Summary of Key Findings:

Health Status of CHNA 25

Fall River, Somerset, Swansea, and Westport, MA

Prepared by
Partners for a Healthier Community, Inc.

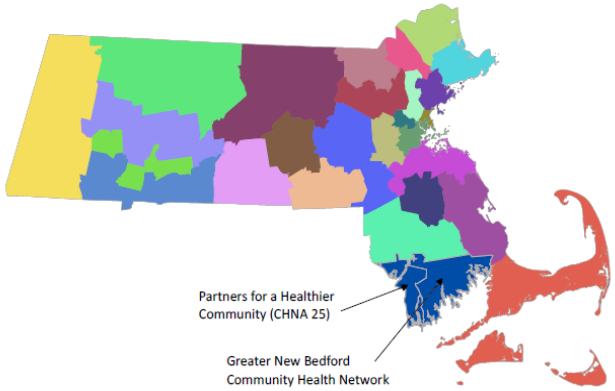
January 2014

Section Outline

Introduction

A Community Health Network area (CHNA) is a local coalition of public, non-profit, and private sector groups that work together to build healthier communities in Massachusetts through community-based prevention planning and health promotion. The geographic definition of the Southcoast region for this report is defined as Community Health Network Areas 25 and 26 (see Figure 1 below). To enhance readability of this report, CHNA 25 will be referred to as "Greater Fall River," which is the population area for Partners for a Healthier Community Communities: Fall River, Somerset, Swansea, Westport. This report summarizes the health status of this Area as of January 2014 by combining findings from a number of sources. The report is assembled to provide a single data source for the creation of the 2014-2019 Community Health Action Plan for Partners for a Healthier Community.

FIGURE 1. Massachusetts Department of Public Health Community Health Network Areas



SOURCES

The data that follows was obtained from the following sources:

- *The Southcoast Health Systems 2013 Community Needs Assessment* prepared by the Center for Policy Analysis of the University of Massachusetts-Dartmouth published in August 2013.
- *The Community Health Needs Assessment* of the HealthFirst Family Care Center, Inc. and Stanley Street Treatment and Resources, published in April 2013
- Reports from the Massachusetts Department of Public Health MassCHIP Massachusetts Community Health Information Profile
- Results of the 2013 Youth Health Survey and Youth Risk Behavior Survey of students in the Fall River School System
- *Brayton Point Coal Plant: Operating at our expense*, Coal Free Massachusetts, August, 2013

SOCIAL DETERMINANTS OF HEALTH

The link between health outcomes and socioeconomic background is well documented. A person's race, income, educational attainment, and other social determinants are among the best predictors of health status[1]. On average, individuals who are poor, less educated, and a racial or ethnic minority have lower levels of health in comparison to their counterparts with higher incomes, higher levels of education, or who are white. Individuals on the lower rungs of the socioeconomic spectrum are also less likely to have health insurance. These factors place unique stresses on health systems, particularly those operating in urban areas[2].

As hospitals have learned, the most effective strategy for alleviating these stresses and reducing inpatient demand is to proactively address the social determinants of health to prevent future demand. This includes identifying vulnerable populations and understanding their environments, including social and economic factors, the physical environment, and individual behavior. Many health systems have taken the lead in improving the health and well-being of residents by engaging community partners that understand these populations and environments as well as the community assets that promote the health and well-being of residents[3]

The link between health outcomes and socioeconomic background is well documented. A person's race, income, educational attainment, and other social determinants are among the best predictors of health status (Center for Disease Control 2012). On average, individuals who are poor, less educated, and a racial or ethnic minority have lower levels of health in comparison to their counterparts with higher incomes, higher levels of education, or who are white. Individuals on the lower rungs of the socioeconomic spectrum are also less likely to have health insurance. These factors place unique stresses on health systems, particularly those operating in urban areas (Fox 2004).

As hospitals have learned, the most effective strategy for alleviating these stresses and reducing inpatient demand is to proactively address the social determinants of health to prevent future demand. This includes identifying vulnerable populations and understanding their environments, including social and economic factors, the physical environment, and individual behavior. Many health systems have taken the lead in improving the health and well-being of residents by engaging community partners that understand these populations and environments, as well as the community assets that promote the health and well-being of residents (Anderson 2004).

The Centers for Disease Control and Prevention defines social determinants as the "complex, integrated, and overlapping social structures and economic systems that are responsible for most health

[1] Centers for Disease Control and Prevention. "CDC Health Disparities and Inequalities Report- United States 2012." U.S. Department of Health. June 2012. Vol. 60

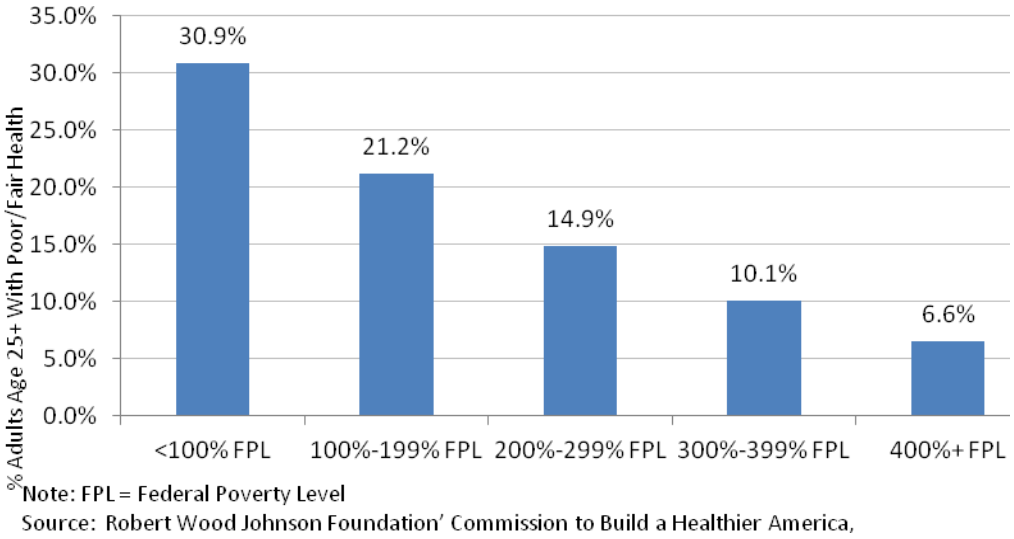
[2] Fox, Claude, and Thomas G. Morford, Amy Fine, Chris Gibbons. "The Johns Hopkins Urban Health Institute: A Collaborative Response to Urban Health Issues." *Academic Medecine.* 2004;79:1169 –1174.

[3] Anderson, Ron J., and Paul J. Boumbulian, Sue Pickens. "The Role of U.S. Public Hospitals in Urban Health." *Academic Medecine* Volume 79 - Issue 12 (2004): 1162-1168.

inequities." These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors[4].

The Robert Wood Johnson Foundation Commission to Build a Healthier America notes that health status improves as income rises (see Graph 1) and this pattern holds true for African Americans, Hispanics, and Whites (see Graph 2). While adults who are poor are most likely to report being in poor or fair health, the report notes that "even adults with middle class incomes are less healthy than those with higher incomes"[5]. This pattern is referred to by many as the socioeconomic gradient in health.

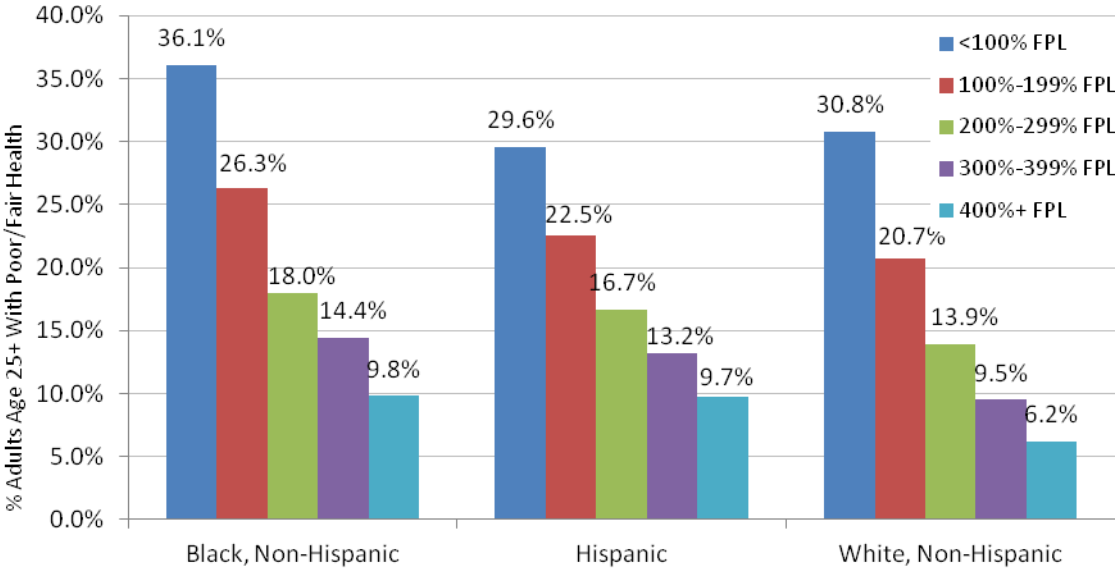
Graph 1. Income & Health Status



Note: FPL = Federal Poverty Level
Source: Robert Wood Johnson Foundation' Commission to Build a Healthier America,

[4] See http://www.cdc.gov/socialdeterminants/Definitions.html
[5] Robert Wood Johnson Foundation, Commission to Build a Healthier America. "Issue Brief 5: Race and Socioeconomic Factors." April 2009.

Graph 2. Income, Race & Health Status



Note: FPL = Federal Poverty Level
Source: Robert Wood Johnson Foundation' Commission to Build a Healthier America, National Health Interview Survey data, 2001-2005 (see www.commissionhealth.org).

Behaviors are often cited as a primary factor in explaining the socioeconomic gradient. For example, the argument goes, poor people are more likely to engage in risky behaviors such as binge drinking and smoking, have poorer diets, and exercise less. However, others highlight that quality and access to care are equally important factors that affect health; racial and ethnic minorities, the poor, and less educated often face more barriers to care and receive poorer quality of care when they can access it. The National Healthcare Disparities Report from the Agency for Healthcare Research and Methodology (mandated annually by Congress) concludes that while quality of care is improving, issues regarding access to care are actually increasing.

The report points out that "These disparities may be due to differences in access to care, provider biases, poor provider-patient communication, or poor health literacy"[6]. In addition, a growing body of research indicates that living and working conditions, including housing quality, exposure to pollution, worksite safety, access to healthy and affordable foods, and proximity to safe places to exercise have a significantly greater effect on health than risky behaviors[7].

GEOGRAPHIC ANALYSIS OF NEED

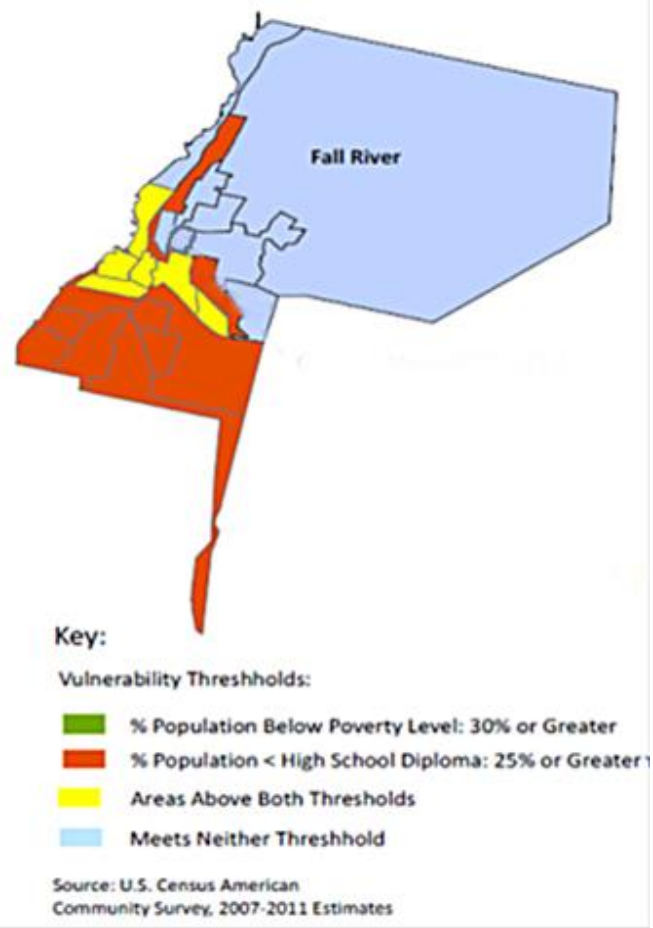
Figure 2 highlights the vulnerable populations footprint in Fall River, that is, census tracts that meet established thresholds for poverty and educational attainment. The region's vulnerable populations

[6] Agency for Healthcare Research and Quality. "National Healthcare Disparities Report." 2012. Publication # 13-0003.

[7] National Research Council of the National Academies. "Improving Health in the U.S.: The Role of Health Impact Assessment." 2012. The National Academies Press. Washington, D.C.

reside in the cities of Fall River and New Bedford – there are no vulnerable populations outside these areas as defined for this report.

Figure 2. Vulnerable Populations Footprint – Fall River



Demographics

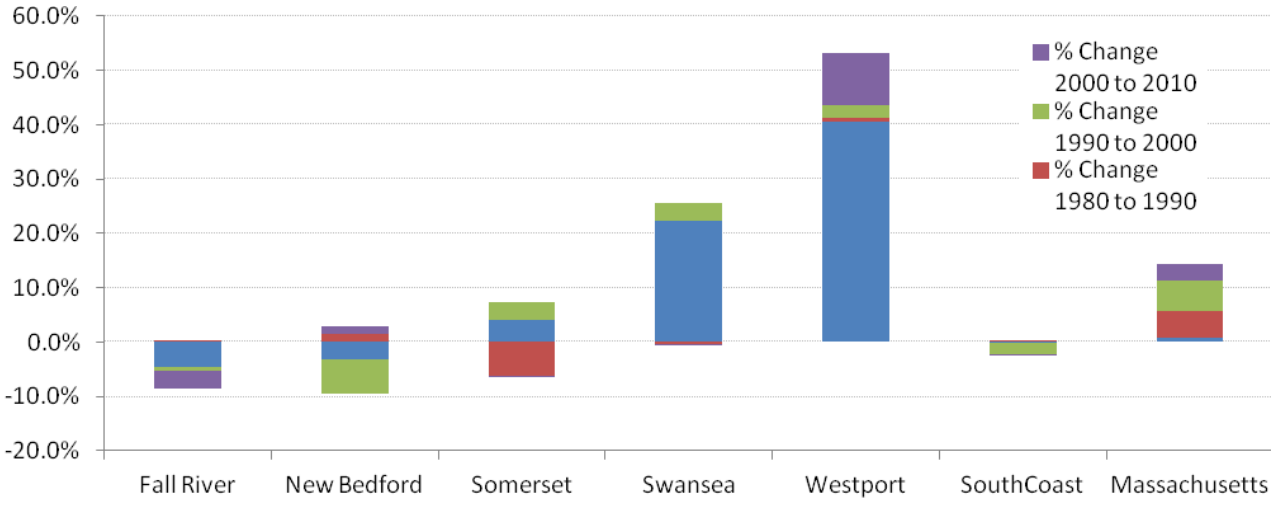
The demographic and socioeconomic analysis presents a snapshot of the region's people in terms of population, race, education, income, poverty, wages, and employment. Where applicable, data is presented from CHNA 25 (Partners for a Healthier Community) and the state. The analysis also includes a focus on demographic and socioeconomic trends in Fall River.

Population trends

The region's total population has changed little over the past 10 years and is likely to grow slowly over the next decade, although the proportion of residents age 65 years and older continues to increase modestly. The population is less diverse in the Southcoast than it is statewide; 79.5% of Southcoast residents are white non-Hispanic, compared to 70.8% of residents across the state.

Population growth and residential development have been uneven within the region; the total population in the cities of Fall River and New Bedford declined by 7.3% (-14,746 residents) between 1970 and 2010, while the Southcoast's suburban towns experienced population growth of 43.3% during the same period (+47,730 residents) (see Graph 3 and Table 1). The area's uneven growth pattern – population declines in the cities and population increases in its suburbs - is putting pressure on the physical infrastructure, school systems, and administrative capacities of many local governments.

Graph 3. Population Change by Decade



Source: 1970 through 2010, U.S. Census STF3 file. 2011, U.S. Census American Community Survey 5-year estimates (2007 through 2011), CFPA.

Table 1. Historical Population of the Southcoast

Historical Population of the SouthCoast								
Municipality	1970	1980	1990	2000	2010	2011		% Change 2000 to 2010
Fall River	96,898	92,574	92,703	91,938	88,857	89,220	Fall River	-3.4%
New Bedford	101,777	98,478	99,922	93,768	95,072	95,006	New Bedford	1.4%
Somerset	18,088	18,813	17,655	18,234	18,165	18,172	Somerset	-0.4%
Swansea	12,640	15,461	15,411	15,901	15,865	15,886	Swansea	-0.2%
Westport	9,791	13,763	13,852	14,183	15,532	15,396	Westport	9.5%
SouthCoast	**239,194**	**239,089**	**239,543**	**234,024**	**233,491**	**233,680**	**SouthCoast**	-0.2%
Massachusetts	**5,689,170**	**5,737,093**	**6,016,425**	**6,349,097**	**6,547,629**	**6,512,227**	**Massachusetts**	3.1%

Source: 1970 through 2010, U.S. Census STF3 file. 2011, U.S. Census American Community Survey 5-year estimates (2007 through 2011), CFPA.

Note: 2011 data not included in percent change because data is a 5-year estimate (2007-2011).

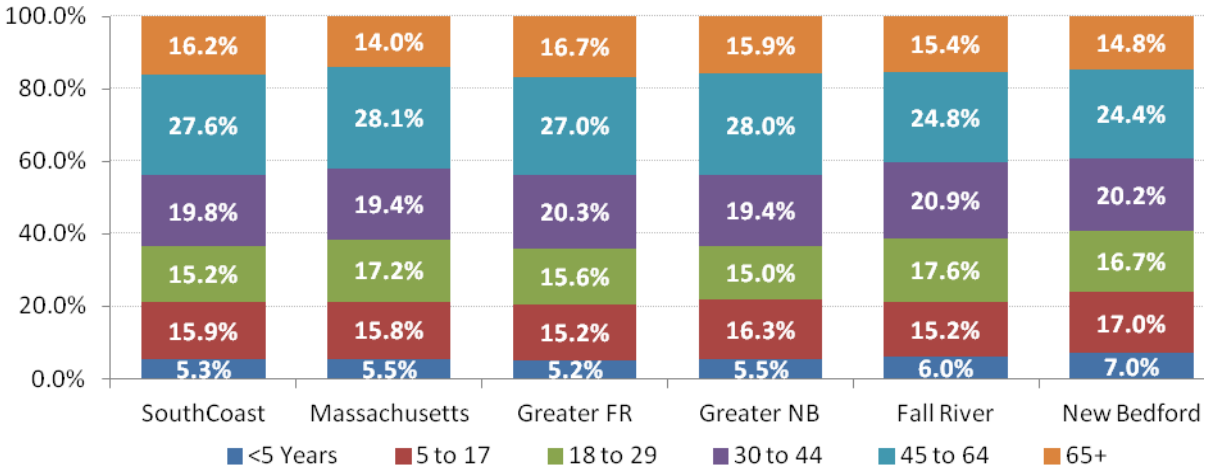
Age

The aging population nationally, statewide, and regionally will have major implications for the delivery of healthcare. The U.S. population age 65 and over increased by 36% from 2000 to 2010, and the U.S. Census Bureau estimates that by 2030 there will be about 72.1 million older persons in the country - twice the number in 2000. Older adults will be increasingly racially and ethnically diverse and rates of chronic disease are expected to rise because older adults have higher rates of chronic disease. All of these factors create challenges for healthcare delivery.

Age Cohorts

Age cohorts in the Southcoast are similar to statewide averages, although the Southcoast has a slightly higher percentage of residents age 65 and older in comparison to the state (see Graph 4). Population cohorts have remained relatively stable over the past two decades.

Graph 4. Age Cohort

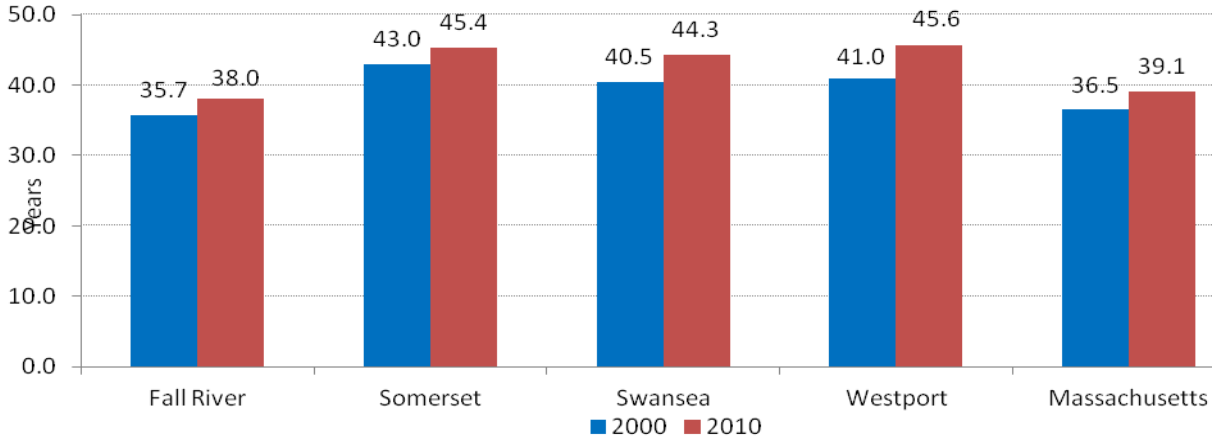


Source: U.S. Census Bureau, 2007-2011 American Community Survey , CFPA.

Median Age

Each of the Southcoast's towns has a median age above the statewide median, while the median ages in Fall River and New Bedford are slightly below the statewide median (see Graph 5)[8].

Graph 5. Median Age



Source: U.S. Census STF1 File (2000) and American Community Survey 5-year estimates (2007-2011).

[8] Data not available for the Southcoast.

Racial Diversity

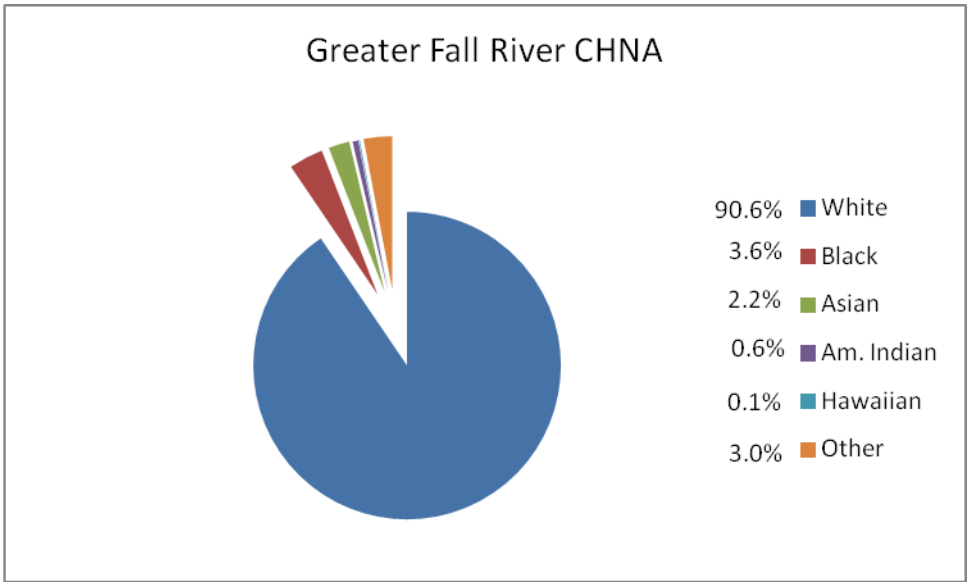
The population is less diverse in the Southcoast than it is statewide; 79.5% of Southcoast residents are White non-Hispanic, compared to 70.8% of residents across the state. Additionally, 7.3% of Southcoast residents are Hispanic, 3.5% are African American, 0.5% are American Indian, 1.4% are Asian, 0.03% are Pacific Islander, 4.6% are some other race, and 3.1% are two or more races.

The 2010 Greater Fall River Area is 90.6% White, 3.6% Black, 3.0% Other, 2.2% Asian and less than one percent American Indian or Hawaiian. Of these, 5.0% are Hispanic. The City of Fall River is 86.6% White, 5.2% Black, 4.3% Other, 2.9% Asian, and less than 1% American Indian and Hawaiian. Of these, 7.2% are Hispanic.

Table 2. Race and Ethnicity 2010

Town/CHNA	White	Black	Asian	Am. Indian	Hawaiian	Other	Hispanic	Total
Fall River	**78,846**	**4,737**	**2,612**	**741**	**195**	**3,888**	**6,552**	**91,019**
	86.6%	5.2%	2.9%	0.8%	0.2%	4.3%	7.2%	
Somerset	**17,865**	**132**	**190**	**77**	**7**	**86**	**191**	**18,165**
	98.3%	0.7%	1.0%	0.4%	0.0%	0.5%	1.0%	
Swansea	**15,404**	**101**	**110**	**13**	**1**	**172**	**173**	**15,801**
	97.5%	0.6%	0.7%	0.1%	0.0%	1.1%	1.1%	
Westport	**15,469**	**116**	**133**	**52**	**11**	**81**	**143**	**15,862**
	97.5%	0.7%	0.8%	0.3%	0.1%	0.5%	0.9%	
CHNA	**127,584**	**5,086**	**3,045**	**883**	**214**	**4,227**	**7,059**	**140,847**
	90.6%	3.6%	2.2%	0.6%	0.1%	3.0%	5.0%	

Chart 1. Greater Fall River Racial Profile



Graph 5. Change in Race by Selected Area

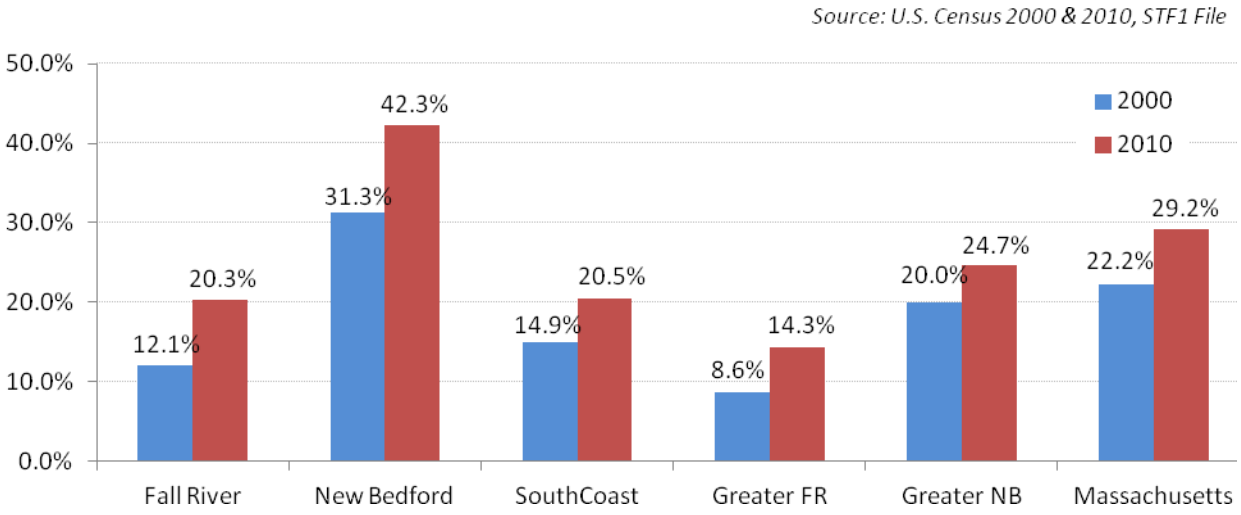
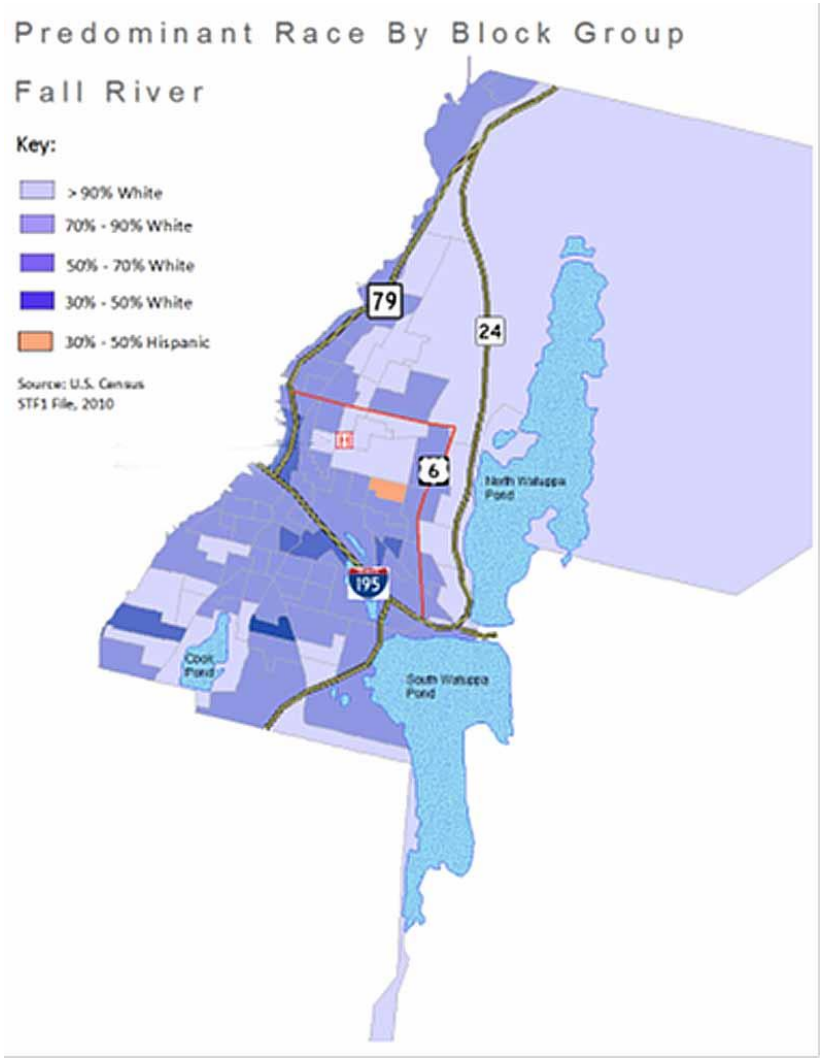


Figure 3. Predominant Race by Census Block



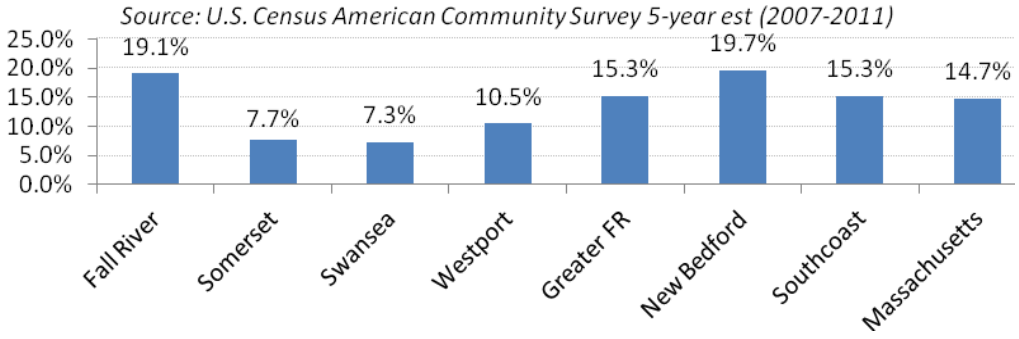
Perhaps the most significant demographic trend in the region is its changing racial makeup; from 2000 to 2010 the minority population increased by 5.6 percentage points region-wide, 8.2 percentage points in Fall River. Hispanics account for a significant portion of this change; the number of Hispanics increased by 7.3 percentage points region-wide from 2000 to 2010, and by 4.1 percentage points in Fall River, which also has pockets of undocumented immigrants, although estimates vary widely as to the size of these groups.

Portuguese speakers are being supplanted by Spanish speakers in the region's cities, although some Portuguese-only speakers remain in Fall River and in Westport. While the Portuguese still comprise a significant portion of Fall River's population, the change in racial and ethnic minorities over the past three decades, particularly the number of Hispanics, has required the region's health systems to refocus on a different cultural population who have specific needs and cultural attitudes toward health.

Foreign Born Population

The Southcoast has always been an attractive place to settle for immigrants. Over fifteen percent (15.3%) of residents in the region are foreign-born, which is just over the statewide average of 14.7%. Fall River (19.1%) has the highest percentage of foreign-born residents in the region (see Graphs 6 and 7).

Graph 6. Percent Foreign-Born Population



Graph 7. Percent Foreign-Born Who Entered Country 2000 or later

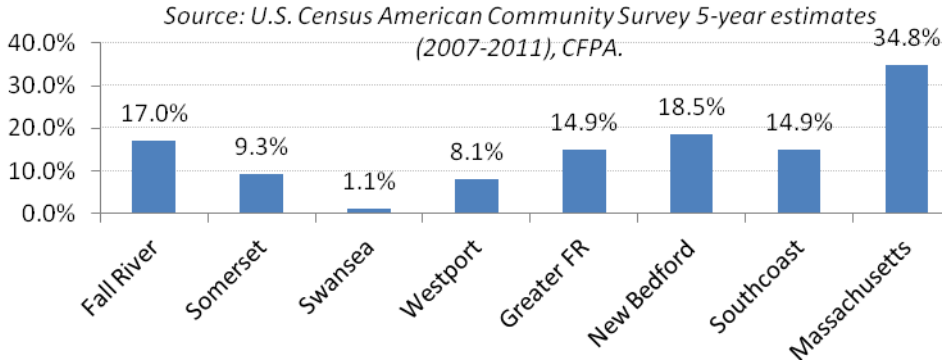
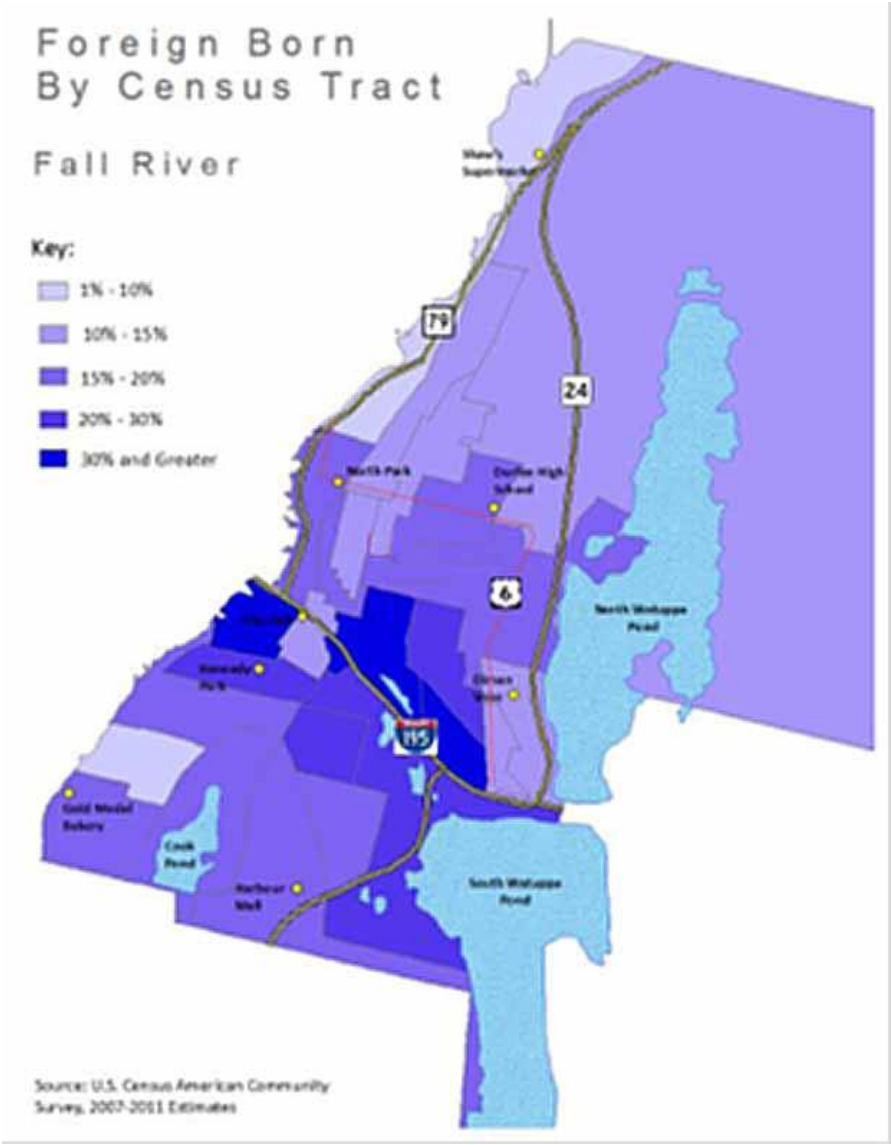


Figure 4. Percent Foreign-Born By Census Tract



Limited English Proficiency

Language barriers can have had a negative impact in terms of access to health care, quality of care, and health status/health outcomes (Baker [9], Derose [10], Wilson[11]). Although most residents in the region speak English, many reside in ethnic neighborhoods where native tongues are commonly spoken, where residents have access to television, radio, and newspapers in their native language, and where they can

[9] Baker, David, and Ron D. Hayes, Puebla Fortier. "Interpreter Use and Satisfaction with Interpersonal Aspects of Care for Spanish-Speaking Patients." Medical Care 1998 Oct; 36(10): 1461–70.
[10] Derose, Kathryn, and David Baker. "Limited English Proficiency and Latinos' Use of Physician Services." Medical Care Research and Review 2000 Mar; 57(1): 76–91.
[11] Wilson, Elisabeth, et al. "Effects of Limited English Proficiency and Physician Language on Health Care Comprehension." Journal of General Internal Medicine. 2005. Volume 20, Issue 9, pp .800–806.

find employment with little interaction outside their established ethnic boundaries. The existence of these enclaves does not encourage residents to become fluent in English.

As noted, Portuguese speakers are being supplanted by Spanish speakers in the region's cities, although some pockets of Portuguese speakers remain, particularly in Fall River, but also in suburbs such as Westport.

Table 3. Language Spoken at Home (Ages 65+): Greater Fall River

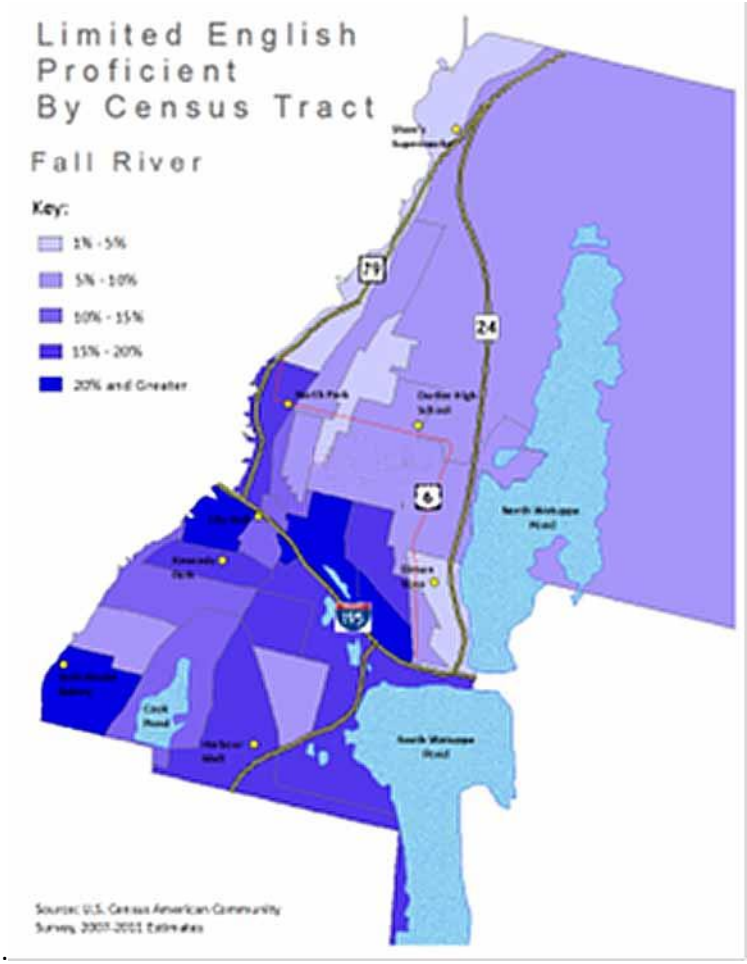
	Area Count	Area Percent	State Percent
Speak Language other than English at Home	7,759	32.4	16.5
Speak English Not Well or Not at All	2,649	34.1	29.0
Speak Spanish at Home	118	0.5	1.6
Speak English Not Well or Not at All	13	11.0	48.4

MassCHIP 12/6/2010, Massachusetts Department of Public Health

Figure 5 maps the percentage of residents over 65 who are limited English proficient (LEP) by census tract in Fall River. In census tracts with a high percentage of LEP residents, they are primarily Hispanic, while in Westport non-English speakers are primarily Portuguese.

While persons with limited English proficiency reside throughout the City of Fall River, those with limited English proficiency are concentrated in three areas of Fall River: 1) the Columbia Street Neighborhood, located South of Route 195 on the western side of the City, composed primarily of Portuguese-Speakers, 2) the Flint Neighborhood, located just north of Route 195 in the center of the City, composed of Cambodian, Portuguese (including Brazilian Portuguese) and Spanish-speakers, and 3) the Sandy Beach Neighborhood, located at the far South West corner of the City, composed primarily of Azorean Portuguese-speakers (see Figure 5).

Figure 5. Limited English Proficient by Census Tract



Racial and Ethnic Health Disparities

Health reports and data show that many Fall River residents from minority racial/ethnic groups have health behaviors and indicators that place them at increased risk for disease morbidity and mortality. Data for the reporting period of 2009-2011 from the Massachusetts Department of Public Health (MDPH) indicates increased risk for Blacks and Hispanics for indicators such as diabetes, smoking, obesity, and hypertension

- Black non-Hispanic and Hispanic residents have a higher diabetes mortality rate than white non-Hispanic residents in the region (38.7 and 21.4 respectively vs.17.6 per 100,000 population).

- Obesity in adults was highest among Hispanics at 32.3%, followed by Black-non Hispanic at 30.9%.

Clinical care indicators that reflect health disparities based on race include cost as a barrier to care and participation in cancer screenings (see Table 4).

- In the Southcoast, the Hispanic population is particularly underserved in terms of clinical care; more cannot see a doctor due to cost and fewer have participated in cancer screenings when compared to non-minorities and even the Hispanic population statewide.

Table 4. Racial Disparities in Clinical Care: Cost and Colorectal Screening

Racial Disparities in Clinical Care						
	Cannot See a Doctor Due to Cost			Colorectal Cancer Screening		
	White	Black	Hispanic	White	Black	Hispanic
Greater Fall River	7.4%	NA	21.3%	65.5%	NA	60.7%
Greater New Bedford	8.0%	NA	19.4%	66.4%	68.5%	57.8%
Massachusetts	5.4%	10.9%	16.7%	74.6%	71.2%	63.5%

Source: BRFSS, via MassCHIP Instant Topics (2010-2013)

Table 5. Racial Disparities in Clinical Care: Mammograms and Pap Smears

Racial Disparities in Clinical Care						
	Mammogram Within Last Two Years			Pap Smear Within Last Three Years		
	White	Black	Hispanic	White	Black	Hispanic
Greater Fall River	87.1%	NA	79.9%	81.8%	NA	70.2%
Greater New Bedford	87.8%	84.7%	69.9%	80.9%	84.9%	79.0%
Massachusetts	84.3%	87.1%	84.4%	84.1%	87.0%	83.9%

Source: BRFSS, via MassCHIP Instant Topics (2010-2013)

- In the areas of smoking and maintaining a healthy weight, Greater Fall River's racial and minority groups are disproportionately affected even when compared to the same population groups statewide.

- Approximately one-quarter (25.8%) of Greater Fall River Hispanics currently smoke, compared to roughly 20% of Whites and Blacks, while just 14.8% of Hispanics Massachusetts-wide smoke.

Table 6. Health Behavior

Health Behavior									
	Current Smoker			Overweight			Obese		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
Greater Fall River	20.3%	20.0%	25.8%	60.3%	72.8%	70.4%	23.5%	30.9%	32.3%
Greater New Bedford	21.8%	42.3%	25.5%	62.0%	73.1%	67.8%	27.7%	42.5%	33.5%
Massachusetts	15.1%	17.5%	14.8%	57.9%	67.1%	65.0%	21.7%	30.6%	29.1%

Source: BRFSS, via MassCHIP Instant Topics (2010-2013)

Similar figures for just the City of Fall River alone reveal a similar pattern, as shown in Tables 7 and 8, below. Tables 9 and 10 reveal that Hispanic hypertension and cholesterol rates are above state averages for the same group, but not necessarily above White hypertension rates. Cardiovascular mortality rates appear to be higher, though it should be noted that these are based on very small counts for minority populations.

Table 7. Smoking Incidence: Current Smoker, by Race/Hispanic Ethnicity – Fall River

	Area 3-Year Percent (b)	State 3-Year Percent
White Non-Hispanic	21.8 (19.4 - 24.3)	15.1 (14.5 - 15.6)
Black Non-Hispanic	42.3 (22.3 - 62.2)	17.5 (15.0 - 20.0)
Hispanic	25.5 (16.9 - 34.1)	14.8 (12.9 - 16.7)
Asian/Pacific Islander	NA (NA - NA)	5.9 (3.6 - 8.1)

Current Smoker: having smoked 100 cigarettes in lifetime and currently smokes regularly ,based on Behavioral Risk Factor Surveillance System (BRFSS) responses for the 3 most recent years available

Table 8. Obese Based on Body Mass Index (BMI>30), by Race/Hispanic Ethnicity – Fall River (Ages 18 and over)

	Area 3-Year Percent (b)	State 3-Year Percent
White Non-Hispanic	27.7 (25.3 - 30.2)	21.7 (21.1 - 22.4)
Black Non-Hispanic	42.5 (23.1 - 62.0)	30.6 (27.5 - 33.6)
Hispanic	33.5 (25.2 - 41.7)	29.1 (26.3 - 31.8)
Asian/Pacific Islander	NA (NA - NA)	8.1 (5.3 - 10.9)

The percent is based on Behavioral Risk Factor Surveillance System (BRFSS) responses for the 3 most recent years available Body Mass Index is calculated from self-reported height and weight;

Table 9. Hypertension: Ever Been Told Blood Pressure was High, by Race/Hispanic Ethnicity – Fall River (Ages 18 and over)

	Area 3-Year Percent (b)	State 3-Year Percent
White Non-Hispanic	30.7 (28.2 - 33.3)	26.6 (25.9 - 27.2)
Black Non-Hispanic	NA (NA - NA)	30.2 (27.2 - 33.2)
Hispanic	24.8 (16.3 - 33.3)	22.1 (19.8 - 24.3)
Asian/Pacific Islander	NA (NA - NA)	10.3 (7.5 - 13.1)

Table 10. Cholesterol: Ever Been Told Blood Cholesterol was High, by Race/Hispanic Ethnicity (Ages 18 and over)

	Area 3-Year Percent (b)	State 3-Year Percent
White Non-Hispanic	39.3* (36.6 - 42.0)	36.3 (35.5 - 37.0)
Black Non-Hispanic	NA (NA - NA)	31.0 (27.6 - 34.4)
Hispanic	47.1 (31.9 - 62.4)	37.0 (33.3 - 40.6)
Asian/Pacific Islander	NA (NA - NA)	26.9 (22.3 - 31.5)

Table 11. Cardiovascular Mortality by Race: Fall River

	Area 3 yr Count	Area 3 yr Age-adjusted Rate (a)	State 3 yr Age-adjusted Rate (a)	Area 3 yr Pre-Mature (b) Count	Area 3 yr Pre-Mature Age-adjusted Rate (b)	State 3 yr Pre-Mature Age-adjusted Rate (b)
All Circulatory System Diseases						
White, non-Hispanic	1,075	262.4	218.5	250	102.0	64.4
Black, non-Hispanic	5	575.9	245.5	3	NA	102.3
Hispanic	4	137.6	118.6	2	NA	58.4
Asian/PI, non-Hispanic	1	38.6	110.0	0	NA	37.9
American Indian, non-Hispanic	0	0.0	127.6	0	NA	NA
Coronary Heart Disease						
White, non-Hispanic	527	134.8	111.9	157	63.5	38.9
Black, non-Hispanic	2	54.3	114.1	2	NA	52.1
Hispanic	2	59.0	56.8	1	NA	29.8
Asian/PI, non-Hispanic	0	0.0	47.9	0	NA	19.0
American Indian, non-Hispanic	0	0.0	47.7	0	NA	NA
Cerebrovascular Disease						
White, non-Hispanic	148	33.5	34.6	21	NA	7.5
Black, non-Hispanic	1	73.1	45.3	0	NA	14.4
Hispanic	1	47.7	24.7	1	NA	12.1
Asian/PI, non-Hispanic	0	0.0	31.2	0	NA	10.2
American Indian, non-Hispanic	0	0.0	15.9	0	NA	NA
Acute Myocardial Infarction						
White, non-Hispanic	131	31.6	32.9	29	11.2	11.6
Black, non-Hispanic	0	0.0	34.3	0	NA	13.0
Hispanic	1	33.6	18.4	1	NA	10.3
Asian/PI, non-Hispanic	0	0.0	18.4	0	NA	7.6
American Indian, non-Hispanic	0	0.0	7.0	0	NA	NA

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- Hypertension was diagnosed among fewer Hispanics than Whites in Greater Fall River, and is on par with that of Hispanics in Massachusetts. On the other hand, the region's Hispanic population is particularly disproportionately affected by high cholesterol with a rate of 49% in Fall River as compared with Fall River Whites at 39% and 37% of Hispanics statewide.

Table 12. Heart-Related Conditions

Heart-Related Conditions

	Hypertension			High Cholesterol		
	White	**Black**	**Hispanic**	**White**	**Black**	**Hispanic**
Greater Fall River	29.9%	33.0%	22.0%	39.0%	34.2%	49.8%
Greater New Bedford	30.7%	NA	24.8%	39.3%	NA	47.1%
Massachusetts	26.6%	30.2%	22.1%	36.3%	31.0%	37.0%

Source: BRFSS, via MassCHIP Instant Topics (2010-2013)

Fetal and Infant Health figures reveal racial and ethnic disparities :

- The table below illustrates disparities in the region across racial and ethnic groups where perinatal health is concerned. When compared to their non-minority counterparts, infants in the Southcoast are disproportionately affected by early and adequate prenatal care, low birth weights, and births to teenage mothers.
- While more than four out of five White Southcoast infants received prenatal care in the first trimester, only 66.7% of Black infants did. In Greater Fall River 83% of Whites did, while only 76.3% of Hispanics and 66.7% of Blacks did.
- Adequate prenatal care was received by 88% of White infants but only 84.3% of Hispanics and 76.4% of Black infants.
- Low birth weight in the region affects 7.7% of White infants in the Southcoast and 7.2% statewide, but low birth weight among Black and Hispanic infants is more prevalent. Low birth weight affected 13.3% of Black infants in Greater Fall River and 9.5% of Hispanics.
- Teen births, an indicator of health outcomes for infants and adolescents in the region, affect racial and ethnic minorities in the Southcoast more disproportionately than statewide

Table 13. Fetal and Infant Health Disparities: Prenatal Care

Fetal and infant Health Disparities						
	Began Prenatal Care During 1st Trimester			Adequate Prenatal Care		
	White	Black	Hispanic	White	Black	Hispanic
Greater Fall River	83.0%	66.7%	76.3%	88.0%	76.4%	84.3%
Greater New Bedford	81.5%	66.5%	63.5%	81.5%	73.5%	71.9%
Massachusetts	85.9%	72.3%	75.3%	86.8%	76.0%	79.2%

Source: MassCHIP Instant Topics (Kids Count and Perinatal Reports), 2009 data

Table 14. Fetal and Infant Health Disparities: Birthweight and Teen Births

	Fetal and infant Health Disparities					
	Low Birthweight			Teen Births (<20)		
	White	Black	Hispanic	White	Black	Hispanic
Greater Fall River	7.7%	13.3%	9.5%	8.2%	9.3%	19.0%
Greater New Bedford	7.5%	11.2%	13.6%	8.5%	13.7%	16.9%
Massachusetts	7.2%	10.8%	8.6%	4.0%	8.7%	15.5%

Source: MassCHIP Instant Topics (Kids Count and Perinatal Reports), 2009 data

- Health outcome breakdowns by race and ethnicity inform the degree to which subgroups experience poor physical health and the degree to which mortality rates and causes vary. Southcoast racial and ethnic subgroups mirror those of the state when it comes to individuals reporting having fair or poor health, but to a greater extreme: while more Hispanics report having fair or poor health in comparison to other groups, the proportion in the Southcoast is 40.1% in Greater Fall River, compared to 26.0% of Hispanics statewide[12].

- A larger proportion of the region's Hispanic population also report worse mental health outcomes, with 18% across the Southcoast reporting feeling sad, blue, or depressed for more than 15 days over

[12] 51. Page 51

the past month[13].This compares to fewer than 10% of the region's White population and 12.8% of Hispanics statewide.

- Alcohol consumption and rates of binge drinking shows lower rates among Hispanics when compared with White populations. However, the rate of chronic drinking was higher for Fall River Hispanics than Hispanic populations statewide.

Table 15. Alcohol Consumption: Chronic Drinking, by Race/Hispanic Ethnicity - Fall River

	Area 3-Year Percent (b)	State 3-Year Percent
White Non-Hispanic	6.9 (5.3 - 8.4)	7.2 (6.7 - 7.6)
Black Non-Hispanic	NA (NA - NA)	3.9 (2.5 - 5.2)
Hispanic	6.5 (2.8 - 10.2)	4.1 (2.9 - 5.3)
Asian/Pacific Islander	NA (NA - NA)	NA (NA - NA)

The percent is based on Behavioral Risk Factor Surveillance System (BRFSS) responses for the 3 most recent years available

Table 16. Binge Drinking, by Race/Hispanic Ethnicity – Fall River

	Area 3-Year Percent (b)	State 3-Year Percent
White Non-Hispanic	17.6 (14.7 - 20.5)	18.7 (18.0 - 19.4)
Black Non-Hispanic	NA (NA - NA)	12.6 (10.1 - 15.1)
Hispanic	10.2 (4.3 - 16.0)	15.0 (12.8 - 17.2)
Asian/Pacific Islander	NA (NA - NA)	7.9 (4.9 - 10.8)

The percent is based on Behavioral Risk Factor Surveillance System (BRFSS) responses for the 3 most recent years available. Binge Drinking: having five or more drinks on an occasion at least once in the last month

[13] 52. Page 51

Education and Income

In terms of clinical care disparities based on income, perhaps unsurprisingly, access to and utilization of clinical care is more challenging to the Southcoast's lower income residents as compared to those earning more than $50,000 per year. For example, across the board, a greater percentage of those with higher incomes have participated in health screenings, which mirrors statewide breakdowns between income groups. But in some cases, even fewer of the Southcoast's lower income residents engage in screenings than their lower income counterparts across Massachusetts, including breast exams, pap smears, and colonoscopies.

Since education levels are correlated with income levels, it follows that among those with lower levels of educational attainment, there is less access to clinical care. Among those without a college degree, many more cannot see a doctor due to cost.

- Where participation in screening is concerned, some education-specific disparities include lower rates of clinical breast exams in Greater Fall River, (where just 75% of this subgroup reports having had this exam), pap smears, and colonoscopies among those without a college degree.
- Approximately four times as many Southcoast adults who earn less than $50,000 per year report having fair or poor health as compared to those who earn above that threshold. In Greater Fall River, 25.0% of low-income earners report having fair or poor health compared to 6.2% of higher earners.
- A significant difference in general health exists between those with and without a college degree; while fewer than nine percent of those with a degree report having fair or poor health, 27.1% in Greater Fall River of those with a high school degree or less report having fair or poor health.

Housing

Households

The percentage of family households in Fall River is higher than non-family households. Female head of households make up 12.5% of total households. Among this group, 11.4% have children under the age of 18 years. Compared to the state, Fall River has a higher percentage of married couple families and a disproportionally higher percentage of grandparents raising grandchildren, 45.6% versus 29.8%.

Table 17	2010 Fall River Household Composition	
	Fall River	**State**
Total Households	38,245	2,522,409
Family Households	58.2%	63.6%
Non-Family Households	41.8%	36.4%
Family Households w/ Children under 18 years	34.7%	47.3%
Married Couple Families	18.0%	12.3%
Married Couple w/Children under 18 years	26.7%	29.2%
Female Households no Husband	12.5%	20.5%
Female Households w/Children under 18 years	11.4%	7.0%
Grandparents Raising Grandchildren	45.6%	29.8%

Sources: U.S. Census 2010

Table 10. Living Arrangements for persons 65+: Greater Fall River

	Area Count		**State Count**
Grandparents Living in Household with 1 or more Grandchildren	2,385		98325.0
Grandparents Responsible for Grandchildren	770		27915.0
	Area Count	**Area Percent**	**State Percent**
Ages 65+	23,980	17.1	13.5
Living in Family Households	14,300	59.6	61.2
Living Alone	7,482	31.2	29.8
Living with others in Non-Family Households	481	2.0	2.3
Living in Group Quarters	1,717	7.2	6.7

MassCHIP: 12/6/2010

Table 11. Living Arrangements for persons 65+ (by sex): Greater Fall River

	Male			Female		
	Area Count	Area Percent	State Percent	Area Count	Area Percent	State Percent
Living in Group Quarters	370	4.1	4.5	1,347	9.0	8.2
Institutionalized	340	3.7	4.0	1,285	8.6	7.7
Nursing Homes	340	3.7	3.6	1,285	8.6	7.4
Hospitals/Wards and Hospices	0	0.0	0.1	0	0.0	0.2
Correctional Institutions	0	0.0	0.1	0	0.0	0.0
Non-Institutionalized	30	0.3	0.5	62	0.4	0.5
Married	6,270	69.1	71.0	5,450	36.7	39.2
Never Married	616	6.8	6.9	1,092	7.3	8.1
Separated, Divorced or Widowed	2,192	24.1	22.2	8,325	56.0	52.7

MassCHIP: 12/6/2010

Homeless Population

The homeless population in Fall River has been growing especially among families. Data from the Task Force to End Homelessness revealed that from January-November 2004 that 655 people accessed homeless shelters. Among this population, 53% of the residents were female and 47% male. Table 19 depicts two Point-In-Time counts of the homeless population in 2012. Agencies providing services to the homeless have reported that many shelter residents cited the following factors as contributing to their homelessness.

a. Housing costs too much
b. Lack of employment
c. Family conflict
d. Substance abuse
e. Mental illness
f. Violence in household

Table 19	Fall River Official Homeless Population Count	
	January 2012	July 2012
Individuals	168	160
Families	68	77
Sheltered Homeless	295	244
Unsheltered Homeless	25	30

Source: 2012 Homeless Population Survey: Point In Time Count January 2012, July 2012

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The numbers of homeless in Fall River have grown over the past 12 years.

Table 20. Homeless Point-In-Time Contacts, Fall River, 2006-2010

YEAR	# SHELTERED, FALL RIVER	# UNSHELTERED, FALL RIVER
2006	**143**	**11**
2007	**139**	**14**
2008	**138**	**5**
2009	**144**	**10**
2010	**238**	**15**

Source: Southcoast Indicators, UMass-Dartmouth

During the 2012-13 school year, the Fall River Public Schools reported that 264 students were homeless. This represents 2.6% of the district's student population. Comparatively, just 1.7% of all Massachusetts public school students were homeless during the last school year. Also, over 100 homeless families continue to be placed in motels in the Greater Fall River Area by the Massachusetts Department of Housing and Community Development while they await placement in permanent housing.

Educational Attainment

The Southcoast has one of the lowest levels of educational attainment of any region in Massachusetts. Fall River has a particularly low rate of educational attainment, although two of the three towns also have average educational attainment levels that are below the state average. The region and the City of Fall River have made gains since 1980 in terms of the percentage of residents who have earned a high school diploma, but still lag behind the state average considerably in terms of the percentage of residents with 4-year college degrees or above.

Table 21	**Education Attainment**	
	Fall River	**State**
No High School diploma	32.0%	11.1%
High School graduate	30.1%	26.3%
College (Bachelor's Degree)	9.7%	22.1%
Graduate or professional degree	4.4%	16.6%

More than twice the percentage (24.0%) of Southcoast residents 25 years of age and older do not have a high school diploma in comparison to residents statewide (11.1%), while 76.0% have earned a high school diploma. Significantly, in an economy that requires increasingly high levels of skills and education, the percentage of Southcoast residents who have earned a bachelor's degree or higher (20.2%) is a little more than half the state average (38.7%). Low levels of education are particularly noteworthy in Fall River where 32.0% of residents have no diploma, compared to 11.1% statewide. Conversely, only 14.1% of Fall River residents have a Bachelor's degree or higher.

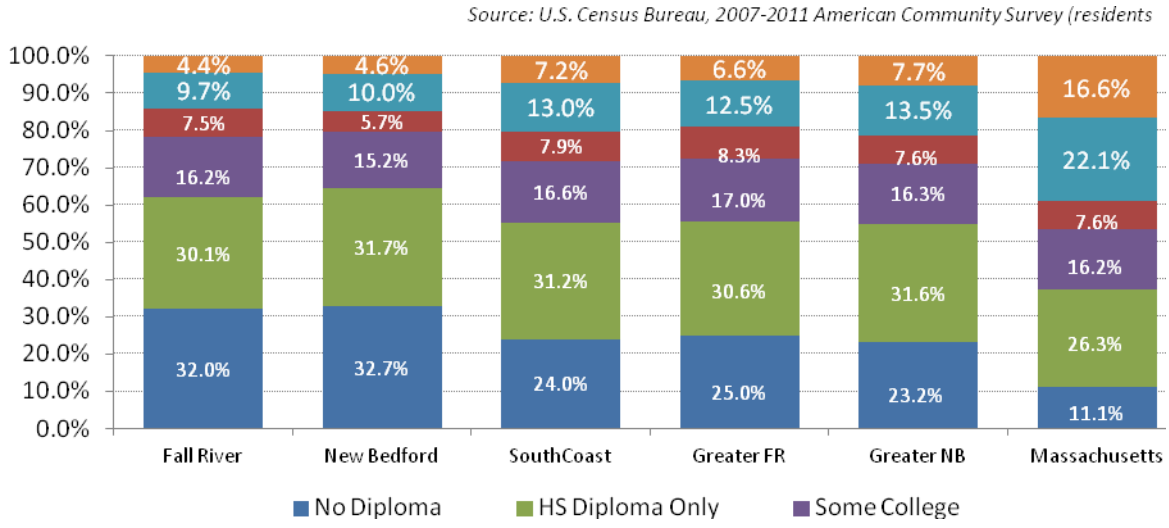
While a significant percentage of Fall River residents are without a high school diploma due to immigration, it is also a consequence of low high school graduation rates of non-immigrants in Fall River across nearly all racial and ethnic populations. For the Class of 2012, only 69% of Fall River high school students graduated within four years. The 4-year graduation rates in many of Fall River's surrounding communities are also below state averages (See Table 21).

The Southcoast and the City of Fall River have made gains since 1980 in terms of the percentage of residents who have earned a high school diploma, with a 20.8 percentage point increase in Fall River and a 17.6 percentage point increase region-wide, compared to a gain of 8.7 percentage points for the state.

Table 21. Educational Attainment

	No Diploma	HS Diploma	Bach+
Fall River	32.5%	67.5%	14.1%
Somerset	30.1%	69.9%	21.2%
Swansea	26.7%	73.3%	18.7%
Westport	31.1%	68.9%	18.7%
New Bedford	34.2%	65.8%	13.6%
SouthCoast	24.0%	76.0%	20.4%
Massachusetts	11.3%	88.7%	38.3%

8. Educational Attainment Southcoast



Conversely, despite historically low percentages of those who have earned a 4-year degree or above, the percentage point increase among Southcoast and Fall River residents earning a 4-year degree or higher from 1980 to 2010 is lower than the state as a whole, with only a 5.7 percentage point increase in Fall River and a 7.2 percentage point increase region-wide, all lower than the statewide gain of 11.1

percentage points. Over the next decade, it will be interesting to track how the increase in high school graduation rates over the past 20 years in the Southcoast translates to residents going on to earn 4-year degrees or graduate degrees.

Graph 9. Educational Attainment, Fall River: 1990 to 2010

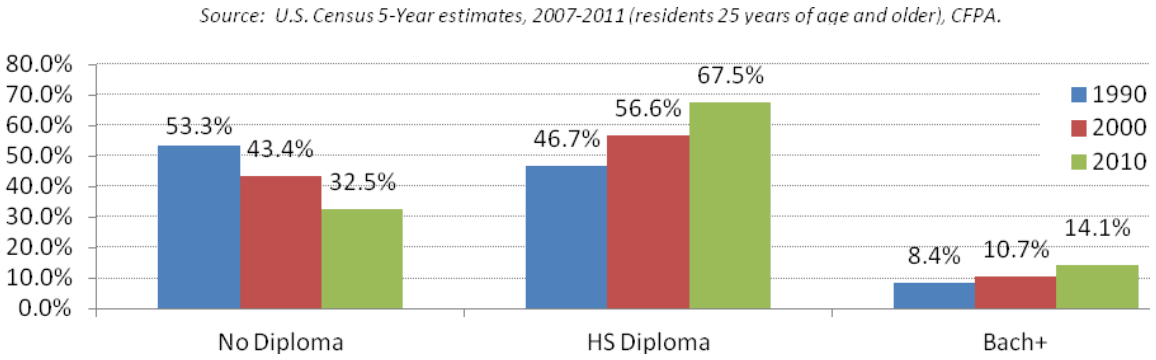
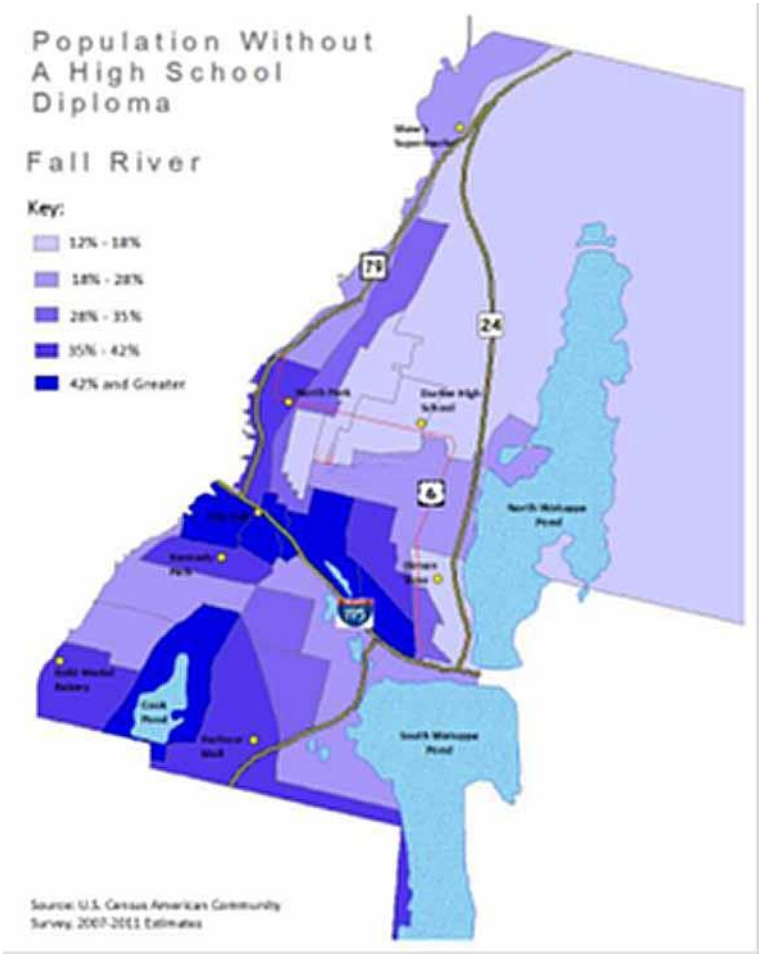


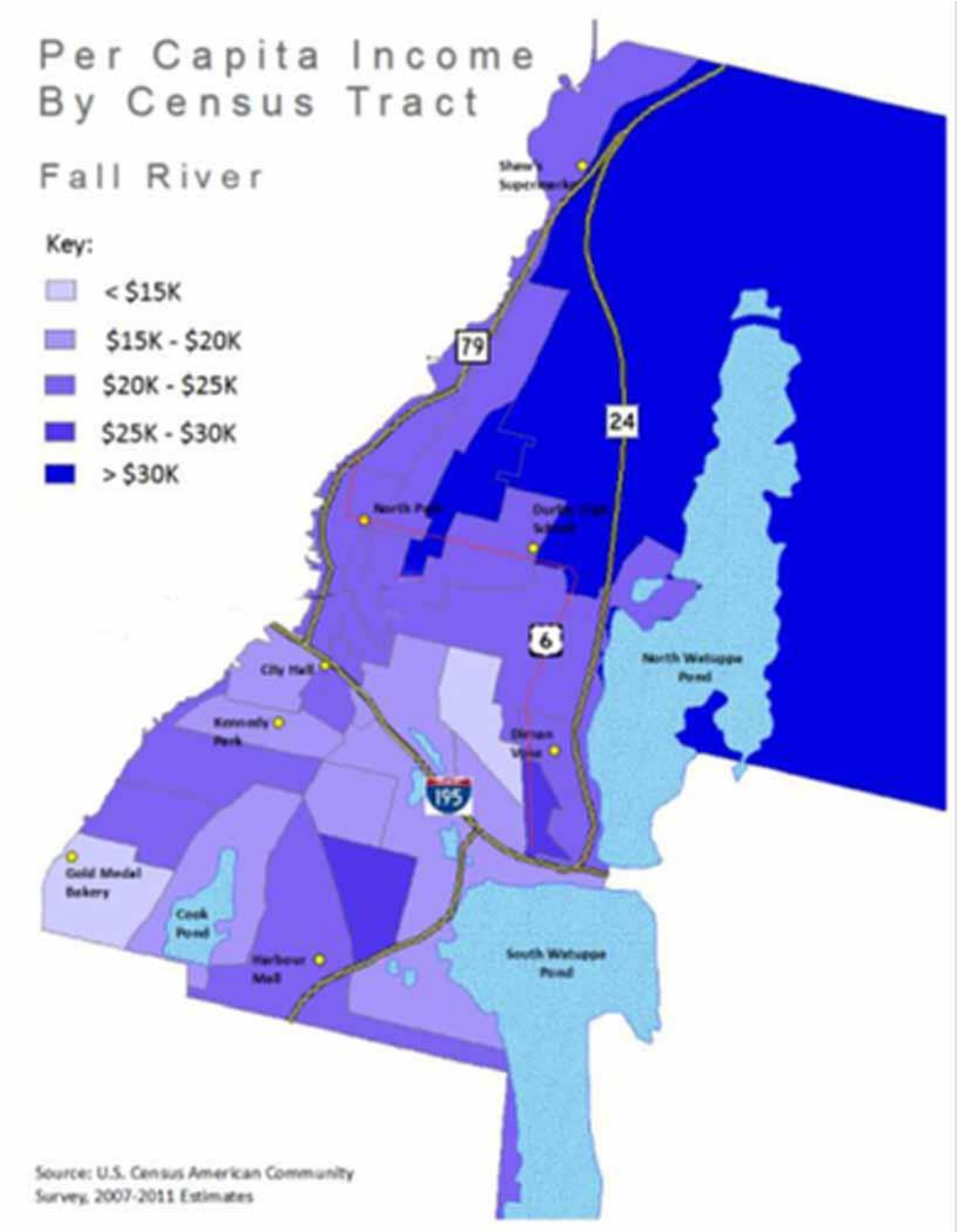
Figure 21. Population Without a High School Diploma



Income & Poverty

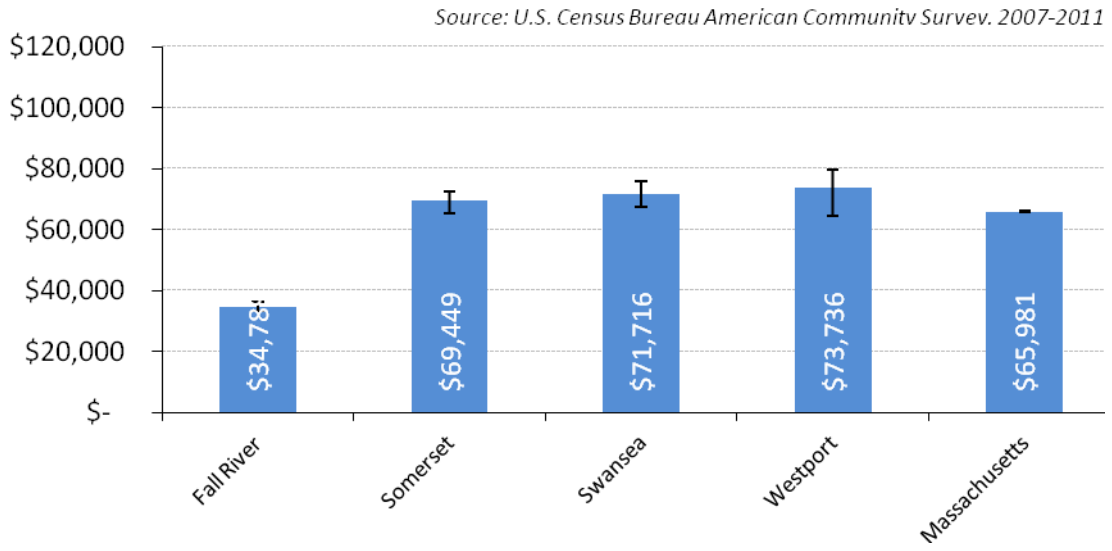
Poverty and income are reflected in wages; there exists a significant wage gap between the Southcoast and the state, a gap that continues to widen. The region's changing racial makeup and continued socioeconomic struggles place unique stresses on healthcare delivery, particularly in addressing health disparities based on race, income, and education.

Figure 7. Per Capita Income By Census Tract



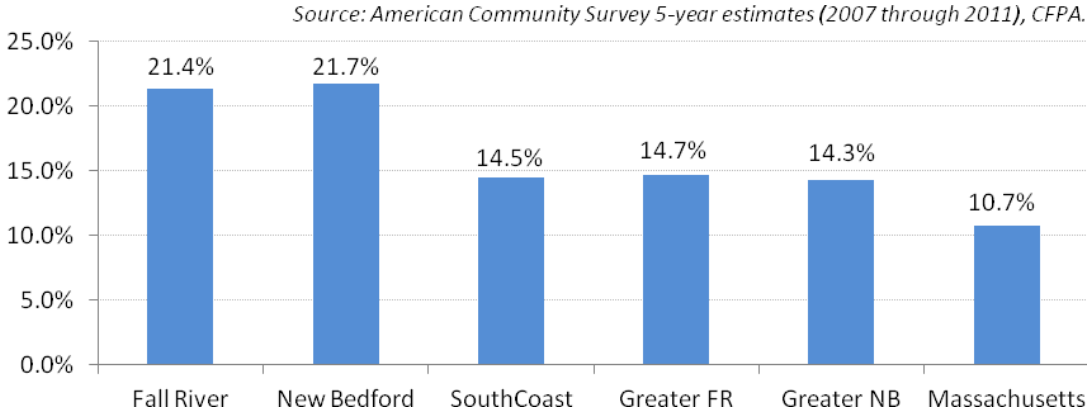
Median household income in the region reveals that 68% of its residents live in the five communities where the median household income is below the statewide figure while eight of the region's fourteen cities and towns have median household incomes that are above the state average. In Greater Fall River, the median household income is $34,789 in Fall River compared to a high of $73,736 in Westport.

Graph 10. Median Household Income Estimates



Poverty is one of the primary social determinants of health. Fall River has one of the highest poverty rates in the state: 21.4% of Fall River residents are below the U.S. Census Bureau's poverty threshold, which compares to 14.5% for the Southcoast and 10.7% statewide (see Figure 37). Importantly, not only does Fall River have the highest poverty rates in the region, but Fall River and New Bedford together also account for the majority of the region's poor in absolute numbers.

Graph 11. Population Below Poverty Level, Selected Areas



Family poverty levels in the Southcoast as a whole are higher than the state average with rates highest in the region's cities (see Table 22):

- 11.5% of Southcoast families live below the federal poverty level compared to 7.6% of families statewide.
- 19.1% of Southcoast families with children live below the federal poverty level compared to 11.8% of families statewide.
- 32.1% of Southcoast female headed by females live below the federal poverty level compared to24.5% statewide.

Figure 8. Families Below Poverty Level by Census Tract

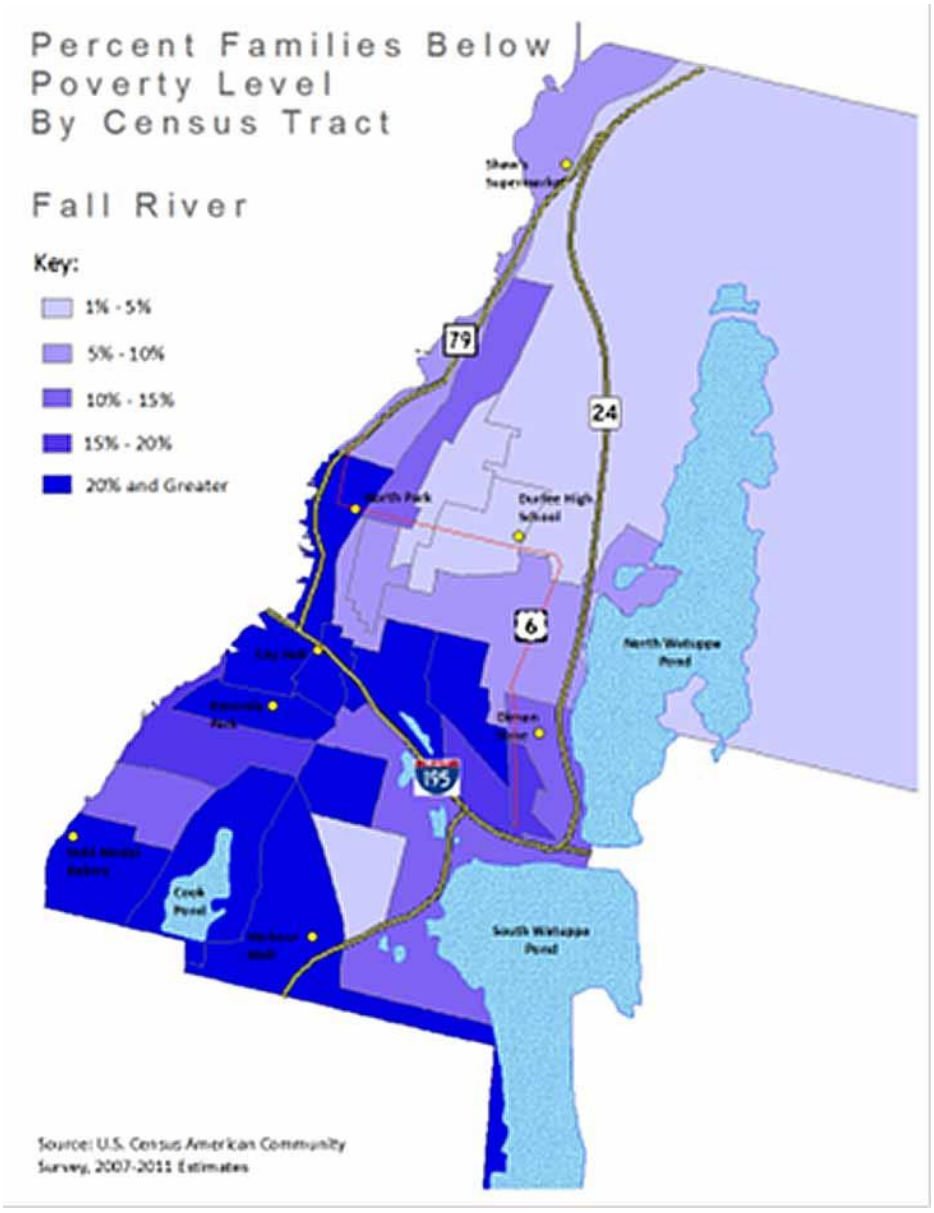
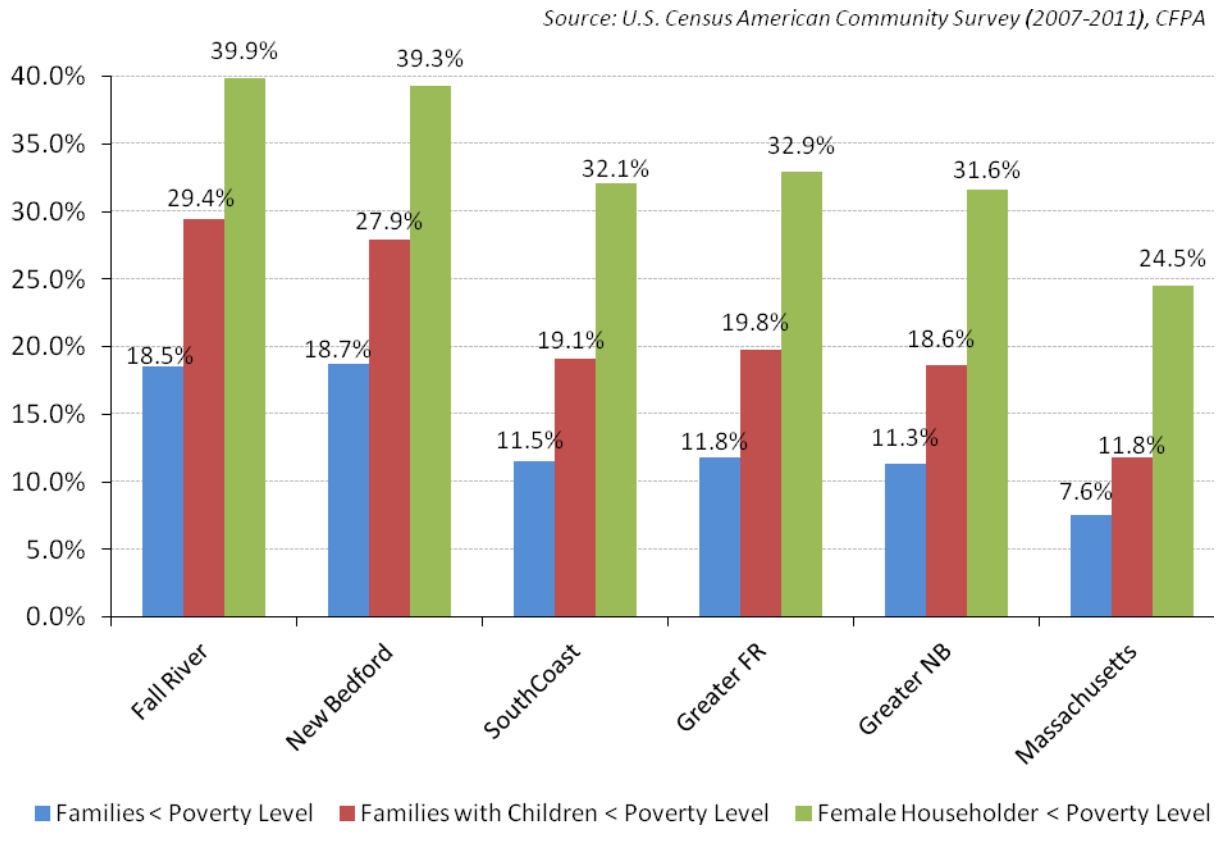


Table 22. Families Below Poverty

Families Below Poverty Level					
Town/City	Enroll	Low Income	# Families	Families<Poverty	Percent
Fall River	12,104	6,079	22,270	4,120	18.5%
New Bedford	14,609	8,431	23,627	4,418	18.7%
Somerset	2,844	264	4,851	116	2.4%
Swansea	2,295	283	4,666	135	2.9%
Westport	1,976	336	4,364	105	2.4%
SouthCoast	**33,828**	**15,393**	**59,778**	**8,895**	**14.9%**
Massachusetts	**1,603,940**				**7.6%**

Source: U.S. Census Bureau American Community Survey Estimates, 2007-2011

Graph 12. Family Poverty: Selected Areas



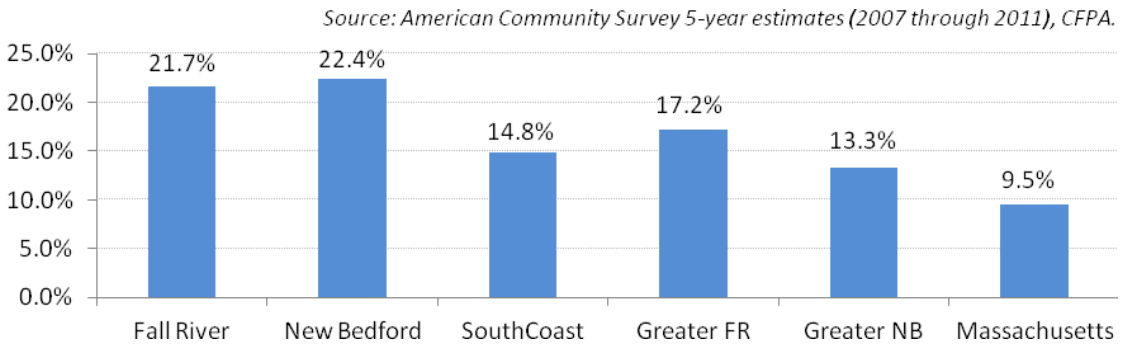
Household income

Table 23	Fall River Income & Poverty	
	Fall River	**State**
Median Household Income	$34,789	$65,981
Median Family Income	$44,635	$83,371
Percentage of Families w/children under 18 years with income below poverty	29.4%	11.8%
Percentage of Families w/children under 5 years with income below poverty	32.1%	12.5%
Percentage of Families with female householder w/ children under 18 years with income below poverty	50.7%	33.5%
Percentage of Families with female Householder w/ children under 5years with income below poverty	56.8%	40.1%

SNAP Benefits

SNAP offers nutrition assistance to eligible, low-income individuals and families. It is estimated that 14.8% of Southcoast households receive SNAP benefits annually, which compares to 9.5% of households statewide and 21.7% of households in Fall River (see Graph 13).

Graph 13. Households Receiving SNAP Benefits: Selected Areas



Nearly half (48.5%) of students in the Southcoast are classified as low-income by the Massachusetts Department of Elementary and Secondary Education (School Year 2011-2012), compared to 35.2% of students statewide. Over seventy-eight percent (78.3%) of students in Fall River are classified as low-income for the free and reduced lunch program.

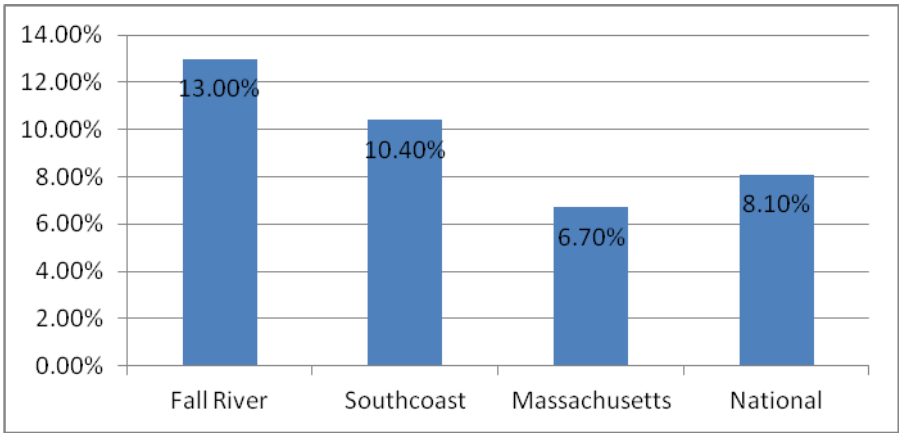
Employment

The Southcoast's economic base was historically dependent on manufacturing jobs located in the cities. Consequently, its economy has been extremely volatile with wide fluctuations in unemployment levels between peaks and troughs of the business cycle. Over the past two decades, the Fall River Area has struggled with the structural shocks of de-industrialization and the transition to a post-industrial economy as evidenced in the shift from "blue-collar" manufacturing to services. Currently, health care, educational services, retail trade, and business services are four of the most rapidly expanding employment sectors in the region and are projected to remain at the forefront of the region's employment growth, while opportunities for new growth exist around a renewal of high-tech manufacturing.

Average unemployment rates in the region are historically higher than the statewide average throughout the business cycle with much of the difference driven by high unemployment rates in Fall River and New Bedford. While the region's unemployment rate declined steadily during the 1990s and slowly closed the gap with the statewide unemployment rate, this gap is beginning to increase once again. The 2012 annual average unemployment rate in the Southcoast was 10.4%, which compares to a statewide average unemployment rate of 6.7% and a national rate of 8.1% (see Figure 44). The annual unemployment rate in Fall River of 13.0% was significantly higher than the state average in 2012.

Annual average wages in the Southcoast range from a low of $31,304 in Swansea to $47,164 in Fairhaven and Marion (see Figure 45).[10] There exists a significant wage gap between the Southcoast and the state which continues to widen: the ratio of Southcoast wages to the statewide average wage was 65.3% in 2012, a decline from 75.7% in 1990.

Graph 14. 2012 Unemployment Rates



Health Status

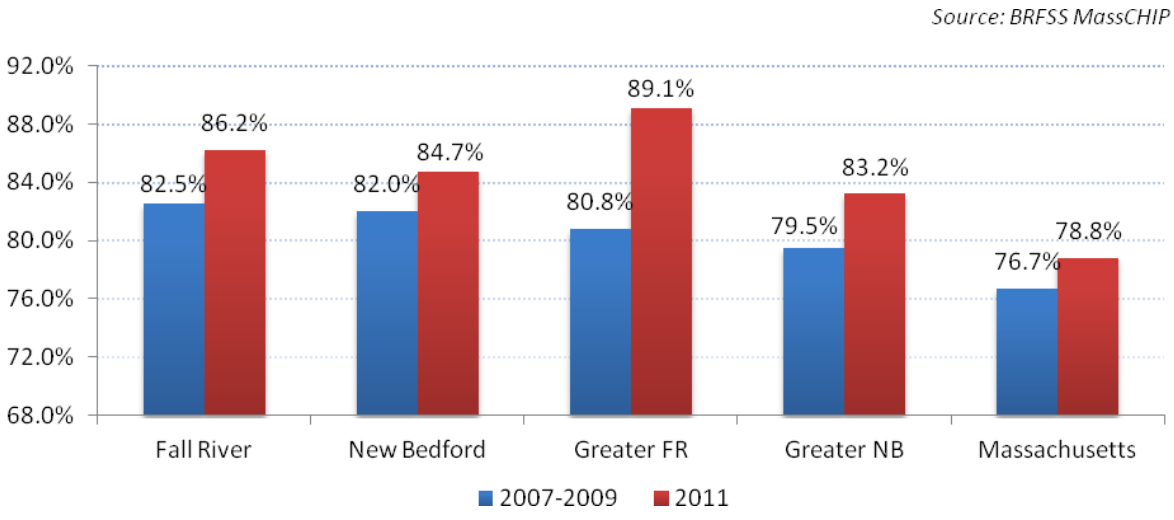
An assessment of the Greater Fall River's health status reveals a variety of indicators that measure residents' health and overall wellbeing. Health indicators are presented across four categories: Access to Care, Health Screenings & Vaccinations, and Health Outcomes. Data for this analysis is primarily derived from the Massachusetts Department of Public Health's MassCHIP database, including data from the Behavioral Risk Factor Surveillance System (BRFSS).

Access to Medical Care

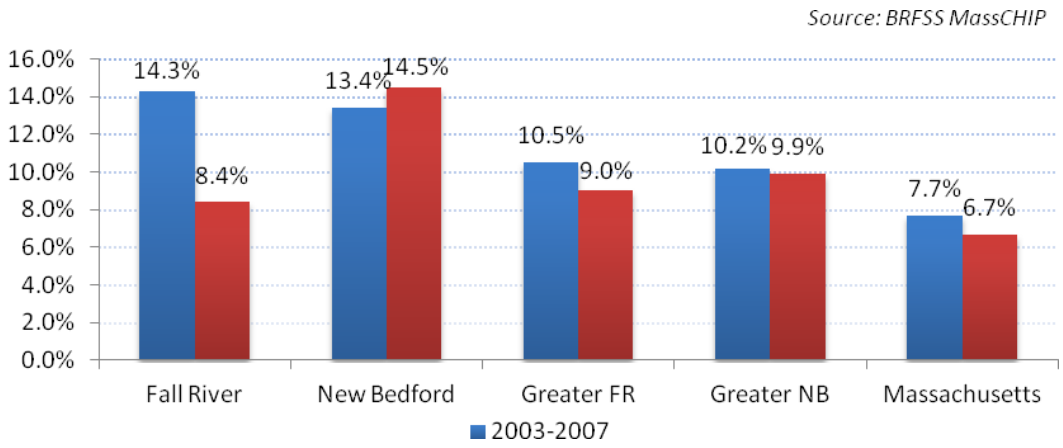
Generally speaking, Southcoast residents have access to care that is comparable to residents of Massachusetts , and when it comes to having a relationship with a care provider, residents of the Southcoast are well served :

- 87.1% of Greater Fall River residents reported having a personal health care provider, compared to 87.8% of residents statewide. However, the number of Fall River residents (84.5%) who have a personal health care provider is below the state level.
- 86.2% of adults in Fall River and 89.1% in Greater Fall River have had a checkup in the past year which is somewhat greater than the statewide average of 78.8%. Access to care is determined according to the following indicators: percentage of adults with a personal health care provider, percentage of adults who could not see a doctor due to cost, and percentage of adults who had a checkup in the past year.
- Similarly, the proportion of Southcoast adults as a whole who report being unable to see a doctor due to cost has declined over the past decade for each of these areas. As with many of the health indicators this assessment is measuring, however, residents in Fall River have greater barriers to care.

Graph 15. Percentage of Adults Who Reported Having a Checkup in the Past Year



Graph 16. Percentage of Adults Who Could Not See a Doctor Due to Cost



Access to Dental Care

Dental health, and gum disease in particular, is linked to health outcomes like diabetes, heart disease, and stroke, and maternal dental health is shown to affect neonatal outcomes[14]. Limited data is available to gauge access to dental care in the Southcoast, but that which is available indicates that the region is underserved in this area. While 77.8% of Massachusetts residents reported a dental visit in the past year, just 66.4 % of Fall River residents visited a dentist[15]. In Bristol County, which encompasses Fall River and New Bedford, the rate was 75%, while the state average was 83 %[16].

The Fall River Public Schools reported that of the 10,459 children enrolled in the public schools, 6,327 (60.5%) are considered low income. A majority of Fall River's low- income children have never had regular routine dental care and have documented poor oral health. During the Massachusetts Department of Public Health Office of Oral Health's statewide oral health assessment of third graders, children in Fall River were found to have higher than average rates of dental caries and other indicators of poor oral health. Among the children screened in Fall River, 43.2% had fillings, 64.9% had a history of tooth decay, 45.9% had untreated decay (compared to 26.6% statewide), 18.8% had at least one dental sealant (compared with 53.3% statewide), and 21.6% were found to have oral pain or infection.

In terms of adult oral health, residents in the area present with high percentages of dental caries and pain. According to the 2008 report "A Profile in Health among Massachusetts Adults in Selected Cities", 66% of Fall River adults reported having a dental visit in the past 12 months compared to the state's rate of 78%. In the same report 22% of adults had six or more missing teeth as a result of decay and gum disease, compared to the state's rate of 14% of adults with missing teeth.

[14] http://www.healthypeople.gov/2020/LHI/oralHealth.aspx
[15] BRFSS 2008.
[16] CHNA data not available; BRFSS 2006-10 via Community Commons.

Behavioral Health

Mental Health

Depression is one of the most common complications of chronic disease. It is estimated that up to one-third of individuals with a serious medical condition experience symptoms of depression. In some cases, the occurrence, management, and progression of a chronic disease can trigger clinically significant depression. According to the most recent Behavioral Risk Factor Surveillance System (BRFSS), a high percentage of Fall River residents reported experiencing poor mental health and depression compared to the county, state and nation. The suicide rate for the area is slightly higher than the state but less than the other two comparable geographic areas. MDPH data found that 55% of suicide victims had a mental health problem, 29% had a history of substance or alcohol abuse and 22% had a job loss or financial problems.

Table 24	Fall River	County	State	National
15+ days of poor mental health in past 30 days	16.7%	13.1%	9.1%	9.4%
15+ days experiencing sad, blue or depressed feelings in past 30 days	13.9%	10.6%	7.2%	9%
Suicide rate (per 100,000)	8.6	11.2	8.1	12.4

Source Department of Public Health 2009

Substance Use

Massachusetts ranks among the top five states in the country for the highest rates of drug and alcohol use among adults and youth. Fall River has the highest usage for heroin in the state; in 2008 there were 1,190/100,000 admissions for injection drug use compared to 424/100,000 admissions for the state. Reported use rates of all listed substances, including cocaine, crack and heroin are twice the state rate, and relapse for needle users one year after treatment is almost three times the state rate. According to the Massachusetts Department of Public Health, the age-adjusted annual death rate from alcohol and other drug use in Fall River is more than double the state average (31.6/100,000vs.14.8/100,000). In terms of race and ethnicity, white non-Hispanic residents are more likely to have an opioid-related ER visit.

Table 25	Fall River	County	State
Hospital Admissions rate for injection drug use (per 100,000)	1,190	858.3	424
Binge Drinking among adults	16%	16.3%	17.9%

Mortality from alcohol and other drug use (per 100,000)	31.6	17.5	14.8

Studies have shown that mental health disorders have a strong association with the risk, occurrence, management, progression, and outcome of serious chronic diseases and health conditions, including diabetes, hypertension, stroke, and heart disease. Untreated mental health disorders can lead to unhealthy and unsafe behaviors, including alcohol or drug abuse, violent or self-destructive behavior, and suicide. The percentage of Fall River residents reporting poor mental health and depression is higher than the state. There were more treatment admissions to publicly funded programs due to heroin than alcohol. The city had much higher rates of treatment for heroin than alcohol. The area's hospitalization rate due to heroin/injection drugs far exceeds that of the state.

Barriers to Accessing Care

Unable to see doctor due to cost

High unemployment and loss of insurance due to job loss have affected residents' ability to access health care. Data from the Behavioral Risk Factor Statewide Survey (BFRSS) indicates a high percentage of residents report they could not see a physician due to cost (10.9% verses 7.0% for the state).

Transportation

While Fall River can be characterized as an urban area, its public transportation service does not reflect that of an urban center. Access to reliable and affordable public transportation for the city is limited and does not meet the needs of the community. In 2010, the Southeastern Massachusetts Transportation Alliance conducted a focus group on the transportation needs of Fall River and surrounding communities. The study found that the existing transit system covers a limited geographic area and that cost is a major barrier for residents that need to access public transportation. For example, residents reported that students with no income, who are self-reliant to get to school, couldn't afford the bus. If they need to transfer buses to get to the high school, it costs them $2 per day to get to school. Transportation barriers have also posed a challenge to the patients we serve and have had an adverse effect on health outcomes among this population.

Through needs assessment, we have learned that transportation is a major barrier for the parents of our pediatric patients. Access to affordable and reliable transportation has always been a challenge for many of our patients, but over the past year, it has become an even greater obstacle due to the high unemployment rate.

Interpreters for the Deaf &Hispanic populations

The HealthFirst Family Care Center and the Stanley Street Treatment and Resources (SSTAR) Family Health Care Center have a long and proud history of providing interpreter services for our ethnic populations. We have accomplished this by recruiting bi/tri-lingual speaking staff and contracting with a telephone language line which offers interpreting services in over 50 languages, 24 hours a day, seven days a week. An increase in the Hispanic population in the area and deaf patients being seen at the health centers have placed a greater demand for Spanish and deaf interpreters. We are finding it

challenging to recruit professional medical interpreters for Spanish speakers and hard of hearing patients.

Recruitment of Medical Providers

Recruitment of medical providers has become more challenging for our community health centers because our area is no longer considered a Health Professional Shortage Area (HPSA). A HPSA designation assisted in our recruitment efforts because medical providers working in such an area can participate in loan repayment and scholarship programs offered by the National Heath Service Corps. We compete with hospitals systems and primary care groups for medical providers and one of the incentives we offered to providers was participation in these loan repayment programs. The change in our HPSA score from 17 to 3, mean that our providers can no longer access scholarships and loan repayment programs.

Health Screening & Vaccinations

The degree to which Southcoast residents access and participate in health screenings reflects issues of access, awareness, and even incidence of negative health outcomes. Health screening data collected through BRFSS reflects utilization of screening for cancers, blood cholesterol, and HIV.

Four types of cancer screenings are tracked for Fall River, New Bedford, and both Southcoast CHNAs. The proportion of the region's adults who undergo a colonoscopy to screen for colorectal cancer is lower than the statewide percentage; 54.6% of Massachusetts adults have undergone a colonoscopy, which compares to 46.9% in Fall River and 51.4% in Greater Fall River. Screening for breast cancer and cervical cancer among women is also comparatively low in the region (see Table 26).

Table 26. Proportion of Adults Participating in Cancer Screening

Proportion of Adults Participating In Cancer Screening

	Colonoscopy	Mammogram*	Breast exam*	Pap smear
Fall River	46.9%	61.4%	77.7%	77.5%
Greater Fall River	51.4%	66.8%	80.7%	79.6%
Massachusetts	54.6%	69.5%	86.1%	85.0%

*adult women only

Source: BRFSS, MassCHIP (colonoscopy & mammography: 2002-07; breast exam & pap smear: 2002-06)

Southcoast residents are on par with the population of the state when it comes to having blood cholesterol checked: 82.5% of Greater Fall River adults have had their cholesterol checked within the past five years, compared to 83.7% of Massachusetts adults.

HIV testing rates have increased slightly over the last decade across the Southcoast, and in the City of Fall River this increase has meant that a greater proportion of adults are tested as compared to the population statewide.

Two indicators are available to gauge the degree to which Southcoast residents access and avail themselves of vaccinations against flu and pneumonia. Interestingly, flu shot rates vary considerably in the Southcoast: 70.7% of Fall River-area residents had a flu shot within the past year, compared to just 54.6% of those living in Greater New Bedford (in Massachusetts, the proportion was 66.9%).[15] Pneumonia vaccination rates follow a similar pattern, though the region is on par with rates statewide; 33.3% of Massachusetts adults have been vaccinated in their lifetimes, compared to 39.5% in Greater Fall River

Health Outcomes

Almost one-fifth of Southcoast residents report having fair or poor health: 27.5% in Fall River and 18.4% in Greater Fall River, compared to just 14.0% statewide. Health outcomes analyzed for this report relate to cardiovascular and respiratory health, physical and mental health, diabetes, and cancer incidence. Results include:

- The prevalence of heart disease in the Southcoast is higher than it is statewide. Hospitalization rates for heart disease are also higher than they are statewide, although these rates have fallen since 2000.
- Strokes are slightly more prevalent in the region than statewide. The percentage of adults who report they had a stroke increased from 2006 to 2010.
- The prevalence of asthma in the Southcoast is higher than it is statewide and hospitalization rates for asthma have increased since 2000.
- The prevalence of diabetes has grown in both the Southcoast and Massachusetts.
- The region's cancer incidence rate increased from 1990 to 2008 which may partly be a result of better detection.
- Southcoast adults reflect a slightly above-average rate of lifetime high blood cholesterol diagnoses.
- Hypertension is also more prevalent in this region than statewide, and has increased across the region since 2001.

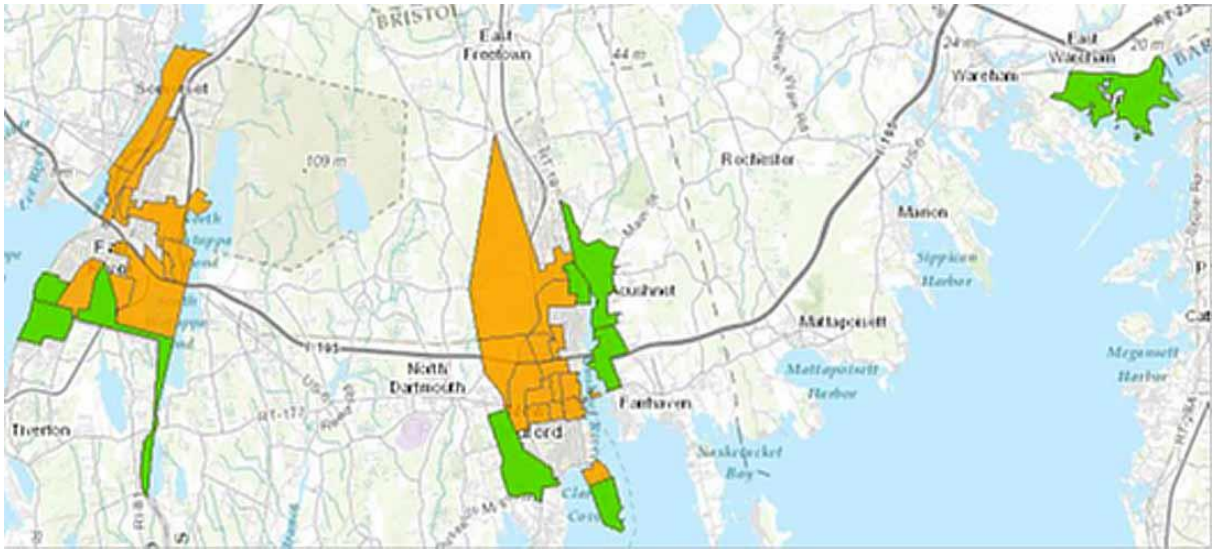
Physical and Social Environment

Not only is the health status of Southcoast residents influenced by availability of and access to clinical care, it is also affected by the physical conditions of the region: access to amenities that facilitate healthy eating and active living, air quality, and sources of environmental contamination.

Access to food

Access to healthy food influences the ability of Southcoast residents to exhibit healthy eating behaviors and thus reduce the risk of diet-related health outcomes like diabetes and heart disease. Residents of Bristol County have access to fewer grocery stores and supermarkets per capita as compared to Massachusetts as a whole (a combined rate of 17.5 per 100,000 residents, versus 19.8 statewide)[17].Bristol County's rate is just 16.4, and this lower density results in a number of food deserts—or low-income neighborhoods with no ready access to fresh, affordable food. Significant portions of Fall River are classified as food deserts where most residents live over 0.5 miles away from a grocery store or supermarket though much of this disparity has recently been relieved by the construction of a new Wal-Mart Supermarket in the South End of the City (see Figure 9).

Figure 9. Southcoast Food Deserts[18]



While fresh, healthy, affordable food can be hard for the region's residents to obtain, fast food options are abundant. In Bristol County, there are 65.6 fast food establishments per 100,000 residents. While

[17] US Census Bureau, County Business Patterns: 2011 (via Community Commons).

[18] USDA Food Environment Atlas. Orange denotes low-income Census tracts where most residents have no access to a grocery store or supermarket within 0.5 miles; green denotes no access within one mile.

this rate is lower than that of the state (71.9), there are nevertheless far more fast food establishments than there are grocery stores and supermarkets[19].

Access to fitness amenities

An active lifestyle can significantly promote positive health outcomes, but the ability to exercise can be influenced by factors like walkability and access to parks and recreation facilities.

Walkable neighborhoods—that is, communities where residents have many amenities nearby that can be easily reached on foot—encourage people to accomplish more day-to-day tasks on foot, which in turn promotes exercise and reduces obesity. Research has shown that people who live in walkable places weigh 6-10 pounds less than their peers in less amenity-rich neighborhoods[20]. Walk Score is a tool developed to measure walkability by neighborhood and city; it does this by scoring a neighborhood on a 0-100 scale influenced by the number, type, and proximity of amenities. Table 19 illustrates the Walk Scores of Greater Fall River cities and towns.

Table 27. Walkable Communities

Walkable Communities

	Score	Description
Fall River	62	Somewhat Walkable
Somerset	37	Car-Dependent
Swansea	37	Car-Dependent
Westport	31	Car-Dependent

Source: MassCHIP Instant Topics (Kids Count and Perinatal Reports)

Southcoast residents also have less access to recreation and fitness facilities than Massachusetts residents as a whole. In Bristol County, there are 13.7 such facilities per 100,000 residents versus 15.9 statewide.

Crime and safety

Crime rates are both a predictor and a consequence of important economic and social indicators such as drug use, perceived and actual levels of safety, economic conditions, and changing demographics. The number of crimes reported in the Southcoast increased by 14.9% from 2000 to 2011, although they have declined by 3.6% since 2005.

- 12,971 crimes in the Southcoast were reported to police in 2011; 2,595 (20.0%) violent crimes and 10,376 (80.0%) non-violent crimes.

[19] US Census Bureau, County Business Patterns: 2011 (via Community Commons).
[20] http://unews.utah.edu/old/p/072808-1.html.

- Property crimes such as larceny/theft (6,724 crimes or 51.8%) and burglary (2,760 crimes or 21.3%) accounted for the majority of crimes in the Southcoast.

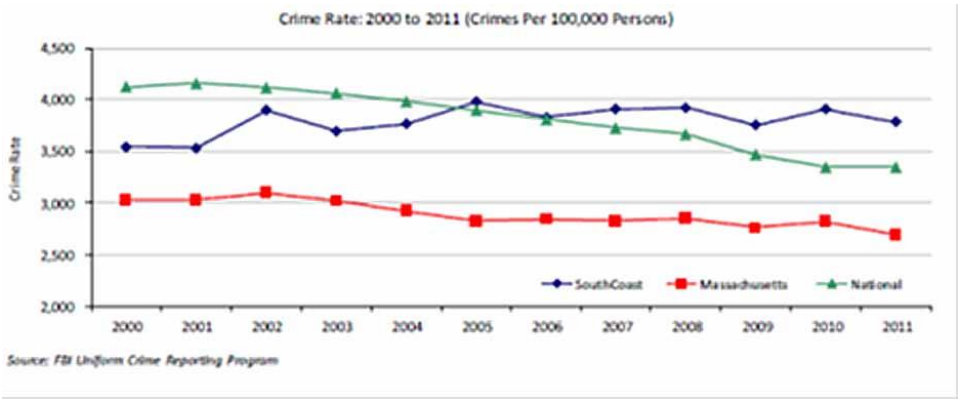
- Fall River and New Bedford accounted for 67.6% of the total crimes reported in the region, while the two cities accounted for 54.1% of the Southcoast's total population.

Table 28. Reported Crimes in Fall River, 2008-2010

Year	Location	Description	Murders	Rapes	Robberies	Assaults	Burglaries	Thefts	Vehicle Thefts	Arson	Crime Index
2010	Fall River, MA	Count	5	52	252	778	940	2,006	351	35	
	Fall River, MA	Per 100,000	5.6	57.9	280.8	866.9	1,047.50	2,235.30	391.1	39	2,942
	Massachusetts	Per 100,000	3.2	26.7	105	331.8	576.8	1,598.80	174.9	NA	1,446
	U.S.	Per 100,000	4.8	27.5	119.1	252.3	699.6	2,003.50	238.8	NA	1,610
2009	Fall River, MA	Count	4	46	273	763	775	2,144	393	44	
	Fall River, MA	Per 100,000	4.4	50.1	297.1	830.2	843.3	2,332.90	427.6	47.9	2,812
	Massachusetts	Per 100,000	2.6	25.8	112.6	316	525.7	1,600.30	178	NA	1,405
	U.S.	Per 100,000	5	28.7	133	262.8	716.3	2,060.90	258.8	NA	1,683
2008	Fall River, MA	Count	3	65	240	780	842	2,337	349	37	
	Fall River, MA	Per 100,000	3.3	71.6	264.4	859.4	927.7	2,574.90	384.5	40.8	2,966
	Massachusetts	Per 100,000	2.6	26.7	108.8	310.9	555.5	1,648.60	196	NA	1,434
	U.S.	Per 100,000	5.4	29.3	145.3	274.6	730.8	2,167.00	314.7	NA	1,784

The crime index measures the number of crimes per 100,000 persons. The overall crime declined slightly in Fall River, but less than the rate of decline at the national levels, since 2008. The latest crime report from the Fall River Police Department (January 2014) has shown continued decreases in murders, aggravated assaults, burglaries and thefts between 2011 and 2013.

Graph 16. Crime Rate 2000 to 2011 (Crimes Per 100,000 Persons)



Environmental Conditions

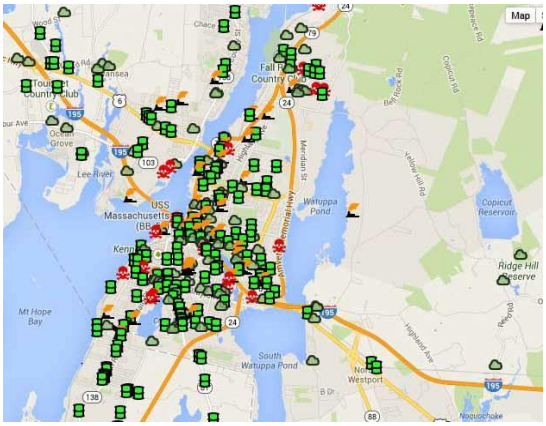
Air quality is linked to respiratory health and can influence the incidence of asthma, bronchitis, damage to the nervous system, organ damage, cardiovascular problems, and cancer. Air quality is measured by ozone, particulate matter in the air, and sources of air pollution in the region.

Ozone, which is influenced by emissions from industrial and energy-producing facilities, motor vehicles, and chemicals, can induce difficulty in breathing, asthma attacks, and reduced lung function, particularly in populations already struggling with respiratory challenges[24] The incidence of poor air quality days on which ozone exceeds the National Ambient Air Quality Standard is very low in the region: in 2012, there were no days on which this standard was exceeded in Bristol or Plymouth County. In fact, the last year in which unhealthy levels were reached in Bristol County was 2006 where there were two days on which the standard was exceeded[21]. There were four such days in this county in 2003. This suggests that air quality has generally improved in the Southcoast.

The Southcoast is home to a number of sites that contain and/or generate contaminants that can negatively affect residents' health. This is influenced in part by the industrial histories of Fall River and New Bedford which were home to many manufacturing facilities that used toxic chemicals and metals that were often released into the water and soil. While some facilities continue to emit contaminants, many are now classified as brownfields—sites that are no longer used and cannot be reused until their contamination is remediated.

Notably, the region is home to seven Superfund sites: that is, brownfields that have been determined to represent significant enough contamination and risk that they qualify for federal funds to expedite cleanup. Fall River is home to 427 contaminated sites, 71 of which present sufficient hazards as to limit activity on and use of these parcels. Though the extent of contamination on these sites is not significant enough to qualify them for federal aid (like that which has been provided through the Superfund program), these brownfields affect residents' health both through the possibility of exposure to contamination as well as the blight these sites can inflict on neighborhoods. Figure 35 illustrates two sources of environmental contamination in Greater Fall River with activity and use limitations. A green barrel symbol indicates a hazardous waste site and a red skull and cross bones indicates a toxic waste site.

Figure 35. Toxic and Hazardous Waste Sites[22]



[21] EPA Air Compare, 2012: http://www.epa.gov/aircompare/compare.htm.
[22] http://www.usa.com/fall-river-ma-environmental-watch.htm

Brayton Point is a 1,527-megawatt fossil fuel plant located in Somerset, Massachusetts on 306 acres of land at the head of Narragansett Bay. In many recent years, Brayton Point Station has been the largest single emitter of carbon dioxide (CO2) pollution in Massachusetts. The types of pollution emitted by burning coal are harmful to both human health and the environment. Brayton Point emits substances such as neurotoxins, known carcinogens and air pollutants that are hazardous to respiratory, circulatory and cardiovascular health. Some of the pollutants are familiar substances like arsenic, lead, manganese, and mercury. Others include sulfur dioxide (SO2), nitrogen oxides (NOx), and fine particulate matter (PM2.5). Nitrogen oxides also contribute to the formation of ground-level ozone, a significant health threat in Bristol County.

Nearly 15% of adults and 14% of children living in New England have asthma. This represents about 2.1 million people in our relatively small region of the country. Adult and childhood asthma rates in New England are among the highest of any of the other 10 U.S. Department of Health and Human Service regions[23].

Table 29. Health Impacts from Brayton Point 2012 Emissions

Health Impacts from Brayton Point 2012 Emissions[14]	# Cases
Mortality	15–39
Acute Bronchitis	20
Heart Attacks	30
Asthma Exacerbation	240
Chronic Bronchitis	9
Asthma ER Visits	9
Cardiovascular Hospital Admissions	9
Respiratory Hospital Admissions	4
Lower Respiratory Symptoms	250
Minor Reduced Activity Days	11,250
Upper Respiratory Symptoms	190
Work Loss Days	1,890

Source: Powerplant Impact Evaluator model; Abt Associates.

Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. Some particles are large or dark enough to be seen as soot or smoke while others are so small they can only be detected with an electron microscope. They can remain suspended in the air for long periods of time. Particles smaller than 10 micrometers in diameter (PM10) pose a health concern

[23] Asthma Regional Council. (2006, March). *The Burden of Asthma in New England.* Retrieved from *http://asthmaregionalcouncil.org/uploads/Surveillance/TheBurdenofAsthmainNewEnglandMarch2006.Summary.pdf.*

because they can be inhaled and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter (PM2.5) are referred to as "fine" particles. Because of their small size—approximately 1/30th the average width of a human hair—these particles can lodge deeply into the lungs[15] and cause health problems such as asthma, bronchitis, and heart attacks. Because these fine particles penetrate into sensitive parts of the lungs, they can cause or worsen respiratory disease, such as emphysema and bronchitis, and aggravate existing heart disease, leading to increased hospital admissions and premature death.

Sulfur dioxides, better known as SO2, are sulfur-based gases that have a range of harmful effects on the human respiratory system, according to the U.S. EPA. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, to an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. Studies also show a connection between short-term exposure and increased emergency room visits and hospital admissions for respiratory illnesses, especially for at-risk populations including children, the elderly, and asthmatics[24].

Table 30. 2012 Emissions from Brayton Point Power Plant and Associated Health Effects

2012 Emissions from Brayton Point Power Plant and Associated Health Effects								
Toxic Pollutant	2012 Amount Released	Known Carcinogen	Neurotoxin	Reproductive	Developmental	Heart & Pulmonary	Lung & Respiratory	Endocrine disrupting
Hydrochloric Acid	3,700 lbs						●	
Hydrogen Fluoride	5,100 lbs						●	
Hydrogen Cyanide	3,500 lbs					●	●	
Antimony	22 lbs					●	●	
Arsenic	120 lbs	●			●	●	●	
Beryllium	5 lbs	●				●		
Cadmium	6 lbs	●			●			suspected
Chromium	915 lbs	●					●	
Cobalt	32 lbs	suspected		●			●	
Lead	82 lbs	●	●	●	●	●		
Manganese	190 lbs		●	●			●	
Nickel	560 lbs	●						
Selenium	690 lbs	suspected					●	
Mercury	14 lbs		●	●	●	●		

Source: EPA IPM model outputs from the Mercury and Air Toxics (MATS) docket. Mercury data from MA DEP.

The above table shows the 2012 results, and also details total health impacts and their associated costs for the next decade, under two operating scenarios. The first is a ten year projection based on how much the plant operated in 2012, which was historically low. The second set of data is a ten year projected total based on operating capacity averages using operating rates of 2010, 2011, and 2012.

[24] .S. Environmental Protection Agency. *Heath.* Retrieved from *http://www.epa.gov/air/sulfurdioxide/health.html.*

Children's Health

Births

The health of mothers, infants, and children can predict future public health challenges for families, communities, and the health care system. Receiving adequate prenatal care and having healthy birth outcomes among infants can prevent death or disability. The infant and child health indicators for the City of Fall River provide a mixed view of potential public health challenges that the community may face. While the percentage of women receiving adequate prenatal care is higher compared to the county, state, and nation, the percentage of low birth weight is higher compared the other geographic areas. The percentage of low birth weight infants is concerning because it can increase an infant's risk of death in its first few days of life and lead to devastating and lifelong disabilities for the child. Fall River has the third highest teen birth rate in Massachusetts as shown in table 3.7. The rate is also significantly higher than the county and nation. Given the high percentage of low birth weight, the area surprisingly has a low infant mortality rate which can be tied to the percentage of women receiving good prenatal care.

Both Greater Fall River and Greater New Bedford have lower rates of infant mortality, or deaths among infants under one year old per 1,000 live births, as compared to the state. The Massachusetts rate is 4.4, compared to 4.0 in Greater Fall River[25]. After delivery, far fewer Southcoast mothers begin to or plan to breast feed as compared to the state average: just 50.6% in Greater Fall River, compared to 82.0% across Massachusetts[26].

Table 310.	Fall River	County	State	National
Adequate Prenatal care	85.8%	82.8%	84.3%	71.0%
Low Birth weight (less than 2,500 grams)	8.6%	8.5%	7.7%	8.2%
Teen Births rate (15-19) per 1,000	45.6	29.0	19.6	34.2
Infant mortality rate (per 1,000 live births)	4.2	4.2	4.8	6.0

U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *Child Health USA 2011* Centers for Disease Control & Prevention Fast Stats 2010

[25] Instant topics – Kids Count, 2010
[26] Instant topics - Perinatal Report, 2009

Teen Births

Teen births in Fall River have been historically higher than both regional and statewide figures over the past twenty years. In the same time period, prenatal care has lagged behind state rates, and maternal smoking rates have been very high, resulting in lower birth weights.

Table 32. Selected Teen Births Characteristics: Greater Fall River, 2007-2009

	Ages 10-17			Ages 18-19		
	Area Count	**Area %**	**State %**	**Area Count**	**Area %**	**State %**
Prenatal Care Characteristics						
Adequate Prenatal Care (b)	24	63.2	69.1	89	84.0	75.3
Started Prenatal Care in 1st trim.	20	52.6	62.4	80	75.5	70.9
Public Source of Payment (c)	34	89.5	76.6	93	93.0	76.6
Maternal Behaviors						
Smoked During Pregnancy	NA	NA	9.5	29	26.9	13.7
Breast feeding or intention to breast feed	16	42.1	68.1	39	39.0	70.8
Birth outcomes						
Premature Births	NA	NA	9.9	9	8.3	9.1
Low birth weight	NA	NA	9.8	12	11.1	8.9
First Time Mothers	36	94.7	93.5	79	73.2	83.8
	State Infant Mortality Rate					
	Ages 10-17			**Ages 18-19**		
Infant Deaths	5.7			6.5		

Denominators used to calculate Area and State %: all teen births of a given age and geography. Unknown values of prenatal care adequacy, trimester prenatal care began, prenatal care payment source, smoking behavior during pregnancy, breast feeding, gestational age, birth weight or Parity are excluded from denominator.
(b) 2007 Linked Births / Deaths (Vital Records)
(c) 2009 Births (Vital Records)

Fetal and Infant health

Fetal and infant health indicators relate to care, maternal behavior, and outcomes. In both Greater Fall River and Greater New Bedford, levels of care and outcomes are generally suboptimal compared to Massachusetts. First, fewer infants' mothers begin prenatal care during the first trimester: 81.2% in Greater Fall River and 76.5% in Greater New Bedford, compared to 83.0% statewide (see Table 8).

Table 33. Fetal and Infant Health

Fetal and Infant Health				
	Began Prenatal Care During 1st Trimester (2009)	Adequate Prenatal Care (2010)	Gestational Diabetes (2009)	Mother Smoked During Pregnancy (2009)
Fall River	No data	85.0%	No data	No data
New Bedford	No data	76.0%	No data	No data
Greater Fall River	81.2%	86.4%	7.7%	17.0%
Greater New Bedford	76.5%	80.1%	4.9%	13.4%
Massachusetts	83.0%	85.0%	4.7%	6.8%

Source: MassCHIP Instant Topics (Kids Count and Perinatal Reports)

Similar proportions of infants born in the region were determined to have adequate prenatal care except for New Bedford where only76% of infants received adequate prenatal care compared to 85% statewide (see Table 32). Among infants receiving some level of prenatal care, 63% of that care was publicly financed for mothers in Greater Fall River which compares to 36% statewide.

Neonatal health outcomes are reflected by prematurity and birth weight. This is an indicator within which there is some divergence in the region: while Greater Fall River has fewer premature births (7.6%) compared to Massachusetts (8.7%), the opposite effect appears where low birth weight is considered, a condition present in 7.8% of Massachusetts infants compares to 8.4% in Greater Fall River.

Table 34. Neonatal Outcomes

Neonatal Outcomes		
	*Premature Births	**Low Birthweight
Fall River	No data	8.7%
New Bedford	No data	5.1%
Greater Fall River	7.6%	8.4%
Greater New Bedford	9.7%	7.1%
Massachusetts	8.7%	7.8%

**Source: MassCHIP Instant Topics, 2009*

*** Source: MassCHIP Instant Topics, 2010*

Lead exposure

The risk and incidence of lead poisoning in the Southcoast is above average and likely skewed by higher risk and incidence in the region's cities. A likely contributing factor is the fact that lead paint (the primary source for exposure in children) is only present in older houses which are particularly prevalent in the cities of Fall River and New Bedford. Table 34 illustrates the degree to which lead exposure and poisoning affects children in Greater Fall River and Greater New Bedford individually, as well as Massachusetts as a whole.

Table 35. Lead Poisoning Cases Per 1,000 Screened

Lead Poisoning Cases Per 1,000 Screened

	2010
Fall River	No data
New Bedford	No data
Greater Fall River	7.6%
Greater New Bedford	9.7%
Massachusetts	8.7%

Source: MassCHIP Instant Topics, 2010

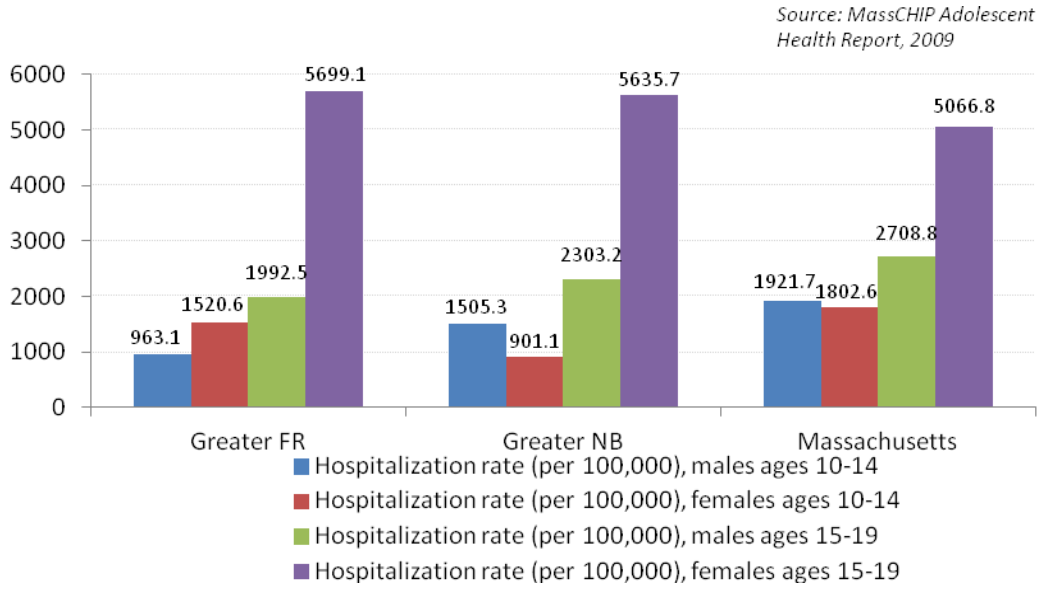
Abuse and Neglect

There were 5,956 children in the Southcoast who were reportedly abused or neglected in 2009. Cumulatively, this means 7.5% of the region's children were involved in reports of abuse or neglect compared to 5.2% of Massachusetts children as a whole. Verified investigations of abuse and neglect result in data that shows 4.1% of our region's children were verifiably abused or neglected (compared to 2.2% statewide)[27].

Abuse hospitalization data is available on younger (ages 10-14) children and older (ages 15-19) adolescents in the region; rates are based on hospitalizations per 100,000 in the relevant age group. With the exception of females ages 15- 19, the Southcoast has adolescent abuse hospitalization rates that are lower than Massachusetts rates. Figure 68 illustrates rates in Greater Fall River, Greater New Bedford, and Massachusetts for both sexes and groups of adolescents.

[27] Instant topics – Kids Count, 2010; calculations by author based on population reported in source.

Graph 16. Abuse and Neglect



School Youth Health

The Fall River Public Schools, with the support of the BOLD Coalition contracted with Northeast Health Resources (NHR) to carry out the tabulation and an overview analysis of the Youth Health Survey for Middle School students and the Youth Risk Behavior Survey (MA YRBS) for high school students in 2012.

MIDDLE SCHOOL – GRADES 6, 7, 8 RESULTS IN 2013 ARE AS FOLLOWS:

SAFETY AND VIOLENCE RELATED BEHAVIORS

- **One-sixth (16.0%)** of all respondents (19.7% - 2011) (7% - MYHS) **report "never" or "rarely" wearing a seatbelt when riding in a car**. The incidence of those reporting never or rarely wearing a seatbelt increased each year by grade (grade 6 – 10.4%, grade 7 – 16.1%, and grade 8 – 20.4%) (females – 14.6%, males – 17.0%).

- **8.0%** of all respondents **report having ridden in a car driven by someone who had been drinking alcohol during the previous 30 days** (grade 6 – 5.9%, grade 7 – 7.0%, and grade 8 – 10.6%). There was no variation by gender.

- **40.6%** of all respondents (43.0% - 2011) (34% - MYHS) **report having been bullied at school at least once during the previous twelve months**. There was little variation by grade (grade 6 – 42.6%, grade 7 – 40.6%, and grade 8 – 39.1%). Female respondents (48%) report being bullied much more frequently than males (34.3%).

- **17.1%** of all respondents (17.9% - 2011) (15% - MYHS) **report having been bullied electronically during the 12 months prior to the survey** (grade 6 – 14.3%, grade 7 – 14.0%, and grade 8 – 22.5%). Females (22.0%) report this experience much more frequently than males (12.6%).

- **17.6%** of all respondents (18.2% - 2011) (13% - MYHS) **report having hurt or injured themselves on purpose (eg. cutting, burning, bruising) at least once during the twelve months prior to the survey.** The incidence of this behavior was lowest in grade 6 (grade 6 – 14.0%, grade 7 – 19.1%, and grade 8 – 19.1%) and higher among females (females – 22.9%, males – 13.2%).

- **3.5%** of all respondents **report having carried a weapon such as a gun, knife, or club on school property at least once during the 30 days prior to the survey.** The incidence of this behavior was highest in grade 8 (grade 6 – 2.1%, grade 7 – 2.7%, 8 – 4.9%) and among males (females – 2.1%, males – 4.6%).

SUICIDE

- **17.7%** of all respondents (12.1% - 2011) (7% - MYHS) **report having seriously thought about committing suicide during the twelve months prior to the survey.** The incidence of these thoughts increased each year by grade (grade 6 – 14.4%, grade 7 – 17.8%, and grade 8 – 20.4%) and was nearly twice as high among female respondents (females – 23.7%, males – 12.3%).

- **6.4%** of all respondents (9.8% - 2011) (4% - MYHS) **report having actually tried to commit suicide during the previous twelve months.**

"During the past 12 months, did you actually try to kill yourself?" Response: "Yes"

	Grade 6	Grade 7	Grade 8	Total
Female	6.2%	8.3%	12.5%	9.1%
Male	5.2%	4.5%	2.5%	4.1%
Total	5.7%	6.2%	7.1%	6.4%
2011 Total	9.9%	11.9%	7.6%	9.8%

TOBACCO USE

- **18.6%** of all respondents (22.0% - 2011) (10% - MYHS) **report having ever tried cigarette smoking** (even one or two puffs)**.** The incidence of those having ever tried cigarette smoking increased each year by grade (grade 6 – 13.3%, grade 7 – 14.3%, grade 8 – 26.9%). There was little variation by gender (females – 19.9%, males – 17.5%).

- **6.5%** of all respondents (3% - MYHS) **report having smoked cigarettes on at least one occasion during the thirty days prior to the survey**. The incidence of recent cigarette use was highest in grade 8 (grade 6 – 5.8%, grade 7 – 3.4%, and grade 8 – 9.2%). There was little variation by gender (females – 7.3%, males – 5.8%).

- **5.8%** of all respondents (7.4% - 2011) **report having ever smoked cigars, cigarillos, or little cigars.** The incidence of this behavior was highest in grade 8 (grade 6 – 5.0%, grade 7 – 3.1%, and grade 8 – 8.2%). Males (6.3%) report doing so slightly more frequently than females (5.0%).

ALCOHOL USE

- **More than one-quarter (27.0%)** of all respondents (32.9% - 2011) (20% - MYHS) **report having ever had a drink of alcohol other than a few sips and other than for religious reasons.** The incidence of lifetime alcohol use increased each year by grade (grade 6 - 17.3%, grade 7 – 23.4%, grade 8 – 39.1%). Females (28.8%) **report ever having a drink of alcohol more frequently than males (24.9%).**

- **12.4%** of all respondents (8% - MYHS) **report having had at least one drink of alcohol on at least one occasion during the thirty days prior to the survey.** The incidence of recent alcohol use increased each year by grade (grade 6 – 8.3%, grade 7 – 10.2%, grade 8 – 17.5%) and was slightly higher among females (females – 13.9%, males – 10.8%).

- **Nearly one respondent in ten (9.6%) report having attended parties held in homes in their school district during the previous 12 months where alcohol use by teens was allowed** (grades 6 – 7.6%, grade 7 – 7.9%, grade 8 – 12.6%). Female respondents (11.7%) report this experience more frequently than males (7.6%).

ILLEGAL DRUG USE

- **14.6%** of all respondents (14.5% - 2011) (8% - MYHS) **report having ever used marijuana**. 8th grade respondents (22.9%) were more likely to have done so than were those from grade 6 (9.0%) or grade 7 (11.4%). There was little variation by gender (females – 15.4%, males – 13.9%). Further, 10.4% (4% - MYHS) report doing so during the 30 days prior to the survey.

- **4.5%** of all respondents (1.8% - 2011) **report ever having used cocaine** (grade 6 – 3.1%, grade 7 – 3.3%, grade 8 – 6.4%) (females – 4.0%, males – 4.8%).

- **9.7%** of all respondents (10.8% - 2011) **report having ever sniffed glue, or breathed the contents of spray cans, or inhaled any paints or sprays to get high. 8.1% reported using inhalants in the prior 30 days.**

  "Have you ever sniffed glue, breathed the contents of aerosol spray cans or inhaled any paints or sprays to get high?" Response: "Yes"

	Grade 6	Grade 7	Grade 8	Total
Female	9.5%	7.9%	13.4%	10.3%
Male	10.7%	7.3%	9.4%	9.3%
Total	10.1%	7.6%	11.2%	9.7%
2011 Total	7.7%	11.9%	13.1%	10.8%

- **7.3%** of all respondents **report having been offered, sold, or given an illegal drug on school property during the prior 12 months.** The incidence of this experience increased each year by grade (grade 6 – 4.0%, grade 7 – 6.9%, grade 8 – 10.4%). There was no variation by gender.

DIETARY BEHAVIOR

- While over half (**53.3%**) of all **respondents** (55.3% - 2011) **described themselves as being at about the right weight**, **49.2% reported trying to lose weight and 11.9% were trying to gain weight.** Female respondents (58.2%) were more likely to be trying to lose weight (males – 41.3%).

- During the previous 30 days, in order to lose weight or to keep from gaining weight:

    - **59.3%** of all respondents **report having exercised**. (females – 58.9%, males – 59.8%)

    - **38.9%** of all respondents **report eating less food, fewer calories, or foods low in fat.** (females – 43.8%, males – 34.7%)

    - **12.3%** of all respondents (11.8% - 2011) **report having gone without eating for 24 hours or more.** (females – 17.4%, males – 7.5%)

    - **4.0%** of all respondents **report having taken diet pills, powders, or liquids without a doctor's permission**. (females – 4.8%, males – 3.3%)

    - **4.9%** of all respondents **report having vomited or taken laxatives**. (females – 7.1%, males – 3.0%)

- **Nearly one-half (49.4%)** of all respondents **report eating breakfast on fewer than 5 days during the previous week.** The incidence of this experience increased each year by grade (grade 6 – 44.0%, grade 7 – 47.1%, grade 8 – 56.4%) and was higher among female respondents (females – 56.4%, males – 43.3%).

PHYSICAL ACTIVITY

- Slightly over half (**53.8%**) of all respondents (72.9% - 2011) (80% - MYHS) **report having exercised or participated in physical activity for at least 20 minutes on at least three days during the seven days prior to the survey**. The incidence of this behavior decreased each year by grade (grade 6 – 56.1%, grade 7 – 55.8%, grade 8 – 50.2%). Males (58.4%) report such regular exercise more frequently than females (49.3%).

- **47.2%** of all respondents (49.0% - 2011) (28% - MYHS) **report that they play video games or computer games or use a computer for something that is not school work 3 hours or more per day on an average school day** (grade 6 – 43.0%, grade 7 – 45.4%, grade 8 – 52.3%). Male respondents (52.0%) were more likely to do so than were females (41.9%).

HIGH SCHOOL - GRADES 9, 10, 11 AND 12 RESULTS ARE AS FOLLOWS

The following also includes comparisons with certain of the data from the 2011 MA YRBS. It should be noted that the report on the MA YRBS often only provides aggregate data on all students from grades 9 through 12 and not on the results from specific grades.

VEHICLE RELATED SAFETY

- **22.1%** of all respondents (24.9% - 2011) (14% - MA YRBS) **report "never" or "rarely" wearing a seatbelt when riding in a car driven by someone else** (grade 9 – 24.2%, grade 10 – 21.2%, grade 11 – 25.2%, grade 12 – 16.0%). Males (24.4%) were more likely to report never or rarely wearing a seatbelt than were females (19.8%).

- **19.2%** of all respondents (22.7% - 2011) (23% - MA YRBS) **report having ridden in a car or other vehicle driven by someone who had been drinking alcohol** on at least one occasion during the thirty days prior to the survey (grade 9 – 19.0%, grade 10 – 16.2%, grade 11 – 20.9%, grade 12 – 19.1%) (females – 16.9%, males – 21.4%).

- **7.2%** of all respondents (7.3% - 2011) (7% - MA YRBS) **report having driven a car or other vehicle after they had been drinking alcohol** on at least one occasion during the thirty days prior to the survey (grade 9 – 6.3%, grade 10 – 6.5%, grade 11 – 5.9%, grade 12 – 8.9%) (females – 4.7%, males – 9.7%).

VIOLENCE RELATED BEHAVIORS

- **5.6%** of all respondents (5.8% - 2011) (4% - MA YRBS) **report having carried a weapon such as a gun, knife, or club <u>on school property</u>** on at least one occasion during the thirty days prior to the survey. There was little variation by grade (grade 9 – 5.2%, grade 10 – 6.7%, grade 11 – 3.7%, grade 12 – 5.1%). Males (8.2%) were more likely to have carried a weapon on school property than were females (3.0%).

- **12.3%** of all respondents (7.4% - 2011) (5% - MA YRBS) **report not having gone to school because they felt they would be unsafe at school or on their way to or from school during the previous thirty days.** The incidence of this behavior was highest in grade 9 (grade 9 – 14.5%, grade 10 – 10.6%, grade 11 – 13.1%, grade 12 – 9.9%). There was no variation by gender.

- **One respondent in four (25.1%)** (23.1% - 2011) (18% - MA YRBS) **reports having been bullied at school** on at least one occasion during the twelve months prior to the survey. The incidence of this experience decreased each year by grade (grade 9 – 33.9%, grade 10 – 26.5%, grade 11 – 19.3%, grade 12 – 16.4%). Female respondents (26.6%) report being bullied at school slightly more frequently than males (22.4%).

- **12.9%** of all respondents (12.0% - 2011) (9% - MA YRBS) **report having ever been hurt physically or sexually by a date or someone they were going out with** (grade 9 – 10.6%, grade 10 – 14.2%, grade 11 – 14.2%, grade 12 – 11.8%). Females were much more likely to have had this experience than were males (females – 16.6%, males – 8.6%).

- **12.3%** of all respondents (11.8% - 2011) **report having ever had sexual contact with someone against their will.** The incidence of this experience was lowest in grade 10 (grade 9 – 13.6%, grade 10 – 8.2%, grade 11 – 13.0%, grade 12 – 12.9%). Female respondents (14.8%) report this experience more frequently than males (9.2%).

- **20.5%** of all respondents (19.0% - 2011) (18% - MA YRBS) **report having hurt or injured themselves on purpose (for example by cutting, burning, or bruising) without wanting to die** at least once during the twelve months prior to the survey. The incidence of this behavior decreased each year by grade (grade 9 – 25.0%, grade 10 – 20.4%, grade 11 – 19.7%, grade 12 – 14.9%). Female respondents (25.7%) report this behavior more frequently than males (14.0%).

SUICIDE

- **One respondent in six (16.9%)** (14.9% - 2011) (13% - MA YRBS**) reports having seriously considered attempting suicide** during the twelve months prior to the survey. Respondents from grade 9 (19.9%) were more likely to have considered suicide than were those from grades 10 (15.7%), 11 (15.8%) or 12 (15.0%). Females (20.1%) were more likely to have done so than were males (12.9%).

- **15.8%** of all respondents (13.2% - 2011) (7% - MA YRBS) **report having actually attempted suicide** on at least one occasion during the twelve months prior to the survey. The incidence of this behavior decreased each year by grade (grade 9 – 18.4%, grade 10 – 15.5%, grade 11 – 14.8%, grade 12 – 12.8%). There was no variation by gender (females – 14.9%, males – 16.0%). Further, **4.6%** of all respondents (4.2% - 2011) **report that if they attempted suicide during the previous twelve months, such attempt resulted in an injury, poisoning or overdose that required medical treatment**.

TOBACCO USE

- **42.3%** of all respondents (50.0% - 2011) (39% - MA YRBS) **report having ever tried cigarette smoking, even one or two puffs.** The incidence of this behavior increased each year by grade (grade 9 – 37.1%, grade 10 – 39.8%, grade 11 – 45.8%, grade 12 – 48.0%). There was little variation by gender (females – 40.6%, males – 43.9%). Further, **11.8%** of all respondents (13.2% - 2011) (7% - MA YRBS) **report having smoked a whole cigarette for the first time before the age of 13.**

- **One-sixth (16.0%)** of all respondents (18.7% - 2011) (14% - MA YRBS) **report having smoked cigarettes on at least one day during the thirty days prior to the survey**. The incidence of recent cigarette use increased each year by grade (grade 9 – 13.1%, grade 10 – 15.9%, grade 11 – 17.2%, grade 12 – 17.8%). Male respondents report doing so most frequently (females – 13.3%, males – 19.0%).
- **7.0%** of all respondents (7.1% - 2011) (6% - MA YRBS) **report having smoked cigarettes <u>on school property</u>** on at least one occasion during the thirty days prior to the survey (grade 9 – 7.6%, grade 10 – 7.0%, grade 11 – 6.9%, grade 12 – 4.9%) (females – 4.4%, males – 9.7%).

- **One respondent in eight (12.2%)** (12.4% - 2011) (14% - MA YRBS) **reports having smoked cigars, cigarillos, or little cigars** at least once during the thirty days prior to the survey. The incidence of this behavior was lowest in grade 9 (grade 9 – 9.4%, grade 10 – 11.8%, grade 11 – 14.3%, grade 12 – 13.6%). Male respondents (16.5%) report the recent use of cigars much more frequently than females (8.4%).

ALCOHOL USE

- **63.9%** of all respondents (71.1% - 2011) (68% - MA YRBS) **report having had at least one drink of alcohol (other than for religious reasons) on at least one occasion during their lives** and **20.0%** (15% - MA YRBS) **report having had their first drink of alcohol before the age of 13**. The incidence of lifetime alcohol use was highest in grade 11 (grade 9 – 58.1%, grade 10 – 60.8%, grade 11 – 70.4%, grade 12 – 68.3%). There was little variation by gender (females – 64.8%, males – 62.8%).

- **One respondent in three (33.2%)** of all respondents (39.9% - 2011) (40% - MA YRBS) **reports having had at least one drink of alcohol on at least one occasion during the thirty days prior to the survey** (grade 9 – 27.3%, grade 10 – 29.4%, grade 11 – 39.4%, grade 12 – 38.0%). There was no variation by gender.

- **18.6%** of all respondents (19.5% - 2011) (22% - MA YRBS) **report having had five or more drinks of alcohol in a row** (within a couple of hours) on at least one occasion during the thirty days prior to the survey. The incidence of recent binge drinking was highest in grades 11 and 12 (grade 9 – 13.7%, grade 10 – 15.2%, grade 11 – 23.2%, grade 12 – 23.0%). There was no variation by gender.

- **24.7%** of all respondents (30.7% - 2011) **report having attended parties held in homes in Fall River where alcohol use by teens is allowed either occasionally or frequently during the twelve months prior to the survey.** The incidence of this experience increased each year by grade (grade 9 – 17.1%, grade 10 – 22.6%, grade 11 – 29.7%, grade 12 – 30.9%) and was higher among male respondents (females – 22.9%, males – 26.5%).

ILLEGAL DRUG USE

- **Nearly one-half (49.0%)** of all respondents (50.0% - 2011) (43% - MA YRBS) **report ever having used marijuana** and **13.3%** (7% - MA YRBS) **report having done so for the first time before the age of 13.** The incidence of lifetime marijuana use was highest in grade 11 (grade 9 – 39.8%, grade 10 – 43.7%, grade 11 – 59.5%, grade 12 – 55.6%) (females – 46.5%, males – 51.9%). Further, **31.0%** of all respondents (28% - MA YRBS) **report having used marijuana on at least one occasion during the thirty days prior to the survey** (females – 27.3%, males – 34.7%).

- **6.5 %** of all respondents (4.8% - 2011) (5% - MA YRBS) **report having ever used any form of cocaine, including powder, crack, or freebase** (grade 9 – 4.9%, grade 10 – 6.0%, grade 11 – 8.4%, grade 12 – 5.8%). Males (8.4%) report doing so more frequently (females – 4.3).

- **8.6%** all respondents (7.9% - 2011) (6% - MA YRBS) **report having ever used ecstasy** (also called MDMA). The incidence of this behavior was highest in grades 10 and 11 (grade 9 – 6.9%, grade 10 – 9.8%, grade 11 – 9.0%, grade 12 – 7.2%) and among male respondents (females – 5.6%, males – 11.3%).

- **4.6%** among all respondents (4.4% - 2011) (3% - MA YRBS) **report having ever used methamphetamines** on at least one occasion during their lives. The incidence of this behavior was highest in grade 10 (grade 9 – 3.3%, grade 10 – 5.8%, grade 11 – 4.4%, grade 12 – 4.1%) and among males (females – 2.4%, males – 6.4%).

- **9.1%** of all respondents (8.2% - 2011) **report having ever used any "other type" of illegal drug such as LSD (acid), PCP, mushrooms, Ketamine (Special K), Rohypnol (Roofies) or GHB.** The incidence of the use of these other drugs was highest among respondents from grade 11 (grade 9 – 6.0%, grade 10 – 10.3%, grade 11 – 11.7%, grade 12 – 7.1%). Males (12.7%) report doing so much more frequently than females (5.7%).

- **More than one respondent in four (26.6%)** (30.0% - 2011) (27% - MA YRBS) **report having been offered, sold, or given an illegal drug <u>on school property</u>** on at least one occasion during the twelve months prior to the survey (grade 9 – 23.4%, grade 10 – 30.7%, grade 11 – 29.5%, grade 12 – 22.5%). Male respondents (32.6%) report this experience more frequently than females (21.7%).

HIV/AIDS EDUCATION

- **90.2%** of all respondents (93.5% - 2011) (84% - MA YRBS) **report having ever been taught about AIDS/HIV infection in school** (grade 9 – 91.7%, grade 10 – 85.1%, grade 11 – 92.3%, grade 12 – 93.2%). There was little variation by gender.

- **Over (53.3%)** of all respondents (48.5% - 2011) **report having no conversation at all with their parents or other adults in their family about sexuality or ways to prevent HIV, other STD's, or pregnancy** during the twelve months prior to the survey. (grade 9 – 49.6%, grade 10 – 53.3%, grade 11 – 49.6%, grade 12 – 61.1%). Male respondents (57.3%) report having no such conversation more frequently than females (50.4%).

SEXUAL BEHAVIOR

- **Half (50.2%)** of all respondents (52.5% - 2011) (42% - MA YRBS) **report having ever had sexual intercourse**. Further, **8.4%** of all (4% - MA YRBS) **report having had sexual intercourse for the first time before the age of 13**. The lifetime incidence of sexual intercourse increased each year by grade (grade 9 – 35.3%, grade 10 – 48.8%, grade 11 – 57.3%, grade 12 – 63.4%). There was very little variation by gender (females – 49.2%, males – 51.4%).

- **11.7%** of all respondents (11.1% - 2011) (11% - MA YRBS) **report having had sexual intercourse with four or more partners** during their lives. The incidence of this behavior was highest in grades 11 and 12 (grade 9 – 9.1%, grade 10 – 8.7%, grade 11 – 15.8%, grade 12 – 14.7%). Males (15.0%) report this behavior more frequently than females (9.1%).

- **One-third (34.0%)** of all respondents (35.3% - 2011) (30% - MA YRBS) **report having had sexual intercourse on at least one occasion during the three months prior to the survey**. The incidence of recent sexual intercourse increased each year by grade (grade 9 – 20.8%, grade 10 – 30.9%, grade 11 – 36.7%, grade 12 – 50.7%). There was little variation by gender (females – 34.8%, males – 33.0%).

- **11.3%** of all respondents (11.1% - 2011) **report having used alcohol or other drugs before the last time they had sexual intercourse** (grade 9 – 8.9%, grade 10 – 10.8%, grade 11 – 14.4%, grade 12 – 11.2%). Male respondents (13.0%) report this behavior more frequently than females (9.9%).

DIETARY BEHAVIOR

- While **52.5%** of all respondents (57.6% - 2011) **described themselves as being at about the right weight**, **48.8%** (45% - MA YRBS) were **trying to lose weight** and **16.4%** were **trying to gain weight**. Females (58.6%) were much more likely to be trying to lose weight than were males (36.7%) who were much more likely to be trying to gain weight.

- During the thirty days prior to the survey, **in order to lose weight or to keep from gaining weight:**

    - **59.4%** of all respondents (62.9% - 2011) **report having exercised**. (females – 56.2%, males – 63.2%)

    - **39.3%** of all respondents (39.6% - 2011) **report having eaten less food, fewer calories, or foods low in fat.** (females – 46.9%, males – 30.0%)

    - **14.9%** of all respondents (13.7% - 2011) (10% - MA YRBS) **report having gone without eating for 24 hours or more.** (females – 18.1%, males – 10.4%)

    - **8.5%** of all respondents (5.9% - 2011) (4% - MA YRBS) **report having taken diet pills, powders, or liquids without a doctor's advice**. (females – 7.6%, males – 8.9%)

    - **7.9%** of all respondents (7.1% - 2011) (5% - MA YRBS) **report having vomited or taken laxatives**. (females – 8.0%, males – 7.2%)

- **61.0%** of all respondents (58.4% - 2011) **report eating breakfast on 4 or fewer days during the week before the survey** (grade 9 – 62.2%, grade 10 – 64.7%, grade 11 – 56.5%, grade 12 – 59.0%). Female respondents (62.2%) report doing so slightly more frequently than males (59.1%).

PHYSICAL ACTIVITY

- **49.5%** of all respondents (52.5% - 2011) (63% - MA YRBS) **report having exercised or participated in physical activities for at least 20 minutes on at least three days during the week prior to the survey.** The incidence of such regular exercise was much higher among those from grade 9 (grade 9 – 64.0%, grade 10 – 42.2%, grade 11 – 48.3%, grade 12 – 40.5%). Male respondents (56.4%) report exercising regularly more frequently than females (43.9%).

- **31.7%** of all respondents (31.4% - 2011) (28% - MA YRBS) **report that they watch television 3 hours or more per day on an average school day.** The incidence of this behavior was much lower in grade 12 (grade 9 – 32.5%, grade 10 – 34.3%, grade 11 – 33.6%, grade 12 – 26.7%). Female respondents (33.1%) report watching television on an average school day slightly more frequently than males (30.5%).

Mental Health

Though little survey data is available on the mental health status of city populations in Massachusetts, the BRFSS does contain two questions that attempt to quantify self-reports of mental health status.

Table 36. 15+ Days of Poor Mental Health in the Past 30 Days Among Adults (2002 - 2007)

	Greater Fall River			Massachusetts		
	Percent (%)	Lower 95% CI	Upper 95% CI	Percent (%)	Lower 95% CI	Upper 95% CI
Overall	13.1	11.3	14.9	9.1	8.7	9.4
Gender						
Male	10.6	8.5	12.6	7.7	7.2	8.2
Female	15.2	12.6	17.9	10.3	9.8	10.7
Age						
Ages 18-34	17.5	12.9	22.1	10.6	9.8	11.4
Ages 35-44	14.4	11.2	17.7	9.2	8.5	9.9
Ages 45-54	12.4	9.4	15.5	10.3	9.6	11
Ages 55-64	11.3	8.3	14.3	8.9	8.1	9.7
Ages 65+	6.4	4.2	8.7	5.4	4.9	5.9
Race/Ethnicity						
White - Non Hispanic	12.5	10.6	14.3	8.7	8.4	9.1
Black - Non Hispanic	20.4 (a)	6 (a)	34.8 (a)	11.4	9.6	13.2
Hispanic	16.5	9.6	23.4	12.1	10.8	13.5
Asian - Non Hispanic	3.4 (a)	0.9 (a)	5.9 (a)	4.8	3.3	6.3
Education						
High School or Less	14.5	12.3	16.6	12.1	11.5	12.8
Some College	16	10.8	21.2	10.9	10.1	11.6
College or More	7.2	5	9.5	5.8	5.4	6.2
Income						
< $50,000	16.1	14	18.3	13	12.4	13.6
$50,000+	7.8	4.2	11.3	6.1	5.7	6.5

Data that are followed with "(a)" should be used with extreme caution since they are less reliable (relative standard error is greater than 30%). The difference in the data may be associated with demographical factors such as age, gender, and race/ethnicity of the respondent groups.

Table 37. 5+ Days of Sad, Blue, or Depressed in the Past 30 Days Among Adults (2002 - 2007)

	Greater Fall River			Massachusetts		
	Percent (%)	Lower 95% CI	Upper 95% CI	Percent (%)	Lower 95% CI	Upper 95% CI
Overall	10.6	8.7	12.5	7.2	6.8	7.6
Gender						
Male	9.8	6.8	12.8	6.1	5.5	6.7
Female	11.3	8.7	13.9	8.2	7.6	8.7
Age						
Ages 18-34	10	6	13.9	8	7	9
Ages 35-44	13.1	8.7	17.5	6.5	5.7	7.3
Ages 45-54	12.4	7.8	17	8.1	7.2	9
Ages 55-64	12.3	6.1	18.5	7.5	6.5	8.4
Ages 65+	6	2.9	9.2	5.8	5	6.5
Race/Ethnicity						
White - Non Hispanic	9.8	7.9	11.8	6.6	6.2	7
Black - Non Hispanic	7.5 (a)	0 (a)	21.5 (a)	10.8	8.1	13.5
Hispanic	17.9	8.4	27.4	12.8	10.9	14.6
Asian - Non Hispanic	(a)	(a)	(a)	2.8	1.2	4.3
Education						
High School or Less	13	10	15.9	10.3	9.5	11.2
Some College	10.9	7	14.8	8.2	7.3	9.1
College or More	3.6 (a)	1.2 (a)	6 (a)	4.3	3.8	4.8
Income						
< $50,000	14.3	11.4	17.1	11	10.2	11.7
$50,000+	4.4 (a)	1.7 (a)	7 (a)	3.9	3.5	4.4

Data that are followed with "(a)" should be used with extreme caution since they are less reliable (relative standard error is greater than 30%). The difference in the data may be associated with demographical factors such as age, gender, and race/ethnicity of the respondent groups.

Substance Abuse

Data is available to measure admissions to Department of Public Health funded substance abuse treatment programs among males and females ages 15-19. While hospitalizations in the region are comparatively lower than statewide rates, substance abuse treatment admissions are generally above state levels. Among males, rates per 100,000 for males ages 15-19 are 1,401 in Greater Fall River and 1,265 in Massachusetts. Among females, rates are 1,315 in Greater Fall River and 700 in Massachusetts[28].

In FY 2012, there were 104,224 admissions to substance abuse treatment programs statewide; 3.45% (3,595) of these admissions reported being from the City of Fall River. 1.53% (55) of admissions from the City of Fall River were under 18 years of age. (Note that these statistics represent admissions to treatment and not distinct individuals.)

[28] Instant topics - Adolescent Health Report, 2009.

In FY 2012, adult admissions to substance abuse treatment services from the City of Fall River reported the following characteristics:

- 67% were male and 33% were female.
- 67% were between the ages of 21-39.
- 89% were white, 3% were black, 4% were multi-racial and 5% were of other single race.
- 5% were Hispanic.
- 71% were never married, 8% were married, and 21% reported not to be married now.
- 35% had less than high school education, 43% completed high school, and 21% had more than high school education.
- 12% were employed.
- 24% were homeless.
- 54% had prior mental health treatment.

Primary Substance of Use

At admission, adult clients identify a "primary drug" of use which is the substance for which they seek treatment. Table 38 compares the proportional distribution of reported primary drugs statewide with that for the City of Fall River.

Table 38.
Primary Drug by City and State FY 2012

	Alcohol	Cocaine	Crack	Heroin	Marijuana	Other Opiates
City	25%	3%	2%	51%	2%	9%
State	35%	2%	2%	43%	3%	5%

Substances Used in Past Year

Upon entering treatment, each adult client is asked to report ALL substances used in the year (12 months) prior to admission. It is possible to report using more than one substance within the year. Therefore the sum of each cell may not equal the total admissions. Table 38 shows the frequency at which past year use was reported for all substances as well as that for intravenous drug use (IDU) for the City of Fall River. Table 40 shows the distribution of admissions by gender, race, ethnicity, and age.

Table 39. Number of Admissions Reporting Substance Used: FY 2002 - FY 2012								
	Total Adult Admissions	Alcohol	Cocaine	Crack	Heroin	IDU	Marijuana	Other Opiates
FY 2002	3,519	58%	31%	12%	62%	52%	25%	12%
FY 2003	3,040	58%	31%	13%	56%	46%	26%	14%
FY 2004	2,776	56%	31%	14%	56%	46%	26%	18%
FY 2005	3,046	61%	38%	17%	51%	43%	21%	17%
FY 2006	3,567	58%	36%	16%	52%	43%	18%	18%
FY 2007	3,625	61%	38%	17%	49%	42%	21%	20%
FY 2008	3,594	59%	35%	16%	52%	44%	24%	20%
FY 2009	3,188	56%	26%	16%	55%	47%	29%	21%
FY 2010	3,293	53%	28%	15%	53%	48%	28%	22%
FY 2011	3,258	54%	29%	13%	52%	48%	27%	22%
FY 2012	3,540	51%	30%	12%	57%	48%	27%	20%

Table 40. Admission to DPH BSAS Contracted Programs 2012: Residents of Fall River

3,586 Inpatient Substance Abuse Admissions of Fall River Residents in 2012			
	Category	**Fall River**	**Massachusetts**
Gender			
	Female	33%	31%
	Male	67%	69%
Race			
	African-American	3%	7%
	Multi-racial	3%	2%
	Other	4%	10%
	White	89%	80%
Ethnicity			
	Hispanic	5%	11%
Age			
	Under 21	3%	7%
	21-29	37%	35%
	30-49	50%	45%
	50 and older	10%	13%

Health Behaviors

Health behavior is defined as the actions taken by individuals or groups thereof to change or maintain their health status or to prevent illness or injury.[29] This category includes behaviors related to healthy eating, active living, smoking, injury prevention, and drug and alcohol use. The health behavior analysis includes behaviors related to healthy eating, active living, smoking, injury prevention, and drug and alcohol use. Highlights include:

- Across the region, fewer than half of all adults reported engaging in physical activity for exercise regularly: just 45.7% in Greater Fall River compared to 53.0% in Massachusetts.
- Over three-quarters of Southcoast adults do not consume the recommended five servings daily of fruit and vegetables. In Greater Fall River, a slightly higher percent of adults (19.9%) consume the recommended servings, compared to 18.8% of residents statewide.
- Since 2000, the population of Southcoast adults who are overweight or obese has increased dramatically in Fall River. As of 2011, 65.7% of Greater Fall River adults were overweight (defined as having a Body Mass Index of more than 25). Approximately half of this group weighed enough to qualify as obese (BMI>30).
- Smoking is much more prevalent among Southcoast adults as compared to incidence of this behavior statewide. More than a quarter of adults in the region are current smokers, compared to less than twenty percent statewide.

Nutrition

Over three-quarters of Southcoast adults do not consume the recommended five servings daily of fruit and vegetables, but in Greater Fall River, 19.9% of adults consume the recommended servings, compared to 18.8% of residents statewide[29]. It should also be noted that the proportion of adults in the region (and in Massachusetts) who consume the recommended servings of fruit and vegetables has declined since 2000.

Physical activity

Higher rates of the region's adults engaged in physical activity for exercise over the span of a month: 73.1% of those in Greater New Bedford and 65.5% of Greater Fall River residents, compared to 76.5% of Massachusetts adults as a whole. Adults in the City of Fall River exercise at particularly low rates, with just 55.9% reporting engaging in exercise in the past month. Across the region, fewer than half of all adults reported engaging in physical activity for exercise regularly: just 45.7% in Greater Fall River and 49.5% in Greater New Bedford, compared to 53.0% in Massachusetts[30].

[29] BRFSS 2011, via MassCHIP
[30] BRFSS 2009, via MassCHIP

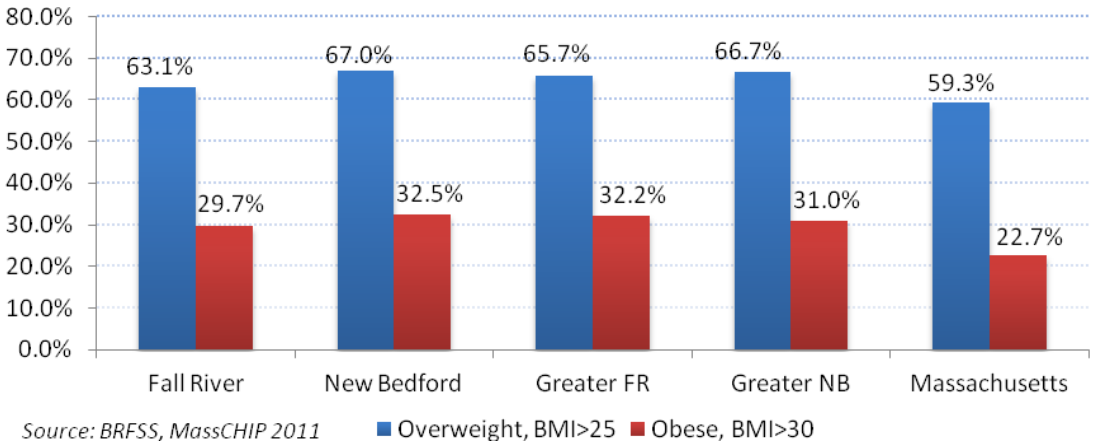
Table 41. Diet and physical activity	Fall River	CHNA 25	SE Mass.	Mass.
Diet of Fruits and Vegetables, 5+/day	21	21.9	27.4)	28.7
Regular Physical Activity	44.8	47.1	51.8	52.1
Any Physical Activity for Exercise in Past Month	64.6%	68.4	77.5	78.7

Behavioral Risk Factor Surveillance System (BRFSS) 2002-2007

Healthy Weight

The ability to maintain a healthy weight is both a health behavior and a health outcome associated with nutrition and physical activity. Since 2000, the population of Southcoast adults who are overweight or obese has increased dramatically. As of 2011, 65.7% of Greater Fall River adults were overweight (defined as having a Body Mass Index of more than 25). Approximately half of this group (32.2%) in Greater Fall River weighed enough to qualify as obese (BMI>30). Comparatively, 59.3% of Massachusetts adults were overweight in 2010, and 22.7% were obese (see Graph 17).

Graph 17. Healthy Weight



Regular physical activity, which is an essential component to weight loss and managing chronic diseases, is practiced by 44.8% of adults in Fall River. While this percentage is much lower than the state's (52.1%), it is significantly higher than the national percentage of 20.4%. A recent report[31] indicates that certain sections of Fall River have even higher obesity prevalence than the citywide number reported by MDPH. The city's south and east ends have the lowest income residents and the largest immigrant population, and were classified as high priority communities in the state based on obesity prevalence rates and higher risks for chronic diseases such as diabetes and hypertension.

Overweight and obesity among school age children was measured in grades 1, 4, 7 and 10 from school years 2003-2004 to 2009-2010. BMI averages were calculated per grade and gender and percentages of

[31] Wenjun, Li, Small-Area Estimation and Prioritizing Communities for Obesity Control in Massachusetts, AM J PUBLIC HEALTH. 2009 MARCH; 99(3): 511–519.

each category: underweight, normal, overweight, and obese were calculated. [32] The percentages of overweight and obese children were calculated for each grade (where data was available) and the school year average of overweight/obese children for the entire sample was determined.

Though the 2009 statewide report showed slightly lower rates for Fall River school children, there was a conspicuous trend of increasing overweight/obese BMI values from School Year 2003-2004 to 2009-2010. The data suggests a progressive increase in the proportion of children categorized as being overweight and obese. The overweight/obese category BMI average for this sample was at its lowest at 21% in the School Year 2006-2007, progressing to a recent high of 38% which demonstrates an increase of 80% in a three year span.

Of primary concern are the gender and age differences revealed during this analysis. For example, in SY2009-2010, 10TH grade males had a 51% of their sample falling into the overweight/obese category. This is in dramatic contrast to the previous year when 34% of male students in the 10th grade fell into the overweight/obese category. This is a startling increase of 50% for this grade category and gender in one year. Upon review of the data for females in the 10th grade over the two year period for which data is available (SY08-09 & SY09-10), the percentage of overweight/obese females suggests a static value of approximately 31%.

Table 42. Status of Childhood Weight

Status of Childhood Weight, Grades 1, 4, 7, & 10, 2009				
			Males & Females	
School District	**Total Screened**	**Overweight**	**Obese**	**Overweight or Obese**
Fall River	2,957	15.2%	15.70%	30.80%
New Bedford	3,457	15.90%	21.20%	37.20%
Massachusetts	109,674	16.9%	17.30%	34.30%
			Males	
School District		**Overweight**	**Obese**	**Overweight or Obese**
Fall River		14.6%	17.40%	31.90%
New Bedford		16.2%	22.00%	38.20%
Massachusetts		17.10%	18.90%	35.90%
			Females	
School District		**Overweight**	**Obese**	**Overweight or Obese**
Fall River		15.8%	14.00%	29.70%
New Bedford		15.70%	20.30%	36.00%
Massachusetts		16.8%	15.70%	32.50%

Preliminary Results from Body Mass Index Screening in 80 Essential School Health Districts, 2008-2009
Bureau of Community Health Access and Promotion, Massachusetts Department of Public Health

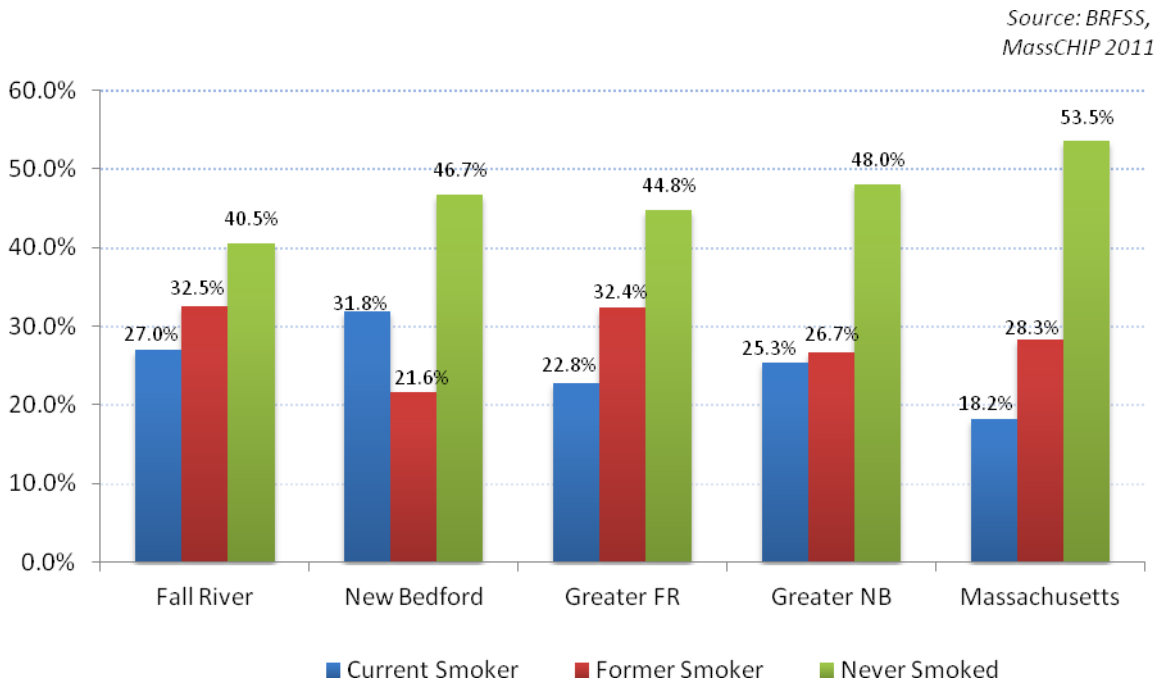
[32] From an April 30, 2011 BMI Analysis Report completed by Maria V. Vazquez MS RN, UMass-Dartmouth, School of Nursing

Smoking

Smoking is much more prevalent among Southcoast adults as compared to incidence of this behavior statewide. More than a quarter of adults in the region are current smokers compared to less than twenty percent statewide. Smoking is most prevalent in New Bedford where 31.8% of adults are current smokers. Figure 39 illustrates current smoking behavior across the region.

Secondhand smoke exposure is also more prevalent in our region with almost one-quarter of Southcoast adults allowing smoking in their home: while just 19.5% of Massachusetts residents allow smoking in their homes either sometimes or always, 29.4% of Greater Fall River residents allow this exposure to secondhand smoke[33].

Graph 18. Smoking Prevalence



[33] BRFSS 2011, via MassCHIP

Table 43. Smoking Status for Selected Population Characteristics, Greater Fall River

	Current Smokers	
	Fall River CHNA Percent	**State Percent**
Total	22.8 (20.7 - 24.9)	15.8 (15.3 - 16.3)
Sex		
Male	24.4 (21.5 - 27.4)	16.8 (15.9 - 17.6)
Female	21.5 (18.5 - 24.5)	14.9 (14.3 - 15.6)
Race/Hispanic Ethnicity		
White Non-Hispanic	22.2 (19.9 - 24.4)	16.0 (15.4 - 16.5)
Black Non-Hispanic	34.7 (19.6 - 49.9)	17.9 (15.5 - 20.4)
Hispanic	22.9 (14.6 - 31.1)	15.6 (13.6 - 17.5)
Educational Attainment		
Less than High School Degree	26.3 (22.0 - 30.6)	29.2 (26.6 - 31.8)
High School Graduate	29.9 (25.4 - 34.4)	23.5 (22.2 - 24.8)
Some College and Above	16.6 (14.3 - 18.9)	11.6 (11.1 - 12.2)
Income		
less than $25,000	32.5 (28.5 - 36.5)	25.6 (24.2 - 27.1)
$25,000 to $49,999	24.7 (20.9 - 28.5)	20.0 (18.7 - 21.3)
$50,000 plus	17.1 (12.9 - 21.3)	11.7 (11.0 - 12.3)
Age		
18 to 24	30.6 (18.6 - 42.6)	21.6 (18.7 - 24.4)
25 to 44	26.3 (23.3 - 29.3)	17.6 (16.7 - 18.5)
45 to 64	23.0 (20.1 - 25.8)	16.4 (15.7 - 17.0)
65 plus	10.3 (8.3 - 12.2)	7.6 (7.0 - 8.1)

Behavioral Risk Factor Surveillance System (BRFSS) for the most recent 3 years available, printed 12/6/2010

Fewer Southcoast adults have tried or plan to quit smoking than Massachusetts residents as a whole. While 60% of the state's smokers have tried quitting before and 37% reported plans to quit smoking in

the next 30 days, similar rates among Greater Fall River and New Bedford residents are 54.4% and 28.1%, respectively[34].

The Southcoast Healthy Housing and Workplace Initiative (SCHHWI) seeks to improve heart and lung health in Fall River, New Bedford, and Wareham by promoting smoke-free public and subsidized housing, worksites, and mental health and substance use treatment facilities. The two-year initiative, which began in January 2013, is funded by the Centers for Disease Control's Community Transformation Grant.

As part of the project, over 5,000 surveys were mailed to public housing residents in Fall River, New Bedford, and Wareham to gauge smoking behaviors and readiness to quit smoking. Over 1,500 completed surveys were returned of which approximately 25% were smokers. Preliminary results show that a large percentage of smokers in public housing are trying to quit; 56% tried to quit in the past year, 53% are thinking of quitting smoking for good, and 32% are interested in learning more about the harmful effects of smoking or exposure to secondhand smoke.

In terms of secondhand smoke, 13% of respondents (smokers and non-smokers) report they were exposed to secondhand smoke in their home in the past week. Most households have a smoking policy in place although only 74% never allow smoking in their home.

On the policy side, 53% of respondents strongly agree that it is okay for their Housing Authority to prohibit smoking in tenants' homes if that is necessary to keep secondhand smoke out of other tenants' homes, while 17% agree, 10% disagree, 13% strongly disagree, and 7% are not sure. Smokers are less supportive of this policy, although there is some support for prohibiting smoking even among smokers.

Alcohol use

Southcoast residents exhibit similar patterns of alcohol use as residents of Massachusetts as a whole. The proportion of adults who report binge drinking (defined as consuming 5+ drinks on an occasion for men or 4+ drinks for women) within the past 30 days is 18.2% in Greater Fall River and 16.7% in Greater New Bedford (17.8% is the statewide rate).

Rates of heavy drinking, or consuming an average of more than two drinks per day (men) or more than one drink per day (women), are actually slightly lower in the Southcoast as compared to Massachusetts. The proportion of adults who report drinking this amount regularly is 6.6% in Greater Fall River and 5.9% in Greater New Bedford, compared to 6.7% across the state.

[34] Greater Fall River data not available; BRFSS 2011, via MassCHIP

Table 44. Binge Drinking Among Adults (2002 - 2007), Fall River

	Fall River			Massachusetts		
	Percent	**Lower 95%**	**Upper 95%**	**Percent**	**Lower 95%**	**Upper 95%**
Overall	16	13.3	18.6	17.4	16.9	17.9
Gender						
Male	25.2	21.2	29.1	25.7	24.9	26.6
Female	8.8	5.4	12.2	9.9	9.5	10.4
Age						
Ages 18-34	25.5	19.3	31.8	30.2	29	31.5
Ages 35-44	16.6	12.1	21.1	19.2	18.3	20.1
Ages 45-54	10.6	7	14.2	15.1	14.2	16
Ages 55-64	10.3	6.2	14.4	9.5	8.7	10.3
Ages 65+	3.1	1.3	4.9	3.3	2.9	3.7
Race/Ethnicity						
White - Non	17.5	14.4	20.5	18.2	17.6	18.7
Black - Non	10.7 (a)	2.3 (a)	19 (a)	12.7	10.7	14.7
Hispanic	8.2 (a)	3.2 (a)	13.2 (a)	15.7	14	17.5
Asian - Non	9.6 (a)	0 (a)	28.7 (a)	8.7	6.6	10.9
Education						
High School or	13	10.5	15.6	17.1	16.2	17.9
Some College	20	12.2	27.8	20	18.9	21.1
College or More	20.9	15.5	26.2	16.3	15.6	17
Income						
< $50,000	14	11.4	16.6	16.5	15.7	17.2
$50,000+	23.9	16.5	31.2	20.1	19.4	20.9

Table 43. Binge Drinking Among Adults (2002 - 2007), Greater Fall River

	CHNA 25			Massachusetts		
	Percent (%)	**Lower 95% CI**	**Upper 95% CI**	**Percent (%)**	**Lower 95% CI**	**Upper 95% CI**
Overall	16.3	14	18.6	17.4	16.9	17.9
Gender						
Male	25.6	21.8	29.4	25.7	24.9	26.6
Female	8.7	6.1	11.2	9.9	9.5	10.4
Age						
Ages 18-34	27.1	21.5	32.8	30.2	29	31.5
Ages 35-44	17.8	13.2	22.3	19.2	18.3	20.1
Ages 45-54	15	10.7	19.4	15.1	14.2	16
Ages 55-64	7.7	5.1	10.3	9.5	8.7	10.3
Ages 65+	4.5	2.2	6.8	3.3	2.9	3.7

Drug use

Drug use is measured by the number of reported admissions to substance abuse treatment programs for residents that were reported to the Bureau of Substance Abuse Services. (See section on Substance Abuse, above). In FY 2012, there were 3,540 admissions to substance abuse treatment admissions from individuals reporting Fall River as their place of residence. This figure represents 3.45% of all substance abuse admissions statewide[35]. Admissions declined by 0.6% in Fall River between FY 2002 and FY 2012 (See Graph 16).

Graph 19. Number of Admissions for Substance Abuse Treatment, FY 2002 to FY 2012

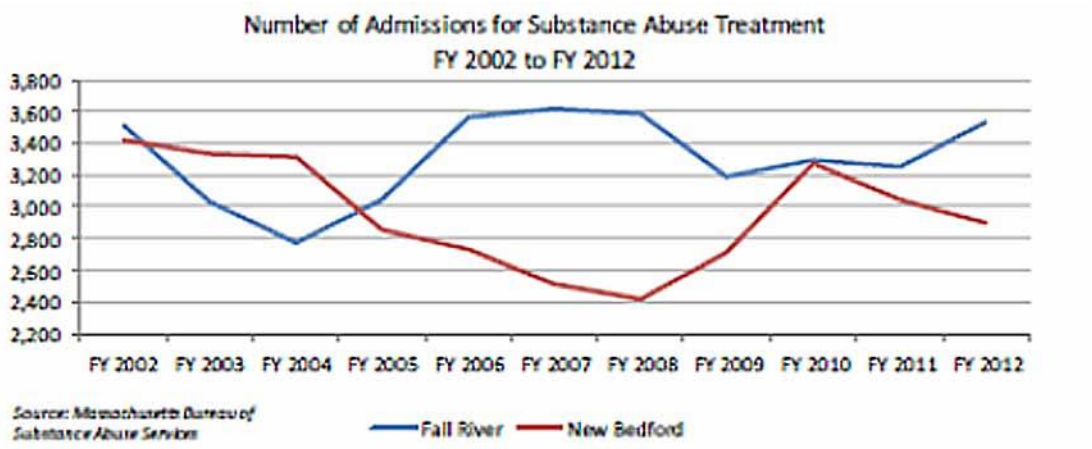


Table 44. Substance Abuse Indicators: Fall River

	Area Count	Area Crude Rate	State Crude Rate
Admissions to DPH funded treatment programs	3,652	3964.5	1532.4
Injection drug user admissions to DPH funded treatment program	1,731	1879.1	621.2
Alcohol and other drug related hospital discharges	359	389.7	344.7

Crude rates are expressed per 100,000 persons. Age adjusted rates are expressed per 100,000 persons, see note (d) for details. 6/4/2013, 2009 Calendar Year Hospital Discharges (UHDDS),2011 Substance Abuse (BSAS) DPH funded program utilization

[35] These statistics represent admissions to treatment and not distinct individuals.

Infectious Diseases

While AIDS and HIV-related deaths are twice the crude rate of the state, other infectious diseases in Greater Fall River are well below state rates.

Table 45. Infectious Disease: Greater Fall River

	Area Count	Area Crude Rate	State Crude Rate
HIV Incidence	NA	NA	8.6
HIV/AIDS Prevalence	250	176.1	261.0
AIDS and HIV-related deaths	5	3.6	1.8
Tuberculosis	NA	NA	3.7
Pertussis	NA	NA	5.8
Hepatitis-B	10	7.0	11.3
Syphilis	NA	NA	9.4
Gonorrhea	22	15.5	37.9
Chlamydia	388	273.3	322.1
	Area Count	**Area Age-specific Rate (c)**	**State Age-specific Rate (c)**
Syphilis, ages 15-19	0	0.0	3.9
Gonorrhea, ages 15-19	NA	NA	76.6
Chlamydia, ages 15-19	102	1145.9	1310.9

Crude rates are expressed per 100,000 persons. Age-specific rates are expressed per 100,000 persons in the specific age group. (c) 2009 data from the AIDS Surveillance Program, Division of Epidemiology and Immunization and Division of Tuberculosis Prevention and Control. 2010 data from the Division of Sexually Transmitted Disease Prevention and Mortality (Vital Records) ICD-10 based

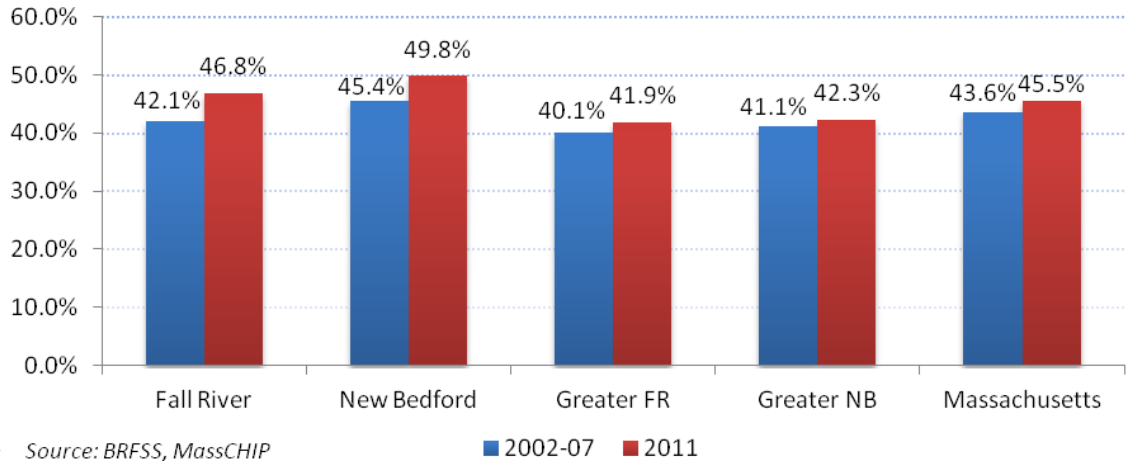
HIV/AIDS

Fall River ranks among the top ten cities in the Commonwealth of Massachusetts where HIV infection is linked to injection drug use. There are 221 people living with HIV/AIDS in the city. The most reported mode of transmission for individuals with HIV in the area is injection drug use. According to SSTAR's data on HIV testing, 82% of those tested identify as an injection drug user (IDU) or a partner of an IDU (01/01/10 CMAR data). An additional 8% identify as the partner of a person living with HIV/AIDS.

Table 46.	Service Area	County	State	National
Number of people living with HIV/AIDS	221	1,043	10,178	1.2 million
Most Reported Mode of Transmission	Injection Drug Use	Injection Drug Use	Male-to male sexual contact	Male-to male sexual contact

MDPH 2010; Centers for Disease Control 2011

Graph 20. Percentage of Adults Tested for



HIV *Source: BRFSS, MassCHIP*

Lyme Disease

Based upon the numbers reported to the Massachusetts Department of Public Health, the incidences of Lyme disease recorded have increased every year. The last reportable data, which is based on the number of reported cases in 2009, indicates that to date 4,045 cases of Lyme disease have been reported to the MDPH for 2009. While confirmed reports of Lyme Disease are high throughout the Eastern Region of Massachusetts and nearby Rhode Island, the City of Fall River has only a moderate number of confirmed reports[36].

Table 47. Confirmed Cases of Lyme Disease

COUNTY	**2005**	**2006**	**2007**	**2008**	**2009**
BRISTOL AND PLYMOUTH COUNTIES	497	432	632	697	620
Percent of County Population	.047	.041	.061	.067	.059
TOWN	**2005**	**2006**	**2007**	**2008**	**2009**
FALL RIVER	18	23	20	23	15
Percent of City Population	.019	.025	.022	.025	.016

[36] Lyme Disease in Massachusetts: A Public Health Crisis, A Report Issued by the House Committee on Post Audit and Oversight, April 2011

Injuries

One data point related to injury prevention is available for health behavior analysis: the proportion of adults who report wearing seatbelts always (or nearly always). Once again, Massachusetts residents as a whole are more risk-averse than their Southcoast counterparts with 89.0% reporting they are regular seatbelt users. Meanwhile, 83.2% of Greater Fall River residents wear seatbelts regularly while residents of the City of Fall River (79.8%) wear their seatbelts even less.

Unintentional motor vehicle injuries and deaths are higher than state averages whereas unintentional falls are significantly lower. The opioid death rate is double the state average. Deaths and injuries from homicides and assaults and deaths and injuries from suicides and self-inflicted injuries are about 25% higher than crude rates for the state.

Table 48. Fatal and Nonfatal Injury Cases for Selected Causes – Greater Fall River Fall River[37]

Fatal and Nonfatal Injury Cases for Selected Causes by Community Health Network Area (CHNA), MA Residents, 2009

	Unintentional Motor			Unintentional Falls			Unintentional Opioid			Homicides/Assaults			Suicides/Self-Inflicted		
County	Deaths	Nonfatal Injuries	Crude Rate[3]	Deaths	Nonfatal Injuries	Crude Rate[3]	Deaths	Nonfatal Injuries	Crude Rate[3]	Deaths	Nonfatal Injuries	Crude Rate[3]	Deaths	Nonfatal Injuries	Crude Rate[3]
25. Partners for Healthier Communities	9	2,404	1,710.7	7	1,952	1,388.9	28	154	143.9	5	735	524.6	15	307	228.3
26. Greater New Bedford CHNA	14	3,216	1,620.3	11	2,095	1,056.5	25	158	107.9	11	1,074	544.3	26	402	214.7
Massachusetts[4]	**347**	**71,771**	**1,093.8**	**408**	**62,605**	**7,044.4**	**599**	**3,519**	**63.3**	**180**	**27,777**	**424.0**	**531**	**11345**	**180.1**

1. Includes unintentional motor vehicle traffic-related injuries to motor vehicle occupants (drivers or passengers), motorcyclists, and pedestrians or pedal cyclists struck by a motor vehicle.
2. Includes opioid "poisonings" of unintentional or undetermined intent, including those related to prescription (e.g. oxycodone) or illegal opioids (e.g. heroin). Cases of opioid abuse or dependence may not be included.
3. Crude rates include fatal and nonfatal injuries per 100,000 residents using 2005 U.S. Census data from MassCHIP.
4. Massachusetts total includes cases of unknown town and homeless persons where no specific town was provided.

Table 49. Injury-Related Deaths

Mortality Rate (<20 Years)		
	Total Deaths	**Injury-Related Deaths**
Fall River	42.1	4.7
Greater Fall River	34.3	6.2
New Bedford	24.5	16.2
Greater New Bedford	26.1	12.1
Massachusetts	35.5	9.3

Source: BRFSS, via MassCHIP, 2010

[37] 2009 Injury Data Book: Fatal and Nonfatal Injuries Among Massachusetts Residents, MA DPH, June 2013

Health Outcomes

Almost one-fifth of Southcoast residents report having fair or poor health: 27.5% in Fall River and 18.4% in Greater Fall River, compared to just 14.0% statewide[38]. The outcomes analyzed in this section relate to cardiovascular and respiratory health, physical and mental health, diabetes, cancer incidence, and mortality. Indicators include reported diagnoses (via BRFSS) as well as hospitalizations for these conditions.

Cardiovascular Health

In 2009, cardiovascular diseases represented 15% of all hospitalizations in Greater Fall River and Greater New Bedford, versus 14% statewide[39]. Indicators of cardiovascular health in the Southcoast region include incidence of high blood cholesterol, hypertension, heart disease, heart attacks, and stroke. Cardiovascular health can be mitigated by health behaviors that include healthy eating, active living, and weight control. It is also influenced by screening for high cholesterol.

Southcoast adults reflect a slightly above-average rate of lifetime high blood cholesterol diagnoses: while 34.3% of Massachusetts residents have been so diagnosed, 42.9% of residents in Fall River and 40.5% of residents in Greater Fall River have been diagnosed with high blood cholesterol in their lifetime[40].

Hypertension, or high blood pressure, is also more prevalent in this region than statewide and has increased across the region since 2001 (see Table 47). On the other hand, a greater proportion of the region's adults diagnosed with hypertension report they are currently taking medication to manage this condition in comparison to residents statewide; 85.2% in Fall River and 83.2% in Greater Fall River, versus 76.9% statewide[41]. Hospitalization rates are also higher in the region and have increased since 2000 (see Graph 21).

Table 50. Diagnoses With Hypertension in Lifetime

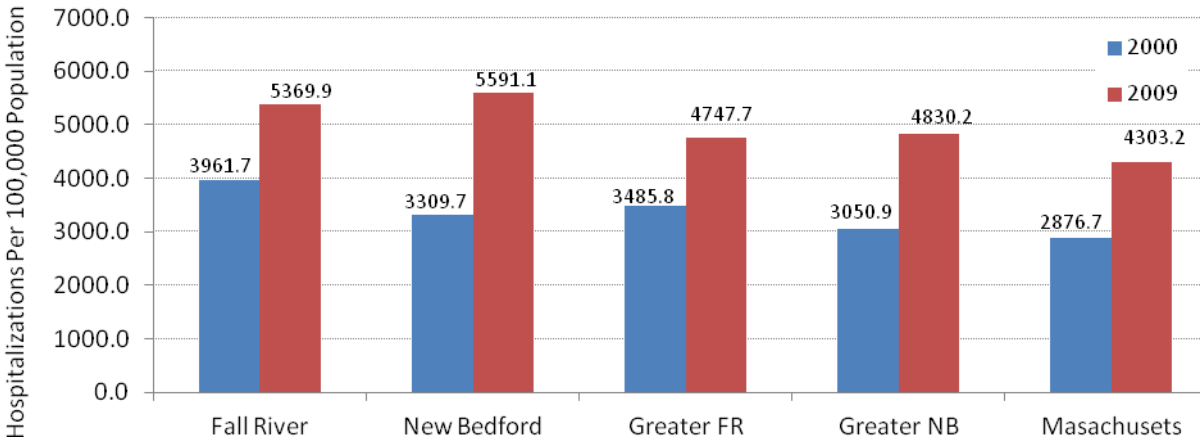
Diagnosed With Hypertension in Lifetime		
	2001	**2011**
Fall River	30.1%	33.1%
New Bedford	31.6%	37.3%
Greater Fall River	31.4%	33.2%
Greater New Bedford	26.3%	34.9%
Massachusetts	23.6%	29.2%

Source: BRFSS, via MassCHIP

[38] BRFSS 2011, via MassCHIP.
[39] Hospital Discharges (UHDDS) 2009, via BRFSS. Data for Wareham not available.
[40] BRFSS 2011, via MassCHIP
[41] BRFSS 2011, via MassCHIP

Graph 21. Hospitalization Rate for Hypertension

Source: Massachusetts Department of Public Health, MassCHIP (age adjusted rate)



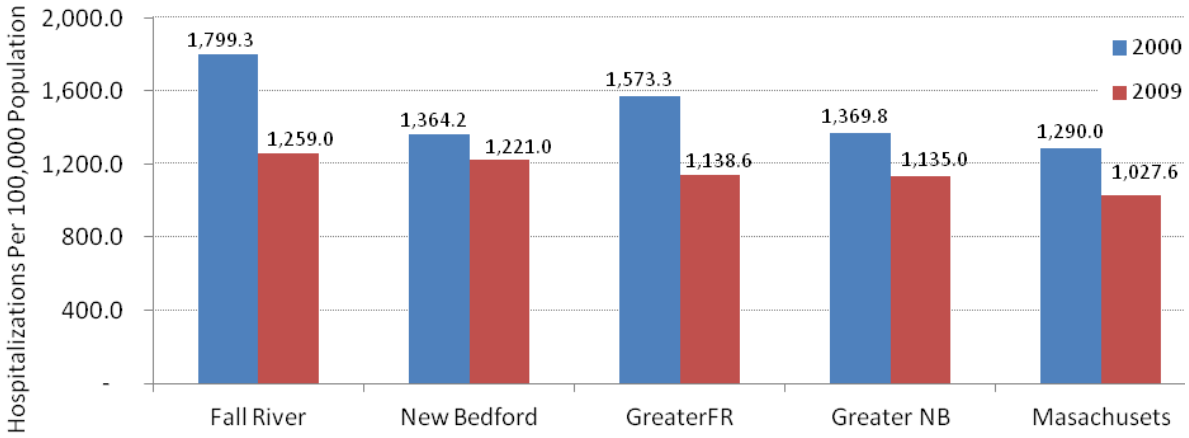
Heart disease is a broad term used to describe a range of diseases that affect one's heart. The prevalence of heart disease in the Southcoast is higher than it is statewide; 9.3% in Fall River, 8.2% in New Bedford, 9.5% in Greater Fall River, and 8.3% in Greater New Bedford, compared to 6.8% statewide (see Figure 48). Hospitalization rates are also higher in the region, although these rates have fallen since 2000 (see Graph 19)

Table 51. Prevalence of Heart Disease Among Adults

Prevalence of Heart Disease Among Adults	Percent
Fall River	9.3%
New Bedford	8.2%
Greater Fall River	9.5%
Greater New Bedford	8.3%
Massachusetts	6.8%

Source: BRFSS, via MassCHIP (2005-2007 Average)

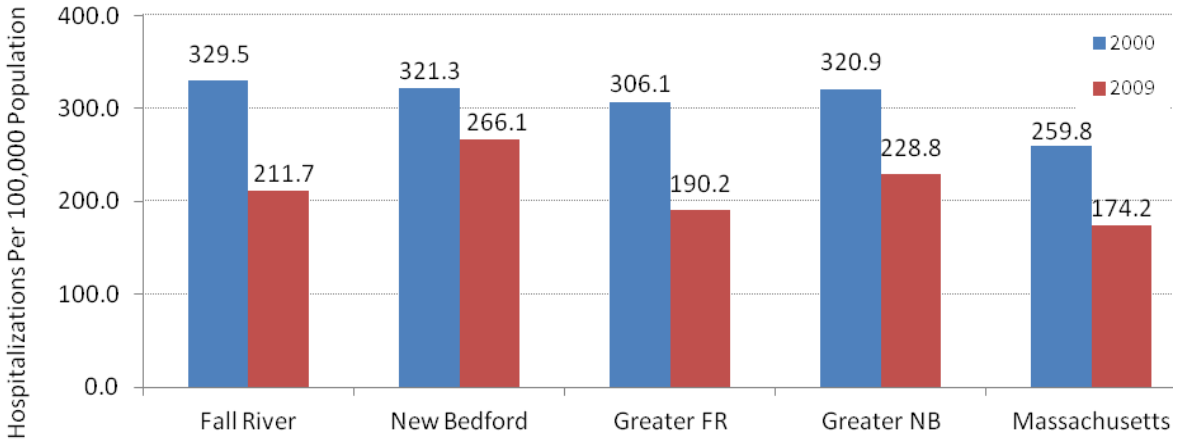
Graph 22. Hospitalization Rate Heart Disease



Source: Massachusetts Department of Public Health, MassCHIP (age adjusted rate)

Hospitalization rates for heart attacks, or myocardial infarction, declined for all study areas from 2000 to 2009 (see Graph 20[42]). Prevalence data for heart attacks is not available.

Graph 23. Hospitalization Rate Myocardial Infarction

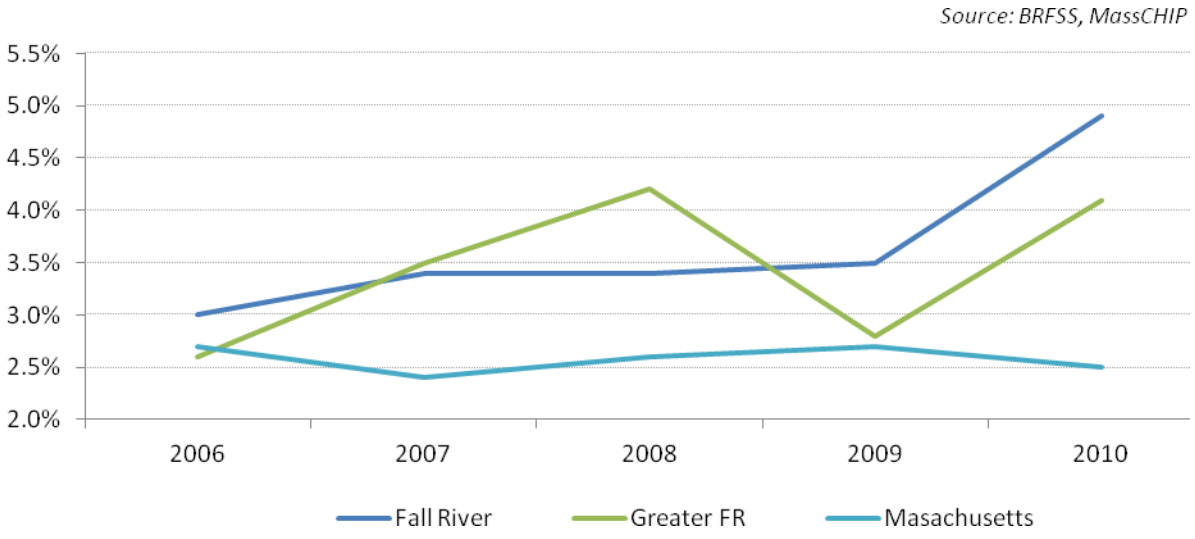


Source: Massachusetts Department of Public Health, MassCHIP (age adjusted rate)

[42] Conclusions for the Wareham data should be made with caution due to broad confidence intervals.

Strokes are slightly more prevalent in the Southcoast than statewide. Among adults in 2010, 4.9% in Fall River and 4.1% in Greater Fall River report having had a stroke in their lifetimes. This compares to 2.5% of residents statewide. The percentage of adults who report they have had a stroke increased in each study area from 2006 to 2010, while the percentage declined slightly at the statewide level (see Graph 21).

Graph 24. Had a Stroke



Diabetes

Since 2000, diabetes has grown in prevalence in both the Southcoast and Massachusetts. Currently, 7.5% of the state's adults had or have diabetes compared to 10.0% of Fall River residents and 10.3% of Greater Fall River residents (see Table 49). Of those who currently have diabetes, over one-quarter take insulin to manage the condition: 26% in Greater Fall River and 28.9% statewide[43].

Table 52.	Fall River	Bristol County	State	National
Prevalence of Diabetes	10%	8.8%	7.5%	8.3%
Diabetes Hospitalization rate (per 100,000)	687.3	504	487.6	688
Diabetes Mortality rate (per 100,000)	17.3	16.4	14.5	22.4

[43] BRFSS 2010-13, via MassCHIP Instant Topics (Cardiovascular)

Table 49. Diagnosis with Diabetes in Lifetime

Diagnosed With Diabetes in Lifetime		
	2000	**2010**
Fall River	8.4%	13.8%
New Bedford	8.2%	12.3%
Greater Fall River	6.1%	10.4%
Greater New Bedford	7.6%	9.0%
Massachusetts	5.8%	7.4%

Source: BRFSS, via MassCHIP

Respiratory Health

Respiratory health is reflected by incidence of asthma. The lifetime prevalence of asthma in the Southcoast is higher than the statewide percentage of 15.3%; 23.7% in Fall River and 20.6% in Greater Fall River (see Tables 53 and 54). Emergency Room visits and hospitalizations rates for asthma are also higher in the region and have increased since 2000 (see Graph 25).

Table 53.	Fall River	Bristol County	State	National
Prevalence of Asthma among adults	16.7%	14.5%	14.7%	8.4%
Pediatric Emergency Room visit rates for children 0-14 (per 100,000)	2,595.9	1,458.5	2137.8	N/A
Asthma Hospitalization rate (per 100,000)	324.2	189.9	151	N/A

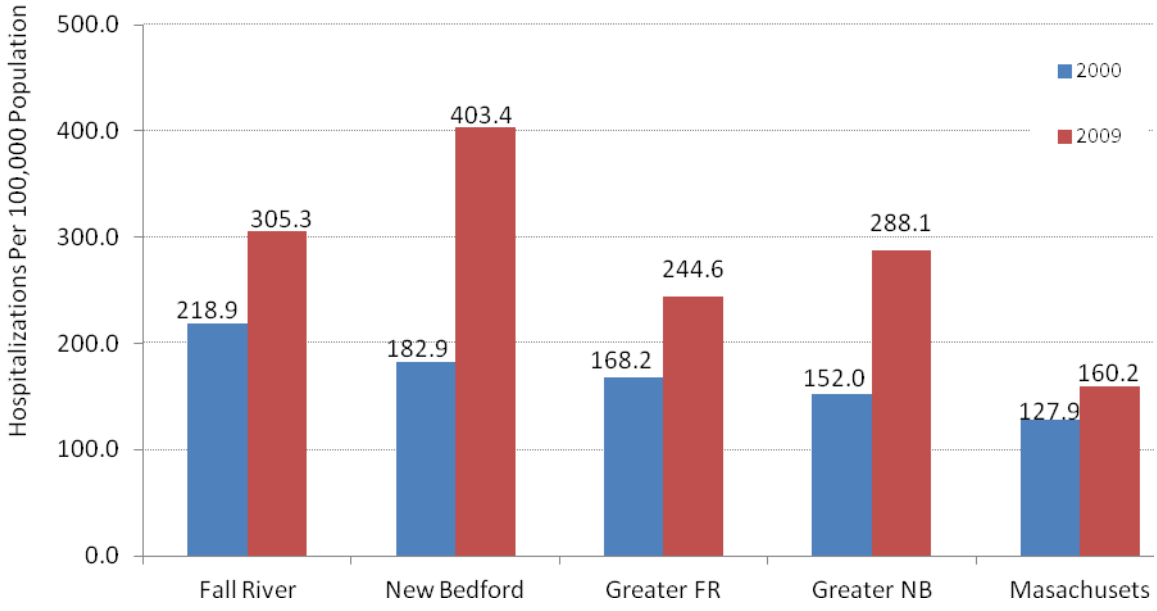
Table 54. Diagnoses with Asthma in Lifetime

Diagnosed With Asthma In Lifetime	
	Percent
Fall River	23.7%
New Bedford	22.4%
Greater FR	20.6%
Greater NB	17.5%
Massachusetts	15.3%

Source: BRFSS, via MassCHIP (2011)

Graph 25. Hospitalization Rate Asthma

Source: Massachusetts Department of Public Health, MassCHIP (age adjusted rate)



Cancer

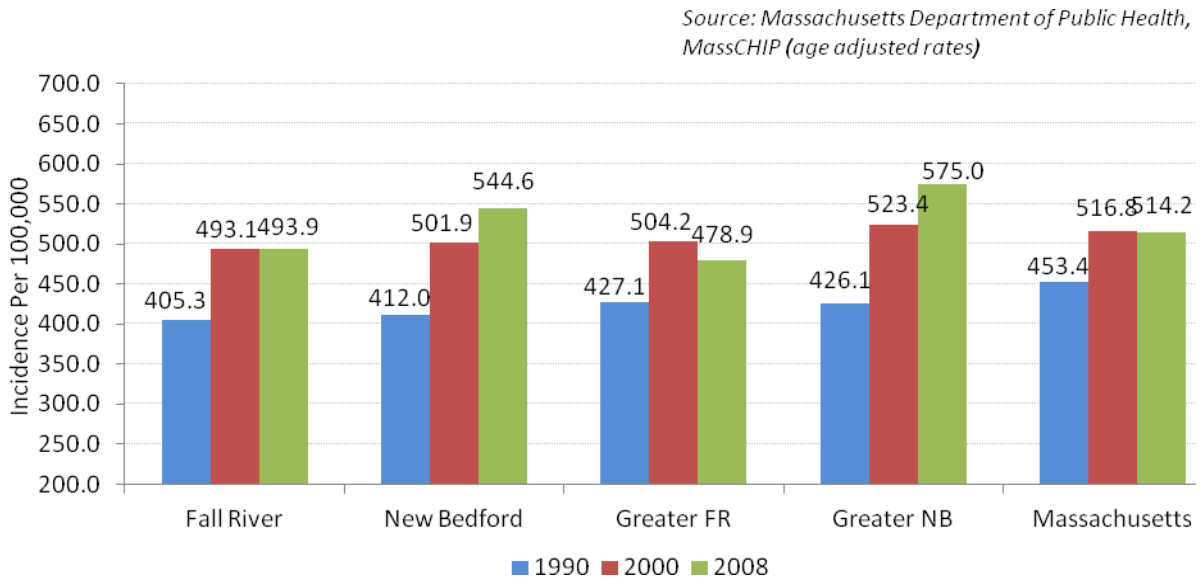
Cancer incidence rates for all types of cancer vary by geography. While Wareham has the highest incidence rates, this result should be interpreted cautiously due to the high margin of error. Most importantly, the incidence rate increased in each area from 1990 to 2008, which may partly be a result of better detection (see Table 55).

For the top two cancers in the US, Breast and Prostate Cancer, the rates for Fall River are significantly lower compared to the county and the state. It is not surprising however, that the rate for Lung and Bronchus cancers are higher compared to county, state, and national rates given the percentage of adults in the city who smoke. The rate of lung cancer deaths for the area was 56.8 per 100,000 compared to the state's 50.9 per 100,000.

Table 55.	Fall River	County	State	National
Breast Cancer Incidence (per 100,000)	107.8	124.8	132.3	124.3
Prostate Cancer Incidence (per 100,000)	125.8	162.2	165.1	154.8
Lung and Bronchus (per 100,000)	170.7	160.2	147.6	62.6

Source: National Cancer Institute: Surveillance Epidemiology and End Results 2009

Graph 26. Invasive Cancer Incidental Rate (All Types) 1990 to 2008



Incidence rates for lung cancer are presented due to the relatively high percentage of Southcoast residents who smoke. The general trend is that lung cancer incidence has increased since 1990, with the rate in Fall River increasing the most (see Graph 27).

Graph 27. Lung Cancer Incidence Rate

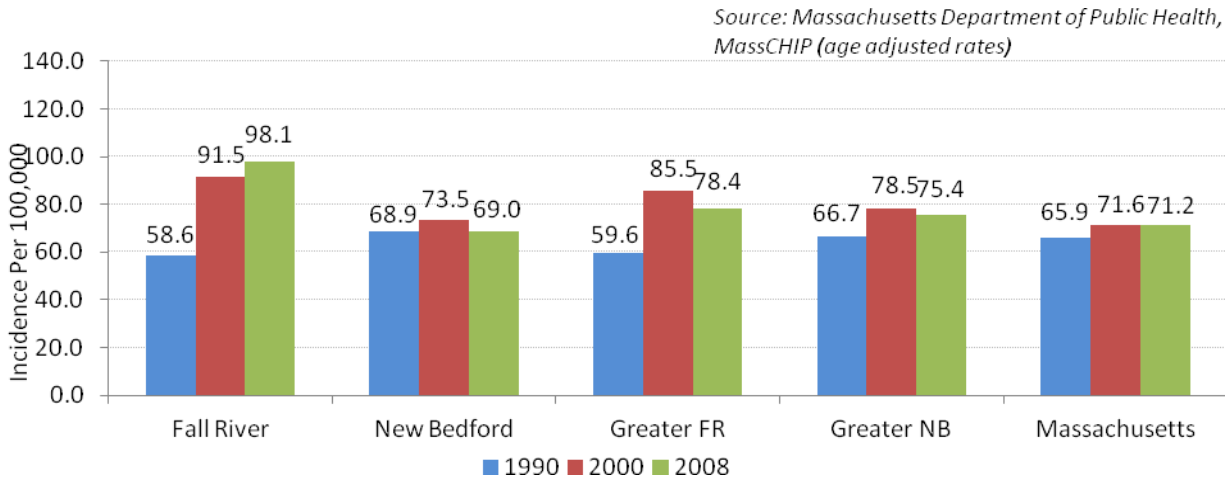


Table 56. Bronchus and Lung Cancer Incidence: Fall River

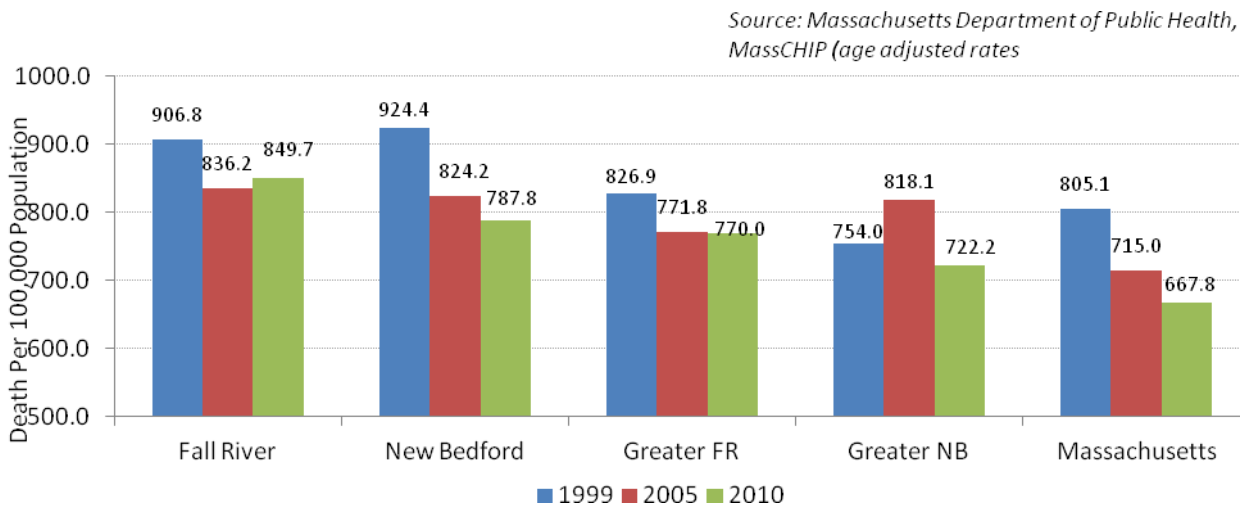
	Area 5 year Count		Area Age-adjusted Rate (a)		State Age-adjusted Rate (a)	
	Males	Females	Males	Females	Males	Females
Total Bronchus & Lung Cancer Incidence	269	187	122.7	61.7	83.0	65.1
White, non-Hispanic	263	184	123.9	63.2	84.9	68.7
Black, non-Hispanic	NA	NA	NA	NA	89.2	47.0
Asian, non-Hispanic	NA	NA	NA	NA	54.2	29.1
Hispanic	NA	NA	NA	NA	37.1	18.3
	Area 5 year Count		**Area Age-specific Rate (b)**		**State Age-specific Rate (b)**	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
Ages 0 to 19	0	0	0.0	0.0	0.2	NA
Ages 20 to 44	5	NA	6.3	NA	3.6	4.8
Ages 45 to 64	87	58	179.2	107.3	92.0	87.1
Ages 65 to 74	90	59	707.6	343.7	417.3	344.9
Ages 75 to 84	68	49	621.6	252.5	597.1	400.0
Ages 85 plus	19	17	492.5	166.4	454.1	243.3

The Counts and Rates are 5 Year aggregates from the 2004-2008 Cancer Registry , MassCHIP

Mortality

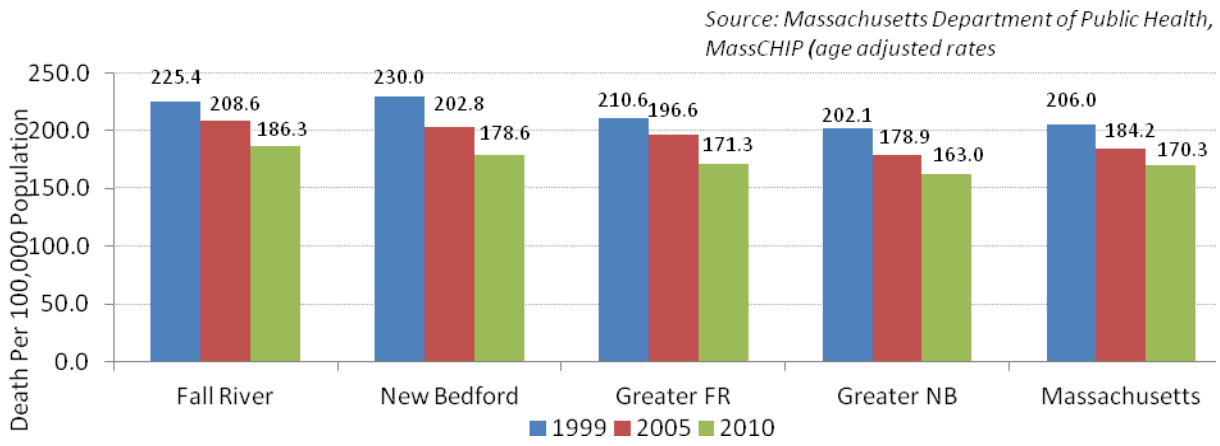
This section presents the mortality rates per 100,000 population for all causes of death, heart disease, and diabetes. Mortality rates for all causes of death have declined throughout the Southcoast and statewide since 1999 (see Graph 28)[44]. However, mortality rates are lower statewide in nearly every instance when compared to the region.

Graph 28. Mortality Rates (Per 100,000) All Causes of Death



Graph 29 shows that while the incidence rate for cancer overall has increased in some of the Southcoast communities, the mortality rates for cancers are declining[45].

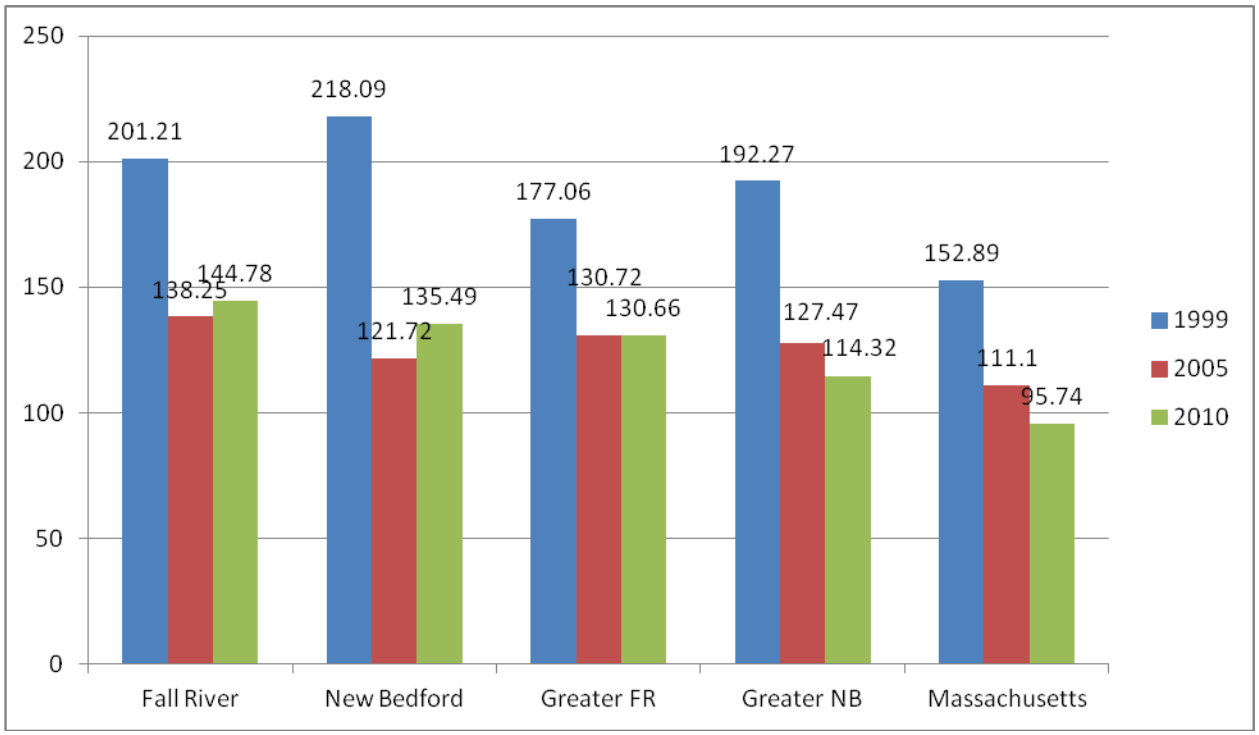
Graph 29. Trends in Mortality Rates, Cancer: All Types



[44] Conclusions for the Wareham data should be made with caution due to broad confidence intervals.
[45] The latest year of data for cancer incidence is 2008, while the latest year of data for mortality is 2010.

Similarly, mortality rates for heart disease and diabetes have declined throughout the Southcoast and statewide since 1999 although rates in the Southcoast remain higher than the statewide average (see Figure 54 and Figure 55).

Graph 30. Trends in Mortality Rates (Per 100,000) Heart Disease



Graph 31. Trends in Mortality Rates (Per 100,000) Diabetes