • 1 Pediatrician office • 2 Family Practice offices • Designated as a HeartSafe Community by CT DPH
Tolland	• Parks & Recreation offers extensive programming throughout the year • Senior Center offers regular classes and opportunities for physical activity • Town operates a farmer's market • Dedicated plots for youth garden • 1 large grocery store • Multiple hiking trails and outdoor recreation opportunities • 2 Gyms/workout facilities (including Star Hill indoor complex) • 1 Independent studio	• Tolland Youth Services conducts research on youth drug and alcohol use (including tobacco click here)	• Senior Center offers a support system for residents 60 and older. Some of the programs include health clinics, which include blood pressure monitoring, blood sugar monitoring, foot care and annual flu shots. • Eastern Connecticut Health Network's CT Breast and Cervical Cancer Early Detection Program. • Walk-in urgent care clinic: Med-East • Visiting Nurse Association community resources • 1 Pediatrician office • 1 Family Practice office • Designated as a HeartSafe Community by CT DPH
Union	• Multiple hiking trails and outdoor recreation opportunities		• Town organizes flu clinics at the town hall • Visiting Nurse Association community resources
Vernon	• Parks & Recreation offers extensive programming throughout the year • Senior Center offers regular classes and opportunities for physical activity • Farmers' Market • 4 large grocery stores • Multiple hiking trails and outdoor recreation opportunities • 2 Gyms/workout facilities • 6 Independent studios		• Senior center car provides Medical and dental appointments outside of Vernon • Senior Center provides Foot Care, Flu Shots, screenings: (blood pressure, blood sugar and cholesterol, hearing. • Acute care hospital: Rockville General • Community Health Center • Visiting Nurse Association community resources • 3 Pediatrician offices • 1 OB/Gyn offices • 7 Family Practice offices • Designated as a HeartSafe Community by CT DPH
Willington	• Parks & Recreation offers seasonal programming including a free loaner program for kayaks and snowshoes • Senior Center offers regular classes and opportunities for physical activity • Multiple hiking trails and outdoor recreation opportunities • 1 Gym/workout facility • 2 Independent studios		• Transportation provided through dial-a-ride for medical appointments for those 60+ or disabled adults. • Visiting Nurse Association community resources

Section V: EHHD/Tolland County Coalition Membership & Activities

The Tolland County Community Transformation Coalition was created in the fall of 2011 as an expansion of the Eastern Highlands Health District's (EHHD) ACHIEVE Community Health Action Response Team (CHART). As the EHHD ACHIEVE Initiative focusing on policy, systems, and environmental (PSE) change was in the third year of activity, there was an identified need to expand the existing coalition that initiated the ACHIEVE work to create a broader impact across the health district and a more sustainable initiative. The timing of this expansion aligned with the 2011 awarding of the Community Transformation Grant (CTG) to Connecticut. Consequently, new partners from across Tolland County were engaged to collaboratively assess and prioritize the health needs in the community and collectively develop an implementation plan to improve the health of Tolland County residents.

As the lead agency and fiduciary agent for the Tolland County CTG, the EHHD subcontracted with the North Central District Health Department to create a partnership approach to reaching key partners in all towns in the county, and established a system for the distribution of tasks associated with the grant deliverables. The resulting coalition of over 45 community leaders includes representation from:

- All 13 towns in Tolland County
- The three required CDC strategic directions
- The five sectors (Community at Large, Worksites, Schools, Organizations, and Health Care)
- Disparate groups

The membership of the coalition has been evolving over the past 12 months as new partners are identified.

The efforts of the Tolland County CTG CHART have greatly benefitted by the groundwork of the EHHD CDC ACHIEVE Initiative. Funded in 2009 through the National Association of Chronic Disease Directors, the primary focus of the EHHD ACHIEVE work was on healthy eating and active living. While there were dozens of town-based improvements to policies and the environment to support ACHIEVE efforts, some initiatives were district-wide including:

- September 2010: Farm-to-table dinner to raise awareness of the need to address policy, systems and environmental change to improve access to healthy food and opportunities for physical activity. The keynote address was given by Dr. David Katz, Director of the Yale Griffin Prevention Institute; 100 community members participated.
- Spring 2011: The 9-5-2-1-0 for Health! Campaign was launched and promoted across the Health District through schools and community organizations resulting in healthier food options at local schools including a Great Plate Tuesdays at one school and the subsequent inclusion of a salad bar at lunch.
- Spring 2011: Initiated Safe Routes to School Master Plan process in two school districts and provided extensive assistance on a grant application for infrastructure through the CT Department of Transportation (awarded funding 2012).
- September 2011: EHHD planned and hosted an Action Institute to provide training on PSE change in the community. Mark Fenton was the keynote speaker and the event included workshops on sector-specific best practices for HEAL.
- Fall 2011: Farmers' Market fees adjusted to facilitate participation in area markets (reduced fees and no-fee options for vendors).

- February 2012: Leadership Breakfast event for municipal and community leaders to heighten awareness of the importance of the built environment in creating a healthy community (Mark Fenton gave keynote address).
- Spring 2012: EHHD temporary food vendor permit modified to encourage healthy food options.
- Completed the CDC CHANGE tool assessment in multiple worksites and community organizations.

One of the most significant accomplishments of the EHHD ACHIEVE Initiative was the impact of the relationships that were built across sectors, departments, and towns. While many of these groups and individuals had a primary or secondary focus on health issues, ACHIEVE brought a common language (PSE) around shared concerns (physical activity and healthy eating). The result was that key leaders participating in ACHIEVE brought the PSE focus back to their collaborative groups and the overall impact in the community from ACHIEVE grew and became sustainable. Building on this success, the Tolland County Community Transformation CHART has leveraged existing collaboratives in the community. Experience from the ACHIEVE years demonstrated that strengthening relationships with local collaboratives provides mutually beneficial results. Four active collaboratives in Tolland County that have become strong partners in the Community Transformation process are identified in Table 20. To further organizational goals, the EHHD has participated for many years on two of these collaboratives (Mansfield and Coventry). The Tolland County Community Transformation CHART meets monthly to address the grant deliverables. Accomplishments to date include:

Table 20: Collaborative Partners in the Community

Name & Membership	Mission
Mansfield Advocates for Children A collaborative of 30 community members representing advocacy groups, education, child care, parents, community services, and health	All Mansfield's children, birth through eight years old, are healthy successful learners connected to the community
Coventry STEPS (Sharing Together Enriches Potential Success) A collaborative of 30 community members representing education, child care, parents, community services, health, and safety	All Coventry children from birth to age 8 are nurtured, healthy, and engaged and successful learners
Stafford Early Childhood Collaborative A collaborative of over 20 community members representing health, parents, education, child care, community services, and safety.	Supporting all Stafford children between the ages of birth to age 8 to ensure a safe, healthy and secure home and community in which to learn and grow
Vernon Community Network A collaboration of 50 community providers representing education, health, community services, social services, and business	Work to identify and coordinate Social Service, Health, Educational, and Economic Development resources for the enhancement of the community.

- Successful expansion of the ACHIEVE CHART into all of Tolland County;
- Engaging key partners across the county to address the work of CTG;
- Branding of the Tolland County CTG Initiative and adoption of CHART as a name for the coalition;
- Worked collaboratively with the 4 other county CTG team leaders and state DPH partners to advance state efforts and coordination of the grant;
- Attended the state-sponsored CDC training on the CHANGE Tool;
- Developed and finalized the Tolland County Community Health Needs Assessment sections on demographics, health outcomes, and health equity; and
- Initiated the county-wide policy scan through the CHANGE Tool.

A listing of the members of the Tolland County Community Transformation CHART can be found in Table 21.

Table 21: 2012 Tolland County CTG CHART

	First Name	Last Name	Town	Affiliation/Organization
1.	Tim	Ackert	Columbia, Coventry, Vernon	State Representative
2.	Tom	Ainsworth	Tolland	Recreation Director
3.	Sandie	Benjamin	Tolland	Youth Garden Initiative
4.	Tara	Bergeron	Willington	Director Willington Youth, Family & Social Services
5.	Ande	Bloom	Regional	Eastern Highlands Health District
6.	Bobby	Brex	Regional	Northeast Communities Against Substance Abuse
7.	Charlie	Chatterton	ECSU	ECSU/Vernon/SRTS/Active transportation
8.	Kyle	Chmielecki	Regional	*EHHD*
9.	Patrick	Doyle	Regional	United Way alternate phone: 860-456-0188
10.	Linda	Drake	UConn	Program Director of EFNEP
11.	Kate	Durant	UConn	Club Sports Program Coordinator
12.	Linda	Farmer	Tolland	Town Planner
13.	Heather	Freeman	Region	North Central District Health Department
14.	Josh	Freeman	Tolland	Town Council member
15.	Sandra	Frizzell	Chaplin/Scotland	Early Childhood Coordinator
16.	Vicki	Fry	UConn	Human Resources
17.	Teri	Gareau	Willington	Director of Parks & Recreation
18.	Erin	Graziani	Ellington	Director of Senior Center
19.	Chris	Grulke	Tolland	School Nursing Supervisor
20.	Kevin	Grunwald	Mansfield	Director of Human Services
21.	Kathryn	Hassler	Coventry	Early Childhood Collaborative
22.	Troy	Hopkins	Ashford	Ashford School Principal
23.	Margaret	Hynes	State	State DPH
24.	Kathleen	Krider	Mansfield	Early Childhood Coordinator
25.	Amy	Krysiewski	Region	Johnson Memorial Hosp
26.	Diane	Lasher-Penti	Ellington	Director Youth Services
27.	Laurel	Leibowitz	Tolland	Family Resource Center Coordinator
28.	Nick	Lownes	UConn	Director Center for Transportation & Livable Systems
29.	Deb	Luby	Stafford	Early Childhood Collaborative
30.	Melissa	Luginbuhl	Regional	ERASE
31.	Elizabeth	McCosh Lilie	Ashford	Region 19 BOE member
32.	Sally	Milius	Mansfield	School Garden Initiatives
33.	Rob	Miller	Region	Director of Health EHHD
34.	Gladys	Morgan	Regional	VNHSC
35.	Linda	Painter	Mansfield	Town Planner
36.	Mary	Pelletier	Regional	VNHSC
37.	Ann	Plumley	Mansfield	Senior Pastor
38.	Stuart	Popper	Andover	Planner/consultant
39.	Wendy	Rubin	Coventry	Recreation Director

40.	Alan	Slobodien	Vernon	Discovery Coordinator
41.	Bonnie	Smith	Regional	Director for ERASE
42.	Bette	Stern	Mansfield	Recreation Coordinator
43.	Jennifer	Tross	Regional	Rockville & Manchester Hospitals
44.	Jaci	VanHeest	UConn	UConn Assistant Professor
45.	Tracy	Verrastro	Bolton	Recreation Director
46.	Bunny	Wilmot	Coventry	Farmer's Market
47.	Mary	Withey	Regional	VNA East
48.	Sheryl	York	Ashford	Recreation Director
49.	Chris	Petrone	Regional	ECHN Director of Women's Services

Section VI: Indicator-driven Policy Scan

Federal, states, and local health-related policies, in the form of laws (acts), statutes, ordinances, regulations, and rules, have a profound impact on community and individual health. Historically, many major improvements in public health are in large part attributable to the adoption of policies, such as drinking water quality improvements through septic and sewer regulations, and a reduction in lung and respiratory illness due to indoor air quality laws. Formulation of health-related policies is a time-consuming and complex process, involving both public and political will for change.

An exhaustive review of health-related policies is beyond the scope of this assessment, however some notable federal legislation aligns with the CTG Strategic Directions such as the recently enacted Affordable Care Act, which provides for universal access to health insurance coverage, removal of exclusions to coverage, expanded provisions for preventive care and health screenings, and promotion of healthy eating through enhanced point-of-purchase nutrition information and labeling requirements. Other federal legislation, such as the Child Nutrition and WIC Reauthorization Act of 2004 and Public Law 108-265 Section 204 - Local Wellness Policy mandate that local educational authorities (LEAs) participating in a program authorized by the Richard B. Russell National School Lunch Act (42 U.S.C.1751 et seq.) or the Child Nutrition Act of 1966 (42 U.S.C. 1771 et seq.) establish a school wellness policy that addresses a broad spectrum of health-related goals, objectives, and activities within schools. In addition to legislation, a multitude of federal and state agencies provide technical guidelines and evidence-based standards that facilitate the development of programs, systems, and policies aligned with the CTG Strategic Directions.

On the state level, there have been considerable advancements in recent years supporting the intent behind the CTG Strategic Directions. State policies in support of Tobacco-free Living include CT General Statutes (CGS) Section 19a-342 establishing tobacco-free public and private school campuses. Through Indoor Clean Air Act provisions, CT statutes also prohibit tobacco use in all municipal facilities, health care facilities, child care centers, group day

care facilities, public college dormitories, theaters, buses and trains, restaurants and bars, and businesses employing 5 or more persons. Additional disincentives on the state level for tobacco use include laws prohibiting the sale or possession of tobacco products by minors (persons under age 18); a ban on placement of cigarette vending machines in areas, facilities or businesses frequented by minors; and significant taxes levied on tobacco products. More specific information on state statutes and regulations that support tobacco-free living are available at: http://www.jud.ct.gov/lawlib/law/smoking.htm

Legislative information compiled by the Connecticut Association of Directors of Health (2012) demonstrates a strong commitment by the CT State Legislature over the past decade in support of policies to make Healthy Eating and Active Living more accessible to all state residents. Of note:

- Bill # H6156 Enacted: 2011: Concerns certified farmers' markets, creates portability for a food service permit held by farmers, enables farmers to readily sell their goods at multiple farmers' markets. "Farmers' market" means a cooperative or nonprofit enterprise or association that consistently occupies a given site throughout the season or that occupies a given site for any given day or event and that operates principally as a common marketplace for a group of farmers, at least two of whom are selling Connecticut-grown fresh produce, to sell Connecticut-grown farm products in conformance with the applicable regulations of CT state agencies.
- Bill # S373 Enacted: 2006: Concerns healthy food and beverages in schools, authorizes a percentage of funds per lunch served in a prior school year by a school district, the regional vocational-technical school system or the governing authority of a state charter school, magnet school or endowed academy, relates to the National School Lunch Program participation.
- Bill # S204 Enacted: 2006: Promotes the physical health needs of students, allows local and regional boards of education to adopt guidelines to coordinate services and programs in order to address the physical health needs of students, provides that school boards may implement them by the 2007-08 school year and have a plan in place for each successive school year.
- Bill # HB5344 Enacted: 2004: Concerns childhood nutrition in schools, recess and lunch breaks; requires minimum time limits for school recess and lunch breaks; requires schools to make healthy food available to students; includes low-fat food and drinks, natural fruit juices and water, and fresh and dried fruit.

Additionally, although not enacted, the following proposed state bills in support of active living and healthy eating objectives in Connecticut serve as an indicator of political and public will in recent years:

Bill # H5696 Dead: 2011: Concerns the reform of physical education in public schools, combats childhood obesity by expanding the activities that may be included in physical education class.

Bill # S400 Dead: 2009: Concerns access to health and nutritional information in restaurants, educates consumers about the nutritional content of menu items before they order.

Bill # S1080 Vetoed: 2009: Concerns access to health and nutritional information in restaurants, requires restaurants to disclose on such restaurants' standard printed menus total calorie counts for standard menu items along with information that identifies major food allergens used in the preparation of such standard menu items, relates to chain restaurants and food item tags, provides that the Commissioner of Public Health shall establish guidelines incorporating inspection and enforcement procedures.

Bill # H6219 Dead: 2009: Implements a state-wide support program for bicycling, provides for the implementation of a state-wide support program for bicycling funded by a Share the Road motor vehicle number plate.

Bill # S738 Dead: 2009: Concerns biking and walking improvements to promote active and healthy living, promotes active and healthy living by improving the bicycling and walking infrastructure of the state.

Bill # H6107 Dead: 2009: Concerns the addition of certain considerations during the planning phase of school construction projects, promotes healthy lifestyles, reduces childhood obesity, reduces gridlock on the roads and reduces the need for school buses.

Bill # S962 Dead: 2009: Concerns wellness incentives, promotes health behavior wellness, maintenance or improvement program participation by requiring such programs to be offered and to require an incentive or reward for such participation.

In addition to federal and state legislation, a number of Tolland County municipalities, agencies, and organizations have established policies and environmental strategies related to the CTG Strategic Directions. In an attempt to understand the scope of local policies, the Tolland County Community Transformation initiative utilized the CDC CHANGE Tool. The CHANGE Tool surveys consist of a series of best practice statements organized by topic: physical activity, nutrition, tobacco, chronic disease management, and leadership. The best practice statements vary somewhat by sector, and for schools there are additional questions relating to the district as a whole, and questions regarding after school programs (if offered). For each statement, a numeric response is assigned which reflects the extent to which the environment and policy exist that supports that particular best practice. The CDC -created CHANGE Tool Excel files contain embedded formulas which calculate a score for each module, derived from the numeric responses to each question in that module, to quantify the extent to which policies and/or environment supports are in place.

The Tolland County CTG initiative reviewed data from CHANGE Tool assessments from 2 community-at-large (towns), 8 schools, 4 healthcare settings, 16 community organizations, and 4 worksites. These data and the anecdotal evidence attained through collecting CHANGE data provide a window into the support for the CTG Strategic Directions in Tolland County and perhaps more importantly, the readiness for change at all levels of organization in the local community which will be further addressed in Section 7 of this report.

The CHANGE Tool reveled opportunities to improve policies regarding physical activity in schools and at worksites, to address the environment thereby enabling or facilitating opportunities for physical activity. Across all sectors the opportunity to improve policy and the environment regarding healthy food options is an important one to address.

Section VII: Public/Political Will for Change within the County

Indicators of public and political will for change in Tolland County were assessed by the CHANGE Tool and through discussions at Tolland County CHART meetings (with representation across the sectors and towns in Tolland County). CHANGE Tool respondents reported a number of existing policies and environmental supports which demonstrate Community-at-large public and political will for change related to the five CTG Strategic Directions. Some examples of this support include municipalities embracing mixed land use; establishing a strong network of parks and playgrounds with ongoing upkeep; financing (or securing funding for) public parks and/or greenways, sports facilities, and pedestrian enhancements. Towns also support locally grown foods and Farmers' Markets and many have community gardens. Connecticut has strong tobacco policy as a state, and the CHANGE Tool data support that communities adhere to all tobacco-free state regulations.

Further evidence of interest in change can be linked to recent topics of discussion and agenda items in various towns and community agencies across the county. Examples of support for policy and environmental changes in the area of Healthy Eating and Active Living include the expansion of the EHHD Be Well Program (providing employee wellness services through local public health) to additional towns in Eastern Connecticut, the support of SRTS through adoption of Master Plans and applications for funding in Mansfield and Coventry, and the efforts in Mansfield, Tolland, and Coventry to expand the number and quality of town playgrounds. Additionally, the Strategic Plan for the EHHD that was recently approved by the agency's Board of Directors, includes an objective to improve student nutrition through engagement with school food service staff.

With regards to notable support for establishing Tobacco-Free Communities, there have been recent efforts to increase smoking cessation programs offered in rural communities in Tolland and Windham Counties, Tobacco-free campuses (worksites) has reached agenda status at a few local employers, and Tobacco-free parks has reached agenda status in some communities while others have proposed ordinances. Aligned with the final Strategic Direction, Quality Clinical Preventive Services, the Tolland County CTG initiative received strong support from local clinical partners for Self-blood Pressure Monitoring project RFP earlier in the year.

With the partnerships that have been nurtured over the past years with key leaders across Tolland County, the Community Transformation initiative is primed to take the next steps to leverage this political and public will and create healthy, sustainable change in the community.

Section VIII: Identified and Prioritized Strategies for Implementation

The Tolland County CTG Coalition evaluated the results of the 2012 Tolland County Community Health Needs Assessment (CHNA) and CHANGE Tool surveys to identify priority strategies for implementation in the county. In addition to these findings, the significant collective community knowledge and experience of the Tolland County CHART members further informed the selection of priority strategies. The results from the CHNA and CHANGE Tool were summarized and presented at several meetings in early 2013 to determine priority strategies, objectives, and activities for implementation focused on four strategic directions – Tobacco Free Living, Active Living, Healthy Eating, and Clinical Preventive Services. At the April 2, 2013 meeting the CHART reached consensus regarding prioritizing strategies. Taking into account public and political will, cost-effectiveness, feasibility in implementation, likelihood of success, scalability, and long-term impact, several potential strategies were identified for each Strategic Direction. It is important to note that county-specific policies related to any of the Strategic Directions do not presently exist as there is no county-level government in Connecticut. Strategies selected are targeted to all races, ethnicities, genders and ages. Since the county is largely rural, any health improvements would reduce health disparities between rural and non-rural communities. To this end, the Tolland County CHART focused on sustainable approaches that could be more easily adopted and scaled across multiple sectors and municipalities. The resulting document "Tolland County CTG Implementation Plan" was a collaborative effort among the CT Department of Public Health and all CTG partner counties to align strategies across the five counties to the extent possible to maximize outcomes. The strategies for implementation (based on Strategic Direction) are highlighted below.

Tobacco-Free Living: Prevent and Reduce Tobacco Use through Tobacco Free Policies in Public Places is a priority strategy.

Families including adults and children that visit tobacco free parks, recreation areas, and public places should not be exposed to environmental tobacco smoke. In accordance with the county CHANGE tool assessments for Tolland County, tobacco free parks were identified as a missing component to tobacco-free living and an opportunity for policy development. Policies and ordinances addressing tobacco free parks, recreation areas, and public places will reduce exposure to environmental tobacco smoke (exposure to second and third-hand smoke) for smokers and non-smokers and serve as a deterrent to tobacco use. Nonsmoking adults visiting these public places may serve as a model to young children, reinforcing new CT tobacco laws prohibiting possession and use of tobacco by minors. Tobacco-free policies and corresponding signage will also send a strong message to community members that tobacco use is harmful to one's health.

Rationale: Certain populations experience a higher burden with tobacco-related illness. For example, the Hispanic population in Tolland County experiences a high rate of hospitalizations due to disease states impacted by tobacco use: cardiovascular

hospitalizations are almost five times the state rate; almost a nine-fold increase over the state rate for lung and bronchial complications; six times the rate of the state for stroke hospitalizations; and twice the rate for asthma hospitalizations. Clearly, all efforts to reduce tobacco exposure and minimize tobacco use will benefit these County residents, especially those who bear the highest burden regarding health outcomes. Any steps taken by Tolland County municipalities to limit or restrict tobacco use in public parks or other public building campuses will benefit local residents and visitors.

Healthy Eating: Improve nutritional quality of all foods offered in preschool settings through policy that aligns with the Connecticut State Department of Education's "Action Guide for Child Care Nutrition and Physical Activity Polices" is a priority strategy.

Child care providers that adopt CT Child Care Nutrition Standards and Allowable Beverages policies will provide children with foods and beverages that mirror the 2013 USDA and State of CT Nutrition guidelines currently being implemented in public schools. These standards have been adopted to prevent obesity and give children optimal nutrition. Using the Infoline 2-1-1 system to identify all child care providers in Tolland County, centers will be prioritized based on service population (percentage of low-income or minority children). There will also be an emphasis in enrolling child care centers receiving United Way funding and those enrolled in WIC and SNAP. An emphasis will be place on sustainability and communication of adopted policies and evaluation of the impact on child care providers, parents and children.

Rationale: While public schools have strong nutrition policies in place, county CHANGE Tool assessments indicate that early child care and education sites, except for federally funded programs, have minimal standards. For the school year 2012/2013, the rate of kindergarten overweight or obese children was 30% in Tolland County. A recent study by the University of Connecticut on Connecticut town insecurity ranking has two (out of 13) Tolland County towns ranking in the bottom 25% of the state for food security/healthy food access with one additional town that ranked higher than average risk that a resident's food is insecure. Preschool children are often ranked among target groups needing interventions designed to improve nutrition. Tolland County will select child care centers to pilot the new standards using the CT Department of Education's Action Guide for Child Care Nutrition and Physical Activity Policies. The Project will increase awareness of nutritional standards among child care workers, parents and caregivers and give early care centers the tools they need to implement policy changes.

Active Living: Increase opportunities for physical activity in preschool settings through policy that aligns with the Connecticut State Department of Education's "Action Guide for Child Care Nutrition and Physical Activity Polices" is a priority strategy.

Child care providers that adopt CT Child Care Nutrition Standards and Allowable Beverages policies will provide children with opportunities for physical activity that mirror the 2013 USDA and State of CT Nutrition guidelines currently being implemented in public schools. These standards have been adopted to prevent obesity and give children optimal activity throughout the day. Using

the Infoline 2-1-1 system to identify all child care providers in Tolland County, centers will be prioritized based on service population (percentage of low-income or minority children). There will also be an emphasis in enrolling child care centers receiving United Way funding and those enrolled in WIC and SNAP. An emphasis will be place on sustainability and communication of adopted policies and evaluation of the impact on child care providers, parents and children.

Clinical Preventive Services: Implement a Self-Blood Pressure Monitoring project through a local clinical site to reduce the rate of uncontrolled hypertension.

The Agency for Healthcare Research and Quality found strong evidence that Self-Measured Blood Pressure monitoring (SMPB) plus additional support was more effective than usual care in lowering blood pressure among patients with hypertension. By providing the resources needed (through training and technical assistance) to clinical partners to effectively implement a system to provide hypertensive patients with a self-blood pressure monitoring program, this objective will begin a systemic change of improving the control of patients' high blood pressure. Following the guidance provided by Glynn et.al. in their review of Interventions used to improve control of blood pressure in patients with hypertension (2010), this objective will address patient non-compliance and uncontrolled blood pressure status through an "organized system of registration, recall and regular review". Clinical sites will be selected to implement a system to flag patient records for those with uncontrolled hypertension to enroll into a self-blood pressure monitoring program for closer follow-up and regular review. These patients will receive a home blood pressure monitor, instruction on how to use it properly, and will have regular follow-up through multiple channels (phone calls, home visits, clinical review) to promote and facilitate blood pressure control.

Rationale: Tolland County adults (by diagnostic group) have a higher ED visit rates for stroke than the rest of the state, with the Hispanic rate for both ED visit rates and hospitalization for stroke almost 7 times that of the state rate for the Hispanic population.

References

1. CDC - Community Transformation Grants (CTGs) [Internet]. [cited 2014 May 27]. Available from: http://www.cdc.gov/nccdphp/dch/programs/communitytransformation/

2. U.S. Department of Health and Human Services. National Prevention Strategy [Internet]. 2011 [cited 2014 Apr 4]. Available from: http://www.surgeongeneral.gov/initiatives/prevention/strategy/

3. Million Hearts - Home [Internet]. [cited 2014 May 27]. Available from: http://millionhearts.hhs.gov/index.html

4. Bureau UC. detail_page_visual-standard-U.S. Census Bureau [Internet]. [cited 2014 May 27]. Available from: http://www.census.gov/

5. Connecticut Economic Resource Center (CERC) – Economic Research, Marketing Services & Business Development in CT [Internet]. [cited 2014 May 27]. Available from: http://www.cerc.com/

6. Home | Connecticut State Data Center [Internet]. [cited 2014 May 27]. Available from: http://ctsdc.uconn.edu/

7. DPH: Population Statistics [Internet]. [cited 2014 May 27]. Available from: http://www.ct.gov/dPh/cwp/view.asp?a=3132&q=388158&dphNav_GID=1601

8. The NCES Fast Facts Tool provides quick answers to many education questions (National Center for Education Statistics) [Internet]. [cited 2014 May 27]. Available from: http://nces.ed.gov/fastfacts/display.asp?id=77

9. Census.gov [Internet]. [cited 2014 May 27]. Available from: http://www.census.gov/

10. State Department of Education - CEDaR [Internet]. [cited 2014 May 27]. Available from: http://sdeportal.ct.gov/Cedar/WEB/ResearchandReports/SSPReports.aspx

11. Cole BL, Fielding JE. Health Impact Assessment: A Tool to Help Policy Makers Understand Health Beyond Health Care. Annu Rev Public Health. 2007 Apr;28(1):393–412.

12. USDA Economic Research Service - Home [Internet]. [cited 2014 May 27]. Available from: http://www.ers.usda.gov/

13. Division SS. Income and Poverty--State and Local Data - The 2012 Statistical Abstract - U.S. Census Bureau [Internet]. [cited 2014 May 27]. Available from: http://www.census.gov/compendia/statab/cats/income_expenditures_poverty_wealth/income_and_poverty--state_and_local_data.html

14. Office UCBPI. Income, Poverty and Health Insurance Coverage in the United States: 2009 - Income & Wealth - Newsroom - U.S. Census Bureau [Internet]. [cited 2014 May 27]. Available from: http://www.census.gov/newsroom/releases/archives/income_wealth/cb10-144.html

15. Partnership for Strong Communities | A Safe, Affordable Home: The Foundation of Opportunity [Internet]. [cited 2014 May 27]. Available from: http://pschousing.org/

16. DPH: The 2009 Connecticut Health Disparities Report [Internet]. [cited 2014 May 27]. Available from: http://www.ct.gov/dph/cwp/view.asp?a=3132&q=433794

17. UniversalLivingWage.org--Connecticut Fair Market Rent [Internet]. [cited 2014 May 27]. Available from: http://www.universallivingwage.org/fmrtables_2011/CT_FMR2011.htm

18. The Pulse of the Community [Internet]. [cited 2014 May 27]. Available from: http://www.accessagency.org/index.cfm?fuseaction=page&page_id=5066

19. Labor Market Information - Historical Labor Force Data By Town [Internet]. [cited 2014 May 27]. Available from: http://www1.ctdol.state.ct.us/lmi/laus/laustown.asp

20. DPH: Healthy People - Healthy Connecticut [Internet]. [cited 2014 May 27]. Available from: http://www.ct.gov/dph/cwp/view.asp?a=3130&q=458600

21. Uninsured Children in Connecticut: 2010 | Connecticut Voices for Children [Internet]. [cited 2014 May 27]. Available from: http://www.ctvoices.org/publications/uninsured-children-connecticut-2010

22. HUD/US. US Department of Housing and Urban Development [Internet]. [cited 2014 May 27]. Available from: http://portal.hud.gov/hudportal/HUD

23. Out of Reach 2012: National Low Income Housing Coalition [Internet]. [cited 2014 May 27]. Available from: http://nlihc.org/oor/2012

24. Connecticut Commission on Children: Lead Poisoning [Internet]. [cited 2014 Jul 9]. Available from: http://www.cga.ct.gov/coc/lead.htm

25. The CT Coalition to End Homelessness [Internet]. [cited 2014 Jul 9]. Available from: http://www.cceh.org/

26. 2-1-1 Connecticut [Internet]. [cited 2014 May 27]. Available from: http://www.211ct.org/default.asp

27. HEALTH EQUITY INDEX [Internet]. [cited 2014 May 27]. Available from: http://www.cadh.org/health-equity/health-equity-index.html

28. Department of Public Health [Internet]. [cited 2014 Jul 9]. Available from: http://www.ct.gov/dph/site/default.asp

29. Baby-Friendly USA [Internet]. [cited 2014 May 27]. Available from: http://www.babyfriendlyusa.org/about-us/baby-friendly-hospital-initiative

30. How Healthy is your County? | County Health Rankings [Internet]. County Health Rankings & Roadmaps. [cited 2014 May 27]. Available from: http://www.countyhealthrankings.org/homepage

31. General Information [Internet]. [cited 2014 May 27]. Available from: https://www.han.ct.gov/local_health/

32. United Way of Connecticut [Internet]. [cited 2014 Jul 9]. Available from: http://www.ctunitedway.org/

33. Windham Region Transit District (WRTD) [Internet]. [cited 2014 May 27]. Available from: http://www.wrtd.net/

34. About Northeastern CT Public Transportation | Bus Service [Internet]. [cited 2014 May 27]. Available from: http://www.nectd.org/about.php

35. Town of Mansfield, Connecticut - Transportation Center [Internet]. [cited 2014 May 27]. Available from: http://www.mansfieldct.gov/TransportationCenter

36. CTTransit - Connecting the Community [Internet]. [cited 2014 May 27]. Available from: http://www.cttransit.com/

37. ConnDOT: Connecticut Park & Ride [Internet]. [cited 2014 May 27]. Available from: http://www.ct.gov/dot/cwp/view.asp?a=1390&Q=259406

38. Hockanum Valley Community Council [Internet]. [cited 2014 May 27]. Available from: http://hvcchelps.org/

39. Connecticut Skilled Nursing Home Facilities - view all skilled nursing home facilities in CT [Internet]. [cited 2014 May 27]. Available from: http://www.skillednursingfacilities.org/directory/ct/

40. CDC - BRFSS 2011 Survey Data and Documentation [Internet]. [cited 2014 Jul 9]. Available from: http://www.cdc.gov/brfss/annual_data/annual_2011.htm

41. America's Health Rankings [Internet]. America's Health Rankings. [cited 2014 May 27]. Available from: http://www.americashealthrankings.org/CT/2011

42. State Data Snapshots--Data Resource Center for Child and Adolescent Health, Connecticut [Internet]. [cited 2014 Jul 9]. Available from: http://childhealthdata.org/browse/snapshots?geo=8#bottom

43. DPH: Connecticut School Health Survey [Internet]. [cited 2014 Jul 9]. Available from: http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388104&dphNav_GID=1832

44. CDC - Obesity - Facts - Adolescent and School Health [Internet]. [cited 2014 Jul 9]. Available from: http://www.cdc.gov/healthyyouth/obesity/facts.htm

45. DPH: Heart Disease & Stroke Surveillance System [Internet]. [cited 2014 Jul 9]. Available from: http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388110&dphNav_GID=1601&dphPNavCtr=|#46997

46. DPH: Connecticut Tumor Registry [Internet]. [cited 2014 Jul 9]. Available from: http://www.ct.gov/dph/cwp/view.asp?a=3129&q=389716&dphPNavCtr=|#47827

47. Quick Profile - State Cancer Profiles [Internet]. [cited 2014 Jul 9]. Available from: http://statecancerprofiles.cancer.gov/cgi-bin/quickprofiles/profile.pl?09&001

48. DPH: CT Diabetes Surveillance System [Internet]. [cited 2014 Jul 9]. Available from: http://ct.gov/dph/cwp/view.asp?a=3132&q=388098

49. WISQARS Nonfatal Injury Reports [Internet]. [cited 2014 Jul 9]. Available from: http://webappa.cdc.gov/sasweb/ncipc/nfirates2001.html

50. CDC - Leading Causes of Death - WISQARS - Injury [Internet]. [cited 2014 Jul 9]. Available from: http://www.cdc.gov/injury/wisqars/leading_causes_death.html

51. National Center for Injury Prevention and Control - Home Page|Injury Center|CDC [Internet]. [cited 2014 Jul 9]. Available from: http://www.cdc.gov/injury/

52. CDC - National Center for Health Statistics [Internet]. [cited 2014 Jul 9]. Available from: http://www.cdc.gov/nchs/