



2019 Community Health Needs Assessment Final Report



**Landmark Medical Center
Woonsocket, Rhode Island**

September 2019

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Our Commitment to Community Health

Landmark Medical Center's main facility, the Woonsocket Unit, located at 115 Cass Avenue in Woonsocket, is a 214-bed acute care hospital and a member of the Prime Healthcare Foundation, a 501(c)(3) public charity. Landmark Medical Center has been part of the fabric of our community for more than 140 years, guided by our mission *to deliver compassionate, quality care to patients and better healthcare to communities*.

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

In December 2013, Landmark Medical Center was purchased by Prime Healthcare Services. Prime Healthcare Services has pledged millions of dollars in capital improvements, increased physician recruitment, and upgraded medical equipment, and to stabilize this vital community institution. Prime Healthcare is an award-winning health system operating 45 hospitals in 14 states. It is one of the nation's leading healthcare service providers with more than 40,000 employees and physicians dedicated to providing the highest quality healthcare. Fifteen of the Prime Healthcare hospitals are not-for-profit members of the Prime Healthcare Foundation.

To guide our community benefit and health improvement efforts across the community, since 2011 Landmark Medical Center has participated with the Hospital Association of Rhode Island (HARI) and other member hospitals across Rhode Island to conduct a statewide comprehensive Community Health Needs Assessment (CHNA). The 2019 CHNA builds upon the 2013 and 2016 studies to monitor health status across the state and in local hospital communities. The CHNAs included a mix of statistical research and stakeholder input to collect and analyze health trends that impact the health of our community.

This report outlines findings from the 2019 CHNA and highlights strengths and opportunities across the Landmark service area and greater Providence County. The findings will be used to guide services at Landmark Medical Center, as well as serve as a community resource for grant making, advocacy, and to support the many programs provided by our community health and social service partners.

To learn more about Landmark Medical Center's work to improve the health of our community, visit landmarkmedical.org or contact [Carolyn Kyle](#), Director of Public Relations, Marketing & Physician Relations at Landmark Medical Center.

Executive Summary of CHNA Findings

CHNA Leadership

The 2019 Hospital Association of Rhode Island (HARI) was conducted in collaboration with eight Rhode Island hospitals, including Landmark Medical Center.

A steering committee of hospital and HARI representatives coordinated and oversaw the CHNA research and stakeholder engagement. Throughout the process, CHNA findings were shared with community partners for review and input to determine local health needs, areas of disparity, and opportunities for collaboration. Community health consultants assisted in all phases of the CHNA including project management, data collection and analysis, and report writing.

2019 HARI CHNA Steering Committee Members

Gina Rocha, Hospital Association of Rhode Island, Vice President, Clinical Affairs

Otis Brown, CharterCARE, Vice President, Marketing & External Affairs

Laurel Holmes, Westerly Hospital, Director of Community Partnerships & Population Health

Carolyn Kyle, Landmark Medical Center, Director Public Relations, Marketing & Physician Relations

Kimberly O'Connell, South County Hospital, Vice President and Chief Strategy Officer

Gail Robbins, Care New England, Senior Vice President of Planning & Finance

Consulting Team

Colleen Milligan, MBA, Director, Healthcare Practice, Baker Tilly

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Jessica Losito, BA, Research Consultant, Baker Tilly

CHNA Methodology

The 2019 CHNA was conducted from April 2018 to June 2019 and included quantitative and qualitative research methods to determine health trends and disparities within the Landmark Medical Center service area compared to health indicators across Rhode Island and the nation. Primary study methods were used to solicit input from healthcare consumers and key community stakeholders representing the broad interests of the community. Secondary study methods were used to identify and analyze statistical demographic and health trends.

Specific CHNA study methods included:

- > An analysis of existing secondary data sources, including public health statistics, demographic and social measures
- > A Key Informant Survey with local health and social service providers
- > A Partner Forum with community partners to review CHNA findings and collect feedback
- > Prioritization of key community health findings

The CHNA was conducted in a timeline to comply with IRS Tax Code 501(r) that requires not-for-profit hospitals to conduct a CHNA every three years as set forth by the Affordable Care Act (ACA). The CHNA findings will be used to guide Landmark Medical Center's community benefit initiatives and engage local partners in collectively addressing identified health needs.

Community Engagement

Community engagement was an integral part of the CHNA research. In assessing the health needs of the community, input was solicited and received from persons who represent the broad interests of the community, as well as underserved, low income, and minority populations. These individuals provided wide perspectives on health trends, expertise about existing community resources available to meet those needs, and insights into service delivery gaps that contribute to health disparities. Research and planning was conducted in coordination with the Rhode Island Department of Health and the local Health Equity Zones (HEZ) to promote collaboration across existing initiatives and reduce duplication of activities.

Summary Findings

Woonsocket is one of the four core cities within Providence County, identified by the Rhode Island Department of Health as experiencing greater economic distress and potential for health inequity. Within Woonsocket, 25% of households and 38.5% of children live in poverty. Nearly 2 in 5 adults have not completed a high school diploma. Poverty as a barrier to accessing care is heightened in Woonsocket, which is a Health Professional Shortage Area (HPSA) for low-income individuals for primary, dental, and mental healthcare. Residents tend to have greater risk factors for disease and experience more chronic diseases. Life expectancy among Woonsocket residents is among the lowest in the state, at fewer than 75 years in the western portion of the city.

Woonsocket is one of the four core cities in Rhode Island, experiencing heightened economic distress and greater potential for health inequity

Areas of opportunity across Woonsocket and the surrounding Providence County continue to be centered on reducing family trauma which is a key contributor and multiplier across priority areas of early treatment of mental health and substance use disorders, reducing health disparities related to chronic disease mortality, improving birth outcomes for women and babies.

Mental Health and Substance Use Disorders

Key informant survey participants indicated that treatment for behavioral health disorders was the top issue that affect Woonsocket residents. Statistical data reinforced this perception on numerous measures. Opioid use has a dramatic impact on the Woonsocket community and the healthcare system. The rate of emergency department (ED) visits for drug-related incidents increased three-fold from 2016 to 2018, and is the second highest rate in the state.

Substance use disorder is closely linked with Adverse Childhood Experiences (ACEs). People who experience ACEs are more likely to have substance use disorders, often perpetuating the cycle of ACEs for their children. A key to breaking the cycle of substance use disorder and ACEs is addressing family violence in our community. Woonsocket has the highest rate of child abuse and neglect in the state and the second highest rate of children of incarcerated parents as of 2017.

Health Disparities Related to Chronic Disease

Despite decreasing uninsured rates and more residents reporting a regular medical home, chronic disease deaths due to heart disease, diabetes, and lung cancer are higher in our

community than national benchmarks. ACEs, behavior health comorbidities, and socioeconomic disparities increase health disparities for Woonsocket residents. Specifically, our youth are disproportionately impacted by obesity and asthma. Food insecurity plays a key role in obesity, while tobacco use and environmental factors contribute to heightened asthma rates.

Maternal and Child Health Disparities

Cyclical poverty and trauma put women and children at increased risk for poor birth outcomes and quality of life. Children residing in Woonsocket experience more violence, abuse, and neglect than in other communities. While nearly 50% less than a decade ago, Woonsocket's teen birth rate is nearly three times the state average at 43.7 teen births per 1,000 births, compared with the state average of 15 per 1,000 births.

Woonsocket mothers and children also experience wide disparities related to prenatal care and breastfeeding. Approximately 19% of Woonsocket mothers do not access prenatal care in the first trimester, suggesting greater healthcare barriers. Only 68% of Woonsocket mothers report breastfeeding at the time of birth compared to 77% of mothers statewide.

Community Health Priorities

To work toward health equity, it is imperative to prioritize resources and activities toward the most pressing health and crosscutting needs within communities. In determining the issues on which to focus efforts over the next three-year cycle, Landmark Medical Center solicited input from community partners and stakeholders to align efforts with existing initiatives headed by the Rhode Island Department of Health, the HEZs, and other community partnerships.

The CHNA findings confirmed that many residents within the Landmark Medical Center service area experience greater socioeconomic disparities and increased health needs than in other parts of the state. Cyclical poverty, exposure to violence, and poorer health outcomes lead to shortened life expectancy for many residents. In support of CHNA findings, Landmark Medical Center will focus on reducing family trauma, improving timely treatment for mental health and substance use disorders, and reducing teen pregnancies while improving birth outcomes for mothers and babies. .

Landmark Medical Center Community Health Priorities for 2019-2022

Behavioral Health: Reduce the prevalence of family trauma

Chronic Disease: Expand access to care to reduce health disparities for chronic disease

Maternal and Child Health: Reduce teen pregnancies and improve birth outcomes for mothers and babies

Community Health Improvement Plan

For many years, Landmark Medical Center has strategically invested in medical services and community health improvement initiatives to reduce health disparities and increase equitable access to services across Woonsocket. Our efforts continue to be in line with our community's most pressing health concerns.

We remain committed to reducing teen pregnancy and improving birth outcomes for women and babies. We recognize the cyclical impact of Adverse Childhood Events (ACEs) on families, and will continue our efforts to address family violence and improve access to food, housing, basic needs, and healthcare. In doing so, we are intentional in our efforts to reduce health disparities that result in higher rates of morbidity and mortality among residents of the Woonsocket community.

Understanding the impact of untreated behavioral health needs, we will continue to provide timely transition to care so patients receive the support they need to maintain their wellbeing. As a key partner in our community's response and recovery from the opioid epidemic, we will continue to invest in best practices to provide emergency care and linkages to services to help people into recovery.

Specific resources and services to address these priority needs are outlined in Landmark Medical Center's Implementation Plan.

Board Approval

The Landmark Medical Center board of directors is committed to our role as an anchor for community health and wellbeing. The board reviewed and approved the 2019 CHNA Final Report.

The 2019 CHNA Report and 2019-2022 Implementation Plan are available for review and comment at landmarkmedical.org.

Full Report of CHNA Findings

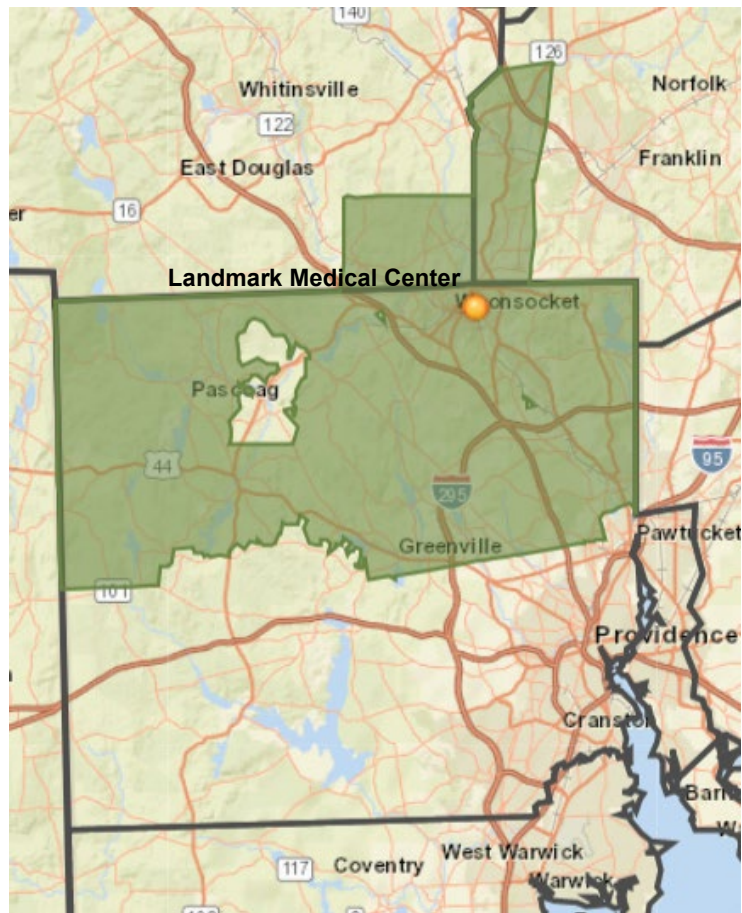
The Landmark Medical Center Service Area

Population Overview

Landmark Medical Center identified its primary service area as 15 zip codes, primarily located in Woonsocket and northern Providence County. Landmark Medical Center also serves residents in neighboring Massachusetts zip codes, but focused on its Rhode Island service area zip codes for the purposes of collaboration with HARI and its member hospitals on the 2019 CHNA. The map below depicts the service area zip codes.

Landmark Medical Center Service Area

Primary Service Area Zip Codes
01504, Blackstone
01529, Millville
02019, Bellingham
02814, Chepachet
02828, Greenville
02829, Glocester
02830, Harrisville
02838, Manville
02859, Pascoag
02864, Cumberland
02865, Lincoln
02876, Burrillville
02895, Woonsocket
02896, North Smithfield
02917, Smithfield



Landmark Medical Center Primary Service Area Population Growth

2018 Population	% Growth 2010-2018	% Growth 2018-2023
181,924	2.6%	1.8%

Landmark Medical Center Service Area Demographic Data Analysis

Analyses of demographic and socioeconomic data is essential in understanding health trends and determining key drivers of health status. Socioeconomic indicators play a significant role in community and individual health. Known as **social determinants of health**, they are defined as factors within the environment in which people live, work, and play that can affect health and quality of life. Social determinants of health are often the root causes of **health disparities**. Healthy People 2020 defines a health disparity as “a particular type of health difference that is closely linked with social, economic, or environmental disadvantage.”

Social determinants of health are factors within the environment in which people live, work, and play that can affect health and quality of life

Demographic data analysis focuses on Woonsocket, the location of Landmark Medical Center. Data for Providence County and all Rhode Island counties are presented with state and national data sets to demonstrate broad trends and areas of strength and opportunity. Demographic analysis by zip code level follow this analysis to provide a detailed view of population statistics. All reported data were provided by ESRI Business Analyst, 2018 and the US Census Bureau unless otherwise noted.

Population Trends

Woonsocket is located in Providence County, the most populous county in the state. The population of Providence County increased 1.8% between 2010 and 2018, and is projected to continue growing at a similar rate through 2023. Woonsocket has a population of 41,681; the population is growing at a similar pace as Rhode Island in general and slightly slower than Providence County.

Population Growth

	2018 Population	% Growth 2010-2018	% Growth 2018-2023
Bristol County	49,418	-0.9%	-0.2%
Kent County	167,033	0.5%	0.6%
Newport County	84,539	2.0%	0.9%
Providence County	637,835	1.8%	1.5%
Woonsocket	41,681	1.2%	1.1%
Washington County	128,703	1.4%	-0.2%
Rhode Island	1,067,528	1.4%	1.1%

Source: ESRI, 2018

Rhode Island is less diverse than the nation, with 77.8% of the population statewide identifying as White. The Providence County population is more diverse with nearly 10% of residents identifying as Black/African American and nearly 1 in 4 residents identifying as Latinx. Woonsocket is slightly less diverse than Providence County, but still more diverse than Rhode Island overall.

2018 Population Overview

	Asian	Black or African American	White	Latinx (any race)	Primary Language Other than English*
Bristol County	2.2%	1.2%	93.7%	3.2%	12.1%
Kent County	2.6%	1.9%	91.1%	5.1%	8.7%
Newport County	1.9%	4.3%	88.0%	6.3%	10.3%
Providence County	4.4%	9.5%	68.7%	23.4%	30.5%
Woonsocket	6.8%	7.9%	71.5%	19.7%	24.6%
Washington County	2.0%	1.4%	92.6%	3.4%	6.4%
Rhode Island	3.6%	6.5%	77.8%	15.9%	21.6%
United States	5.7%	12.9%	70.0%	18.3%	21.2%

Source: ESRI, 2018

*Data are reported for 2012-2016 based on most recent records available.

The percentage of the total Rhode Island population that identifies as White is projected to decrease through 2023, while the percentage of residents identifying as Asian, Black/African American, and/or Latinx is projected to increase. The same is true for Providence County and Woonsocket. The trend is due in large part to the age of the current White population in Rhode Island, which is older than the age of Rhode Islanders of other races and ethnicities. Fewer White women in Rhode Island are in their childbearing years compared to minority women.

Population by Race/Ethnicity as a Percentage of Total Population (Projected Change)

	Asian		Black/African American		White		Latinx	
	2010	2023	2010	2023	2010	2023	2010	2023
Bristol County	1.4%	2.9%	0.8%	1.5%	95.7%	92.1%	2.0%	4.3%
Kent County	2.0%	3.1%	1.5%	2.3%	93.4%	89.3%	3.2%	6.7%
Newport County	1.6%	2.1%	3.5%	4.7%	90.2%	86.4%	4.2%	8.1%
Providence County	3.7%	5.0%	8.5%	10.3%	73.4%	65.4%	18.8%	27.0%
Woonsocket	5.4%	7.7%	6.4%	9.1%	77.7%	66.7%	14.2%	24.3%
Washington County	1.6%	2.2%	1.2%	1.5%	93.8%	91.7%	2.4%	4.3%
Rhode Island	2.9%	4.0%	5.7%	7.2%	81.4%	75.2%	12.4%	18.6%

Source: ESRI, 2018

Rhode Island has a higher median resident age than the nation. The median age of Providence County residents is lower than the state, but consistent with the nation. Providence County has proportionately fewer people over age 65 and more people under age 24 than any other county in Rhode Island. The median age for Woonsocket residents is lower than the state and consistent with the nation. The age distribution in Woonsocket is similar to Providence County, although there are proportionately more people age 14 years or younger in Woonsocket than any other geography listed, including the US.

2018 Population by Age

	14 years and under	15-24 years	25-34 years	35-54 years	55-64 years	65+ years	Median Age
Bristol County	14.6%	14.6%	10.5%	24.3%	15.8%	20.3%	45.1
Kent County	15.0%	10.5%	12.4%	26.9%	15.7%	19.6%	44.9
Newport County	14.4%	12.9%	11.3%	24.8%	15.5%	21.2%	45.3
Providence County	16.7%	15.2%	14.2%	24.9%	12.9%	16.1%	38.1
Woonsocket	19.5%	12.3%	14.3%	25.2%	12.9%	15.9%	38.0
Washington County	14.0%	16.4%	10.0%	23.8%	16.3%	19.5%	44.4
Rhode Island	15.8%	14.4%	13.0%	25.1%	14.1%	17.6%	40.7
United States	18.6%	13.3%	13.9%	25.3%	13.0%	16.0%	38.3

Source: ESRI, 2018

While the proportion of seniors living in Providence County and Woonsocket is generally lower than in Rhode Island overall, they comprise nearly 1 in 5 residents. People over age 65 tend to have different health needs than younger people, including more chronic disease and mobility issues.

2018 Population by Age

	65+ years	75+ years	85+ years
Bristol County	20.3%	9.4%	3.5%
Kent County	19.6%	8.6%	3.1%
Newport County	21.2%	9.2%	3.1%
Providence County	16.1%	7.2%	2.7%
Woonsocket	15.9%	7.1%	2.7%
Washington County	19.5%	7.9%	2.6%
Rhode Island	17.7%	7.8%	2.8%
United States	16.0%	6.6%	2.0%

Source: ESRI, 2018

Economic Measures

The median household income for all Rhode Island counties except Providence exceeds state and national comparisons. The median household income in Providence County is the lowest in the state. Providence County residents are more likely to live in poverty with nearly 1 in 5 residents and 1 in 4 children impacted. One in 5 households in Providence County receives Food Stamp/SNAP benefits.

The median household income in Woonsocket is lower than Providence County, and is roughly \$20,000 less than the national median. In Woonsocket, 1 in 4 people live in poverty and nearly 2 in 5 children live in poverty. Nearly 1 in 3 households receive food stamps or SNAP benefits.

Median Household Income and Poverty Indicators

	Median Household Income	People in Poverty	Children in Poverty	Households with Food Stamp/ SNAP Benefits
Bristol County	\$77,309	7.0%	6.7%	8.2%
Kent County	\$64,878	7.8%	8.9%	12.0%
Newport County	\$76,030	9.0%	11.5%	9.8%
Providence County	\$51,926	16.7%	24.4%	20.5%
Woonsocket	\$39,413	24.4%	38.5%	28.3%
Washington County	\$78,882	9.6%	10.1%	8.6%
Rhode Island	\$58,972	13.4%	18.9%	16.1%
United States	\$58,100	14.6%	20.3%	13.0%

Source: ESRI, 2018; US Census Bureau, 2013-2017

Rhode Island and the nation have equivalent white and blue collar work forces and percentage unemployed. Compensation for white collar workers tends to include benefits like private health insurance more often than it does for blue collar workers.

Providence County has the highest blue collar workforce and percentage unemployed in Rhode Island, exceeding both state and national benchmarks. The blue collar workforce in Woonsocket exceeds that of Providence County, but the percentage unemployed is lower than the county, state, and nation.

Population by Occupation and Unemployment

	White Collar Workforce	Blue Collar Workforce	Unemployment Rate
Bristol County	69.0%	31.0%	4.1%
Kent County	63.0%	37.0%	4.9%
Newport County	65.0%	35.0%	3.4%
Providence County	58.0%	42.0%	5.9%
Woonsocket	49.0%	51.0%	4.3%
Washington County	66.0%	34.0%	2.8%
Rhode Island	61.0%	39.0%	5.0%
United States	61.0%	39.0%	4.8%

Source: ESRI, 2018

The employment to population ratio measures the employed workforce in comparison to the total workforce population ages 16 and older. The employment to population ratio measures the discrepancy between the available soft and hard skills among working age people living in the area, and the soft and hard skills needed in the industries available nearby. The ratio is an indicator of workforce participation, and is similar in Rhode Island to the nation.

Employment to Population Ratio

	Rhode Island		United States	
	2017	2018	2017	2018
Employment to Population Ratio	61.6%	61.9%	60.1%	60.4%

Source: U.S. Department of Labor Bureau of Labor Statistics, 2019

Housing Measures

Homeownership and housing affordability are measures of economic stability. The median home value in Woonsocket is less than Providence County, Rhode Island, and the US in general, but more than half of Woonsocket residents (62.5%) are renters, far more than the state and nation.

Housing cost-burdened households are more likely to have difficulty affording other necessities like food, transportation, and medical care. Housing cost burden is defined by the US Census Bureau as spending more than 30% of household income on rent or mortgage expenses.

Approximately 51% of renters and 35% of homeowners in Rhode Island are considered housing cost burdened. A similar percentage of renters in Providence County are housing cost burdened as the state, but the county has the highest percentage of housing cost burdened homeowners in Rhode Island. In Woonsocket, fewer renters are housing cost burdened compared to Providence County and the state, but 41% of homeowners are housing cost burdened.

Population by Household Type and Housing Cost Burden

	Renter-Occupied	Renters Paying 30% or More of Income on Rent	Owner-Occupied	Median Home Value	Mortgages Costing 30% or More of Household Income
Bristol County	29.7%	53.5%	70.3%	\$330,000	31.7%
Kent County	29.9%	49.4%	70.1%	\$208,400	33.8%
Newport County	39.1%	47.4%	60.9%	\$352,900	35.3%
Providence County	47.1%	51.2%	52.9%	\$209,800	35.9%
Woonsocket	62.5%	48.9%	37.5%	\$156,100	41.3%
Washington County	27.6%	50.3%	72.4%	\$315,100	32.2%
Rhode Island	40.3%	50.7%	59.7%	\$238,200	34.6%
United States	36.4%	51.1%	63.6%	\$184,700	30.8%

Source: US Census Bureau, 2012-2016

The State of Rhode Island Office of Housing and Community Development states, “The Rhode Island Comprehensive Housing Production and Rehabilitation Act of 2004 and Rhode Island Low and Moderate Income Housing Act (Rhode Island General Laws 45-53) general requires that 10% of each municipalities' housing stock be "affordable". A total of 29 communities are covered by the Act; 10 are exempt due to their percentage of rental housing and/or current affordable housing inventory.”

Woonsocket is one of the 10 exempt communities, not covered by the Low and Moderate Income Housing Act. In 2017, Woonsocket had a total of 3,047 low and moderate income housing units, comprising 15.9% of all housing units. The following is a breakdown of available housing units by target demographic.

Low and Moderate Income Housing (LMIH) Units by Target Demographic

	Total LMIH Units	Total Housing Units	LMIH Percent of Total	Elderly Housing Units	Family Housing Units	Special Needs Housing Units
Woonsocket	3,047	19,168	15.9%	1,276 (42%)	1,620 (53%)	151 (5%)
Rhode Island	37,157	445,902	8.3%	19,631 (53%)	13,726 (37%)	3,800 (10%)

Source: State of Rhode Island Office of Housing and Community Development, 2017

Each year, the Rhode Island Coalition for the Homeless conducts a point-in-time study to identify individuals experiencing homelessness. The unduplicated statewide count is conducted on a single night in January. The study does not include individuals at risk of homelessness or those who are “couch surfing.”

In 2018, 1,101 people across Rhode Island were identified as homeless, including 747 single adults and 354 persons in families. Of the single adults, nearly 75% were in emergency shelters and 19% were in transitional housing. Family households were more evenly split between emergency shelters (51%) and transitional housing (48%). Single adults were more likely than persons in families to be unsheltered.

Homeless Point in Time Count for Rhode Island

	Single Adults		Persons in Families	
	Count	Percent	Count	Percent
Emergency Shelter	557	74.6%	182	51.4%
Transitional Housing	141	18.9%	170	48.0%
Unsheltered	49	6.6%	2	0.6%

Source: Rhode Island Coalition for the Homeless, 2018

The vast majority (94%) of the chronically homeless population were in emergency shelters; 6% were unsheltered. Veterans were the most likely to be in transitional housing (61%), while youth were the most likely to be in emergency shelters (73%).

Homeless Point in Time Count by Subpopulation for Rhode Island

	Chronically Homeless		Veterans		Youth	
	Count	Percent	Count	Percent	Count	Percent
Emergency Shelter	247	93.6%	37	35.9%	40	72.7%
Transitional Housing	0	0.0%	63	61.2%	14	25.5%
Unsheltered	17	6.4%	3	2.9%	1	1.8%

Source: Rhode Island Coalition for the Homeless, 2018

The RIDOH defines homeless children as children under age 18 who stayed at homeless shelters, domestic violence shelters, or transitional housing facilities with their families. Across Rhode Island in 2017, 539 families with 998 children stayed at a homeless shelter or other emergency housing facility. Children comprised 22% of all homeless individuals in Rhode Island, 51% of whom were under age six.

The following tables depict homeless children identified by public schools during the 2016-2017 school year. A total of 91 students in Woonsocket were identified as homeless, comprising 1.6% of the student population. The percentage of homeless students in Woonsocket is higher than the core cities aggregate and higher than the remainder of Rhode Island.

Homeless Children Identified during the 2016-2017 School Year

	Total Student Enrollment	Number of Children Identified as Homeless	Percent of Children Identified as Homeless
Woonsocket	5,863	91	1.6%
Four Core Cities	41,419	444	1.1%
Remainder of Rhode Island	91,811	770	0.8%
All of Rhode Island	142,142	1,245	0.9%

Source: Rhode Island Department of Health, 2016-2017

Education Measures

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. Rhode Island has a greater proportion of residents attaining higher education and fewer residents who do not complete high school than the nation. In Providence County, the proportion of adults who have not completed high school is greater than Rhode Island and the US. Roughly 1 in 3 adults in Providence County have completed high school, and another 1 in 3 have completed a bachelor's degree or higher. In Woonsocket, 17.2% of adults have not completed high school, more than in any county in Rhode Island and more than the US in general. Fewer than 1 in 5 adults (18.1%) in Woonsocket have completed a bachelor's degree or higher.

Population (25 Years or Over) by Educational Attainment

	Less than a High School Diploma	High School Graduate/GED	Bachelor's Degree or Higher
Bristol County	7.9%	20.3%	49.5%
Kent County	7.1%	28.0%	34.5%
Newport County	5.7%	22.1%	48.5%
Providence County	14.2%	29.6%	30.0%
Woonsocket	17.2%	36.3%	18.1%
Washington County	5.2%	22.2%	47.5%
Rhode Island	10.9%	27.4%	35.3%
United States	12.3%	27.0%	31.8%

Source: ESRI, 2018

The following tables profile the key social determinants of health of poverty and educational attainment by race and ethnicity. Across Rhode Island, minority populations are more likely to be impacted by adverse social determinants of health when compared to Whites.

Providence County has the greatest racial and ethnic diversity within Rhode Island. While Washington County is less diverse than Providence County, socioeconomic disparities are consistent across Black/African American and Latinx residents.

Poverty Rates by Race and Ethnicity

	White		Black/African American		Latinx	
	Count	Percent	Count	Percent	Count	Percent
Bristol County	2,808	6.4%	301	47.6%	127	11.2%
Kent County	12,342	8.2%	191	8.2%	778	11.7%
Newport County	5,680	8.0%	563	23.0%	872	20.8%
Providence County	61,249	13.8%	14,887	25.4%	42,541	32.8%
Woonsocket	7,580	24.0%	1,251	35.9%	3,217	45.3%
Washington County	10,166	9.0%	532	33.9%	546	17.3%
Rhode Island	92,245	11.2%	16,474	25.1%	44,864	31.0%

Source: US Census Bureau, 2012-2016

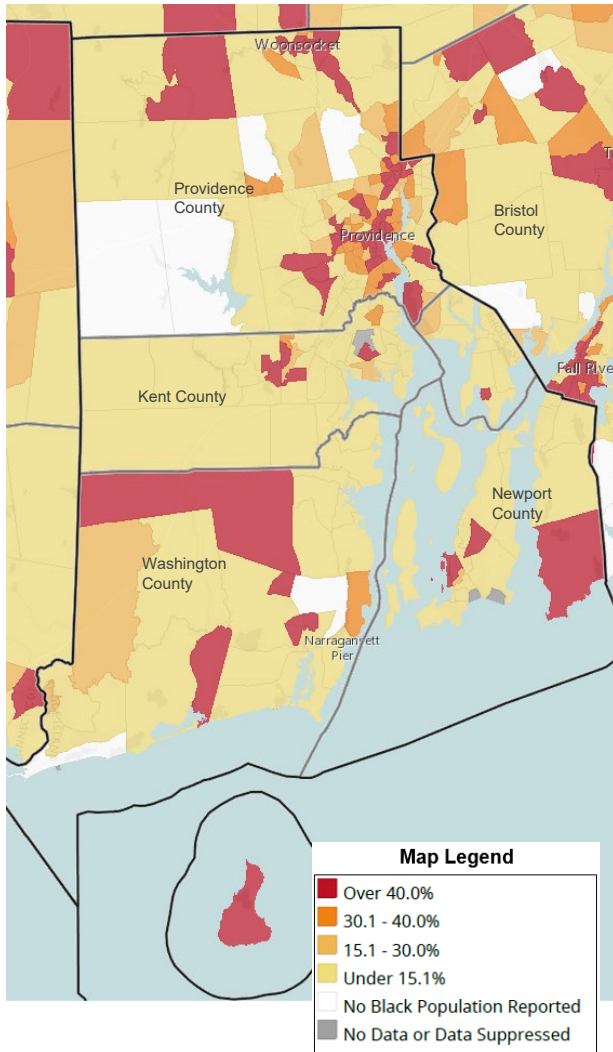
Bachelor's Degree or Higher by Race and Ethnicity

	White		Black/African American		Latinx	
	Count	Percent	Count	Percent	Count	Percent
Bristol County	15,194	46.2%	174	43.1%	290	45.3%
Kent County	35,497	31.4%	605	33.3%	1,001	28.8%
Newport County	25,242	46.1%	594	34.3%	700	33.8%
Providence County	96,947	29.3%	6,553	18.4%	7,615	10.8%
Woonsocket	3,512	14.6%	235	11.6%	134	4.4%
Washington County	36,661	45.3%	242	30.1%	614	37.6%
Rhode Island	209,541	34.2%	8,168	20.2%	10,220	13.1%

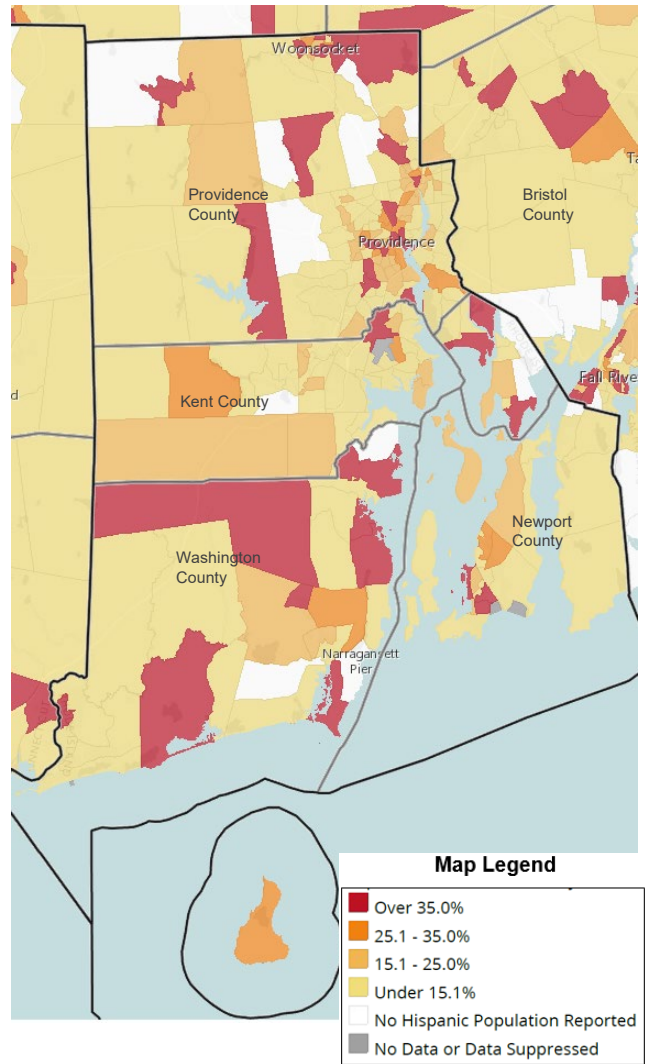
Source: US Census Bureau, 2012-2016

The following maps further illustrate poverty rates among Black/African American and Latinx residents, pinpointing areas of disparity by census tract.

Black/African American Population Below the Poverty Level by Census Tract



Latinx Population Below the Poverty Level by Census Tract

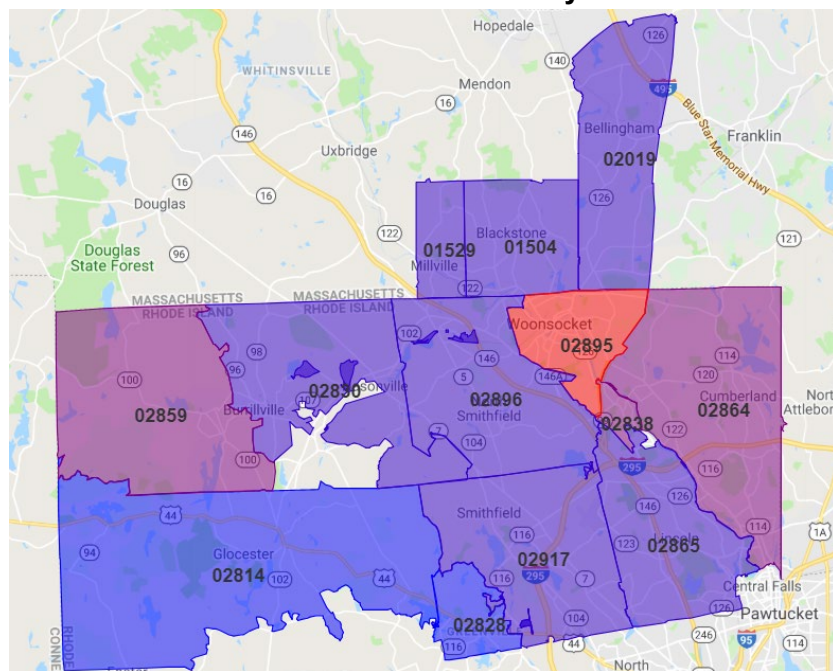


Landmark Medical Center Service Area Zip Code Analysis

Zip code of residence is one of the most important predictors of health disparity; where residents live matters in determining their health. The Community Need Index (CNI) was developed by Dignity Health and Truven Health Analytics to illustrate the potential for health disparity at the zip code level. The CNI scores zip codes on a scale of 1.0 (low need) to 5.0 (high need) based on 2015 data indicators for five socio-economic barriers:

- > Income: Poverty among elderly households, families with children, and single female-headed families with children
- > Culture/Language: Minority populations and English language barriers
- > Education: Population over 25 years without a high school diploma
- > Insurance coverage: Unemployment rate among population 16 years or over and population without health insurance
- > Housing status: Householders renting their home

**Community Need Index for
Landmark Medical Center’s Primary Service Area**



The weighted average CNI score for Landmark Medical Center’s service area is 2.6, indicating moderate overall community need. However, a deeper view of zip codes across the service area demonstrates that not all residents experience the same health and social equity.

The following tables list the social determinants of health that contribute to CNI scores for Landmark Medical Center’s Rhode Island service area zip codes. Zip codes are shown in comparison to Providence County and the state, and are presented in descending order by CNI

score. Cells highlighted in **yellow** are more than 2% points higher than the county statistic, but may not be statistically significant.

Social Determinants of Health Indicators by Rhode Island Zip Code

	HHS in Poverty	HHS Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less than HS Diploma	Without Health Insurance	CNI Score
Providence County	17.3%	20.5%	24.4%	30.5%	5.9%	14.2%	9.6%	3.5
02895 (Woonsocket)	24.6%	28.3%	38.5%	24.6%	4.3%	17.2%	9.4%	4.2
02859 (Pascoag)	10.9%	12.3%	18.9%	3.5%	5.0%	8.4%	7.8%	2.8
02838 (Manville)	11.3%	20.8%	27.0%	15.5%	4.5%	10.5%	4.0%	2.8
02864 (Cumberland)	8.8%	9.2%	11.0%	14.9%	2.7%	8.3%	3.4%	2.6
02896 (North Smithfield)	4.9%	5.5%	5.1%	7.9%	2.8%	6.9%	4.6%	2.2
02865 (Lincoln)	8.7%	9.4%	10.8%	12.5%	3.5%	6.7%	6.4%	2.0
02830 (Harrisville)	10.2%	11.0%	10.2%	4.1%	4.5%	9.7%	6.9%	2.0
02917 (Smithfield)	6.2%	8.6%	0.6%	8.6%	3.7%	5.6%	4.3%	1.8
02828 (Greenville)	4.6%	3.5%	2.2%	6.0%	4.8%	6.8%	2.7%	1.6
02814 (Chepachet)	4.6%	8.7%	10.1%	3.8%	3.4%	5.0%	6.2%	1.4
02876 (Burrillville)	4.2%	0.0%	25.5%	0.0%	5.3%	0.0%	4.2%	NA
Rhode Island	14.1%	16.1%	18.9%	21.6%	5.0%	10.9%	8.0%	3.1

*Data for zip code 02829 (Glocester) are not available.

Demographic Indicators by Rhode Island Zip Code

	White	Black/ African American	Latinx	18-24	25-34	35-44	45-54	55-64	65+
Providence County	68.7%	9.5%	23.4%	11.7%	14.2%	12.1%	12.8%	12.9%	16.1%
02895 (Woonsocket)	71.5%	7.9%	19.7%	8.9%	14.3%	12.6%	12.6%	12.9%	15.9%
02859 (Pascoag)	94.7%	1.0%	3.5%	7.7%	11.5%	12.7%	16.2%	16.4%	15.8%
02838 (Manville)	87.9%	3.9%	9.2%	10.0%	14.2%	12.6%	13.6%	13.0%	16.9%
02864 (Cumberland)	90.0%	2.0%	6.8%	7.2%	11.2%	12.1%	15.1%	15.4%	18.9%
02896 (North Smithfield)	95.0%	0.8%	3.8%	6.7%	9.8%	11.1%	15.2%	16.3%	23.1%
02865 (Lincoln)	88.4%	2.0%	5.9%	7.4%	11.0%	10.8%	14.6%	16.3%	21.2%
02830 (Harrisville)	96.4%	0.5%	2.4%	7.6%	11.4%	12.7%	15.8%	16.6%	16.4%
02917 (Smithfield)	93.0%	1.9%	3.9%	24.7%	8.1%	9.2%	12.6%	14.1%	17.6%
02828 (Greenville)	95.6%	1.2%	2.5%	7.1%	8.5%	10.3%	14.2%	16.6%	26.3%
02814 (Chepachet)	96.3%	0.5%	2.3%	7.2%	9.8%	11.8%	17.4%	18.4%	16.6%
02876 (Burrillville)	93.2%	0.9%	4.2%	6.8%	10.2%	11.9%	14.4%	15.3%	22.0%
Rhode Island	77.8%	6.5%	15.9%	10.9%	13.0%	11.7%	13.3%	14.1%	17.7%

*Data for zip code 02829 (Glocester) are not available.

Statistical Analysis of Health Indicators

Background

Health indicators were analyzed for a number of health issues, including access to care, health behaviors and outcomes, chronic disease prevalence and mortality, mental health and substance use disorder, and maternal and child health. Data were compiled from secondary sources including the Rhode Island Department of Health, the Centers for Disease Control and Prevention (CDC), the Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), and the University of Wisconsin County Health Rankings & Roadmaps program, among other sources. A comprehensive list of data sources is provided in Appendix A.

Health data focus on county-level reporting which is generally the most recent and most consistent data available. Health data for the counties are compared to state and national averages and Healthy People 2020 (HP 2020) goals, where applicable, to provide benchmark comparisons. Healthy People is a US Department of Health and Human Services health promotion and disease prevention initiative that sets science-based, 10-year national objectives for improving the health of all Americans.

Age-adjusted rates are referenced throughout the reporting to depict a comparable burden of disease among residents. Age-adjusted rates are summary measures adjusted for differences in age distributions so that data from one year to another, or between one geographic area and another, can be compared as if the communities reflected the same age distribution.

The BRFSS is a telephone survey of residents age 18 or over conducted nationally by states as required by the CDC. A consistent survey tool is used across the US to assess health risk behaviors, prevalence of chronic health conditions, access to care, and preventive health measures, among other health indicators. BRFSS results included within this report were provided by the Rhode Island Department of Health.

The YRBSS is a school-based survey conducted by the CDC every other odd year to monitor priority health risk behaviors among youth. YRBSS findings are reported for youth in grades 9-12 by county.

The most recent data available at the time of this study were used unless otherwise noted.

Access to Healthcare

Rhode Island counties are shown in rank order for clinical care, as reported by the University of Wisconsin County Health Rankings & Roadmaps program. The rankings are based on a number of indicators, including health insurance coverage and provider access. Providence County continued to be ranked as the lowest county for clinical care measures. The overall rank order is consistent with the 2015 reporting.

2018 Clinical Care County Health Rankings

#1 Bristol County (#1 in 2015)

#2 Washington County (#2 in 2015)

#3 Newport County (#3 in 2015)

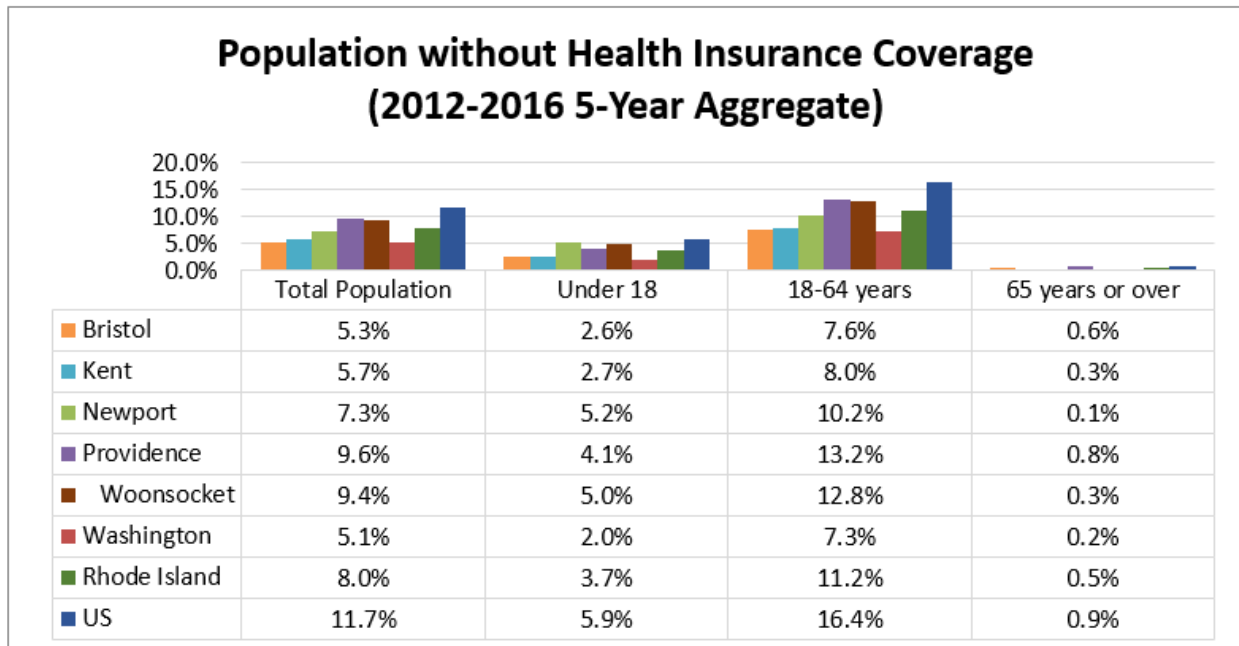
#4 Kent County (#4 in 2015)

#5 Providence County (#5 in 2015)

Health Insurance Coverage

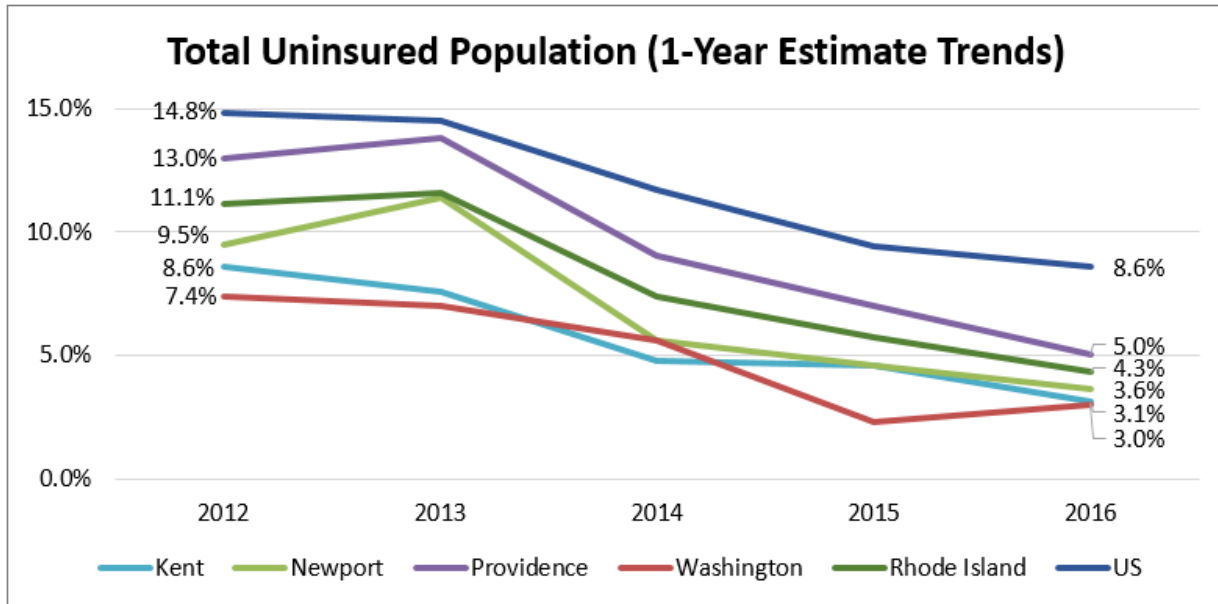
The State of Rhode Island has fewer uninsured residents compared to the nation, however, no counties meet the Healthy People 2020 goal of having 100% of all residents insured. Providence County has the highest percentage uninsured, but the percentage is still lower than the nation by 2 points. The proportion of uninsured residents in Woonsocket is similar to Providence County overall.

Over the past five years, the percentage of uninsured residents has decreased. Woonsocket has slightly more uninsured residents than the state.



Source: US Census Bureau, 2012-2016

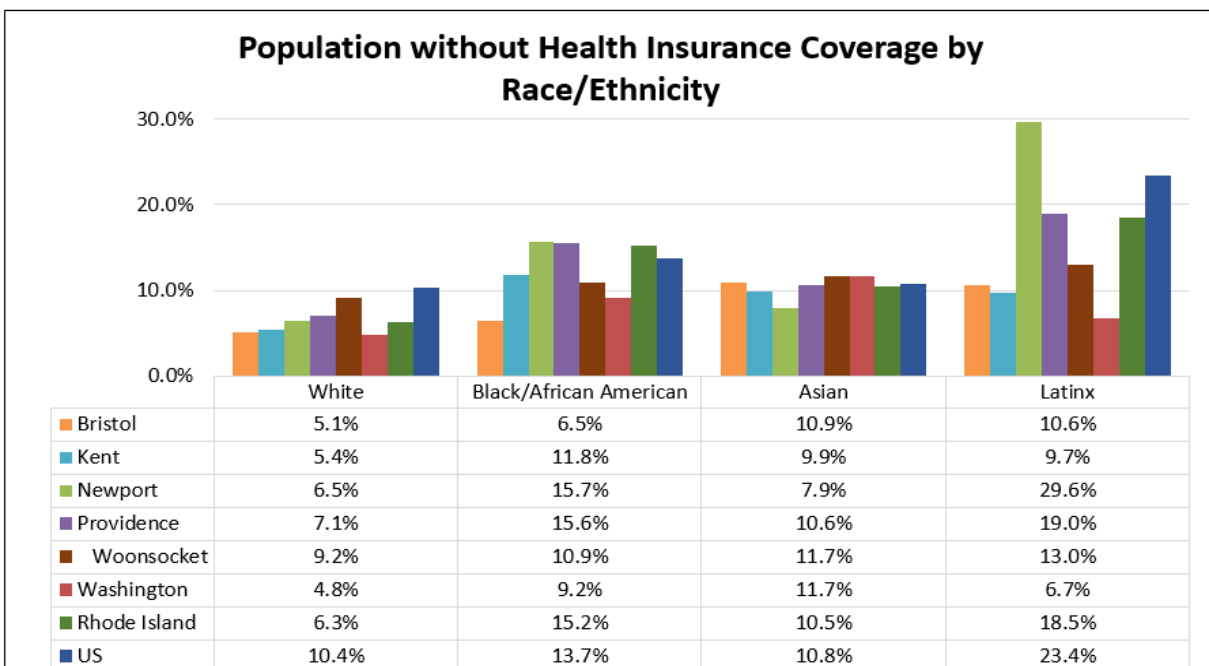
Over the past five years, the percentage of uninsured residents in Rhode Island declined, allowing more people greater access to clinical care. Providence County experienced the greatest decline of 8 percentage points between 2013 and 2016.



Source: US Census Bureau, 2012-2016

*Data for Woonsocket are not available on an annual basis. Bristol County data are only reported as a five-year aggregate due to low population counts.

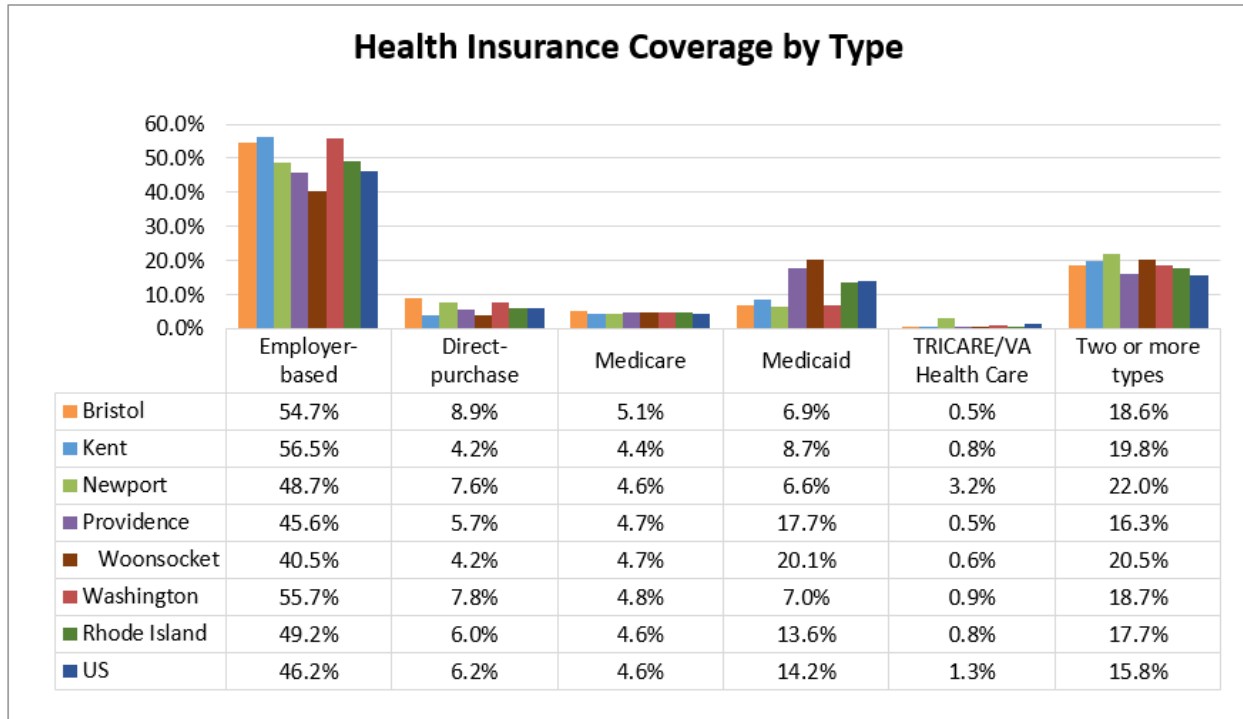
Uninsured percentages across Rhode Island and the nation, as well as Woonsocket, are highest among Latinx residents.



Source: US Census Bureau, 2012-2016

The following graph depicts health insurance coverage by type of insurance. In Woonsocket, fewer residents are covered by private insurance compared to Providence County and the state. Approximately 1 in 5 residents are covered by Medicaid, a higher proportion than any Rhode Island county or the state overall.

1 in 5 Woonsocket residents are insured by Medicaid, a higher proportion than the state overall



Source: US Census Bureau, 2012-2016

Provider Access

Provider rates are measured as the number of providers in an area per 100,000 people, and are measured against state and national benchmarks for primary care physicians, dentists, and mental healthcare providers. Primary care physicians include non-federal, practicing physicians under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. Mental health providers include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advanced practice nurses specializing in mental healthcare.

All Rhode Island counties have a higher primary care physician rate than the nation, indicating a greater number of providers per person and potential for greater access to care. The Providence County provider rate increased from 2011 to 2015 by 4 points.

From 2011 to 2015, the Providence County primary care provider rate per 100,000 people increased by 4 points

Rhode Island has a lower dentist provider rate than the nation, indicating fewer dentists per person. The dentist provider rate increased 3-4 points from 2012 to 2016 across Rhode Island and in Providence County.

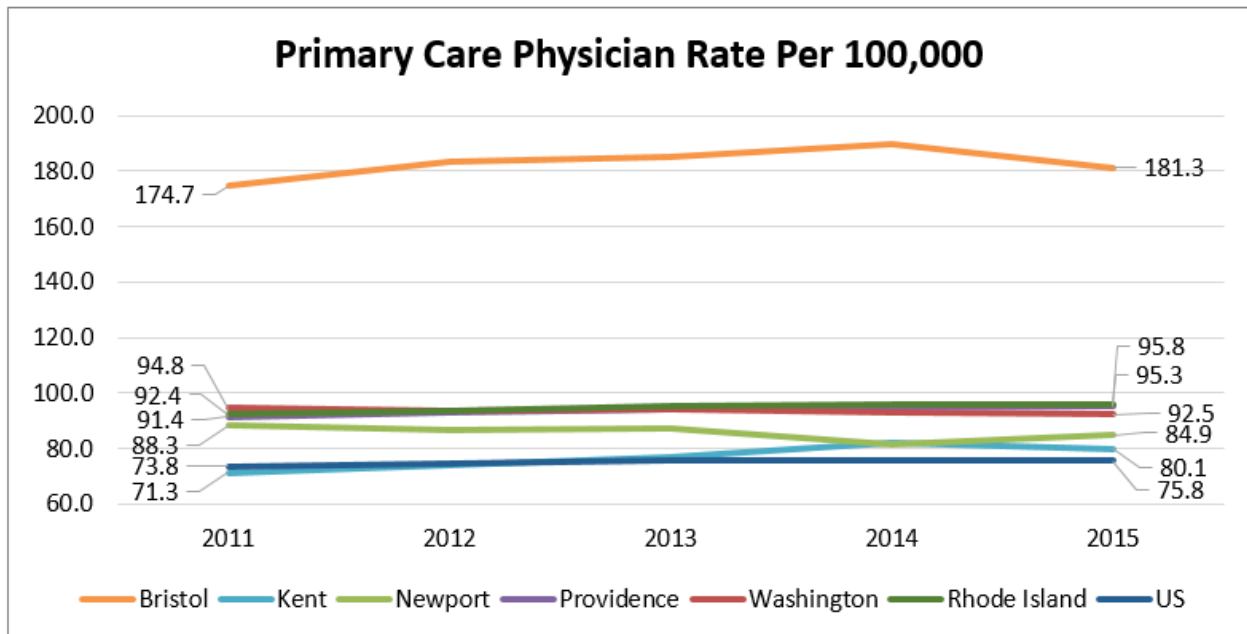
Rhode Island has a higher mental health provider rate than the nation. The provider rate increased more than 50 points statewide from 2014 to 2017 and more than 60 points in Providence County. These findings indicate overall improved access to care based on the number of providers per population, but may not account for specialty provider shortages, including psychiatrists and psychologists. The rates do not reflect insurance programs participation or open patient panels.

The mental healthcare provider rate increased by 61 points in Providence County between 2014 and 2017

Provider Rates per 100,000
 (Green = Higher than the State or Nation; Red = Lower than the State or Nation)

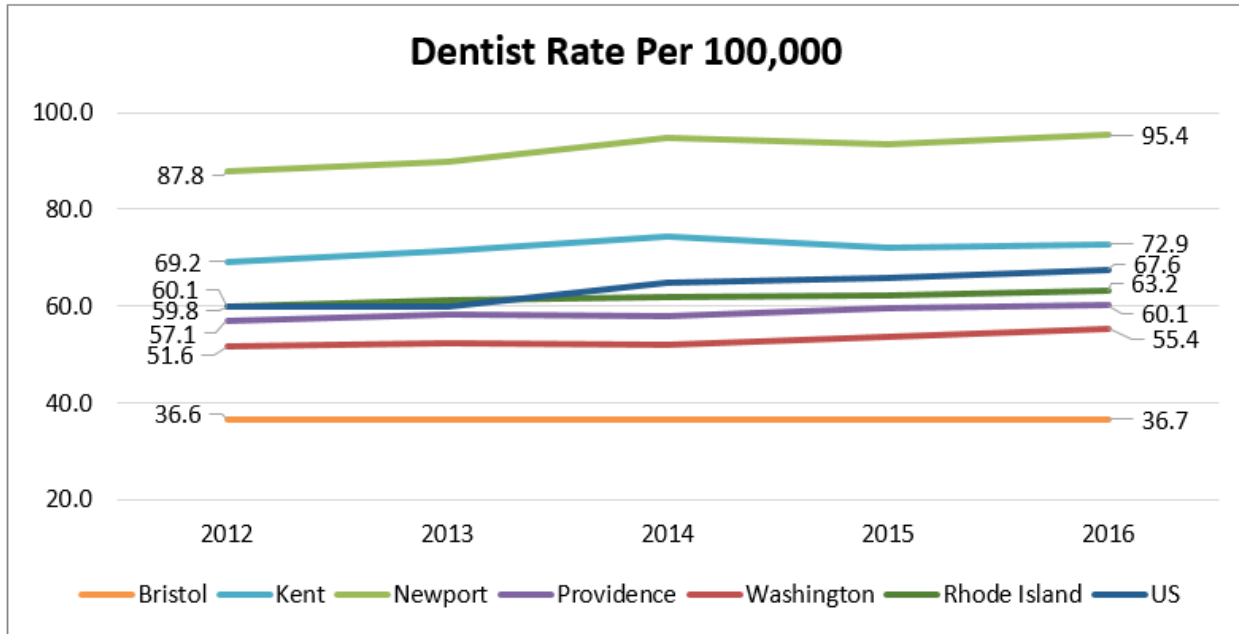
	2015 Primary Care Physician Rate	2016 Dentist Provider Rate	2017 Mental Health Provider Rate
Bristol County	181.3	36.7	185.5
Kent County	80.1	72.9	281.3
Newport County	84.9	95.4	302.0
Providence County	95.3	60.1	433.0
Washington County	92.5	55.4	285.1
Rhode Island	95.8	63.2	370.2
United States	75.8	67.6	212.8

Source: Health Resources & Services Administration, 2015 & 2016; Centers for Medicare and Medicaid Services, 2017

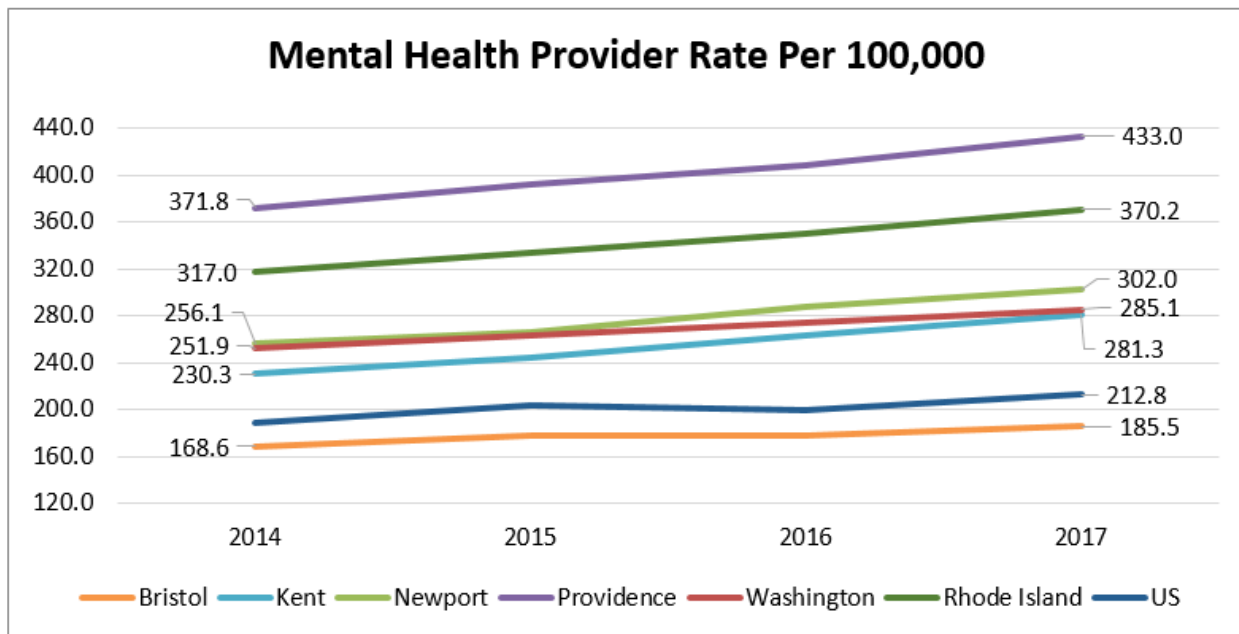


Source: Health Resources & Services Administration, 2011-2015

*Primary care physicians are identified based on the county in which their preferred professional/business mailing address is located. Rates do not take into account providers that serve multiple counties or satellite clinics.



Source: Health Resources & Services Administration, 2012-2016



Source: Centers for Medicare and Medicaid Services, 2014-2017

*An error occurred in the County Health Rankings method for identifying mental health providers in 2013. Data prior to 2014 are not shown.

The Health Resources & Services Administration is responsible for designating geographic areas as Health Professional Shortage Areas (HPSAs) for primary, dental, and mental healthcare. Shortage areas are determined based on a defined ratio of total health professionals to total population. All of

Woonsocket is designated as a HPSA for primary, dental, and mental healthcare for low-income populations

Providence County is a mental health HPSA for low-income populations. The four core cities, including Woonsocket, are HPSAs for primary and dental care for low-income populations.

Routine Healthcare Access

Health insurance coverage and provider availability can impact the number of residents who have a primary care provider and receive routine care. Rhode Island adults are more likely to have a usual primary care provider and receive routine checkups, and are less likely to consider cost as a barrier to receiving care.

Providence County adults are more likely to consider cost as a barrier to receiving care than other Rhode Islanders

Providence County adults are more likely to consider cost as a barrier to receiving care than other Rhode Islanders.

Adult Routine Healthcare Access
(Green/Red = Higher than the State or Nation)

	Has a Personal Doctor	Received a Routine Checkup within the Past 2 Years	Unable to See a Doctor within the Past Year due to Cost
Bristol County	92.7%	96.9%	6.7%
Kent County	88.7%	94.1%	5.9%
Newport County	87.5%	89.2%	6.5%
Providence County	86.0%	91.8%	12.3%
Washington County	90.2%	90.5%	8.7%
Rhode Island	87.2%	92.0%	10.3%
United States	77.1%	83.6%	12.0%

Source: Centers for Disease Control and Prevention, 2016; Rhode Island Department of Health, 2016

Overall Health Status

Rhode Island counties received the following health outcomes rankings, as reported by the University of Wisconsin County Health Rankings & Roadmaps program. Health outcomes are measured in relation to premature death (before age 75) and quality of life. Providence County ranks #5 in the state for health outcomes. Measures for residents’ physical health, mental health, and premature death are less favorable than the state. The rankings are unchanged since 2015.

2018 Health Outcomes County Health Rankings

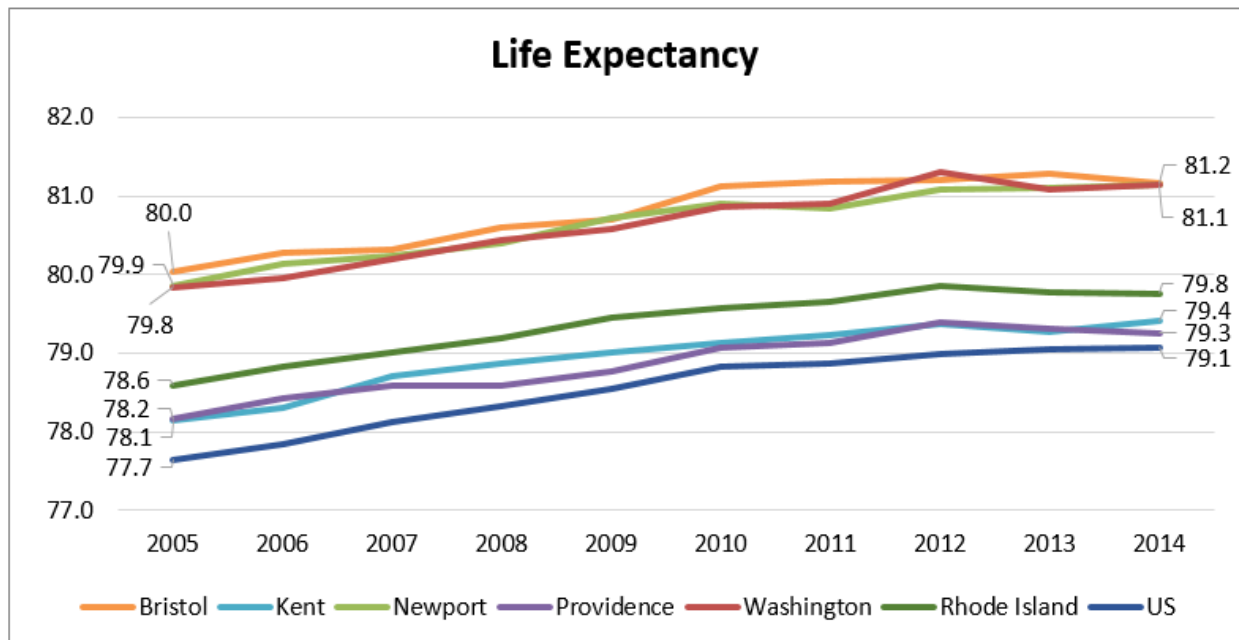
- #1 Bristol County (#1 in 2015)
- #2 Newport County (#2 in 2015)
- #3 Washington County (#3 in 2015)
- #4 Kent County (#4 in 2015)
- #5 Providence County (#5 in 2015)

Health Outcomes Indicators
(Green = Lower than the State or Nation; Red = Higher than the State or Nation)

	Premature Death Rate per 100,000	Adults with "Poor" or "Fair" Health Status	30-Day Average - Poor Physical Health Days	30-Day Average - Poor Mental Health Days
Bristol County	4,599	10.2%	3.4	3.7
Kent County	6,042	11.9%	3.6	4.1
Newport County	4,484	11.0%	3.3	3.5
Providence County	6,284	16.5%	4.0	4.4
Washington County	5,424	11.3%	3.4	3.9
Rhode Island	5,920	14.8%	3.8	4.3
United States	6,700	16.0%	3.7	3.8

Source: National Center for Health Statistics, 2014-2016; Centers for Disease Control and Prevention, 2016

Life expectancy increased across the state and all counties by approximately one year from 2005 to 2014. Providence County overall has the lowest life expectancy in the state (79.3 years).



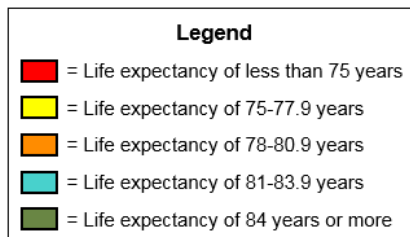
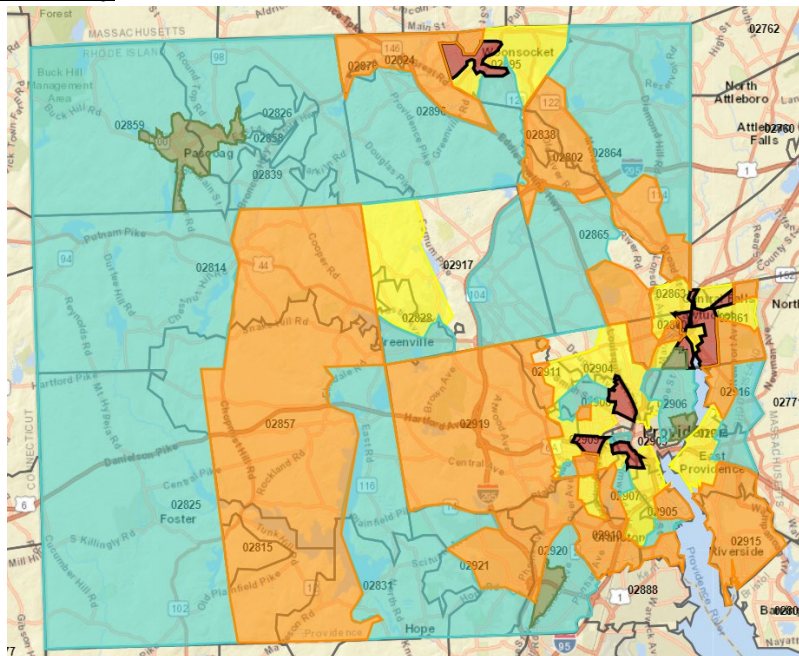
Source: Institute for Health Metrics and Evaluation, 2005-2014

The following maps depict life expectancy by census tract (CT) within Providence County, as available. Data are provided by the US Small-area Life Expectancy Estimates Project, a partnership of the National Center for Health Statistics, the Robert Wood Johnson Foundation, and the National Association for Public Health Statistics and Information Systems. All data are reported as a five-year aggregate for 2011-2015.

Within Rhode Island, Bristol, Newport, and Washington counties have the greatest overall life expectancy of 75 years or older. Within Kent and Providence counties, several areas have an average life expectancy of less than 75 years. These areas are concentrated in the core cities in Providence County and West Warwick in Kent County, where residents experience greater socioeconomic disparity and potential for health disparity.

Overall life expectancy is less than 75 years in portions of the core cities and West Warwick

Providence County Life Expectancy by Census Tract
Areas of Disparity: Central Falls, Pawtucket, Providence, Smithfield, Woonsocket



Health Behaviors

Health behaviors may increase or reduce the likelihood of disease or early death. Individual health behaviors include risk factors like smoking and obesity, or health promoting behaviors like exercise, good nutrition, and stress management. The prevalence of these health behaviors is provided below, with benchmark comparisons, as available.

Tobacco Use

Overall smoking rates among adults declined across the state and within Providence County by more than 2% points from 2012-2016, but do not meet the Healthy People 2020 goal of 12%. Providence County adults are more likely to smoke compared to the state average, but are less likely to smoke when compared to the nation.

Smoking Among Adults from the 2016 CHNA to Present
(Green = Decrease of More than 2 Points; Red = Increase of More than 2 Points)

	2012	2016
Bristol County*	15.7%	12.5%
Kent County	16.1%	17.3%
Newport County	8.5%	15.0%
Providence County	19.3%	15.4%
Washington County	15.0%	12.7%
Rhode Island	17.4%	14.4%
United States	17.0%	17.0%
Healthy People 2020	12.0%	12.0%

Source: Centers for Disease Control and Prevention, 2012 & 2016; Healthy People 2020

*Bristol County data is reported for 2010 due to data availability. A change in methods occurred in 2011 that may affect the validity of comparisons to prior years.

It is important to note that new trends related to e-cigarettes are affecting smoking data. Some traditional cigarette smokers have changed to e-cigarettes, while others who had never smoked before, particularly teens, are trying “vaping.” Data reflecting these trends were not available at the time of this report, but qualitative research indicated that “vaping” is a fast growing trend, especially among teens and young adults

E-cigarette use has surpassed traditional cigarette use among teens. According to the Rhode Island Department of Health, in 2017, 26% of Rhode Island high school students reported using a form of tobacco (cigarettes or cigars, smokeless tobacco, or e-cigarettes) on at least one day during the past 30 days. In 2017, 20% of high school students reported current use of e-cigarettes, while 6% of students reported current use of traditional cigarettes.

20% of RI high school students reported current use of e-cigarettes in 2017

Smoking Among High School Students from the 2016 CHNA to Present

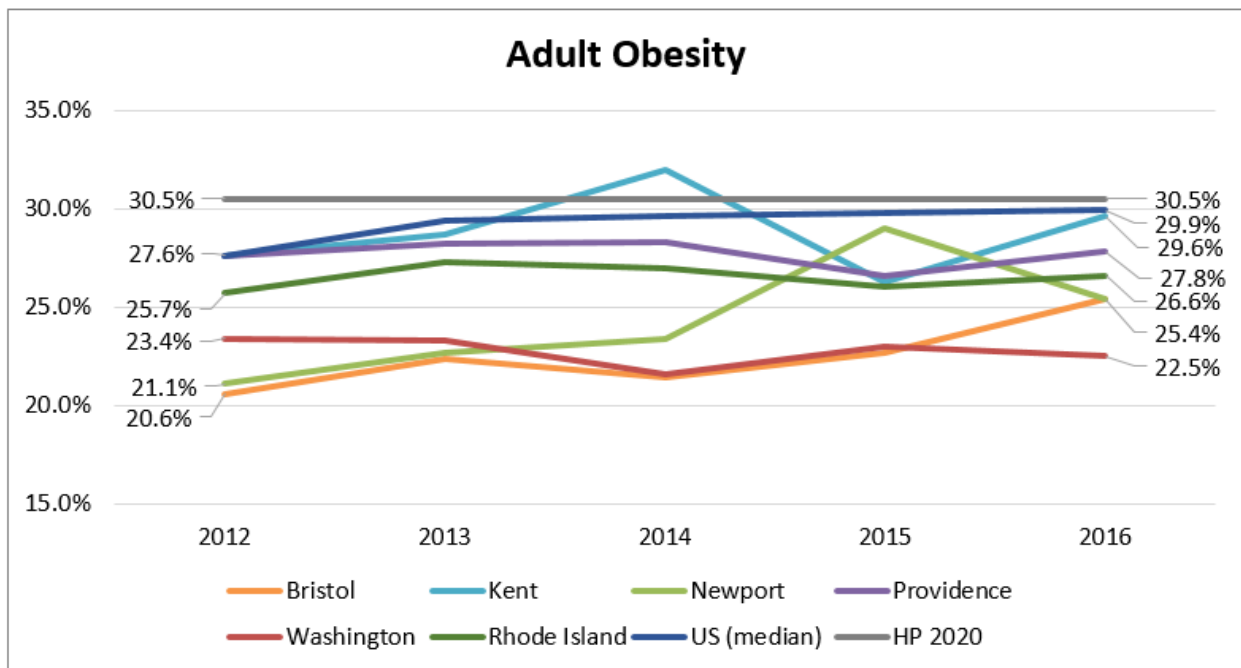
	2013	2017
Rhode Island	8%	6%
United States	16%	9%

Source: Rhode Island Department of Health; Centers for Disease Control and Prevention, 2013 & 2017

Additional data related to substance use among youth is included within the Youth Behavioral Health section of this report on page 54.

Adult Obesity

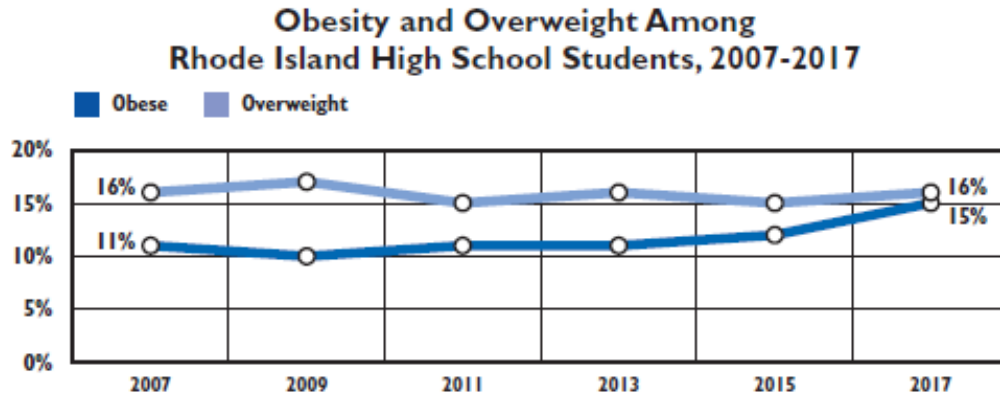
Obesity is associated with an increased risk of disease and mortality, as well as a reduced quality of life. Healthy People 2020 sets a goal of having no more than 30.5% of all adults obese. All Rhode Island counties have met the Healthy People 2020 goal, and fewer adults are obese when compared to national averages. However, current percentages still indicate that more than one in five adults living in Rhode Island are obese. Across Rhode Island, the percentage of obese adults increased since 2012.



Source: Centers for Disease Control and Prevention, 2002-2016; Rhode Island Department of Health, 2012-2016

Adolescent Obesity

In 2017, 15% of Rhode Island high school students were obese and 16% were overweight. The percentage of obese students increased since 2007, while the percentage of overweight students has remained consistent. A higher percentage of Latinx students (21%), males (17%), and Black/African American students (18%) were obese compared to their peers.



Source: Rhode Island Department of Health, 2007-2017

Physical Activity and Nutrition

Lifestyle habits such as regular exercise and good nutrition are important to maintaining health. Environments that foster these habits provide easy access to places where people can be active and obtain nutritious foods. Parks, gyms, pools, and recreation centers can encourage positive physical activity habits. Grocery stores, community gardens, farm stands, and mobile food markets make it easier for residents to obtain healthy foods.

Despite availability, other factors can influence residents' ability to access these resources. Transportation, neighborhood safety, times of operation, cost, and other factors present barriers for some residents to take advantage of existing community assets.

As an example, 94% of Providence County residents live within close proximity of venues that promote physical activity; yet, the percentage of adults in Providence County that engage in physical activity is the lowest in the state. In contrast, Washington County residents are the least likely to have access to physical activity venues, but are among the most likely to be physically active.

Residents in Providence County are more likely to experience higher socioeconomic needs, while residents in Washington County generally experience lower socioeconomic needs, which may account for the difference in physical activity, despite availability of resources.

Physical Activity
(Green = Higher than the State or Nation; Red = Lower than the State or Nation)

	Access to Physical Activity Venues	Participate in Physical Activity in the Past Month
Bristol County	91.9%	77.8%
Kent County	94.0%	78.8%
Newport County	83.9%	81.7%
Providence County	94.0%	72.2%
Washington County	76.1%	80.7%
Rhode Island	91.0%	75.6%
United States	83.0%	76.9%

Source: Business Analyst, Delorme Map Data, ESRI, & US Census Tigerline Files, 2010 & 2016; Centers for Disease Control and Prevention, 2016; Rhode Island Department of Health, 2016

Food insecurity is defined as being without a consistent source of sufficient and affordable nutritious food. Food insecurity is reflective of a variety of socioeconomic factors including employment, income, access to healthy food options, transportation, housing, and other factors.

Residents who are food insecure may also experience challenges with healthy eating and weight management. Acknowledging the relationship between socioeconomic factors and food insecurity, the percentage of children eligible for free or reduced school lunch is shown in the table below along with the percentage of food insecure residents and children

Nearly 20% of Providence County children are food insecure and nearly 60% of children are eligible for free or reduced school lunch. Eligibility for free school lunch includes households with an income at or below 130% of the poverty threshold. Households with an income between 130% and 185% of the poverty threshold are eligible for reduced priced school lunch.

Nearly 1 in 5 Providence County children are food insecure

Food Insecure Residents
(Red = Higher than the State or Nation)

	All Residents	Children	Free or Reduced School Lunch Eligibility
Bristol County	10.0%	13.8%	19.5%
Kent County	10.4%	15.1%	31.6%
Newport County	11.5%	15.4%	31.8%
Providence County	13.2%	19.1%	58.6%
Washington County	10.7%	15.2%	23.2%
Rhode Island	12.1%	17.4%	47.0%
United States	12.9%	17.5%	

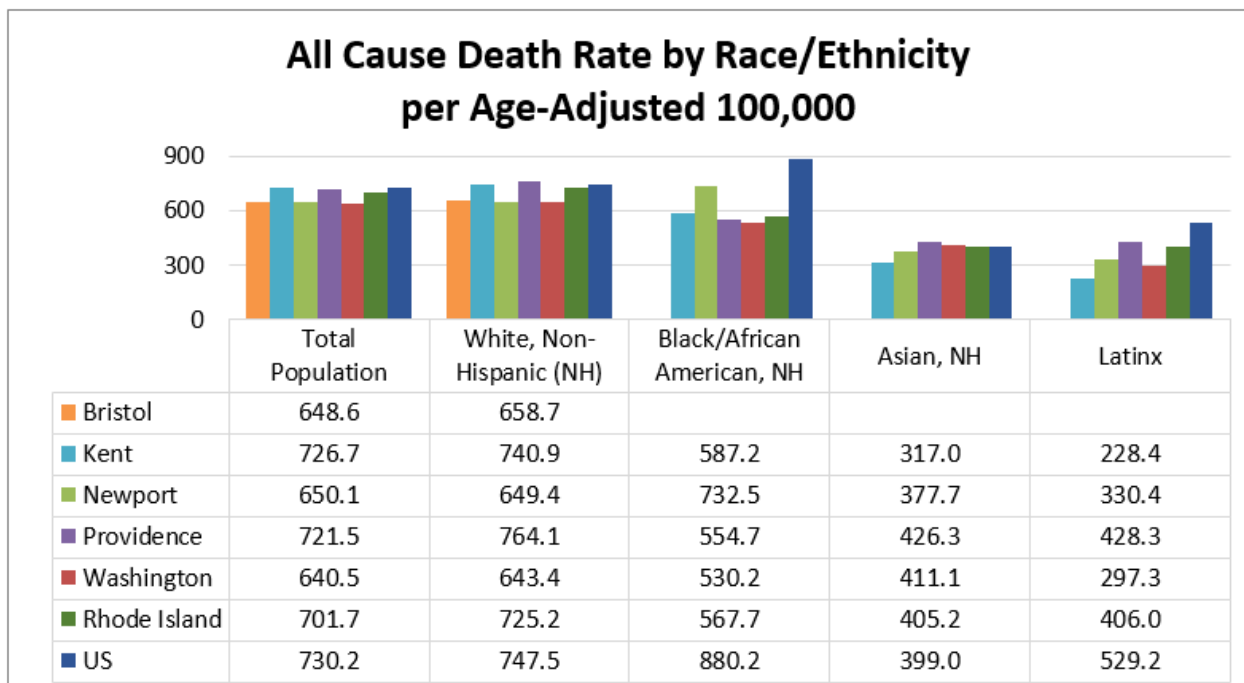
Source: Feeding America, 2016; National Center for Education Statistics, 2015-2016

Mortality

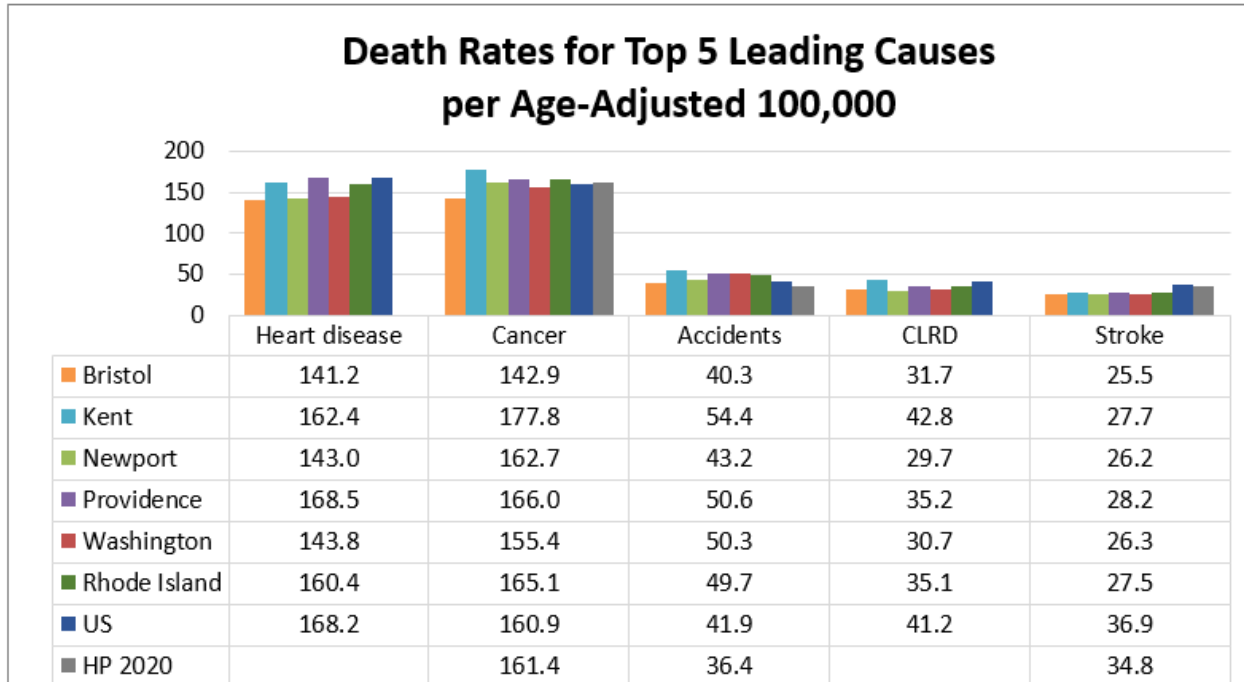
The following graph depicts the all cause age-adjusted death rate by county and race/ethnicity. The overall death rate for all Rhode Island counties is lower than the national rate. The death rate for Providence County is higher than the state and similar to the nation. Minority populations often experience higher death rates. This does not appear to be the case for the majority of Rhode Island and may be due to the small minority population and low death counts.

The death rate for Providence County is higher than the state and similar to the nation

Minority populations often experience higher death rates. This does not appear to be the case for the majority of Rhode Island and may be due to the small minority population and low death counts.



Source: Centers for Disease Control and Prevention, 2012-2016
 *Data for Bristol County are reported as available due to low death counts.



Source: Centers for Disease Control and Prevention, 2012-2016; Healthy People 2020

While heart disease remains the top cause of death in the nation, cancer is beginning to surpass heart disease as the top cause of death in some states, including Rhode Island. Cancer is the leading cause of death in all counties except Providence County, which has a higher rate of death due to heart disease.

Consistent with the nation, heart disease is the top cause of death in Providence County. In all other RI counties, the top cause of death is cancer.

Accidents or unintentional injuries are the third leading cause of death in the state. Rhode Island overall has a higher accidental death rate than the nation, and the state and all five counties exceed the Healthy People 2020 goal for accidental deaths. The following is a list of accidental deaths in rank order from highest cause of death in Rhode Island.

Accidental deaths in rank order from highest cause of death in Rhode Island

1. Accidental poisoning by and exposure to narcotics and psychodysleptics (hallucinogens)
2. Unspecified falls
3. Accidental poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances
4. Unspecified motor-vehicle accidents
5. Accidental poisoning by and exposure to alcohol.

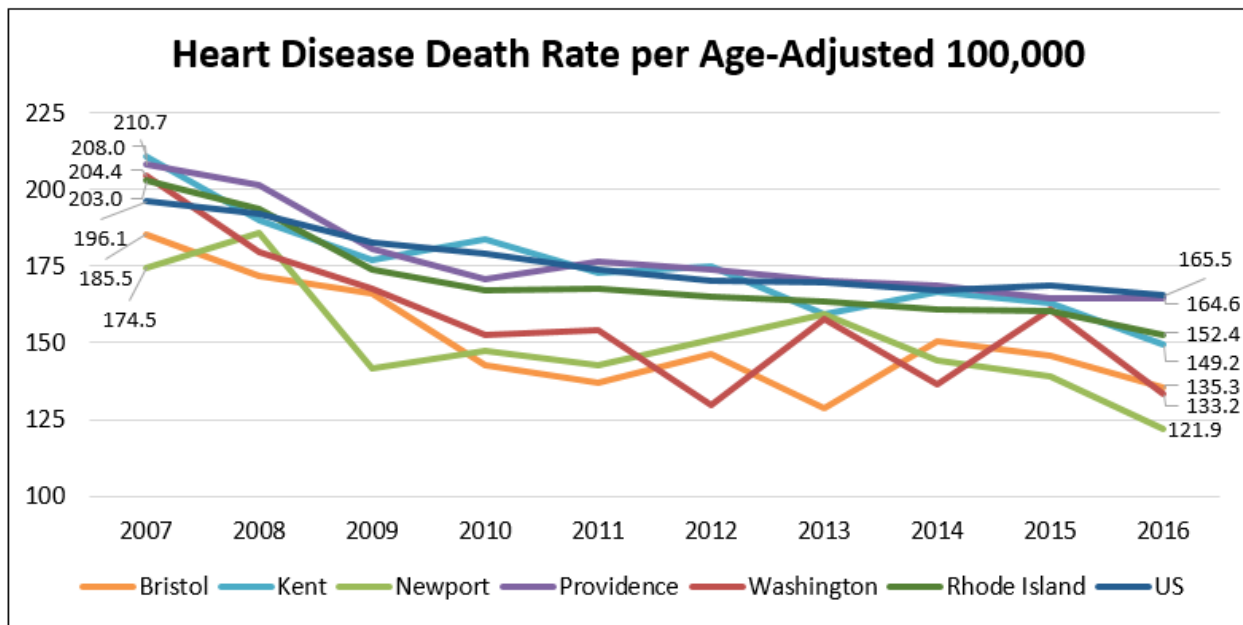
The following sections profile morbidity and mortality for the top five causes of death by county.

Chronic Diseases

Most top causes of death in Rhode Island fall under the broader category of chronic diseases, which are the leading causes for death and disease. Chronic diseases are often preventable through reduced risk behaviors like tobacco or alcohol use; regular physical activity; good nutrition; early detection of risk factors and disease, and effective disease management.

Heart Disease and Stroke

Between 2007 and 2016, death rates due to heart disease declined across the state and the nation. Heart disease death rates for all five counties fall below the national rate. Death rates for all five counties except Providence also fall below the state rate.



Source: Centers for Disease Control and Prevention, 2007-2016

Across the nation, the heart disease death rate is highest among Blacks/African Americans. Rhode Island as a whole differs from the national trend with a higher rate of death among Whites. Race and ethnicity data are not reported for all counties due to low death counts.

Heart Disease Death Rates per Age-Adjusted 100,000 by Race and Ethnicity

	White, Non-Hispanic	Black/African American, Non-Hispanic	Latinx
Newport County	141.2	206.6	NA
Providence County	178.2	121.0	84.8
Rhode Island	165.4	126.8	80.6
United States	170.9	212.6	118.2

Source: Centers for Disease Control and Prevention, 2012-2016

*Data for Bristol, Kent, and Washington counties are not reported due to low death counts.

Hypertension and high cholesterol can lead to heart disease. A higher percentage of Rhode Island adults have hypertension when compared to adults across the nation. Providence County adults have some of the highest prevalence of hypertension and high cholesterol among Rhode Island counties. In contrast, a lower percentage of Rhode Island adults have high cholesterol when compared to adults across the nation.

Heart Disease Prevalence among Adults
(Green = Lower than the State or Nation; Red = Higher than the State or Nation)

	Hypertension	High Cholesterol
Bristol County	28.1%	38.8%
Kent County	36.5%	34.9%
Newport County	31.3%	34.4%
Providence County	32.5%	35.9%
Washington County	30.9%	33.7%
Rhode Island	32.4%	35.2%
United States	30.9%	36.3%

Source: Centers for Disease Control and Prevention, 2015; Rhode Island Department of Health, 2015

Coronary heart disease is characterized by the buildup of plaque inside the coronary arteries. Rhode Island as a whole does not meet the Healthy People 2020 goal for coronary heart disease death. Providence County has the highest coronary heart disease death rate in the state.

The Providence County coronary heart disease death rate is the highest in the state and higher than the nation

Several types of heart disease, including coronary heart disease, are risk factors for stroke. Rhode Island and all five counties meet the Healthy People 2020 goal for stroke death and have a lower rate of death than the nation.

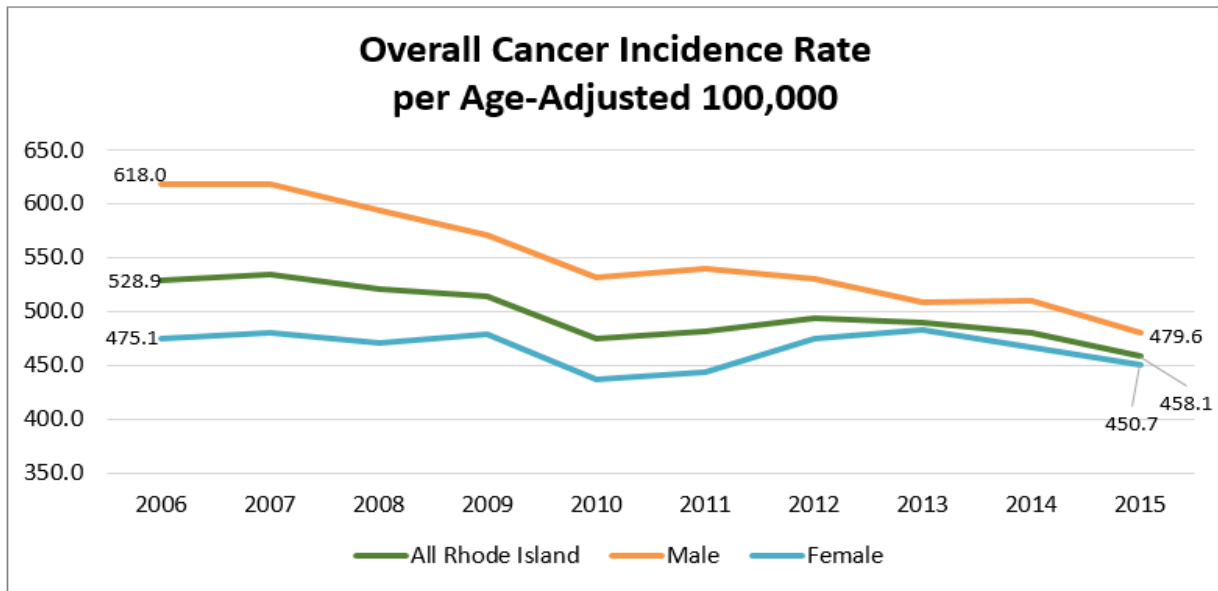
Coronary Heart Disease and Stroke Death Rates
(Green = Lower than State or National Benchmarks;
Red = Higher than State or National Benchmarks)

	Coronary Heart Disease Death per Age-Adjusted 100,000	Stroke Death per Age-Adjusted 100,000
Bristol County	97.0	25.5
Kent County	115.4	27.7
Newport County	89.0	26.2
Providence County	117.1	28.2
Washington County	93.2	26.3
Rhode Island	110.1	27.5
United States	99.6	36.9
Healthy People 2020	103.4	34.8

Source: Centers for Disease Control and Prevention, 2012-2016; Healthy People 2020

Cancer

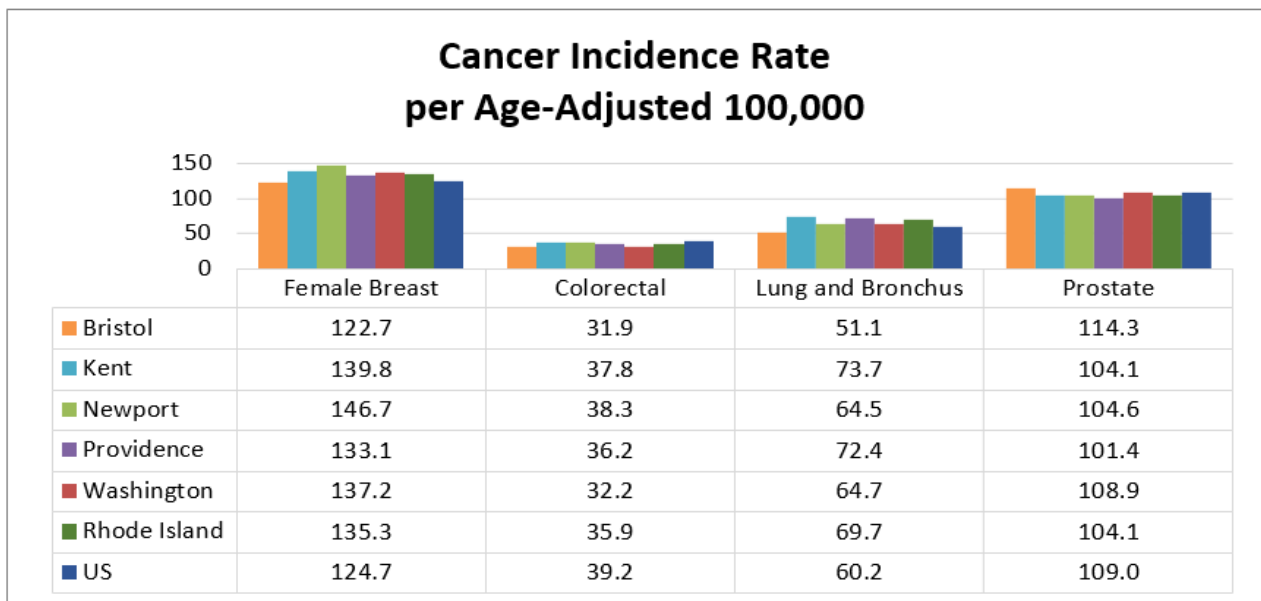
Cancer is the second leading cause of death in America, but the top cause of death in Rhode Island. The age-adjusted overall incidence of cancer is higher among males than females.



Source: Rhode Island Department of Health, 2006-2015

Presented below are the incidence rates for the most commonly diagnosed cancers: breast (female), colorectal, lung, and prostate (male). Rhode Island outpaces the nation for breast and lung cancer incidence; and Kent County rates exceed the state. Providence County rates exceed the state. Providence County has a higher incidence of lung cancer compared to the state and the nation, while Washington County has a higher incidence of breast cancer.

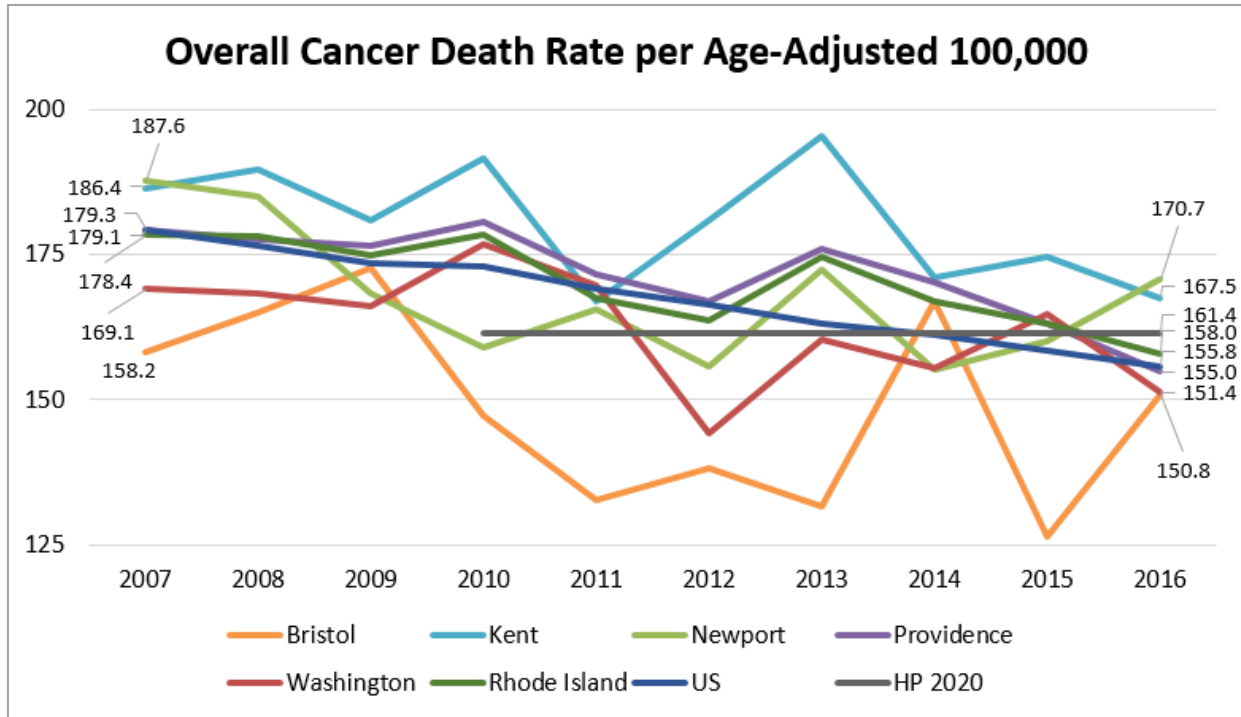
Rhode Island overall has higher incidence of lung cancer; Providence County has one of the highest incidence rates in the state



Source: Centers for Disease Control and Prevention, 2011-2015

Cancer death rates among Rhode Island counties have been variable over the past decade, but declined over the past decade. Death rates for all counties except Kent and Newport meet the Healthy People 2020 goal of 161.4 per age adjusted 100,000 people.

Cancer death rates declined over the past decade; Providence County meets HP 2020 goals for all cancer death rates except lung



Source: Centers for Disease Control and Prevention, 2007-2016

Across the nation, Blacks/African Americans have a higher rate of cancer death than Whites do. However, across Rhode Island, Whites have a higher death rate than Blacks/African Americans. Data by race and ethnicity are not reported for all counties due to low death counts.

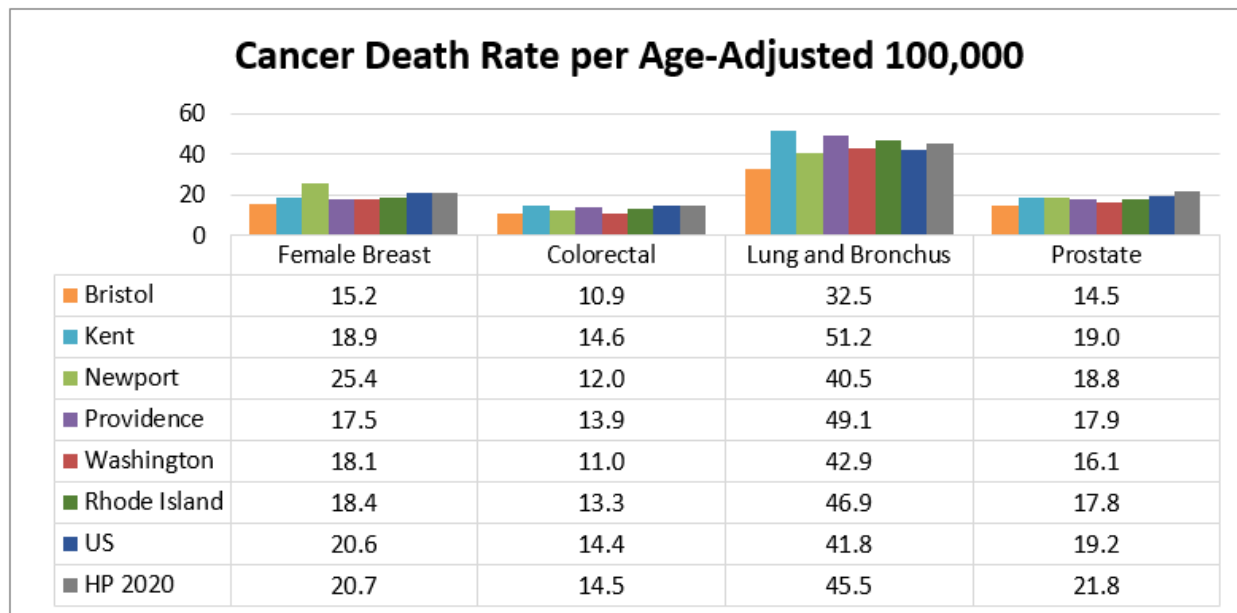
Cancer Death Rates by Race and Ethnicity

	White, Non-Hispanic	Black/African American, Non-Hispanic	Latinx
Newport County	162.0	189.7	NA
Providence County	178.2	114.8	94.7
Rhode Island	171.9	120.1	91.3
United States	165.7	190.0	112.6

Source: Centers for Disease Control and Prevention, 2012-2016

*Data for Bristol, Kent, and Washington counties are not reported due to low death counts.

Presented below are the death rates for the most commonly diagnosed cancers. Healthy People 2020 has set death rate goals for all four cancer types. Providence County meets the Healthy People 2020 goals with the exception of lung cancer, which is consistent with a higher incidence rate of lung cancer in the county.



Source: Centers for Disease Control and Prevention, 2012-2016

Rhode Island has higher reported incidence and death rates due to lung cancer than the nation. A potential contributor to higher rates is the prevalence of radon in homes across the state. Radon is a colorless and odorless gas produced from the decay of radium in rocks, soil, and water. It is the second leading cause of lung cancer. The Environmental Protection Agency recommends action to mitigate radon when testing shows radon levels of 4.0 pCi/L or higher. One in four homes in Rhode Island have radon levels at or above 4.0 pCi/L compared to the national average of 1 in 15 homes.

Radon is the second leading cause of lung cancer.

Radon levels of 1 in 4 Rhode Island homes exceed EPA standards; the national average is 1 in 15 homes

The Environmental Protection Agency distinguishes counties by radon zones. The following table shows each county's radon zone, its average radon level, and the percentage of radon testing results above 4 pCi/L.

Average Reported Indoor Radon Levels

	Radon Zone	Average Radon Level (pCi/L*)	Radon Testing Results Above 4 pCi/L
Bristol County	Zone 3 (less than 2 pCi/L)	1.9	10.2%
Kent County	Zone 2 (2 to 4 pCi/L)	3.3	23.8%
Newport County	Zone 2 (2 to 4 pCi/L)	3.5	23.2%
Providence County	Zone 2 (2 to 4 pCi/L)	2.4	14.4%
Washington County	Zone 1 (greater than 4 pCi/L)	4.7	34.9%
Rhode Island	NA	4.3	NA

Source: Environmental Protection Agency, no date. *Picocuries per liter

Many forms of cancer, if identified early, can be successfully treated. Screening rates for three of the most common forms of cancer (cervical, breast, and prostate) are shown in the table below. Among Rhode Island females ages 21-65, more than 8 in 10 receive cervical cancer screenings. A similar percentage of females ages 50-74 receive breast cancer screenings. The prevalence of cervical and breast cancer screenings among females is higher in all Rhode Island counties compared to the nation. A higher percentage of Rhode Island males ages 40 or older receive prostate cancer screenings when compared to the nation, but the percentage is lower in Providence County.

More Providence County females receive routine cancer screenings than the national averages, but fewer males receive screenings

Adult Routine Cancer Screenings
(Green = Higher than the State or Nation; Red = Lower than the State or Nation)

	Pap Test in Past Three Years (Ages 21-65)	Mammogram in Past Two Years (Ages 50-74)	PSA Test in Past Two Years (Ages 40+)
Bristol County	91.3%	96.5%	40.7%
Kent County	83.6%	83.9%	42.1%
Newport County	82.3%	85.1%	48.6%
Providence County	85.6%	84.9%	39.1%
Washington County	94.7%	86.1%	47.6%
Rhode Island	85.7%	85.5%	41.5%
United States	79.8%	77.6%	39.5%

Source: Centers for Disease Control and Prevention, 2016; Rhode Island Department of Health, 2016

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 (COPD), emphysema, and asthma, all of which contribute to lower quality of life and increased risk of early death. Providence County adults have a lower prevalence of asthma and/or COPD when compared to the state, but children have a higher prevalence.

CLRD Death Rates per Age-Adjusted 100,000 by Race and Ethnicity
(Green = Lower than the State or Nation; Red = Higher than the State or Nation)

	Total Population	White, Non-Hispanic	Black/African American, Non-Hispanic	Latinx
Bristol County	31.7	32.6	NA	NA
Kent County	42.8	44.0	NA	NA
Newport County	29.7	30.2	NA	NA
Providence County	35.2	39.1	20.3	9.4
Washington County	30.7	31.0	NA	NA
Rhode Island	35.1	37.4	19.9	8.8
United States	41.2	46.3	29.7	17.8

Source: Centers for Disease Control and Prevention, 2012-2016

*Data by race/ethnicity is limited due to low death counts.

CLRD Prevalence

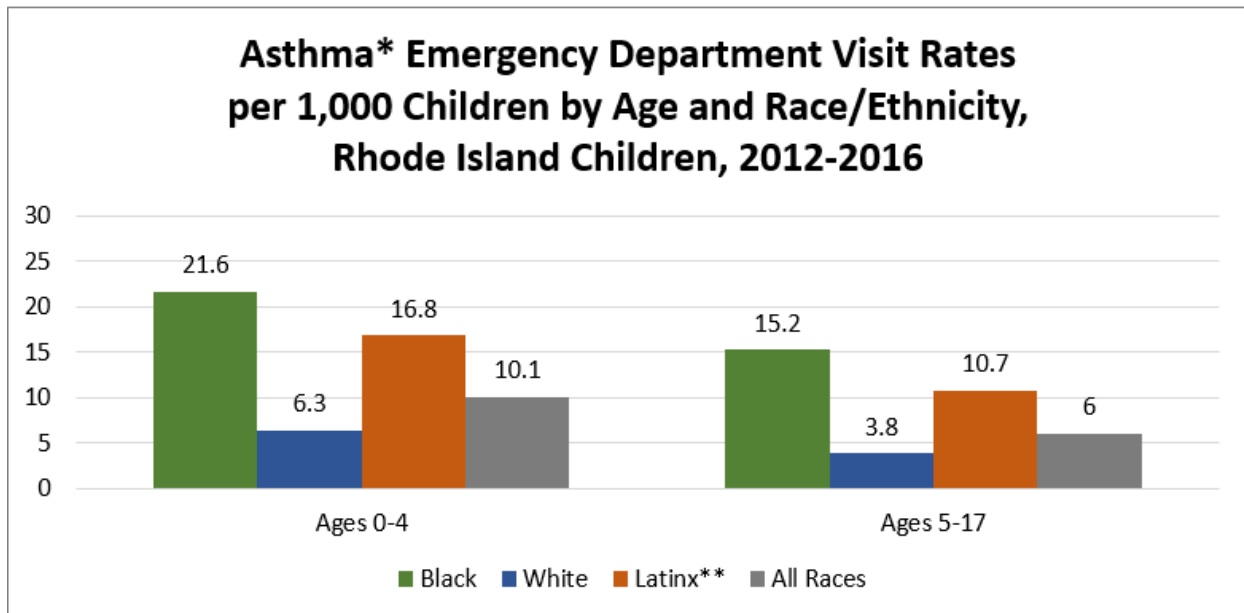
(Green = Lower than the State or Nation; Red = Higher than the State or Nation)

	Adults with Asthma (Current)	Children with Asthma (Ever)	Adults with COPD (Ever)
Bristol County	9.8%	6.0%	3.9%
Kent County	12.1%	10.3%	8.3%
Newport County	11.9%	15.5%	7.4%
Providence County	10.6%	14.7%	6.4%
Washington County	12.0%	16.9%	8.0%
Rhode Island	10.7%	13.6%	6.9%
United States	9.3%	NA	6.3%

Source: Centers for Disease Control and Prevention, 2016; Rhode Island Department of Health, 2016

Asthma is the most common chronic condition among children. Across Rhode Island from 2012 to 2016, asthma was the primary diagnosis for 7,917 emergency department visits among children under age 18. Black/African American and Latinx children had the highest rates of emergency department visits, as shown in the graph below. Children residing in the four core cities also had a higher rate of emergency department visits (12.2 per 1,000) compared to the remainder of the state (4.5 per 1,000).

Childhood asthma is more prevalent in Providence County than in the state



Source: Rhode Island Department of Health, 2012-2016

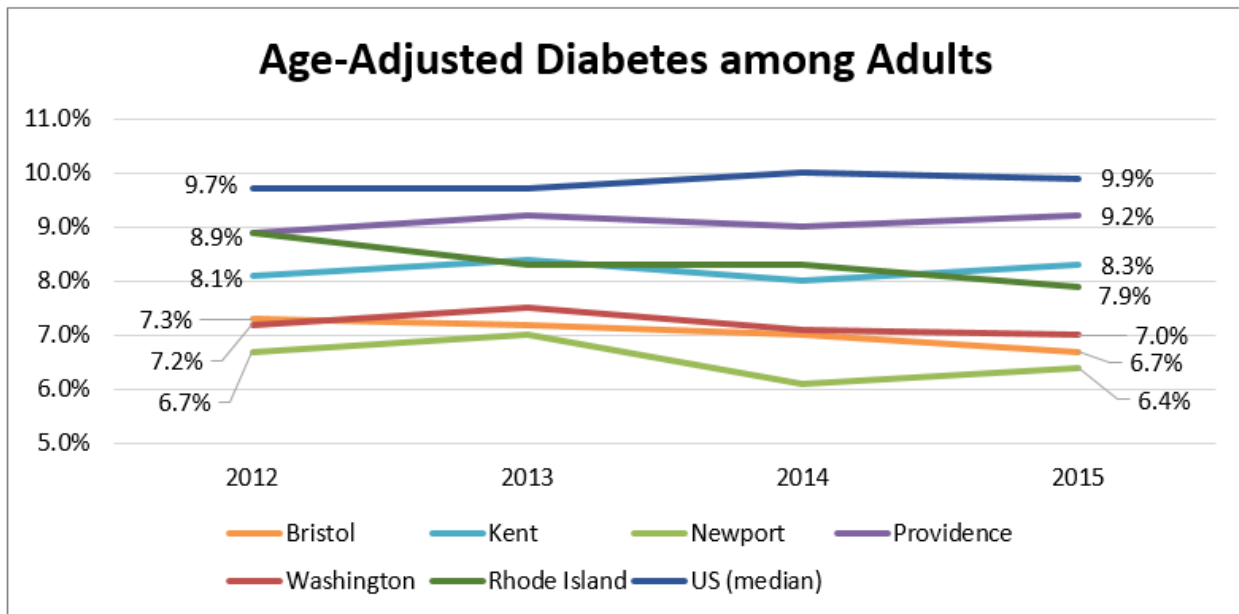
*Rates are for a primary diagnosis of asthma. **Latinx children can be of any race.

Diabetes

Diabetes is among the top 10 causes of death in the nation. Diabetes can cause a number of serious complications. Type 2 diabetes, the most common form, is largely preventable through diet and exercise. The percentage of adults in Rhode Island diagnosed with diabetes is less than the nation, and decreased over the past three years.

All Rhode Island counties have a lower prevalence of diabetes than the nation

Providence County measures are higher than the state and increased slightly since 2012.



Source: Centers for Disease Control and Prevention, 2012-2015

The Rhode Island death rate due to diabetes is lower than the national death rate. All Rhode Island counties except Providence also have a lower death rate than the nation. Across the state and nation, the diabetes death rate is highest among Blacks/African Americans compared to Whites and Latinxs.

Diabetes Death Rate per Age-Adjusted 100,000
(Green = Lower than the State or Nation; Red = Higher than the State or Nation)

	Total Population	White, Non-Hispanic	Black/African American, Non-Hispanic	Latinx
Bristol County	17.0	16.7	NA*	NA*
Kent County	17.6	17.6	NA*	NA*
Newport County	11.5	11.4	NA*	NA*
Providence County	19.7	19.2	24.2	19.5
Washington County	14.8	14.5	NA*	NA*
Rhode Island	17.8	17.4	24.0	18.1
United States	21.1	18.6	38.6	25.6

Source: Centers for Disease Control and Prevention, 2012-2016

*Data by race/ethnicity is limited due to low death counts.

Senior Health

Chronic Disease Among Medicare Beneficiaries

Seniors face a growing number of challenges related to health and well-being as they age. People over 65 are more prone to chronic disease, social isolation, and disability. The following sections highlight key health indicators for the region’s senior population.

According to the CDC, “Among Medicare fee-for-service Beneficiaries, people with multiple chronic conditions account for 93% of total Medicare spending.”

The tables below note the percentage of Rhode Island Medicare beneficiaries who have been diagnosed with a chronic condition. Cells highlighted in red represent percentages that are higher than state and national benchmarks.

Senior Medicare beneficiaries in Providence County experience more chronic disease than other counties.

The presence of chronic conditions among Medicare beneficiaries varies by county. Medicare beneficiaries in Providence County are more likely to have a chronic condition diagnosis compared to state and national averages.

Chronic Conditions Among Medicare Beneficiaries Age 65 Years or Older (Red = Higher than the State or Nation)

	Bristol County	Kent County	Newport County	Providence County	Washington County	Rhode Island	US
Alzheimer’s Disease	12.4%	12.0%	11.2%	12.4%	9.3%	11.7%	11.3%
Arthritis	30.5%	33.0%	29.3%	31.2%	32.9%	31.5%	31.3%
Asthma	8.7%	9.7%	9.0%	10.2%	7.7%	9.5%	7.6%
Cancer	10.6%	10.8%	10.8%	10.2%	10.2%	10.4%	8.9%
COPD	9.3%	12.4%	11.3%	12.1%	10.6%	11.7%	11.2%
Depression	16.2%	18.5%	16.9%	18.5%	14.5%	17.5%	14.1%
Diabetes	23.7%	27.0%	22.3%	29.3%	21.6%	26.6%	26.8%
Heart Failure	12.1%	14.7%	12.9%	15.2%	12.8%	14.3%	14.3%
High Cholesterol	51.9%	55.7%	51.9%	55.0%	51.7%	54.1%	47.8%
Hypertension	60.0%	63.7%	59.0%	64.1%	60.0%	62.6%	58.1%
Ischemic Heart Disease	24.9%	32.0%	25.0%	29.1%	27.4%	28.6%	28.6%
Stroke	3.9%	4.3%	5.7%	4.3%	3.9%	4.4%	4.2%

Source: Centers for Medicare & Medicaid Services, 2015

Number of Chronic Conditions Among Medicare Beneficiaries Age 65 Years or Older

	Bristol County	Kent County	Newport County	Providence County	Washington County	Rhode Island	US
0 to 1 condition	29.9%	25.9%	31.1%	26.8%	30.5%	27.9%	32.3%
2 to 3 conditions	33.2%	31.3%	32.1%	30.8%	33.3%	31.6%	30.0%
4 to 5 conditions	22.0%	24.2%	21.2%	23.5%	21.9%	23.0%	21.6%
6 + conditions	14.9%	18.6%	15.6%	19.0%	14.3%	17.5%	16.2%

Source: Centers for Medicare & Medicaid Services, 2015

Regular screenings are essential for the early detection and management of chronic conditions. The following table analyzes diabetes and mammogram screenings among Medicare enrollees. Rhode Island and all five counties exceed national metrics for both screenings. Medicare enrollees in Providence County are more likely to receive annual hA1c tests for diabetes than the state average, but are less likely to receive mammograms than the state.

Chronic Disease Screenings among Medicare Enrollees
(Green = Higher than the State or Nation Red = Lower than the State or Nation)

	Annual hA1c Test from a Provider (65-75 Years)	Mammogram in Past Two Years (67-69 Years)
Bristol County	89.0%	76.0%
Kent County	87.4%	68.7%
Newport County	87.0%	67.8%
Providence County	87.8%	65.3%
Washington County	88.0%	72.6%
Rhode Island	87.7%	67.9%
United States	85.0%	63.0%

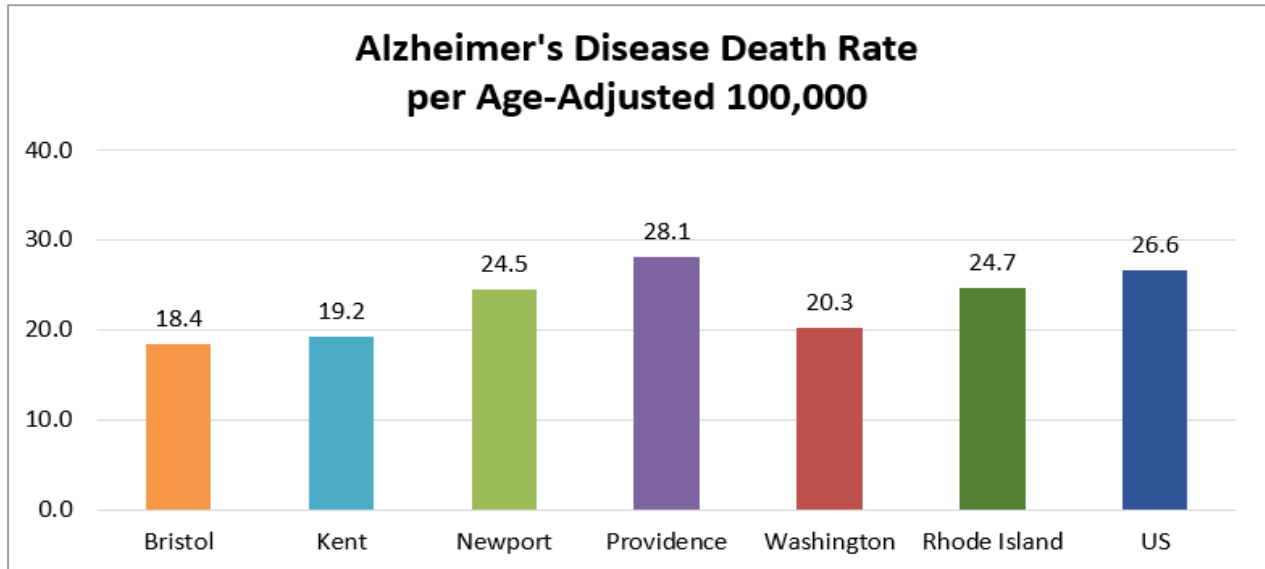
Source: Dartmouth Atlas of Healthcare, 2014

Alzheimer’s Disease

Alzheimer’s disease is currently the sixth leading cause of death in the United States. According to the National Institute on Aging, “Alzheimer’s disease is an irreversible, progressive brain disorder that slowly destroys memory and thinking skills, and, eventually, the ability to carry out the simplest tasks. In most people with Alzheimer’s, symptoms first appear in their mid-60s. Estimates vary, but experts suggest that more than 5.5 million Americans, most of them age 65 or older, may have dementia caused by Alzheimer’s.”

Providence County has a higher rate of death due to Alzheimer’s disease than the state and nation

In Rhode Island, only Providence County has a higher rate of death due to Alzheimer’s disease than the state or the nation.

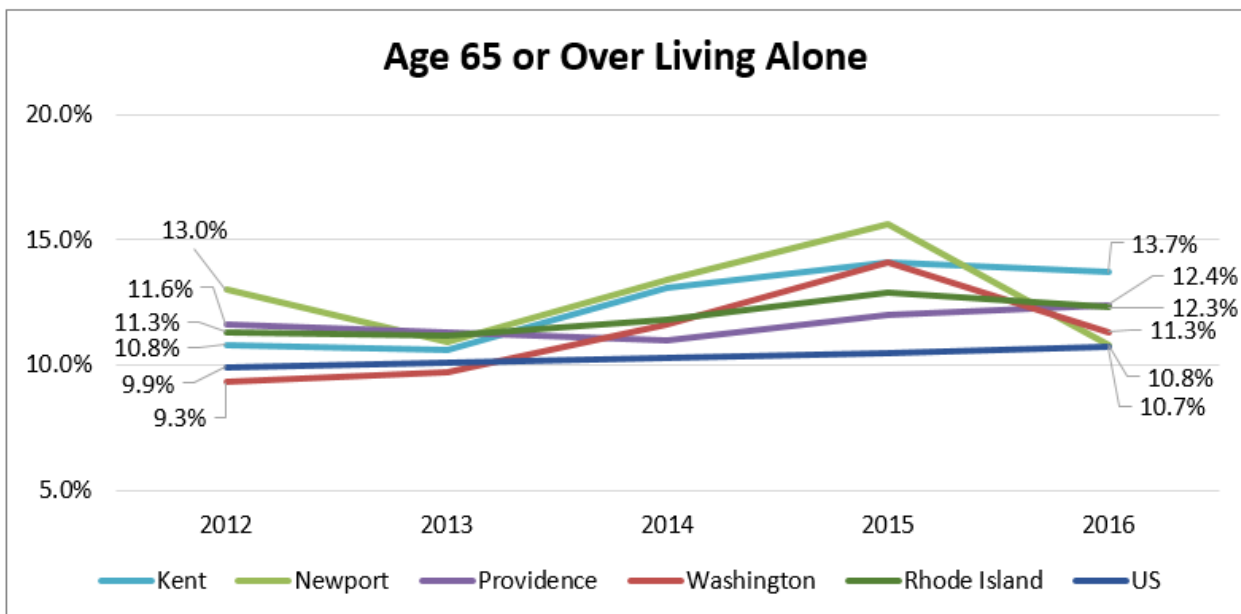


Source: Centers for Disease Control and Prevention, 2012-2016

Social Isolation Among Seniors

As seniors age, they are at risk for isolation due to physical limitations and decreasing social circles. One indicator of isolation is the percentage of seniors age 65 or older who live alone. In Rhode Island, seniors are more likely to live alone than seniors across the nation. Approximately 12% of seniors in Providence County live alone, similar to the state but higher than the nation.

Approximately 12% of seniors in Providence County live alone, slightly more than the nation



Source: US Census Bureau, 2012-2016

*Bristol County data is only available as a five-year aggregate based on data availability.

Behavioral Health

Mental Health

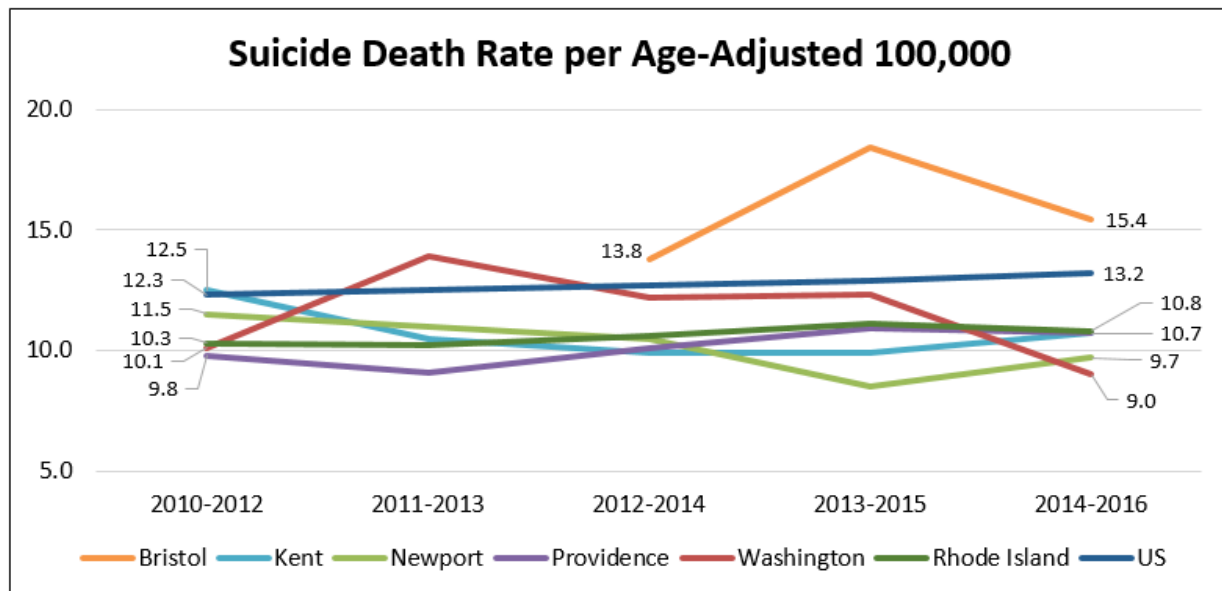
A higher percentage of Rhode Island adults have been diagnosed with a depressive disorder when compared to the nation. Nearly 25% of Providence County adults have been diagnosed with a depressive disorder at some point in their lives, which exceeds the state and nation. The Providence County suicide rate is on par with the state and lower than the nation, but just over the Healthy People 2020 goal. The suicide rate in Providence County increased slightly over the past six years, contrary to most RI counties.

About 25% of Providence County adults have ever been diagnosed with a depressive disorder

Mental Health Measures
(Red = Higher than State or National Benchmarks)

	Adults with a Depressive Disorder (Ever)	Suicide Rate per Age-Adjusted 100,000	Mental & Behavioral Disorders Death Rate per Age-Adjusted 100,000
Bristol County	20.9%	15.4	66.8
Kent County	22.1%	10.7	53.8
Newport County	20.4%	9.7	43.8
Providence County	23.1%	10.7	53.9
Washington County	19.5%	9.0	53.7
Rhode Island	22.3%	10.8	53.6
United States	17.4%	13.2	37.2
Healthy People 2020	NA	10.2	NA

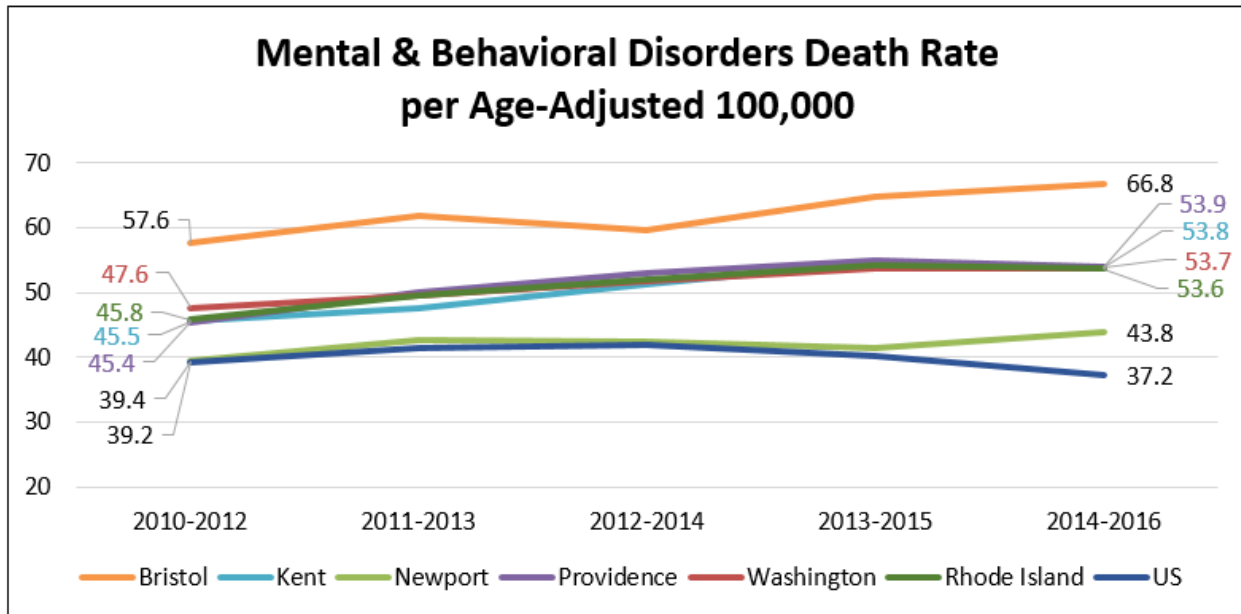
Source: Centers for Disease Control and Prevention, 2014-2016 & 2016; Healthy People 2020



Source: Centers for Disease Control and Prevention, 2010-2012 – 2014-2016

*Data for Bristol County are suppressed for years prior to 2012-2014 due to low death counts.

Mental and behavioral disorders span a wide range of disorders, including disorders due to psychoactive substance use, anxiety disorders, Schizophrenia and other delusional disorders, and mood or personality disorders. The disorders are not induced by alcohol and other psychoactive substances, but they may result from substance abuse. The mental and behavioral disorders death rate increased by four or more points over the past six years in all counties, and 8.5 points in Providence County.



Source: Centers for Disease Control and Prevention, 2010-2012 – 2014-2016
 *Death rates for Kent, Providence, and Washington counties and RI are color-coded to distinguish trends.

Substance Use Disorder

The category of substance use disorder includes alcohol and drug use, including the use of prescription drugs outside of the prescribed use.

Excessive drinking includes binge drinking and heavy drinking. Across Rhode Island, approximately 17% of adults report excessive drinking. The percentage of county adults who report excessive drinking is higher than the state and the nation for all counties except Providence. Providence County has the lowest percentages of excessive drinking among adults, and the lowest percentage of deaths due to DUI.

Providence County has the lowest percentage of excessive drinking among adults and deaths due to DUI in the state

Drug-induced deaths include all deaths for which drugs are the underlying cause of death, including drug overdoses and deaths from medical conditions resulting from chronic drug use.

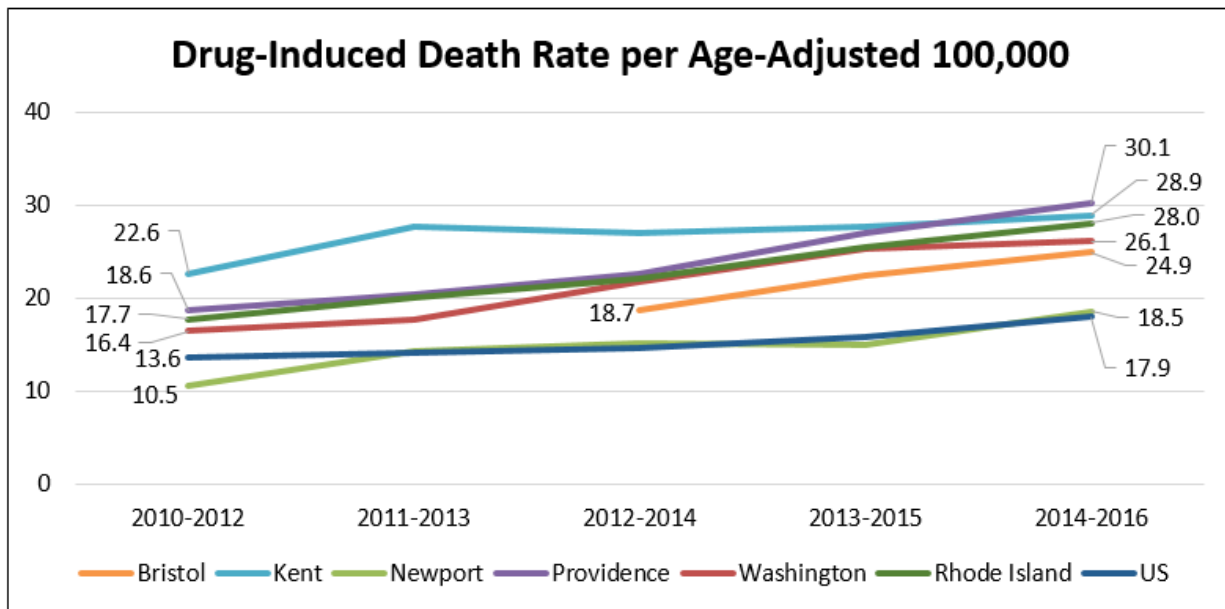
Since 2010, the drug-induced death rate increased across the state and all counties, and exceeds national benchmarks

The drug-induced death rate increased across all counties over the past five years. The death rate for Rhode Island and all counties, except Newport, and is more than double the Healthy People 2020 goal. The death rates for the state and for all counties exceed the national death rate.

**Substance Use Disorder Measures
(Red = Higher than National Benchmarks)**

	Excessive Drinking (Adults)	Percent of Driving Deaths due to DUI	Drug-Induced Death Rate per Age-Adjusted 100,000
Bristol County	19.4%	NA	24.9
Kent County	19.9%	43.1%	28.9
Newport County	23.8%	44.0%	18.5
Providence County	17.8%	34.5%	30.1
Washington County	21.4%	50.0%	26.1
Rhode Island	17.4%	39.1%	28.0
United States	18.0%	29.0%	17.9
Healthy People 2020	NA	NA	11.3

Source: Centers for Disease Control and Prevention, 2014-2016 & 2016; National Highway Traffic Safety Administration, 2012-2016; Healthy People 2020



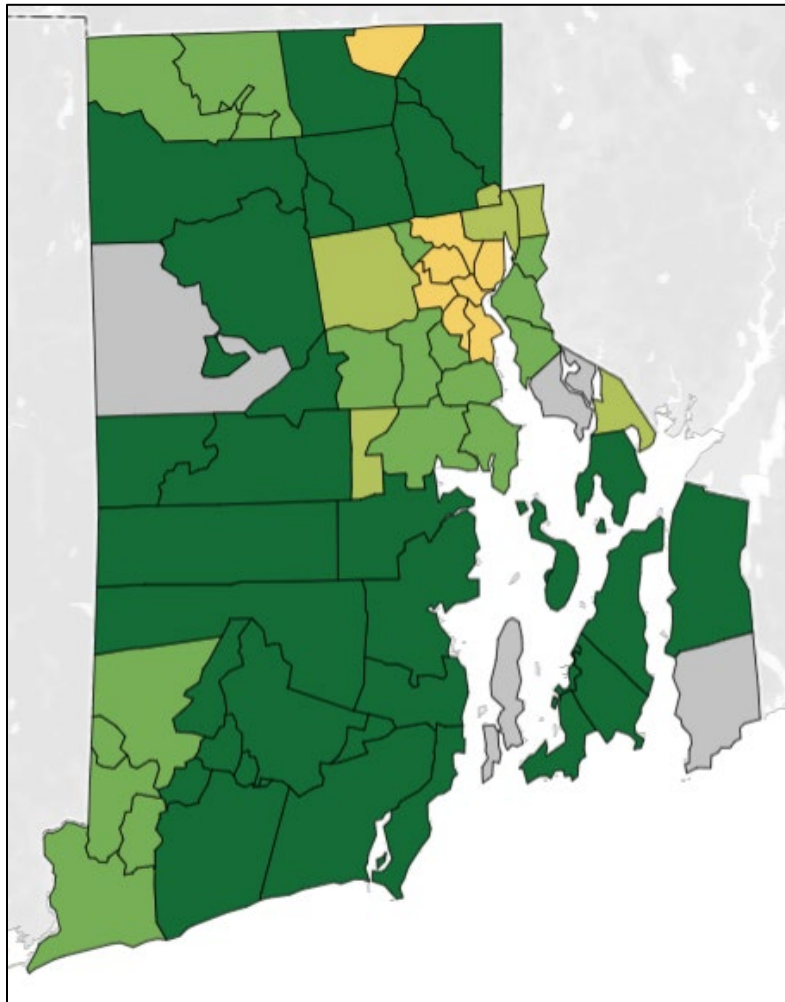
Source: Centers for Disease Control and Prevention, 2010-2012 – 2014-2016

*Data for Bristol County are suppressed for years prior to 2012-2014 due to low death counts.

In response to increasing overdose deaths across the state, Rhode Island implemented a data dashboard, PreventOverdoseRI.org, to track overdose deaths biannually. According to the website, “In 2014, over 240 Rhode Islanders lost their lives to overdose — that’s more than the number of people who died in car accidents, murders, and suicides combined.” In 2018, the number of overdose deaths increased to 314.

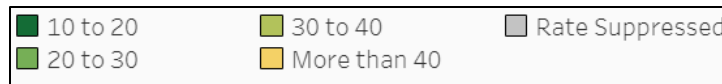
The number of overdose deaths in Woonsocket decreased from 2016 to 2018, but the 2018 death rate was the 5th highest in Rhode Island

Overdose Death Rate per 100,000 by Rhode Island City/Town



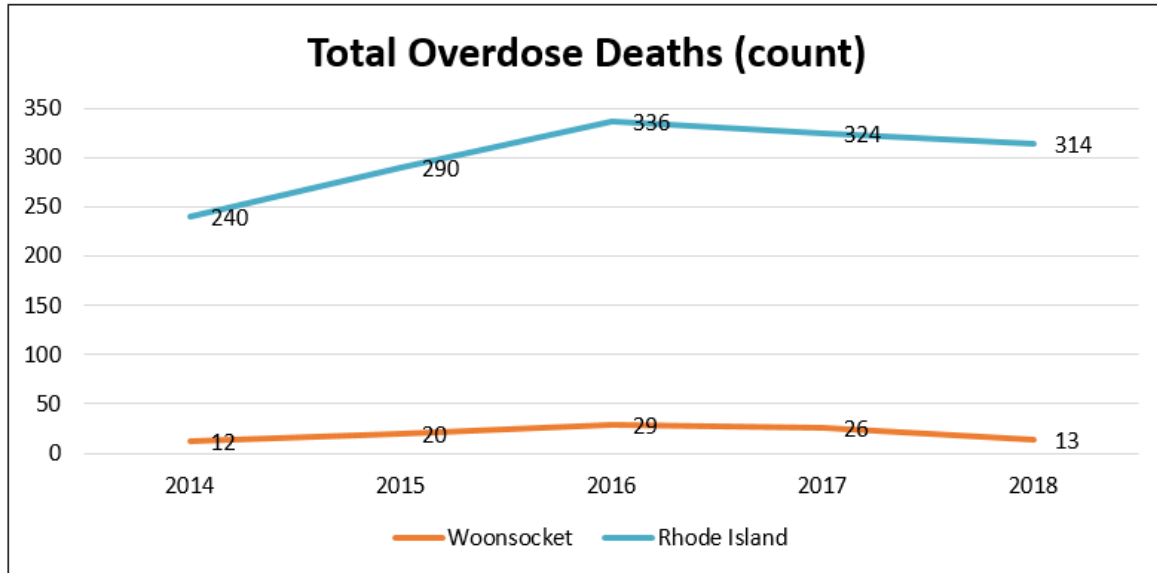
Source: Rhode Island Department of Health, 2014-2018

Overdose Death Rate per 100,000 Legend



Although the number of deaths due to overdose in Woonsocket for a single year may appear to be a relatively small number, each incident has an impact on the community. When the population of Woonsocket is considered at approximately 41,000 people, the rate of death due to overdose in the community is higher than Rhode Island in general. From 2016 to 2018, the number of overdose deaths in Woonsocket decreased from 29 to 13 deaths, the fifth highest number of deaths in the state.

From 2016 to 2018, the number of overdose deaths in Woonsocket decreased from 29 to 13 deaths, the fifth highest number of deaths in the state.



Source: Rhode Island Department of Health, 2014-2018

*Deaths are reported by the location where the death occurred, not where the deceased lived.

**Overdose Death Rate per 100,000 for Rhode Island
Cities/Towns With Highest Death Rate, 2018**

	Death Rate	Count
West Warwick	48.0	14
Providence	44.4	79
Coventry	37.1	13
Pawtucket	32.3	23
Woonsocket	31.6	13

Source: Rhode Island Department of Health, 2018

Overdose death data was also analyzed as a five-year aggregate to illustrate more reliable counts and rates. The following table shows the top cities/towns for overdose deaths for 2014 to 2018. Woonsocket had the highest rate of overdose death during this time span.

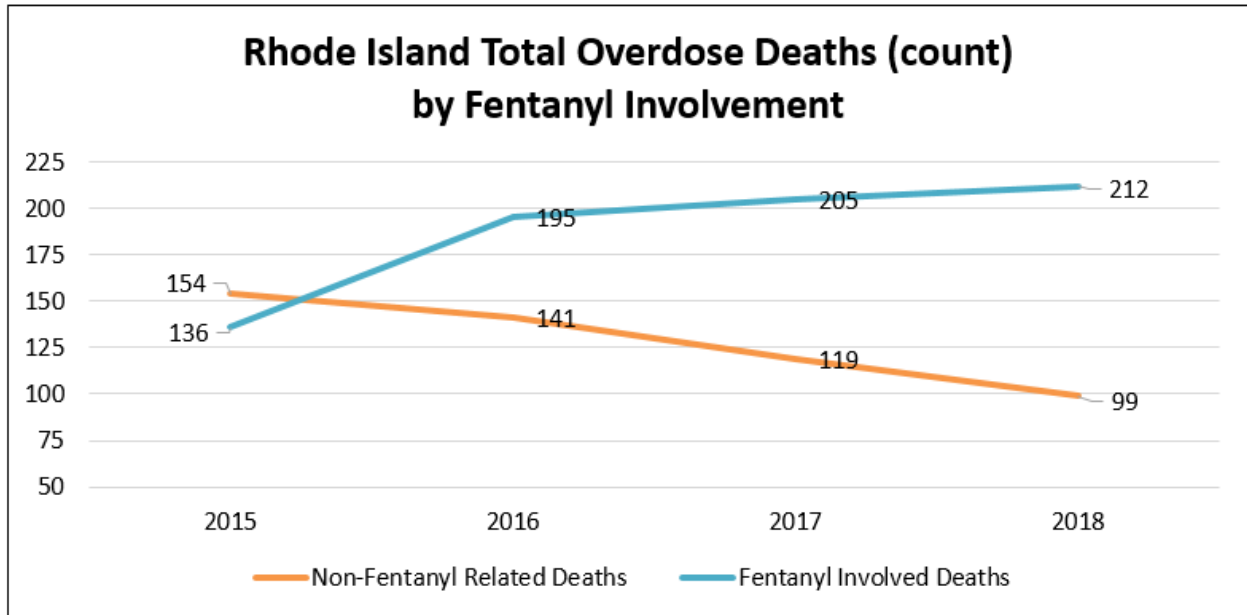
**Overdose Death Rate per 100,000 for Rhode Island
Cities/Towns With Highest Death Rate, 2014-2018 (aggregate)**

	Death Rate	Count
Woonsocket	48.6	100
Providence	44.7	398
Central Falls	37.2	36
West Warwick	34.9	51
Pawtucket	33.2	118

Source: Rhode Island Department of Health, 2014-2018

Fentanyl is a significant contributing factor in death from overdose. With the rise in the presence of fentanyl in illicit drugs, there has been a commensurate rise in the number of overdose deaths from opiates.

Fentanyl-related overdoses are on the rise, accounting for >60% of deaths in 2017



Source: Rhode Island Department of Health, 2015-2018

*From January through March 2019, there were 58 non-fentanyl related deaths and 13 fentanyl-involved deaths in Rhode Island.

In 2018, 1,289 Naloxone kits were distributed throughout Woonsocket to first responders, individuals, family members, and key community institutions such as libraries, for a rate of 3,130 kits per 100,000 people. A total of 242 kits were known to be administered in Woonsocket in 2018 for a rate of 588 kits per 100,000 people.

The number of administered kits includes naloxone doses given by EMS, police, and friends or family members to individuals brought to an Emergency Department (ED) and reported through Rhode Island’s 48-Hour Reporting System. They do not include unreported kits administered by community members, friends, and family.

Distributed Naloxone Kits by Year

	2016	2017	2018
Woonsocket	198	794	1,289
Rhode Island	6,341	7,798	16,771

Source: Rhode Island Department of Health, 2016-2018

Naloxone Administration by Year

	2016	2017	2018
Woonsocket	67	158	242

Source: Rhode Island Department of Health, 2016-2018

When EMS services use Narcan to revive a patient, they must report basic details regarding the location, characteristics of the person, and the amount of Narcan used. The summaries of these data for Woonsocket are listed in the tables below. The data indicate that there has been a relatively steady need for Narcan since 2016.

When the number of opioid overdose-related EMS calls in Woonsocket is broken down by gender, men are two times as likely to overdose as women, consistent with the state overall. Statewide, the number of females who needed EMS services for an overdose increased annually.

Men are two times as likely as women to overdose and require EMS services

Opioid Overdose-Related EMS Runs by Gender by Year

Year	Woonsocket			Rhode Island	
	Total Runs (count)	Male	Female	Male	Female
2016	138	68%	32%	69%	31%
2017	139	66%	34%	69%	31%
2018	132	62%	38%	67%	33%
2019*	54*	67%*	33%*	66%*	34%*

Source: Rhode Island Department of Health, 2016-2019

*Data are provided through April 2019.

The table below breaks down opioid overdose-related EMS runs by age for Woonsocket and Rhode Island for 2018 and 2019. The data indicate that overdose impacts people of all ages. The majority of people experiencing overdose in Woonsocket and Rhode Island are adults ages 25 to 44.

Percentage of Total EMS Runs That Were For Opioid Overdose by Age and Year

Age of Patient	Woonsocket		Rhode Island	
	2018	2019*	2018	2019*
15-24 years	6%	9%	11%	15%
25-34 years	42%	46%	34%	32%
35-44 years	26%	15%	22%	20%
45-54 years	11%	11%	15%	16%
55+ years	15%	19%	17%	16%

Source: Rhode Island Department of Health, 2018-2019

*Data are provided through April 2019.

The effects of Narcan are shorter than the effects of opiates. This means that when Narcan wears off, in many cases, people return to the crisis state created by the overdose. Therefore, every person experiencing overdose, even when revived with Narcan, should go to the ED of a nearby hospital. Protocols dictate the transport to the ED of anyone EMS revives by Narcan unless the patient refuses transport.

The data below reflect overdose-related ED visits reported to R23-1-OPIOID, an anonymous, mandated reporting system. Woonsocket had the second highest cumulative rate of overdose-related ED visits in Rhode Island between February 2016 and April 2019. During this timeframe the number of overdose deaths also decreased.

Overdose-Related ED Visits Rate per 100,000 for Rhode Island Cities/Towns with a Rate >400 per 100,000, February 2016-April 2019

	Visit Rate
Providence	793.5
Woonsocket	746.5
West Warwick	656.6
Pawtucket	594.9
Warwick	548.4
Cranston	495.0
Exeter	484.6
Westerly	478.2
Warren	412.6
Central Falls	401.7

Source: Rhode Island Department of Health, February 2016-April 2019

The decrease in overdose deaths and high rate of ED visits for overdose-related cases may be related to proactive interventions with Narcan and subsequent transport to the ED. A change in standardized and mandatory reporting of overdose cases in the ED may have also ensured more overdose related cases were tracked in the ED.

Woonsocket has the second highest overdose-related ED visit rate in the state.

With the rise in the number of overdoses and deaths due to opiates nationwide, the Substance Abuse and Mental Health Services Administration (SAMHSA) and others have encouraged evidenced-based treatments for addiction and dependence, including the use of Medication-Assisted Treatment (MAT). The number of people accessing MAT is increasing across Rhode Island and Woonsocket. The following table indicates the availability of various MAT services in Woonsocket.

Medication-Assisted Treatment Options in Woonsocket

Buprenorphine/ Suboxone Waivered Physicians	Methadone Treatment Programs	Vivitrol Providers
22	4	0

Source: Rhode Island Department of Health, 2018

The Rhode Island Department of Behavioral Healthcare, Developmental Disabilities and Hospitals (BHDDH) defines recovery residences as, “A sober, safe, and healthy living environment that promotes recovery from alcohol and other drug use and associated problems.” There are 40 certified recovery residences in Rhode Island, documented by RICARES (aka Rhode Island Recovery Community Organization). Uncertified recovery residences are not listed or tracked by a state agency and are therefore not reflected in the data in this report. Two licensed residences are located in Woonsocket, and both serve males only.

Woonsocket has two certified recovery residences, both serve males only; uncertified residences are not tracked

Youth Behavioral Health

According to the Rhode Island Department of Health, 19% of Rhode Island children ages 6 to 17 have a diagnosable mental health condition. At the time of the last CHNA, the Rhode Island Department of Health reported that in 2013, 2,737 youth were hospitalized across five hospitals with a primary diagnosis of mental disorder, an increase of 53% from 2003. The number of hospitalizations among children decreased from 2013 to 2016, but it is on the rise again, as shown in the graph below.

19% of Rhode Island youth ages 6-17 have a diagnosable mental health condition

Emergency Care for Primary Diagnosis of Mental Disorder, Children Under Age 18, Rhode Island, 2007-2016*



Source: Rhode Island Department of Health, 2007-2016

*Data reflect the number of visits or hospitalizations, not children. Children may have had more than one visit or hospitalization.

Child mental health services are often fragmented and/or unavailable in a timely manner. According to the Rhode Island Department of Health, in 2017, 55% of children ages 3 to 17 who needed mental health services had difficulty obtaining care.

More than half of Rhode Island youth ages 3-17 who needed mental health services had trouble obtaining care

“In Federal Fiscal Year (FFY) 2017, 462 Rhode Island children and youth awaited psychiatric inpatient admission for an average of four days on medical floors at Hasbro Children’s Hospital. This is up from 212 children and three days in FFY 2016. Also during that time, an average of nine children per day were ready to leave the psychiatric hospital (up from the FFY 2016 average of six kids per day), but were unable [to be discharged] due to a lack of step-down availability or there being no other safe placement (including at home).”

Bradley Hospital and Butler Hospital specialize in providing child psychiatric care. The following table shows the number of children under age 19 treated at either hospital by service type for FFY2017. The most common diagnoses among children treated in the inpatient setting were depressive disorders, anxiety disorders, adjustment disorders, bipolar disorders, and schizophrenia.

Children Under Age 19 Treated at Rhode Island Psychiatric Hospitals (FFY2017)

	Bradley Hospital General Psychiatric Services		Bradley Hospital Developmental Disabilities Program*		Butler Hospital Adolescent Psychiatric Services	
	# Treated	Average Length of Stay	# Treated	Average Length of Stay	# Treated	Average Length of Stay
Inpatient	791	21 days	116	38 days	509**	8 days
Residential	41	235 days	34	238 days	NA	NA
Partial Hospitalization	824	20 visits	102	20 visits	166	5 visits

Source: Rhode Island Department of Health, October 1, 2016-September 30, 2017

*The Bradley Hospital Developmental Disabilities Program offers specialized inpatient and residential services to children and adolescents who show signs of serious emotional and behavioral problems in addition to developmental disabilities.

**An additional 81 youth were treated in adult programs.

Young people who consistently feel depressed or sad may be at risk for self-harm and risky behaviors, including committing suicide. The percentage of high school students reporting an attempted suicide decreased three points from 14% in 2013 to 11% in 2017. Between 2012 and 2016, 22 youth under the age of 20 died due to suicide.

The percentage of Rhode Island high school students reporting an attempted suicide decreased three points from 14% in 2013 to 11% in 2017.

Teen alcohol and drug use is both a symptom and a risk factor for increased injury, depression, and poor health. The following table depicts substance use among Rhode Island high school students. The percentage of students reporting alcohol use decreased 3 points from 26% in 2013 to 23% in 2017, 7 points lower than the US. comparison. Marijuana use decreased 11 points from 34% in 2013 to 23% in 2017, 6 points higher than the US comparison.

Substance Use Among Rhode Island High School Students

	Alcohol Use	Marijuana Use	Prescription Drug Misuse
2013 Rhode Island	26%	34%	NA*
2017 Rhode Island	23%	23%	4%
2017 United States	30%	20%	14%

Source: Rhode Island Department of Health, 2013-2014 and 2017

*A change in methodology occurred between 2013 and 2017. A benchmark comparison is not reported.

Neonatal Abstinence Syndrome (NAS)

Babies exposed to opiates or other substances in the womb, may experience withdrawal symptoms shortly after birth. Neonatal abstinence syndrome (NAS) is a group of conditions caused when a baby withdraws from certain drugs he or she has been exposed to in the womb. Although most commonly associated with opioid exposure, other substances can also cause NAS, including antidepressants and benzodiazepines. In addition to the specific difficulties of withdrawal after birth, problems in the baby may include premature birth, seizures, respiratory distress, birth defects, poor growth and other developmental problems. Because the symptoms of NAS often occur after the baby has been discharged from the hospital and symptoms can be hard to identify as NAS, the incidence of NAS is difficult to accurately capture.

Medications, opioids, and other substances that can cause NAS can be managed prenatally to improve outcomes for newborns. Fear of separation from their baby, stigma, or mental health and substance use disorders often deter women from accessing services prepartum and postpartum.

Neonatal Abstinence Syndrome per 10,000 Delivery Hospitalizations

	2013–2018 NAS Rate
West Warwick	120.3
Woonsocket	161.9
Rhode Island	96.1

Source: Rhode Island Department of Health, 2013-2018

Maternal and Child Health

Total Births and Teen Pregnancy

A total of 53,756 births occurred in Rhode Island between 2012 and 2016. Nearly 70% of births were to mothers residing in Providence County. Of the total births in Rhode Island, approximately 3,000 were to teen mothers between the ages of 15 and 19. The resulting teen birth rate of 15 per 1,000 is half the reported rate for the prior decade (30.4 per 1,000). However, the teen birth rate within the four core cities continues to exceed the remainder of the state.

The teen birth rate declined by half across Rhode Island over the past decade, but continues to be highest in the core cities.

Woonsocket has the second highest teen birth rate in the state

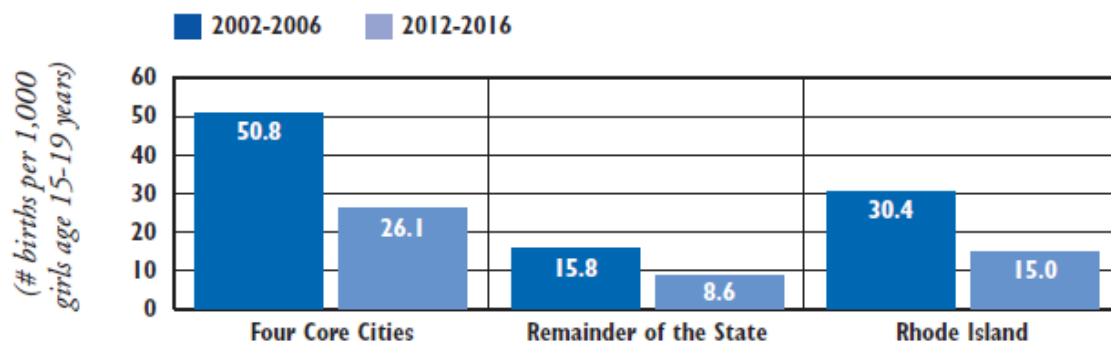
Births in Rhode Island per 1,000 Females Ages 15-44, 2012-2016

	Total Births		Non-Hispanic White Births		Non-Hispanic Black Births		Latina Births	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Bristol County	1,690	36.8	1,535	34.0	21	144.8*	59	68.2
Kent County	7,853	53.5	6,830	46.5	124	43.9	466	69.3
Newport County	3,416	45.3	2,676	38.0	179	51.5	389	98.5
Providence County	36,351	53.6	17,219	36.2	3,910	59.2	11,625	81.2
Washington County	4,277	35.2	3,741	32.2	70	37.1	178	40.0
Rhode Island	53,756	50.1	32,143	37.6	4,309	57.9	12,729	80.0

Source: Rhode Island Department of Health, 2012-2016

*The Bristol rate is considered statistically unstable; please interpret with caution.

Teen Birth Rates, Rhode Island, Five-Year Averages Comparisons: 2002-2006, 2012-2016



Teen Births (Ages 15-19), 2012-2016

	Teen Birth Count	Teen Birth Rate per 1,000 females
Bristol County	45	4.5
Kent County	303	12.5
Newport County	112	8.2
Providence County	2,361	19.3
Woonsocket	276	43.7
Washington County	159	5.5

Source: Rhode Island Department of Health, 2012-2016

Maternal and Infant Health Outcomes

In aggregate, Rhode Island and all five counties meet the Healthy People 2020 goal of 77.9% of women accessing prenatal care in the first trimester. Women in Providence County experience the most barriers to accessing prenatal care, and have poorer birth outcomes compared to other counties. When statewide data is broken down by race and ethnicity, health disparities among women of color become clearer. For all reported maternal and child health indicators, women and infants of color experience poorer outcomes than their White peers.

For all reported maternal and child health indicators, women and infants of color experience poorer outcomes than their White peers.

Engaging in prenatal care early in pregnancy increases the chances that a woman and her baby will have a healthy pregnancy and a healthy birth. Entry into prenatal care after the first trimester can suggest barriers to care such as lack of information, lack of access to healthcare or transportation, or behavioral health barriers.

Delayed prenatal care can contribute to low birth weight and preterm births. Low birth weight is defined as a birth weight of less than 5 pounds, 8 ounces, and is often a result of premature birth, fetal growth restrictions, or birth defects. Preterm birth is defined as birth before 37 weeks of pregnancy, and can contribute to infant death or disability. All Rhode Island counties meet the Healthy People 2020 goal for preterm births, and all counties except Providence meet the goal for low birth weight.

Breastfeeding is recommended to ensure healthy nutritional intake for babies and to promote bonding between mother and child. Washington County is the only county to meet the Healthy People 2020 goal for breastfeeding at the time of birth. Data by race or ethnicity is not available for this measure.

**Maternal and Child Health Indicators by County, Race, Ethnicity
(Yellow = Health Disparities)**

	Delayed Prenatal Care	Preterm Births	Low Birth Weight	Breastfeeding
Bristol County	12.4%	7.5%	5.7%	79.5%
Kent County	12.3%	8.3%	6.8%	75.5%
Newport County	11.6%	8.7%	6.8%	73.2%
Providence County	16.1%	9.4%	8.0%	72.7%
Washington County	8.5%	7.5%	6.2%	83.7%
Rhode Island	14.5%	9.0%	7.5%	77.0%
White	12.4%	6.4%	6.7%	NA
Latina	17.4%	8.1%	8.2%	NA
Black	21.9%	9.2%	11.3%	NA
Asian	26.5%	7.2%	13.1%	NA
Native American	15.6%	8.9%	10.3%	NA
Healthy People 2020	22.1%	9.4%	7.8%	81.9%

Source: Rhode Island Department of Health, 2012–2016

Analyzing maternal and infant health outcomes by town helps to illuminate variances that can reflect wider health and social disparities among populations. The following table depicts maternal and infant health outcomes for Providence County towns.

Fewer women in Woonsocket receive early prenatal care or breastfeed. They are also more likely to have preterm or low birth weight babies

2012-2016 Providence County Infant Births by Maternal Characteristics and Town (Yellow = Health Disparities)

	Total Births	Births per 1,000 Girls 15-19 years	Delayed Prenatal Care	Breastfeeding at Time of Birth	Preterm Births	Low Birth Weight
Burrillville	645	11.2	12.9%	76%	9.5%	6.0%
Central Falls	1,613	59.5	18.1%	73%	8.9%	8.2%
Cranston	3,927	10.1	13.1%	79%	9.5%	7.6%
Cumberland	1,661	5.8	10.6%	82%	7.1%	5.9%
East Providence	2,347	13.8^	13.2%	76%	8.1%	6.6%
Foster	166	NA (n=5)	11.4%^	89%	9.0%^	NA
Glocester	337	NA (n=11)	11.9%	80%	10.1%	5.6%^
Johnston	1,330	11.9	11.3%	75%	7.8%	7.1%
Lincoln	977	6.9^	11.6%	80%	9.5%	6.8%
North Providence	1,625	17.6	13.2%	75%	9.8%	8.3%
North Smithfield	415	NA (n=10)	11.1%	82%	8.7%	7.5%
Pawtucket	4,885	26.1	18.1%	74%	10.0%	9.0%
Providence	12,511	21.6	18.8%	73%	10.0%	8.8%
Scituate	385	NA (n=10)	14.8%	83%	8.8%	5.5%^
Smithfield	641	NA (n=10)	9.7%	82%	4.8%	3.9%
Woonsocket	2,890	43.7	19.0%	68%	9.4%	8.3%
Rhode Island	53,752	15.0	14.5%	77%	9.0%	7.5%

Source: Rhode Island Department of Health, 2012-2016

^The data are statistically unstable and rates or percentages should be interpreted with caution.

Adverse Childhood Experiences

Adverse Childhood Experiences (ACEs) have significant negative impact on the mental, physical, and emotional development of children, and contribute to risky health behaviors, poor health outcomes, and premature death. The following tables profile the prevalence of ACEs in Rhode Island, including abuse, neglect, and family dysfunction (incarceration and domestic violence). Prevalence within the four core cities and the top 10 towns or cities for children experiencing ACEs are also shown.

Children of Incarcerated Parents

Children of incarcerated parents are more likely to experience educational challenges and physical and mental health difficulties. The rate of children of incarcerated parents within the four core cities in Rhode Island is nearly double the statewide rate. Woonsocket has the second highest rate overall with more than 250 children impacted.

Children of Incarcerated Parents: Top 10 Cities/Towns in Rhode Island in Descending Order by Rate per 1,000 Children

	Children of Incarcerated Parents per 1,000 Children*
West Warwick	53.3
Woonsocket	25.6
Providence	23.6
Central Falls	21.6
Pawtucket	19.2
Newport	18.6
North Providence	14.7
Cranston	9.9
Foster	9.1
Burrillville	8.4
Four Core Cities	22.7
Rhode Island	12.7

Source: Rhode Island Department of Health, September 30, 2017

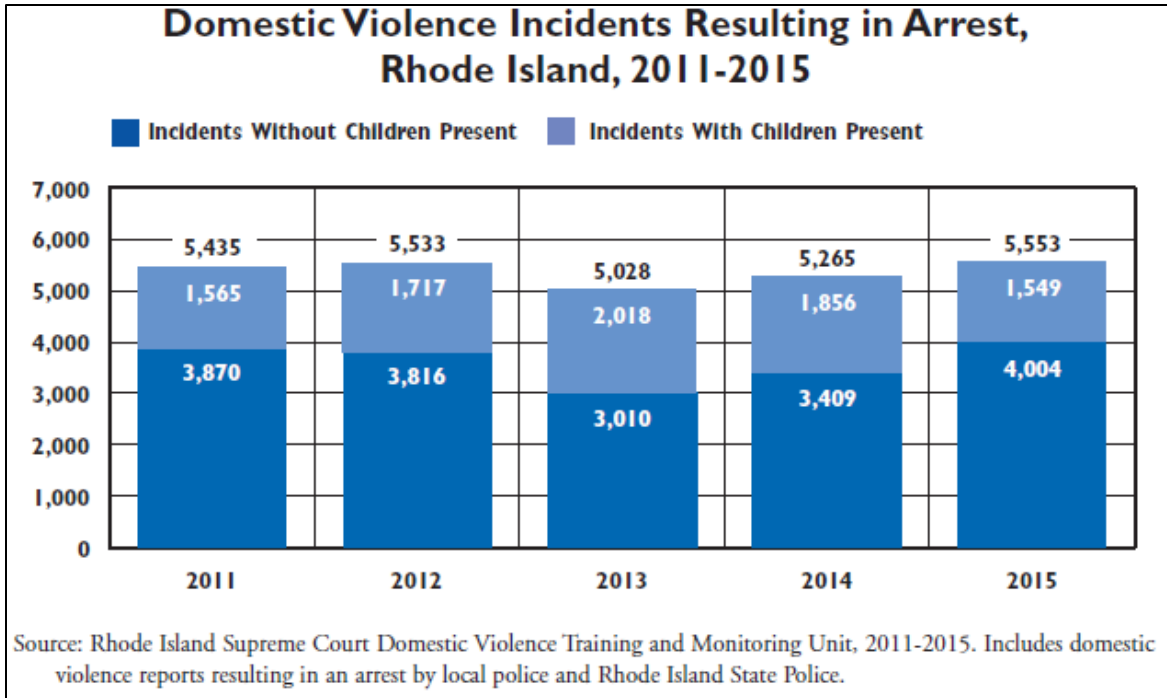
*Data are self-reported by the incarcerated parent(s) and may include children over age 18.

Children Witnessing Domestic Violence

According to the 2018 Rhode Island Kids Count Factbook, “Children who are exposed to domestic violence are more likely to be victims of child abuse and neglect than those who are not.” In 2015, there were 5,553 domestic violence incidents resulting in arrests in Rhode Island, an increase from 2014 and 2013. Approximately 28% of the incidents statewide in 2015 had a child present; 40% of these incidents originated in the four core cities.

Woonsocket is among the top three cities and towns in Rhode Island with 362 domestic violence incidents that resulted in arrest. Children were present for about one-quarter of the arrests.

Woonsocket children
are present for
about one-quarter of
domestic violence arrests.



Domestic Violence Incidents Resulting in Arrests Top 10 Cities/Towns in Rhode Island in Descending Order by Number of Incidents

	Total Domestic Violence Incidents	Percent with Children Present
Providence	942	31%
Pawtucket	764	27%
Woonsocket*	362	24%
Cranston	357	24%
Warwick	310	29%
East Providence	271	31%
Westerly	268	26%
New Shoreham	207	29%
North Providence	187	29%
Coventry	125	36%
Four Core Cities	2,215	28%
Rhode Island	5,553	28%

Source: Rhode Island Department of Health, 2015 *Data for Woonsocket are provisional.

Child Abuse and Neglect

The Rhode Island Department of Health defines child abuse/neglect as the following:

- Child abuse includes physical, sexual, and emotional abuse.
- Child neglect includes emotional, educational, physical, and medical neglect, as well as a failure to provide for basic needs.

The Department of Health reported that, “In 2017 in Rhode Island, there were 2,404 indicated investigations of child abuse and neglect involving 3,357 children. The rate of child abuse and neglect per 1,000 children under age 18 was more than two times higher in the four core cities than in the remainder of the state. About half (52%) of the victims of child abuse and neglect in 2017 were young children under age six, and one-third (34%) were ages three and younger.” Woonsocket had the highest rate of child abuse/neglect in the state in 2017.

The rate of child abuse and neglect was more than two times higher in the four core cities than in the remainder of the state. Woonsocket was the highest.

Indicated Investigations of Child Abuse and Neglect: Top 10 Cities/Towns in Rhode Island in Descending Order by Rate per 1,000 Children

	Indicated Investigations per 1,000 Children	Child Abuse/Neglect Victims per 1,000 Children
Woonsocket	22.9	35.9
Central Falls	18.4	30.8
Newport	18.9	27.9
West Warwick	15.1	25.9
Pawtucket	17.2	24.1
Providence	13.0	19.3
Hopkinton	15.7	18.4
Westerly	10.9	16.9
Bristol	12.4	15.7
Warren	9.8	13.9
Four Core Cities	15.7	23.5
Remainder of State	7.8	10.2
Rhode Island	10.7	15.0

Source: Rhode Island Department of Health, 2017

Top 10 Cities/Towns in Rhode Island For Child Abuse and Neglect, Shown in Descending Order by Rate of Victims per 1,000 Children

	Total Indicated Investigations of Child Abuse/Neglect	Indicated Investigations per 1,000 Children	Total Victims of Child Abuse/Neglect	Child Abuse/Neglect Victims per 1,000 Children
Woonsocket	226	22.9	355	35.9
Central Falls	104	18.4	174	30.8
Newport	77	18.9	114	27.9
West Warwick	87	15.1	149	25.9
Pawtucket	285	17.2	400	24.1
Providence	540	13.0	805	19.3
Hopkinton	29	15.7	34	18.4
Westerly	52	10.9	81	16.9
Bristol	45	12.4	57	15.7
Warren	19	9.8	27	13.9
Four Core Cities	1,155	15.7	1,734	23.5
Remainder of State	1,170	7.8	1,526	10.2
Rhode Island	2,404	10.7	3,357	15.0

Source: Rhode Island Department of Health, 2017

The following table shows the number of emergency department visits, hospitalizations, and deaths due to child abuse and/or neglect in Rhode Island. The number of emergency department visits due to child abuse/neglect declined from 2012 to 2016. The number of hospitalizations and deaths has been variable and accounted for 139 total hospitalizations and six child deaths from 2012 to 2016.

Rhode Island Emergency Department Visits, Hospitalizations, and Deaths Due to Child Abuse and/or Neglect

	# of Emergency Department Visits*	# of Hospitalizations*	# of Deaths**
2012	153	25	1
2013	133	34	3
2014	102	44	1
2015	92	28	0
2016	79	8	1
Total	559	139	6

Source: Rhode Island Department of Health, 2012–2016. Data for 2015 and 2016 are provisional.

*The number of Emergency Department visits and the number of hospitalizations include both suspected and confirmed assessments of child abuse and neglect.

**Due to a change in data source, data for child deaths due to child abuse and/or neglect are only comparable with Factbooks since 2013.

Child Lead Screening and Poisoning

The CDC estimates that at least four million households have children living in them that are being exposed to high levels of lead. Lead exposure increases the risk for central nervous system damage, slowed growth and development, and hearing and speech problems.

Consistent with national trends, chlamydia and gonorrhea infection rates increased across all counties

According to the Rhode Island Department of Health, 729 or 7% of statewide children eligible to enter kindergarten in fall 2019 who were screened for lead poisoning had elevated blood lead levels. The number of children with elevated blood lead levels has steadily declined in all areas of Rhode Island. However, the core cities of Central Falls, Pawtucket, Providence, and Woonsocket are disproportionately impacted, accounting for 433 of the 729 cases. Ten percent of children living in Core Cities and screened for lead exposure have elevated blood lead levels.

10% of screened children in core cities have elevated blood lead levels; Providence County has the oldest housing stock in the state, increasing the likelihood for lead paint exposure

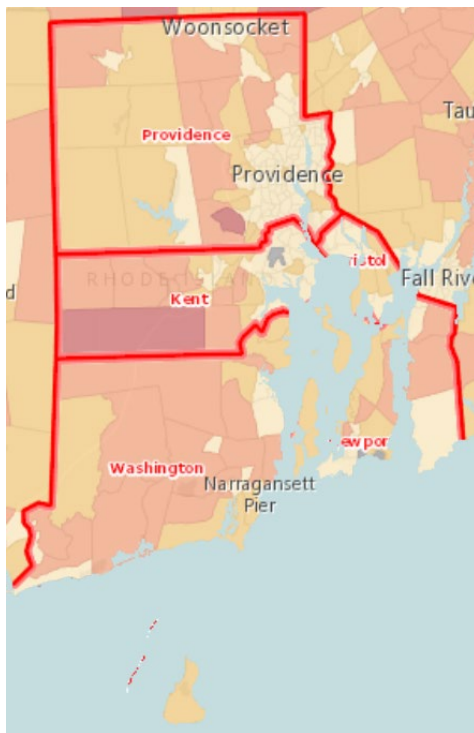
The following table depicts towns with a higher percentage of pre-kindergarten children with confirmed elevated blood lead levels compared to the state. All towns except Warren are located in Providence County

Lead Poisoning among Children Eligible to Enter Kindergarten in Fall 2019

	Number Tested for Lead Poisoning	Confirmed Elevated Blood Lead Levels	
		Number	Percent
Providence	2,573	292	11.3%
Central Falls	300	32	10.7%
Pawtucket	841	73	8.7%
East Providence	469	40	8.5%
Warren	106	9	8.5%
Rhode Island	10,689	729	6.8%

Source: Rhode Island Department of Health, 2018

Lead paint was frequently used to paint the inside and outside of houses until 1978 when it was banned in the US due to its association with lead poisoning. As a result, homes built before 1978 are at risk of having lead paint inside, a leading exposure pathway for children. Housing stock in Rhode Island is older than that of the US with half of homes across the state built before 1960. Providence County has the oldest housing stock with nearly 60% of homes built before 1960.



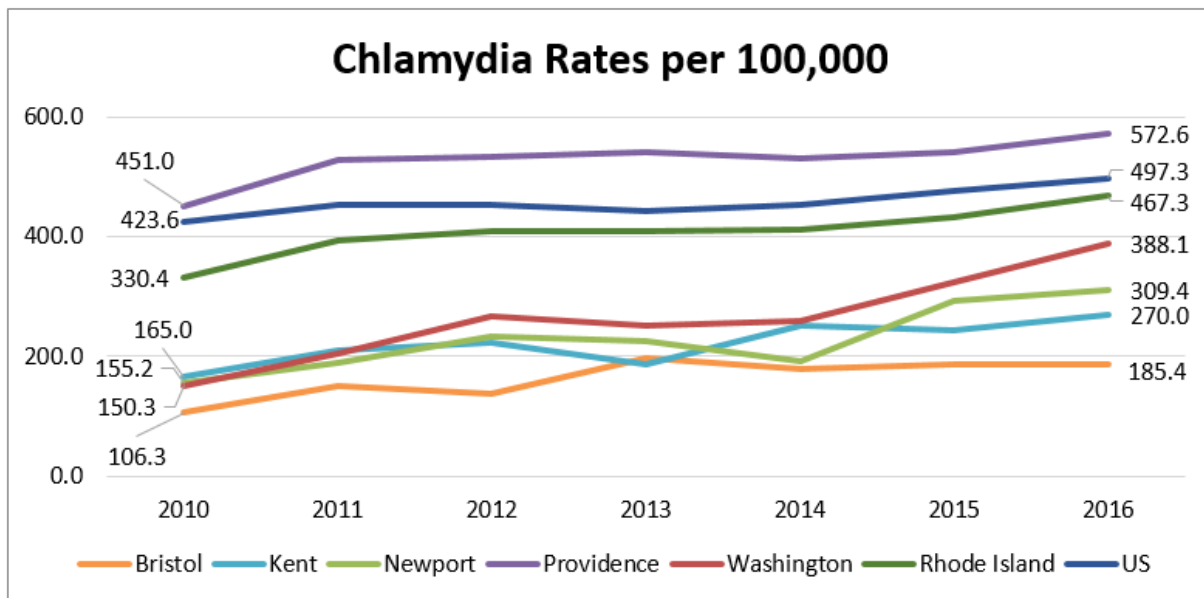
Housing Units by Median Year Built and Census Tract, US Census Bureau 2012-16

- Newer than 1985
- 1976 - 1985
- 1966 - 1975
- Older than 1966
- No Data or Data Suppressed
- Report Area

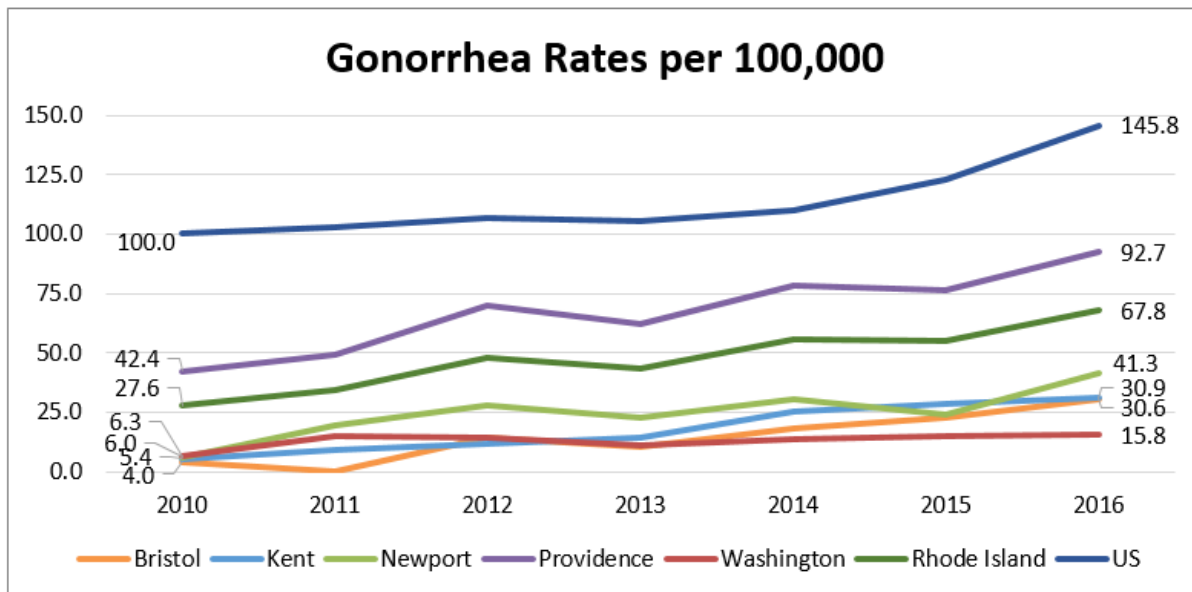
Reportable Diseases

The rate of infection of sexually transmitted infections (STIs) including chlamydia, gonorrhea, and HIV has been increasing across the nation and Rhode Island since 2010. As highly communicable conditions, STIs require reporting to the CDC and state and local health bureaus upon detection. The rate of chlamydia and gonorrhea infections in Rhode Island fall below national rates, but rates in Providence County exceed state and/or national benchmarks. Both STIs have increased across all counties between 2010 and 2016.

Chlamydia and gonorrhea infection rates in Providence County exceed state and/or national benchmarks



Source: Centers for Disease Control and Prevention, 2010-2016



Source: Centers for Disease Control and Prevention, 2010-2016

The following table shows HIV prevalence for all five Rhode Island counties compared to the state and the nation. There are currently 2,357 people living with HIV in Rhode Island. Providence County is the only county with a higher HIV prevalence rate than the state and is similar to the national rate.

2015 HIV Prevalence
(Green = Lower than the State or Nation)

	HIV Prevalence per 100,000	HIV Cases
Bristol County	88.5	38
Kent County	100.2	143
Newport County	148.7	108
Providence County	346.1	1,863
Washington County	63.6	71
Rhode Island	259.5	2,357
United States	362.3	971,524

Source: Centers for Disease Control and Prevention, 2015

Key Informant Survey Results

Background

A Key Informant Survey was conducted with community stakeholders to solicit information about community health needs. A total of 45 individuals responded to the survey, including health and social service providers; community and public health experts; civic, religious, and social leaders; community planners; policy makers and elected officials; and others representing diverse populations including minority, low-income, and other underserved or vulnerable populations.

These “key informants” were asked a series of questions about their perceptions of community health including health drivers, barriers to care, community infrastructure, and recommendations for community health improvement.

Survey Participants

HARI and the CHNA hospitals solicited input from community partners across the state to participate in the survey. The table below shows the breakdown of participation by county. Many participants indicated that they served multiple counties. “Other” areas served as indicated by respondents included Bristol County in Massachusetts, the Blackstone Valley Region, and Pawtucket. A list of the represented community organizations and the key informants’ respective role/title is included in Appendix B. Key informant names are withheld for confidentiality.

Counties Served by Key Informants

	Percent of Informants*	Number of Informants
Providence County	77.8%	35
Kent County	57.8%	26
Washington County	51.1%	23
Bristol County	44.4%	20
Newport County	33.3%	15
Other	11.1%	5

*Key informants were able to select multiple counties. Percentages do not add up to 100%.

Participants were asked to indicate if their organizations focused on any specific populations. About one-third of key informants indicated that they served all populations. As demonstrated in the table below, survey participants represent the interests of a broad mix of community stakeholders, including children and youth, families, low income/poor, racial and ethnic minorities, among other underserved populations. “Other” populations as indicated by respondents included domestic violence victims and survivors, individuals with substance use disorders, and individuals experiencing language and cultural barriers.

Populations Served by Key Informants

	Percent of Informants*	Number of Informants
Children/Youth	60.0%	27
Families	60.0%	27
Low Income/Poor	60.0%	27
Women	51.1%	23
Latinx	48.9%	22
Seniors/Elderly	46.7%	21
Men	44.4%	20
Black/African American	37.8%	17
Immigrant/Refugee	37.8%	17
Uninsured/Underinsured	37.8%	17
Disabled	35.6%	16
Homeless	35.6%	16
Not Applicable (Serve All Populations)	31.1%	14
LGBTQ+ Community	28.9%	13
Asian/Pacific Islander	22.2%	10
American Indian/Alaska Native	17.8%	8
Other	8.9%	4

*Key informants were able to select multiple population groups. Percentages do not add up to 100%.

Health Perceptions

Choosing from a list of health issues, key informants were asked to rank order what they perceived as the top three health concerns impacting the population(s) they serve. An option for “other” was also provided. A following question asked participants to similarly rank order what they saw as the top three contributing factors to the health concerns they had indicated in the previous question. The top five responses for each question are depicted in the tables below. The tables are rank ordered by the number of informants that selected the issue within their top three choices.

More than one-third of informants saw mental health conditions as the No. 1 health concern in their community and 67% chose it among their top three community health concerns. Correlation between these data demonstrates more consensus around this issue than others on the list. More than 50% of informants selected substance abuse among their top three choices. Overweight/obesity and diabetes rounded out the top three health concerns with about 40% of informants’ selecting these issues.

More than 37% of key informants saw mental health conditions as the No. 1 health concern; 67% chose it among their top three selections

Top Health Concerns Affecting Residents*

Rank	Health Concern	Informants Selecting as the No. 1 Health Concern		Informants Selecting Among Top 3 Health Concern	
		Percent	Count	Percent*	Count
1	Mental health conditions	37.2%	16	67.4%	29
2	Substance abuse	18.6%	8	53.5%	23
3	Overweight/Obesity	4.7%	2	41.9%	18
4	Diabetes	16.3%	7	39.5%	17
5	Other**	4.7%	2	14.0%	6
5	Cancers	0.0%	0	14.0%	6
5	Heart disease and stroke	0.0%	0	14.0%	6

*Key informants were able to select multiple health concerns. Percentages do not add up to 100%.

**Other responses: lead exposure, and affordable, healthy housing.

More than half (54.5%) of key informants saw poverty among the top three contributing factors to health concerns, with 25% selecting it as a the No. 1 contributor. There was less consensus among informants regarding other factors that most contribute to community health concerns. Health habits and ability to afford healthcare received the next highest votes after poverty.

Poverty was identified as the top contributing factor to community health concerns

Top Contributing Factors to Community Health Concerns

Rank	Contributing Factor	Informants Selecting as the No. 1 Contributor		Informants Selecting Among Top 3 Contributor	
		Percent	Count	Percent*	Count
1	Poverty	25.0%	11	54.5%	24
2	Health habits (diet, physical activity)	11.4%	5	29.5%	13
3	Ability to afford healthcare (doctor visits, prescriptions, deductibles, etc.)	13.6%	6	27.3%	12
4	Drug/Alcohol use	2.3%	1	22.7%	10
5	Stress (work, family, school, etc.)	6.8%	3	18.2%	8
5	Other**	4.5%	2	18.2%	8
5	Lack of preventive healthcare (screenings, annual check-ups)	2.2%	1	18.2%	8

*Key informants were able to select multiple contributing factors. Percentages do not add up to 100%.

**Other responses: Social determinants of health, sedentary lifestyles, too much screen time, racism, sexism, mental health outpatient services for children and adolescents not requiring home-based services, and inadequate Medicaid funding for care.

Key Informant Comments

Informants' were invited to provide freeform comments to expand upon their quantitative responses to the previous questions. Verbatim comments are included below.

- > *"...Planning efforts involving all stakeholders and communities should be strengthened to decrease duplication of effort, increase efficiencies across the state, maximize use of funding, and centralize systems of care. The current system is fragmented and confusing to patients, clients, community stakeholders, and providers."*
- > *"Progress is being made in some of these areas through the local Health Equity Zone (HEZ) and the work of many partners to increase access to healthy foods, exercise, asthma, recreation, etc."*
- > *"There is a large disparity between those who can and cannot afford healthcare. Those with Medicaid have increased barriers. However, more and more individuals who have private insurance are also finding it difficult to manage their health due to high premiums, deductibles, and co-pays. People are having to choose between paying rent, buying food, and costs associated with managing their healthcare."*
- > *"There is a dearth of community based care for mental health and substance abuse." [in Washington County]*
- > *"We need a greater focus on "health" over "healthcare." Specifically, being holistic and addressing trauma in our communities. Health equity and addressing social determinants of health require us to seek solutions across sectors with community engagement and direct investment in elements of social determinants of health."*
- > *"Children do not spend enough time with unstructured play outdoors. Most residents do not spend enough time outdoors in nature even though there are many places where they can do this. Stress permeates our culture and people do not learn strategies for managing stress and balancing their lives."*
- > *"In the nursing home community, the individuals we care for typically suffer from dementia or other age-related disability. Depression is also a chronic problem, because these individuals have experienced so much loss; the majority of them have outlived their spouse and/or friends. They have lost their independence, their good vision and hearing, their health, etc. It's a very challenging time of life, whether they receive care at home, in assisted living, or in a nursing facility. The state has sufficient nursing facility beds, but those facilities are financially starved due to Medicaid funding shortfalls. This means patients must be in semi-private rooms, and staff are too busy to provide the relaxed and friendly care they deserve. They receive good primary care, but there are SERIOUS shortfalls in dental and behavioral healthcare for nursing home residents."*
- > *"Washington County has pockets of poverty that are overshadowed by high income areas."*
- > *"There aren't enough providers because the reimbursement rates are so low and [rates] don't take into account the social factors contributing to missed appointments, etc."*

- > *“Families are facing multiple stressors. Availability of providers, the ability to pay, availability of alcohol and drugs, lack of adequate housing and transportation, limited educational level, low community connectivity, low understanding of effects of school truancy/absenteeism/academic failure on a child's future, long history of trauma in our communities.”*
- > *[In Washington County], “We have lost services in the last 10 years. We no longer have a true community mental health agency, but an off-shoot of Lifespan that has NO out-patient clinical services in place for children and adolescents other than in-home services which are needed by very few children. The insurance companies do not provide adequate reimbursement to providers, so many do not take insurance. The State of Rhode Island joined our community mental health services with Kent County and we no longer have a fulltime child and adolescent psychiatrist available. Ten years ago we had a full [complement] of children's services, including a partial hospital program. Now we overload the emergency rooms with patients....[they are] sent home with NO services and the problems continue!”*
- > *“The social and environmental determinants of health are the ground in which all of the health concerns occur. Hospitals should devote significant investment in the communities that are most affected by these determinants. Simply providing care when there are problems misses the point. The hospitals should support strategies, such as the Health Equity Zones, that are doing work in the community where 80-90% of health occurs. Healthcare is obviously critically important, but prevention is actually where we need to focus more of our resources. That is where we are going to address asthma, obesity, mental health concerns, diabetes, and other illnesses that are exacerbated and disproportionately affected by lack of employment, poor housing, etc., and fed by systemic racism.”*
- > *“The lack of specific ethnic data in certain categories, which may contribute to inaccurate generalization about health issues affect among Southeast Asians (SEA) in this state. A combination of cultural factors, including the violence and trauma-laden refugee experience following the Vietnam War, contributes to a higher risk of chronic illnesses and associated risk factors among SEA. A lack of ethnic-specific data collection and reporting on SEAs in Rhode Island makes it difficult to provide a clear snapshot of the health status of the SEA community. Areas such as mental health lack SEA specific data although the SEA refugee population has been historically afflicted with trauma and violence. However, data collected nationally and in other states show that the SEA community is disproportionately affected by cancer and hepatitis B and faces unique risks in term of heart disease. The majority of SEA health issues are associated with various barriers to healthcare access; low rates of preventative care to detect, monitor, and treat chronic and infectious diseases; and generally poor knowledge of important health issues.”*
- > *“Our community (East Bay) is very diverse economically and that makes it difficult to say that the region is served in any one way. Economics is the No.1 factor when it comes to the ability to meet the challenges of health concerns. That is not necessarily the same as*

poverty—it is the crunch of the working poor and lower level middle class. These families face increased stress that is a result of their economic situation that impacts food choices (e.g. fast food versus fresh food) that are not related to education or availability.”

Healthcare Access

Key informants were asked to rate their agreement to statements pertaining to access to care using a scale of (1) “strongly disagree” to (5) “strongly agree.”

Access to Healthcare Statements in Descending Order by Mean Score

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Mean Score
	(1)	(2)	(3)	(4)	(5)	
Residents have a regular primary care provider/doctor/practitioner that they go to for healthcare.	2.2%	20.0%	37.8%	33.3%	6.7%	3.22
Providers in the community are culturally sensitive to race, ethnicity, cultural preferences, etc. of patients.	2.2%	35.6%	33.3%	22.2%	6.7%	2.96
There are a sufficient number of providers that accept Medicaid/ Medical Assistance in the community.	11.1%	35.6%	35.6%	17.8%	0.0%	2.60
Residents have available transportation (public, personal, or other service) for medical appointments and other services.	8.9%	53.3%	22.2%	11.1%	4.4%	2.49
Residents have access to a consistent source of affordable healthy foods.	11.1%	57.8%	13.3%	13.3%	4.4%	2.42
There are a sufficient number of bilingual providers in the community.	15.6%	57.8%	20.0%	6.7%	0.0%	2.18

Access to adequate and timely health services is a key contributor to the health of a community. As shown in the table above, key informants were divided on a number of issues affecting residents’ access to care. Key informants were most affirmative with regard to residents’ access to a regular primary care provider. Survey respondents were most divided on the cultural sensitivity of providers with 38% disagreeing, 33% neutral, and 29% agreeing to the statement.

Key informants mostly disagreed or were neutral with regard to the number of Medicaid providers available in their communities. Only 18% “agreed” or “strongly agreed” that there were a sufficient number of providers that accept Medicaid. Most informants disagreed that residents had access to services {transportation (62%); healthy foods (69%) and bilingual providers (73%)}.

Provider Availability

Key informants were asked to rate their agreement to statements pertaining to the availability and accessibility of primary and specialty care providers using a scale of (1) “strongly disagree” to (5) “strongly agree.”

Healthcare Provider Availability and Accessibility

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Mean Score
Primary Care Services						
Residents receive care when they need it.	4.5%	27.3%	29.5%	31.8%	6.8%	3.09
There are a sufficient number of providers in the community.	14.0%	39.5%	11.6%	27.9%	7.0%	2.74
Specialty Care Services						
Residents receive care when they need it.	11.4%	38.6%	31.8%	18.2%	0.0%	2.57
There are a sufficient number of providers in the community.	20.9%	20.9%	27.9%	25.6%	4.7%	2.72
Dental Care Services						
Residents receive care when they need it.	11.4%	43.2%	27.3%	18.2%	0.0%	2.52
There are a sufficient number of providers in the community.	23.3%	20.9%	23.3%	30.2%	2.3%	2.67
Vision Care Services						
Residents receive care when they need it.	7.0%	30.2%	39.5%	23.3%	0.0%	2.79
There are a sufficient number of providers in the community.	4.8%	23.8%	40.5%	26.2%	4.8%	3.02
Mental Healthcare Services						
Residents receive care when they need it.	34.1%	38.6%	13.6%	13.6%	0.0%	2.07
There are a sufficient number of providers in the community.	34.9%	34.9%	18.6%	11.6%	0.0%	2.07
Substance Abuse Services						
Residents receive care when they need it.	20.5%	50.0%	11.4%	13.6%	4.5%	2.32
There are a sufficient number of providers in the community.	30.2%	39.5%	16.3%	11.6%	2.3%	2.16

Key informants were neutral or divided on many of the measures related to availability and accessibility of healthcare services. Most key informants took a neutral position on whether residents receive care when they need it, but the majority disagreed that there were a sufficient number of primary care providers in the community. With regard to specialty care, informants mostly disagreed that residents receive care when they need it, and mostly disagreed or were neutral that there were sufficient specialty providers in the community.

Key informants felt that residents do not receive dental care when they need it, and generally disagreed or were neutral as to sufficient providers available. Responses were similar with regard to vision care, with most informants indicating that residents do not receive care when they need it, while indicating neutral opinions on the availability of providers.

70% of key informants thought residents did not receive behavioral health services when they need it, and that there are not enough providers

The strongest consensus was with regard to mental healthcare and substance abuse services. Approximately 70% of informants “disagreed” or “strongly disagreed” that residents receive mental healthcare or substance abuse care when they need it and that there was not a sufficient number of these providers in the community.

Choosing from a list of specified reasons, key informants were asked to rank order what they perceived as the top three reasons that individuals who have health insurance do not receive regular care. An option for “other” was also provided. The top five responses are depicted in the table below and rank ordered by the number of informants that selected the reason among their top three choices.

Top Reasons Individuals with Health Insurance Do Not Receive Regular Care

Rank	Reason	Informants Selecting as the No. 1 Reason		Informants Selecting Among Top 3 Reasons	
		Percent	Count	Percent*	Count
1	Unable to afford care (copays, deductibles, prescriptions, etc.)	36.6%	15	61.0%	25
2	Challenges of navigating the healthcare system	12.2%	5	43.9%	18
3	Lack of transportation to access healthcare services	12.2%	5	34.1%	14
4	Awareness/Emphasis of preventive health measures	7.3%	3	29.3%	12
5	Providers not accepting insurance/new patients	4.9%	2	29.3%	12

*Key informants were able to select multiple reasons. Percentages do not add up to 100%.

“Unable to afford care” was selected as the No. 1 reason that insured individuals do not receive regular care with 37% selecting it as the No. 1 reason and 61% of respondents selecting it within their top three reasons. Higher consensus among this issue suggests that cost of care, not insurance access, is a larger barrier for residents to receive care.

37% of key informants identified “unable to afford care” as the top reason insured individuals do not receive regular care

“Challenges of navigating the healthcare system” was ranked second, above lack of transportation, awareness of preventive health measures, and providers accepting insurance or new patients. This ordering suggests that improving ease of accessing care could increase the frequency that residents access preventive care.

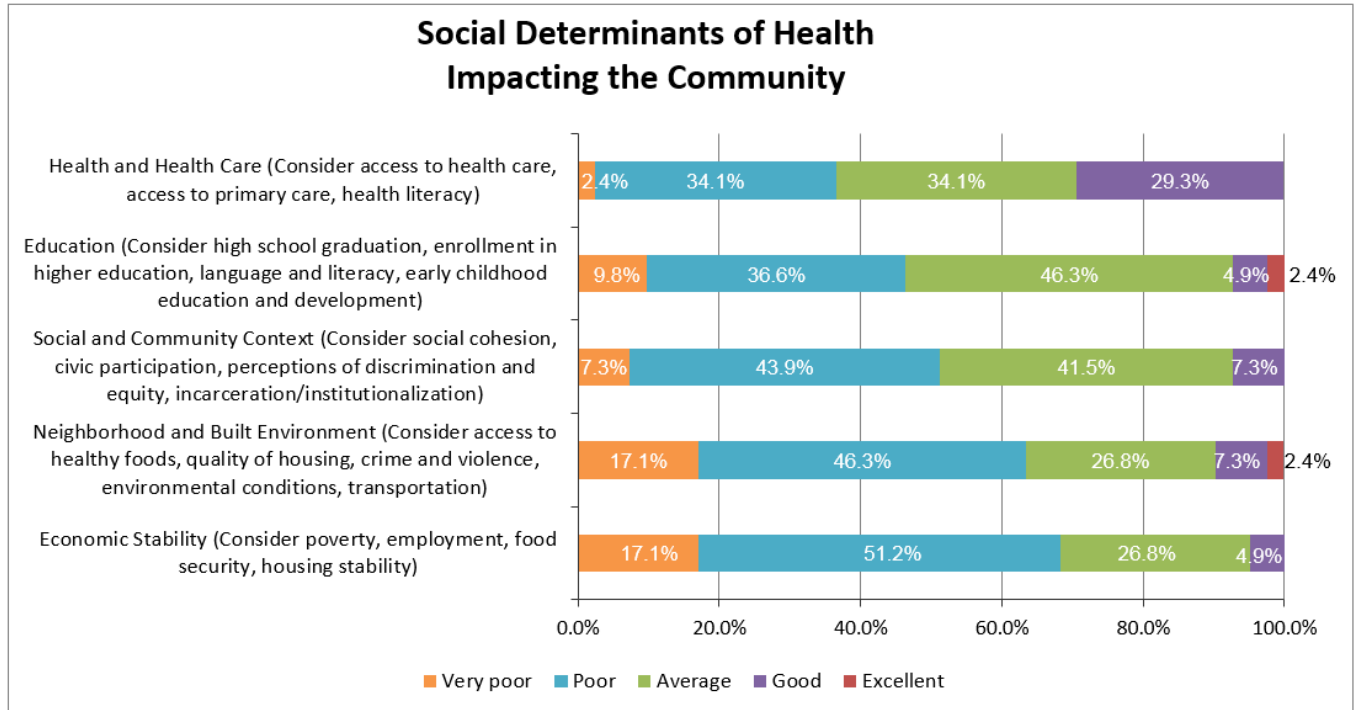
Social Determinants of Health

Healthy People 2020 defines social determinants of health as conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, function, and quality of life outcomes and risks. Informants were asked to rate social determinants of health across five different dimensions: economic stability; education; health and healthcare; neighborhood and built environment; and social and community context using a scale of (1) “very poor” to (5) “excellent.”

The mean scores for each dimension are listed in the table below in rank order, followed by a graph showing the scoring frequency. Mean scores fell between 2.20 for “economic stability” and 2.90 for “health and healthcare,” with most respondents rating the listed social determinants as “poor” or “average.” Health and healthcare received the highest frequency of “good” scoring.

Social Determinants of Health Rating in Descending Order by Mean Score

Ranking	Social Determinant of Health	Mean Score
1	Health and Healthcare	2.90
2	Education	2.54
3	Social and Community Context	2.49
4	Neighborhood and Built Environment	2.32
5	Economic Stability	2.20



Survey participants were asked to provide insight into their scoring of the social determinants of health dimensions using a freeform response. Verbatim comments are listed below. As demonstrated by the comments, many key informants acknowledged a strong link between socioeconomic factors and health status.

- > *“Overall, Washington County looks good on most measures, except mental health where we stand out, i.e. suicide, binge drinking, motor vehicle accidents caused by impaired drinking, etc. Health disparities occur in small poverty pockets under the radar. Lack of transportation and social isolation in our rural suburban landscape affect residents' ability to have access to medical care, healthy foods, exercise, etc.”*
- > *“Even though there may be access to healthcare, fresh foods, and services in a given community, whether a family can take advantage of those depends on their unique situation. In some ways, families who have economic instability who live in places where there are lots of options are just as challenged as families who live in areas with no options.”*
- > *“Our organization has seen an increase in homelessness, food insecurity, and lack of transportation. Mental health challenges impact ability to work and manage day to day life.”*
- > *“My community suffers from a lack of available mental healthcare at all income levels; lack of transportation for low income residents; pockets of deep poverty hidden in a generally well off community; and a cultural acceptance of unhealthy eating habits and overweight. School meals are of a particular concern. They follow RIDE "guidelines" but in practice offer children a lot of prepackaged foods that look like less healthy products for sale in grocery stores. Companies are advertising unhealthy foods to children and*

families through school meals. The look alike products available in the grocery stores are high in sugar, sodium, and unhealthy fats and low in whole grains. They do not teach children and families about healthy eating habits.”

- > *“Isolation is the number one cause of depression in the elderly. Without access to transportation, social engagement, and in-home care, we will see a higher use of ER and hospital visits in part because of their depression and loneliness.”*
- > *“Addressing SDOH requires both a collective impact approach and hospitals as anchors leveraging their resources to engage in economic security, direct housing investments, and trauma-informed community development.”*

Community Resources

Key informants were asked what resources are missing in the community that could help residents optimize their health. Respondents could choose as many options as they thought applied. Nearly 75% of informants chose “mental health services and transportation options as the top missing resources within the community. Approximately 68% included multi-cultural or bilingual healthcare providers and 65% checked substance abuse services. Sixty percent of informants selected healthy food options as a missing resource within the community. Just over half of the informants indicated a need for housing or additional health and wellness education.

Top 10 Missing Resources within the Community to Optimize Health

Ranking	Resource	Percent of Informants	Number of Informants
1	Mental health services	72.5%	29
1	Transportation options	72.5%	29
3	Multi-cultural or bilingual healthcare providers	67.5%	27
4	Substance abuse services	65.0%	26
5	Healthy food options	60.0%	24
6	Health and wellness education and programs	52.5%	21
6	Housing	52.5%	21
8	Outlets for physical activity (parks, rec centers, gyms, walking trails, etc.)	40.0%	16
9	Child care providers	35.0%	14
9	Dental care	35.0%	14

Specific comments from key informants related to missing resources in the community are included below. Transportation, housing, health equity, cultural competency, and promotion of community health workers and other evidence-based programs are discussed.

- > *“What are the barriers that keep people from spending more time in parks and other outdoor places? Perhaps it is knowledge that these places are there. Perhaps it is the lack of time. Perhaps there needs to be more organized groups that people can join for walking?”*

- > *“Resources present in the community should not be considered available/adequate unless they are affordable to the lowest-income residents and can be accessed without fear due to immigration status (or other similar factors).”*
- > *“Spanish is NOT the only bi-lingual challenge. And, with language comes cultural norms that are often not appreciated or respected by providers. One cannot trust a provider who makes the patient feel stupid or 'less than' because of lack of knowledge or exposure to the American system and way of life.”*
- > *“Bring more community health workers as key members of the health team, establishing the connections between community and clinic. Invest in evidence-based healthy life style programs available in the communities where the patients live.”*
- > *“In many areas of the state, transportation is the key factor. Most places do not have consistent transportation options. Hours of operation for healthcare is also challenging some times.”*
- > *“Affordable housing is a problem across the state and pressures are especially high in Washington County with economic pressures for student and tourist housing. Transportation is a significant issue with minimal public transportation available. Although the minority/multi-cultural/non-English speaking population is small, services for them are fairly nonexistent. Mental health services are hard to navigate and the full continuum of mental healthcare is not available in Washington County, i.e. no intensive outpatient programs, crisis care, etc. Families with children with behavioral health challenges have few supports available to them.”*

When asked how local and regional healthcare providers can better engage community members to achieve optimal health outcomes, respondents made recommendations for community collaboration; increased focus on prevention; and improved healthcare access. Specific recommendations from informants included:

- > Advocate for healthy meals, increased physical activity, and improved health education for students
- > Collaborate with and invest in the local Health Equity Zones
- > Employ community health workers to assist and support patients
- > Encourage coordination of care among providers
- > Engage with community non-profits to maximize efforts and collaboration
- > Improve healthcare access (evening hours with childcare provided, specialty care providers)
- > Partner with local community development and housing agencies
- > Promote cultural sensitivity by employing a multi-racial/multi-cultural staff
- > Provide prevention and wellness programs for community members

Community Partner Forum Summary

Background

Landmark Medical Center held a Community Partner Forum on March 27, 2019 in partnership with the Woonsocket Health Equity Zone. The objective of the forum was to share data from the CHNA and gather feedback on community health priorities, gaps in service delivery, and opportunities for collaboration among organizations. A total of 18 people attended the forum as representatives of Landmark Medical Center, health and social service agencies, senior services, and civic organizations. A list of participants is included in Appendix C.

Large group dialogue was facilitated to discuss CHNA research findings and participant perspectives. Themes that emerged during the forum were organized around root causes or drivers of health disparity. Healthy People 2020 defines a health disparity as “a particular type of health difference that is closely linked with social, economic, or environmental disadvantage.” A summary report of the discussion and key themes follows.

Key Themes

Primary root causes of health disparity, as identified by participants, were housing, childcare, and education and workforce development. Poverty was seen as the underlying factor.

Partner Forum participants identified housing, childcare, education and workforce development, and poverty as root causes of health disparity

Housing

Housing needs in Woonsocket include lack of affordable housing and substandard rental housing stock. The cost of housing in Woonsocket is increasing, driven by higher property values and taxes, but household income has been stagnant. Half of all renters and 41% of home owners are considered housing cost burdened, or paying more than 30% of their income for housing. The need for affordable housing in Woonsocket meets the threshold for the statewide mandate that 10% of new housing stock be affordable. The cost of utilities (e.g. heat, water, electric) are additional expenses not included in housing cost burden ratios, which contribute to inability to afford adequate housing.

Lack of affordable housing contributes to homelessness. Woonsocket has the highest percentage of students identified as homeless in the state.

Participants suggested using the CHNA data to leverage funding and policies to support additional affordable housing in Woonsocket. Campaigns to increase the number of landlords who accept Section 8 housing vouchers were also recommended.

Woonsocket has the highest percentage of homeless students in the state.

Individuals and families who can't afford adequate housing may turn to substandard housing units that are under-regulated and potentially unsafe. Many of these landlords are from out of the state. Property foreclosures of these properties are common, and tenants often do not have advance notice and are unaware of their rights, nor have other housing options.

Childcare

Woonsocket has 23 licensed childcare providers with a total capacity for approximately 1,300 children. One in 5 or approximately 8,000 Woonsocket residents are under age 16, and more than 5,000 are under age 10. Forum participants shared that there are “no more than 16 available ‘slots’ at any given point.” “Families need to get on a waiting list for an opening as soon as they know they are pregnant.” Infant care is the most difficult to obtain within the city.

Woonsocket has approximately 23 licensed childcare providers and 5,000 children under age 10

Families that require extended hours or childcare for second or third shift working hours have additional challenges in finding childcare. Home-based childcare providers are generally the only option for these families. Recent policy changes by the Department of Children, Youth, & Families have reduced licensing for many home-based providers. Participants recommended campaign efforts to increase licensing among home childcare providers.

. Partner Forum participants saw early childhood education as a significant opportunity to impact future Woonsocket residents.

Childcare plays an important role in children’s development, impacting early education and school readiness. Lack of high-quality early childcare is detrimental to the future learning capacity of youth, and contributes to lower overall educational attainment, including high school graduation. Partner Forum participants saw early childhood education as a significant opportunity to impact the future health of Woonsocket residents.

Education and Workforce Development

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. In Woonsocket, 17.2% of adults have not completed high school; fewer than 20% have attained a bachelor’s degree or higher.

Woonsocket students are more likely to drop out of high school than their peers statewide

Woonsocket students are more likely to drop out of high school than their peers statewide. Partner Forum participants described this trend as the beginning of a “vicious cycle” of poverty, underemployment, and lack of safe and affordable housing. Community interventions are needed to increase high school completion rates, as well as to promote blue collar and technical jobs training for individuals who do not pursue higher education. Grassroots workforce and business development initiatives, like the Kitchen Incubator were seen as successful models of intervention.

Investment in education and job training is seen as a good foundation toward overall community health improvement

The Northern Rhode Island Higher Education Center is planned for Woonsocket. The education center will bring together community partners, including business and industry, to provide educational and workforce development programs to meet projected workforce growth in the region. Funded in part by the Governor’s Real Jobs Rhode Island initiative, the center will initially concentrate on bridging gaps in education and workforce development in high-demand industries, including

advanced manufacturing, IT, cybersecurity, finance and healthcare. Community Forum participants applauded the state's investment in Woonsocket saw the new education center as a community pillar and foundation to build from to improve other aspects of resident health.

Other Root Causes of Health Disparity

Participants listed the following key drivers that contribute to health disparities for Woonsocket residents.

- > Adverse childhood experiences (ACEs): contribute to homelessness, mental health issues, substance addiction, among others
- > Higher rates of incarceration: contribute to poverty among family members and breakdown of the family support structure
- > Lack of community and social connections: Residents are disengaged from community and lack social supports.
- > Lack of public transportation: contributes to isolation and lack of access to basic needs, including food and medical care.
- > Undocumented status of residents, particularly Latinxs: adds barriers to accessing health and social services. Twenty percent (20%) of the Woonsocket population is Latinx.

Partner Forum findings were reviewed with the CHNA committee and correlated with statistical secondary data and Key Informant Survey findings to inform priority health needs and community health improvement strategies.

Evaluation of Community Health Impact from 2016 CHNA Implementation Plan for Community Health Improvement

In 2016, Landmark Medical Center completed a CHNA and outlined a supporting three-year Implementation Plan for community health improvement. The strategies implemented to address health priorities reflect Landmark Medical Center's mission to deliver compassionate, quality care to patients and better healthcare to communities.

Landmark Medical Center's 2016 Implementation Plan outlined strategies to address the identified priorities of behavioral health, chronic disease, and maternal and child health. The plan leveraged resources across the hospital and the community, drawing on existing partnerships. The following section highlights the hospital's approach to addressing health needs, and outcomes from the implemented action items.

- > Increased capacity for primary care through provider recruitment strategies. Landmark recruited three primary care providers and a pediatrician. The practices are located in the community in areas conducive to public transportation. Two of the providers speak Spanish.
- > Decreased the number of patients boarded in the ED while awaiting mental health services. Landmark worked closely with Community Care Alliance and Anchor Mental Health to establish community linkages for patients coming to the ED with a mental health issue. Specifically, Anchor provides a Care Navigator 24/7 to help assist patients with case management.
- > Supported the Campaign to Change Direction, a national public health initiative that aims to change the culture of mental health so that all in need receive the care they deserve.
- > Created an inventory of health and social services partners to aid in coordinating care for patients, and communicated the list to providers.
- > Created consistent screening tools used by primary care providers to assess patients for chronic disease and mental health risk factors.
- > Improved the referral system from the ED to community-based behavioral health services.
- > Continued outreach programs for patients diagnosed with chronic disease, including Cardiac Rehabilitation, Cardiac Maintenance, Exercise to Health, and Outpatient Diabetic Education.
- > Continued partnering with Homefront Healthcare Cable TV to provide education about chronic disease and related issues.
- > Continued Mended Hearts monthly support group featuring guest speakers from Landmark Medical Center to discuss chronic disease and related topics.

- > Continued support of the annual American Heart Association Southern New England Heartwalk.
- > Continued to support Thundermist Community Health Center's Health Fair to provide health education for underserved populations.
- > Continued to support YWCA of Northern RI & Quota Club Health Fairs to provide health screenings and education about chronic disease and related topics.

2019 CHNA Priority Areas

To work toward health equity, it is imperative to prioritize resources and activities toward the most pressing health and crosscutting needs within communities. In determining the issues on which to focus efforts over the next three-year cycle, Landmark Medical Center solicited input from community partners and stakeholders and sought to align efforts with existing initiatives headed by the Rhode Island Department of Health, the HEZs, and other community partnerships. A formal presentation of the CHNA research findings was made to the Woonsocket Health Equity Zone committee. A wide range of community representatives and members were asked to provide their feedback on community needs based on the research and their experience within the community.

The CHNA findings confirmed that many residents within the CharterCARE service area experience greater socioeconomic disparities and increased health needs than in other parts of the state. Cyclical poverty, exposure to violence, and higher disease incidence lead to shortened life expectancy for many residents.

In line with the CHNA Steering Committee recommendations, Landmark Medical Center adopted the following health priorities on which to focus for the 2019–2022 reporting cycle. Specific resources and services to address these priority needs are outlined in Landmark Medical Center’s Implementation Plan.

Behavioral Health: Reduce the prevalence of family trauma

Chronic Disease: expand access to care to reduce health disparities for chronic disease

Maternal and Child Health: Reduce teen pregnancies and improve birth outcomes for mothers and babies

Implementation Plan

Following the 2019 CHNA, Landmark Medical Center leadership representatives developed the 2019-2022 Implementation Plan to guide community benefit activities across the hospital’s service area. The Implementation Plan builds upon previous health improvement activities and takes into consideration the evaluation of impact from the previous Implementation Plan cycle, while recognizing new health needs and a changing health care delivery environment identified in the 2019 CHNA.

Landmark Medical Center will continue its work to improve the health and well-being of northern Rhode Island residents, guided by the 2019 CHNA and our mission to deliver compassionate, quality care to patients and better healthcare to communities. We encourage you to visit our website to learn more about the CHNA and our community health improvement initiatives: landmarkmedical.org.

Appendix A: Public Health Secondary Data References

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Appendix B: Key Informant Survey Participants

A Key Informant Survey was conducted with 45 community representatives. The organizations represented by key informants and their respective role/title are listed below as required by IRS code 501(r) for the conduct of a Community Health Needs Assessment. Individual names are withheld for confidentiality.

Key Informant Organization	Key Informant Title/Role
Alpert Medical School and Kent Hospital	Clinical Professor of Family Medicine
Bayside Family YMCA	Operations Director
Blackstone Valley Community Health Care	Community Health Team Manager
Blackstone Valley Prevention Coalition	Regional Director
Brown University	Field Coordinator
Care New England	Senior Vice President, Planning and Finance
Care New England Primary Care and Specialty Services, Kent Hospital	Project Manager/Administrator
Catholic Social Services of Rhode Island	Secretary Catholic Charities & Social Ministry
Center for Southeast Asians	Executive Director
Childhood Lead Action Project	Executive Director
Community Care Alliance	Program Manager
Comprehensive Community Action, Inc.	CEO
Elmhurst Rehab & Healthcare Center	Vice President of Business Development
Elmwood and South Providence Neighborhood Crime Watch	Chair
Farm Fresh Rhode Island	Program Director- Community Access
Our Lady of Fatima Hospital	Associate Director/Advanced Education in General Dentistry Program
PACE Organization of Rhode Island	CEO
Pawtucket Child Opportunity Zone (COZ) (Pawtucket School Department)	Director
Rhode Island Coalition Against Domestic Violence	Empowerment Evaluator
Rhode Island Department of Health	Executive Director of Health
Rhode Island Department of Health	Health Equity Institute Director
Rhode Island Foundation	CEO
Rhode Island General Assembly	Senator
Rhode Island Health Care Association	President & CEO
Rhode Island Housing Resources Commission	Coordinator, Office of Community Development
Rhode Island Land Trust Council	Executive Director
Rhode Island Parent Information Network, Inc.	Director of Health Initiatives
Rhode Island Primary Care Physicians Corporation	President & CEO
Rhode Island Primary Care Physicians Corporation	CEO
Rhode Island Public Health Institute	Executive Director
Rhode Island Quality Institute	Founding President & CEO
South County Health	Volunteer
South County Health	Director, Orthopedic Service Line
South County Health - Healthy Bodies, Healthy Minds	Outreach Coordinator
South County Health - Healthy Bodies, Healthy Minds	Director
The Providence Center	Supervisor
The Providence Center	President & COO
The Providence Center	Vice President
Thundermist Health Center	Senior Director, Health Equity Initiatives
Town of Barrington, Rhode Island	Administrator, Spencer Trust
Tri County Community Action Agency	COO
United Way of Rhode Island	Ambassador
Warwick Police Department	Chief of Police
West Elmwood Housing	Executive Director
Women & Infants Hospital	President & COO

Appendix C: Community Partner Forum Participants

A Community Partner Forum was conducted with 18 health and social service providers serving residents of Woonsocket in Providence County. Partner Forum attendees included:

Name	Organization
Bridget Bennett	Community Care Alliance
Linda S. Brunetti	The Autism Project
Tamara Burman	Health Equity Zone
Lisa Carcifero	Woonsocket Prevention Coalition, Blackstone Valley Prevention Coalition
Patricia Corbett	FCEP
Terry Curtin	Connecting for Children & Families
Carolyn Dery	Landmark Medical Center
Mary Dwyer	Community Care Alliance
Krista Handfield	Health Equity Zone
Carolyn Kyle	Landmark Medical Center
Kelly Lee	PACE
Naffeesatu Massaquoi	Connecting for Children & Families
Paul Michael	Community Care Alliance
Leslie Page	Woonsocket Harris Public Library
Jody Ragosta	Woonsocket Heart Start Child Development Association
Meghan Rego	NeighborWorks Blackstone River Valley
Cathy Schultz	Health Equity Zone
Zoya Tseytlin	Connecting for Children & Families
Daynah Williams	NeighborWorks Blackstone River Valley

Appendix D: Federally Qualified Health Center Locations

Bristol County

Location	Address
East Bay Mental Health Center	2 County Rd, Barrington, RI 02806-4505

Kent County

Location	Address
Everett C. Wilcox Family Health Center	226 Buttonwoods Ave, Warwick, RI 02886-7541
Comprehensive Community Action Program: Integrated Primary Care Partners	2756 Post Rd Suite 103, Warwick, RI 02886-3003
Thundermist West Warwick	186 Providence St, West Warwick, RI 02893-2508
Health Hut – Deering Middle School West Warwick	2 Webster Knight Dr, West Warwick, RI 02893-2743
Thundermist Dental West Warwick	1219 Main St, West Warwick, RI 02893-4834
Family Health Services of Coventry	191 Macarthur Blvd, Coventry, RI 02816-7244

Newport County

Location	Address
East Bay Community Action Program/Dental Center/Dental Mobile Van	19 Broadway, Newport RI 02840-2937
Head Start, Early Head Start & Child Care	8 John H Chafee Blvd, Newport, RI 02840-1034
East Bay Family Health Center	6 John H Chafee Blvd, Newport, RI 02840-1034

Providence County

Location	Address
Molar Express – Dental Van	311 Doric Ave, Cranston, RI 02910-2903
East Bay Family Health Center	100 Bullocks Point Ave, Riverside, RI 02915-5351
Family Health Services – Cranston	1090 Cranston St, Cranston, RI 02920-7323
Providence Community Health Center at Prairie Avenue	355 Prairie Ave, Providence, RI 02905-1928
Providence Community Health Center Dental Tower	335R Prairie Ave, Providence, RI 02905-2426
Chafee Health Center	1 Warren Way, Providence, RI 02905-5000
Providence Community Health Center Met School Clinic	325 Public St, Providence, RI 02905-2340
Thundermist Dental Providence	557 Broad St, Providence, RI 02907-1403
Adams-Farley Counseling Center	610 Wampanoag Trl, Riverside, RI 02915-1504
Central Health Center	239 Cranston St, Providence, RI 02907-2406
Crossroads RI	160 Broad St, Providence, RI 02903-4028
Tri-County Community Health Center	1126 Hartford Ave, Johnston, RI 02919-7109
Olneyville Health Center	100 Curtis St, Providence, RI 02909-3623
Capitol Hill Health Center	40 Candace St, Providence, RI 02908-3747

Providence County cont'd

Location	Address
Providence Community Health Centers at North Main Street	530 N Main St, Providence, RI 02904-5762
Providence Community Health Center at Randall Square	1 Randall Sq Ste 205, Providence, RI 02904-2773
WellOne Primary Medical and Dental Care	35 Village Plaza Way, Scituate, RI 02857-1849
Tri-County Community Health Center of North Providence	33 Maple St, North Providence, RI 02911-2415
Blackstone Valley Community Health Center Main Street Satellite	1145 Main St, Pawtucket, RI 02860-4807
Blackstone Valley Community Health Care, Inc.	39 East Ave, Pawtucket, RI 02860-4003
Blackstone Valley Community Health Center Women's Health, Vision, and Specialty Services	42 Park Pl, Pawtucket, RI 02860-4010
Blackstone Valley Community Health Center Dental Health Center	210 Main St, Pawtucket, RI 02860-4008
WellOne Primary Medical and Dental Care	142A Danielson Pike, Foster, RI 02825-1485
Central Falls High School Clinic	24 Summer St, Central Falls, RI 02863-2142
Blackstone Valley Community Health Center	9 Chestnut St, Central Falls, RI 02863-2005
Blackstone Valley Community Health Center Central Falls	1000 Broad St, Central Falls, RI 02863-1507
WellOne Primary Medical and Dental Care	36 Bridge Way, Pascoag, RI 02859-3131
Health Hut – Woonsocket High School	777 Cass Ave, Woonsocket, RI 02895-4719
Thundermist Woonsocket/The Molar Express – Dental Van	450 Clinton St, Woonsocket, RI 02895-3207
Thundermist Dental Admin Woonsocket	25 John A Cummings Way, Woonsocket, RI 02895-3244

Washington County

Location	Address
Wood River Health Services, Inc.	823 Main St, Hope Valley, RI 02832-1920
WellOne Primary Medical and Dental Care	308 Callahan Rd, North Kingstown, RI 02852-7739
Thundermist South County	1 River St, Wakefield, RI 02879-3214