



2016 Community Health Needs Assessment



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Our Commitment to Community Health

Landmark Medical Center is a 214-bed hospital that was created in 1988 by the merging of the former Woonsocket Hospital and John E. Fogarty Memorial Hospital, two healthcare institutions that had been part of the fabric of Northern Rhode Island and the neighboring Massachusetts communities for more than 130 years. In December 2013, Landmark Medical Center was purchased by Prime Healthcare Services. Prime Healthcare Services has pledged millions of dollars in capital improvements, increased physician recruitment, and upgraded medical equipment, and to stabilize this vital community institution.

Each year, more than 175,000 people rely on Landmark Medical Center for their healthcare needs. The Woonsocket Unit provides emergency, diagnostic, cardiac, oncologic, medical, surgical, pain management, pediatric, obstetric, and rehabilitative care. Landmark also owns and operates the Rehabilitation Hospital of Rhode Island and the Landmark Heart Center, and is affiliated with a network of physician offices throughout northern Rhode Island.

In support of Landmark Medical Center's community benefit activities and to guide community health improvement efforts across the community, the hospital participated in a statewide comprehensive Community Health Needs Assessment (CHNA), led by the Hospital Association of Rhode Island (HARI), and its member hospitals. The CHNA was conducted from June 2015 to June 2016. The 2016 CHNA builds upon our hospital's previous CHNA conducted in 2013 and was conducted to further the hospital's commitment to community health and population health management.

Landmark Medical Center's Mission

To deliver compassionate, quality care to patients and better healthcare to communities.

2016 CHNA Overview: A Statewide Approach to Community Health Improvement

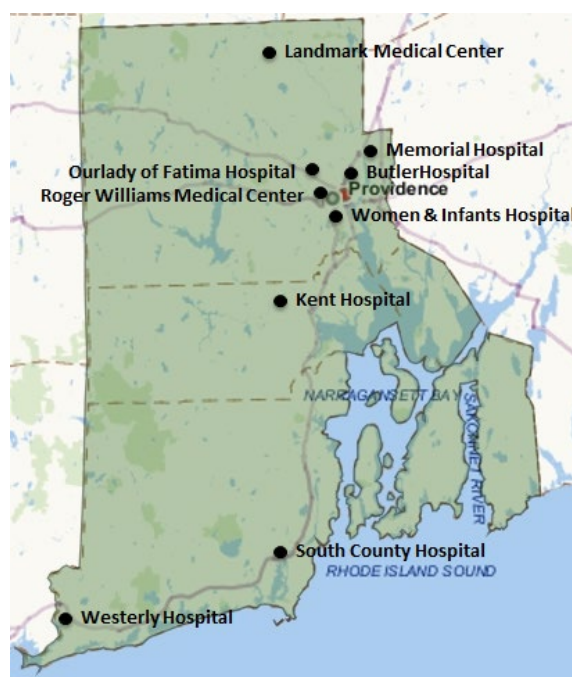
Landmark Medical Center participated in a statewide Community Health Needs Assessment (CHNA) led by the Hospital Association of Rhode Island (HARI) and its member hospitals. Through a coordinated statewide effort, HARI and its hospital members worked with the Rhode Island Department of Health and local community partners to collect health data, gather feedback on regional and local health needs, and develop coordinated plans to address priority health needs across the state.

The CHNA was conducted from June 2015-June 2016. The assessment was conducted in a timeline to comply with requirements set forth in the Affordable Care Act, as well as to further the hospital's commitment to community health and population health management. The findings from the assessment will be used by Landmark Medical Center to guide its community benefit initiatives and to engage partners to address the identified health needs.

2016 CHNA Partners:

- > The Hospital Association of Rhode Island
- > Care New England Health System: Butler Hospital; Kent Hospital; Memorial Hospital of Rhode Island; Women & Infants Hospital of Rhode Island
- > CharterCARE: Our Lady of Fatima Hospital; Roger Williams Medical Center
- > Landmark Medical Center
- > South County Hospital
- > Westerly Hospital

Map of Rhode Island CHNA Partner Hospitals



Research Methodology

Quantitative and qualitative methods, representing both primary and secondary research, were used to illustrate and compare health trends and disparities across Rhode Island and within individual hospital service areas. Primary research methods were used to solicit input from key community stakeholders representing the broad interests of the community, including experts in public health and individuals representing medically underserved, low-income, and minority populations. Secondary research methods were used to gather existing statistical data to identify community health trends across geographic areas and populations.

Specific research methods:

- > A Secondary Data Profile comprising indicators for each county and hospital service area compared to state and national benchmarks
- > An analysis and comparison of Hospital Discharge Data including emergency room, observation, and inpatient usage
- > Partner Forums with key representatives in each of the three counties served by the CHNA partners
- > Focus Groups with behavioral health consumers and English and Spanish-speaking Latino/a residents

Leadership

The 2016 HARI CHNA was overseen by a Steering Committee of representatives from HARI and each member hospital as follows:

Liz Almanzor, Finance Director, Hospital Association of Rhode Island
Otis Brown, CharterCARE
Laurel Holmes, Westerly Hospital
Carolyn Kyle, Landmark Medical Center
Gina Rocha, Hospital Association of Rhode Island
Alex Speredelozzi, Care New England
Kellie Sullivan, Care New England
Stephany Valente, Care New England
Cynthia Wyman, South County Hospital

Ex officio: Michael Souza, President, Hospital Association of Rhode Island
Ana Novais, Rhode Island Department of Health

Research Partner

Baker Tilly assisted in all phases of the CHNA including project management, quantitative and qualitative data collection, report writing, and development of the Implementation Strategy.

Project Manager: Colleen Milligan, MBA, Baker Tilly
Lead Researcher: Catherine Birdsey, MPH, Baker Tilly

Alignment with Public Health

The CHNA Steering Committee actively sought feedback and coordinated research and planning efforts with the Rhode Island Department of Health (RI DOH) to ensure statewide efforts for community health improvement were aligned. In addition to cross-communication between the RI DOH and the CHNA Steering Committee, efforts were made to coordinate local research with the RI DOH Health Equity Zones (HEZ). Health Equity Zones receive funding through a RI DOH initiative with the CDC to address health disparities. Partner forums, focus groups and planning were conducted in coordination with and inclusion of the HEZ partners.

Community Engagement

Community engagement was a key component of the 2016 HARI CHNA. The CHNA included wide participation of public health experts and representatives of medically underserved, low income, and minority populations. As stated above, the RI DOH and HEZ partners were included throughout the process to collect insights and provide access to underserved populations. A full listing of agencies represented in the CHNA research and planning is listed in Appendix A.

Prioritization of Community Health Needs

The Steering Committee correlated quantitative and qualitative data from the 2016 CHNA and compared with findings from the 2013 CHNA and RI DOH Community Health Improvement Plan to define statewide health priorities. In line with the 2013 CHNA and the RI DOH, the following community health priorities were identified:

- > Behavioral Health
- > Chronic Disease: Diabetes & Heart Disease
- > Maternal & Child Health

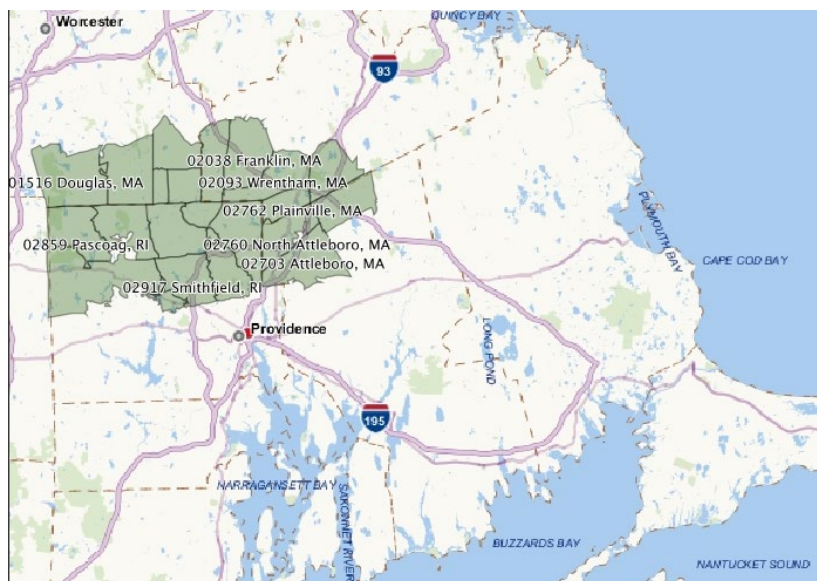
Development of a Community Health Improvement Plan

Each CHNA partner hospital developed an Implementation Plan that outlined the priority areas the hospital/health system would address and a three year action plan to align community benefit activities with community health needs.

Board Approval and Adoption

The Landmark Medical Center Board of Director adopted the 2016 CHNA Final Report and Implementation Plan. The CHNA report is widely available to the public via the Landmark Medical Center website and the HARI RhodeIslandHealthcarematters.org portal.

Landmark Medical Center Service Area



Landmark Medical Center serves the following zip codes, primarily in Providence County, RI:

- | | | | |
|------------------------|----------------------|---------------------------|--------------------|
| 02895 Woonsocket | 02876 Burrillville | 02019 Bellingham, MA | 01516 Douglas, MA |
| 02896 North Smithfield | 02830 Harrisville | 02703 Attleboro, MA | 02038 Franklin, MA |
| 02917 Smithfield | 02859 Pascoag | 02760 North Attleboro, MA | 01756 Mendon, MA |
| 02828 Greenville | 02829 Glocester | 02671 North Attleboro, MA | 01569 Uxbridge, MA |
| 02865 Lincoln | 02814 Chepachet | 02762 Plainville, MA | 02093 Wrentham, MA |
| 02838 Manville | 01504 Blackstone, MA | 02035 Foxboro, MA | |
| 02864 Cumberland | 01529 Millville, MA | 02048 Mansfield, MA | |

Population Overview

The population across Landmark Medical Center’s service area is primarily White with less than 10% of residents identifying with another race or ethnicity. The median age of residents is higher than the state, as is the median household income. In aggregate, Black/African American and Hispanic/Latino residents have a lower median income than Asian or White residents.

2015 Population Overview

	Landmark Medical Center Service Area	Rhode Island
White	90.1%	79.8%
Asian	3.4%	3.3%
Black or African American	2.3%	5.9%
Hispanic or Latino (of any race)	4.9%	14.1%
Median Age	41.2	40.1
Median Income	\$73,616	\$56,945

Source: The Nielsen Company, 2015

Landmark Medical Center Demographic Analysis

The following section outlines key demographic indicators related to the social determinants of health within Landmark Medical Center’s service area. Social determinants of health are factors within the environment in which people live, work, and play that can affect health and quality of life, and are often the root cause of health disparity. Healthy People 2020 defines a health disparity as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.” All reported demographic data are provided by © 2015 The Nielsen Company.

Language Spoken at Home

The languages spoken in the service area mimic the racial characteristics. Approximately 89% of residents speak English and 5.3% speak an Indo-European language as their primary language. Another 2.9% of residents speak Spanish.

Financial and Occupation Demographics

Landmark Medical Center’s service area encompasses 142,623 housing units, 70.4% are owner-occupied and 29.6% are renter-occupied. The median home value for owner-occupied units is \$298,722, which is higher when compared to Rhode Island (\$252,604).

The median household income in Landmark Medical Center’s service area is \$73,616; however, income varies notably by race and ethnicity. The median income for Blacks or African Americans and Hispanics or Latinos is \$47,863 and \$40,227 respectively.

2015 Population by Median Household Income

	Landmark Medical Center Service Area	Rhode Island
White	\$74,909	\$61,419
Black or African American	\$47,863	\$36,627
Asian	\$87,130	\$55,406
Hispanic or Latino (of any race)	\$40,227	\$33,970
Total Population	\$73,616	\$56,945

Approximately 71% of residents age 16 years or over are in the workforce and 5.7% are unemployed, which is lower than the state average (6.4%) and equivalent to the national average (5.5%). The majority of residents in the workforce are for-profit private workers (71%) and hold white collar positions (66.6%). Residents are most likely to work in office/administrative support (14.3%), sales (12%) and management (11.1%).

Education Demographics

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. In Landmark Medical Center’s service area, 9.3% of residents 25 years or over have less than a high school diploma and 35% have at least a bachelor’s degree. Hispanic/Latino residents have notably lower educational attainment; nearly 26% have less than a high school diploma and only 18.5% have a bachelor’s degree or higher.

2015 Population by Educational Attainment

	Landmark Medical Center Service Area		Rhode Island	
	Overall Population	Hispanic/Latino Population	Overall Population	Hispanic/Latino Population
Less than a high school diploma	9.3%	25.9%	14.5%	37.1%
High school graduate	27.5%	27.1%	27.5%	29.3%
Some college or associate’s degree	28.2%	28.6%	26.8%	22.2%
Bachelor’s degree or higher	35.0%	18.5%	31.2%	11.4%

*Educational attainment is not available for Blacks/African Americans or other racial groups

Poverty

The percentage of all families and families with children living in poverty (5.3% and 4.3% respectively) is lower when compared to the state (9.4% and 7.3% respectively). Poverty rates vary by zip code within Landmark Medical Center’s service area; most notably 19.1% of families in 02895 (Woonsocket) live in poverty.

Social Determinants of Health by Zip Code

Social determinants impact health for all individuals within a community, populations most at risk for health disparities are highlighted below by zip code to allow Landmark Medical Center to focus its health improvement efforts where it can have the greatest impact.

**Social Determinants of Health Indicators by Zip Code
(ordered by highest poverty levels)**

	Black/ African American	Hispanic/ Latino	English Speaking	Families in Poverty	Families w/ Children in Poverty	Single Female Households w/ Children	Unemploy- ment	Less than HS Diploma
02895 Woonsocket	6.8%	16.3%	77.7%	19.1%	17.2%	20.4%	5.3%	21.1%
02838 Manville	2.9%	7.3%	87.8%	6.9%	3.9%	21.2%	3.8%	11.7%
02865 Lincoln	1.9%	4.9%	88.8%	4.3%	2.8%	7.8%	4.8%	10.8%
02896 North Smithfield	0.6%	3.1%	92.6%	4.0%	2.7%	6.7%	3.3%	11.5%
02814 Chepachet	0.4%	1.7%	95.5%	3.7%	3.1%	5.1%	3.7%	9.2%
02828 Greenville	1.0%	2.0%	91.8%	3.3%	1.5%	4.7%	4.5%	6.5%
02830 Harrisville	0.3%	1.6%	94.8%	3.2%	3.0%	7.3%	7.1%	12.0%
02864 Cumberland	1.8%	5.5%	85.5%	3.1%	2.0%	7.5%	4.1%	10.7%
02917 Smithfield	1.4%	3.1%	90.1%	3.1%	0.9%	6.4%	5.8%	8.1%
02859 Pascoag	0.8%	2.8%	94.0%	3.0%	2.9%	8.8%	7.3%	11.9%
Total Service Area (SA)	2.3%	4.9%	89.1%	5.3%	4.3%	8.8%	5.7%	9.3%
Rhode Island	5.9%	14.1%	79.0%	9.4%	7.3%	12.1%	6.4%	14.5%

Source: The Nielsen Company, 2015

Color Coding Guide
0-2% points higher than the Total SA Exception: English Speaking cells are 0-2% points lower than Total SA
More than 2% points higher than the Total SA Exception: English Speaking cells are more than 2% points lower than Total SA

Statistical Health Data for the Landmark Medical Center Service Area

Background

Publicly reported health statistics were collected and analyzed to display health trends and identify health disparities across the service area. The following analysis primarily uses data available on the Rhode Island Healthcare Matters portal, an interactive data site developed through collaboration of the Hospital Association of Rhode Island, its members, and the Rhode Island Department of Health. A full listing of public health indicators available through the portal can be found at www.rihealthcarematters.org. A full listing of all public health data sources can be found in Appendix B.

Due to the collaboration across Rhode Island and that much of Landmark Medical Center's service area is located in Providence County, RI, public health data focuses on Providence County, RI. State and national standards, when referenced, are drawn from the same source as the county statistic to which it is compared. Data from Landmark Medical Center's 2013 CHNA, including Behavioral Risk Factor Surveillance System (BRFSS) data, are also incorporated to provide trending analysis. Note that BRFSS data represent Landmark Medical Center's specific Rhode Island service area, not all of Providence County.

Healthy People 2020 (HP 2020) goals are national goals created by the U.S. Department of Health and Human Services to set a benchmark for all communities to strive towards. Healthy People goals are updated every ten years and progress is tracked throughout the decade. Comparisons to Healthy People 2020 goals are included where applicable.

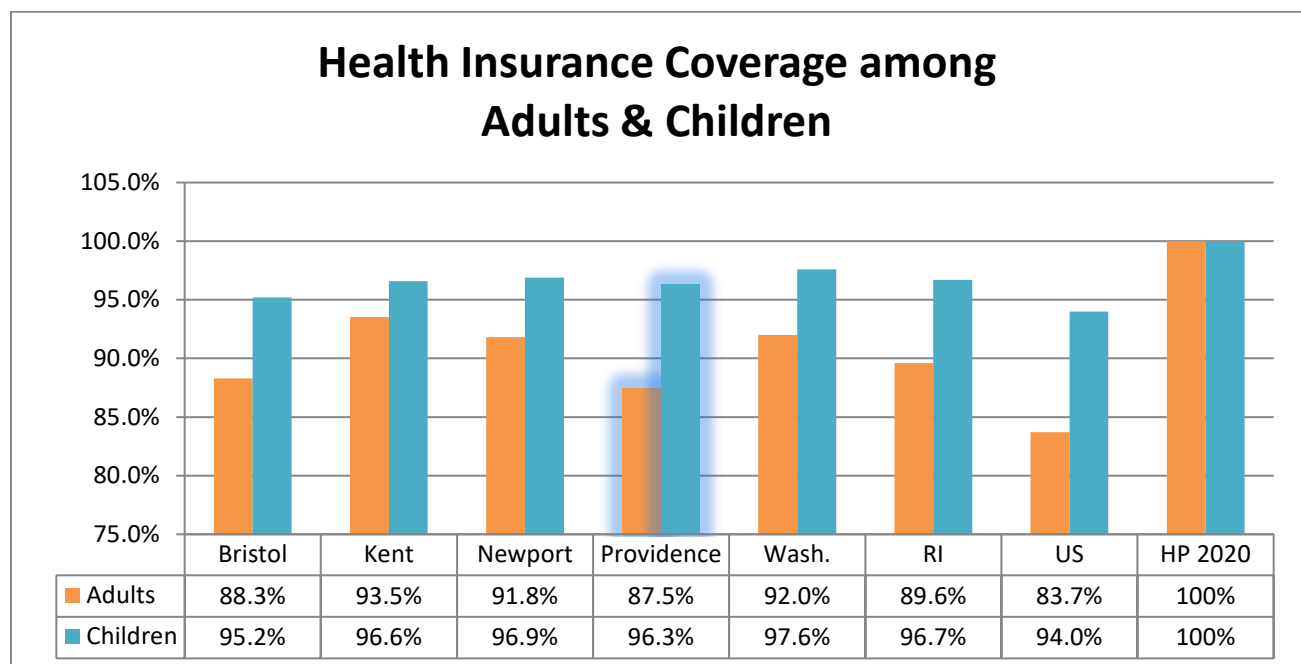
Access to Health Services

Approximately 88% of Providence County adults (ages 18 to 64 years) have health insurance. The percentage is the lowest in Rhode Island average, but represents an increase from 2013 (81.1%). Adults ages 25 to 34 years are the least likely to be insured (81.6%).

Healthy People 2020 Goal = 100% of adult and children insured

Providence County = 87.5% adults; 96.3% children insured

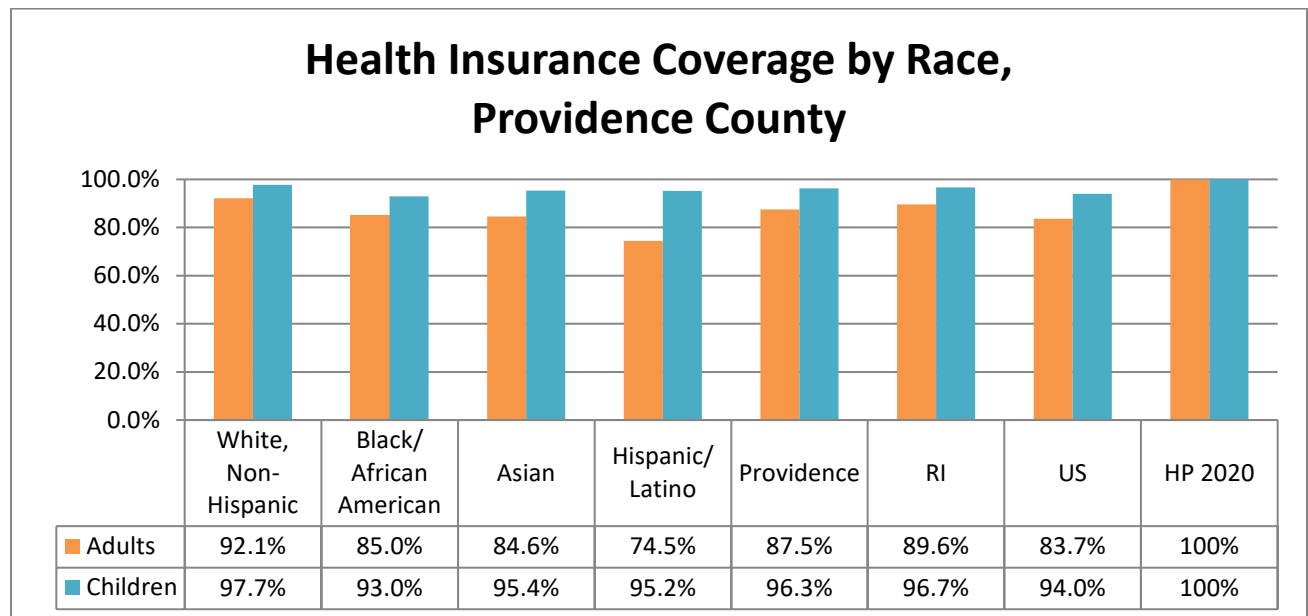
The percentage of Providence County children with health insurance (96.3%) is equal to the state (96.7%), above the nation (94%), and represents an increase from 2013 (93.5%). The Healthy People 2020 goal is 100% of all adults and children be insured by 2020.



Source: American Community Survey, 2014*

*Bristol data represents a 2011-2013 average due to availability

Minority racial and ethnic groups in Providence County have lower health insurance rates when compared to the White, Non-Hispanic population; most notably only 74.5% of Hispanic/Latino adults are insured and only 93% of Black/African American children are insured.

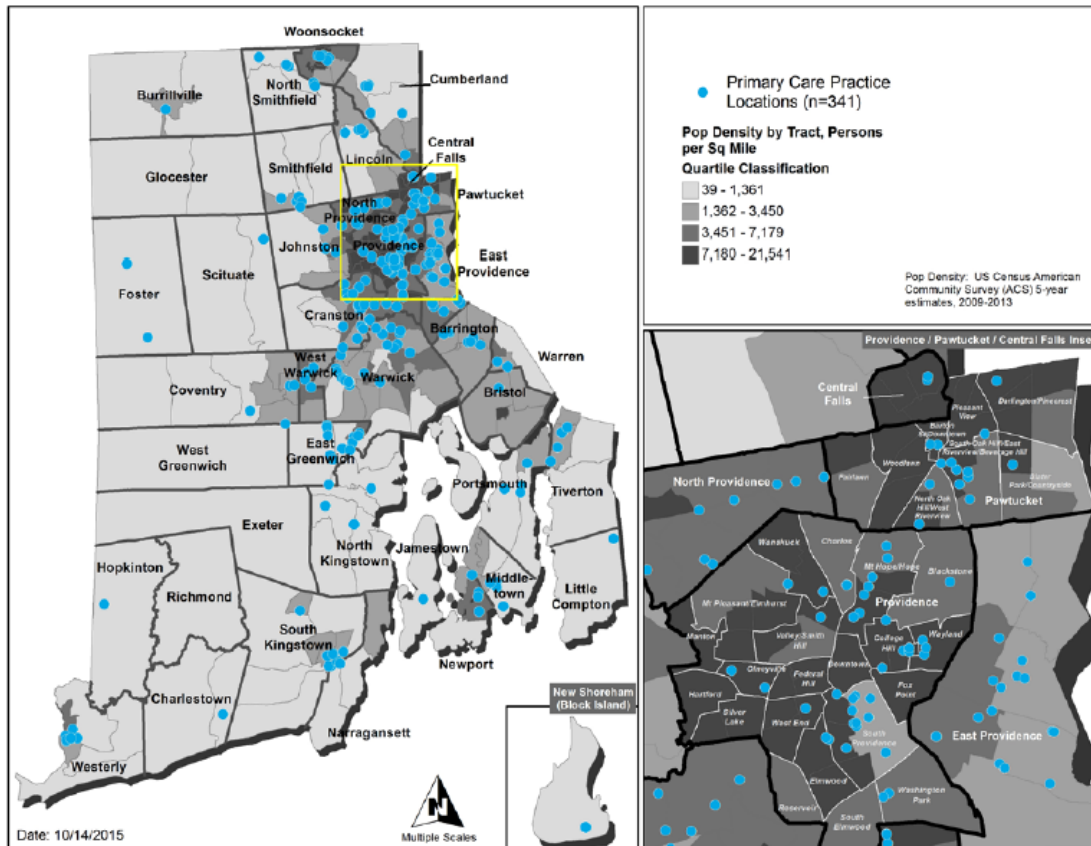


Source: American Community Survey, 2014

Fewer people in Landmark Medical Center’s service area delay needed healthcare due to cost. The 2013 CHNA found that 14.5% of adults in the service area did not see a doctor when they needed to due to cost barriers compared to 15.8% of Rhode Island residents and 17% of U.S. residents.

Access to Primary Care

A total of 803 primary care physicians were identified in Rhode Island in 2014; however, based on their total number of hours worked per week, full-time equivalents equated to 602.7 physicians and a ratio of one physician for every 1,718.1 Rhode Islanders. The following figure and table illustrate the location of primary care practices (n=341) layered over population density and the primary care physician ratio by town.



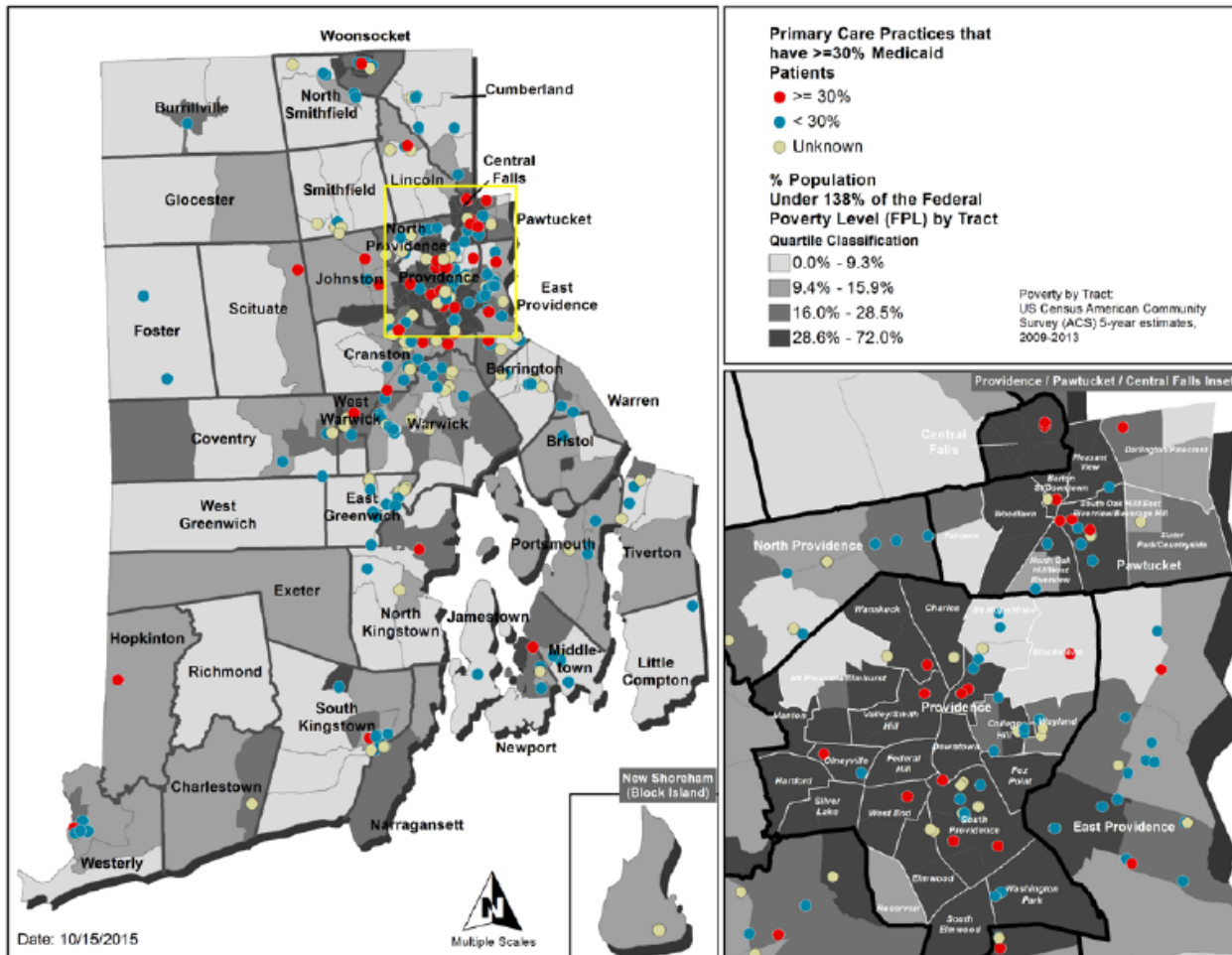
Source: Rhode Island Department of Health Statewide Health Inventory, 2015

Primary Care Physician Ratio by Providence County Town

Town	Ratio	Town	Ratio
Mt. Pleasant/Elmhurst	19,072.0	Cranston	1,821.4
Wanskuck	13,544.7	Charles	1,805.1
Scituate	13,348.4	Smithfield	1,708.1
Burrillville	8,669.4	Cumberland	1,662.7
Central Falls	6,593.4	North Smithfield	1,588.6
Foster	4,287.4	North Providence	1,506.1
Elmwood	3,288.8	Pawtucket	1,315.5
West End	3,250.3	Olneyville	1,021.5
Blackstone	3,207.5	Lincoln	895.9
Wayland	2,788.6	College Hill	887.4
Woonsocket	2,476.3	East Providence	863.6
Johnston	1,934.0	South Providence	278.0
Providence	1,826.9		

Source: Rhode Island Department of Health Statewide Health Inventory, 2015

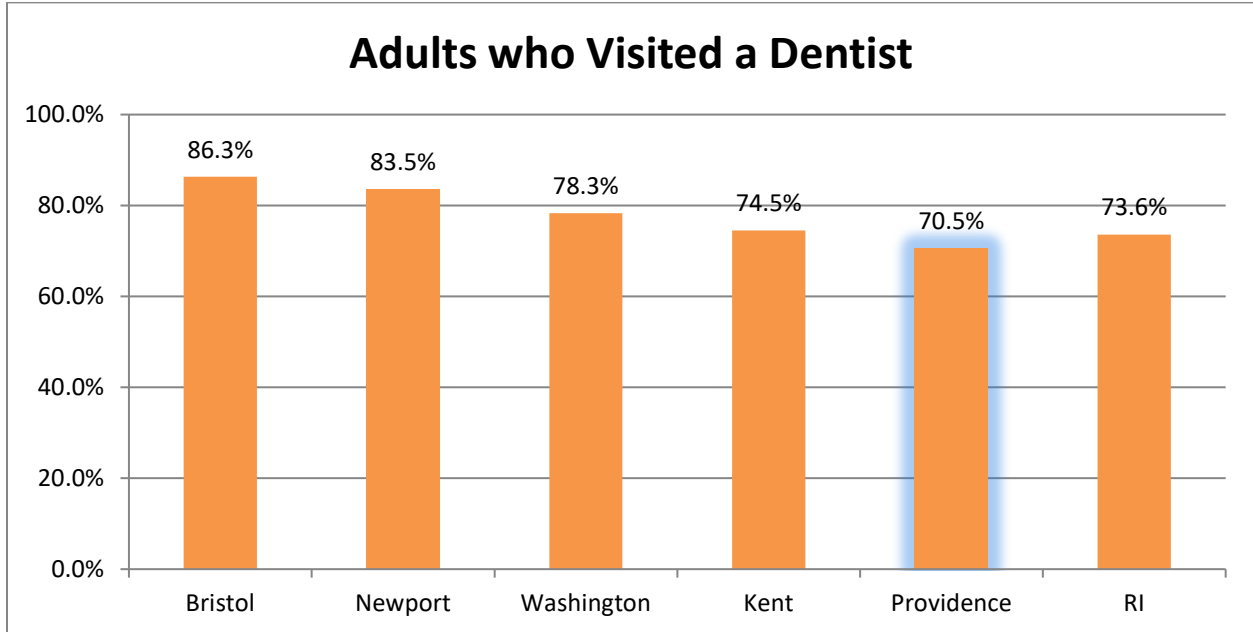
In Rhode Island in 2014, 81% of primary care practices saw at least one Medicaid patient, but less than 20% of practices had a patient population that was at least 30% covered by Medicaid. The following figure displays primary care practices with 30% or more their patient population covered by Medicaid layered over the percent of the population under 138% of the federal poverty level.



Source: Rhode Island Department of Health Statewide Health Inventory, 2015

Access to Dental Care

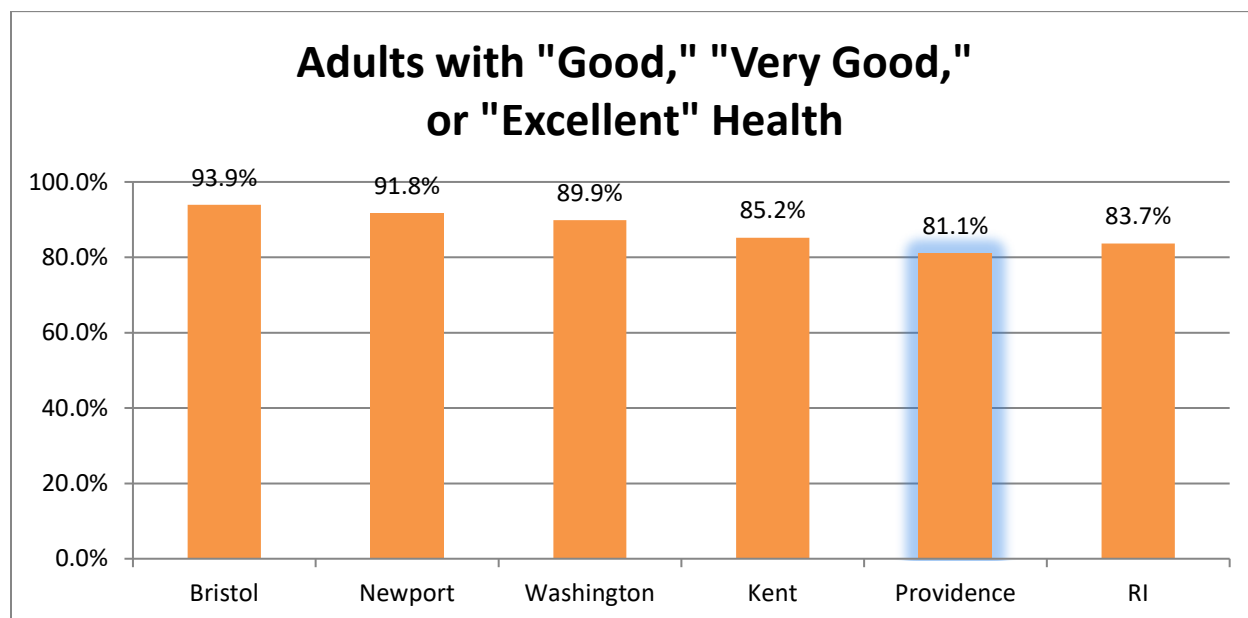
The dental provider rate in Providence County (58 per 100,000) is equitable to the state rate (61 per 100,000); however, the percentage of adults visiting a dentist is the lowest in the state. The percentage is not comparable to past years of data due to changes in methodology.



Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

Overall Health Status

Overall health status is measured by self-reported indicators, life expectancy, and premature death. Approximately 81% of Providence County adults report having good, very good, or excellent health. The percentage is the lowest in the state, but increased from 79.9% in 2011. Adults report an average of 3.8 days of poor physical health and 3.7 days of poor mental health over a 30 day period, which is higher than the state and the nation.



Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

The areas of Pawtucket, Central Falls, and Providence are noted for having greater health disparities due to poorer social determinants of health. The following table depicts the percentage of adults who were affected by poor physical and/or mental health on eight to 30 days during the past month.

Mental/Physical Health Affected 8 to 30 Days in Past Month

	Percentage
02863, Central Falls	33.5%
02907, Providence	30.2%
02909, Providence	28.6%
02860, Pawtucket	28.0%
02903, Providence	26.4%
02904, Providence	25.2%
02908, Providence	23.3%
02905, Providence	20.6%
02861, Pawtucket	16.8%
02906, Providence	13.8%

Source: The Nielsen Company, 2015

Life expectancy in Providence County is on par with the state average in Rhode Island, slightly better than the nation. Life expectancy increased by 0.2 years for males and females.

Premature death measures the years of potential life lost or years of death before age 75. Providence County has the second highest rate of premature death in Rhode Island; however, the rate is lower than the national average

Life Expectancy & Premature Death per 100,000

	Bristol	Kent	Newport	Provid.	Wash.	RI	US
Life Expectancy							
Males	77.7	76.3	78.1	76.3	77.4	76.7	75.0
Females	82.6	80.6	82.9	81.2	82.6	81.4	79.8
Premature Death	3,890.9	6,458.2	4,729.9	6,124.2	4,939.3	5,808	6,622

Source: Institute for Health Metrics and Evaluation, 2010 & County Health Rankings, 2010-2012

Health Behaviors

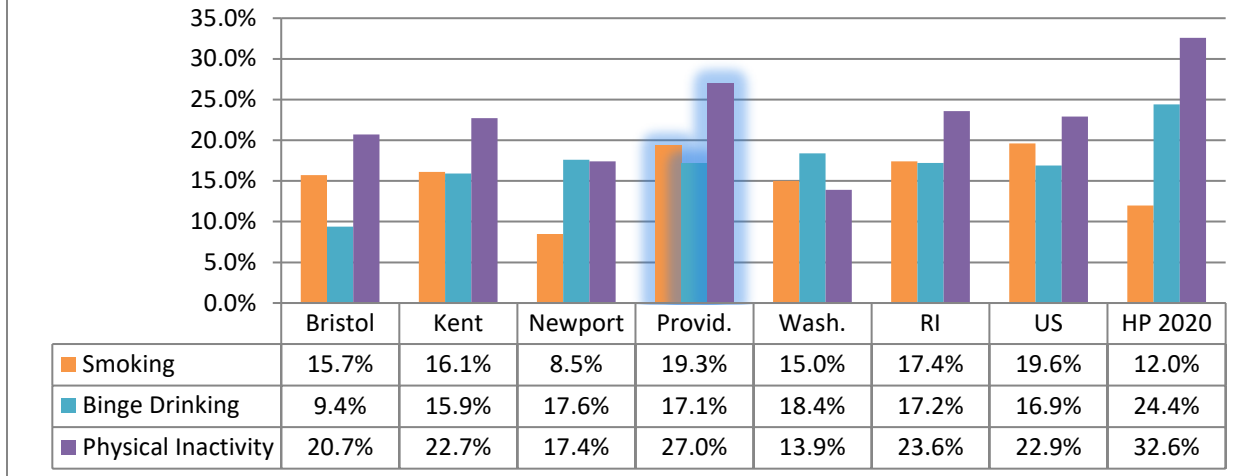
Individual health behaviors, including smoking, excessive drinking, physical inactivity, and obesity, have been shown to contribute to or reduce the chance of disease. The prevalence of these health behaviors is provided below, compared to Rhode Island and national averages and the Healthy People 2020 goals.

Providence County adults are among the most likely to smoke and be physically inactive compared to Rhode Island and the nation; the percentage of smokers exceeds the Healthy People 2020 goal by more than 7 points. However, the percentage of smokers and physically inactive adults decreased by 1.2 points from 2011.

Providence County adults smoke more and are less physically active than the state average

The percentage of adults in Providence County who binge drink is equitable to the state and the nation and decreased by 2.7 points from 2011.

Key Health Behaviors



Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

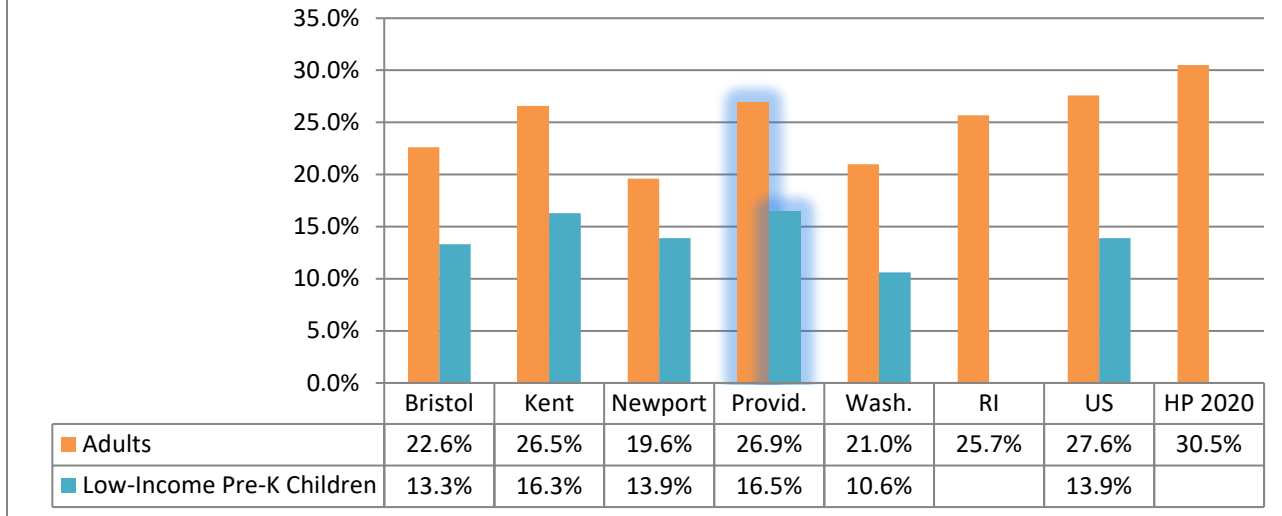
Overweight and Obesity

The percentage of overweight and obese adults and children is a national epidemic. In Providence County, 63.5% of adults are overweight or obese and 26.9% are obese. The percentage of overweight or obese adults decreased by 0.7 points, but the percentage of obese adults increased by 0.7 points. Both percentages represent some of the highest in the state.

Approximately 17% of low-income preschool children in Providence County are obese, which is unchanged from the 2013 CHNA finding. Providence and Kent counties have the highest percentages in the state, which are approximately 3 points higher than the national average. The children represented by this indicator are ages 2 to 4 years and participate in federally funded health and nutrition programs. Data for this age group is not available for the state of Rhode Island or Healthy People 2020.

Obesity rates in Providence are among the highest in the state and higher than the national averages

Obese Adults & Low-Income Preschool Children



Source: Behavioral Risk Factor Surveillance System, 2010 & 2012 & US Dept. of Agriculture, 2009-2011
 *Obesity data for low-income Pre-K children is not available for Rhode Island or Healthy People 2020

Overweight and obesity are also affected by access to nutritious food. In Providence County, 15.8% of all residents and 23.7% of children were food insecure in the last year. Food insecurity is defined as being without a consistent source of sufficient and affordable nutritious food. The percentages are the highest in Rhode Island despite a decrease in the overall food insecurity rate of 0.9 points.

Nearly one-quarter of children in Providence County are food insecure

Providence County also has a notably higher rate of fast food restaurants (0.73 per 1,000 residents) compared to grocery stores (0.25 per 1,000 residents).

Percentage of Food Insecure Residents

	All Residents	Children
Bristol	11.9%	16.9%
Kent	13.0%	20.0%
Newport	13.5%	19.8%
Providence	15.8%	23.7%
Washington	12.1%	18.7%
Rhode Island	14.4%	21.7%
United States	15.1%	23.7%

Source: Feeding America, 2013

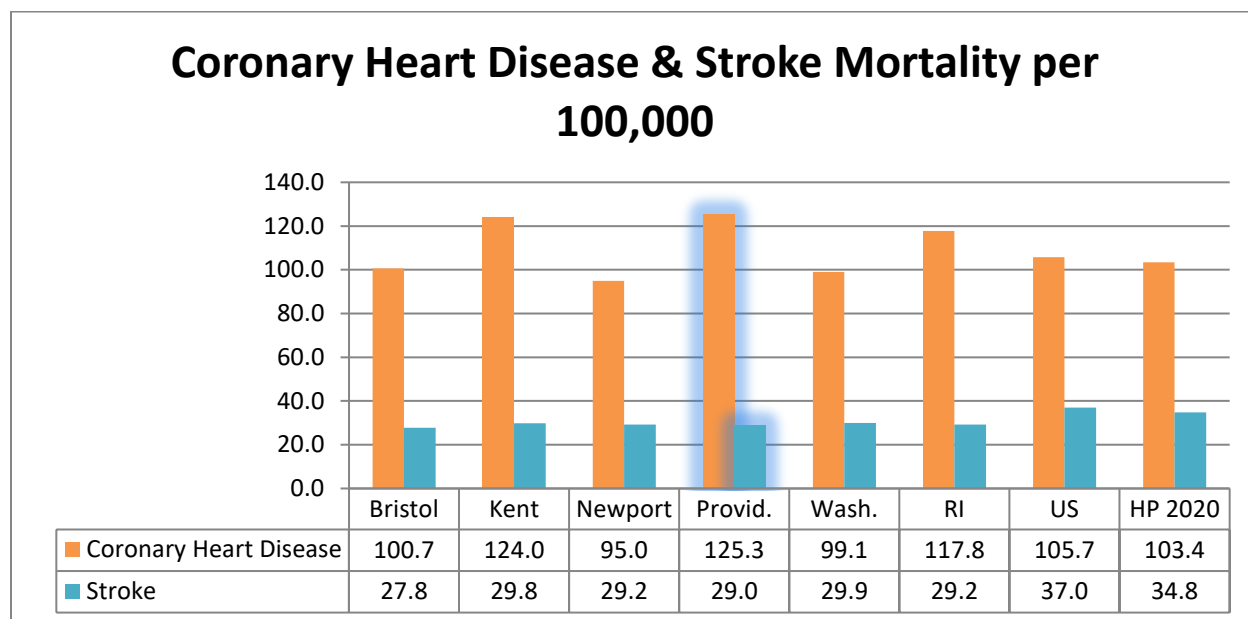
Chronic Diseases

Chronic disease rates are increasing across the nation and are the leading causes of death and disability. Chronic diseases are often preventable through reduced health risk behaviors like smoking and alcohol use, increased physical activity and good nutrition, and early detection of risk factors and disease.

More Providence County adults die from coronary heart disease and fewer adults die from stroke compared to the national average

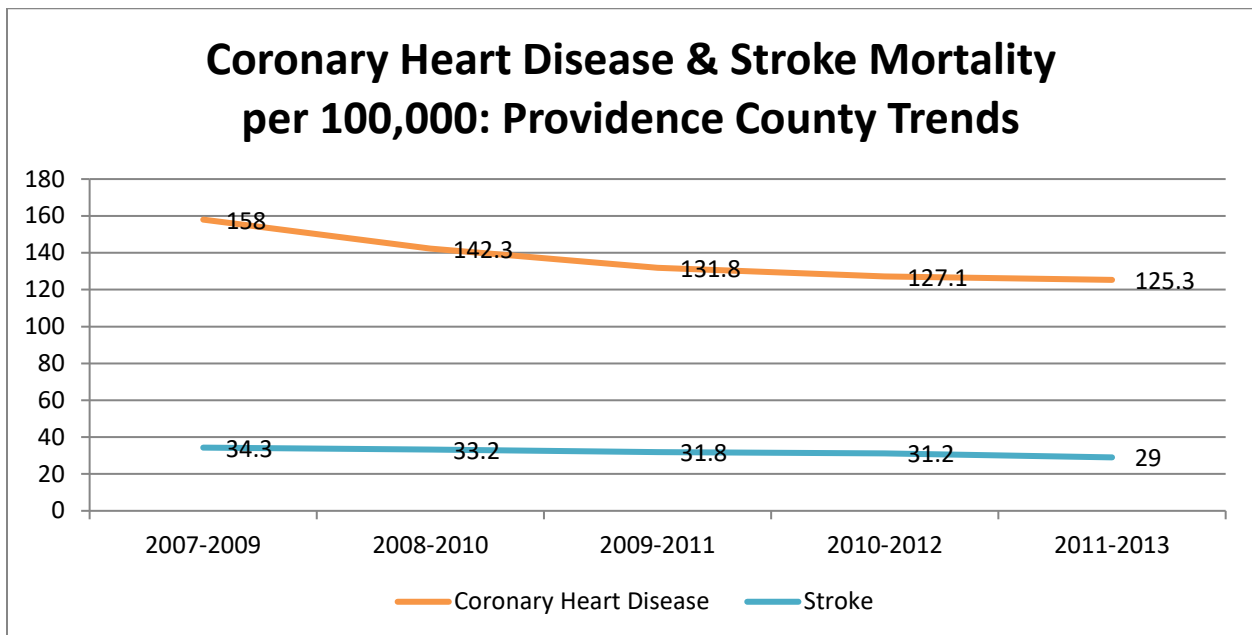
Heart Disease and Stroke

Heart disease is the leading cause of death in the nation. Providence County's mortality rate for coronary heart disease is 125.3 per 100,000. Providence and Kent County experience higher rates than other Rhode Island counties and the US average. The rate exceeds the state, the nation, and the Healthy People 2020 goal, but is declining.



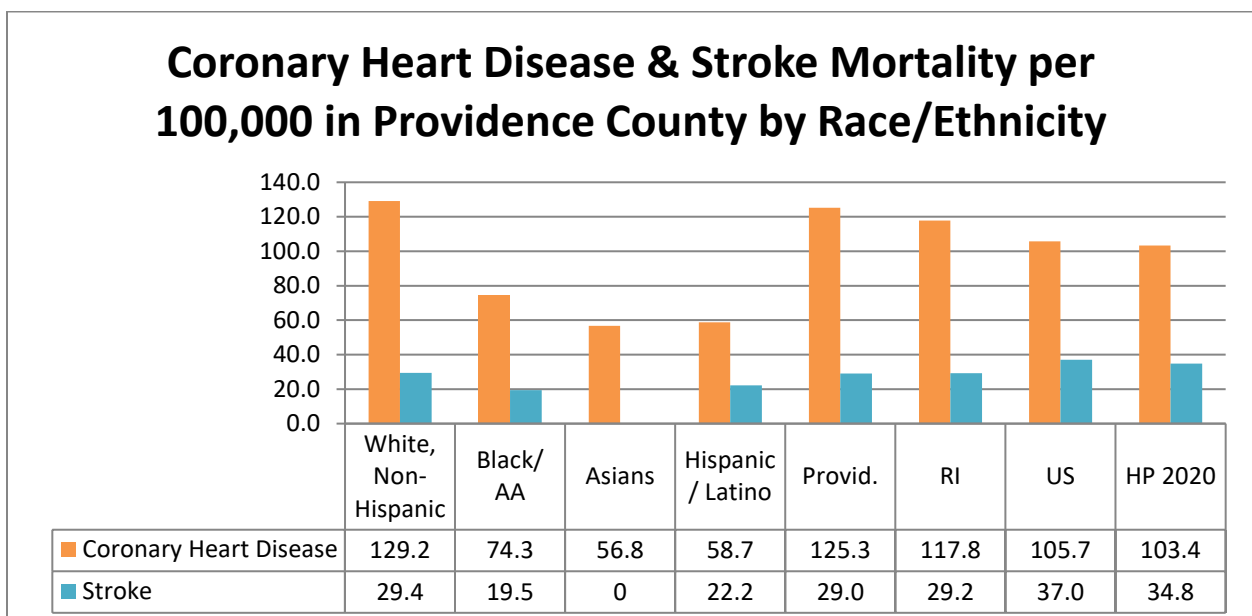
Source: Centers for Disease Control and Prevention, 2011-2013

The Providence County mortality rate due to stroke (29 per 100,000) is equivalent to the state, is lower than the national average, meets the Healthy People 2020 goal, and is declining.



Source: Centers for Disease Control and Prevention

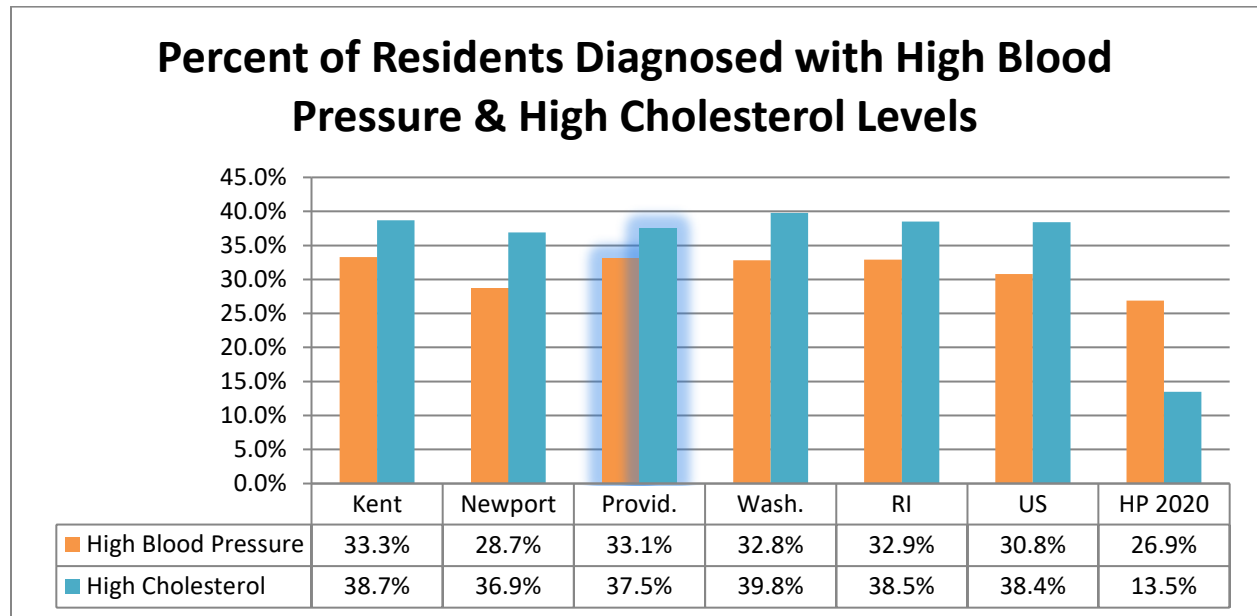
The White, Non-Hispanic population has the highest death rates for coronary heart disease and stroke. The death rates are significantly higher for heart disease among whites and less different for stroke death rate.



Source: Centers for Disease Control and Prevention, 2011-2013*

*Stroke mortality data is not available for Asians

Heart Disease is often a result of high blood pressure and high cholesterol, which can result from poor diet and exercise habits. The table below shows that Providence County is in line with the state and the nation, but does not meet Healthy People 2020 goals.



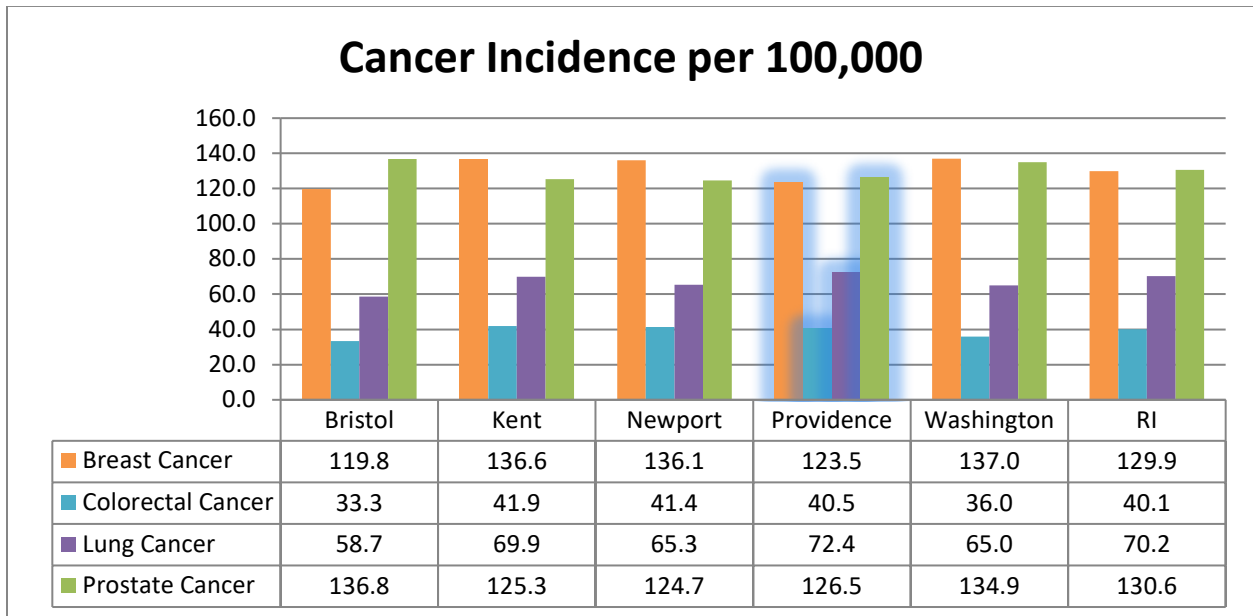
Source: Behavioral Risk Factor Surveillance System, 2009 & 2011

*Data for Bristol County is not available.

Cancer

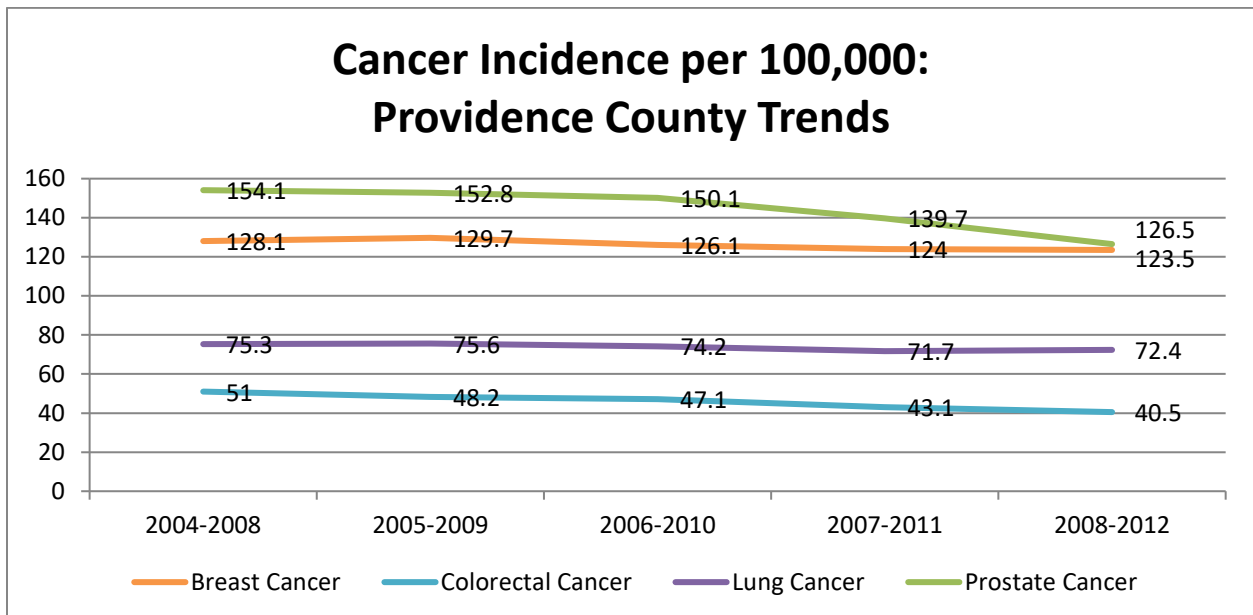
Cancer is the second leading cause of death in the nation behind heart disease. Cancer incidence rates are declining in Providence County for breast, colorectal, lung, and prostate cancer. Providence County incidence rates are generally lower than or equivalent to state rates. Lung cancer incidence is slightly higher in Providence County than other counties in the state.

Presented below are the incidence and death rates for the most commonly diagnosed cancers: breast (female), colorectal, lung, and prostate (male).



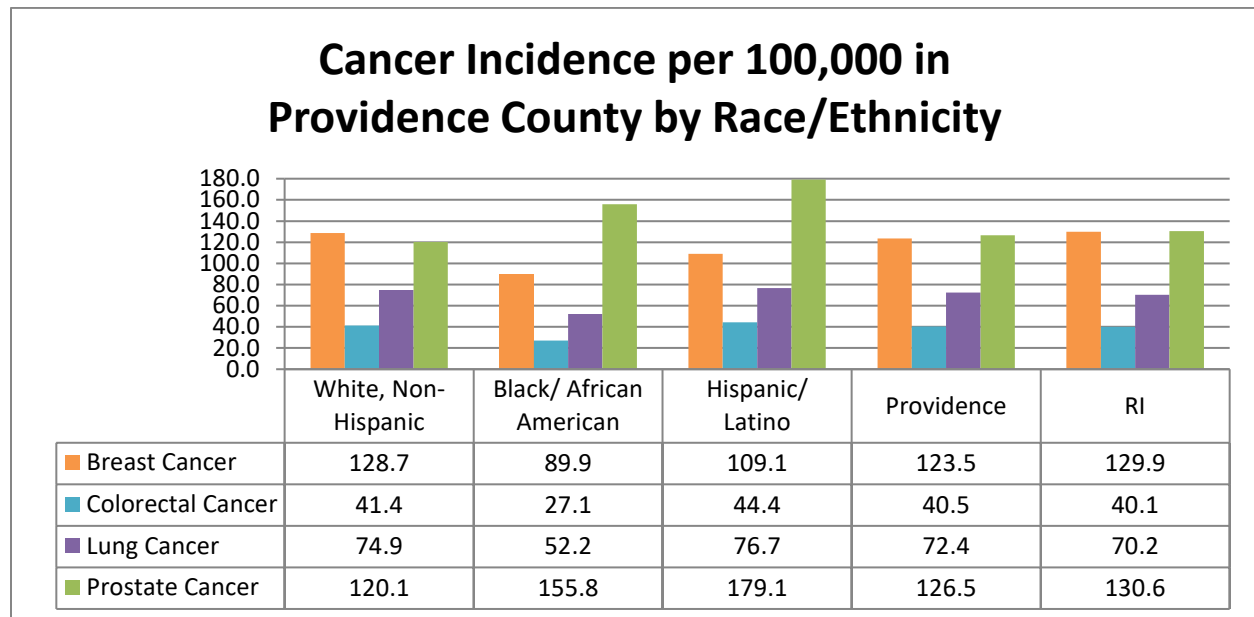
Source: National Cancer Institute, 2008-2012

Incidence rates are holding steady for breast, colorectal, and lung cancer. Prostate cancer rates have continued to decline since 2008.



Source: National Cancer Institute

Overall cancer incidence rates in Providence County are declining, but racial and ethnic disparities exist. Hispanic/Latino residents have the highest incidence of colorectal, lung, and prostate cancer. White, Non-Hispanic women are more likely to get breast cancer, while Hispanic/Latino and Black/African American men have higher rates of prostate cancer.



Source: National Cancer Institute, 2008-2012

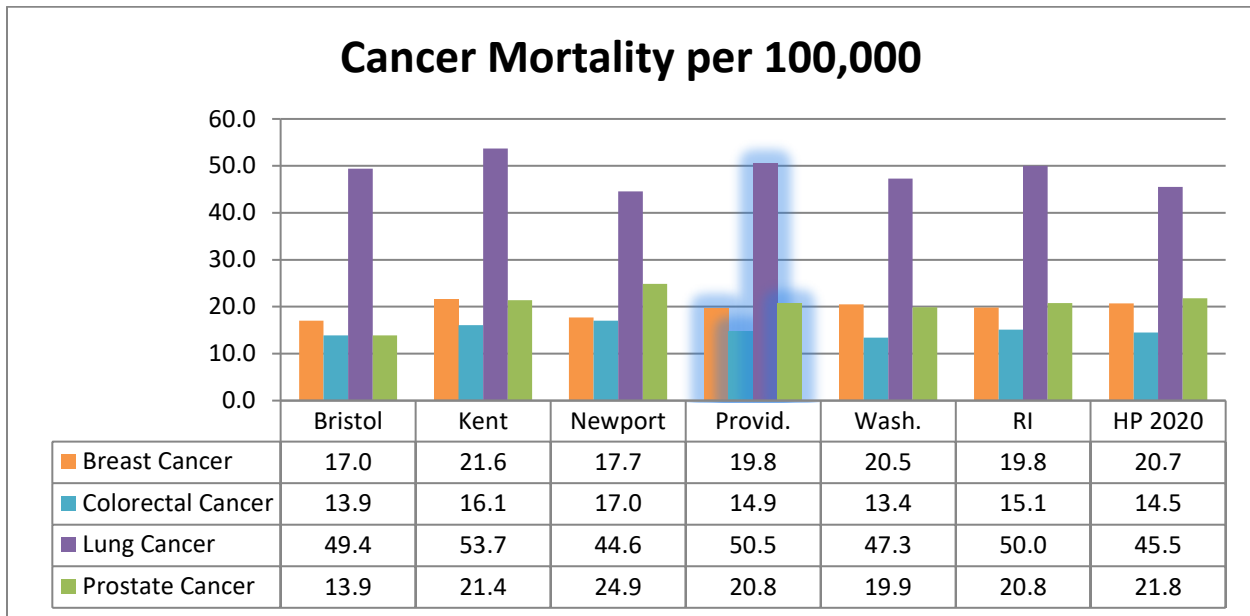
Cancer screenings are essential for early diagnosis and preventing mortality. Colorectal cancer screenings are recommended for adults age 50 years or over. In Providence County, 69.6% of adults have had a colorectal cancer screening. The percentage is the lowest in the state. Mammograms are recommended for women age 50 years or over to detect breast cancer. Approximately 83% of women in Providence County had a mammogram in the past two years, which is equivalent to the state. Screening rates are not comparable to past years of data due to changes in methodology.

Cancer Screenings

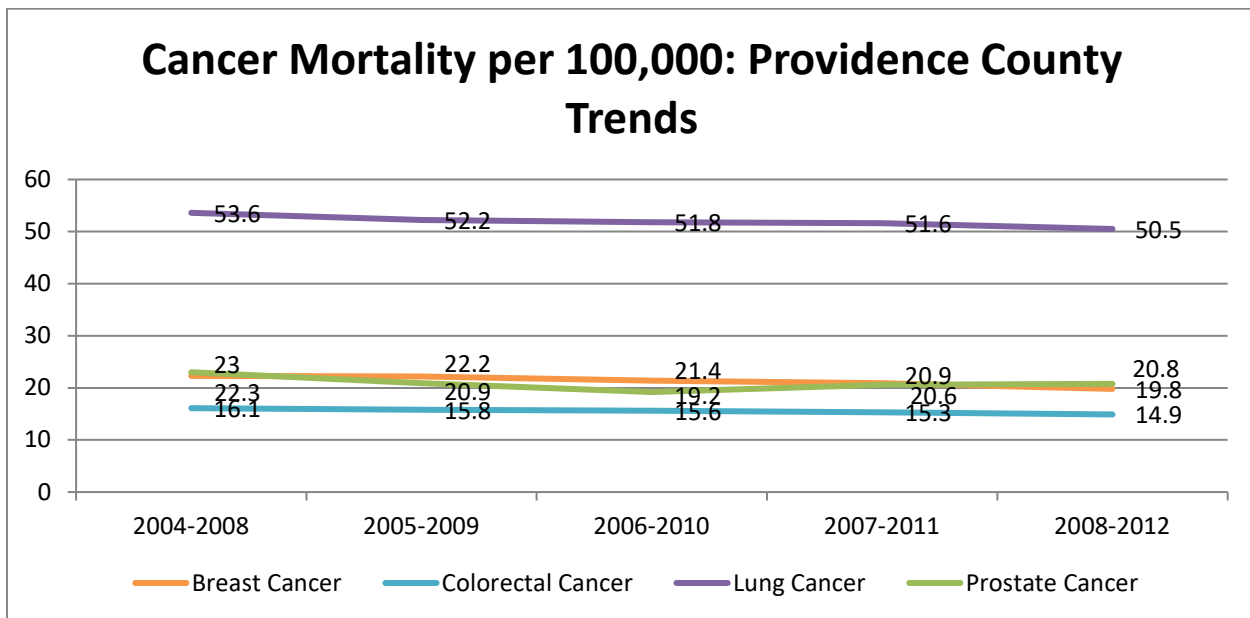
	Colorectal Cancer Screening	Mammogram in Past Two Years
Bristol	79.8%	87.2%
Kent	79.3%	82.6%
Newport	74.6%	83.4%
Providence	69.6%	83.2%
Washington	84.7%	83.5%
Rhode Island	74.7%	83.5%

Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

Cancer mortality rates are declining slightly in Providence County for breast, colorectal, lung, and prostate cancer. Providence County mortality rates are generally lower than or equivalent to both the state and Healthy People 2020 goals.

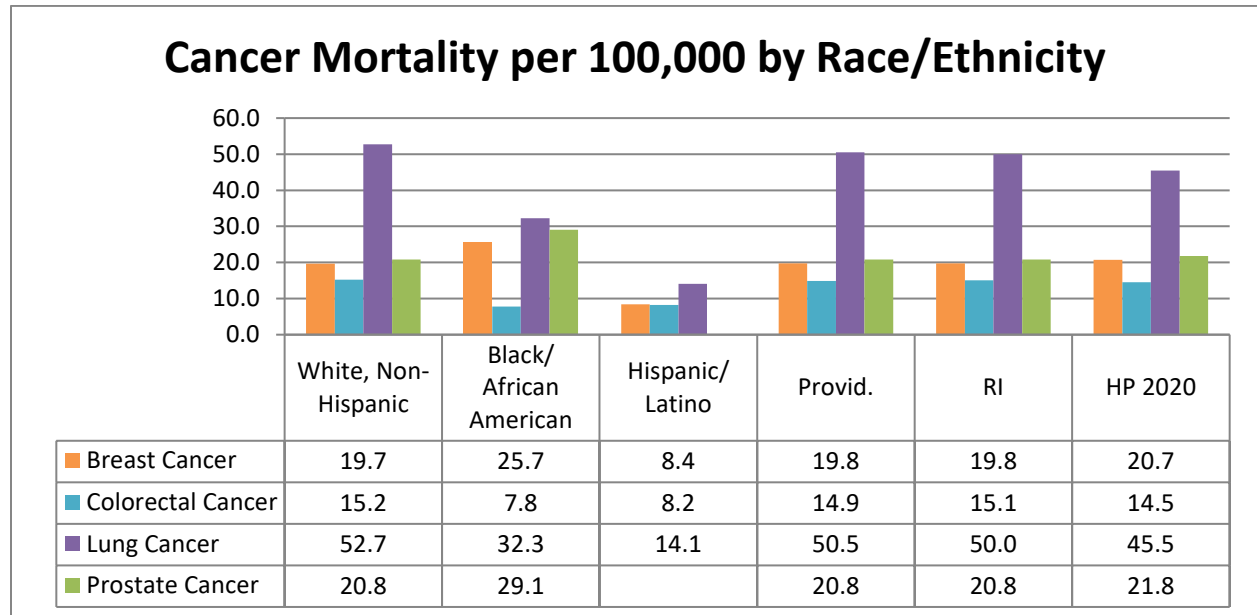


Source: National Cancer Institute, 2008-2012



Source: National Cancer Institute

Racial and ethnic disparities also exist for cancer mortality. While Black/African American women have the lowest incidence of breast cancer, they are most likely to die from the disease. Black/African American men are more likely to be diagnosed with prostate cancer and to die from it. Hispanic/Latino men are most likely to be diagnosed with Prostate Cancer; mortality rates are not available for this subgroup.



Source: National Cancer Institute, 2008- 2012*

*Prostate cancer mortality data is not available for Hispanics/Latinos

Chronic Lower Respiratory Disease

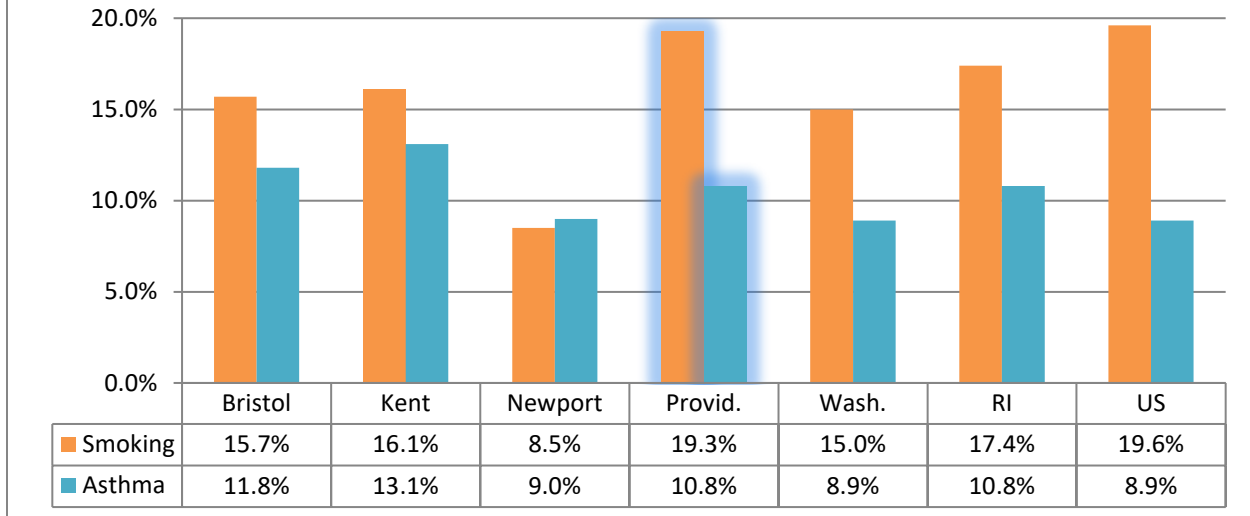
Chronic lower respiratory disease (CLRD) is the third most common cause of death in the nation. CLRD encompasses diseases like chronic obstructive pulmonary disorder, emphysema, and asthma.

In Providence County, 10.8% of adults have asthma. The percentage is higher when compared to the nation, but represents a decrease from the 2013 CHNA (12.8%).

A higher percentage of adults and children have asthma compared to the nation

Landmark Medical Center’s 2013 CHNA BRFSS study also found that 20.3% of children have asthma. The percentage is higher than the national comparison (13.4%).

Smoking & Asthma Prevalence



Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

Smoking cigarettes contributes to the onset of CLRD. Adults in Providence County are more likely to smoke compared to the state. The percentage of youth smokers varies; most notably 15% of Johnston high school students report smoking.

More adults in Providence County smoke than across the state

2013-2014 Youth Cigarette Use in Providence County School Districts

School District	Cigarette Use	
	Middle School	High School
Burrillville	5%	11%
Central Falls	4%	6%
Cranston	2%	10%
Cumberland	2%	11%
East Providence	2%	10%
Foster-Glocester	1%	11%
Johnston	4%	15%
Lincoln	NA	7%
North Providence	3%	11%
North Smithfield	NA	7%
Pawtucket	2%	6%
Providence	3%	5%
Scituate	2%	10%
Smithfield	1%	8%
Woonsocket	2%	9%
Rhode Island	2%	9%

Source: Rhode Island Kids Count Factbook, 2015

Diabetes

Diabetes is caused either by the body's inability to produce insulin or effectively use the insulin that is produced. Diabetes can cause a number of serious complications. Type II diabetes, the most common form, is largely preventable through diet and exercise.

In Providence County, 10% of adults have been diagnosed with diabetes, which is equivalent to the state and the nation, but represents an increase from the 2013 CHNA (9%).

Providence County adults are more likely to die from diabetes than the state average

The diabetes mortality rate in Providence County (17 per 100,000) is the highest in the state, but decreased from the 2013 CHNA (18 per 100,000).

Diabetes Prevalence & Mortality

	Diabetes Prevalence	Diabetes Mortality per 100,000
Bristol	3.6%	11.3
Kent	11.6%	16.1
Newport	7.0%	11.9
Providence	10.0%	17.0
Washington	7.3%	14.1
Rhode Island	9.8%	15.7
United States	9.7%	21.3

Source: Behavioral Risk Factor Surveillance System, 2010 & 2012 & Centers for Disease Control and Prevention, 2011-2013

Senior Health

Seniors face a number of challenges related to health and well-being as they age. They are more prone to chronic disease, social isolation, and disability. The following table notes the percentage of Medicare Beneficiaries 65 years or over who have been diagnosed with a chronic condition.

Chronic Conditions

The percentage of Medicare Beneficiaries in Providence County with a chronic condition is typically higher than the state and the nation.

Chronic Conditions among Medicare Beneficiaries 65 Years or Over

	Bristol	Kent	Newport	Provid.	Wash.	RI	US
Alzheimer's Disease	11.6%	12.1%	10.7%	13.4%	12.1%	12.5%	11.4%
Asthma	5.1%	6.1%	4.3%	6.2%	4.9%	5.7%	4.3%
Cancer	10.9%	11.2%	10.8%	10.4%	10.4%	10.6%	9.1%
Depression	13.4%	16.1%	13.3%	16.0%	12.1%	15.0%	12.7%
Diabetes	24.0%	27.2%	23.4%	28.7%	22.4%	26.6%	27.4%
Hypertension	60.8%	65.2%	60.4%	65.4%	61.4%	63.9%	59.1%
High Cholesterol	54.8%	56.5%	51.6%	55.1%	52.8%	54.5%	48.0%
Coronary Heart Disease	26.5%	34.3%	27.0%	31.3%	30.3%	30.9%	31.1%
Stroke	3.6%	4.5%	4.6%	4.1%	3.6%	4.1%	4.1%

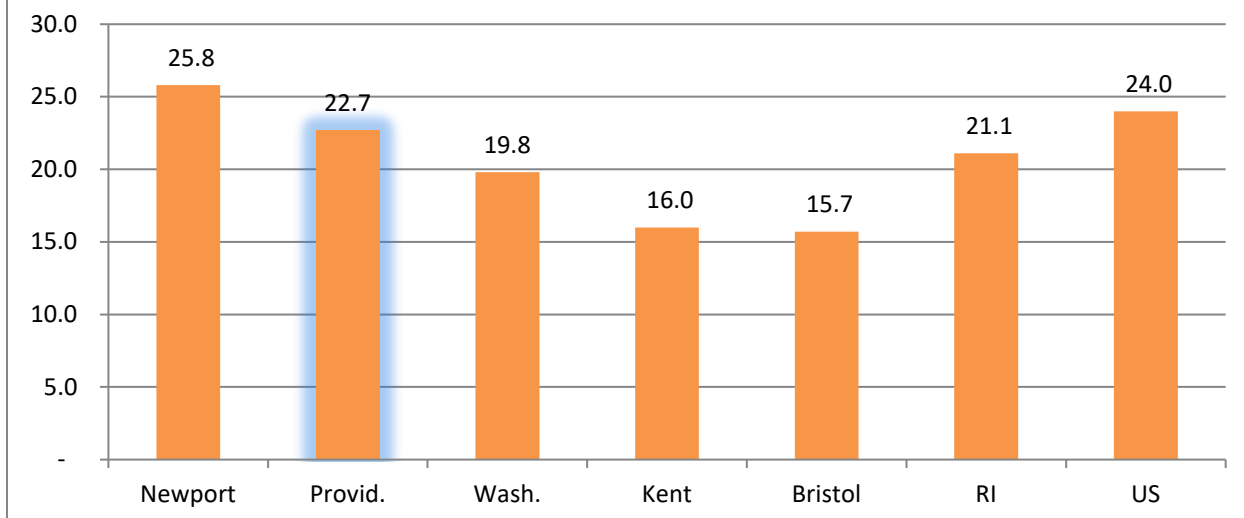
Source: Centers for Medicare & Medicaid Services, 2012

Alzheimer's Disease

According to the National Institute on Aging, "Although one does not die of Alzheimer's disease, during the course of the disease, the body's defense mechanisms ultimately weaken, increasing susceptibility to catastrophic infection and other causes of death related to frailty."

The age-adjusted death rate attributed to Alzheimer's disease among Providence County residents (22.7 per 100,000) is the second highest in the state, but lower than the nation. The rate remained steady from the past CHNA.

Alzheimer's Disease Mortality per 100,000



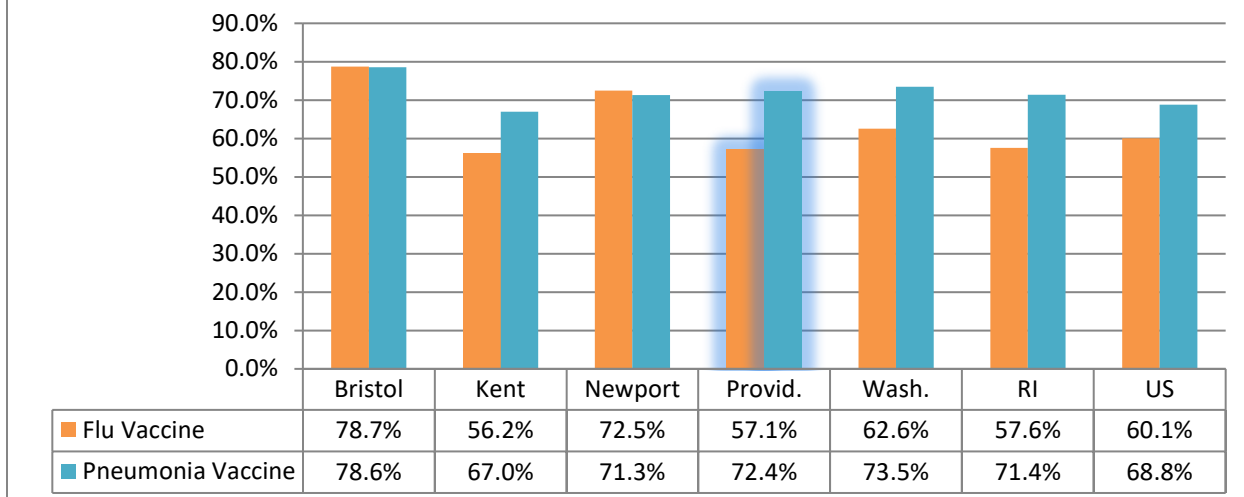
Source: Centers for Disease Control and Prevention, 2011-2013

Immunizations

The Advisory Committee on Immunization Practices recommends all individuals age six months or older receive the flu vaccine and adults age 65 or older receive the pneumonia vaccine. Providence County has the second lowest senior flu vaccination rate among all counties in Rhode Island (57.1%). The percentage increased slightly from the last CHNA (56.2%). However, the percentage of seniors vaccinated for pneumonia in Providence County (72.4%) exceeds the state and the nation and remained steady from the last report of 72.7%.

More Providence County seniors get vaccinated against pneumonia than flu

Vaccine Rates among Adults 65+



Source: Behavioral Risk Factor Surveillance System, 2008, 2010, & 2012

Behavioral Health

Behavioral health encompasses both mental health and substance abuse conditions. Diagnosis, treatment, and comorbidity with chronic diseases are having an increasing impact on residents, patients, and the healthcare system. According to the September 2015 *Rhode Island Behavioral Health Project Report* by Truven Health Analytics, Rhode Island children and adults experience poorer mental health and substance abuse outcomes than residents in other New England states. Adult residents in Rhode Island are more likely to be hospitalized for mental health and substance use disorders. The following section analyzes measures related to feelings of depression, mental health diagnoses, mental health deaths, and provider access in Rhode Island.

Mental Health

Providence County adults report an average of 3.7 poor mental health days per 30-day period. The average is equal to the 2013 CHNA, but is the second highest in the state and surpasses the nation. In addition, the 2013 CHNA found that 25.9% of adults have been diagnosed with a depressive disorder compared to 22% across the state and 16.8% across the nation.

Providence County adults report a higher average of poor mental health days and a higher incidence of depressive disorders

Despite residents reporting poorer mental health, Providence County has the lowest suicide rate in the state. The suicide rate meets the Healthy People 2020 goal and decreased from the 2013 CHNA rate of 10.8 per 100,000.

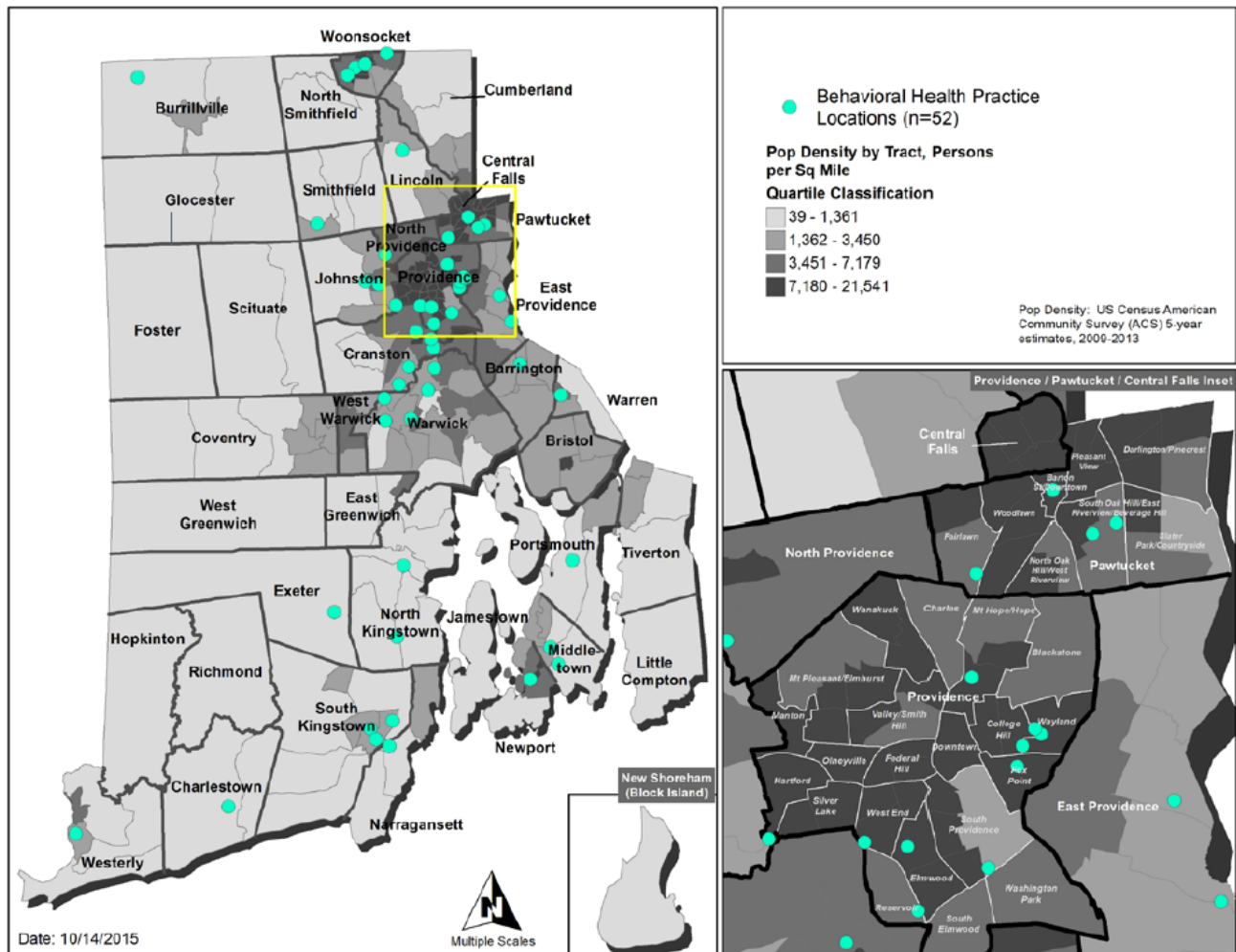
Mental Health Measures

	Poor Mental Health Days	Suicide per 100,000	Mental Health Provider Ratio
Bristol	2.9	N/A	541:1
Kent	4.0	10.5	397:1
Newport	3.0	11.0	354:1
Providence	3.7	9.1	257:1
Washington	3.2	13.9	366:1
Rhode Island	3.6	10.2	298:1
United States	3.4	12.5	529:1
HP 2020	N/A	10.2	N/A

Source: Behavioral Risk Factor Surveillance System, 2010 & 2012 & Centers for Disease Control and Prevention, 2011-2013 & County Health Rankings, 2012

Behavioral Health Providers

There are 52 licensed behavioral health clinics in Rhode Island. In 2014, the median number of patients seen across all clinics was 566. The following figure illustrates the location of the clinics layered over population density. Behavioral health providers are most available in Providence and Kent Counties.



Source: Rhode Island Department of Health Statewide Health Inventory, 2015

Substance Abuse

Substance abuse includes both alcohol and drug abuse. In Providence County, binge drinking and DUI deaths are on par with the state average. Binge drinking decreased by 2.7 points from the 2013 CHNA. Drug poisoning deaths are the second highest in the state and increased nearly 2 percentage points from 15.7 per 100,000 to 17.5 100,000.

The death rate due to drug poisoning is the second highest in the state and increased nearly 2 points

Substance Abuse Measures

	Binge Drinking	Percent of Driving Deaths due to DUI	Drug Poisoning Deaths per 100,000
Bristol	9.4%	28.6%	11.7
Kent	15.9%	47.3%	18.9
Newport	17.6%	50.0%	10.3
Providence	17.1%	38.0%	17.5
Washington	18.4%	43.8%	13.2
Rhode Island	17.2%	41.4%	16.4
United States	16.9%	30.6%	N/A
HP 2020	24.4%	N/A	N/A

Source: Behavioral Risk Factor Surveillance System, 2010 & 2012 & County Health Rankings, 2006-2012 & 2009-2013

The *Rhode Island Behavioral Health Project Report* reported that Rhode Island residents have the highest rate of death due to narcotics and hallucinogens in comparison to other New England states. The rate is also higher than the national average. In addition, residents are more likely to be hospitalized for mental and substance use disorders and have unmet mental health care needs in comparison to other New England states. The hospitalization rate is 26% higher than Massachusetts (second highest in New England) and 150% higher than Vermont.

Youth Behavioral Health

An increasing number of youth are affected by behavioral health issues. *Rhode Island Kids Count* reported that in 2013, 2,737 youth were hospitalized across five hospitals with a primary diagnosis of mental disorder. The number of hospitalizations represents an increase of 53% from 2003. The report identified the top diagnoses for inpatient care as depressive disorders (41%), bipolar disorders (38%), anxiety disorders (12%), and adjustment disorders (5%). Rhode Island adolescents age 12 to 17 years are more likely to have major depressive episodes, and young adults age 18 to 24 years are more likely to have serious psychological distress, when compared to other New England states and the nation.

Suicide is another concern among youth. In 2013, 14% of Rhode Island high school students reported attempting suicide and there were 916 emergency department visits and 406 hospitalizations among youth 13 to 19 years for suicide attempts. A total of 24 youth in Rhode Island died due to suicide between 2009 and 2013.

14% of Rhode Island high school students reported attempting suicide

Substance abuse is affecting more youth in Rhode Island. The following table depicts substance abuse data among middle school and high school students by town in Providence County. In general, adolescents age 12 to 17 years in Rhode Island have higher rates of illicit drug use when compared to other New England states and the nation.

2013-2014 Youth Substance Abuse by School District

School District	Alcohol Use		Marijuana Use		Prescription Drug Use		Cigarette Use	
	Middle School	High School	Middle School	High School	Middle School	High School	Middle School	High School
Burrillville	6%	29%	9%	35%	4%	10%	5%	11%
Central Falls	9%	27%	9%	30%	7%	7%	4%	6%
Cranston	5%	28%	6%	39%	3%	14%	2%	10%
Cumberland	3%	28%	4%	36%	2%	13%	2%	11%
East Providence	6%	30%	8%	42%	4%	14%	2%	10%
Foster-Glocester	3%	23%	4%	30%	2%	13%	1%	11%
Johnston	5%	33%	7%	40%	3%	17%	4%	15%
Lincoln	2%	29%	4%	33%	2%	10%	NA	7%
North Providence	6%	28%	8%	42%	4%	11%	3%	11%
North Smithfield	2%	22%	3%	24%	2%	7%	NA	7%
Pawtucket	9%	24%	10%	37%	3%	10%	2%	6%
Providence	11%	24%	10%	31%	5%	9%	3%	5%
Scituate	5%	23%	5%	22%	3%	9%	2%	10%
Smithfield	2%	23%	2%	32%	2%	13%	1%	8%
Woonsocket	6%	25%	9%	39%	3%	11%	2%	9%
Rhode Island	6%	26%	7%	34%	3%	12%	2%	9%

Source: Rhode Island Kids Count Factbook, 2015

Maternal and Child Health

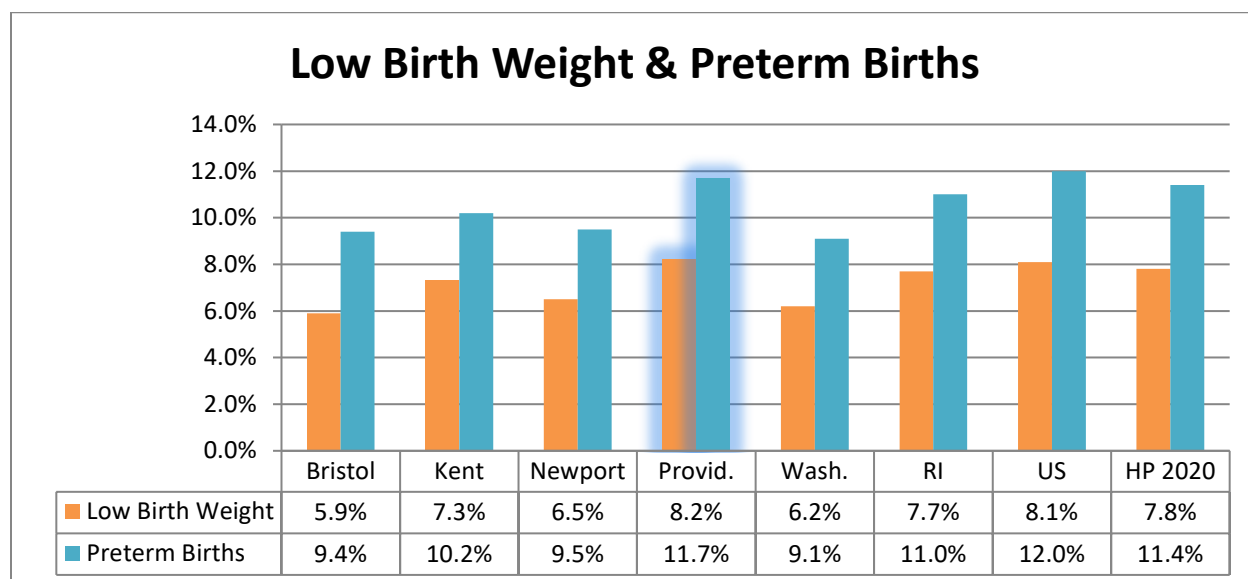
Prenatal & Infant Health

Maternal and child health is measured by a number of indicators, including low birth weight and preterm births. Low birth weight is defined as a birth weight of less than 5

Providence County mothers are more likely to have low birth or premature babies. Disparities are greatest among Black/African American mothers.

pounds, 8 ounces. It is often a result of premature birth, fetal growth restrictions, or birth defects. The percentage of low birth weight babies in Providence County is higher than the state and the nation and exceeds the Healthy People 2020 goal, but represents a decrease from the 2013 CHNA (8.5%).

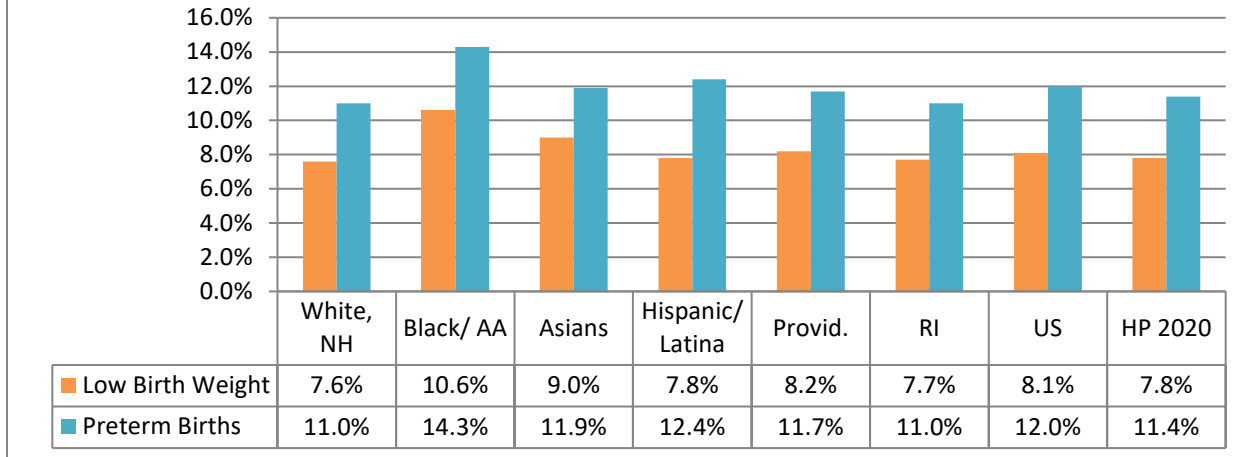
Premature births are births that occur earlier than the 37th week of pregnancy. They often lead to infant death. The percentage of preterm births in Providence County is higher than the state and exceeds the Healthy People 2020 goal, but represents a decrease from the 2013 CHNA (12.5%).



Source: Health Indicators Warehouse, 2007-2013

Black/African American mothers are the most likely to have a low birth weight (10.6%) and/or preterm birth (14.3%). Asian and Hispanic/Latina women and babies also have higher rates compared to White mothers.

Low Birth Weight & Preterm Births by Race, Ethnicity



Source: Health Indicators Warehouse, 2007-2013

2009-2013 Infant Births by Maternal Characteristics and Town

	Total Births	Births per 1,000 Girls 15-19 yrs	Delayed Prenatal Care*	Exclusively Breast Fed	Preterm Births	Infant Mortality Rate per 1,000 Births
Central Falls	1,654	73.4	15.5%	51%	11.2%	4.8
Cranston	3,915	16.0	11.6%	66%	11.2%	5.1
East Providence	2,536	21.0	9.5%	67%	9.5%	5.1
Johnston	1,318	15.3	11.8%	65%	9.6%	5.3
North Providence	1,533	17.2	11.0%	68%	10.1%	6.5
Lincoln	904	9.2	9.4%	71%	9.8%	6.6
Rhode Island	55,169	21.0	12.8%	64%	10.7%	6.6
Cumberland	1,586	9.2	8.5%	72%	8.4%	6.9
Woonsocket	3,056	63.8	15.8%	53%	11.9%	7.9
Pawtucket	5,020	37.5	15.9%	57%	12.0%	8.4
Providence	13,131	31.1	17.2%	55%	12.7%	8.8
Burrillville	655	14.1	11.6%	71%	8.2%	NA**
Foster	146	5.2	NA (n=20)	76%	NA (n=18)	NA**
Glocester	365	7.0	NA (n=41)	76%	NA (n=38)	NA**
North Smithfield	433	7.0	NA (n=43)	78%	NA (n=47)	NA**
Scituate	310	4.6	NA (n=36)	75%	NA (n=24)	NA**
Smithfield	615	3.1	7.0%	75%	8.6%	NA**

Source: Rhode Island Kids Count Factbook, 2015

*Percentage of mothers initiating prenatal care in the second or third trimester

**The number of infant deaths is less than 5

According to *Rhode Island Kids Count*, in 2013 76 babies were diagnosed with Neonatal Abstinence Syndrome (NAS). The equivalent rate is 72 per 100,000 births and is nearly double the 2006 rate of 37.2 per 100,000 births.

Immunizations

The Advisory Committee on Immunization Practices recommends that all individuals age six months or older receive the flu vaccine. However, the vaccine is considered a priority for children ages six months to four years. The 2013 CHNA found that 77.1% of children under 18 years received a flu vaccine. The statewide average was 73.2%.

In addition, the Advisory Committee on Immunization Practice recommends a series of vaccinations for all children age 19 months to 35 months. The series includes diphtheria, tetanus, polio, measles, etc. *Rhode Island Kids Count* found that 82% of Rhode Island children received the full series of vaccinations, the best in the nation. The report also found that 95% to 98% of kindergarten students received the five immunizations required for school entry.

Landmark Medical Center Utilization Data Analysis

Background

Landmark Medical Center discharge data related to chronic diseases and behavioral health was analyzed across the emergency room, observation, and inpatient settings to determine usage trends related to key community health needs. The data were correlated with public health statistics and socio-economic measures to determine if there were utilization patterns among high risk populations and to improve outcomes for patients.

The claims data was provided by Truven Health Analytics and all analyses were performed by Baker Tilly. Due to availability, inpatient data is based on fiscal years 2013 and 2014 and observation and emergency room data are based on fiscal year 2014.

Inpatient Cases Combined visits FY 2013 and FY2014	Emergency Visits FY2014	Observation (not admitted) FY2014
12,954	32,378	339

The hospital utilization data was considered in conjunction with demographic data to more fully understand the needs of Landmark Medical Center's service area. It is important to consider public health data with the hospital utilization data as in a given year much of the population will not have contact with any of the hospital's departments. Therefore, their health concerns are not measured by health provider utilization data.

The following section reports utilization findings and compares local hospital data with a state average. The Rhode Island State Hospital average includes all hospitals in Rhode Island except specialty hospitals (Butler Hospital, Bradley Hospital, Hasbro Children's Hospital, and Women & Infants Hospital). After a careful review of the data it was decided a three percentage point difference from the Rhode Island average warranted hospital attention. This standard was used throughout all analyses.

Chronic Condition Prevalence

The following table illustrates the zip code 02895 (Woonsocket) accounting for 50% or more of utilization across six chronic conditions: Asthma, Behavioral Health, Chronic Heart Failure, Chronic Obstructive Pulmonary Disorder, Diabetes, and Hypertension. The data represent the percentage of chronic disease cases originating from residents who reside in Woonsocket. The condition may not be the primary reason for the visit, or the primary diagnosis code, but it is listed on the patient's record as an existing condition.

Zip Code Accounting for 50% or more of Chronic Condition Prevalence across Inpatient and Outpatient Settings

Zip Code	Asthma	Behavioral Health	CHF	COPD	Diabetes	Hypertension
02895 Woonsocket	76%	69%	57%	66%	68%	62%

Recognizing the relationship between social determinants of health and health status, the following table shows socioeconomic measures for zip code 02895 (Woonsocket). Woonsocket has some of the highest utilization rates and poorest socioeconomic measures in the service area. It also where Landmark Medical Center is located, which may drive higher utilization.

Social Determinants of Health Indicators by Zip Code

	Black/ African American	Hispanic/ Latino	English Speaking	Families in Poverty	Families w/ Children in Poverty	Single Female Households w/ Children	Unemployment	Less than HS Diploma
02895 Woonsocket	6.8%	16.3%	77.7%	19.1%	17.2%	20.4%	5.3%	21.1%
Total Service Area (SA)	2.3%	4.9%	89.1%	5.3%	4.3%	8.8%	5.7%	9.3%
Rhode Island	5.9%	14.1%	79.0%	9.4%	7.3%	12.1%	6.4%	14.5%

Source: The Nielsen Company, 2015

Color Coding Guide
0-2% points higher than the Total SA Exception: English Speaking cells are 0-2% points lower than Total SA
More than 2% points higher than the Total SA Exception: English Speaking cells are more than 2% points lower than Total SA

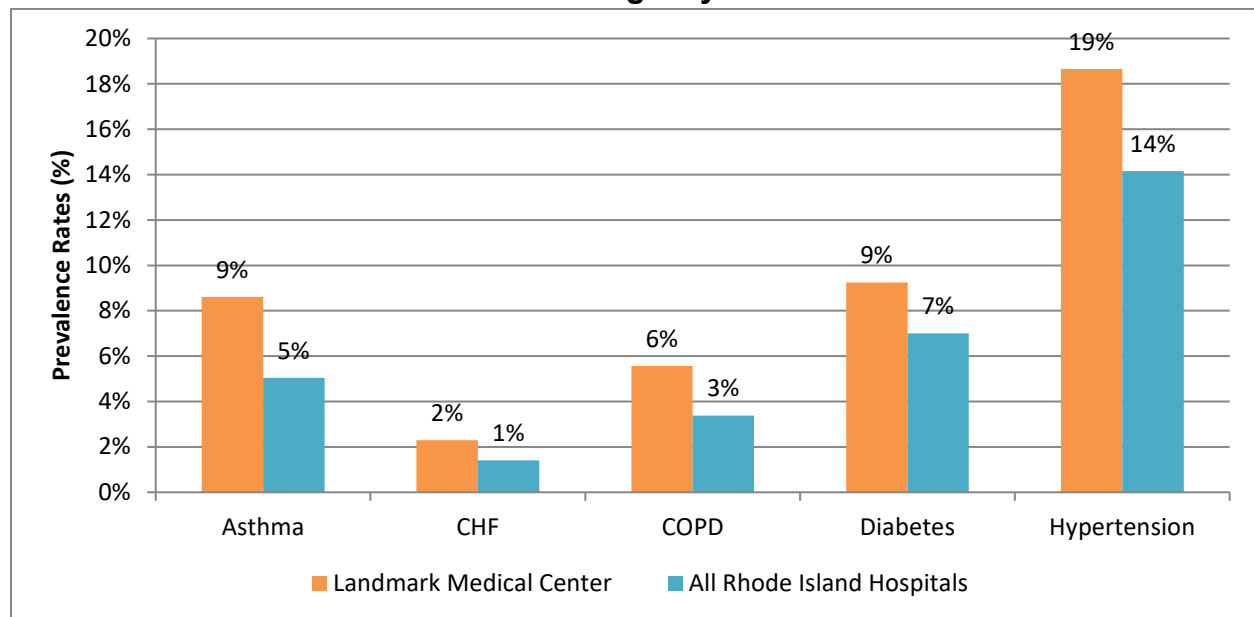
Chronic Condition Prevalence among Hospital Patients

The following graphs examine the prevalence of common chronic conditions among Landmark Medical Center emergency room and inpatient settings. A data set comprising an average of all Rhode Island Hospitals (excluding specialty hospitals) is provided as a benchmark. The data includes any patient with a diagnosis for the chronic condition, whether the condition was the admitting diagnosis or not.

Chronic Disease among Emergency Room Patients

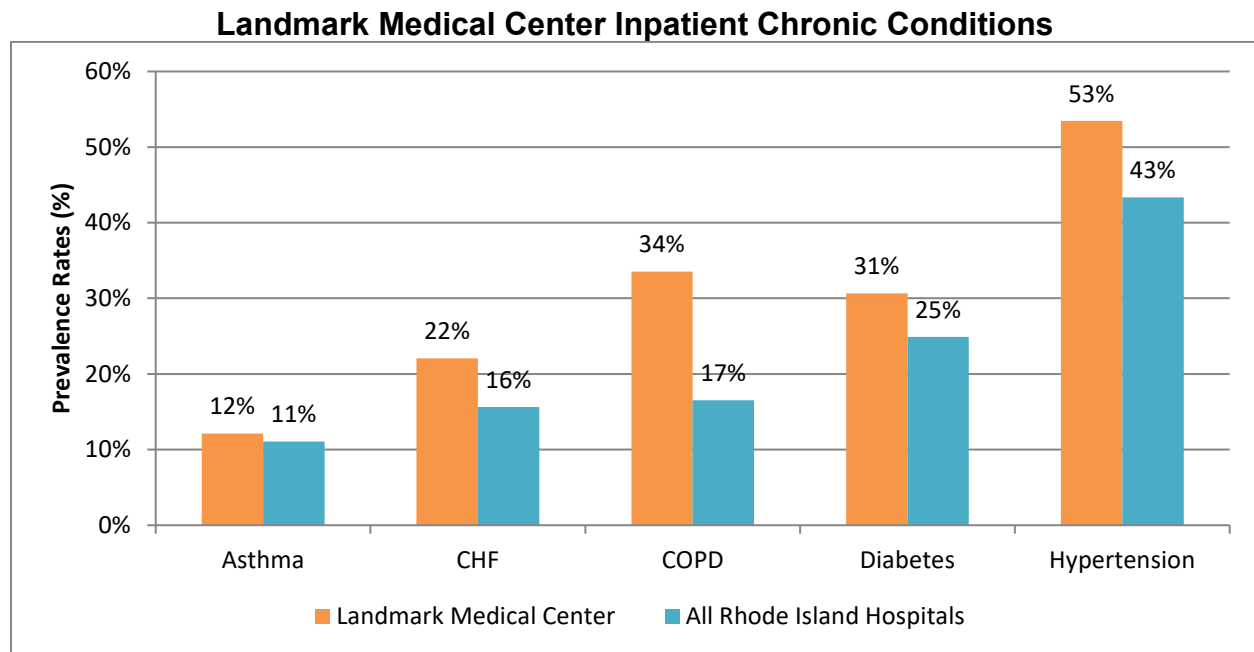
Patients seen at the Landmark Medical Center emergency room have a higher prevalence of asthma (9%), COPD (6%), and hypertension (19%) compared to the Rhode Island average. The prevalence of CHF and diabetes is equivalent to the state average.

Landmark Medical Center Emergency Room Chronic Conditions



Chronic Conditions among Inpatient Admissions

Patients admitted to Landmark Medical Center have a higher prevalence of CHF (22%), COPD (34%), diabetes (31%), and hypertension (53%) compared to the state average. The prevalence of asthma is equivalent to the state average.



Behavioral Health and Medical Comorbidities in the Inpatient Setting

Inpatient data for all Rhode Island hospitals were analyzed in aggregate to identify behavioral health admissions across the state and to demonstrate local needs related to behavioral health inpatient care.

Among Landmark Medical Center service area residents, during fiscal years 2013 and 2014, there were 4,113 inpatient admissions with behavioral health as the primary diagnosis. The following table identifies the number and percentage of total behavioral health admissions (may not be unique patient visits), by patient's zip code of residence. Behavioral health admissions include admissions to all hospitals within Rhode Island, not just Landmark Medical Center.

Residents from two zip codes (02895 and 02864) account for approximately 53% of all behavioral health admissions across the Landmark Medical Center service area; one zip code 02895 (Woonsocket) has the highest rates of poverty and lowest educational attainment in the service area.

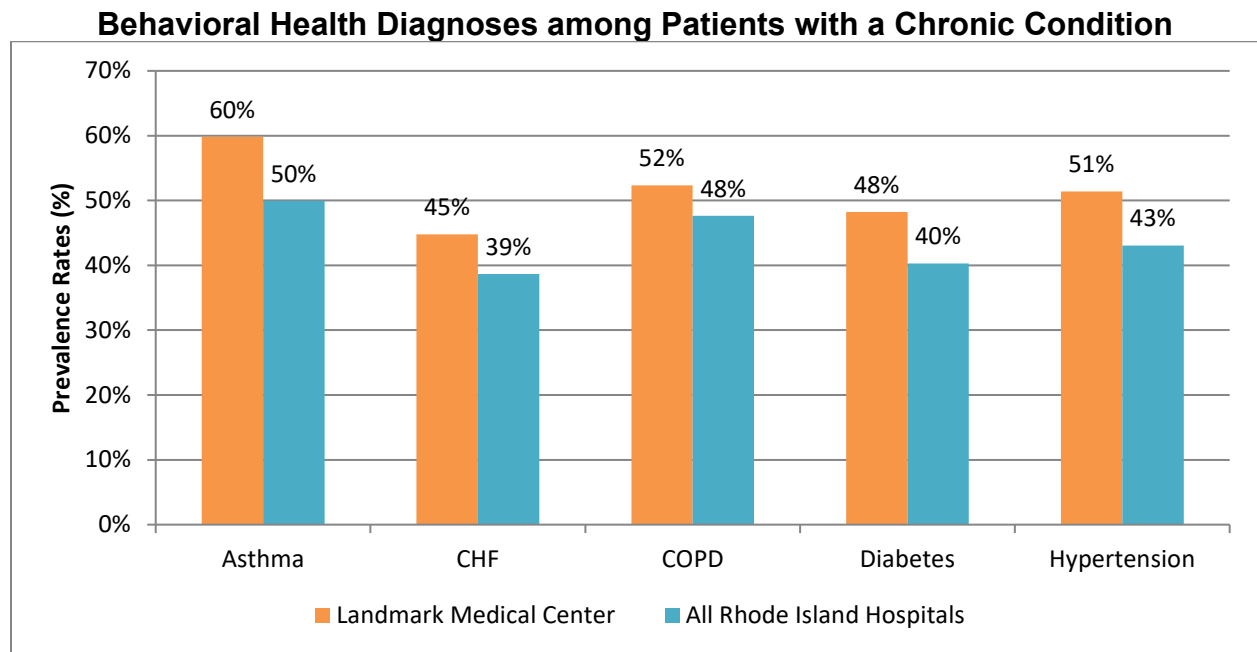
Behavioral Health Admissions Over Two Years (Oct 1, 2012-Sep 30, 2014)

Patient Zip Code of Residence	Behavioral Health Admissions* within the Zip Code of Residence (not unique patients)	% of Total Behavioral Health Admissions in Landmark Medical Center's Service Area (4,113/2yrs)
02895, Woonsocket	1,615	39.27%
02864, Cumberland	583	14.17%
02917, Smithfield	339	8.24%
02865, Lincoln	299	7.27%
02859, Pascoag	195	4.74%
02896, North Smithfield	171	4.16%
02828, Greenville	152	3.70%
02814, Chepachet	149	3.62%
02830, Harrisville	133	3.23%
02838, Manville	121	2.94%
02703, Attleboro, MA	101	2.46%
02760, North Attleboro	64	1.56%
02876, Burrillville	42	1.02%
01504, Blackstone, MA	39	0.95%
02762, Plainville, MA	19	0.46%
02038, Franklin, MA	19	0.46%
02048, Mansfield, MA	15	0.36%
02019, Bellingham, MA	14	0.34%
01569, Uxbridge, MA	11	0.27%
02829, Glocester	8	0.19%
02093, Wrentham, MA	6	0.15%
01529, Millville, MA	5	0.12%
01516, Douglas, MA	5	0.12%
01756, Mendon, MA	4	0.10%
02035, Foxboro, MA	4	0.10%

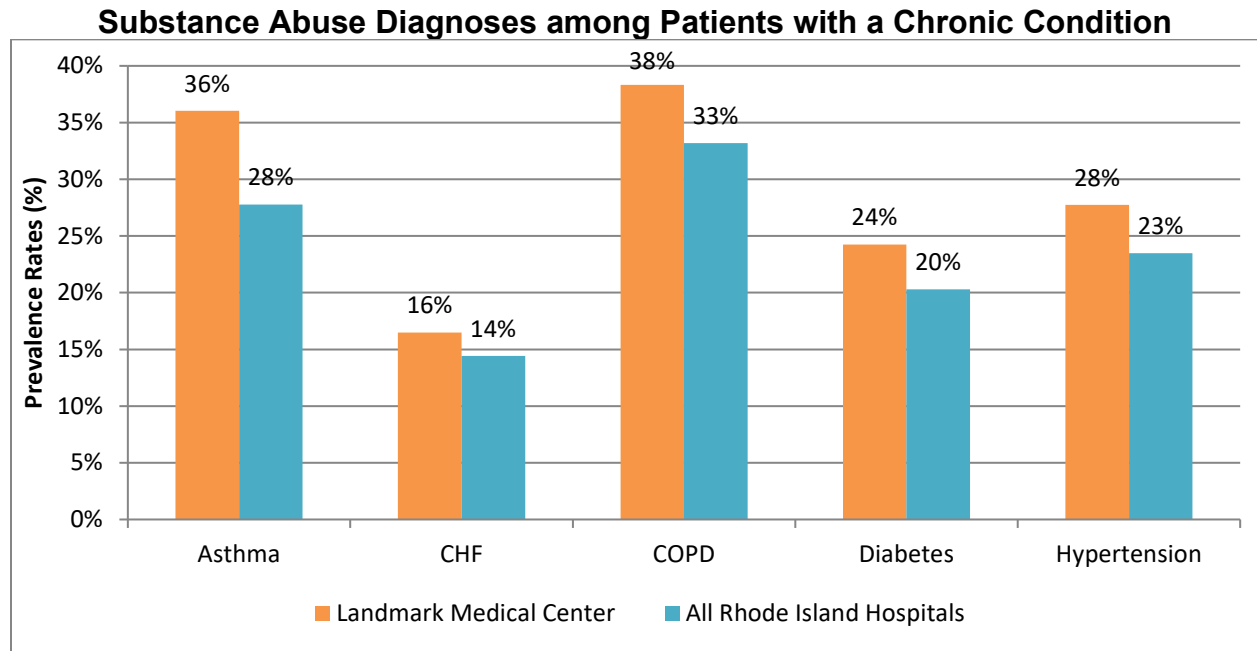
*Admissions to any Rhode Island Hospital

Chronic conditions can be more difficult to manage if a patient also has a behavioral health and/or substance abuse diagnosis. The following charts show the prevalence of behavioral health and substance abuse diagnoses among patients admitted to the hospital with one or more of the top five chronic diseases: Asthma, CHF, COPD, Diabetes, and Hypertension.

Approximately 45% to 60% of patients admitted to Landmark Medical Center with asthma, CHF, COPD, diabetes, and/or hypertension, have a behavioral health diagnosis. The prevalence of behavioral health comorbidities is higher than state averages.



Among patients with asthma, COPD, diabetes, and hypertension, the percentage who also have a substance abuse diagnosis is higher than state averages. In particular, the percentage of asthma patients with a substance abuse diagnosis is 36%, while the state average is 28%. Among patients with CHF, the percentage who also have a substance abuse diagnosis is equivalent to the state average.

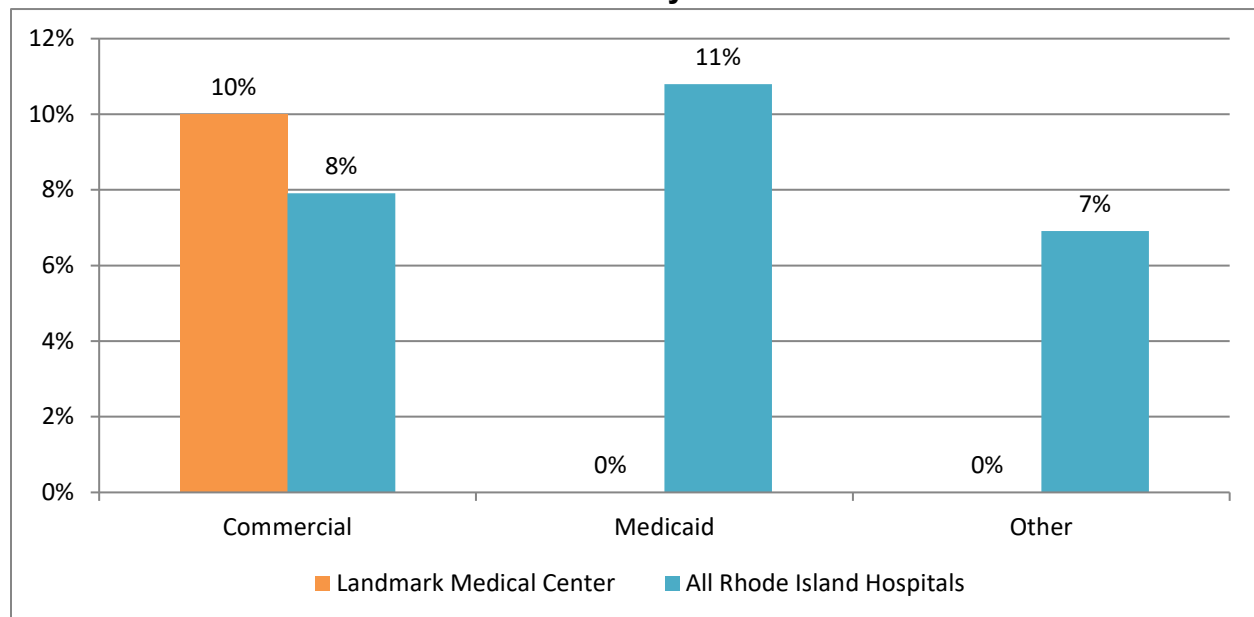


Premature Birth Rate

Less than 1% of births (105) in Rhode Island occurred at Landmark Medical Center. Approximately two-thirds of births were to mothers with Medicaid insurance (68%, n=71); less than 30% of births (n=30) were to mothers with commercial insurance. The hospital wide premature birth rate (3%) is lower than the state average (9%), but the premature birth rate for Commercial patients (10%) is higher than the state average (8%).

Public health data show that Providence County Black/African American mothers are the most likely to have a low birth weight (10.6%) and/or preterm birth (14.3%). Asian and Hispanic/Latina women and babies also have higher rates compared to White mothers.

Premature Birth Rate by Line of Business



Woonsocket Partner Forum

October 27, 2015, 10 am-12:30 pm
Landmark Medical Center, 115 Cass Avenue, Woonsocket

The objective of the forum was to solicit feedback from representatives of key stakeholder groups, facilitate collaboration to address community health needs, and align community health improvement efforts between the HARI CHNA, the Rhode Island Department of Health State Improvement Plan, and the local Health Equity Zones (HEZ).

Partner Forum Participants:

Monica Blanchette, Rhode Island Student Assistant Services
Estelle Borucki, Thundermist Health Center
Ainsley Cantoral, NeighborWorks Black River Valley
Lisa Carcifero, Woonsocket Prevention Coalition
Shaun Cournoyer, Friendly Home
Terry Curtin, Connecting for Children & Families
Joyce Dolbec, YMCA
Mary Dwyer, Community Care Alliance
Charlene Elie, Landmark Medical Center
Stump Evans, Community Care Alliance
Rebekah Greenwald, Riverzedge
Sheri Griffin, Farm Fresh Rhode Island
Dee Henry, Woonsocket Head Start Child Development Association
Kelly Henry, Sojourner House
Carla Martin, Friendly Home
Diane Martin, YMCA
Karen Mazzara, Thundermist Health Center
Ivy Medeiros, Community Care Alliance
Linda Plays, City of Woonsocket
Julian Rodriguez-Drix, Rhode Island Department of Health
David Testoni, Gateway Healthcare
Linda Thibault, Senior Services
Thea Upham, Farm Fresh Rhode Island
Elaine Trujillo, Thundermist Health Center
Barbara Waterman, Senior Services
Sheng Yang, Rhode Island Department of Health
Khin Sein Yin, MD, Rehabilitation Hospital of Rhode Island

Facilitation

An overview of the current CHNA research findings related to health needs and disparities in the community was presented to the partners. The partners were then grouped by priority area for small group discussion based on the services their organization provides and/or the populations they serve. The subgroups discussed barriers for residents, underserved populations, gaps in existing services, existing community assets, and opportunities for collaboration to address the priority issues.

The small group discussion started with identifying the community assets available to address the priority area. Partners identified specific organizations or programs in the community, the populations they serve, and any partners that support its efforts. Partners were then presented with a set of questions aimed at identifying gaps in services and potential partnerships to address the priority area. The questions included:

- > Are people aware of existing resources and services?
- > What barriers keep residents from accessing existing programs/services/initiatives?
- > What populations are underserved or most at-risk?
- > What programs/services/initiatives could help reach this population?
- > Who are potential partners for outreach and service delivery?

An overview of the participants' responses to these questions and the identified community assets, grouped by priority area, follows.

Behavioral Health: Mental Health & Substance Abuse

Barriers to Accessing Programs/Services/Initiatives

Partners stated that agencies and providers in the community are connected and know the services being offered, but residents are not always aware of the services. Partners are also concerned that schools are not aware of the services, which is a barrier to accessing children and families.

Partners said that stigma associated with seeking services, lack of basic necessities, poverty/out-of-pocket costs, and family norms are barriers to accessing services in the community. In regard to basic necessities, residents are not able to focus on their health when they are focused on just meeting basic needs like food and shelter. Poverty/Out-of-pocket costs are a concern for both residents and programs that are losing funding. Family norms are a concern in the community as parents are encouraging children to use drugs with them under the pretense that it is safer than if they use them outside of the home. As a result, children develop a pattern of drug use at an early age. Partners said the issue of drug use in the home is one of the biggest reasons why Woonsocket has one of the highest drug use rates in the state despite efforts to combat it.

Underserved or Most At-Risk Populations

Partners focused on youth, particularly youth of color and youth between the ages of 10 and 13 years, as underserved or most at-risk. The area does not have mental health services for seriously mental ill children and many services that are available for children are no longer available once they enter kindergarten. Additional underserved or at-risk populations include low-income individuals and single-parent households due to the stress of making ends meet.

Insight and Recommendations for Services to Meet the Needs of Underserved or At-Risk Populations

The partners recommended a number of services and initiatives to meet the behavioral health needs of underserved or at-risk populations. These services and initiatives include:

- > A peer support services curriculum/training for adolescents to assist other adolescents in need
- > A behavioral health resource book that is continually updated with services in the community

Identifying Collaborative Partners to Address Behavioral Health Needs

Partners identified faith-based organizations as the best community partner based on their connection to community members across all neighborhoods and demographics. They also identified behavioral health homes and the Rhode Island Department of Behavioral Healthcare, Development Disabilities & Hospitals as partners. These organizations provide holistic services that focus on individuals' entire well-being.

Chronic Disease: Prevention & Management

Barriers to Accessing Programs/Services/Initiatives

Partners said that most residents are aware of some services that address chronic disease needs, but most do not know about all of the existing services. Partners also listed a number of barriers to accessing the services that are available:

- > Convenience of available appointment times
- > Lack of parental education/knowledge regarding healthy lifestyles
- > Transportation to get services
- > Life stressors that inhibit healthy behaviors
- > Lack of community engagement/ input to create healthy communities
- > Socioeconomic factors (poverty, incarceration, education, etc.)

Underserved or Most At-Risk Populations

The partners agreed that populations within the community are at higher risk for developing chronic disease and are less likely to receive necessary interventions. The following populations are considered underserved or at-risk:

- > Families in a cycle of poverty
- > Working class individuals/families
- > Uninsured/Underinsured populations
- > Seniors
- > Disabled populations
- > Non-English speaking populations
- > Immigrants/Refugees

Insight and Recommendations for Services to Meet the Needs of Underserved or At-Risk Populations

The partners recommended a number of services and initiatives to meet the chronic disease needs of underserved or at-risk populations. These services and initiatives include:

- > A centralized network of resources that makes accessing and obtaining services easy for residents
- > More educational outreach efforts and programs for parents and children, designed to encourage stronger family units and family involvement in the community
- > More culturally relevant and sensitive educational programs in the community to reach minority racial and ethnic groups

Identifying Collaborative Partners to Address Chronic Disease Needs

A number of potential partners were identified in the community, all of which are noted in the assets list. These partners provide chronic disease prevention and management services for all age groups, healthy and affordable housing, healthy food options, etc. In addition to traditional partners, a partnership with the Rhode Island Public Transit Authority (RIPTA) was discussed in detail as a means to improve access to health care facilities and basic necessities. Forum participants would like to work with RIPTA to identify opportunities for expanding the transportation system.

The partners also noted the importance of engaging the community and bringing them in to any potential program planning efforts. They recommended partnering with faith-based organizations and housing developments to engage the community and ultimately create leadership roles for community members.

Maternal & Child Health

Barriers to Accessing Programs/Services/Initiatives

Participants shared that residents are not aware of all of the services available to them, particularly residents who are seen in private practice. Private practice offices are not as integrated into the community and are therefore not as connected to other services as public health practices.

In addition, participants listed the following barriers keeping residents from accessing services:

- > Lack of coordinated care among providers
- > Lack of support (policy and social) for breastfeeding and pumping services
- > Populations that are transient and are not in the community long enough to receive services
- > Lack of onsite childcare at service locations
- > A fear of seeking professional services among community members

Underserved or Most At-Risk Populations

The partners agreed that populations within the community are at higher risk for maternal and child health issues. These populations include:

- > Teenage mothers
- > Transient populations
- > Vulnerable mothers and families (low-income, minority, etc.)
- > Mothers using opioids or other drugs
- > Patients in troubled homes, who do not want providers in their home to realize their situation

Insight and Recommendations for Services to Meet the Needs of Underserved or At-Risk Populations

The partners recommended a number of services and initiatives to meet the maternal and child health needs of underserved or at-risk populations. These services and initiatives include:

- > Programs that support young parents by providing parenting skills, stress-coping skills, child development education, etc.
- > Comprehensive school-based sex education
- > Integrating Screening, Brief Intervention, and Referral to Treatment (SBIRT) in all obstetrics facilities to assist mothers with substance use disorders or at-risk of developing these disorders

Identifying Collaborative Partners to Address Maternal & Child Health Needs

The partners identified three opportunities for partnership to enhance outreach and service delivery. The first partnership involves collaboration between the Department of Health and Landmark Medical Center to facilitate referrals for additional public health services for pregnant teenagers in the private practice setting. This population was identified as being underserved due to lack of awareness of services in the community. The second partnership involves partnering with government and organizational administration to enact policy change around breastfeeding support. Lastly, the partners would like to work with health care providers and other service agencies to identify a primary case manager and universal care plan for high risk (due to health or socioeconomic factors) families. The program would support intensive case management in a streamlined and efficient manner to make sure these families are receiving all of the services available to them and ensuring the cycle of risk does not continue.

Identified Community Assets

Behavioral Health: Mental Health & Substance Abuse	
Community Asset	Target Population(s) as Applicable
Agape Center	Adults
Community Care Alliance	Families
Connecting for Children & Families	Parents & Children
Discovery House	Opiate Addicts
Food Pantry	
Gateway Healthcare	
Landmark Medical Center	
Rhode Island Student Assistance Services	High School Students
Sojourner House	Domestic Violence Victims
St. James Baptist Church	
St. James Episcopal Church Calvary	
Thundermist Health Center	Uninsured/Underinsured
Tides Family Services	
Woonsocket Head Start	Pre-School Children
Woonsocket Prevention Coalition	

Chronic Disease: Prevention & Management	
Community Asset	Target Population(s) as Applicable
City Government	
Farm Fresh Rhode Island	
Landmark Medical Center	
NeighborWorks Blackstone River Valley	Affordable Housing
Rehabilitation Hospital of Rhode Island	
Rhode Island Department of Health	
Rhode Island Public Transit Authority	
Thundermist Health Center	Uninsured/Underinsured
Woonsocket Senior Center	Northern Rhode Island Seniors & Disabled
YMCA	

Maternal & Child Health	
Community Asset	Target Population(s) as Applicable
Community Care Alliance	Families
Connecting for Children & Families	Parents & Children
Riverzedge Arts Project	Youth & Teens
Thundermist Health Center	Students, Pregnant Women, Newborns
Women, Infants, & Children	Pregnant/Nursing Mothers & Children
Woonsocket Head Start	Children and Families at-Risk
YWCA	Teenage Mothers

Woonsocket HEZ “Sex, Choices and Futures” Study

Background

Woonsocket HEZ teens and their Industry Mentors used three methods to gather qualitative and quantitative data on prevalent teen attitudes and behaviors related to teen health and pregnancy prevention:

- > An anonymous, online teen survey that generated use and experiences data
- > Focus groups with teens that provided additional insight and context
- > Assets questionnaire identifying baseline programs and services by type and location

The bi-lingual English/Spanish Teen Sex, Choices and Future Survey/Encuesta de Sexo Adolescente, Opciones, y Futuros Survey was created by teen-aged students at Woonsocket High School. Survey questions addressed sexual activity, use of birth control and pregnancy and parenting history among the teen population of Woonsocket.

The survey and focus groups reached approximately 275 individuals and 9 organizations. The survey was completed by 236 teens ages 13 to 19. Forty additional teens informed the creation process and provided focus group responses. Seven organizations representing 13 programs filled out the asset questionnaire.

Study Findings

The following key findings were identified among the teen population and the community.

Among the teen population:

- > 15 out of 236 respondents (6.4%) were pregnant or parenting teens, which is less than the 11% target for accurate demographic representation
- > Sexual activity increases rapidly between the ages of 16 and 17
- > Between 50% and 60% of 17 and 18 year olds and 80% of 19 year olds are sexually active
- > Birth control use increases rapidly between the ages of 16 and 17. Out of 65 total 16-year-olds who reported they were sexually active, only 45% reported using birth control, and only 55% of those, described their use as always, i.e. 17 out of 65 sexually active 16 year olds always use birth control. In contrast, 61.5% of 40 sexually active 17-year-olds, and 64% of 18-year-olds, report using birth control, with 71% and 78% describing their use as “always.” Rates of birth control use go up at age 19, but use described as “always,” goes down

- > Of the 44 respondents who answered the optional write in question “which method do you use?” only 13 reported using a Long-Acting Reversible Contraception (LARC) method
- > The two primary reasons for not using birth control were: “I forgot” and “I planned not to have sex but then did anyway.”
- > 13 out of 189 respondents answered they had been pregnant and not given birth
- > Focus groups reported that very little sex education happens in school or at home, and when it does, it is dry, technical, not related to youth bodies or lives, and not delivered in a comfortable way that allows for Q & A.
- > The health center at the high school is very effective at education and dispensation, but barriers remain for many youth to engage those services.

Among the Community:

- > Much of what exists to support teens in areas of maternal and child health is not reaching teens that are the intended beneficiaries and most in need of support.
- > There are not sufficient services and programs, nor program slots, to meet current teen needs in and outside of the arena of maternal and child health.
- > Most organizations do not have sufficient funding or capacity to enable them to address their internal gaps, let alone close external gaps working in isolation.
- > Attention to safe space, authentic engagement, collaboration, and other affective HEZ goals successfully results in higher participation, effective collaboration and a sense of empowerment that was not present at the beginning of the year

Recommendations for Study Year 2:

- > With the added elements of teen design and high committee engagement, multi-media campaign can reach a majority of local teens with multiple hits
- > Community education efforts must engage teens in reviewing data and outcomes differentials, as well as the results of the local survey. Education efforts should include ample information processing and reflection time, as these are new skills for most teens
- > Riverzedge should focus on mass production of cheap, available vehicles for message delivery such as stickers, pencils, T-shirts and social media, and spread them widely
- > Messaging should create a comfortable, inviting--even humorous--ethos and use engaging memes even when addressing serious topics - to create directionality and openness to more robust and user friendly education
- > Teens should lead decision making on what ideas to pursue and what messages to use, even when charged with messaging on specific topics such as increasing rates of use, choosing LARCs, and planning for the “yes” moment in advance, even if you plan not to have sex.
- > Gentle and indirect, and visually driven messaging will work better than “know the facts” messages in many settings.

Evaluation of Community Health Impact from 2013 CHNA Implementation Plan

Landmark Medical Center developed and implemented a plan to address community health needs that leverages resources across the medical center and the community. Recognizing the inter-relationship between the priority areas (diabetes, heart disease, and mental health and substance abuse) and the ability to employ cross-cutting strategies to address the identified needs, Landmark Medical Center developed the following overarching goal statements and objectives:

Goals

1. Improve access to services for persons with co-occurring mental health and substance abuse by increasing access to appropriate primary care and behavioral health services.
2. Improve coordination of care and outcomes among persons diagnosed with co-occurring diseases including diabetes, heart disease, COPD, mental health and substance abuse.

Objectives:

- > Increase the proportion of adults with mental health disorders and/or substance abuse who receive timely treatment
- > Identify co-morbidity factors in patients (presenting with behavioral health and chronic conditions)
- > Increase number of points of access for referral to services
- > Improve disease management for currently diagnosed patients
- > Promote healthy lifestyles and environments to reduce risk factors

2014-2016 Implemented Strategies:

The 2013 CHNA findings provided impetus for Landmark to develop strategic goals/objectives. Progress measures and key findings are as follows:

- > Increase capacity of and/or recruit primary care providers
 - Landmark recruited three primary care providers and a pediatrician. The practices are located in the community in areas conducive to public transportation. Two of the providers speak Spanish.
- > Decrease number of patients boarded in ED while awaiting Mental health Services
 - Landmark worked closely with NRI and Anchor Mental Health to establish community linkages for patients coming to the ED with a MH issues.

Specifically, Anchor providers a Care Navigator 24/7 to help assist patients with case management.

- > Create inventory of health and social services partners to aid in coordinating care of patients; communicate list to providers
- > Create consistent screening tools used by primary care providers to assess patients for chronic disease and mental health risk factors.
- > Improve referral system from ED to community-based behavioral health services
- > Continue outreach programs for patients diagnosed with chronic disease, including Cardiac Rehabilitation, Cardiac Maintenance, Exercise to Health, and Outpatient Diabetic Education
- > Continue partnership with Homefront Healthcare Cable TV to provide education about chronic disease and related issues.
- > Continue Mended Hearts monthly support group featuring guest speakers from Landmark Medical Center to discuss chronic disease and related topics.
- > Continue support of annual American Heart Association Southern New England Heartwalk. Landmark Medical Center 2016 Final CHNA Report DRAFT 55
- > Continue to support Thundermist Community Health Center's Health Fair to provide health education for underserved populations.
- > Continue to support YWCA of Northern RI & Quota Club Health Fairs to provide health screenings and education about chronic disease and related topics.

Appendix A: Our Partners

HARI CHNA Steering Committee:

Liz Almanzor, Finance Director, Hospital Association of Rhode Island
Otis Brown, CharterCARE
Laurel Holmes, Westerly Hospital
Carolyn Kyle, Landmark Medical Center
Gina Rocha, Hospital Association of Rhode Island
Alex Speredelozzi, Care New England
Kellie Sullivan, Care New England
Stephany Valente, Care New England
Cynthia Wyman, South County Hospital

Ex officio: Michael Souza, President, Hospital Association of Rhode Island
Ana Novais, Rhode Island Department of Health

Woonsocket Partner Forum Participants:

Monica Blanchette, Rhode Island Student Assistant Services
Estelle Borucki, Thundermist Health Center
Ainsley Cantoral, NeighborWorks Black River Valley
Lisa Carcifero, Woonsocket Prevention Coalition
Shaun Cournoyer, Friendly Home
Terry Curtin, Connecting for Children & Families
Joyce Dolbec, YMCA
Mary Dwyer, Community Care Alliance
Charlene Elie, Landmark Medical Center
Stump Evans, Community Care Alliance
Rebekah Greenwald, Riverzedge
Sheri Griffin, Farm Fresh Rhode Island
Dee Henry, Woonsocket Head Start Child Development Association
Kelly Henry, Sojourner House
Carla Martin, Friendly Home
Diane Martin, YMCA
Karen Mazzara, Thundermist Health Center
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David Testoni, Gateway Healthcare
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Thea Upham, Farm Fresh Rhode Island
Elaine Trujillo, Thundermist Health Center
Barbara Waterman, Senior Services
Sheng Yang, Rhode Island Department of Health
Khin Sein Yin, MD, Rehabilitation Hospital of Rhode Island

Appendix B: Statistical Health Data References

- County Health Rankings & Roadmaps. (2015). *Rhode Island*. Retrieved from <http://www.countyhealthrankings.org/>
- Healthy People 2020. (2010). *2020 topics and objectives – objectives a-z*. Retrieved from <http://www.healthypeople.gov/2020/topics-objectives>
- Nielsen Company. (2015). *Nielsen answers*. Retrieved from <https://answers.nielsen.com/>
- Rhode Island Department of Health. (2015). *2015 Statewide health inventory utilization and capacity study*. Retrieved from <http://www.health.ri.gov/data/healthinventory/>
- Rhode Island Health Care Matters. (2016). *Community dashboard*. Retrieved from <http://www.rihealthcarematters.org>
- Rhode Island Kids Count. (2015). *2015 Rhode Island kids count factbook*. Retrieved from <http://www.rikidscount.org/DataPublications/RIKidsCountFactbook.aspx>
- Truven Health Analytics. (2015). *Rhode Island behavioral health project: Final report*. Retrieved from <http://www.eohhs.ri.gov/>
- United States Census Bureau, 2014 American Community Survey 1-Year Estimate. (n.d.). *Health insurance coverage status*. Retrieved from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
- United States Department of Agriculture. (2015). *Food environment atlas*. Retrieved from <http://www.ers.usda.gov/data-products/food-environment-atlas.aspx>