2016 Community Health Needs Assessment

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Our Commitment to Community Health

Memorial Hospital is a major teaching affiliate of The Warren Alpert Medical School of Brown University and a site for the medical school's primary care academic program. Memorial provides a variety of outpatient health services for the people of northern Rhode Island and southeastern Massachusetts, including oncology, cardiology services, rehabilitation, pain management, pediatric neurodevelopmental, orthopedics, and diagnostics. In addition, the hospital offers a fully staffed emergency department with behavioral health support.

Care New England Health System, the not-for-profit parent organization, founded in 1996, is a trusted organization that fuels the latest advances in medical research, attracts the nation's top specialty-trained doctors, hones renowned services and innovative programs, and engages in the important discussions people need to have about their health and end-of-life wishes. Care New England is helping to transform the future of health care, providing a leading voice in the ongoing effort to ensure the health of the individuals and communities we serve.

Backed by a broad range of care—primary care, surgery, cardiovascular care, oncology, psychiatry, behavioral health, newborn pediatrics and the full spectrum of women's health services—CNE is reinventing the way health care is delivered, partnering with our patients to provide the best care possible while working to create a community of healthier people.

Care New England prides itself in its on-going efforts to assess community need and has always strived to respond with programs and interventions geared toward addressing these needs. Through targeted efforts, Care New England has worked to improve public health and the quality of life for the state and region. From staff involvement in community organizations to the role we play as educators for those aspiring to careers in health, from the sponsorship of community events to the everyday commitment of our health educators who lead a rich array of classes and programs at our institutions, we embrace our roles as advocates, teachers and good neighbors.

In support of Care New England's community benefit activities and to guide community health improvement efforts across the system, Care New England participated in a statewide comprehensive Community Health Needs Assessment (CHNA), led by the Hospital Association of Rhode Island (HARI), and its member hospitals. The 2016 CHNA builds upon our hospital's previous CHNA conducted in 2013. The assessment was conducted in a timeline to comply with requirements set forth in the Affordable Care Act (ACA), as well as to further the hospital's commitment to community health and population health management.

Mission

To be your partner in health.

Vision

To create a community of healthier people.

Values

Care New England's organizational values emphasize individual contributions and a team approach that foster:

Accountability • Caring • Teamwork

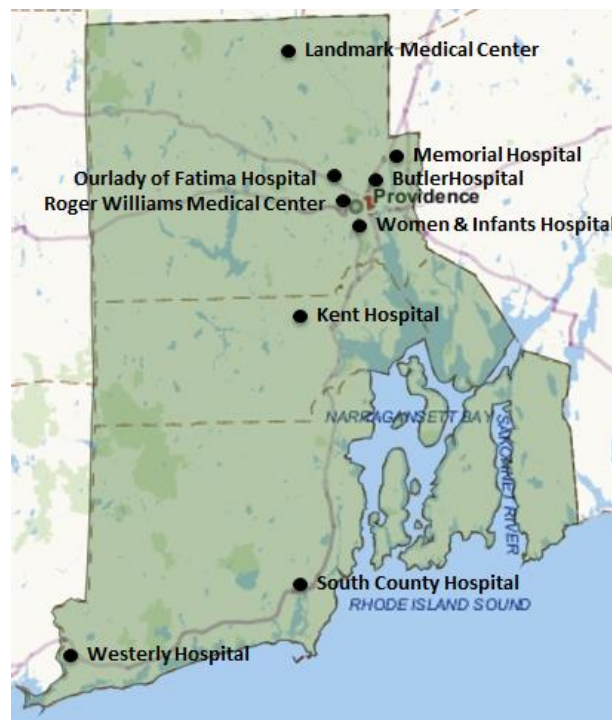
2016 CHNA Overview: A Statewide Approach to Community Health Improvement

Memorial Hospital 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.

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 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
Lead Researcher: Catherine Birdsey, MPH

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. 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 issues were identified as priorities across the state.

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

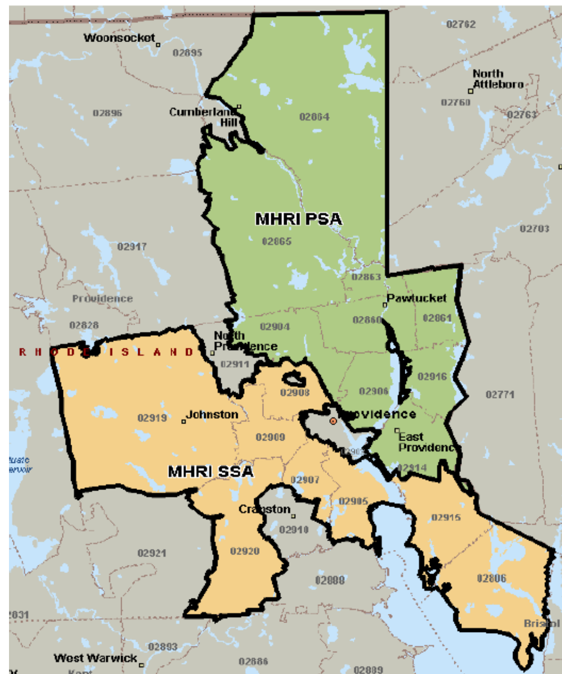
Development of a Community Health Improvement Plan

Each CHNA partner hospital developed an Implementation Plan that outlined the priority area(s) 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 Care New England Board of Director adopted the 2016 CHNA Final Report and Implementation Plan on September 22, 2016. The documents are widely available to the public via the Memorial Hospital website and the HARI RhodeIslandHealthcarematters.org portal.

Memorial Hospital Service Area



Memorial Hospital serves the following zip codes, primarily in Providence County, RI:

02860 Pawtucket
02861 Pawtucket
02863 Central Falls
02864 Cumberland
02914 East Providence

02904 Providence
02916 East Providence
02865 Lincoln
02906 Providence
02909 Providence

02915 East Providence
02919 Johnston
02908 Providence
02907 Providence
02920 Cranston

02905 Providence
02806 Barrington

Population Overview

The population across Memorial Hospital's service area is primarily White; however, the population is more racially and ethnically diverse than the state with 33.2% of the population identifying as another race. The median age of residents is lower 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

	Memorial Hospital Service Area	Rhode Island
White	66.8%	79.8%
Asian	4.0%	3.3%
Black or African American	10.3%	5.9%
Hispanic or Latino (of any race)	25.1%	14.1%
Median Age	37.0	40.1
Median Income	$47,707	$56,945

Source: The Nielsen Company, 2015

Memorial Hospital Service Area Demographics

The following section outlines key demographic indicators related to the social determinants of health within Memorial Hospital'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 66% of residents speak English and 20.8% speak Spanish as their primary language. Another 9.3% speak an Indo-European language.

Financial and Occupational Demographics

Memorial Hospital's service area encompasses 177,910 housing units, 52.1% are owner-occupied and 47.9% are renter-occupied. The median home value for owner-occupied units is $226,139, which is lower when compared to Rhode Island ($252,604).

The median household income in Memorial Hospital's service area is $47,707; however, income varies notably by race and ethnicity. The median income for Blacks or African Americans and Hispanics or Latinos is $35,907 and $32,365 respectively.

2015 Population by Median Household Income

	Memorial Hospital Service Area	Rhode Island
White	$53,376	$61,419
Black or African American	$35,907	$36,627
Asian	$52,817	$55,406
Hispanic or Latino (of any race)	$32,365	$33,970
Total Population	**$47,707**	**$56,945**

Approximately 75% of residents age 16 years or over are in the workforce and 7.4% are unemployed, which is higher than the state and national averages (6.4% and 5.5% respectively). The majority of residents in the workforce are for-profit private workers (69.2%) and hold white collar positions (57.9%). Residents are most likely to work in office/administrative support (14.5%), sales (10%) and production (8.6%).

Educational Demographics

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. In Memorial Hospital's service area, 20% of residents 25 years or over have less than a high school diploma and 27.1% have at least a bachelor's degree. Hispanic/Latino residents have notably lower educational attainment; nearly 41% have less than a high school diploma and only 9.2% have a bachelor's degree or higher.

2015 Population by Educational Attainment

	Memorial Hospital Service Area		Rhode Island	
	Overall Population	Hispanic/Latino Population	Overall Population	Hispanic/Latino Population
Less than a high school diploma	20.0%	40.7%	14.5%	37.1%
High school graduate	27.8%	29.7%	27.5%	29.3%
Some college or associate's degree	25.2%	20.5%	26.8%	22.2%
Bachelor's degree or higher	27.1%	9.2%	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 (13.9% and 10.9% respectively) is higher when compared to the state (9.4% and 7.3% respectively). Poverty rates vary by zip code within Memorial Hospital's service area; most notably 31.1% of families in 02907 (Providence) live in poverty.

Social Determinants 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 Memorial Hospital 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
02907 Providence	21.9%	61.1%	31.6%	31.1%	24.9%	29.6%	13.1%	32.0%
02863 Central Falls	11.1%	65.0%	28.6%	28.2%	22.8%	26.3%	6.6%	46.1%
02909 Providence	14.0%	59.5%	35.8%	27.4%	21.5%	27.1%	11.1%	35.3%
02905 Providence	17.6%	40.1%	51.0%	22.6%	20.1%	22.9%	12.0%	21.4%
02860 Pawtucket	20.0%	26.7%	53.2%	21.2%	16.8%	22.9%	7.9%	27.0%
02908 Providence	18.2%	39.4%	58.9%	20.7%	17.6%	24.1%	8.2%	23.4%
02904 Providence	12.2%	17.8%	76.0%	12.7%	10.3%	15.1%	7.4%	15.6%
02914 East Providence	7.7%	6.9%	67.8%	9.4%	8.2%	15.4%	6.9%	25.7%
02920 Cranston	6.5%	16.0%	79.7%	8.6%	5.9%	10.9%	6.7%	15.2%
02861 Pawtucket	6.8%	15.1%	75.5%	7.9%	5.4%	12.9%	7.3%	17.1%
02919 Johnston	2.4%	7.5%	84.9%	7.6%	4.9%	8.5%	5.4%	15.4%
02906 Providence	5.0%	6.8%	81.6%	6.0%	4.6%	9.8%	4.7%	5.9%
02915 East Providence	3.7%	3.3%	90.4%	5.7%	3.8%	9.1%	5.7%	11.1%
02865 Lincoln	1.9%	4.9%	88.8%	4.3%	2.8%	7.8%	4.8%	10.8%
02916 East Providence	4.6%	3.7%	84.2%	4.0%	3.3%	8.0%	4.9%	13.0%
02864 Cumberland	1.8%	5.5%	85.5%	3.1%	2.0%	7.5%	4.1%	10.7%
02806 Barrington	0.6%	2.7%	91.0%	2.0%	1.6%	6.4%	4.5%	3.9%
Total Service Area (SA)	**10.3%**	**25.1%**	**66.3%**	**13.9%**	**10.9%**	**16.2%**	**7.4%**	**20.0%**
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
Within 2% points of the Total SA Exception: Unemployment cells are within 1% point of the Total SA
More than 2% points higher than the Total SA Exception: English Speaking cells are more than 2% points lower than Total SA & Unemployment cells are more than 1% point higher than Total SA

Statistical Health Data for the Memorial Hospital 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.

Given the HARI CHNA collaboration and that much of Memorial Hospital'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 Memorial Hospital's 2013 CHNA, including Behavioral Risk Factor Surveillance System (BRFSS) data, are also incorporated to provide trending analysis. Note that BRFSS data represent Memorial Hospital'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.

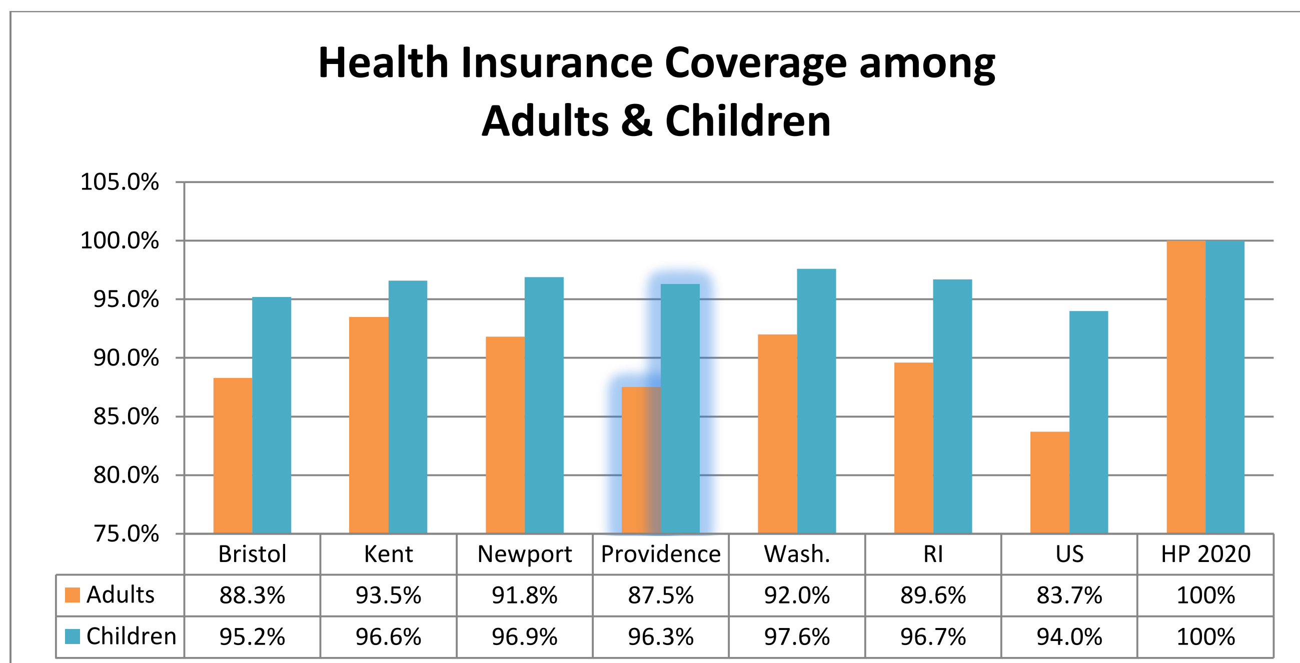
Access to Health Services

Approximately 88% of Providence County adults (ages 18 to 64 years) have health insurance. The percentage is the lowest average in Rhode Island, 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

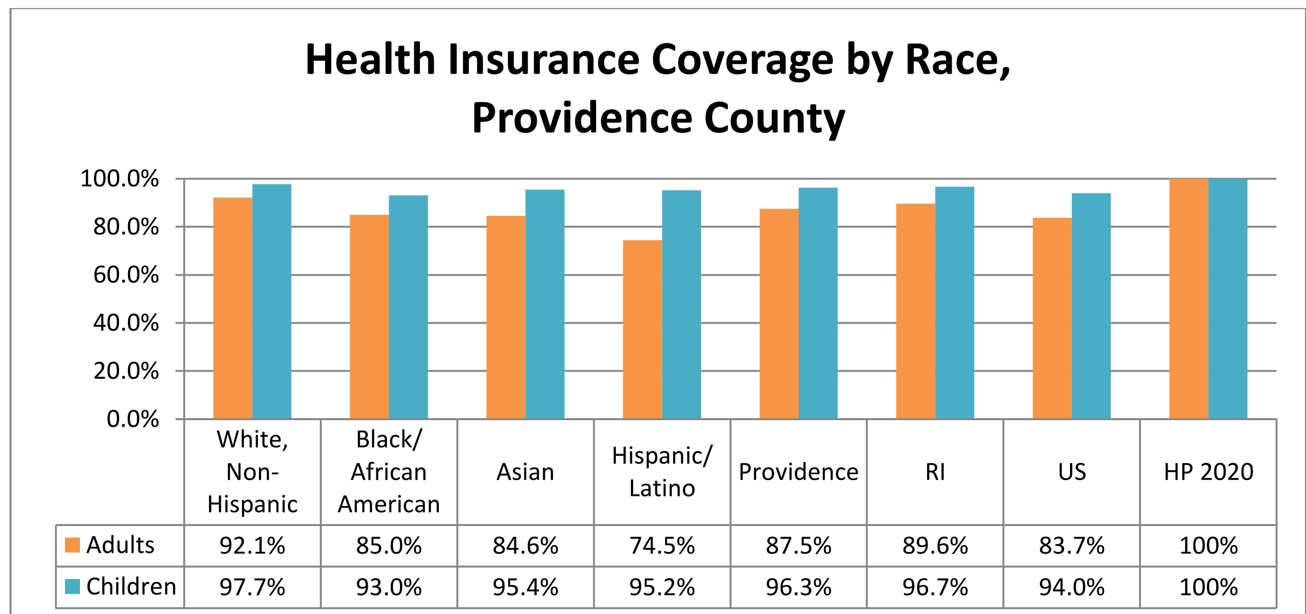
The percentage of Providence County children with health insurance (96.3%) is equal to the state (96.7%), above the nation (94%), and represents an increase from 2013 (93.5%). The Healthy People 2020 goal is 100% of all adults and children be insured by 2020.



	Bristol	Kent	Newport	Providence	Wash.	RI	US	HP 2020
Adults	88.3%	93.5%	91.8%	87.5%	92.0%	89.6%	83.7%	100%
Children	95.2%	96.6%	96.9%	96.3%	97.6%	96.7%	94.0%	100%

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, 74.5% of Hispanic/Latino adults are insured and 93% of Black/African American children are insured.



	White, Non-Hispanic	Black/ African American	Asian	Hispanic/ Latino	Providence	RI	US	HP 2020
Adults	92.1%	85.0%	84.6%	74.5%	87.5%	89.6%	83.7%	100%
Children	97.7%	93.0%	95.4%	95.2%	96.3%	96.7%	94.0%	100%

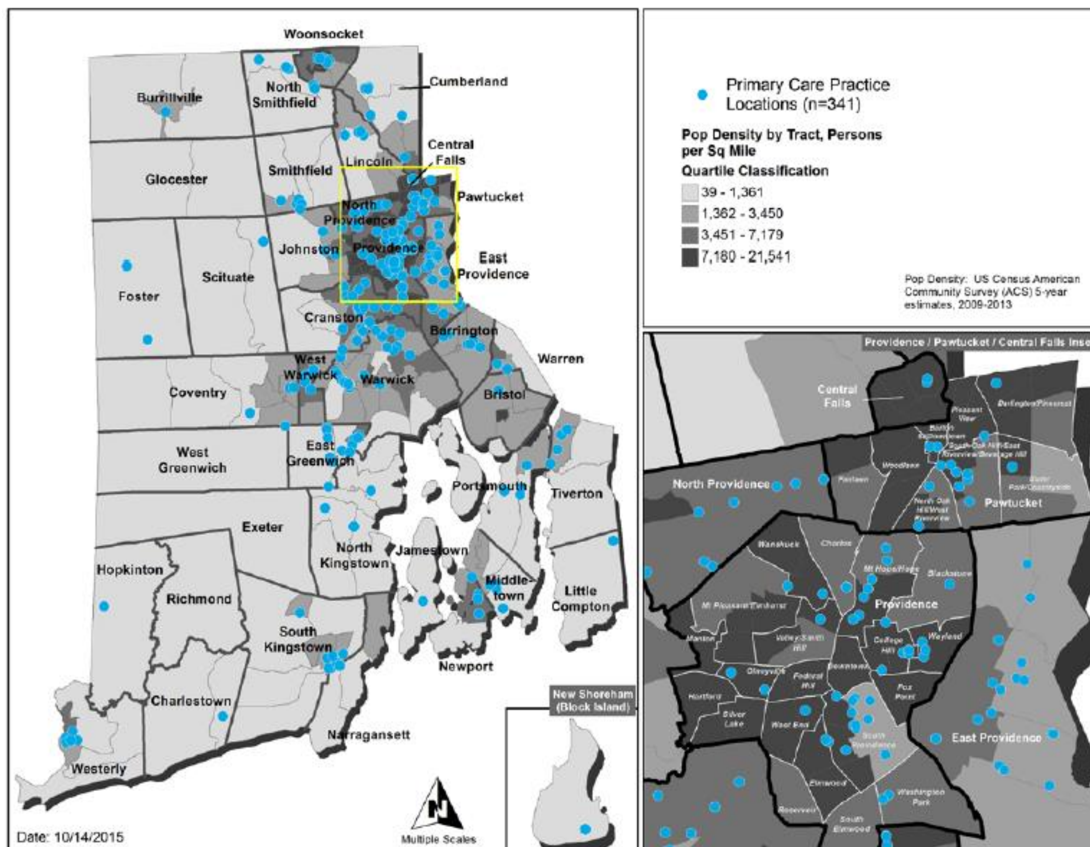
Source: American Community Survey, 2014

More people in Memorial Hospital's service area delay needed healthcare due to cost when compared to the state and national averages. The 2013 CHNA found that 21.5% of adults in the service area did not see a doctor when they needed one due to cost barriers compared to 15.8% of Rhode Island residents and 17% of U.S. residents.

More people in Providence County delay receiving healthcare due to cost than residents across Rhode Island and the nation

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.



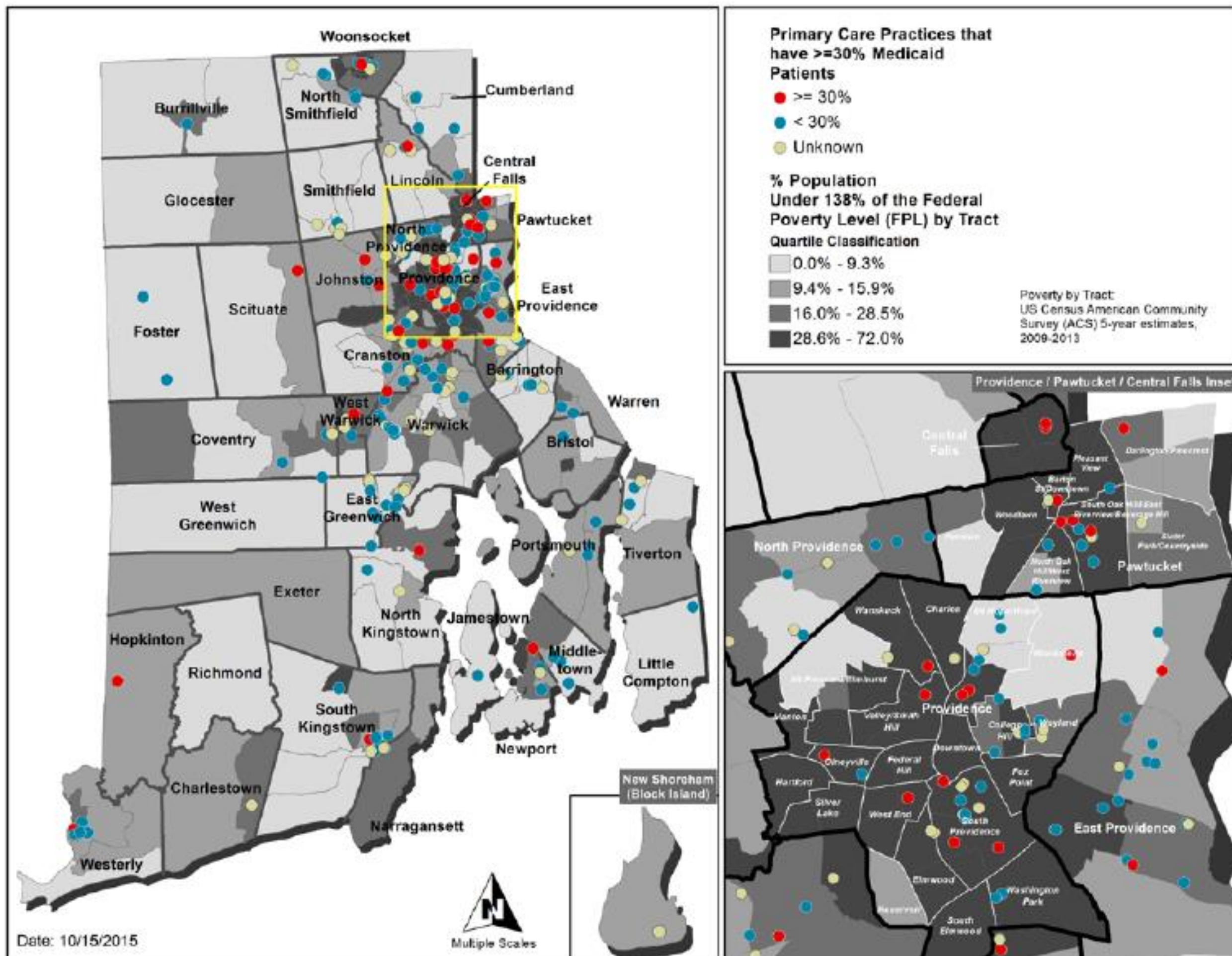
Source: Rhode Island Department of Health Statewide Health Inventory, 2015

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		

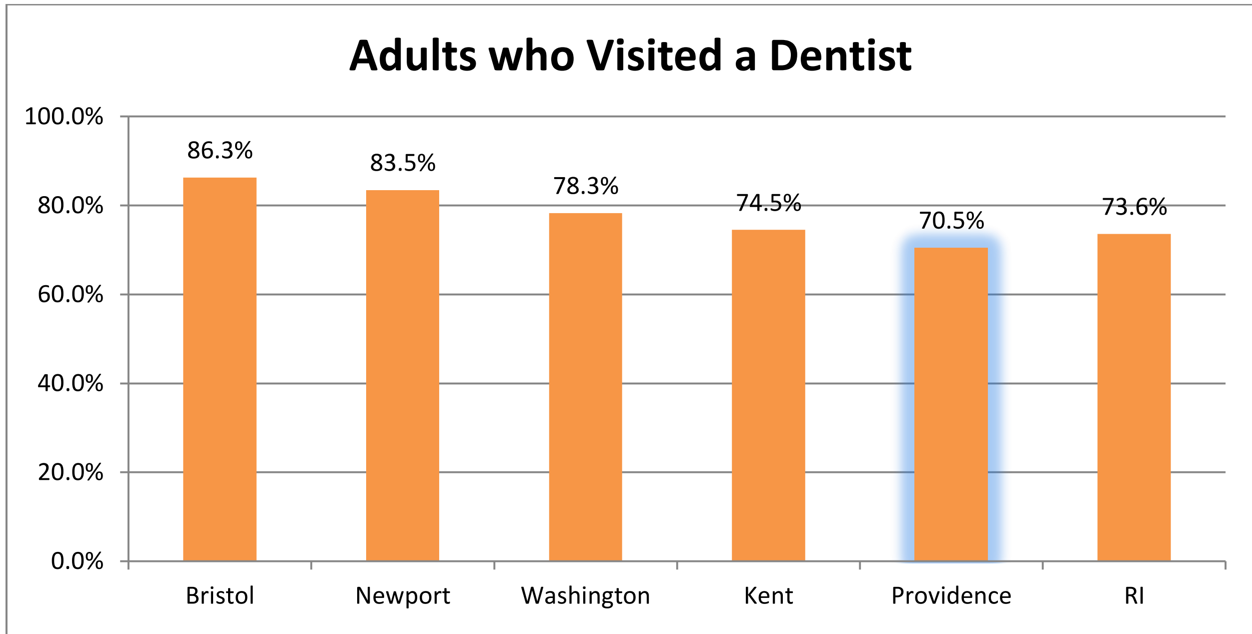
Source: Rhode Island Department of Health Statewide Health Inventory, 2015

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

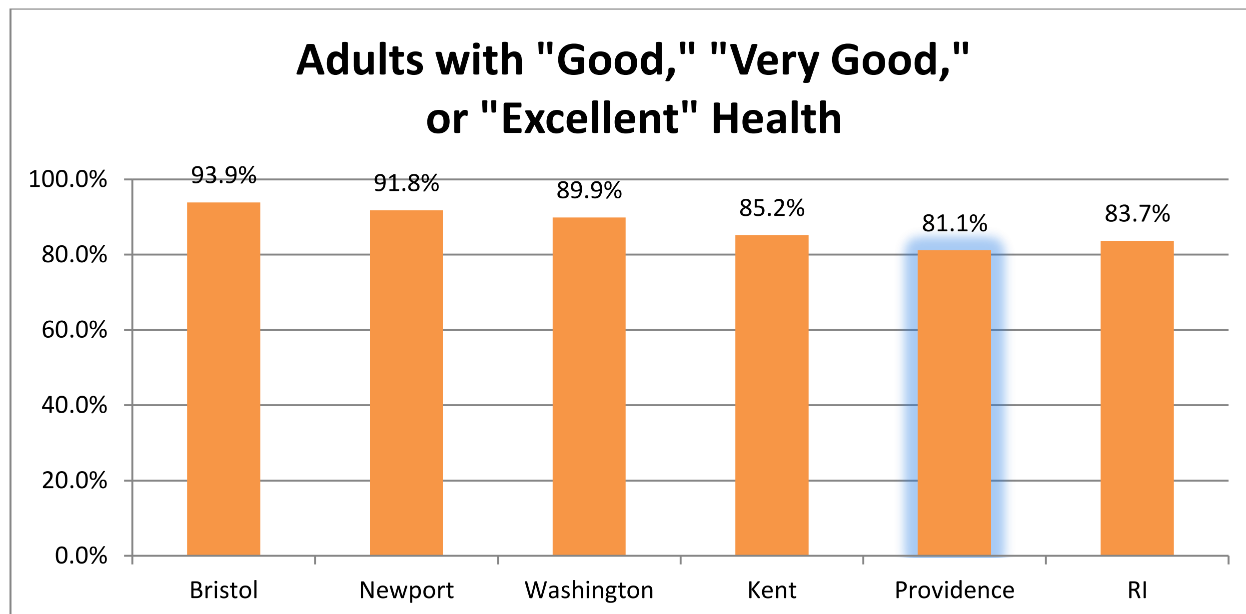
Access to Dental Care
The dental provider rate in Providence County (58 per 100,000) is equitable to the state rate (61 per 100,000); however, the percentage of adults visiting a dentist is the lowest in the state. The percentage is not comparable to past years of data due to changes in methodology.



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

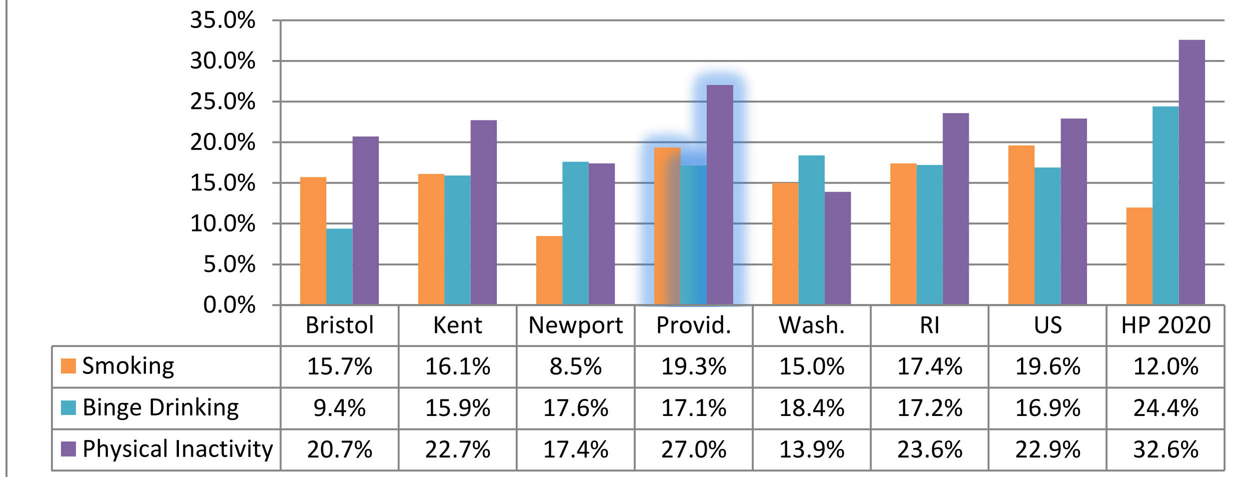
Health Behaviors

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.



	Bristol	Kent	Newport	Provid.	Wash.	RI	US	HP 2020
Smoking	15.7%	16.1%	8.5%	19.3%	15.0%	17.4%	19.6%	12.0%
Binge Drinking	9.4%	15.9%	17.6%	17.1%	18.4%	17.2%	16.9%	24.4%
Physical Inactivity	20.7%	22.7%	17.4%	27.0%	13.9%	23.6%	22.9%	32.6%

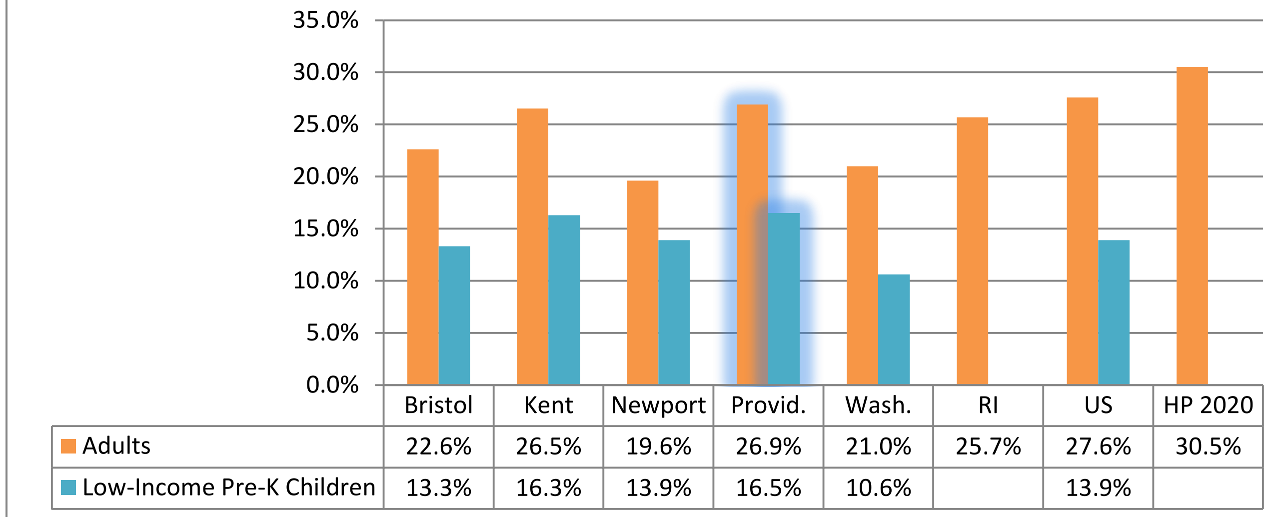
Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

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.

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

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.



	Bristol	Kent	Newport	Provid.	Wash.	RI	US	HP 2020
Adults	22.6%	26.5%	19.6%	26.9%	21.0%	25.7%	27.6%	30.5%
Low-Income Pre-K Children	13.3%	16.3%	13.9%	16.5%	10.6%		13.9%	

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

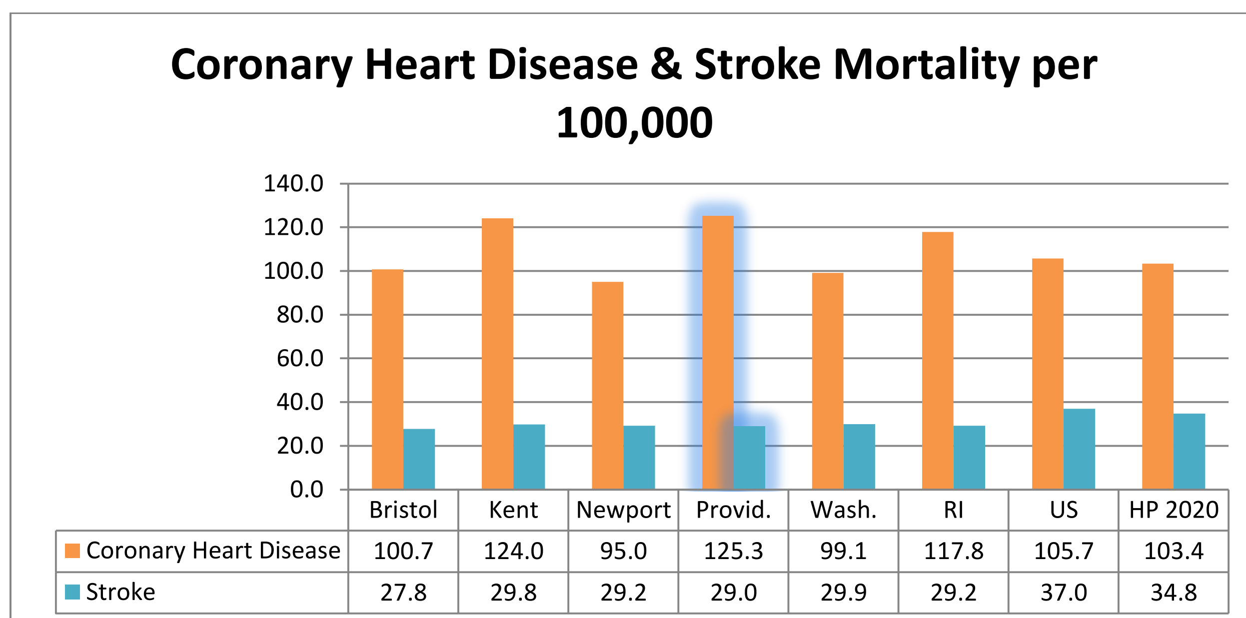
Chronic Diseases

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

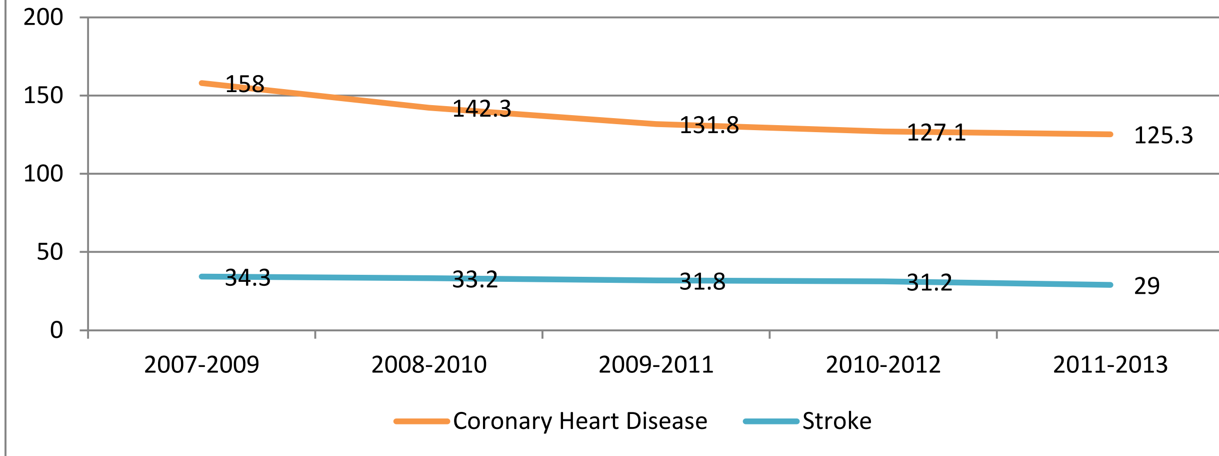
Heart disease is the leading cause of death in the nation. Providence County's mortality rate for coronary heart disease is 125.3 per 100,000. Providence and Kent County experience higher rates than other Rhode Island counties and the US average. The rate exceeds the state, the nation, and the Healthy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



	Bristol	Kent	Newport	Provid.	Wash.	RI	US	HP 2020
Coronary Heart Disease	100.7	124.0	95.0	125.3	99.1	117.8	105.7	103.4
Stroke	27.8	29.8	29.2	29.0	29.9	29.2	37.0	34.8

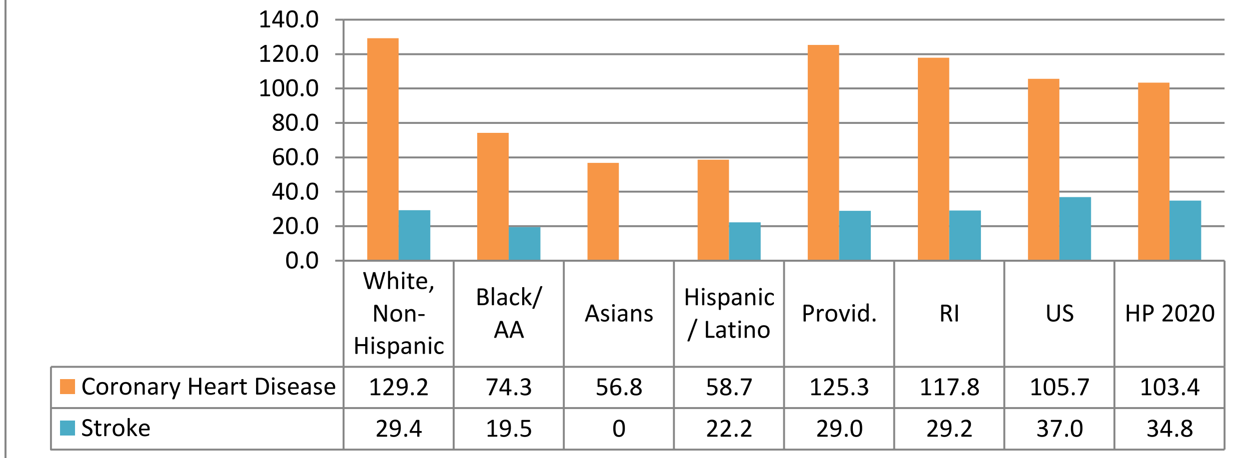
Source: Centers for Disease Control and Prevention, 2011-2013

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

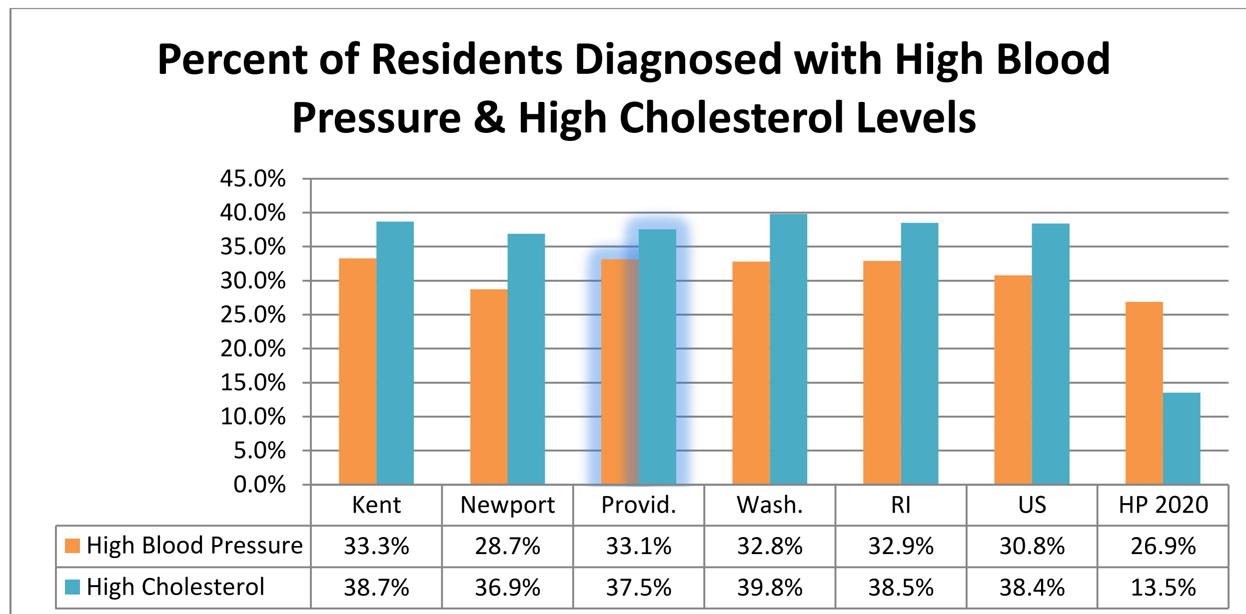
The White, Non-Hispanic population has the highest death rates for coronary heart disease and stroke. The death rates are significantly higher for heart disease among whites and less different for stroke death rate.



	White, Non-Hispanic	Black/ AA	Asians	Hispanic / Latino	Provid.	RI	US	HP 2020
Coronary Heart Disease	129.2	74.3	56.8	58.7	125.3	117.8	105.7	103.4
Stroke	29.4	19.5	0	22.2	29.0	29.2	37.0	34.8

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.

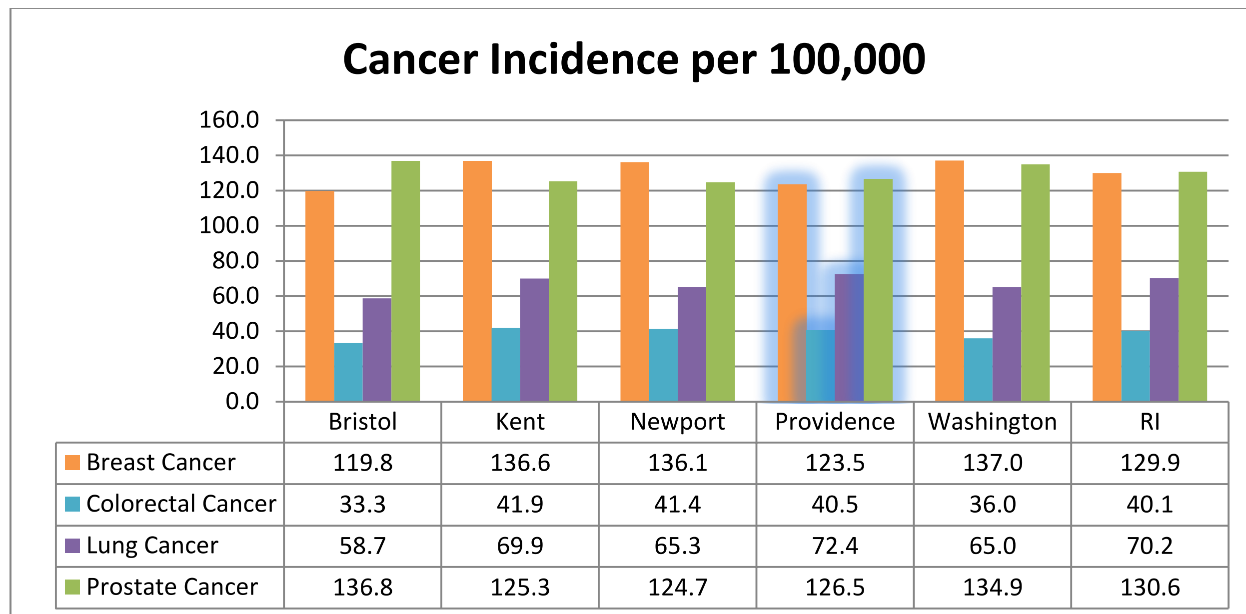


	Kent	Newport	Provid.	Wash.	RI	US	HP 2020
High Blood Pressure	33.3%	28.7%	33.1%	32.8%	32.9%	30.8%	26.9%
High Cholesterol	38.7%	36.9%	37.5%	39.8%	38.5%	38.4%	13.5%

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.

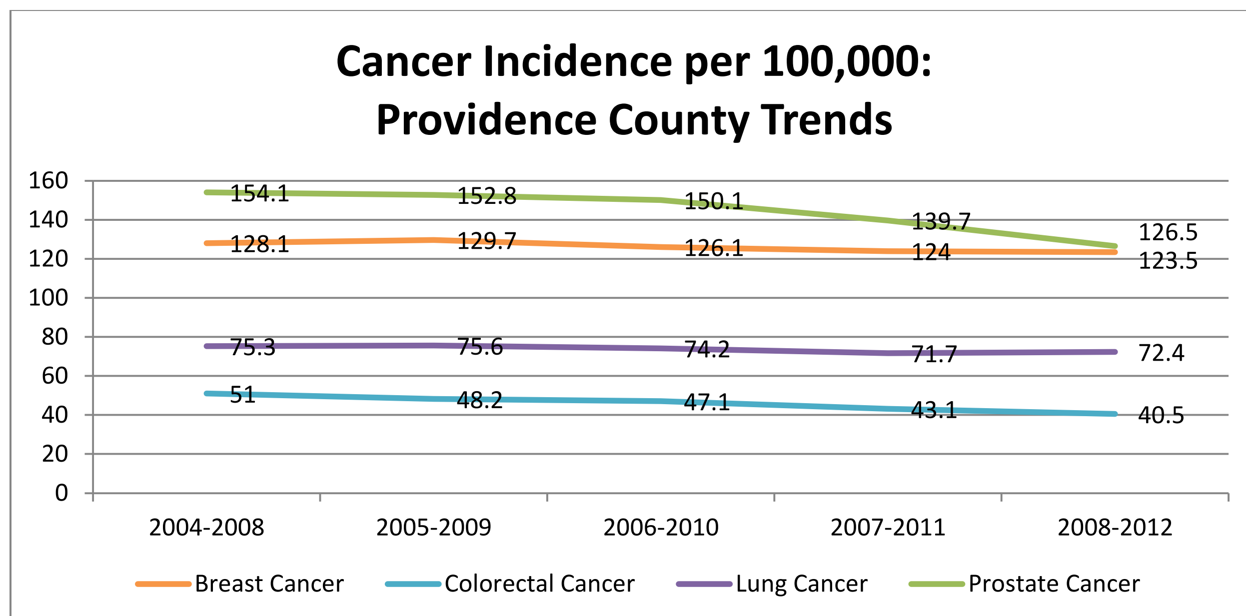
Presented below are the incidence and death rates for the most commonly diagnosed cancers: breast (female), colorectal, lung, and prostate (male).



	Bristol	Kent	Newport	Providence	Washington	RI
Breast Cancer	119.8	136.6	136.1	123.5	137.0	129.9
Colorectal Cancer	33.3	41.9	41.4	40.5	36.0	40.1
Lung Cancer	58.7	69.9	65.3	72.4	65.0	70.2
Prostate Cancer	136.8	125.3	124.7	126.5	134.9	130.6

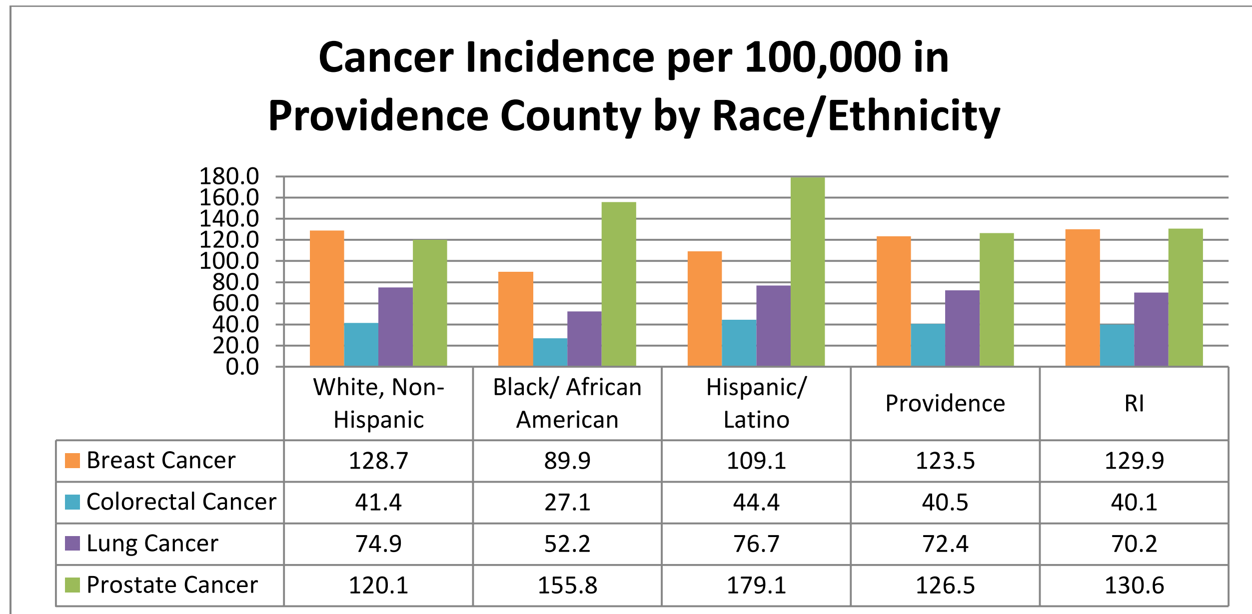
Source: National Cancer Institute, 2008-2012

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.



	White, Non-Hispanic	Black/ African American	Hispanic/ Latino	Providence	RI
Breast Cancer	128.7	89.9	109.1	123.5	129.9
Colorectal Cancer	41.4	27.1	44.4	40.5	40.1
Lung Cancer	74.9	52.2	76.7	72.4	70.2
Prostate Cancer	120.1	155.8	179.1	126.5	130.6

Source: National Cancer Institute, 2008-2012

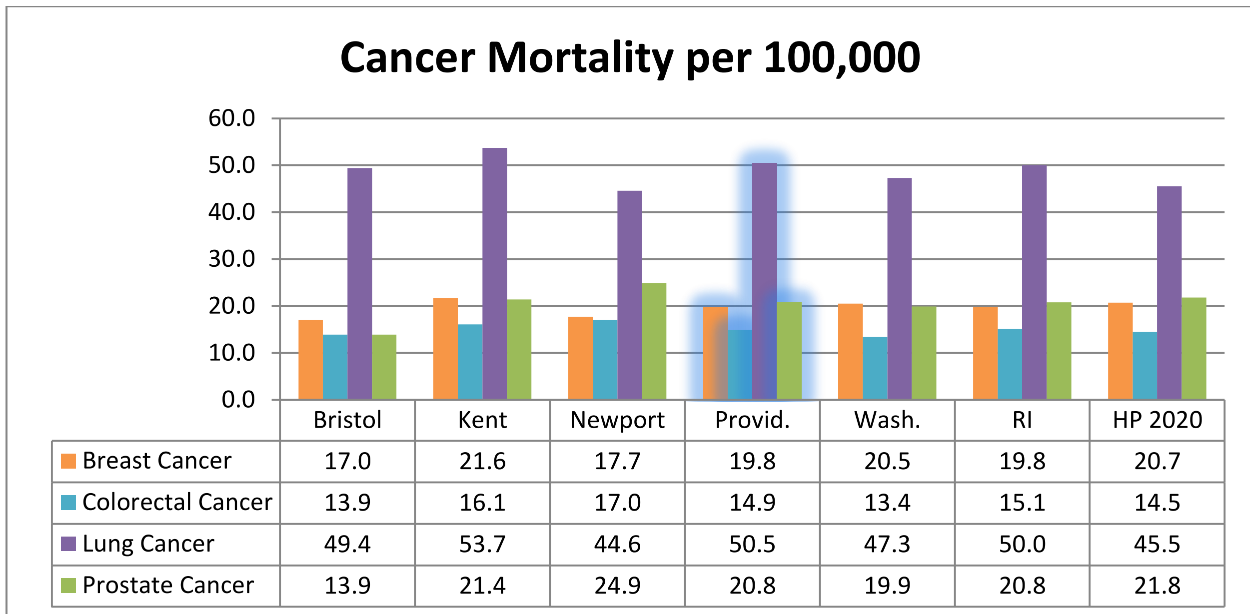
Cancer screenings are essential for early diagnosis and preventing mortality. Colorectal cancer screenings are recommended for adults age 50 years or over. In Providence County, 69.6% of adults have had a colorectal cancer screening. The percentage is the lowest in the state. Mammograms are recommended 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%**

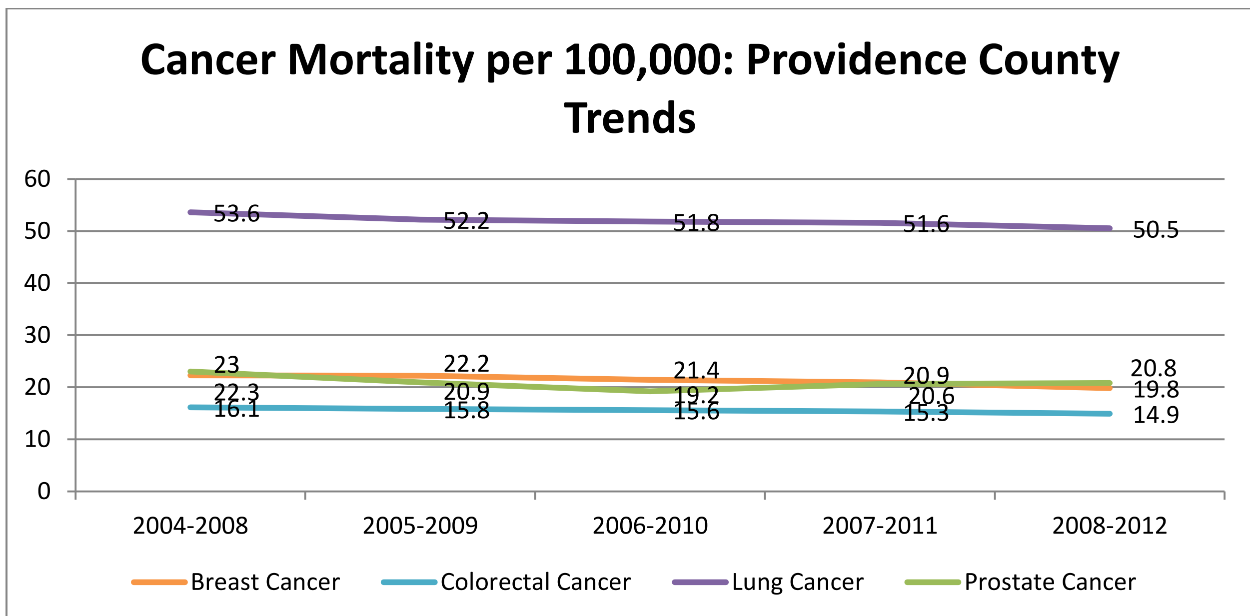
Source: Behavioral Risk Factor Surveillance System, 2010 & 2012

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.



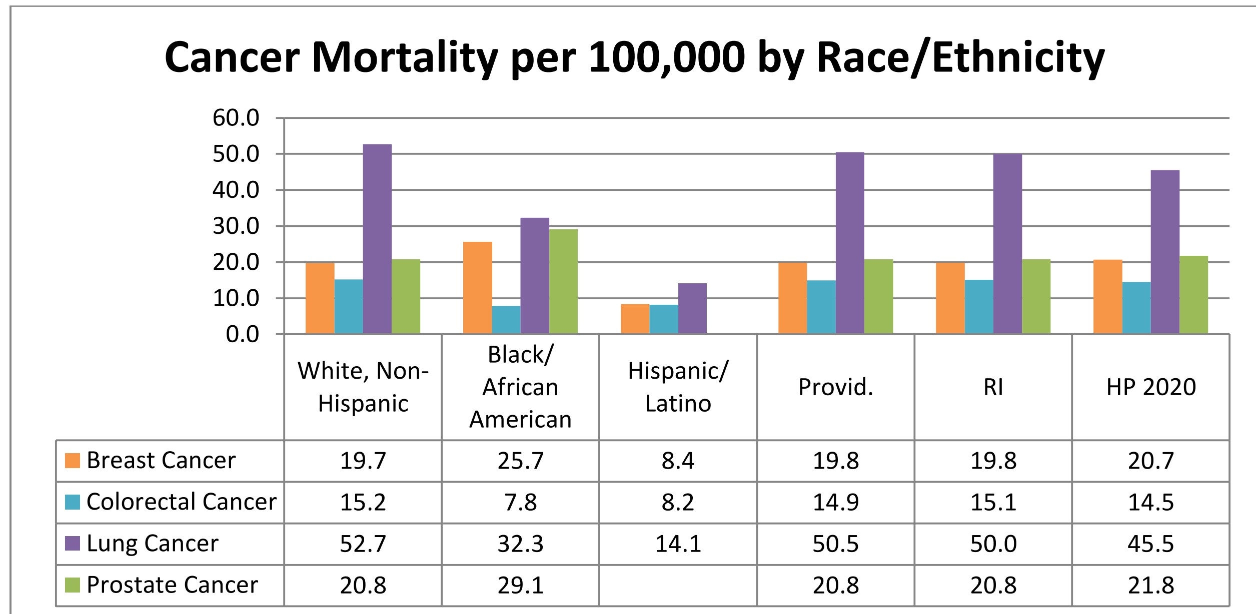
	Bristol	Kent	Newport	Provid.	Wash.	RI	HP 2020
Breast Cancer	17.0	21.6	17.7	19.8	20.5	19.8	20.7
Colorectal Cancer	13.9	16.1	17.0	14.9	13.4	15.1	14.5
Lung Cancer	49.4	53.7	44.6	50.5	47.3	50.0	45.5
Prostate Cancer	13.9	21.4	24.9	20.8	19.9	20.8	21.8

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.



	White, Non-Hispanic	Black/ African American	Hispanic/ Latino	Provid.	RI	HP 2020
Breast Cancer	19.7	25.7	8.4	19.8	19.8	20.7
Colorectal Cancer	15.2	7.8	8.2	14.9	15.1	14.5
Lung Cancer	52.7	32.3	14.1	50.5	50.0	45.5
Prostate Cancer	20.8	29.1		20.8	20.8	21.8

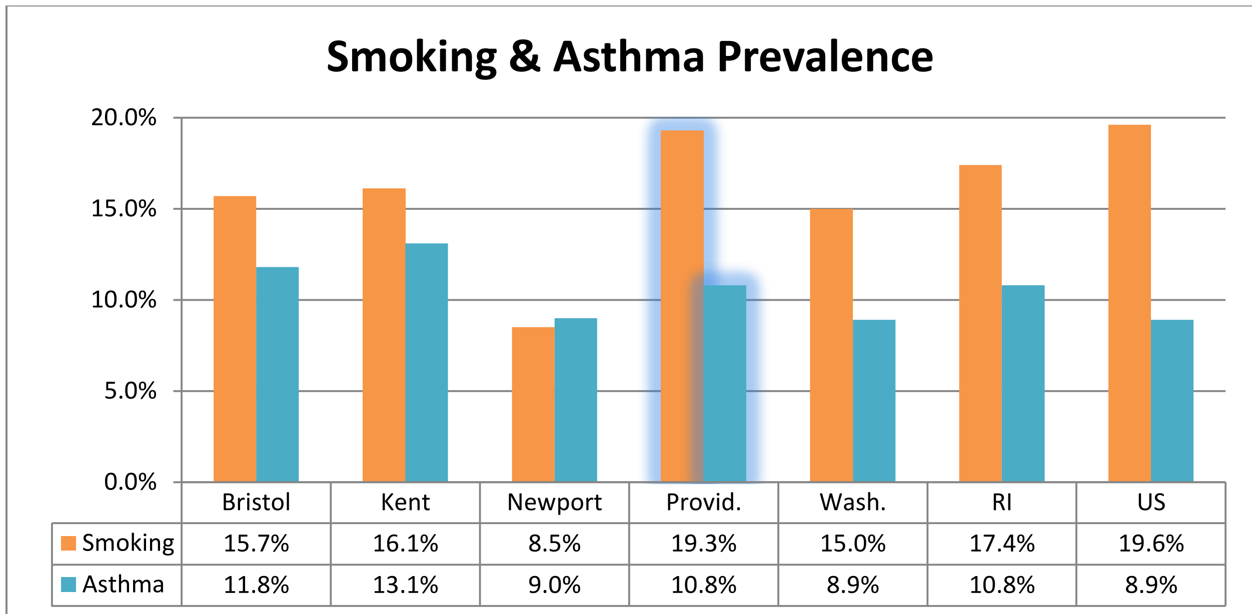
Source: National Cancer Institute, 2008- 2012*
*Prostate cancer mortality data is not available for Hispanics/Latinos

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 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

Memorial Hospital's 2013 CHNA BRFSS study also found that 16.5% of children have asthma. The percentage is higher than the national comparison (13.4%).



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

	Cigarette Use	
School District	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

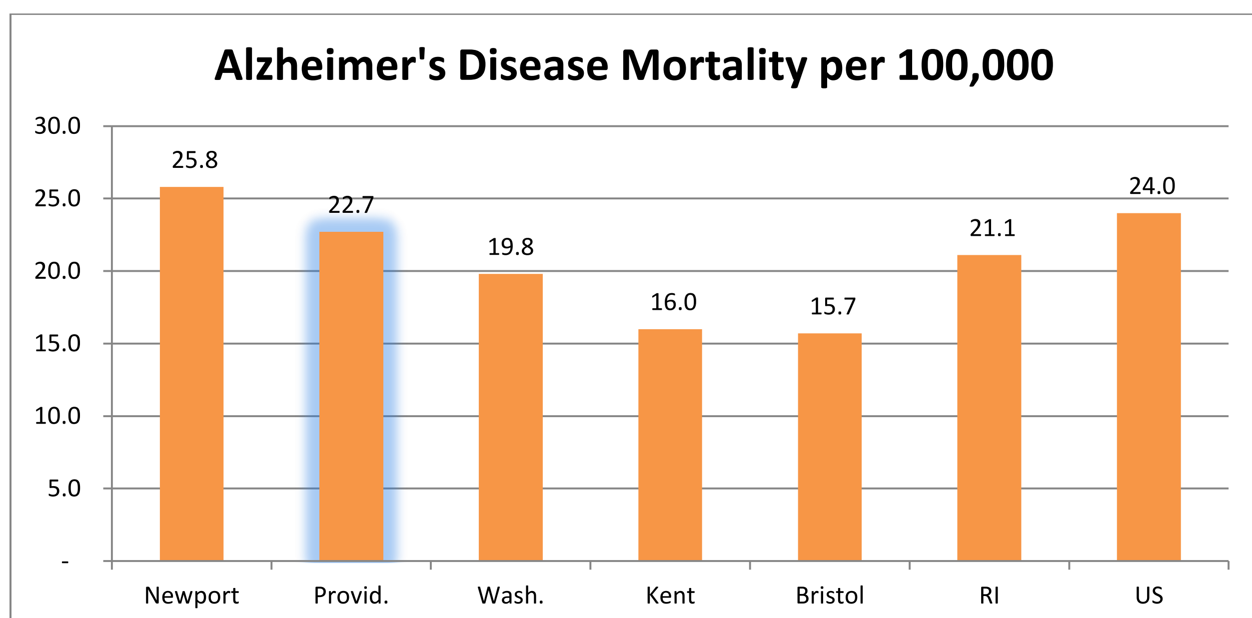
	Bristol	Kent	Newport	Provid.	Wash.	**RI**	**US**
Alzheimer's Disease	11.6%	12.1%	10.7%	13.4%	12.1%	**12.5%**	**11.4%**
Asthma	5.1%	6.1%	4.3%	6.2%	4.9%	**5.7%**	**4.3%**
Cancer	10.9%	11.2%	10.8%	10.4%	10.4%	**10.6%**	**9.1%**
Depression	13.4%	16.1%	13.3%	16.0%	12.1%	**15.0%**	**12.7%**
Diabetes	24.0%	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.

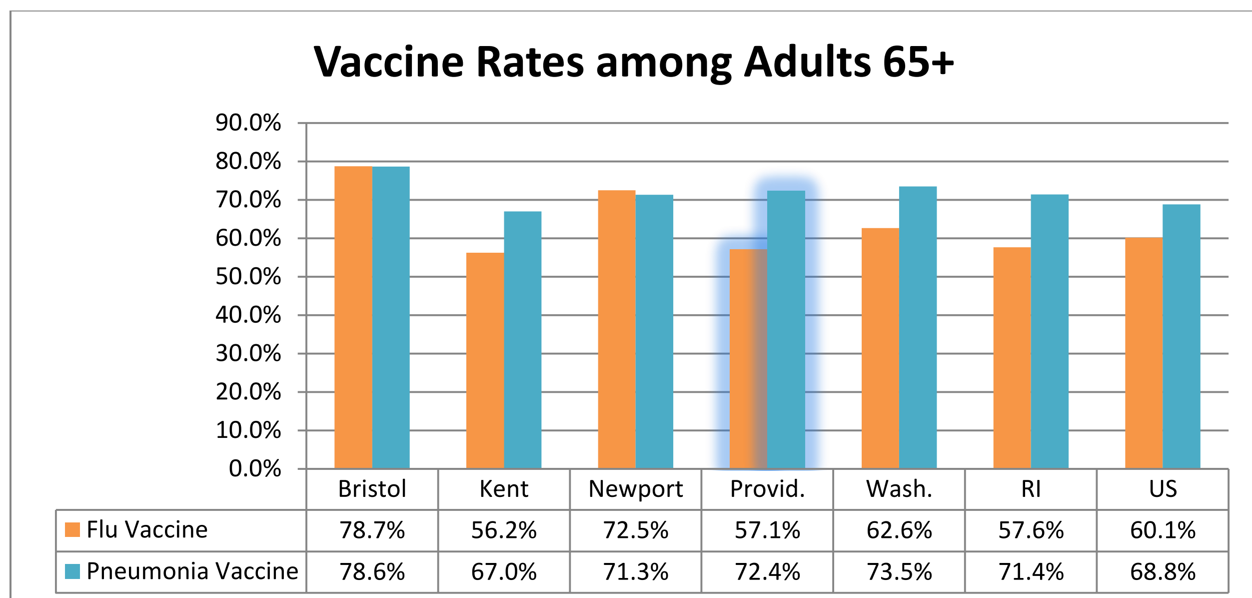


Source: Centers for Disease Control and Prevention, 2011-2013

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



	Bristol	Kent	Newport	Provid.	Wash.	RI	US
Flu Vaccine	78.7%	56.2%	72.5%	57.1%	62.6%	57.6%	60.1%
Pneumonia Vaccine	78.6%	67.0%	71.3%	72.4%	73.5%	71.4%	68.8%

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 26.5% 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.

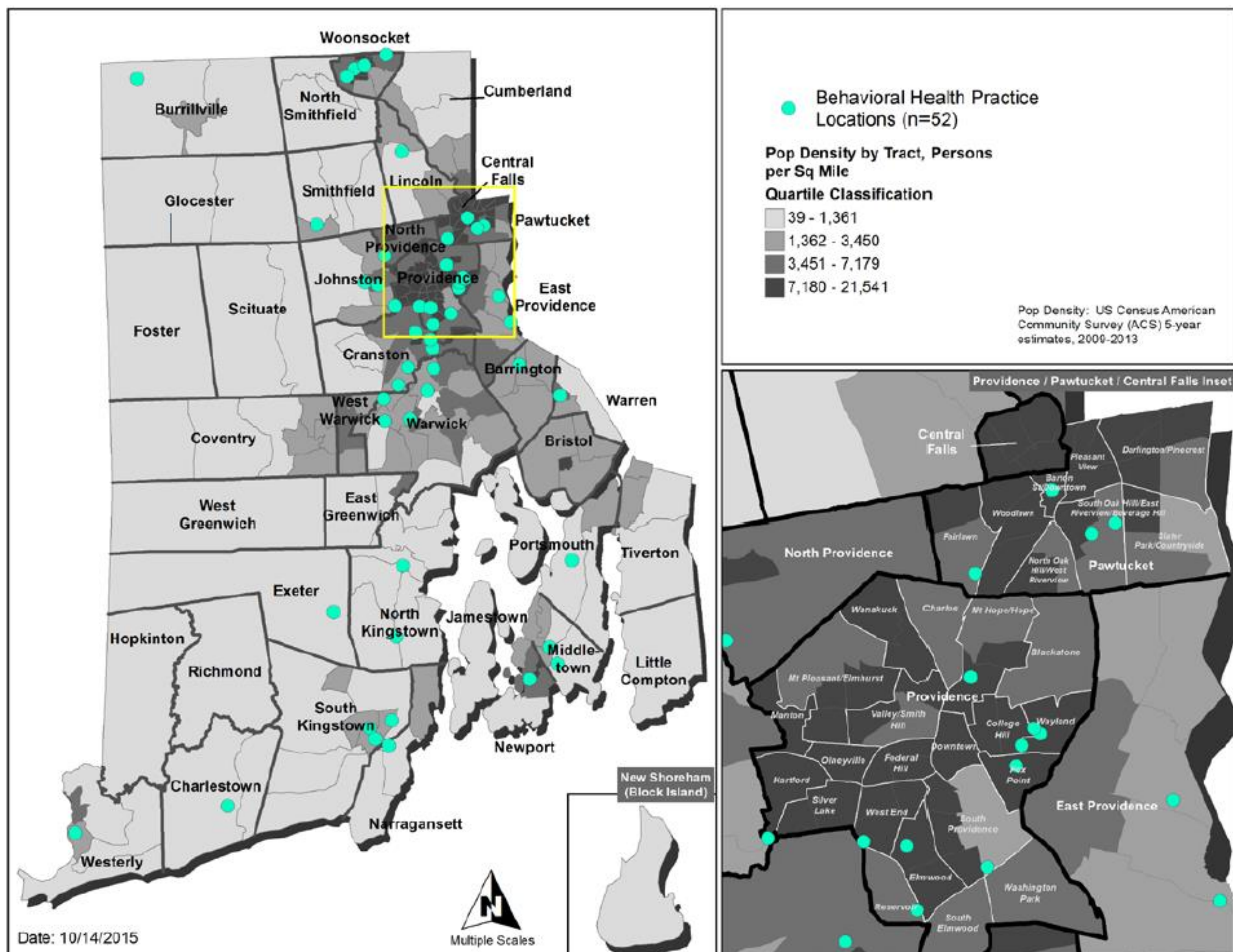
Mental Health Measures

	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.

14% of Rhode Island high school students reported attempting suicide

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.

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

	Alcohol Use		Marijuana Use		Prescription Drug Use		Cigarette Use	
School District	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

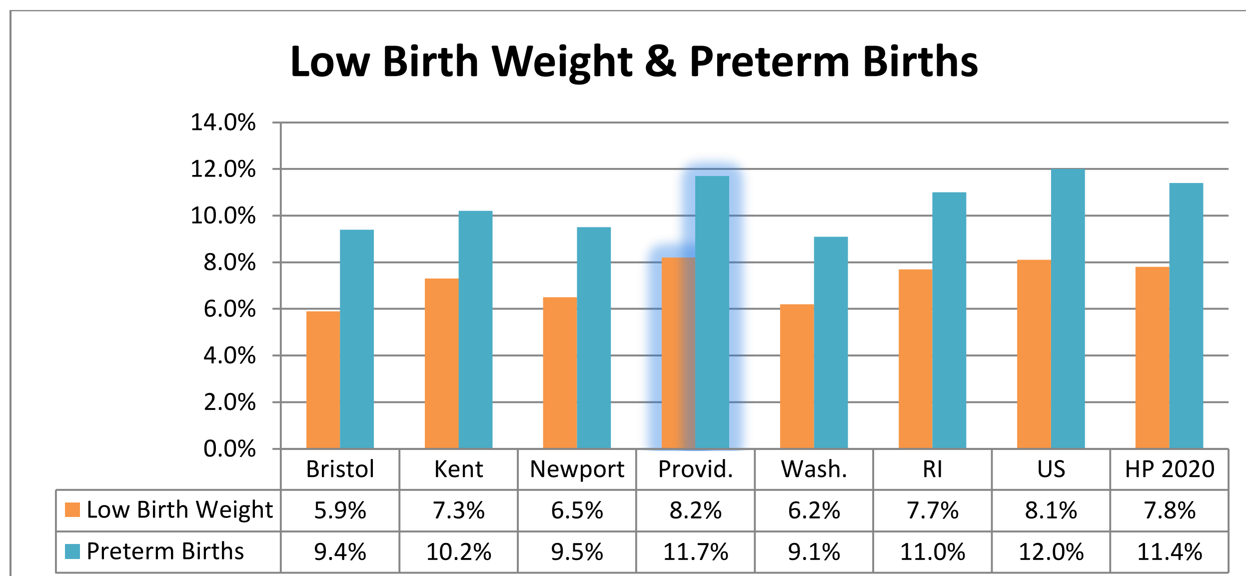
Maternal and Child Health

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 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%).

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

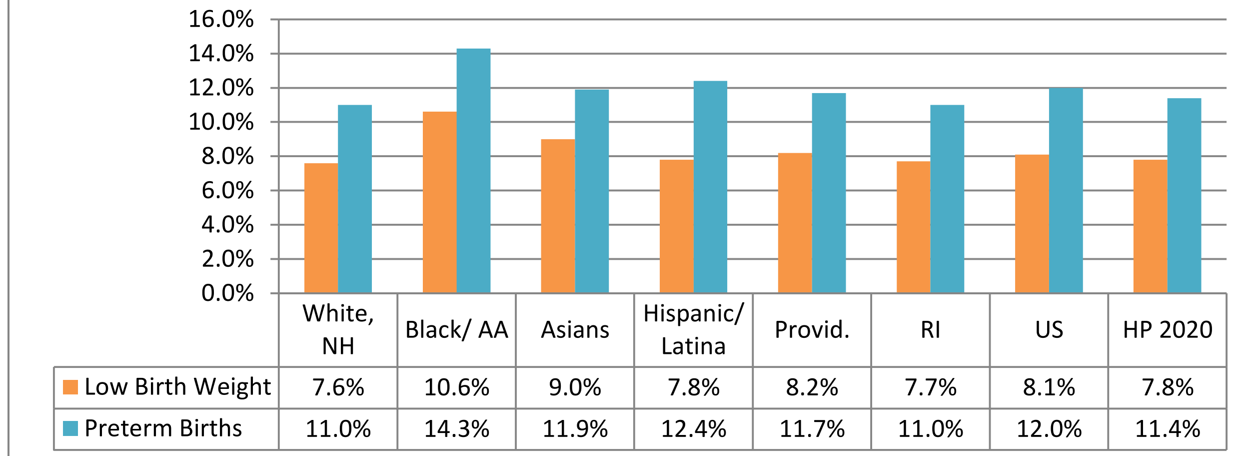
Premature births are births that occur earlier than the 37th week of pregnancy. They often lead to infant death. The percentage of preterm births in Providence County is higher than the state and exceeds the Healthy People 2020 goal, but represents a decrease from the 2013 CHNA (12.5%).



	Bristol	Kent	Newport	Provid.	Wash.	RI	US	HP 2020
Low Birth Weight	5.9%	7.3%	6.5%	8.2%	6.2%	7.7%	8.1%	7.8%
Preterm Births	9.4%	10.2%	9.5%	11.7%	9.1%	11.0%	12.0%	11.4%

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.



	White, NH	Black/ AA	Asians	Hispanic/ Latina	Provid.	RI	US	HP 2020
Low Birth Weight	7.6%	10.6%	9.0%	7.8%	8.2%	7.7%	8.1%	7.8%
Preterm Births	11.0%	14.3%	11.9%	12.4%	11.7%	11.0%	12.0%	11.4%

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 70.2% of children under 18 years in Washington County 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.

Memorial Hospital Utilization Data Analysis

Background

Memorial Hospital 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
10,513	1,524	871

The hospital utilization data was considered in conjunction with demographic data to more fully understand the needs of Memorial Hospital'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 codes 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 each zip code. 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. The data are presented in order of zip codes with the highest percentages of chronic disease usage.

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

Zip Code	Asthma	BH	CHF	COPD	Diabetes	HTN
02860 Pawtucket	42%	41%	32%	40%	38%	36%
02861 Pawtucket		20%	28%	24%	21%	24%
02863 Central Falls	19%					

Recognizing the relationship between social determinants of health and health status, the following table shows socioeconomic measures for the Memorial Hospital service area zip codes accounting for 50% of more of chronic condition prevalence. Zip code 02860 (Pawtucket) has some of the highest utilization rates and poorest socioeconomic measures in the service area.

	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
02863 Central Falls	11.1%	65.0%	28.6%	28.2%	22.8%	26.3%	6.6%	46.1%
02860 Pawtucket	20.0%	26.7%	53.2%	21.2%	16.8%	22.9%	7.9%	27.0%
02861 Pawtucket	6.8%	15.1%	75.5%	7.9%	5.4%	12.9%	7.3%	17.1%
Total Service Area (SA)	**10.3%**	**25.1%**	**66.3%**	**13.9%**	**10.9%**	**16.2%**	**7.4%**	**20.0%**
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

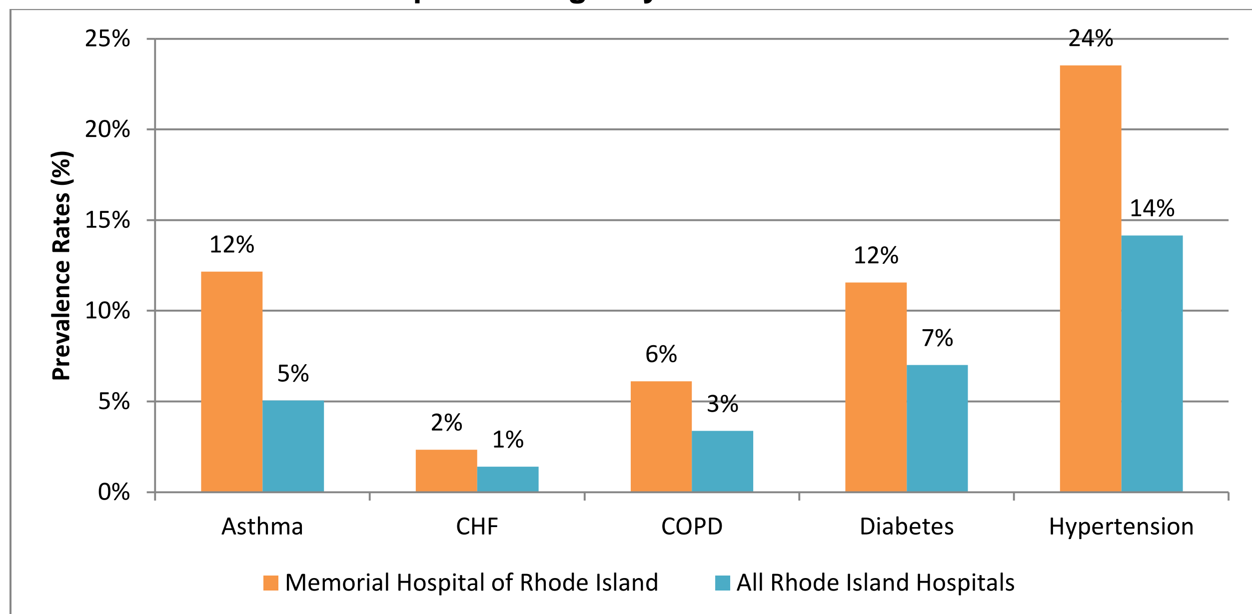
Chronic Condition Prevalence among Hospital Patients

The following graphs examine the prevalence of common chronic conditions among Memorial Hospital 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 Memorial Hospital emergency room have a higher prevalence of asthma (12%), COPD (6%), diabetes (12%), and hypertension (24%) compared to the Rhode Island average. The prevalence of CHF is similar to the state average.

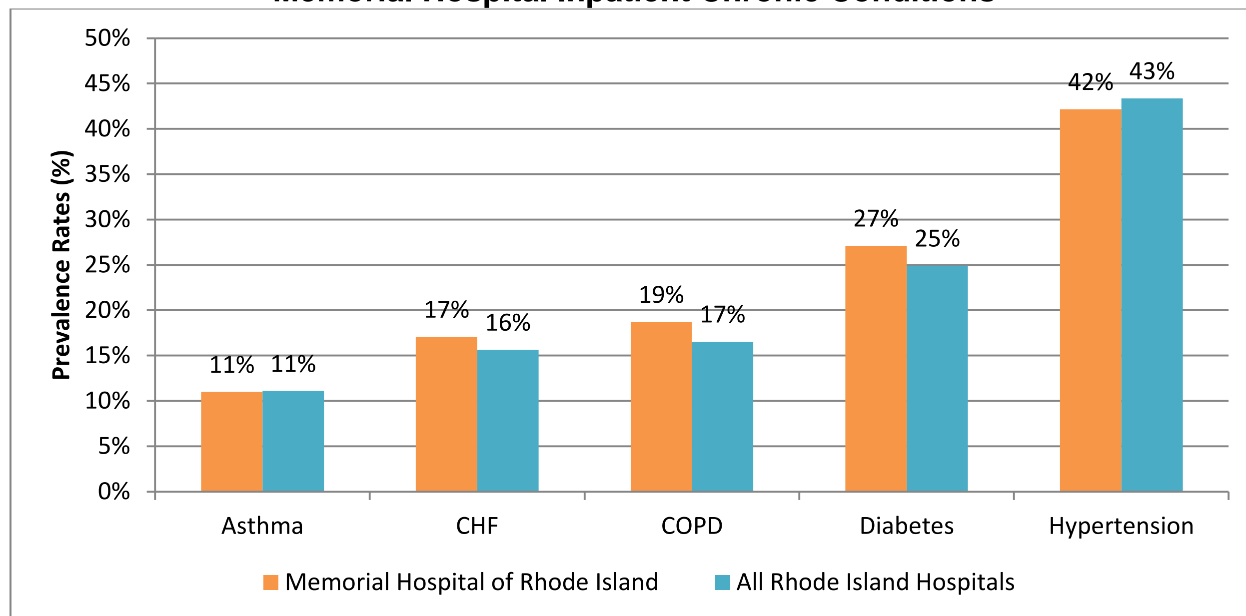
Memorial Hospital Emergency Room Chronic Conditions



Chronic Conditions among Inpatient Admissions

Patients admitted to Memorial Hospital have a similar prevalence of asthma, CHF, COPD, diabetes, and hypertension compared to the state average.

Memorial Hospital Inpatient Chronic Conditions



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 Memorial Hospital service area residents, during fiscal years 2013 and 2014, there were 10,668 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 Memorial Hospital.

Residents from four zip codes (02908, 02909, 02860, and 02907) account for approximately 44% of all behavioral health admissions across the Memorial Hospital service area. Three zip codes (02907, 02909, and 02860) rank among the top five zip codes in Memorial Hospital's service area for higher poverty rates and lower educational attainment.

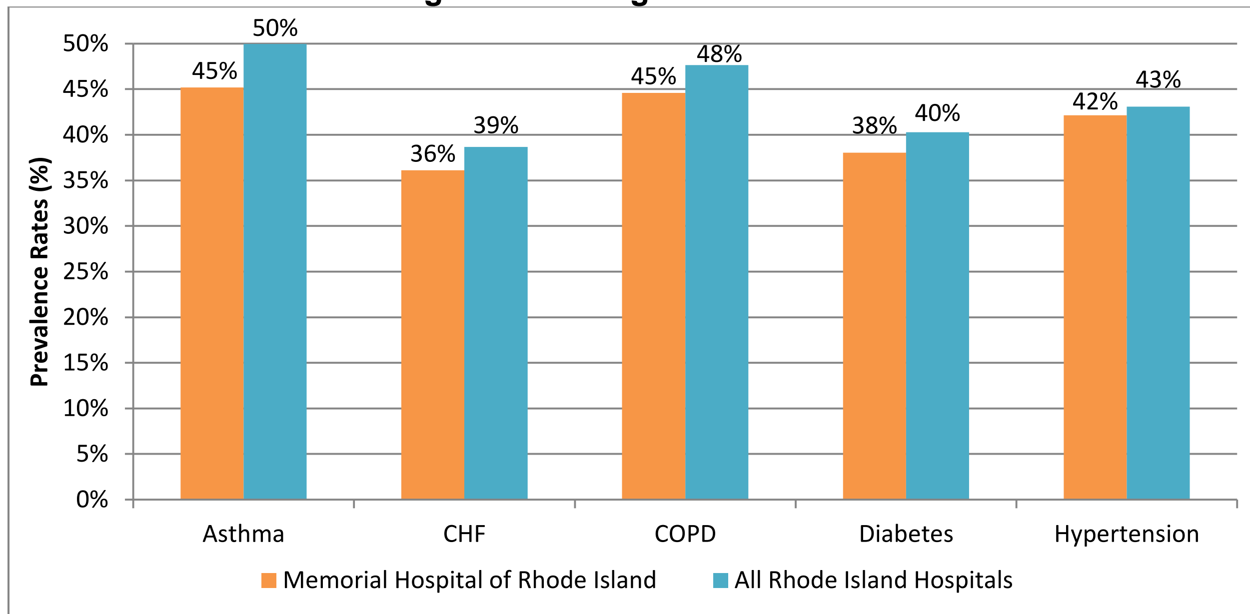
Behavioral Health Admissions Over Two Years (Oct 1, 2012-Sep 30, 2014)

Patient Zip Code of Residence	Behavioral Health Admissions* within the Zip Code of Residence (not unique patients)	% of Total Behavioral Health Admissions in Memorial Hospital's Service Area (10,668/2yrs)
02908, Providence	1,324	12.41%
02909, Providence	1,214	11.38%
02860, Pawtucket	1,180	11.06%
02907, Providence	963	9.03%
02904, Providence	791	7.41%
02919, Johnston	720	6.75%
02905, Providence	681	6.38%
02920, Cranston	671	6.29%
02906, Providence	547	5.13%
02914, East Providence	517	4.85%
02864, Cumberland	439	4.12%
02863, Central Falls	434	4.07%
02861, Pawtucket	360	3.37%
02915, East Providence	292	2.74%
02865, Lincoln	223	2.09%
02806, Barrington	206	1.93%
02916, East Providence	106	0.99%

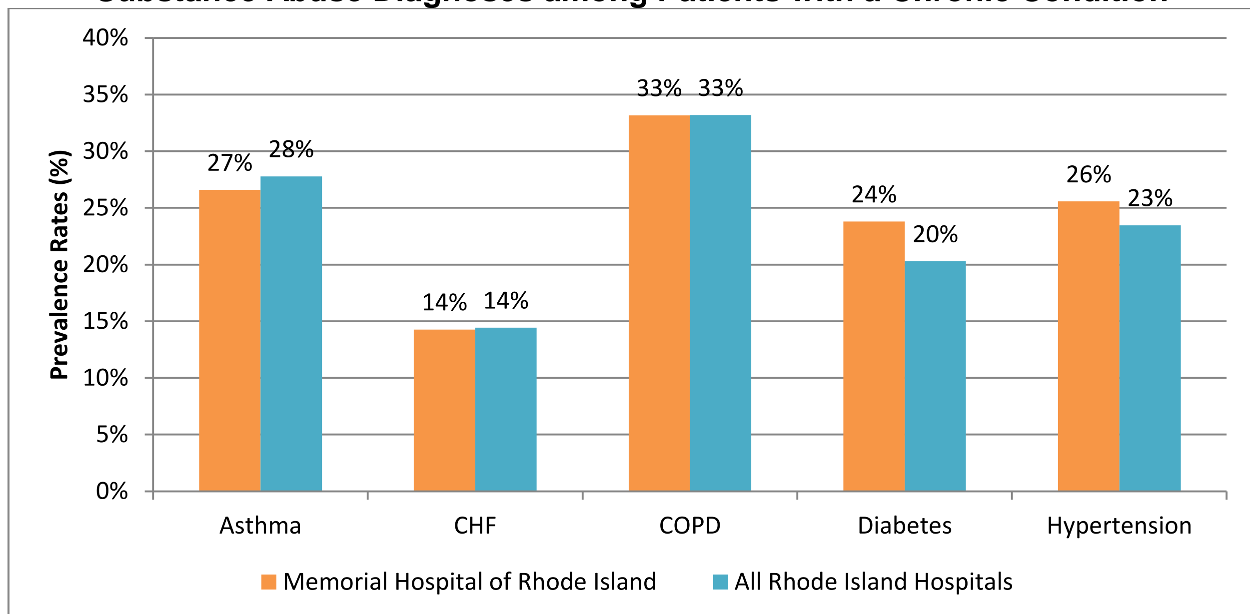
*Admissions to any Rhode Island Hospital

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.

Consistent with the state average, nearly half of all patients with asthma and COPD, and approximately 40% of patients with diabetes or hypertension, also have a behavioral health condition.



Nearly one-third of patients with asthma or COPD, and about one-quarter of patients with diabetes or hypertension, have a substance abuse issue.

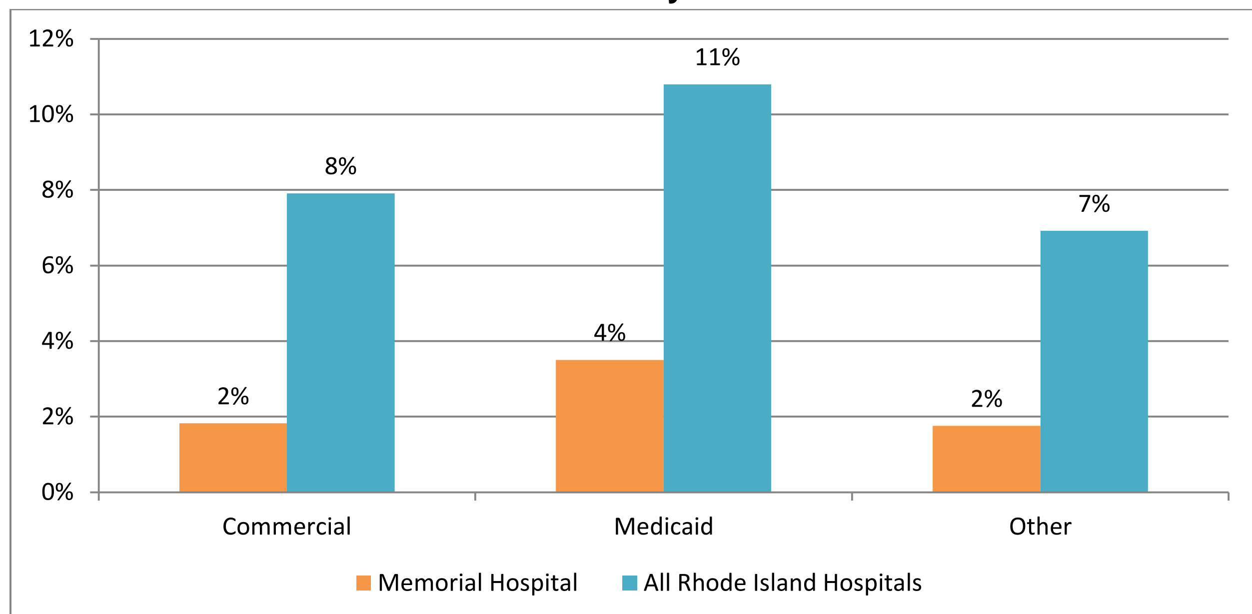


Premature Birth Rate

Approximately 4% of births (977) in Rhode Island occurred at Memorial Hospital during Oct. 1, 2013-Sept. 31, 2014. About half of the births were to mothers with commercial insurance (56%, n=549) and 32% (n=314) were to mothers with Medicaid insurance. Mothers who qualify for Medicaid were twice as likely to have premature births as mothers who have commercial insurance.

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



Partner Forums with Key Stakeholders

Partner Forums were held on Oct. 21 and 23 in the Providence area. The first forum was held at Women & Infants Hospital in Providence. The second forum was held at Progreso Latino in Central Falls. The objective of the forums was to solicit feedback from representatives of key stakeholder groups about priority health needs including identifying underserved populations, existing resources to address the priority needs, and barriers to accessing services. The forum also served to facilitate collaboration to address community health needs while aligning community health improvement efforts between the HARI CHNA, the Rhode Island Department of Health State Improvement Plan, and the local Health Equity Zones (HEZ).

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 divided by priority area for small group discussion based on the services their organization provides and/or the populations they serve. The subgroups discussed underserved populations, barriers to optimal health for residents, existing community assets, service delivery gaps, and opportunities for collaboration around the priority needs.

The small group discussion began with identification of existing community assets to address the priority area. Partners named specific organizations, programs, and individuals in the community, populations served, and partners that provide services in support of the identified need. Group participants were then presented with a set of questions aimed at identifying gaps in services and opportunities for collaboration 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 participants' responses from each Partner Forum is outlined below.

Providence Partner Forum

October 21, 2015, 12-2:30 pm
Women & Infants Hospital, 100 Dudley Street #2, Providence

Partner Forum Participants:

Ann Bavone, Rhode Island Department of Health
Amy Blustein, Care New England
Rebecca Boxx, Children and Youth Cabinet
Laura Bozzi, Southside Community Land Trust
Carrie Bridges-Feliz, Resident
Ellen Cynar, City of Providence
Eddy Davis, Providence Recreation Department/HCO
Lisa Donohue, North Providence School Department
Suzanne Fortier, Care New England Philanthropy
Patti Haskins, St. Joseph's Health Center
Brooke Havens, CareLink
Donald Laliberte, Crossroads Rhode Island
Virginia Lopez, St. Joseph's Health Center
Leah Montalbano, CareLink
Mia Patriarca, Rhode Island Department of Health
Jennifer Rossi, Environmental Justice League
Tina Shepard, ONE Neighborhood Builders
Betsy Shimberg, Brown University
Denise Tamburro, Rhode Island Department of Health
Monica Tavares, Rhode Island Department of Health
Elizabeth Vachon, North Providence School Department
Doug Victor, Providence Police Department
Emily Westgate, Brown University

Behavioral Health: Mental Health & Substance Abuse

Barriers to Accessing Programs/Services/Initiatives

Most residents are aware of some behavioral health services but do not know the full breadth and scope of services available. Better communication and cross-referral would improve resident awareness of community resources. Other barriers that residents experience when accessing services include:

- Wait times for appointments
- Eligibility criteria to receive services (income, insurance, etc.)
- Lack of specialists, especially child psychiatrists and physicians with geriatric experience
- Stigma associated with behavioral health
- Lack of services, specifically home-based interventions and support groups
- Limited state funding for free or reduced cost services
- Lack of follow- through with discharge planning

Underserved or Most At-Risk Populations

The partners agreed that populations within the community are at higher risk for developing behavioral health issues and are less likely to receive necessary interventions. These populations include:

- Adults with serious and persistent mental illness
- Children with incarcerated parents
- Individuals under 65 years of age on Medicare
- The uninsured population
- Immigrants, especially undocumented immigrants
- Individuals at-risk for crisis
- Formerly incarcerated individuals
- Racial and ethnic minority groups

A greater number of individuals ages 55-69 who have behavioral health and other chronic conditions are being referred to nursing homes because they are unable to find adequate housing. Group homes are limited in their ability to deliver personal care to these individuals and as a result, they are pushed prematurely into nursing homes, which do not always have the expertise in managing behavioral health symptoms. A new housing model is required to address the needs of these individuals.

Recommendations to Improve Access for Underserved or At-Risk Populations

There is a lack of early intervention and prevention work in the community. Residents are not accessing health services until they are in crisis. Partners recommended using community health workers/community mental health workers and other outreach programming to reach individuals prior to crisis. They also recommended that all primary care settings adopt a standardized mental health screening tool to be used on all patients.

Identifying Collaborative Partners to Address Behavioral Health Needs

Partners named schools, faith-based communities, foundations, funders outside of Rhode Island, federal agencies, and others as potential partners to address health needs. Partners stressed that there is a shortage of state funding so organizations need to seek federal and national funding to fill the gap.

Partners brainstormed two unique partnership opportunities. 1) Collaboration between The Providence Center and the North Providence School District to better prepare students who receive services at The Providence Center to transition back into the traditional school setting. 2) Engaging well-known, well-respected community leaders to advocate, support, and raise awareness of behavioral health issues. Partners recognized that competition for funding, rather than collaboration, often makes creating partnerships challenging.

Chronic Disease: Prevention & Management

Barriers to Accessing Programs/Services/Initiatives

Communication to residents about existing resources can be improved by using diverse channels for communication to specific populations and stakeholder groups in the community. In addition to awareness of existing services, other barriers keep residents from accessing services, including:

- Socioeconomic factors (poverty, education, etc.)
- Transportation to services
- Lack of multilingual providers
- Lack of health literacy and communication with providers
- Availability/convenience of appointment times
- Safety concerns/crime inhibiting outdoor physical activity
- Program capacity (e.g. the ratio of community gardens to residents)
- Lack of services, particularly for nutrition education

Underserved or Most At-Risk Populations

The partners agreed the following populations are at higher risk for developing chronic disease and are less likely to receive necessary interventions:

- Individuals on Medicaid/Medicare
- Individuals without family to support the management of their condition(s)
- Low-income, urban populations
- Minority racial/ethnic populations
- School children without adequate family structure to support healthy behaviors
- Individuals with low access to healthy, affordable foods

Recommendations to Improve Access for 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:

- Community infrastructure and policy to support free/low cost physical activity (e.g. bikeable/walkable communities and further integration of physical activity into the school day)
- Greater support for Providence Public School District's Wellness Coordinator in implementing healthy school policies and ensuring compliance
- Providing a full service grocery store to South Providence
- Advocating for a 100% match of SNAP and WIC benefits at farmers markets versus the current 40% match
- Development of additional community gardens and urban farms with gardening instruction provided to residents
- A fruit and vegetable prescription program for physicians and patients, coupled with nutrition education
- A full-scale marketing effort (mailers, radio, door-to-door canvasing, etc.) of available services to the community
- The development of a combined health clinic/grocery/farmer's market to increase healthy food access and nutrition education in the community
- Identify community activists and champions to instill ownership of the community, create mentorship opportunities, and promote awareness of services

Identifying Collaborative Partners to Address Chronic Disease Needs

The participants identified a potential partnership between the Southside Community Land Trust and low-income neighborhoods to support community gardens and subsidized gardening resources.

Maternal & Child Health

Barriers to Accessing Programs/Services/Initiatives

Participants said that providers are often unaware of existing resources and therefore do not educate their patients about services. In addition to a lack of information sharing in the community, partners identified these additional barriers:

- Transportation to services
- Lack of prenatal outreach
- Lack of a "one door" approach, residents need to go to many providers to receive many services as opposed to having one access point to help them connect to services

Underserved or Most At-Risk Populations

The partners agreed that the following populations are at higher risk for poorer outcomes related to maternal and child health:

- Families and children within the welfare system
- Undocumented immigrants
- Teenage mothers
- Non-English speaking residents
- Families with parents who are incarcerated
- Children with PTSD or other trauma symptom

Recommendations to Improve Access for Underserved or At-Risk Populations

Partners thought any program or service designed for underserved or at-risk populations should be community-driven; too many programs are perceived as coming from organizations and individuals “outside” of the community. Partners also stated that programs and services should implement place-based strategies and use representatives from the target population to help reach the community. Place-based strategies recognize that “place” matters and individuals do better when they live in vibrant and supportive communities. The goal of place-based strategies is to create communities of opportunity.

Identifying Collaborative Partners to Address Maternal & Child Health Needs

Partners stated that there is a need for more connection between small grassroots organizations and larger intermediary organizations like the Department of Health. These connections will support community collaboration toward like-minded goals without duplicating services. A shared referral system among providers to ensure access and create a “one door” approach to services was also recommended.

Pawtucket/Central Falls Partner Forum

October 23, 2015, 9-11:30 am
Progreso Latino, 626 Broad Street, Central Falls

Partner Forum Participants:

Rui Almeida, City of Central Falls

Melanie Andrade, Central Falls Housing Authority

Ami Awad, Progreso Latino

Bill Bentley, Blackstone Valley Community Action Program

Laura Bozzi, Southside Community Land Trust

Alberto DeBurgo, Central Falls Housing Authority

Joe Diaz, Memorial Hospital of Rhode Island

Carlos Domenech, Pawtucket Central Falls Development

Jordan Dunne, Pawtucket School Department Child Opportunity Zone

Melissa Flaherty, Pawtucket Housing Authority

Nancy Howard, Local Initiatives Support Corporation

Cezarina Jackson, Memorial Hospital of Rhode Island

Norma Lopez, Pawtucket Adult Education

Mary Parella, Pawtucket School Department Child Opportunity Zone

Bianca Policastro, Blackstone Valley Community Action Program

Cynthia Roberts, Rhode Island Coalition Against Domestic Violence

Gretchen Sloane, Memorial Hospital of Rhode Island

Caitlin Towey, Rhode Island Public Health Institute

Behavioral Health: Mental Health & Substance Abuse

Barriers to Accessing Programs/Services/Initiatives
Partners thought that most residents were aware of some services that address behavioral health needs, but most do not know about all of the existing community services. In addition to a lack of information, the partners noted that there is a lack of "one door" to access all programs. In addition, partners listed the following barriers that residents face in accessing services in the community:

- Transportation to services
- Pride in asking for help
- Stigma and anxiety associated with seeking help
- Concern for basic needs (e.g. housing) before health needs
- Lack of specialists for services and settings to receive care
- Out-of-pocket costs for care
- Lack of education/knowledge regarding behavioral health conditions
- Lack of cultural competency among mental health providers
- Lack of multilingual providers

Underserved or Most At-Risk Populations
The partners agreed that some populations within the community are at higher risk for developing behavioral health issues and are less likely to receive necessary interventions. The Hispanic/Latino population, in particular, was noted as underserved due to reduced awareness and acceptance of the behavioral health issues among the community and a lack bi-lingual and culturally competent providers. The following populations were also considered underserved or at-risk:

- Youth
- Homeless population
- Elderly population
- Undocumented immigrants
- Low-income residents

Recommendations to Improve Access for Underserved or At-Risk Populations
Partners said that school-based health clinics and community centers are the best venues to reach underserved or at-risk populations. School-based health clinics can offer mental health and medical services and community centers can be a "one-stop shop" for accurate information regarding services in the community.

Identifying Collaborative Partners to Address Behavioral Health Needs
Information sharing was suggested as an opportunity for collaboration. Promoting information about local programs, in addition to a list of behavioral health providers was suggested. Taking a community-centered approach, versus an agency-centered approach would improve dissemination of information to residents. Blackstone Community Health Center was noted as a potential partner to help promote community wide resources for behavioral health care.

Chronic Disease: Prevention & Management

Barriers to Accessing Programs/Services/Initiatives
While residents are likely aware of some of the community offerings that could help improve health, information could be more widely disseminated. Motivation and barriers to accessing services also keep residents from taking advantage of existing resources. Barriers include:

- Availability of appointment times
- Transportation to services
- Lack of cultural competent/multilingual providers
- Out-of-pocket costs for care
- Safety/crime inhibiting outdoor physical activity
- Lack of city planning/design that supports physical activity

Underserved or Most At-Risk Populations
Males, particularly, those who are non-English speaking are seen as the most underserved or at-risk population. They are least likely to seek services until they reach a point of crisis. Individuals with low incomes and others who cannot easily access healthy foods are also at-risk for poorer health.

Recommendations to Improve Access for Underserved or At-Risk Populations
Participants recommended the following services that could help improve chronic disease among underserved or at-risk populations:

- Mobile farmer’s markets at schools, housing developments, and other locations
- Promotion of Community Supported Agriculture programs and the Slater Hill Farmer’s Market in low-income areas
- A language access plan for non-English speaking populations
- Home visits for at-risk populations to ensure adequate nutrition and physical activity and chronic disease management
- School- and work-based health programs
- A program allowing hospitals and physicians to provide services to patients in known and comfortable locations in the community to increase access

- An initiative to convert vacant lots into community gardens and provide education and resources to support gardeners
- Programs that employ community health workers that reflect the community demographics
- A walking school bus to increase physical activity among students, utilizing available walking trails and sidewalks
- An initiative to develop family fitness programs in housing developments

Identifying Collaborative Partners to Address Chronic Disease Needs
Partners discussed a number of ways to incorporate health into the community so that it is comfortable and relevant based on language and culture. Food access and community exercise programs were emphasized. They recommended an increase in community gardens, fruit and veggie prescription programs, and farmer's markets. Partnerships between community groups and health providers to deliver exercise programs in the community were suggested to encourage physical activity.

Maternal & Child Health

Barriers to Accessing Programs/Services/Initiatives
Participants stated that many residents are not aware of all the services available to them due to a lack of publicity. In addition, a number of barriers exist when accessing services; transportation and housing are two of the biggest barriers. Participants said that bus fees are more expensive than Uber and only a few people in the community qualify for free passes.

Partners also stated that the struggle to meet basic needs, like housing, inhibits residents from accessing services. Affordable housing options in the community have a two to five year waiting period and there is no emergency housing. In addition, housing is often overpopulated and unsafe with absentee landlords.

Additional barriers to accessing services include:

- Undocumented citizen status
- Transportation to services
- A fear/mistrust of the healthcare system
- Poverty and out-of-pocket costs for care
- Lack of multilingual providers
- Social and emotional distress inhibiting ability to identify and navigate services

Underserved or Most At-Risk Populations

The partners agreed the following populations experience higher disparities related to maternal and child health outcomes:

- Minority racial/ethnic populations
- Teenagers, particularly those who have withdrawn from school
- Single mother households

Recommendations to Improve Access for Underserved or At-Risk Populations

Participants named the following organizations as existing or potential partners to improve maternal and child health outcomes:

- School districts to reach at-risk youth and disseminate information to families
- Community Health Centers
- Department of Human Services
- Children's Friend Day Care Center
- The City/Government to enact policy change around issues like breastfeeding and improve transportation through better sidewalks and biking paths

Identifying Collaborative Partners to Address Chronic Disease Needs

The partners brainstormed two unique partnerships that would aid the community:

1) Partner RIPTA with healthcare providers to create a healthcare route similar to the college bus routes.

2) Partner social service and advocacy groups with the city government to create safe and accessible walking and biking paths.

Identified Community Assets

Behavioral Health: Mental Health & Substance Abuse	
Community Asset	**Target Population(s) as Applicable**
12 Step Programs for Substance Misuse (Phoenix House, Oasis Center, CODAL, NAMI, RISAS)	
211 (United Way)	
Anchor Counseling	
Blackstone Valley Community Action Program	
Blackstone Valley Community Health Care	
Bradley Hospital (Lifespan) & Bradley School Solutions	
Butler Hospital's Young Adult Partial Program	
Central Falls Housing Authority/Planning & Economic Development	
Child Opportunity Zones (COZ)	
Colleges, Universities, K-12 Schools	
Community Center	
Community Mental Health Centers	
Day One	
Family Services of Rhode Island/Rhode Island Student Assistance Services	Students, Families
Gateway Healthcare: Mental Health First Aid	
Home-Based Team Services (Mobile Treatment Teams)	
House of Hope	
Kids Link (Butler Hospital & Gateway Healthcare)	Students, Schools
Office of the Mental Health Advocate	
PACE Rhode Island	Adults 55 years or older
Pawtucket Central Falls Development	
Peace Love Studio (Behavioral Health Awareness)	
PODOR Radio	Spanish-Speaking Population
Private Providers, including Primary Care	
Progresso Latino	
Rhode Island Department of Behavioral Healthcare; Children, Youth, and Families; Development Disabilities; Human Services	
Rhode Island Elder Mental Health and Addiction Coalition	
Rhode Island Parent Information Network	Parents of children with special health care needs
Rhode Island Public Transit Authority	
The Providence Center (Care New England)	Adults, Children, Families
The Samaritans	Suicide Prevention
Women & Infants Hospital	Women with post-partum depression
Youth Pride, Inc.	

Chronic Disease: Prevention & Management	
Community Asset	**Target Population(s) as Applicable**
Blackstone Valley Community Action Program	Low-Income Families
Blackstone Valley Community Health Care	
Community Gardens	West End, South Providence, Pawtucket
Community Health Network (referrals to self-management programs for diabetes, arthritis, smoking, etc.)	High Risk Chronic Disease Patients
Connect Care Choice Community Partners (4CP)	Medicaid, Medicare Dual Eligible with Chronic Health Needs
Farmers Market Incentive Programs/Farm Fresh Rhode Island	
Health Equity Zones (HEZ)	Olneyville & Providence Residents
Memorial Hospital of Rhode Island	
Partnership for Providence Parks	
Pawtucket Child Opportunity Zone (COZ)	Students
Pawtucket Housing	
Progresso Latino	
PODOR Radio	Spanish-Speaking Population
Rhode Island Coalition Against Domestic Violence	Domestic Violence Victims
Rhode Island Public Health Institute	
South Providence Development Initiatives (ONE Neighborhood Builders, City of Providence, Libraries)	
Southside Community Land Trust	
West Elmwood Housing	

Maternal & Child Health	
Community Asset	**Target Population(s) as Applicable**
Birth to Three Committee	
Blackstone Valley Community Action Program	
Blackstone Valley Community Health Care	Low-Income, Underinsured/ Uninsured, Minorities
Child Opportunity Zones (COZ)	
Childhood Lead Action Project	
Children's Friend Day Care Center	Low-Income Families
City Government	
Day Cares/Head Start/Early Childhood Development	Children Ages 0-5 Years
Department of Human Services	
Environmental Justice League	Oppressed and marginalized communities
Family Visiting Program (Department of Health)	
Farm Fresh Rhode Island	
Food Banks/Pantries	
Green & Healthy Homes	
Hospitals & Health Centers (HARI, Care New England, CharterCARE, The Providence Center, etc.)	
International Board Certified Lactation Consultants/Certified Lactation Counselors	Breastfeeding Women
Memorial Hospital of Rhode Island	
Mental Health Providers	
Nurse-Care Managers	
Pawtucket Soup Kitchen	Individuals in Need
Progresso Latino	
PODOR Radio	Spanish-Speaking Population
Providence Children & Youth Cabinet	
Ready to Learn Providence	
Rhode Island Department of Health	
Rhode Island Doula Collective	Pregnant Teens
School Districts & Staff (nurses, social workers, etc.)	
The Providence Center	
Universities/Students	
Women & Infants Hospital	
Youth Success Program	Teenage Families

Focus Groups with Latino Residents

Two focus groups, one conducted in English and one conducted in Spanish, were held with Latino residents in the Pawtucket/Central Falls region in March 2016. The research objective of the focus groups was to:

1) Understand health needs and perceptions regarding diabetes
2) Determine what health resources exist/are needed in the community
3) Define barriers to achieving optimal health
4) Explore individual experiences associated with accessing health care

Diabetes Awareness & Perceptions

Focus group participants identified diabetes or "sugar" as one of the top health issues among the Latino community. All of the participants know at least one individual with diabetes; they perceive it to be a deteriorating condition that "Sucks the life out of you." "It's a terror to take insulin; it's a terror to have an amputation." Participants felt that individuals with diabetes are constantly thinking about and adjusting their lives around their diet, daily testing, and medication management. Insulin management is a primary struggle due to the need for proper timing.

Most participants in the Spanish language focus group had a chronic condition. Five in the group had hypertension and high cholesterol. Three were diagnosed with Pre-diabetes; four had Type 2 Diabetes. Three of the individuals with Diabetes also had depression. Most did not feel limited by their health condition, but rather in their resources to manage their conditions. Money is the biggest limitation to buying the "right foods" and affording medications. Many of the participants depend on food stamps and Social Security.

Participants recognized the increased risk for disease if you are overweight or obese, and the benefits of diet and exercise. Nearly all participants receive annual screenings for diabetes. Some in the group have gym memberships; others walk for exercise. The majority of participants eat vegetables twice a day; meat three times a day; and fruits twice a week. Cost and availability of fruits and vegetables limit consumption.

Some thought Diabetes was genetic; others thought it could be prevented. "It is hit or miss." "I have a [diabetes] history on my father's side, so I was expecting that sooner or later I would come out with it, as I did." Participants recognize diabetes as a common condition within the Latino community and listed a number of factors contributing to the prevalence of diabetes in the Latino community:

- **Access to healthy foods**: The closest grocery stores are located in Pawtucket, however participants thought the quality of the fruit and vegetables were not good. “They are rotten within two days.” There used to be a bus to other grocery stores, but the service was discontinued when the city went bankrupt.

- **Lack of community diabetes education**: Participants thought there was widespread need for diabetes education in the community to “explain the A to Zs of diabetes, and the long-term effects” (e.g. blindness, kidney failure, heart failure, etc.). Many Latinos do not realize that the side effects of diabetes are severe and potentially deadly. They also stated that providers are not educating the community about their risk for diabetes.

- **Lack of exercise facilities**: Central Falls does not have a community center or indoor facilities for residents to exercise. The community center was closed when the city filed bankruptcy. It was referenced several times throughout the focus groups as a significant loss in the community. Residents also find it difficult to walk outside, particularly in the winter, due to the need for sidewalk maintenance. One participant stated, “We have a number of absentee landlords and you go through patches of streets where the sidewalk hasn’t even been touched.”

    - Progreso Latino partnered with the YMCA to address access to exercise facilities. The partnership provides free transportation to the Pawtucket Family YMCA, where residents are eligible for free group exercise classes (Zumba, Cardio Latin Beat, and Aqua-Fit) and family open swim. The program serves approximately 45 people.

- **Lack of provider education**: Participants criticized providers for not educating patients about the medications they prescribe for them. Patients have to research their medications themselves online, but they still don’t understand why they are taking the medication. “Is it because of my family [genetics] or something I’m eating? I’m drinking this medication, but how long do I have to take it for? What can I do to get better?” Participants were particularly concerned about not receiving information about what could happen if they *did not* take their medication.

- **Lack of relationships with providers**: In general, residents do not feel that they have good relationships with their providers due to short length of appointment, seeing different providers on each visit, language barriers, and cultural competency.

- **Lack of nutrition education**: The community is in need of nutrition education to promote healthy cooking habits and substitutions for the Latino diet. Participants recognize that the traditional Latino diet is not healthy, and they welcome advice on making substitutions. “You can’t just tell someone they can’t have their favorite dish, you have to teach them how to substitute cook.” “I would like a diet that I can work with daily. I know a healthy diet is vegetables, meats, and fruits, but how do I do it? The portion size too.”

    - The Pawtucket Family YMCA offers a 16-week program that teaches participants how to eat and cook healthy, measure portions, and make substitutions. The program is only offered in English.

- **Language/Cultural differences**. The community has a number of immigrants from multiple Spanish-speaking countries. For many, it is not the norm in their home country to visit a doctor. Healthcare facilities in the region need to be aware that immigrants may be seeing a doctor or other provider for the first time. In addition, participants stated that provider offices need translation services that are accurate and appropriate; Spanish learned in school may not reflect the dialect used by immigrants.

- **Lack of bilingual providers.** There are a limited number of doctors in the community that are Spanish-speaking. Some offices have nurses or staff that can interpret. Others use a translation phone or rely on patients’ family members or other lay interpreters. Latino patients want to communicate directly with their doctor in Spanish.

There are some Diabetes education courses offered in the community; but they are dependent on grant-funding and offered sporadically. Only some participants in the focus group are aware of the different programs. More effort needs to be placed on publicizing programs and services to the Latino community. Progreso Latino is seen as an excellent resource and referral source for Latinos. Progreso Latino and Holy Spirit Church are seen as the only places in the community where Latinos can receive information and programs. Residents would like to have more places like these that provide information and services in Spanish. Participants recommended a centralized diabetes/well-being health and education center that addresses physical activity, nutrition, and counseling services.

In addition, participants made the following general recommendations regarding community programming:

- **Timing**: Program timing should be flexible to reach all populations (e.g. seniors prefer day time activities, but working adults prefer evening activities).

- **Fees/Incentives**: Fees should be limited to $5 to ensure all community members can attend. Meals are an appealing incentive for residents.

- **Location**: Locations should be accessible and convenient to all community members. A suggestion was to hold programs in the subsidized housing apartments, but make it open to the communities.

Access to Care

Most in the group have insurance varying between Medicaid, Medicare, and Commercial insurance. All but one participant in the Spanish language group sees a doctor or nurse practitioner at the Health Center. One sees a “private” PCP. Spanish speaking participants liked that the Health Center has Spanish-speaking doctors and staff.

Some prefer to see a doctor instead of the Nurse Practitioner, but agree they can be seen sooner if they see the Nurse Practitioner. A common concern is that they do not have enough time with their doctor to discuss their condition, care, and concerns. Many see a different provider within the practice each visit, which effects continuity of care.

Language is the next concern. Latino participants preferred to talk directly to their provider in their language. Using an onsite medical interpreter is the next best option. Using a lay interpreter, family member, or telephonic translation makes patients feel uneasy. “I’m not sure if they are translating what I am saying correctly.” “On the phone, they can’t see where I’m pointing.” Most participants prefer not to have family members interpret, citing concerns for privacy and that, in some instances, not all the dialogue is communicated to the patient or doctor “to protect the patient.” Lack of cultural competency by providers or office staff makes Latino patients feel unwelcome or undervalued.

“If you don’t have a relationship with the doctor, how are you supposed to work on better things? How do you progress? It’s frustrating and stressful.” Some patients don’t feel like they are given a choice in their care.

The lack of a local health clinic reduces access to care for community residents. Participants said that Blackstone Valley Community Health Care, located in Pawtucket,

is slated to offer health services in Central Falls in the future. According to focus group participants, people must be a patient of the healthcare center to receive services. They understood that Blackstone Valley patients must access all services (dental, mental, and physical) through the healthcare center and services are integrated. For example, if a patient makes an appointment for a dental cleaning, they may first have to see a health provider as part of routine care. Participants were concerned that if you like the dentist, but not the doctor, you still have to access all services from Black Valley to remain a patient. The Health Center does provide walk-in appointments on Saturday mornings for patients and non-patients.

Transportation to health and other services is an issue for many. Most focus group participants rely on public transportation or family and friends for transportation.

Focus Group participants identified these additional barriers to accessing care:

- **Appointment scheduling**: Wait times to see a provider range from two weeks to two months for a non-emergent primary care appointment. They often visit urgent care or the emergency room instead of waiting for an appointment. In addition, many providers are not accepting new patients.

- **Appointment wait times**: Patients can wait as long as two hours for their scheduled appointments.

- **Immigrant documentation**: Many immigrants rely on the free clinics until their paperwork for insurance is approved. Frequently, people are removed from the clinic system before they receive paperwork and then have to wait for a new opening at the clinic. In the meantime, they must borrow money or fundraise to afford necessary medications, particularly insulin.

- **Office environment**: Provider offices are not seen as friendly or customer oriented; staff rarely greets patients or asks for feedback on their services.

- **Out-of-pocket expenses**: Copays and other fees have increased and have a financial impact. One participant stated, “You [access care] because you have to do it. It doesn’t mean you can afford it. You’re going without something else.” Participants shared that out-of-pocket expenses increased when Health Source, the official Rhode Island marketplace for health insurance, went into effect. “I’m paying now for myself what I used to pay for a family.”

- **Navigating the health care system**: The healthcare system is difficult to navigate. “We [Latinos] need systems in place to help us…in our way of thinking. Providers should be here to help us. It’s not a business.”

Communication Channels

Many individuals in the Latino community are not receiving information about health resources. One participant stated, "I hear a lot of good information here, but I don't hear this information on the outside. Agencies don't tend to reach out to people. We are blind in our own community." Families with school age children tend to receive the most information about community activities through the schools.

Participants recommended using these additional partners to promote health information to Latino residents of all ages:

- **Broad Street in Central Falls**: Broad Street is an area of diversity and a gathering point for many Latino residents.

- **Federal housing/subsidized housing units**: Many of the housing units have informational bulletin boards located by the resident mailboxes.

- **Highways**: One participant stated, "In Rhode Island, you have to get on a highway to go anywhere." Participants recommended using bill boards for public health information.

- **Holy Spirit Church**: The church is the largest in the community and a primary site of worship for Latinos.

- **Insurance companies**: Insurance companies regularly mail flyers with health information and patient reminders for annual exams and screenings. Participants recommended partnering with insurance companies to provide community-based resource information.

- **Restaurants**: Some Latino restaurants will hang flyers to promote communities activities.

Participants would like to receive more information from the health department and providers regarding diabetes and other health issues affecting Latinos. They recommended that the message be bilingual and easy to understand. A variety of communication channels should be used including billboards, buses, newspapers, and Latino television and radio stations.

Evaluation of Community Health Impact from 2013 CHNA Implementation Plan

Memorial Hospital and other Care New England hospitals developed and implemented a system-wide plan to address community health needs that leverages resources across the system and employs the system's specialized services for behavioral health, women's and infants health, and cardiovascular and diabetes care.

Mental Health and Substance Abuse

Goal 1: Decrease morbidity from diabetes and heart disease among persons with mental illness, including substance abuse disorders.

Goal 2: Improve mental health by increasing access to appropriate, quality mental health services including substance abuse services.

Leveraging resources across the Care New England System, Butler Hospital focused on improving care coordination for patients with comorbid conditions. Our key initiatives included identifying and referring behavioral health patients without a primary care physician (PCP) to a PCP practice, including mental health screening as part of our coronary heart failure (CHF) program, and providing medication continuity in CNE emergency departments for psychiatric patients with diabetes and heart disease awaiting an inpatient psychiatric bed through our Safe Transitions program. Over the three year period, we were successful in referring 900 patients discharged from Butler Hospital to a PCP.

Other objectives included 1) expanding capacity to respond to patients awaiting psychiatric services in hospital emergency departments; 2) improving the transition for patients from emergency departments to inpatient care; 3) developing a partnership with a community provider to enhance continuum and improve access to community-based services; and 4) educating prenatal mothers and their families about risk factors for postpartum depression and resources available to assist with treatment.

Our key initiatives for this goal included providing online mental health screening; developing a patient-centered medical home model with integrated mental/physical health; and developing an affiliation agreement with The Providence Center to provide greater access to psychiatric care, including 24/7 presence in Care New England emergency departments.

Between January 1, 2013 and December 31, 2015, the online mental health screening tool hosted on Butler Hospital's website received 57,390 new visitors with an additional

1,737 people returning during this time period. Promotion of butler.org/healthscreening in communications and advertising brought 43,524 people directly to the page, and 13,866 visitors found the screening tool through another page on the web site. In all cases, the average period of time spent on the page (3:05) indicates visitors are completing the online mental health screening. The relevance and value of the tool to the community is proven with its ranking as the fourth highest traffic page on our website, only behind the homepage and employment opportunities.

Another key accomplishment is Care New England's work to improve youth behavioral health and postpartum depression among women. One initiative by Kent Hospital established a program within the City of Warwick to train city employees to be mentors for youth. The goal of the program is to increase youth confidence, self-esteem, and the desire to stay in school. Kent Hospital also provided school-based health education to instruct parents on the warning signs and treatment of substance abuse. CNE clinicians increased awareness of postpartum depression and provided information and education to residents as part of Rhode Island's Climb Out of Darkness event.

Care New England also hosted mental health support groups and education sessions and provided insurance enrollment assistance for uninsured patients to improve mental health wellbeing and access to care.

Heart Disease

Goal 1: Increase the number of women who are aware of their risk for heart disease.

Goal 2: Reduce heart disease through early identification, and early and appropriate treatment/management.

Our objectives included educating women about the benefits of healthy behavior and the risk factors for heart disease, increasing screenings for women who may be at higher risk for heart disease, and increasing the number of women who exclusively breastfeed their infants to impact the health of the infant and mother.

Community outreach, including education and screening, was conducted via activities across the Care New England System and communities, reaching hundreds of individuals. Initiatives included the Spirit of Women Day of Dance and the Women's Health Fair.

Other initiatives included support for the Rhode Island Free Clinic with physicians and allied health professionals, nutrition and weight management programs, and The Doctor Is In wellness lecture series at Memorial Hospital.

Care New England sought and received Baby Friendly designation for all birthing services at Women & Infants Hospital and Kent Hospital and increased efforts to encourage breastfeeding among mothers giving birth across the CNE system. A seven-day-a-week, nurse-staffed Warm Line supported the informational and educational needs of new and expectant mothers. A weekly peer support group facilitated by nurse educators and other staff for new parents and babies provided a safe nonjudgmental forum for women to bond with each other and their babies.

Fiscal Year 2013-2015 Warm Line Statistics

	FY 2013	FY 2014	FY 2015
Warm Line Calls	11,019	6,401	5,993
Spanish Language Calls	325	266	256
Post-Partum Call Backs	7,995	7,209	7,733
Physician Referrals	999	858	628
Warm Line Visits to Maternity Patients	2,889	7,029	7,763

To improve outcomes and self-management for patients with heart disease, we conducted congestive heart failure education and developed partnerships with PCPs and area skilled nursing facilities to reduce hospital readmissions.

Diabetes

Goal 1: Increase the number of people who are aware of the risk factors for diabetes.

Goal 2: Increase diabetes self-management education for people living with diabetes.

Our objectives were to 1) increase the proportion of persons with diabetes whose condition has been diagnosed; 2) increase community awareness of the risk factors for diabetes; and 3) lower readmissions rates for patients with diabetes-related complications.

The CNE Family Van served 1,800 clients to improve access to healthcare for medically underserved residents, including uninsured and under-insured. The van team provided education, screenings, and chronic disease self-management. Each client received applicable screenings for blood pressure, cholesterol, lipid profiles, body fat analysis, diabetes, and pregnancy testing, and follow-up education and referrals based on lab results. Efforts focused on populations that experience health disparities, including the Providence, Pawtucket, Central Falls, and Woonsocket communities.

The CNE Family Van also targeted senior Latino residents in subsidized housing units to provide diabetes education and support groups. The initiative aimed to identify undiagnosed individuals and improve self-management skills.

Care New England participates in community health fairs to promote health education and screenings. During the annual, two-day health fair for Electric Boat employees, all CNE hospitals participate, serving approximately 2,000 residents. Care New England also participates in the City of Warwick Health Fair, the WIH Family Van Health Fair, and others across the community.

Other accomplishments included creating standardized screening/testing across CNE facilities; sharing screening tests (with patients and primary care providers); educating women at-risk for or diagnosed with gestational diabetes; and developing a CIS initiative to measure patient outcomes. A pilot program included screening approximately 2,000 CNE employees for diabetes in 2013 and 2014.

Memorial Hospital Implementation Plan for Community Health Improvement

Memorial Hospital will employ the following goals, objectives, and strategies in working to meet its goals to improve the health of the communities it serves. Memorial Hospital's full Implementation Plan for Community Health Improvement is available on request.

Priority Area: Behavioral Health

CNE Goals:

> Prevent opioid use addiction and opioid addiction in conjunction with other substances.

> Decrease morbidity and mortality from opioid use and opioid use with other substances.

Objectives:

> Increase awareness and knowledge among the public and health care professionals about opioid addiction, signs and symptoms of substance abuse, prevention, and existing addiction and recovery services.

> Increase the number of people who are identified with opioid addiction or are at-risk for opioid addiction and require treatment services.

> Increase the number of people who learn about the CNE Center of Excellence Addiction and Recovery Treatment Model and who seek out and are able to access treatment services.

> Improve staff cultural competence in delivering preventive and treatment services to those with opioid addiction or are at-risk for opioid addiction and in communicating with family members, significant others, friends, and the public about opioid addiction prevention and treatment, and related services and programs.

> Help reduce stigma associated with opioid addiction and other substance use disorders.

Strategies:

> Deliver education and outreach to build awareness in the multiple community audiences about opioid addiction to further prevention, improve care access, and lessen morbidity and mortality rates.

- Address opioid addiction in populations and communities where there is greatest disparity in outcomes and need.

- Align efforts the Governor's Overdose Prevention and Intervention Task Force Action Plan and 2016 Rhode Island opioid and substance use legislation.

- Increase awareness about Care New England's centralized intake for behavioral health.

- Continue to provide a free online screening tool and promote its use, particularly for substance use and opioid use disorder.

- Collaborate with Central Falls-Pawtucket HEZ in delivering Youth Mental Health First Aid training to students.

- Analyze and report on race and ethnicity in CNE emergency rooms of patients who present with overdose and substance use symptoms to identify disparities related to the opioid crisis.

- Assess need for expanding AnchorMORE and adding recovery coaches and develop further capacity as needed.

- Continue narcotics support groups and other self-help support groups, according to budget, and assess need for expansion.

Priority Area: Chronic Disease—Diabetes

Goals:

- Reduce the number of new cases of diabetes.

- Decrease morbidity and mortality from type 2 diabetes and diabetes-related conditions.

Objectives:

- Increase the public's awareness and knowledge of risk factors for prediabetes and diabetes.

- Increase the proportion of pre-diabetic people at risk for diabetes who have been screened and diagnosed.

- Increase the proportion of persons with diabetes whose condition has been diagnosed.

- Reduce disparities in screening, diagnosing, and treatment of diabetes.

- Promote healthy behaviors, including those related to diet and nutrition, to aide in reducing the risk factors for the development of diabetes among at-risk populations in underserved populations residing in CNE hospital service areas.

- Support persons at high risk for diabetes with modifying health behaviors, including healthy eating.

- Improve cultural competence among clinicians and staff in delivering preventive and treatment services to those at risk of acquiring type 2 diabetes or have type 2 diabetes and their families.

Strategies:

- Facilitate prediabetes and diabetes education, outreach, prevention, and screening in the community in CNE service areas through community events, health fairs, and related venues.

- Analyze and report on pre-diabetes and diabetes status of the CNE patient population over time.

- Facilitate increased prediabetes screening of CNE patients by CNE primary care providers.

- Perform outreach and education to CNE primary care providers on U.S. Preventive Services Task Force (USPSTF) Task Force recommendations for screening asymptomatic adults at risk for diabetes.

- Facilitate referral of patients with prediabetes to CDC approved diabetes prevention programs (DPP) that address risk factors such as diet and nutrition.

- Develop type 2 diabetes screening protocols or referral process for screening for at risk behavioral health inpatients and outpatients based on clinical criteria.

- Join the DPP Stakeholder Network.

- Continue Memorial Hospital collaboration with Pawtucket/Central Falls HEZ with regard to diabetes prevention and education, including activities related to health diet and nutrition.

- Assess the feasibility of offering the diabetes prevention program or similar programs to CNE employees.

- Partner with internal and/or external diabetes self-management programs for referral purposes for people with type 2 diabetes. Refer through the Community Health Network, RIDOH’s centralized referral system, individuals eligible and

qualified for no-cost diabetes self-management programs and chronic disease self-management programs.

- Collaborate with Progreso Latino in establishing physical activity and other programs, such as healthy eating, designed to prevent diabetes.
- Support diabetes outreach and prevention activities by CNE hospitals, according to budget, such as the Family Van Program, the "Doctor Is In" wellness series, nutrition/weight management education, health fairs, and support groups.
- Evaluate and update diabetes outreach and educational materials, when necessary, to improve readability, comprehension, and cultural relevance.

Priority Area: Maternal Child Health

CNE Goals:

- Increase healthy pregnancies and improve birth outcomes for at-risk mothers and babies.
- Reduce the disparity in prenatal care, preterm births, low birthweight, and infant mortality among at-risk black/African American families.

Objectives:

- Increase the proportion of pregnant women who receive prenatal care during the first trimester of pregnancy and reduce barriers to accessing prenatal care services for at-risk women throughout pregnancy.
- Improve postpartum outcomes for mothers and babies, including infant mortality.
- Increase breastfeeding initiation and duration across all populations and work toward reducing barriers to breastfeeding.
- Improve the overall health of pregnant women.

Strategies:

Access

- Support continuity of health insurance coverage for postpartum women by facilitating referrals to health coverage navigators.
- Expand Family Van outreach services with pregnancy testing and related MCH education, information, and referral. Additionally, evaluate the prospect of adding breastfeeding support/education at Family Van sites.

- As feasible and beneficial, provide transportation to low-income pregnant women to and from prenatal care visits.

WIC Program

- Continue the WIC program at Women & Infants Hospital.
- Assess feasibility of partnership with WIC to develop and operate a Baby Café.
- Support established and new community-based WIC programming.

RIDOH and Community Collaboration

- Continue support for the Rhode Island Task Force on Premature Birth, a diverse coalition of community groups, government agencies, and health care partners working to reduce the rate of premature birth and the morbidity and mortality associated with premature birth in Rhode Island.
- Educate patients, families and communities about the importance of maternal child health, including prenatal and postnatal care.
- Increase referrals to and enrollment and retention in Rhode Island Department of Health evidence-based maternal child health programs, including the Nurse-Family Partnership Program and related evidence-based programs, for eligible women.
- Collaborate with the Department of Health to explore alternative financing opportunities that could support larger scale and saturation of maternal child health programs.

Breastfeeding

- Continue peer support group for new parents and babies, and provide breast feeding education.
- Continue supporting the Warm Line and RN/lactation consultants to new and expectant parents.
- Continue and further develop breastfeeding support groups for postpartum women in the hospital setting and in the community.
- Increase awareness of existing community resources for breastfeeding.

Screening

- Screen for tobacco, alcohol, and substance use and refer for services as appropriate.

Data

- Develop data resources to support goals and objectives.

Memorial Hospital will employ its initiatives, services, and programs in working to meet its goals to improve the health of the communities it serves. Memorial Hospital's full Implementation Strategy was attached to the Hospital's Form 990 and is available on the Hospital's website.

Board Approval and Adoption

The Care New England Board of Directors reviewed and approved the Memorial Hospital report of the Community Health Needs Assessment and adopted the Implementation Plan to address the priority areas on September 22, 2016.

Care New England prides itself in its on-going efforts to assess community need and has always strived to respond with programs and interventions geared toward addressing these needs. Through targeted efforts, Care New England has worked to improve public health and the quality of life for the state and region. From staff involvement in community organizations to the role we play as educators for those aspiring to careers in health, from the sponsorship of community events to the everyday commitment of our health educators who lead a rich array of classes and programs at our institutions, we embrace our roles as advocates, teachers and good neighbors.

Care New England has more than 500 years of combined service to Rhode Island and southeastern Massachusetts, with three of its institutions each offering more than a century of service to this community. Care New England provides a wide range of complementary and coordinated programs and services, with multiple access points throughout the care continuum. Its strength is in the distinctive competencies of each of its member organizations, its affiliated partners, and in the relationships it has with the community.

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

Providence Partner Forum Participants:

Ann Bavone, Rhode Island Department of Health
Amy Blustein, Care New England
Rebecca Boxx, Children and Youth Cabinet
Laura Bozzi, Southside Community Land Trust
Carrie Bridges-Feliz, Resident
Ellen Cynar, City of Providence
Eddy Davis, Providence Recreation Department/HCO
Lisa Donohue, North Providence School Department
Suzanne Fortier, Care New England Philanthropy
Patti Haskins, St. Joseph's Health Center
Brooke Havens, CareLink
Donald Laliberte, Crossroads Rhode Island
Virginia Lopez, St. Joseph's Health Center
Leah Montalbano, CareLink
Mia Patriarca, Rhode Island Department of Health
Jennifer Rossi, Environmental Justice League
Tina Shepard, ONE Neighborhood Builders
Betsy Shimberg, Brown University
Denise Tamburro, Rhode Island Department of Health
Monica Tavares, Rhode Island Department of Health
Elizabeth Vachon, North Providence School Department
Doug Victor, Providence Police Department
Emily Westgate, Brown University

Pawtucket/Central Falls Partner Forum Participants:

Rui Almeida, City of Central Falls
Melanie Andrade, Central Falls Housing Authority
Ami Awad, Progreso Latino
Bill Bentley, Blackstone Valley Community Action Program
Laura Bozzi, Southside Community Land Trust
Alberto DeBurgo, Central Falls Housing Authority
Joe Diaz, Memorial Hospital of Rhode Island
Carlos Domenech, Pawtucket Central Falls Development
Jordan Dunne, Pawtucket School Department Child Opportunity Zone
Melissa Flaherty, Pawtucket Housing Authority
Nancy Howard, Local Initiatives Support Corporation
Cezarina Jackson, Memorial Hospital of Rhode Island
Norma Lopez, Pawtucket Adult Education
Mary Parella, Pawtucket School Department Child Opportunity Zone
Bianca Policastro, Blackstone Valley Community Action Program
Cynthia Roberts, Rhode Island Coalition Against Domestic Violence
Gretchen Sloane, Memorial Hospital of Rhode Island
Caitlin Towey, Rhode Island Public Health Institute

Appendix B: Statistical Health Data References

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