TRINITAS
Regional Medical Center

Community Health Needs Assessment & Implementation Plan

Final Summary Report

December 2019

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Our Commitment to Community Health

Trinitas Regional Medical Center (Trinitas) is a true community hospital dedicated to serving the poor and disenfranchised in our community, regardless of their ability to pay. We consistently maintain the fourth largest charity care and Medicaid program in New Jersey, and Trinitas is one of the state's top safety-net hospitals.

We are the only hospital in Elizabeth, a densely populated immigrant city where more than 1 in 10 adults do not own a car, meaning we are the only viable healthcare option for a significant percentage of the local population. Poverty is an issue within the community we serve: 25% of individuals and 27% of children live below the poverty level. Much like the city of Elizabeth, our patient base is diverse, and predominantly Latinx. Our total service area encompasses the majority of Union County households and nearly all of the county's poorest residents.

As a safety net hospital, we are guided by a mission that promises access to quality medical care for all, regardless of ability to pay.

To guide our community benefit and health improvement efforts, Trinitas conducts a comprehensive Community Health Needs Assessment (CHNA) every three years. The 2019 CHNA builds upon our 2013 and 2016 studies. The CHNAs are one way we monitor health status across Elizabeth and all of Union County. The CHNA includes a mix of statistical research and stakeholder input to collect and analyze health trends that impact the health of residents.

This report outlines findings from the 2019 CHNA and highlights strengths and opportunities across the Trinitas service area. The findings will be used to guide services at Trinitas, as well as to 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 Trinitas' work to improve the health of our community, we invite you to visit our website.

Executive Summary of CHNA Findings

CHNA Leadership

The 2019 CHNA was conducted in collaboration with a Community Advisory Committee, representing Trinitas and diverse community populations and organizations. Committee members, listed below, oversaw the CHNA research and stakeholder engagement. Throughout the process, CHNA findings were shared with committee members for review and input to determine local health needs, areas of disparity, and opportunities for collaboration. Our consultant, Baker Tilly, assisted in all phases of the CHNA including project management, data collection and analysis, and report writing.

Community Advisory Committee Members

Amparo Aguirre, Trinitas Regional Medical Center
Michelle Ali, Trinitas Regional Medical Center
Kathleen Azzarello, Trinitas Regional Medical Center
Tom Beck, Jewish Family Services of Central NJ
Nadine Brechner, Trinitas Regional Medical Center
Ivy Cabrera, Trinitas Regional Medical Center
Margaret Cammarieri, American Heart Association
Tim Clyne, Trinitas Regional Medical Center
Yocasta Corona, Trinitas Regional Medical Center
Jennifer Costa, Elizabeth Destination Marketing Organization
Carmen De Jesus, Proceed Inc.
Julie DeSimone, Mayors Wellness Campaign (NJ Health Care Quality Institute)
Nancy DiLiegro, PhD, FACHE, Trinitas Regional Medical Center
Jill Dispenza, Jewish Family Services of Central NJ
James Dunleavy, Trinitas Regional Medical Center
David Fletcher, Elizabethtown Healthcare Foundation
Juanita Fryar, Trinitas Regional Medical Center
Krishna Garlic, City of Elizabeth Department of Health and Human Services
Hana Hamdi, NJ Community Capital
Douglas Harris, Trinitas Regional Medical Center
Carlos Herrera, Jewish Family Services
Gary S. Horan, Trinitas Regional Medical Center
Michael Johnson, Shaping Elizabeth/The Gateway Family YMCA
Maureen Kuhn, American Cancer Society
Lisa Liss, Trinitas Regional Medical Center
Jim McCreath, Trinitas Regional Medical Center
William McHugh, MD, Trinitas Regional Medical Center
Annarelly McNair, Union County Office of Health Management
Mary McTigue, Trinitas Regional Medical Center
Sister Marion Scranton, Trinitas Regional Medical Center
Theresa Soto Vega, Proceed Inc.
Morgan Thompson, Prevention Links
Andrea Topping, City of Elizabeth Department of Health and Human Services
Corey Wu Jung, Shaping Elizabeth/The Gateway Family YMCA

Baker Tilly CHNA Team
Colleen Milligan, MBA, Director, Healthcare Practice
Catherine Birdsey, MPH, Research Manager
Jessica Losito, Research Consultant

CHNA Methodology

The 2019 CHNA was conducted from January to September 2019 and included quantitative and qualitative research methods to determine health trends and disparities within Elizabeth and the whole of Union County as compared to health indicators across New Jersey 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 research methods and stakeholder engagement included:

- An analysis of secondary data, including health, demographic, and social measures
- A Key Informant Survey of representatives from health, social services, education, economic, and other community based organizations
- Meetings with community partners to review data and gather feedback
- Prioritization and planning meeting with community partners
- Development of Implementation Plan

The CHNA was conducted in a timeline to comply with IRS Tax Code 501(r) requirements to conduct a CHNA every three years as set forth by the Affordable Care Act (ACA). The findings will be used to guide Trinitas' community benefit initiatives and engage local partners to collectively address identified health needs.

Community Engagement

Community engagement was an integral part of the CHNA. In assessing health needs, input was solicited and received from Trinitas' Community Advisory Committee members, as well as other persons who represent the broad interests of the community, including 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.

Summary Findings

For the purposes of the CHNA, Trinitas examined its primary service area of Elizabeth, New Jersey and its secondary service area, including nearly all of Union County, New Jersey and parts of Staten Island, New York. Collectively, the total service area spans 26 zip codes.

The CHNA research demonstrated key socioeconomic factors that drive health disparities for residents within the primary service area of Elizabeth. Key health concerns were determined by correlating statistical data with input from community stakeholders. Specifically, areas of opportunity within the Trinitas service area continue to be centered on access to care; behavioral health needs; health risk factors and chronic disease; maternal and child health; and health and social disparities. A summary of these findings follows.

Social Determinants of Health

The median age (33.9) in Elizabeth is lower than Union County (38.8) and 6 years below the state (40), and is declining contrary to state and national trends. Elizabeth is more diverse than Union County as a whole, with approximately two-thirds of Elizabeth residents identifying as Latinx.

In general, Elizabeth residents experience greater socioeconomic disparity compared with Union County as a whole and the state of New Jersey. In Elizabeth, approximately 1 in 5 households and 1 in 4 children live in poverty, 1 in 4 adults do not have a high school diploma, and 1 in 5 residents are uninsured. Nearly three-quarters of residents speak a primary language other than English, predominantly Spanish.

Housing affordability is a concern for residents across the service area with approximately 56% of renters and 45% of homeowners qualifying as “housing cost burdened” or spending more than 30% of their household income on housing. These percentages exceed state and national comparisons. Housing cost burden is more pronounced in Elizabeth, where nearly 60% of renters and homeowners are affected.

As demonstrated in this report, higher poverty levels, lower education attainment, less access to healthy foods, transportation barriers, and other social determinants of health contribute to diminished health outcomes for Elizabeth residents when compared to the overall Union County population. One telling measures of this disparity is life expectancy. The life expectancy for Union County residents in towns outside of Elizabeth is as high as 84 years or more, while in portions of Elizabeth, life expectancy is as low as 75 years.

Access to Healthcare

Eighteen percent of Elizabeth residents are uninsured compared to 10% of residents across Union County. Lack of health insurance contributes to less preventive care, late stage diagnoses, increased costs for treatment, and poorer healthcare outcomes for patients. In the most recent survey of Elizabeth adults, 41% reported that they delayed care due to cost and 48% did not have a regular primary care provider.

Provider availability also limits healthcare access in Elizabeth and across Union County. The countywide primary care physician rate is lower than state and national benchmarks, and declining. Within the county, both Elizabeth and Plainfield are designated as Medically Underserved Areas, indicating lower access to primary care services.

Behavioral Health

Approximately 23% of Elizabeth adults report a history of depression, a higher percentage than Union County overall and the state. Elizabeth had nine suicide deaths in 2017 and eight suicide deaths each year in 2016 and 2015. Within Union County, the death rates due to suicide and mental and behavioral disorders have generally been increasing over the past decade, although rates are lower than state and national benchmarks.

Substance use disorder includes the misuse of alcohol and/or drugs, both of which affect health status of Elizabeth and Union County residents. The county has a higher percentage of adults who report heavy drinking and a higher percentage of deaths due to DUI; both percentages are increasing. The county's drug-induced death rate has historically been lower than the state and nation, but increased sharply in recent years, rising 13 points from 2014 to 2017. While a drug-induced death rate is not reported for Elizabeth, the total number of deaths due drugs or alcohol tripled from 2014 (10) to 2017 (33).

Approximately 6% of all ED visits in Union County are due to behavioral health conditions. This percentage is consistent with 2016 CHNA findings despite an overall increase in the number of behavioral health visits to the ED. The largest number of admissions were by Elizabeth residents, followed by Plainfield residents.

Health Risk Factors and Chronic Disease

One-quarter of adults in Union County and one-third of adults in Elizabeth are obese, and these percentages are increasing. Nearly 30% of Union County adults and nearly 40% of Elizabeth adults have high blood pressure. Approximately one-third of adults in either geography have high cholesterol.

Health risk factors contribute to increased risk of disease, which is demonstrated in the prevalence of diabetes. Although the percentage of Elizabeth adults diagnosed with diabetes declined from 2016 to 2017, it has doubled since 2013. The diabetes death rate among Elizabeth residents exceeds county, state, and national averages.

Wide disparities in chronic disease death rates are particularly evident among African American residents in Elizabeth. While Union County and Elizabeth residents in general have lower death rates due to heart disease and cancer, rates among African American residents are 10-20 points higher than White residents. The diabetes death rate among African Americans is double the death rate for Whites.

Maternal and Child Health

There were 6,845 births in Union County in 2017; Elizabeth residents comprised nearly one-third of those births with 2,018 total. Prenatal care is less accessible for women in Union County with 67.9% receiving care in the first trimester compared to 74.7% statewide. Elizabeth lags behind the county with only 56.1% of women receiving first trimester care, which is the second lowest ranking in the county, behind Plainfield.

In 2017, births to Latina mothers made up approximately 43% of births countywide and 69% of births in Elizabeth; nearly 20% of births in either area were to African American mothers. Across the county, access to prenatal care is lower for African American (58.2%) and Latina (56.5%) mothers compared to White mothers (87.7%).

Despite lower prenatal care access among Elizabeth mothers and disparities among racial and ethnic groups, Elizabeth as a whole has positive outcomes related to low birthweight and

premature birth. Both indicators are consistent with Union County overall, lower than state and national averages, and meet Healthy New Jersey and Healthy People 2020 goals. Women in Elizabeth are also less likely to smoke during pregnancy, nearly meeting the Healthy People 2020 goal of 1.4%.

Community Health Priorities

To work toward health equity, it is imperative to prioritize resources and activities toward the most pressing and cross-cutting health needs within our community. In determining the issues on which to focus efforts over the next three-year cycle, Trinitas solicited input from community partners and stakeholders. A summary of the process for identifying community health priorities is included within this report.

Using stakeholder feedback and taking into account the medical center's expertise and resources, Trinitas will continue to focus efforts on the following community health priorities:

- Behavioral Health
- Cancer
- Chronic Disease
- Maternal & Child Health

Social determinants of health are intrinsically tied to health status. While Trinitas can best apply its health expertise and resources to improving equitable outcomes for these health priorities, the medical center will continue to work with community partners to collectively impact the socioeconomic factors that multiply health disparities for the most vulnerable in the community.

Board Approval

The 2019 CHNA Final Report and corresponding Implementation Plan were reviewed and approved by the Trinitas Regional Medical Center Board of Directors on December 4, 2019. The report and plan are available for review and comment at www.trinitasrmc.org.

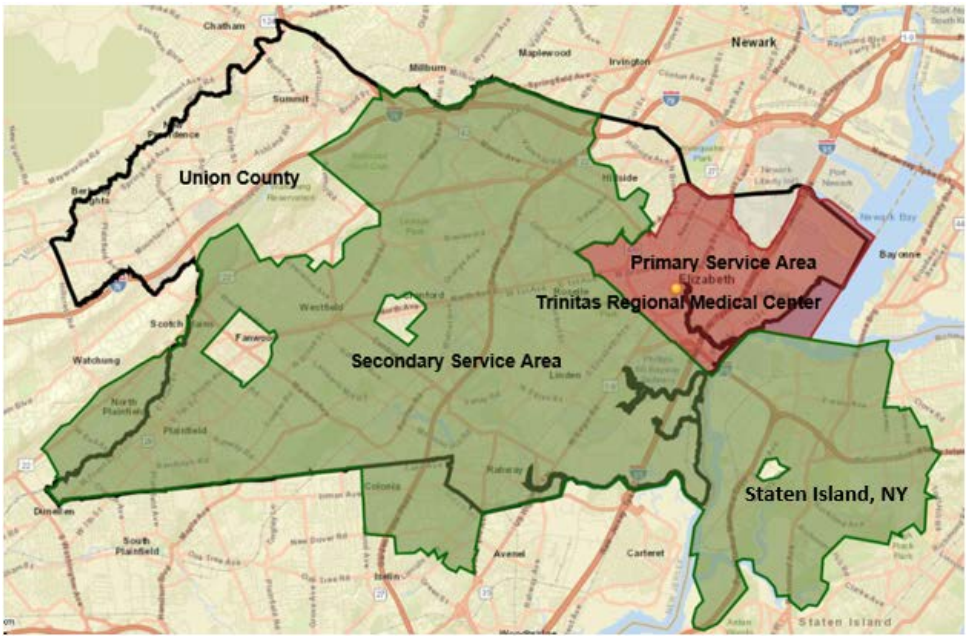
Full Report of CHNA Findings

The Trinitas Regional Medical Center Service Area

Trinitas Regional Medical Center's total service area, defined for the purposes of the CHNA, encompasses nearly all of Union County in New Jersey and parts of northern Staten Island. The medical center primarily serves residents of Elizabeth. Collectively, the primary and secondary service areas span 26 zip codes.

Operating on two major campuses, Trinitas has 554 beds, including a 120-bed long-term care center. Trinitas is a Catholic teaching hospital and is sponsored by the Sisters of Charity of Saint Elizabeth in partnership with Elizabethtown Healthcare Foundation.

Trinitas Regional Medical Center Service Area



Primary Service Area (shown in red)				
07201, Elizabeth	07202, Elizabeth	07206, Elizabethport	07207, Elizabeth	07208, Elizabeth
Secondary Service Area (shown in green)				
07016, Cranford	07062, Plainfield	07067, Colonia	07088, Vauxhall	07204, Roselle Park
07033, Kenilworth	07063, Plainfield	07076, Scotch Plains	07090, Westfield	10302, Staten Island
07036, Linden	07065, Rahway	07081, Springfield	07091, Westfield	10303, Staten Island
07060, Plainfield	07066, Clark	07083, Union	07203, Roselle	10314, Staten Island
07061, Plainfield				

Trinitas Regional Medical Center Service Area Demographic Data Analysis

Analyses of demographic and socioeconomic data are 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

Service area data are presented with New Jersey and national data sets to demonstrate broad trends and areas of strength and opportunity. Demographic analysis by zip code follow the county level 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

The 2018 population of the total service area is 650,216. The population increased nearly 5% from the 2010 Census, and is projected to increase an additional 2.7% by 2023.

Population Growth

	2018 Population	% Growth 2010-2018	% Growth 2018-2023
Total Service Area	650,216	4.7%	2.7%
Primary Service Area	132,664	6.1%	3.2%
Secondary Service Area	517,552	4.3%	2.6%

The Trinitas total service area population is more diverse than the state or nation with fewer residents identifying as White and more residents identifying as Black/African American and/or Latinx. White and Black/African American population proportions are consistent across the primary and secondary service areas, but the primary service area is predominantly Latinx. Nearly 70% of residents in the primary service area identify as Latinx compared to 25% of secondary service area residents.

67% of primary service area residents are Latinx; the percentage is projected to increase to 71% in 2023

Population diversity is projected to increase across the service area through 2023 as the White population as a percentage of the total population declines. The Latinx population is the fastest growing demographic, and will account for 37% of the total service area population in 2023 compared to 29% in 2010.

2018 Population Overview by Race, Ethnicity, and Primary Language

	White	Black or African American	Asian	Latinx (any race)	Language Other than English Spoken at Home*
Total Service Area	57.0%	21.0%	7.0%	33.4%	43.5%
Primary Service Area	52.3%	20.6%	2.0%	66.8%	74.9%
Secondary Service Area	58.2%	21.0%	8.2%	24.8%	35.8%
Union County	57.8%	22.5%	5.4%	32.8%	42.9%
New Jersey	65.1%	13.9%	9.9%	20.9%	30.7%
United States	70.0%	12.9%	5.7%	18.3%	21.1%

*Data are reported for 2012-2016 based on availability.

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

	White		Black/African American		Asian		Latinx	
	2010	2023	2010	2023	2010	2023	2010	2023
Total Service Area	60.5%	54.7%	20.6%	21.1%	6.0%	7.6%	28.6%	36.9%
Primary Service Area	54.7%	51.3%	21.1%	20.1%	2.1%	1.9%	59.5%	71.2%
Secondary Service Area	61.9%	55.6%	20.4%	21.4%	7.0%	9.1%	20.8%	28.1%
Union County	61.3%	55.7%	22.1%	22.7%	4.6%	5.9%	27.3%	36.8%
New Jersey	68.6%	62.6%	13.7%	14.0%	8.3%	11.1%	17.7%	23.2%
United States	72.4%	68.2%	12.6%	13.0%	4.8%	6.4%	16.4%	19.8%

The population of the Trinitas primary service area, comprising Elizabeth, is ethnically diverse. Among Elizabeth residents who report single ancestry, the largest number are West Indian, primarily Haitian. The primary West Indian languages are French, Haitian, and Cajun. Among Elizabeth West Indian residents, approximately 49% speak English less than “very well.”

2013-2017 Elizabeth Residents Reporting Single Ancestry, Top Five

	Number
1. Other	80,091
2. West Indian (except Latinx)	5,328
Haitian	4,548
Jamaican	417
Other	363
3. Portuguese	3,979
4. American	1,728
5. Italian	1,484
Total	**99,495**

According to the US Census Bureau, by 2060, the median age of the US population is expected to grow from the current age of 38 to age 43. The median age of the total service area (38.4) is consistent with the national median and remained unchanged from the 2016 CHNA. The median age of the primary service area is notably younger and declining, in contrast to state and national trends. The current median age of the primary service area is 33.9 compared to 34.6 at the time of the 2016 CHNA. Approximately 1 in 5 primary service area residents are youth.

The median age of the primary service area is lower than the state and nation and declining, contrary to national trends

2018 Population by Age

	Under 15	15-24 years	25-34 years	35-54 years	55-64 years	65+ years	Median Age
Total Service Area	18.8%	12.8%	13.8%	26.8%	12.8%	15.0%	38.4
Primary Service Area	21.0%	14.2%	16.7%	26.6%	10.7%	10.9%	33.9
Secondary Service Area	18.3%	12.4%	13.1%	26.9%	13.3%	16.1%	39.7
Union County	19.2%	12.7%	13.1%	27.0%	12.9%	15.1%	38.8
New Jersey	18.0%	12.4%	13.0%	26.5%	13.5%	16.6%	40.1
United States	18.6%	13.3%	13.9%	25.3%	13.0%	16.0%	38.3

Economic Measures

Poverty rates for the total service area are comparable to state comparisons. This finding largely reflects the secondary service area. Within the primary service area, 25% of people and 27% of children live in poverty compared to 11% and 16% statewide. Residents of the primary service area are more likely to work in blue collar positions (60%) than residents statewide (34%) and have a slightly higher unemployment rate (6.9% vs. 5.1%). The unemployment rate declined from the 2016 CHNA report of 9.6%.

The secondary service area poverty rate is similar to the state; the primary service area rate is more than double

2018 Median Household Income and 2012-2016 Poverty/Food Stamp Status

	Median Household Income	People in Poverty	Children in Poverty	Households with Food Stamp/ SNAP Benefits
Total Service Area	$72,149	12.8%	17.2%	10.8%
Primary Service Area	$45,675	25.4%	27.1%	19.5%
Secondary Service Area	$80,895	10.3%	14.0%	8.8%
Union County	$74,700	10.8%	15.1%	9.2%
New Jersey	$78,126	10.9%	15.6%	9.4%
United States	$58,100	15.1%	21.2%	13.1%

2018 Population by Occupation and Unemployment

	White Collar Workforce	Blue Collar Workforce	Unemployment
Total Service Area	59.0%	41.0%	5.6%
Primary Service Area	40.0%	60.0%	6.9%
Secondary Service Area	64.0%	36.0%	5.2%
Union County	61.0%	39.0%	6.1%
New Jersey	66.0%	34.0%	5.1%
United States	61.0%	39.0%	4.8%

Housing Measures

Homeownership and housing affordability are measures of economic stability. Approximately 66% of housing units in the secondary service area are owner-occupied compared to 25% in the primary service area. Primary service area findings are likely impacted by home value relative to household income. The median home value in the primary service area ($302,465) is comparable to the state ($346,269), but median household income is more than $30,000 less than the state median.

Only 25% of primary service area housing units are owner-occupied; nearly 60% of homeowners are housing cost burdened

Nearly 60% of homeowners in the primary service area are considered housing cost-burdened compared to 40% statewide. The percentage of housing cost-burdened renters is consistent across the total service area (55%) and comparable to the state and nation.

2018 Population by Household Type and Housing Cost Burden

	Renter-Occupied	Renters Paying 30%+ of Income on Rent*	Owner-Occupied	Median Home Value	Mortgages Costing 30%+ of Household Income*
Total Service Area	42.4%	55.5%	57.6%	$381,253	45.2%
Primary Service Area	75.2%	57.0%	24.8%	$302,465	59.8%
Secondary Service Area	34.5%	54.8%	65.5%	$389,865	44.0%
Union County	42.2%	55.5%	57.8%	$388,445	43.7%
New Jersey	37.5%	53.2%	62.5%	$346,269	39.8%
United States	36.9%	51.1%	63.1%	$218,492	30.8%

*Data are reported for 2012-2016 based on availability.

Education Measures

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. More than one-third of secondary service area residents have attained a bachelor's degree or higher, comparable to the state. Only 13% of primary service area residents have attained a bachelor's degree and more than one-quarter do not have a high school diploma.

One-third of secondary service area residents have at least a bachelor's degree compared to 13% of primary service area residents

2018 Population (25 Years or Over) by Educational Attainment

	Less than a High School Diploma	High School Graduate/GED	Bachelor's Degree or Higher
Total Service Area	14.1%	30.7%	31.0%
Primary Service Area	26.0%	38.7%	12.8%
Secondary Service Area	11.2%	28.8%	35.4%
Union County	13.6%	28.5%	35.1%
New Jersey	10.5%	27.3%	39.2%
United States	12.3%	27.0%	31.8%

The following tables profile social determinants of health for the three primary racial and ethnic groups in the Trinitas service area. Data are only reported for Union County due to data limitations at the zip code level.

Socioeconomic indicators for Union County indicate that Black/African American and Latinx residents are disproportionately impacted by higher poverty and unemployment rates and lower educational attainment. Educational attainment is one of the biggest areas of disparity with 22% of Black/African American and 16% of Latinx residents attaining a bachelor's degree or higher compared to 40% of White residents. Socioeconomic disparity contributes to worse health outcomes. Health data by race and ethnicity are reported as available at the county-level throughout the report.

2013-2017 Poverty Rates by Race and Ethnicity

	Union County		New Jersey
	Count	Percentage	Percentage
White	21,620	6.9%	8.3%
Black/African American	15,320	13.2%	19.2%
Latinx	26,279	15.5%	19.6%

2013-2017 Unemployment Rates by Race and Ethnicity

	Union County		New Jersey
	Count	Percentage	Percentage
White	15,518	6.1%	6.0%
Black/African American	10,477	11.0%	12.2%
Latinx	9,603	7.5%	7.5%

2013-2017 Bachelor's Degree or Higher by Race and Ethnicity

	Union County		New Jersey
	Count	Percentage	Percentage
White	89,898	40.4%	38.8%
Black/African American	17,842	22.3%	23.0%
Latinx	16,320	15.5%	17.9%

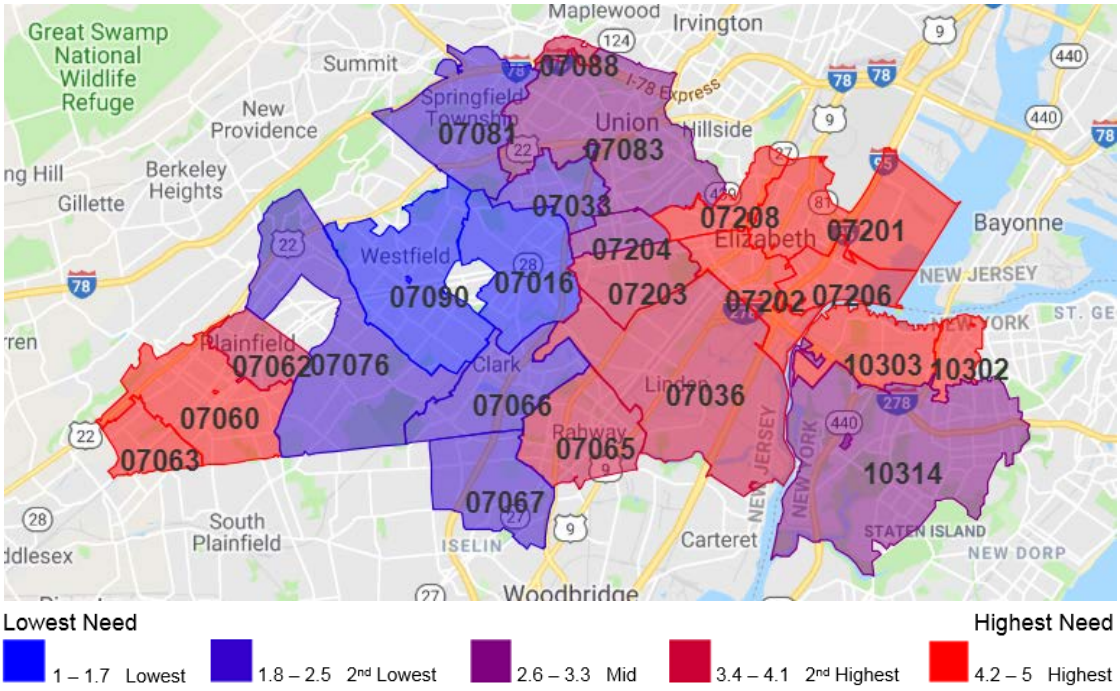
Trinitas Regional Medical Center Service Area Zip Code Analysis

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 socioeconomic 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

The weighted average CNI score for Trinitas' total service area is 3.3, indicating moderate overall community need. Residents of Trinitas' primary service area experience greater disparity as evidenced by a CNI score of 4.3. The CNI score for the secondary service area is 3.1.

Community Need Index for Trinitas Regional Medical Center's Service Area



The following tables list the social determinants of health that contribute to zip code CNI scores and are often indicative of health disparities. Zip codes are shown in comparison to the total service area and the county, and are presented in descending order by CNI score. Cells highlighted in yellow are more than 2% points higher than the county statistic, but not necessarily statistically significant.

Social Determinants of Health Indicators by Primary Service Area Zip Code

	HHs in Poverty	HHs Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemp-loyment	Less than HS Diploma	Without Health Insurance	CNI Score
Total Service Area	**12.0%**	**10.8%**	**17.2%**	**43.5%**	**5.6%**	**14.1%**	**13.6%**	**3.3**
07202, Elizabeth	20.7%	17.9%	25.3%	77.5%	7.2%	24.4%	24.7%	4.4
07206, Elizabethport	21.2%	20.7%	27.7%	73.6%	6.8%	36.3%	28.2%	4.4
07201, Elizabeth	17.4%	19.6%	22.8%	76.0%	6.5%	26.5%	27.4%	4.2
07208, Elizabeth	16.3%	20.6%	33.0%	71.5%	6.8%	19.9%	20.7%	4.2
Primary Service Area	**18.9%**	**19.5%**	**27.1%**	**74.9%**	**6.9%**	**26.0%**	**25.0%**	**4.3**
Union County	**10.6%**	**9.2%**	**15.1%**	**42.9%**	**6.1%**	**13.6%**	**14.2%**	**3.2**

*Data are not available for zip code 07207, Elizabeth.
**Data are reported as a five year aggregate (2012-2016). Exception: Unemployment and education data are reported for 2018.

2018 Demographic Indicators by Primary Service Area Zip Code

	White	Black/ African American	Latinx	Under 15	15-24	25-34	35-54	55-64	65+
Total Service Area	**57.0%**	**21.0%**	**33.4%**	**18.8%**	**12.8%**	**13.8%**	**26.8%**	**12.8%**	**15.0%**
07202, Elizabeth	58.5%	14.0%	72.1%	19.6%	13.7%	16.5%	26.8%	10.8%	12.5%
07206, Elizabethport	47.7%	23.0%	72.1%	24.9%	15.9%	17.4%	25.4%	8.6%	7.8%
07201, Elizabeth	44.1%	28.0%	61.2%	20.9%	14.5%	17.4%	26.8%	10.6%	9.9%
07208, Elizabeth	55.0%	21.1%	59.8%	19.5%	13.1%	15.8%	27.0%	12.2%	12.4%
Primary Service Area	**52.3%**	**20.6%**	**66.8%**	**21.0%**	**14.2%**	**16.7%**	**26.6%**	**10.7%**	**10.9%**
Union County	**57.8%**	**22.5%**	**32.8%**	**19.2%**	**12.7%**	**13.1%**	**27.0%**	**12.9%**	**15.1%**

*Data are not available for zip code 07207, Elizabeth.

Social Determinants of Health Indicators by Secondary Service Area Zip Code

	HHs in Poverty	HHs Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemp-loyment	Less than HS Diploma	Without Health Insurance	CNI Score
Total Service Area	**12.0%**	**10.8%**	**17.2%**	**43.5%**	**5.6%**	**14.1%**	**13.6%**	**3.3**
10303, Staten Island, NY	27.6%	25.0%	31.5%	44.2%	3.9%	17.3%	9.4%	4.4
07060, Plainfield	16.5%	14.0%	27.4%	53.2%	6.2%	25.3%	26.8%	4.2
07063, Plainfield	15.7%	16.6%	21.8%	51.3%	6.9%	23.1%	23.0%	4.2
10302, Staten Island, NY	24.5%	22.0%	33.5%	40.6%	3.2%	14.6%	13.4%	4.2
07062, Plainfield	13.6%	18.1%	27.8%	33.8%	8.3%	15.1%	20.2%	4.0
07036, Linden	10.0%	9.1%	14.9%	46.6%	6.9%	13.1%	14.7%	3.8
07088, Vauxhall	17.8%	10.6%	19.6%	20.1%	12.1%	10.2%	19.6%	3.8
07203, Roselle	14.4%	11.5%	23.8%	39.0%	9.4%	13.1%	16.0%	3.8
07065, Rahway	7.2%	10.2%	6.7%	40.4%	7.2%	9.8%	11.5%	3.4
07204, Roselle Park	7.8%	2.6%	8.5%	45.0%	8.5%	7.5%	10.1%	3.2
10314, Staten Island, NY	11.4%	9.0%	10.9%	32.0%	3.1%	9.2%	5.7%	3.0
07083, Union	8.3%	5.1%	10.1%	41.7%	4.9%	11.3%	8.3%	2.8
07033, Kenilworth	6.1%	2.7%	14.9%	31.3%	5.6%	12.2%	5.4%	2.4
07081, Springfield	6.3%	4.3%	6.1%	28.6%	3.5%	5.1%	6.4%	2.4
07076, Scotch Plains	3.4%	2.8%	2.5%	17.8%	3.7%	3.7%	4.4%	2.0
07066, Clark	4.9%	1.1%	4.3%	21.6%	4.6%	7.7%	6.1%	1.8
07016, Cranford	2.7%	1.7%	0.4%	14.7%	3.9%	3.7%	5.1%	1.6
07090, Westfield	2.5%	2.2%	1.4%	15.2%	4.0%	2.2%	3.1%	1.6
Secondary Service Area	**10.4%**	**8.8%**	**14.0%**	**35.8%**	**5.2%**	**11.2%**	**10.7%**	**3.1**
Union County	**10.6%**	**9.2%**	**15.1%**	**42.9%**	**6.1%**	**13.6%**	**14.2%**	**3.2**

*Data are not available for zip codes 07061, Plainfield; 07067, Colonia; and 07091, Westfield.
**Data are reported as a five year aggregate (2012-2016). Exception: Unemployment and education data are reported for 2018.

2018 Demographic Indicators by Secondary Service Area Zip Code

	White	Black/ African American	Latinx	Under 15	15-24	25-34	35-54	55-64	65+
Total Service Area	**57.0%**	**21.0%**	**33.4%**	**18.8%**	**12.8%**	**13.8%**	**26.8%**	**12.8%**	**15.0%**
10303, Staten Island, NY	32.4%	36.6%	38.9%	22.2%	16.2%	15.3%	26.0%	10.9%	9.4%
07060, Plainfield	33.2%	33.7%	50.8%	20.8%	13.4%	16.2%	27.7%	10.8%	11.0%
07063, Plainfield	30.1%	42.7%	45.3%	23.3%	13.9%	15.8%	26.8%	10.3%	9.9%
10302, Staten Island, NY	46.1%	21.5%	44.3%	21.8%	14.5%	15.7%	25.6%	10.9%	11.5%
07062, Plainfield	23.6%	57.2%	31.1%	19.7%	12.5%	13.3%	27.1%	12.7%	14.7%
07036, Linden	55.8%	27.4%	31.4%	16.2%	12.6%	14.3%	27.3%	13.4%	16.3%
07088, Vauxhall	10.6%	78.7%	10.0%	16.8%	12.7%	14.4%	26.5%	12.3%	17.3%
07203, Roselle	27.0%	55.3%	31.8%	18.5%	12.2%	14.8%	26.7%	12.7%	15.0%
07065, Rahway	46.9%	32.5%	30.5%	16.6%	12.3%	14.4%	27.4%	13.4%	16.0%
07204, Roselle Park	68.3%	6.8%	37.7%	16.9%	12.5%	14.6%	28.7%	13.5%	13.9%
10314, Staten Island, NY	72.3%	4.4%	14.5%	16.7%	11.0%	13.2%	25.9%	13.9%	19.4%
07083, Union	51.0%	27.6%	20.8%	16.1%	13.1%	13.1%	26.6%	14.3%	16.9%
07033, Kenilworth	83.3%	4.0%	22.8%	15.9%	11.5%	12.6%	28.4%	13.8%	17.8%
07081, Springfield	77.3%	7.8%	13.9%	17.2%	10.5%	11.0%	26.8%	14.5%	20.0%
07076, Scotch Plains	72.4%	13.0%	9.8%	20.2%	11.5%	9.2%	27.9%	14.3%	16.9%
07066, Clark	90.7%	1.1%	11.6%	15.8%	10.7%	11.4%	26.6%	15.3%	20.2%
07016, Cranford	88.9%	3.4%	10.1%	18.4%	11.0%	9.4%	26.9%	14.5%	19.8%
07090, Westfield	84.5%	4.1%	7.4%	22.1%	12.5%	7.4%	27.2%	14.4%	16.5%
Secondary Service Area	**58.2%**	**21.0%**	**24.8%**	**18.3%**	**12.4%**	**13.1%**	**26.9%**	**13.3%**	**16.1%**
Union County	**57.8%**	**22.5%**	**32.8%**	**19.2%**	**12.7%**	**13.1%**	**27.0%**	**12.9%**	**15.1%**

*Data are not available for zip codes 07061, Plainfield; 07067, Colonia; and 07091, Westfield.

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 New Jersey Department of Health, the Centers for Disease Control and Prevention (CDC), the Behavioral Risk Factor Surveillance System (BRFSS), 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 Union County are compared to state and national averages, as well as Healthy New Jersey 2020 (HNJ 2020) and Healthy People 2020 (HP2020) goals, where applicable. Healthy New Jersey 2020 is the state's health improvement plan and prevention agenda for the decade. The initiative is modeled after Healthy People 2020, 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, preventive health measures, among other health indicators. BRFSS results included within this report were provided by the New Jersey Department of Health.

BRFSS data for Elizabeth reflect the City of Elizabeth Health District. While the data have been weighted to better represent the Elizabeth population, the survey sample size is small. Results have wide variability across reporting years and should be interpreted with caution.

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

Access to Healthcare

Union County was ranked #14 out of 21 counties in New Jersey for clinical care, as reported by the 2018 University of Wisconsin County Health Rankings & Roadmaps program. The clinical care ranking is based on a number of indicators, including health insurance coverage and provider access. Union County dropped three positions in the rankings from the 2016 CHNA.

2018 County Health Rankings
Clinical Care

#14 Union County (#11 for 2016 CHNA)

Health Insurance Coverage

Consistent with state and national trends, the percent of uninsured residents in Elizabeth continued to decline. From 2013 to 2017, the uninsured rate fell 10 percentage points. The current uninsured percentage is still more than double state and national averages, and is highest among the adult population age 19-64. The child uninsured rate is also higher than the state, and does not meet the Healthy New Jersey 2020 goal of 96.5% insured.

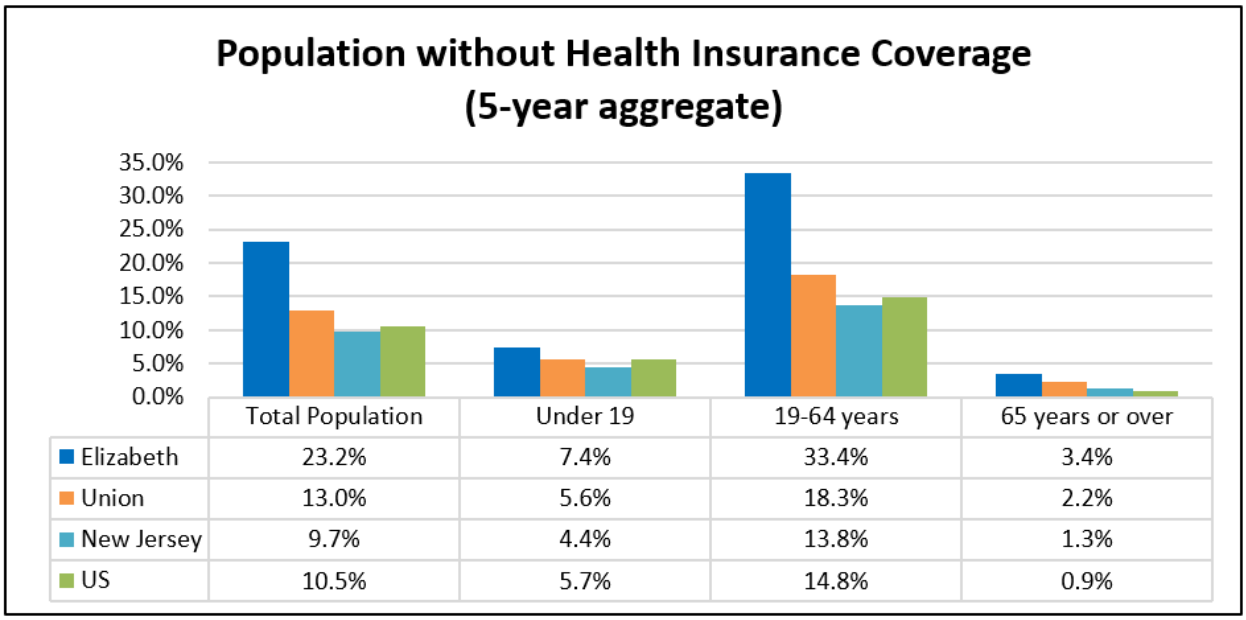
The percent uninsured is declining, but more than double state and national averages. More adults report cost as a barrier to receiving care.

Across Elizabeth, a higher percentage of Latinx residents are uninsured compared to any other population group. The percentage of uninsured Latinx is higher than county, state, and national benchmarks. White and Blacks/African residents have a similar uninsured rate that also exceeds benchmark comparisons.

The uninsured rate is impacted by a prominent Latinx population that is more likely to be uninsured compared to the state and nation

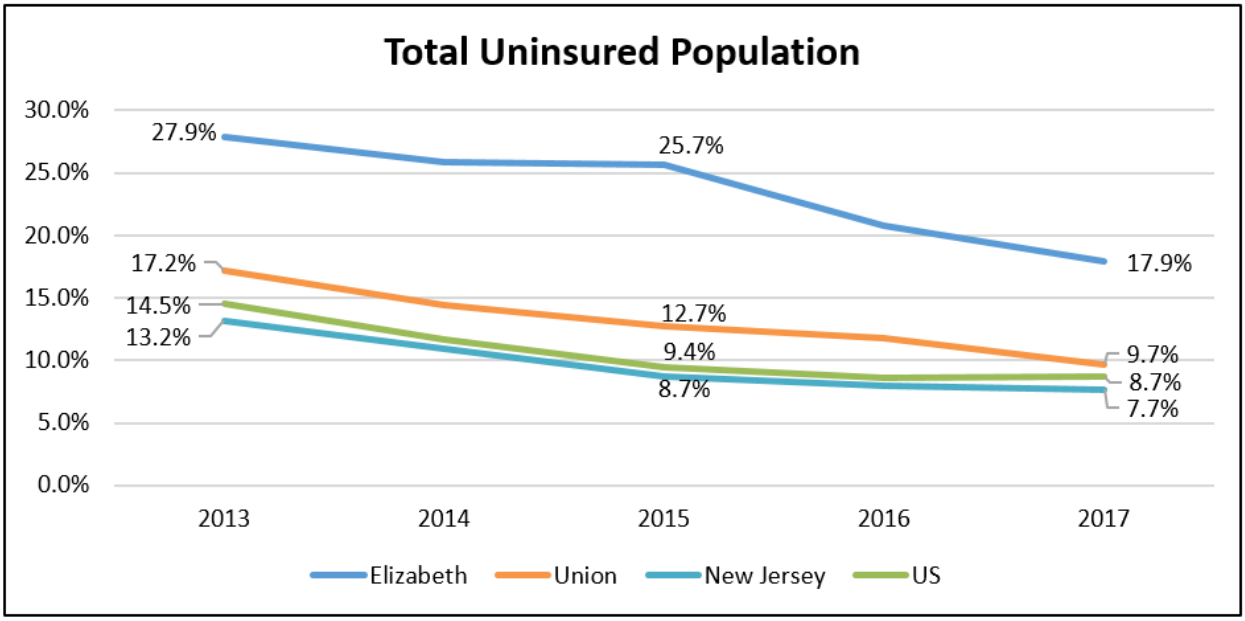
Only about one-third of Elizabeth residents are covered by employer-based insurance compared to approximately half of residents across Union County and the state. Employer-based insurance is more commonly associated with white collar positions. Approximately 40% of employees in Elizabeth hold a white collar position, compared to 61% countywide. More than one-quarter of Elizabeth residents are covered by Medicaid.

More than 25% of Elizabeth residents are covered by Medicaid

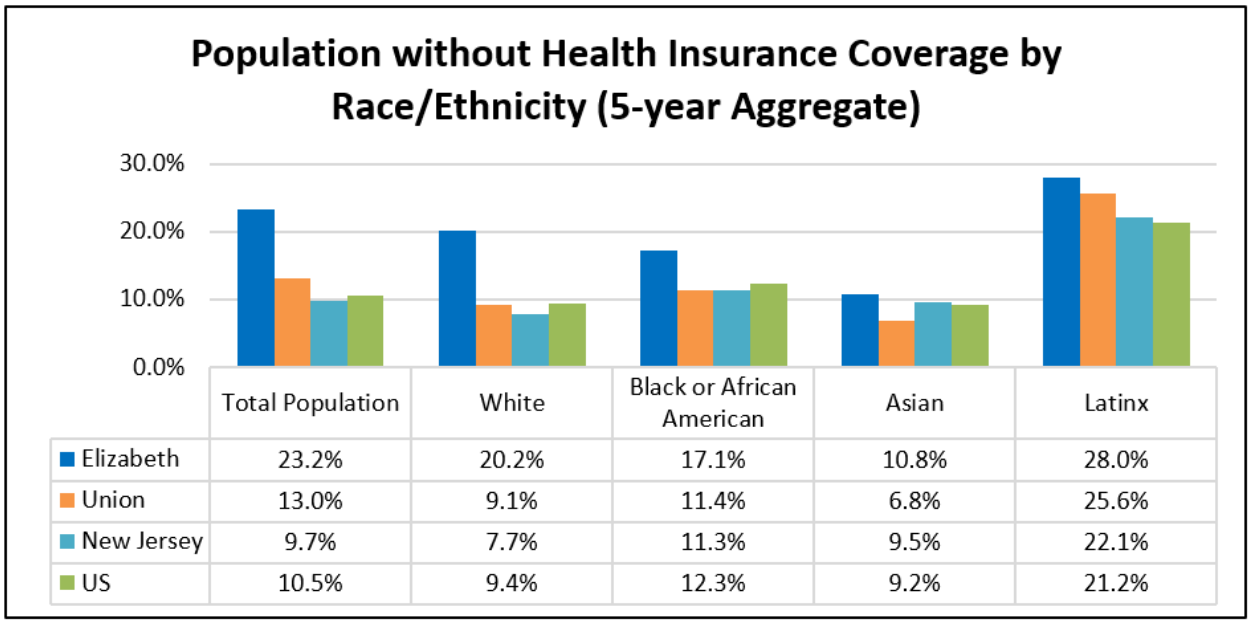


	Total Population	Under 19	19-64 years	65 years or over
Elizabeth	23.2%	7.4%	33.4%	3.4%
Union	13.0%	5.6%	18.3%	2.2%
New Jersey	9.7%	4.4%	13.8%	1.3%
US	10.5%	5.7%	14.8%	0.9%

Source: US Census Bureau, 2013-2017

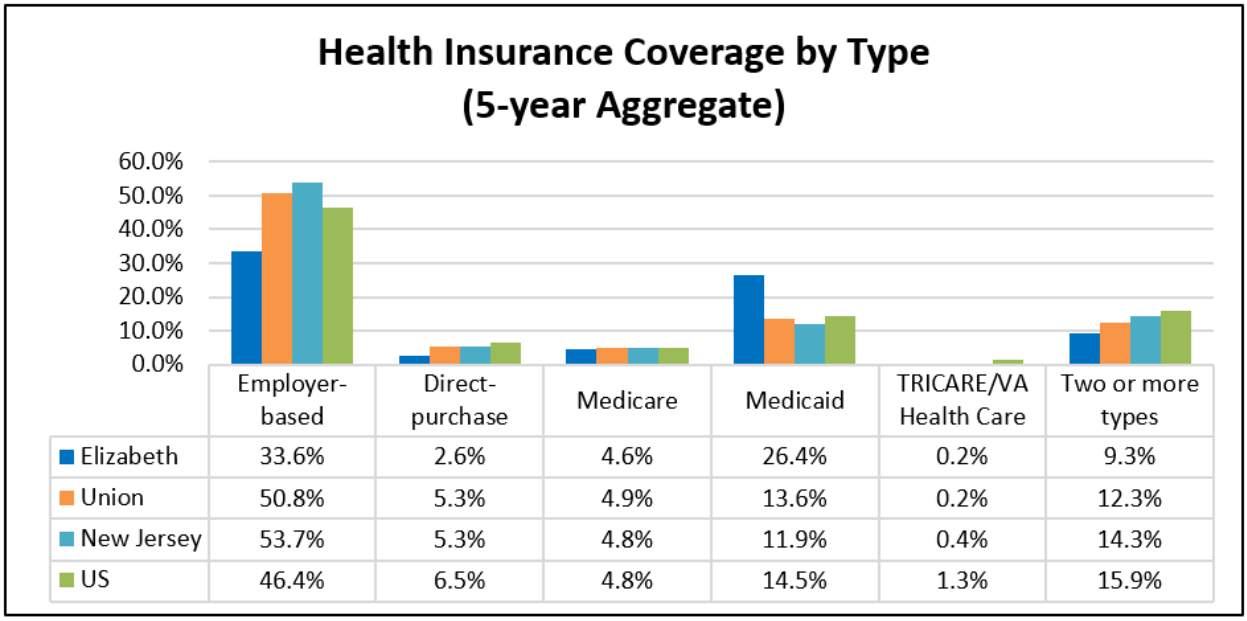


Source: US Census Bureau, 2013-2017



	Total Population	White	Black or African American	Asian	Latinx
Elizabeth	23.2%	20.2%	17.1%	10.8%	28.0%
Union	13.0%	9.1%	11.4%	6.8%	25.6%
New Jersey	9.7%	7.7%	11.3%	9.5%	22.1%
US	10.5%	9.4%	12.3%	9.2%	21.2%

Source: US Census Bureau, 2013-2017



	Employer-based	Direct-purchase	Medicare	Medicaid	TRICARE/VA Health Care	Two or more types
Elizabeth	33.6%	2.6%	4.6%	26.4%	0.2%	9.3%
Union	50.8%	5.3%	4.9%	13.6%	0.2%	12.3%
New Jersey	53.7%	5.3%	4.8%	11.9%	0.4%	14.3%
US	46.4%	6.5%	4.8%	14.5%	1.3%	15.9%

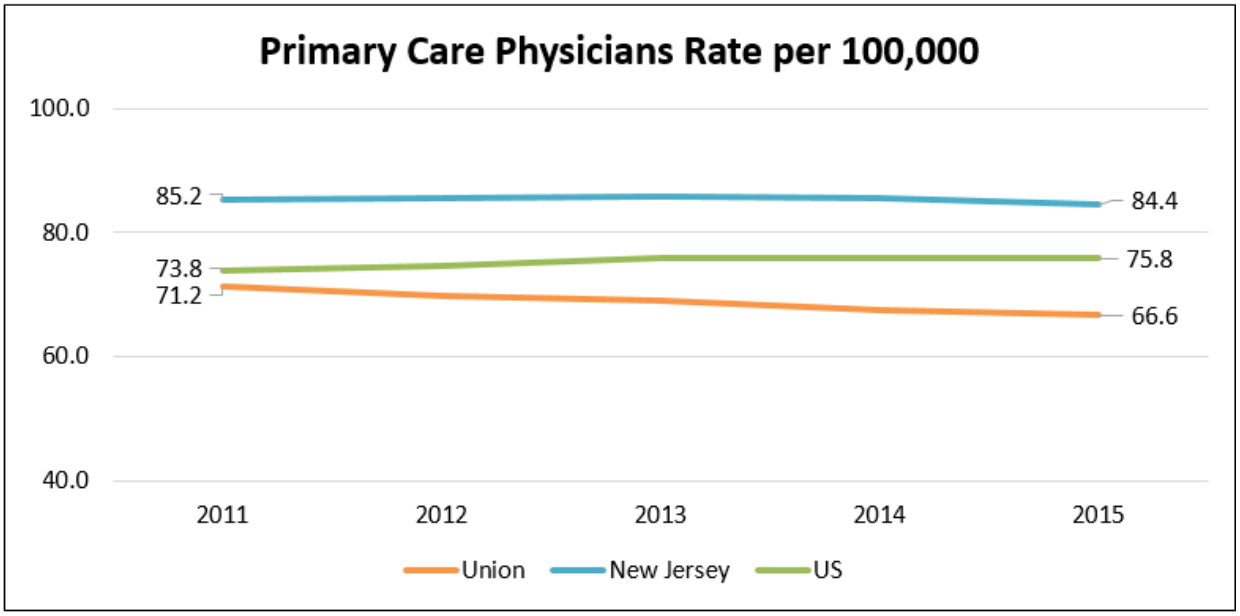
Source: US Census Bureau, 2013-2017

Provider Access

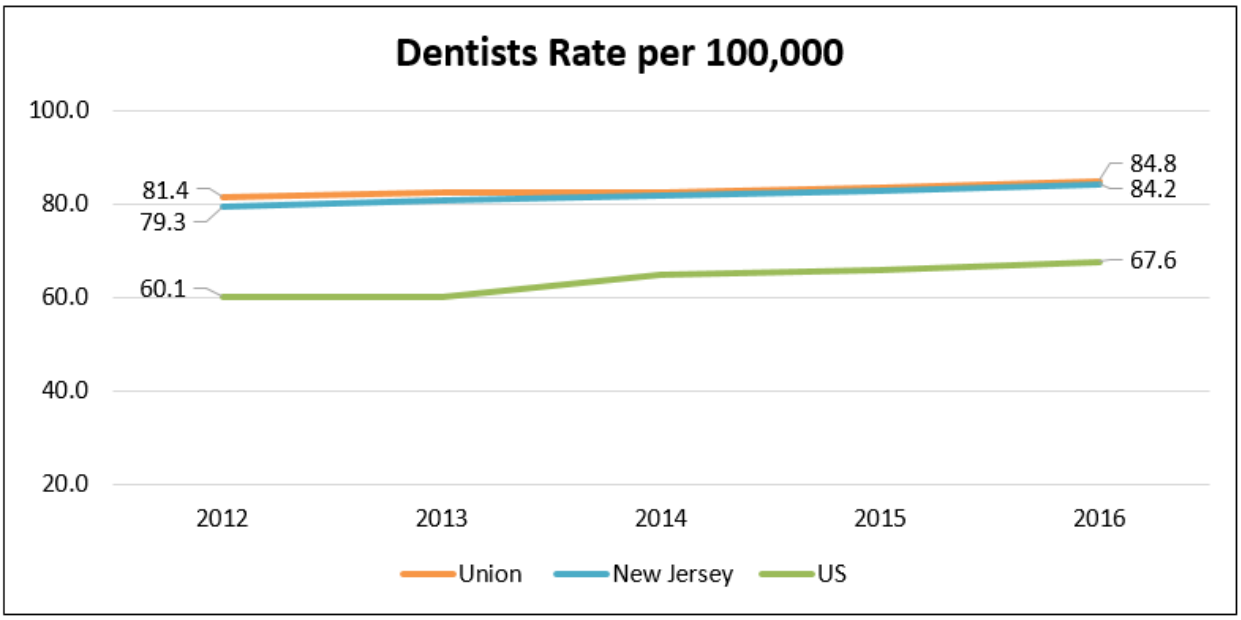
The primary care physician rate in Union County is lower than state and national benchmarks and declined over the past five years. No parts of the county are designated as Health Professional Shortage Areas, but portions of Elizabeth and Plainfield are designated as Medically Underserved Areas. Medically Underserved Areas are designated by the Health Resources & Services Administration (HRSA) based on four demographic and health indicators: primary care providers per 1,000, population in

Elizabeth and Plainfield, designated MUAs, are home to four FQHCs

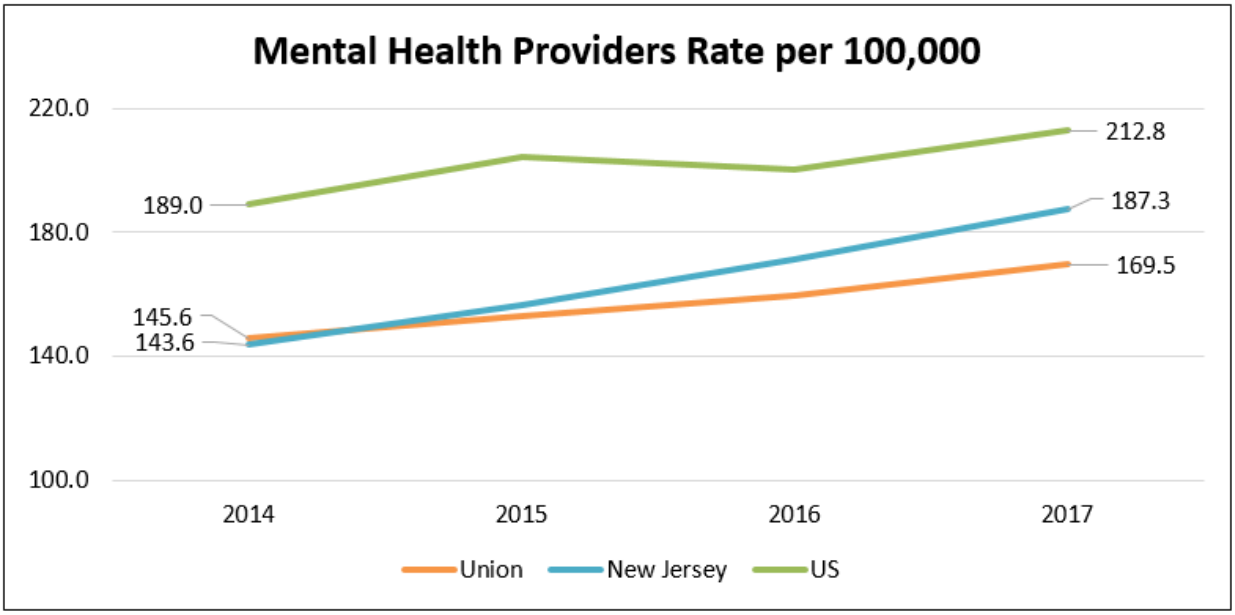
poverty, population age 65 or over, and infant mortality rate. Federally Qualified Health Centers (FQHCs) are critical to serving the healthcare needs of medically underserved populations. Union County has four FQHCs, three in Plainfield and one in Elizabeth.



Source: Health Resources & Services Administration, 2011-2015
*Providers are identified based on the county in which their preferred professional mailing address is located. Provider rates do not take into account providers that serve multiple counties or satellite clinics.

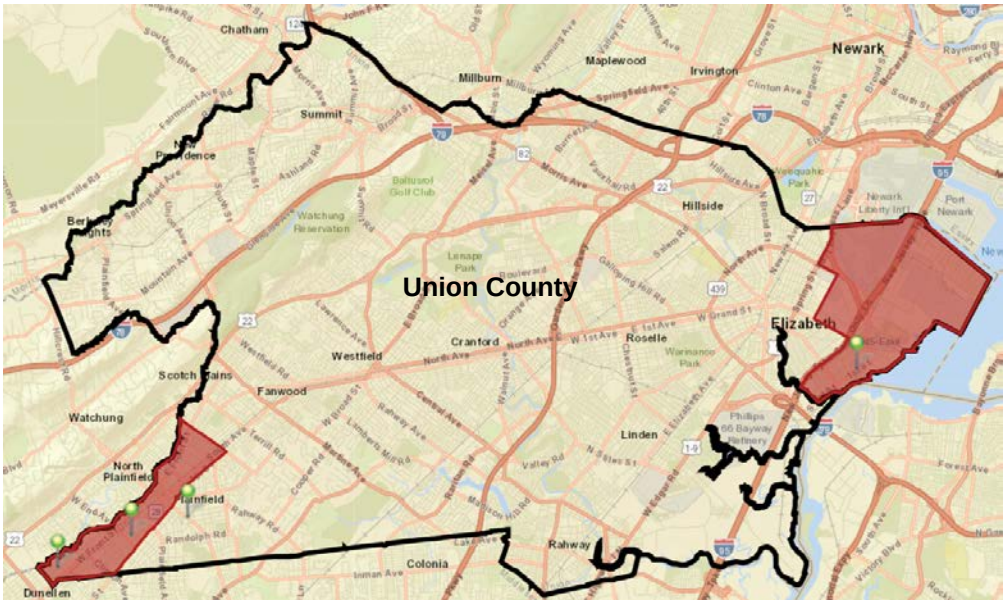


Source: Health Resources & Services Administration, 2012-2016



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.

Medically Underserved Areas in Union County (Red Shading) and FQHC Locations (Green Pins)



FQHC Locations in Union County

Location	Address
Neighborhood Health Center Elizabeth	184 1st St, Elizabeth, NJ 07206
Neighborhood Health Center Cardinal	950 Park Ave, Plainfield, NJ 07060
Neighborhood Health Center The Healthy Place	427 Darrow Ave, Plainfield, NJ 07060
Neighborhood Health Center Plainfield	1700 Myrtle Ave, Plainfield, NJ 07063

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. Consistent with having a higher uninsured population, a higher percentage of Elizabeth adults report that they are unable to afford care and do not have a regular primary care provider. Despite these care access barriers, a similar percentage of adults received routine health visits in the last year compared to the state and nation.

40% or more of Elizabeth adults do not have a primary care provider and are unable to get needed care due to cost

Adult Healthcare Access
(Red = Higher than State and National Benchmarks)

	Unable to Afford Care	No Primary Care Provider	No Routine Health Visit in Last Year	No Dental Visit in Last Year
Elizabeth	41.1%	48.0%	26.6%	29.8%
Union County	18.8%	24.5%	22.6%	29.8%
New Jersey	14.0%	20.8%	23.9%	26.6%
United States	12.4%	22.5%	29.6%	33.6%

Source: Centers for Disease Control and Prevention, 2016, 2017; NJ Department of Health, 2016, 2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.

Overall Health Status

Union County was ranked #8 out of 21 counties in New Jersey for health outcomes, as reported by the 2018 University of Wisconsin County Health Rankings & Roadmaps program. Health outcomes are measured in relation to premature death (before age 75) and quality of life. Union County improved in the rankings from the 2016 CHNA (#9).

The Union County premature death rate is lower than state and national rates, but average life expectancy is not equitable across the county. Residents of the western portion of the county, excluding Plainfield, generally have a life expectancy of 81 years or higher, while residents of the eastern portion of the county, including Elizabeth, have a life expectancy of 75 to 80.9 years or less. Residents of center city Elizabeth have one of the lowest life expectancies, consistent with greater socioeconomic barriers.

Life expectancy is lower in areas experiencing greater socioeconomic disparity, including Elizabeth

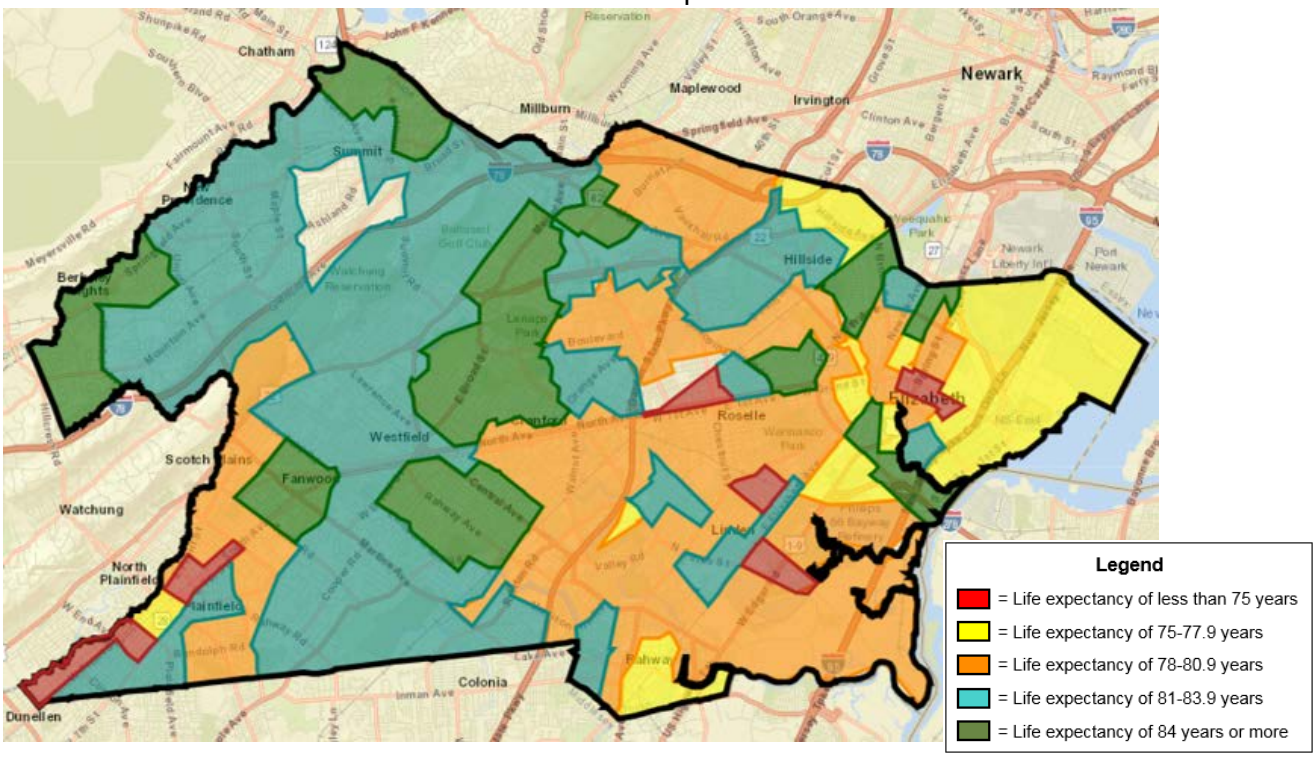
Health Outcomes Indicators
(Green = Lower than State and National Benchmarks)

	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
Union County	5,035	16.9%	3.6	3.3
New Jersey	5,469	16.5%	3.5	3.4
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

Union County Life Expectancy in Years by Census Tract

Areas of Disparity: Elizabeth, Hillside Township, Linden, Plainfield, Rahway, Roselle Park, Winfield Township



Health Behaviors

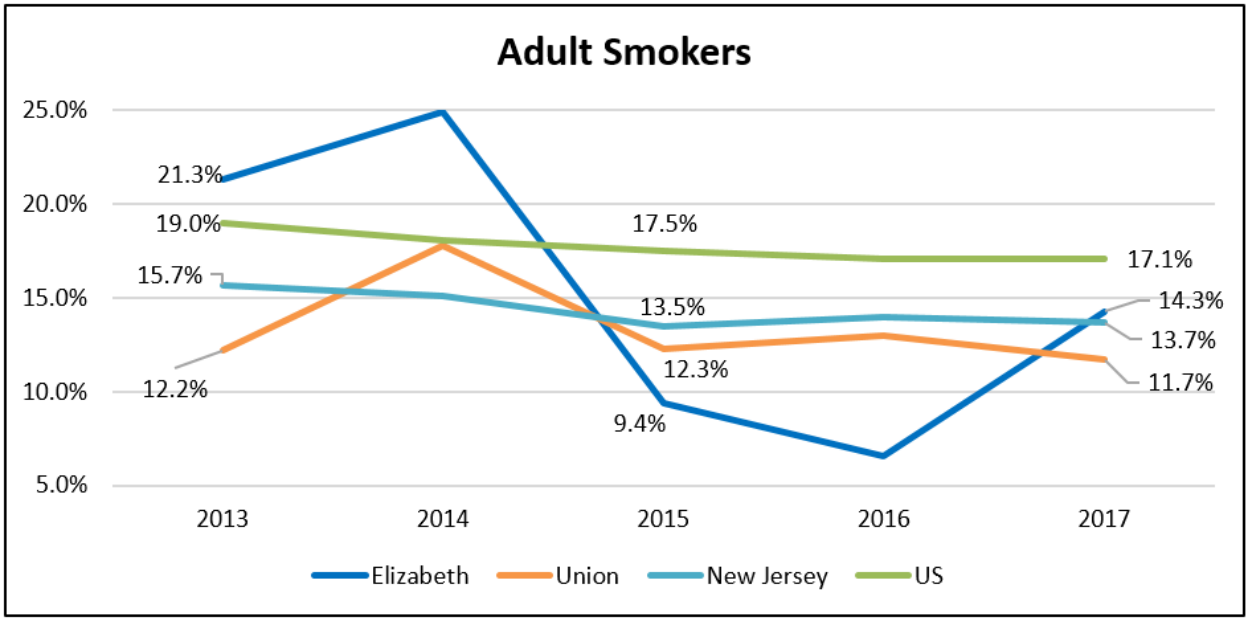
Health behaviors may increase or reduce the likelihood of disease or early death. Individual health behaviors include risk factors like smoking and obesity, or health promoting behaviors like exercise, good nutrition, and stress management. The prevalence of these health behaviors is provided below,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

The percentage of adult smokers in Elizabeth is higher than the county overall, but similar to the state. While the percentage of adult smokers in Elizabeth has been variable, it more than doubled from 2016 to 2017. In contrast, the percentage of adult smokers across Union County steadily declined and meets Healthy New Jersey (12.4%) and Healthy People 2020 (12%) goals.

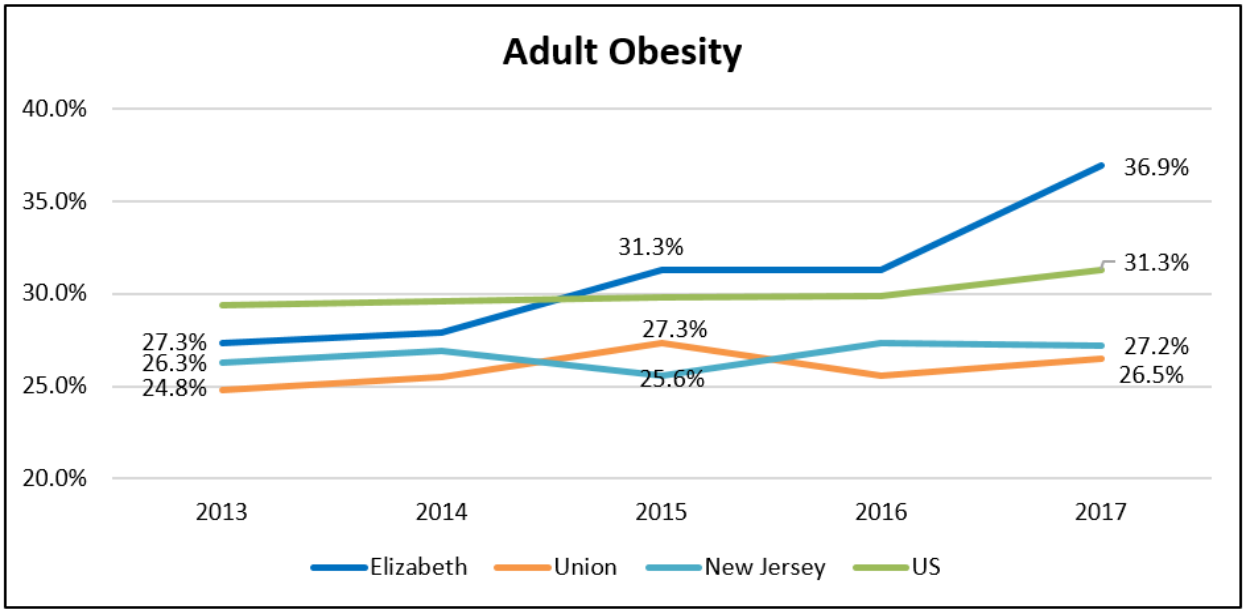
The percentage of Elizabeth adults who smoke is similar to the state, but increased, contrary to countywide trends

More than three-quarters of adults in Elizabeth are obese, higher than the state and nation, and exceeding Healthy New Jersey (23.8%) and Healthy People (30.5%) 2020 goals. While obesity remained relatively stable across Union County from 2013 to 2017, it increased nearly 10 percentage points in Elizabeth.

Three-quarters of Elizabeth adults are obese, exceeding all state and national benchmarks



Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.



Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution. Data for 2016 is not available for Elizabeth; 2015 data is shown to illustrate the trend through 2017.

Healthy Eating and Food Insecurity

Food insecurity, defined as being without a regular source of sufficient and affordable nutritious food, negatively impacts the opportunity for healthy eating and healthy weight management. Food insecurity is reflective of a variety of social factors including employment, income, access to healthy food options, transportation, housing, and other factors.

Food insecurity among Union County residents decreased from the 2016 CHNA

Eligibility for free lunch includes households with an income at or below 130% of the poverty income threshold, while eligibility for reduced-priced lunch includes households with an income between 130% and 185% of the poverty threshold. The percentage of food insecure residents and children across Union County is lower than the state and nation, and declined from the 2016 CHNA (year 2013). County percentages likely do not reflect areas of greater socioeconomic need, including Trinitas' primary service area.

Food Insecure Residents
(Green = Lower than State and National Benchmarks)

	All Residents		Children	
	2013	2016	2013	2016
Union County	11.6%	9.6%	16.7%	12.8%
New Jersey	12.4%	10.3%	18.3%	13.5%
United States	15.1%	12.9%	23.7%	17.5%

Source: Feeding America, 2013 & 2016

Children Eligible for Free or Reduced-Price School Lunch

	Percent
Union County	47.5%
New Jersey	37.6%

Source: National Center for Education Statistics, 2015-2016

Physical Activity

Engaging in regular physical activity contributes to positive health outcomes. Nearly 100% of Union County residents have access to activity venues, including parks, gyms, and pools, among others, but 30% of adults across Union County and Elizabeth are physically inactive.

Physical Activity

	Access to Physical Activity	Physically Inactive Adults
Elizabeth	NA	30.0%
Union County	99.5%	30.1%
New Jersey	95.0%	29.0%
United States	83.0%	25.6%

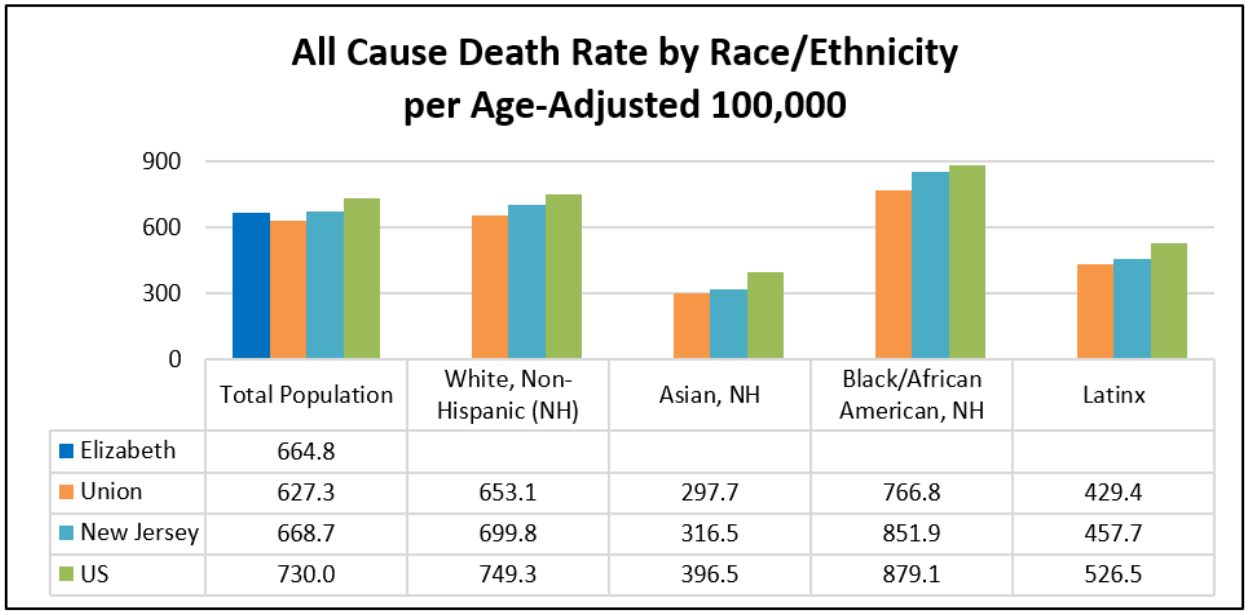
Source: Business Analyst, Delorme Map Data, ESRI, & US Census Tigerline Files, 2010 & 2016; Centers for Disease Control and Prevention, 2017; NJ Department of Health, 2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.

Mortality

The all cause age-adjusted death rate is lower in Elizabeth and Union County compared to the state and nation, although the Elizabeth death rate exceeds the countywide death rate. Death rates among racial and ethnic groups are not reported for Elizabeth, but countywide, Blacks/African Americans have a higher death rate than Whites by more than 100 points.

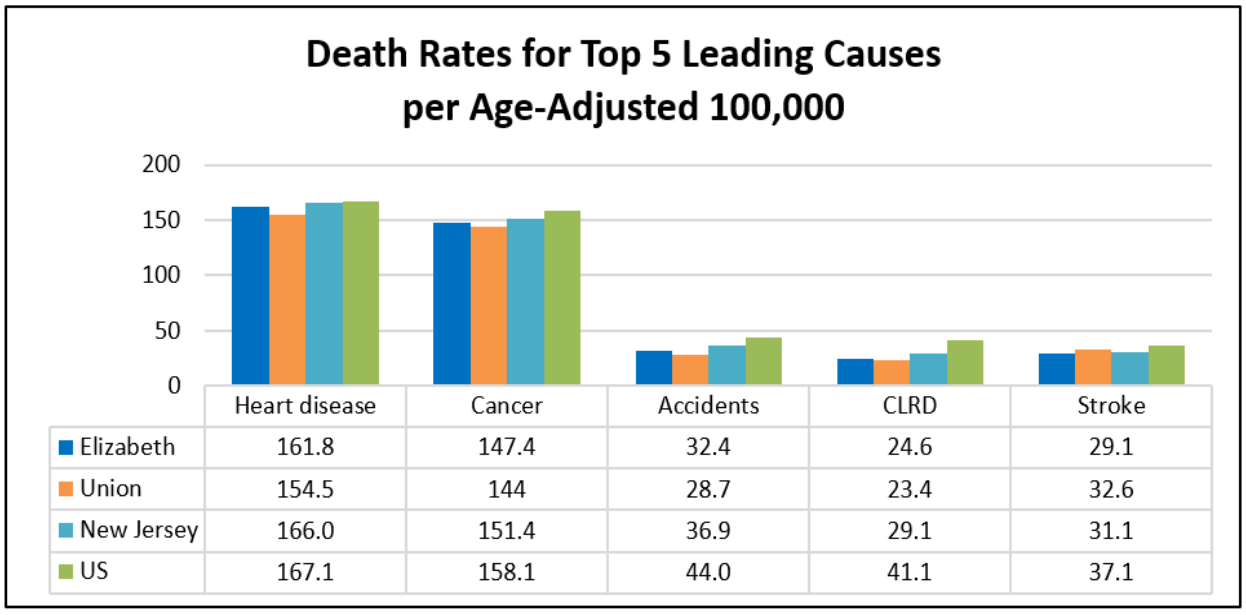
The top five causes of death in the nation, in rank order, are heart disease, cancer, accidents, chronic lower respiratory disease, and stroke. Consistent with the all cause death rate, Elizabeth and Union County have lower rates of death than the state and nation, but Elizabeth generally exceeds the county.

Elizabeth and Union County have lower death rates than the state and nation, but rates are higher for African Americans vs. Whites



	Total Population	White, Non-Hispanic (NH)	Asian, NH	Black/African American, NH	Latinx
Elizabeth	664.8				
Union	627.3	653.1	297.7	766.8	429.4
New Jersey	668.7	699.8	316.5	851.9	457.7
US	730.0	749.3	396.5	879.1	526.5

Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017
*Data by race and ethnicity are not available for Elizabeth.



	Heart disease	Cancer	Accidents	CLRD	Stroke
Elizabeth	161.8	147.4	32.4	24.6	29.1
Union	154.5	144	28.7	23.4	32.6
New Jersey	166.0	151.4	36.9	29.1	31.1
US	167.1	158.1	44.0	41.1	37.1

Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017

Chronic Diseases

Chronic diseases are among the most prevalent and costly health conditions in the United States. More than two-thirds of all deaths are caused by one or more of these five chronic diseases: heart disease, cancer, stroke, chronic obstructive pulmonary disease, and diabetes. Chronic diseases are often preventable through reduced risk behaviors like tobacco and alcohol use, increased physical activity and good nutrition, early detection of risk factors, and effective primary and community management of disease.

Heart Disease and Stroke

While Elizabeth residents have a similar death rate due to heart disease as the state and nation, adults are more likely to experience heart disease and related risk factors. Of note, nearly 7% of Elizabeth adults have had a stroke compared to 2.5% across New Jersey, and nearly 40% have high blood pressure compared to 33% statewide.

The heart disease death rate for Elizabeth is similar to the state, but residents are more likely to experience heart disease and related risk factors

Death rates among racial and ethnic groups are not reported for Elizabeth. Across Union County, heart disease death rates among racial and ethnic groups are lower than state and national benchmarks, but Blacks/African Americans have a higher death rate than any other reported demographic.

Heart Disease Prevalence among Adults
(Red = Higher than State and National Benchmarks)

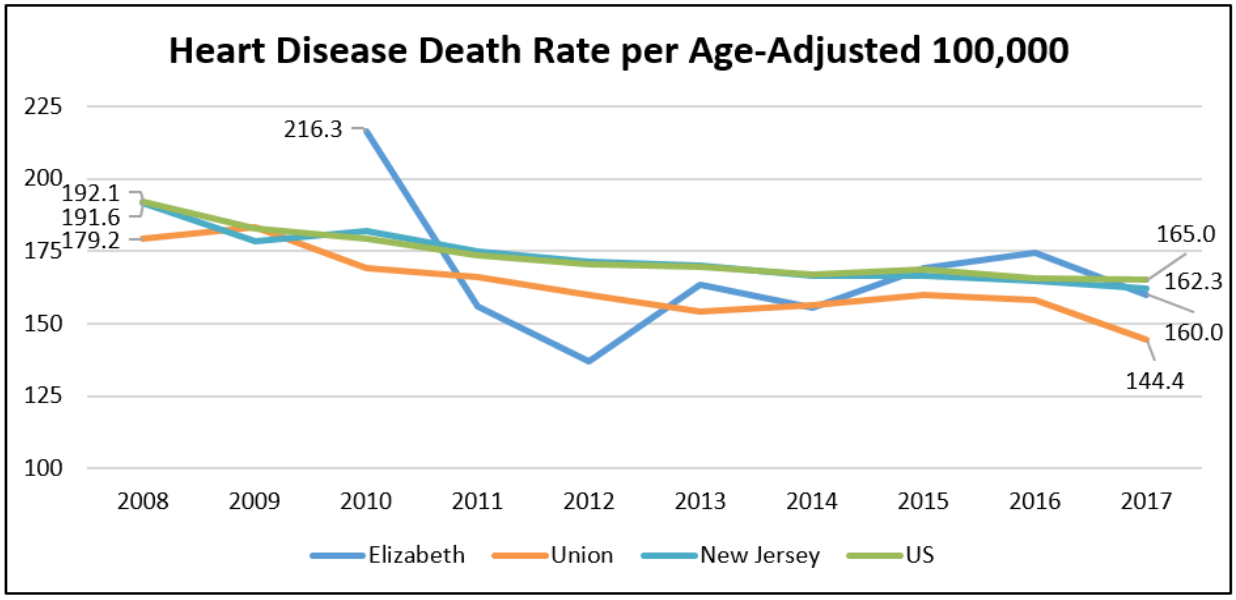
	Angina/Coronary Heart Disease	Heart Attack	Stroke
Elizabeth	3.1%	5.0%	6.8%
Union County	2.9%	3.7%	2.4%
New Jersey	3.7%	3.8%	2.5%
United States	3.9%	4.2%	NA

Source: Centers for Disease Control and Prevention, 2017; NJ Department of Health, 2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.

High Blood Pressure and High Cholesterol Prevalence among Adults
(Red = Higher than State and National Benchmarks)

	High Blood Pressure	High Cholesterol
Elizabeth	37.8%	31.9%
Union County	29.6%	33.9%
New Jersey	33.0%	34.6%
United States	32.3%	33.0%

Source: Centers for Disease Control and Prevention, 2017; NJ Department of Health, 2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.



Source: Centers for Disease Control and Prevention, 2008-2017; NJ Department of Health, 2010-2017
*Elizabeth data are not available prior to 2010.

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

	White, Non-Hispanic	Black/African American, Non-Hispanic	Asian/Pacific Islander, Non-Hispanic	Latinx
Union County	164.8	173.6	75.1	97.8
New Jersey	175.1	196.7	74.5	102.6
United States	170.3	210.9	87.2	116.6

Source: Centers for Disease Control and Prevention, 2013-2017

Coronary heart disease (CHD) is characterized by the buildup of plaque inside the coronary arteries. Several types of heart disease, including coronary heart disease, are risk factors for stroke. Elizabeth meets the Healthy People 2020 goal for stroke death, and all of Union County meets Healthy New Jersey and Healthy People 2020 goals for CHD death.

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

	Coronary Heart Disease Death per Age-Adjusted 100,000	Stroke Death per Age-Adjusted 100,000
Elizabeth	NA	29.1
Union County	89.5	32.6
New Jersey	97.6	31.1
United States	97.1	37.1
HNJ 2020	94.3	28.6
HP 2020	103.4	34.8

Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017

Cancer

Cancer remains a leading cause of death, but if detected early, can often be effectively treated. The Union County cancer incidence rate is lower than the state rate and declined 67 points from 2006 to 2015. New Jersey and Union County have a higher incidence of cancer than the nation, but a lower death rate, which is typically indicative of early and effective treatment.

Union County has a higher cancer incidence rate, but a lower cancer death rate than the nation, indicating early and effective treatment

Blacks/African Americans have a lower cancer incidence rate, but a higher cancer death rate, presenting an opportunity to increase early detection

In Union County, cancer incidence is higher among Whites than Blacks/African Americans, contrary to national trends. The cancer death rate is higher among Blacks/African Americans than Whites, indicating Blacks/African Americans may not receive recommended screenings for early detection and treatment.

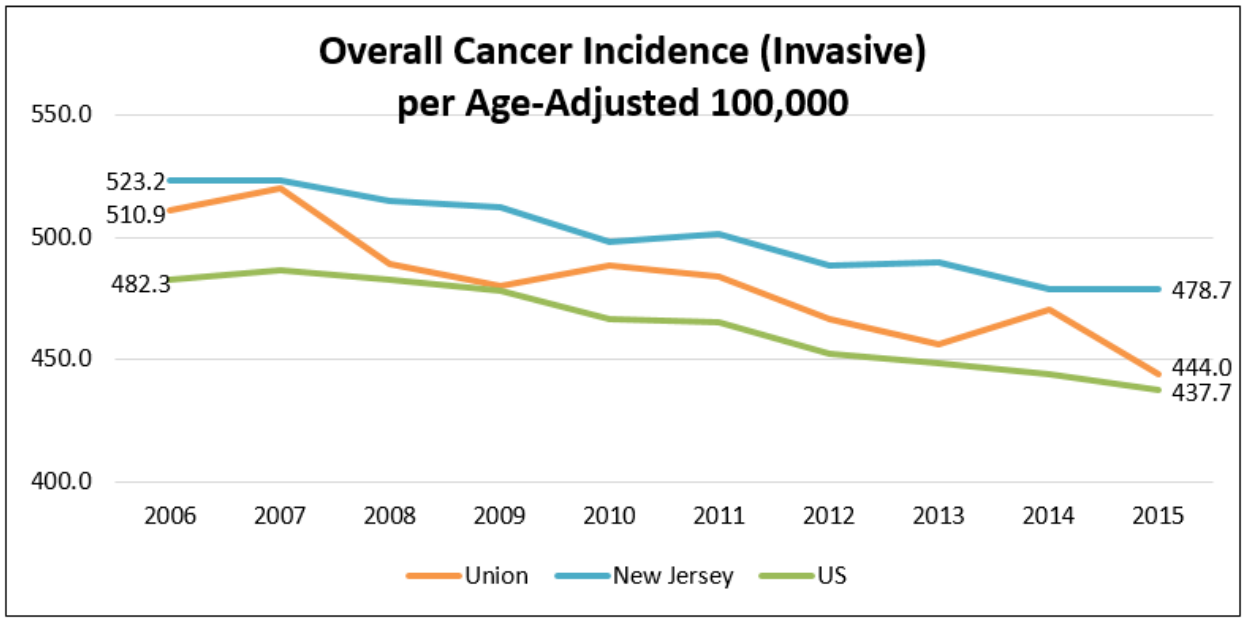
The most commonly diagnosed cancers include female breast, colorectal, lung, and male prostate. Union County incidence and death rates for female breast and colorectal cancers are similar to the state; death rates meet or nearly meet Healthy New Jersey and Healthy People 2020 goals. Approximately 65% of Union County adults receive colorectal screenings and 77% receive mammograms, lower than the state.

Despite positive cancer outcomes, Union County adults do not meet HNJ 2020 goals for screenings

Consistent with having a lower adult smoking rate, Union County lung cancer incidence and death rates are lower than the state and the nation and meet both Healthy New Jersey and Healthy People 2020 goals. While the prostate cancer incidence rate is higher than the state and the nation, the death rate is lower, indicating overall positive screening practices.

Cancer incidence data are not reported for Elizabeth. Cancer death data is similar to the state overall, with the exception of an elevated death rate due to prostate cancer. National findings suggest that Black/African American men are among the most at-risk for prostate cancer incidence and death. ZERO, a nonprofit organization dedicated to ending prostate cancer, reported that Black/African American men are 1.7 times more likely to be diagnosed with and 2.3 times more likely to die from prostate cancer than White men.

Cancer death rates for Elizabeth are similar to the state with the exception of a higher death rate due to prostate cancer

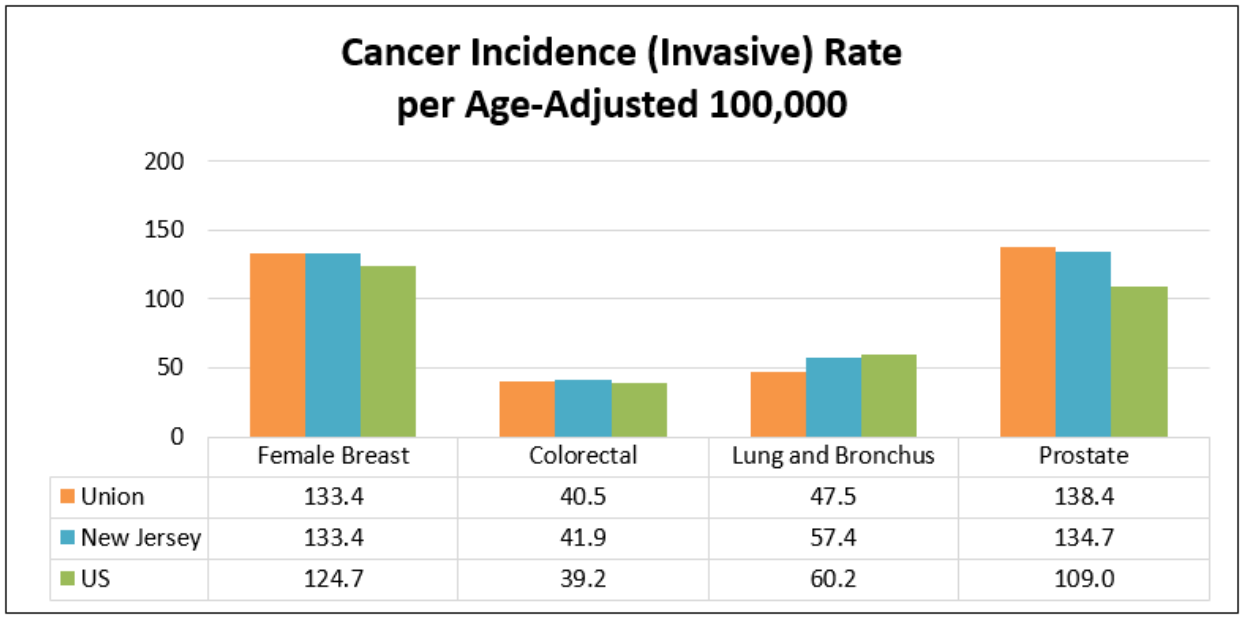


Source: Centers for Disease Control and Prevention, 2006-2015; NJ Department of Health, 2006-2015

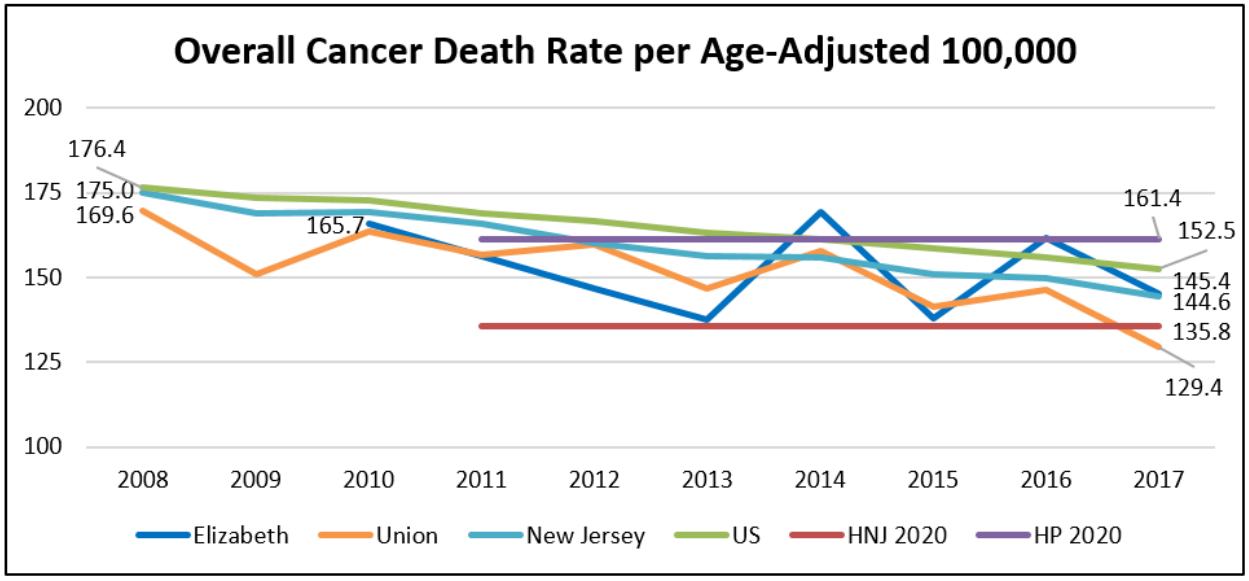
Overall Cancer Incidence (Invasive) per Age-Adjusted 100,000 by Race and Ethnicity

	White	Black/African American	Asian/Pacific Islander	Latinx
Union County	468.0	428.9	274.2	399.4
New Jersey	497.8	448.5	268.8	392.8
United States	450.9	454.9	290.8	346.9

Source: Centers for Disease Control and Prevention, 2011-2015; NJ Department of Health, 2011-2015



Source: Centers for Disease Control and Prevention, 2011-2015; NJ Department of Health, 2011-2015

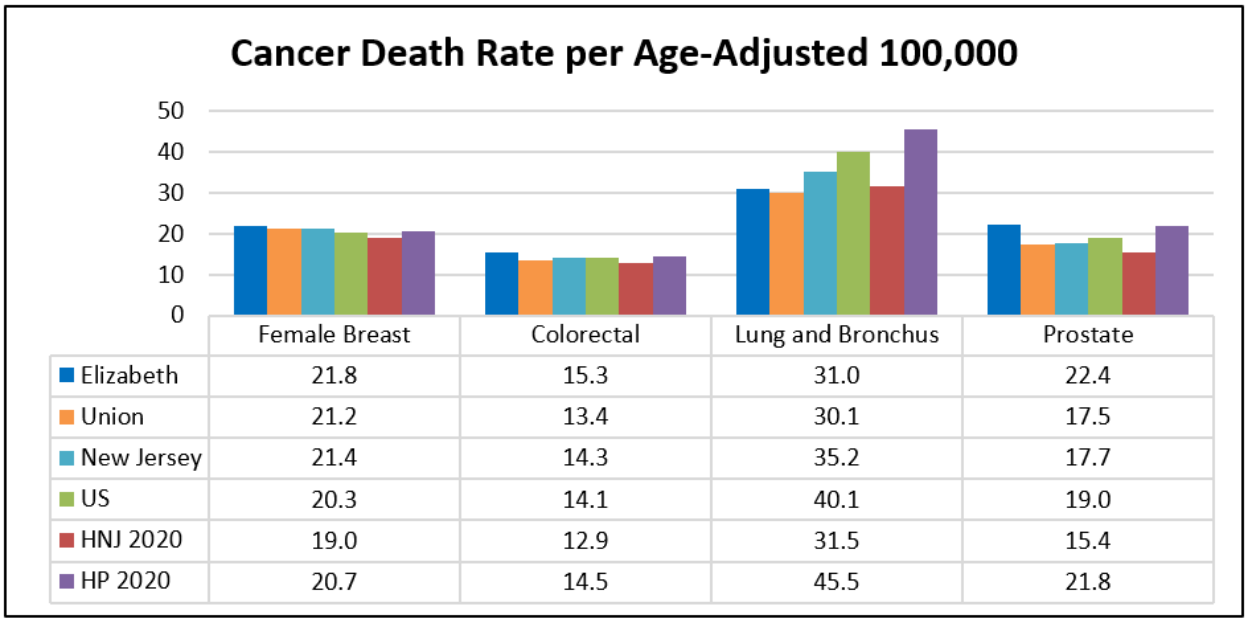


Source: Centers for Disease Control and Prevention, 2008-2017; NJ Department of Health, 2010-2017
*Elizabeth data are not available prior to 2010.

Overall Cancer Death per Age-Adjusted 100,000 by Race and Ethnicity

	White, Non-Hispanic	Black/African American, Non-Hispanic	Asian/Pacific Islander, Non-Hispanic	Latinx
Union County	153.3	173.0	74.0	99.6
New Jersey	161.5	182.1	73.7	98.1
United States	163.2	185.9	98.6	110.9

Source: Centers for Disease Control and Prevention, 2013-2017



	Female Breast	Colorectal	Lung and Bronchus	Prostate
Elizabeth	21.8	15.3	31.0	22.4
Union	21.2	13.4	30.1	17.5
New Jersey	21.4	14.3	35.2	17.7
US	20.3	14.1	40.1	19.0
HNJ 2020	19.0	12.9	31.5	15.4
HP 2020	20.7	14.5	45.5	21.8

Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017

Age-Adjusted Cancer Screenings
(Red = Lower than State Benchmarks)

	Up to Date Colorectal Screening (ages 50-75)	Mammogram in Last Two Years (ages 50-74)	Pap Test in Last Three Years (ages 21-65)
Union County	65.2%	77.0%	74.2%
New Jersey	67.5%	79.3%	81.7%
HNJ 2020	70.2%	87.5%	93.6%

Source: NJ Department of Health, 2017

Chronic Lower Respiratory Disease

Despite a higher prevalence of COPD, Elizabeth has a lower CLRD death rate than the state and nation

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. Despite a higher percentage of Elizabeth adults with a COPD diagnosis, the CLRD death rate is lower than the state and the nation and consistent with the county overall.

Adult Asthma and CLRD Prevalence
(Red = Higher than State and National Benchmarks)

	Asthma Diagnosis (Current)	COPD Diagnosis
Elizabeth	7.4%	8.3%
Union County	8.9%	5.1%
New Jersey	8.6%	6.1%
United States	9.4%	6.5%

Source: NJ Department of Health, 2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.

CLRD Death Rate per Age-Adjusted 100,000 by Race and Ethnicity

	Total Population	White, Non-Hispanic	Black/African American, Non-Hispanic	Latinx
Elizabeth	24.6	NA	NA	NA
Union County	23.4	26.8	26.1	11.0
New Jersey	29.1	32.8	27.3	14.7
United States	41.4	46.3	29.8	17.6

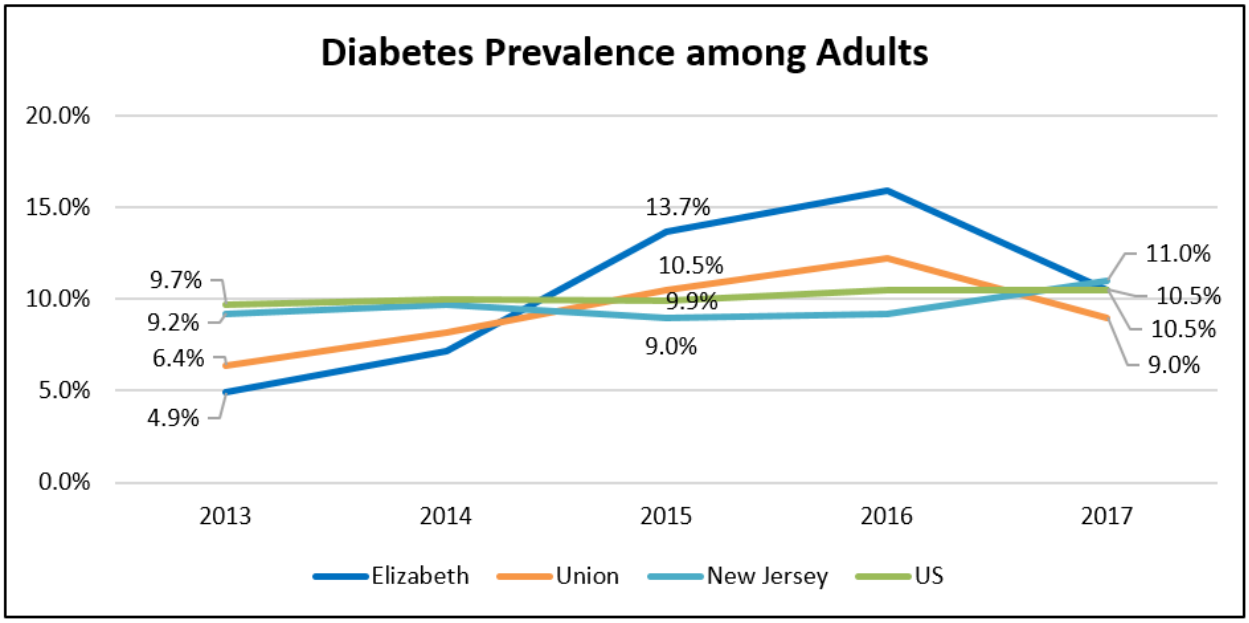
Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017

Diabetes

Diabetes is among the top 10 causes of death in the nation. According to the American Diabetes Association, diabetes and prediabetes affect more than 110 million Americans and cost $322 billion per year. Diabetes can cause a number of serious complications. Type II diabetes, the most common form, is largely preventable through diet and exercise.

As of 2017, approximately 10.5% of Elizabeth adults had diabetes, similar to the state and nation. The percentage represents a more than 5-point decline from 2016 and should continue to be monitored. The diabetes death rate may more accurately reflect the burden of diabetes in Elizabeth. The diabetes death rate is nearly 6-points higher than the county overall, indicating a potentially higher prevalence of disease and/or disease management barriers. Across the county, the Black/African American diabetes death rate is double the White death rate.

Diabetes prevalence and disease management barriers should continue to be monitored in Elizabeth



Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.

Diabetes Death Rate per Age-Adjusted 100,000 by Race and Ethnicity

	Total Population	White, Non-Hispanic	Black/African American, Non-Hispanic	Asian/Pacific Islander, Non-Hispanic	Latinx
Elizabeth	24.3	NA	NA	NA	NA
Union County	18.9	16.4	32.1	NA	13.5
New Jersey	18.3	16.3	34.9	13.2	19.5
United States	21.2	18.7	38.4	15.8	25.3

Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017

Annual hA1c Screenings among Medicare Enrollees 65-75 Years
(Red = Lower than State Benchmark)

	Percent
Union County	83.6%
New Jersey	84.5%
United States	85.0%

Source: Dartmouth Atlas of Health Care, 2014

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 Union County Medicare Beneficiaries who have been diagnosed with a chronic condition.

Approximately 70% of Union County Medicare beneficiaries 65 years or over have two or more chronic conditions, similar to the state percentage. The most commonly diagnosed chronic condition among Medicare beneficiaries is hypertension, followed by high cholesterol and ischemic heart disease.

Approximately 70% of senior Medicare beneficiaries manage two or more chronic conditions

Chronic Condition Diagnoses among Medicare Beneficiaries 65 Years or Over
(Red = Higher than the State and Nation; Green = Lower than the State and Nation)

	Union County	New Jersey	United States
Alzheimer's Disease	12.5%	12.3%	11.3%
Arthritis	29.9%	33.1%	31.3%
Asthma	7.1%	8.4%	7.6%
Cancer	10.2%	10.3%	8.9%
COPD	9.1%	11.1%	11.2%
Depression	11.2%	12.4%	14.1%
Diabetes	33.3%	32.5%	26.8%
Heart Failure	18.5%	16.8%	14.3%
High Cholesterol	53.0%	57.0%	47.8%
Hypertension	62.9%	64.5%	58.1%
Ischemic Heart Disease	35.7%	35.0%	28.6%
Stroke	4.7%	5.1%	4.2%

Source: Centers for Medicare & Medicaid Services, 2015

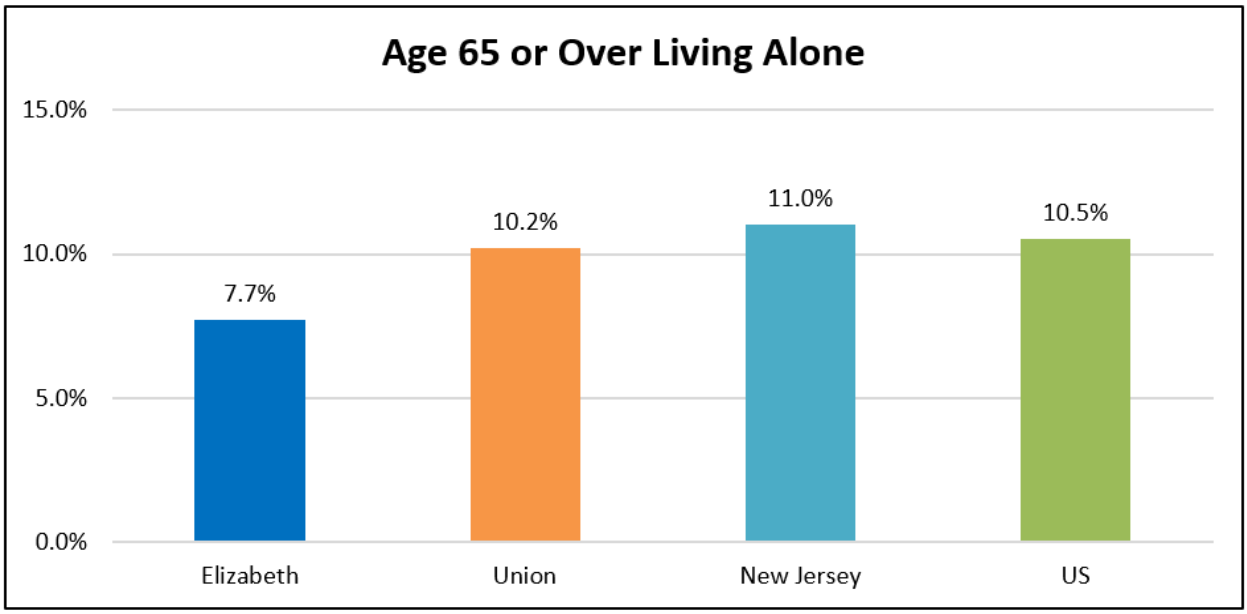
Number of Chronic Conditions among Medicare Beneficiaries 65 Years or Over

	Union County	New Jersey	United States
0 to 1 condition	28.5%	26.2%	32.3%
2 to 3 conditions	29.0%	29.7%	30.0%
4 to 5 conditions	24.3%	24.8%	21.6%
6 or more conditions	18.2%	19.4%	16.2%

Source: Centers for Medicare & Medicaid Services, 2015

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 over who live alone. The percentage of Elizabeth seniors living alone is lower than the county, state, and nation.



Source: US Census Bureau, 2013-2017

Immunizations

The Advisory Committee on Immunization Practices recommends all individuals age six months or older receive the flu vaccine, but the vaccine is a priority for older adults. Approximately two-thirds of Union County older adults receive a flu vaccine, higher than the state and nation and within reach of the Healthy New Jersey 2020 goal.

Pneumococcal disease continues to be a leading cause of serious illness among older adults. According to the CDC, approximately 20%–25% of pneumococcal cases are potentially preventable with proper vaccination. Only 69% of Union County seniors have received a pneumonia vaccination, lower than the state, nation, and Healthy New Jersey 2020 goal.

Vaccination Rates among Older Adults Age 65+
(Red = Lower than State and National Benchmarks)

	Ever Received a Pneumonia Vaccination	Had a Flu Vaccination in the Last Year
Union County	69.3%	65.9%
New Jersey	71.6%	63.4%
United States	75.4%	60.7%
HNJ 2020	72.2%	67.4%
HP 2020	90.0%	90.0%

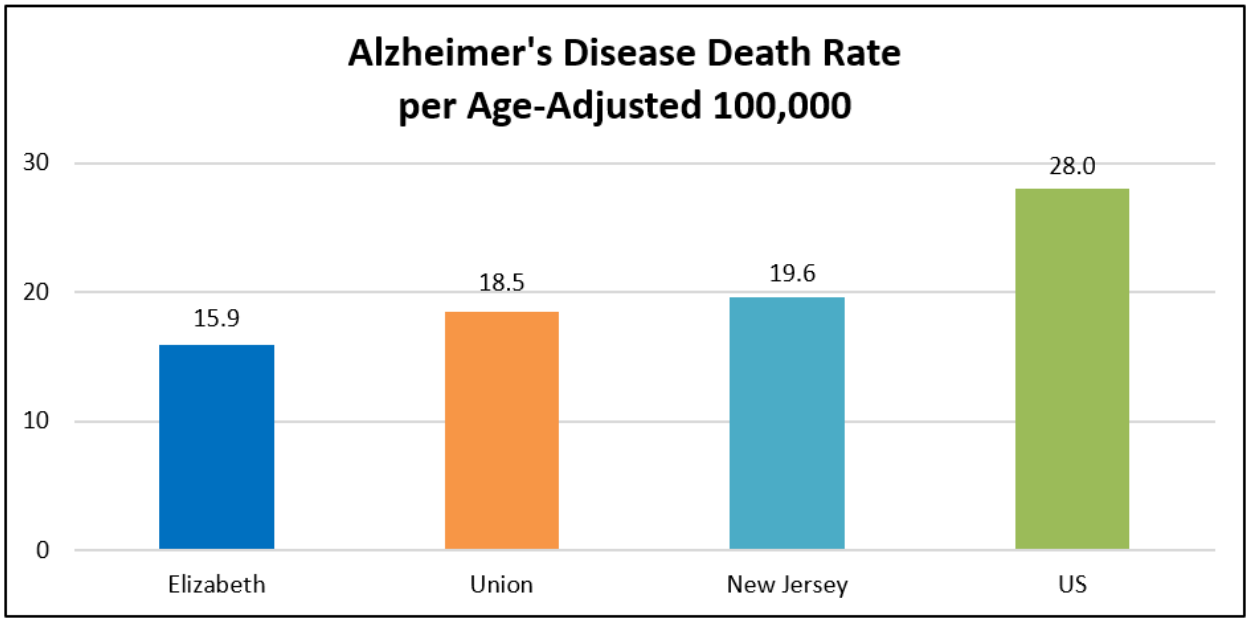
Source: NJ Department of Health, 2017

Alzheimer's Disease

Alzheimer's disease prevalence is slightly higher in Union County than the nation, but the death rate is lower

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."

Approximately 12.5% of Union County Medicare beneficiaries have an Alzheimer's disease diagnosis, slightly higher than the nation, but residents across Union County and Elizabeth are less likely to die from Alzheimer's disease.



Source: Centers for Disease Control and Prevention, 2013-2017; NJ Department of Health, 2013-2017

Behavioral Health

Mental Health

Elizabeth adults are more likely to report frequent mental distress and depression

Approximately 18% of Elizabeth adults report 14 or more days of poor mental health in an average month, and 23% report a history of depression. The percentages exceed state and national benchmarks, and are higher than the county overall. The percentage of adults with diagnosed depression has been variable over the past five years, but increased in both Elizabeth and Union County from 2016 to 2017.

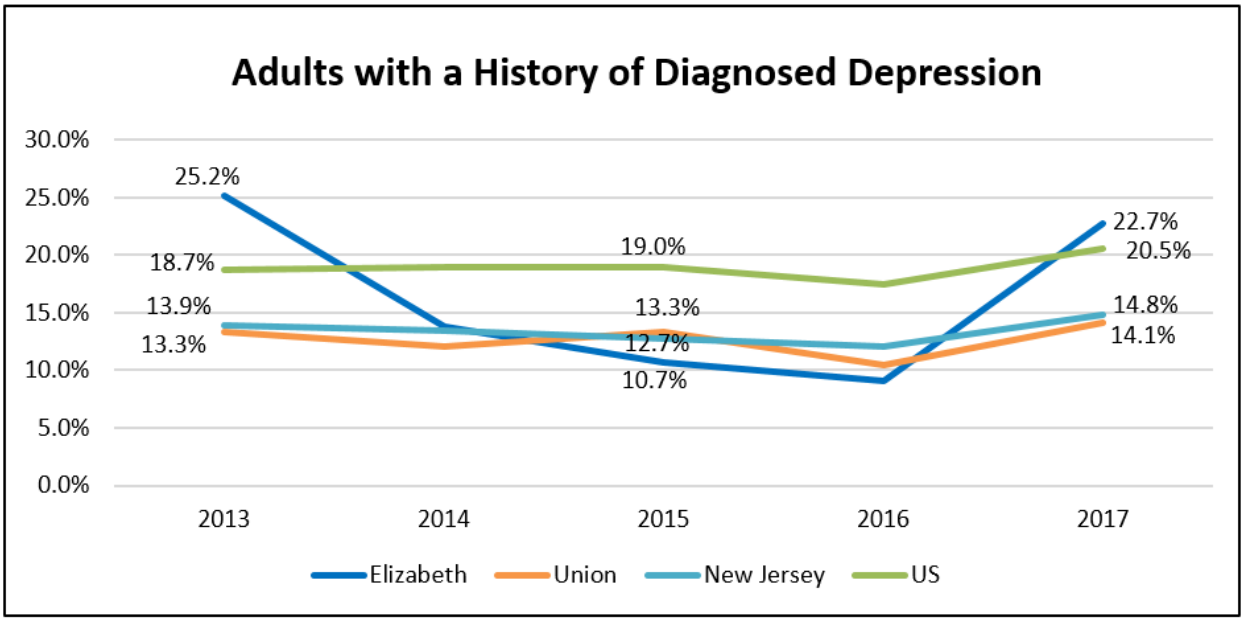
The Union County suicide death rate also increased in recent years and is nearly equal to the state rate. Suicide death data are not available for Elizabeth. Elizabeth had nine suicides in 2017 and eight suicides each in 2016 and 2015.

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. Union County has a lower rate of death due to mental and behavioral disorders than the state and the nation, but the rate increased over the past decade. Mental and behavioral disorders death data are not available for Elizabeth.

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

	Poor Mental Health 14 or More of the Past 30 Days	History of Diagnosed Depression
Elizabeth	18.1%	22.7%
Union County	13.4%	14.1%
New Jersey	11.8%	14.8%
United States	NA	20.5%

Source: NJ Department of Health, 2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.



Source: NJ Department of Health, 2013-2017
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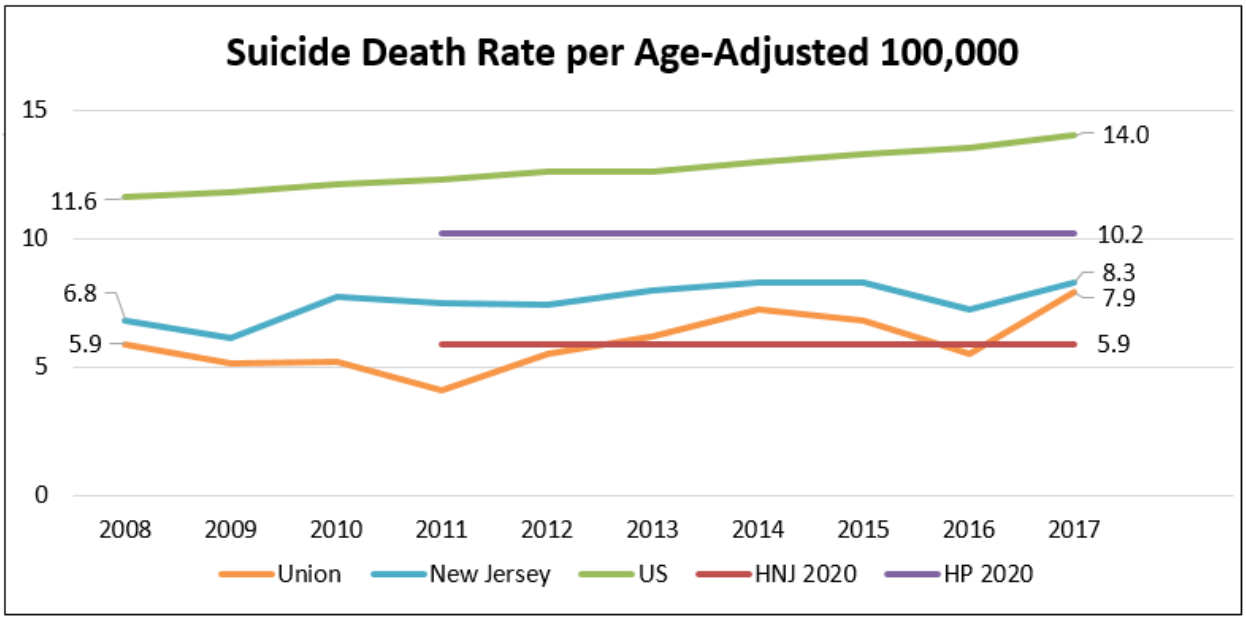
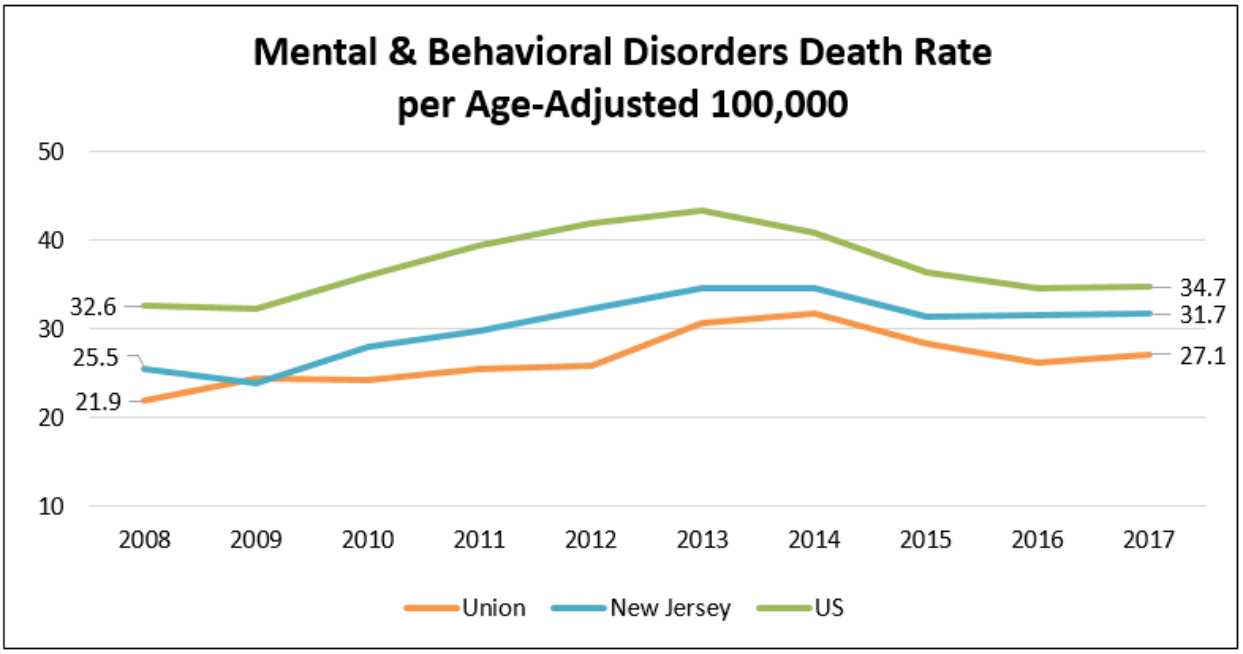


Source: Centers for Disease Control and Prevention, 2008-2017



Source: Centers for Disease Control and Prevention, 2008-2017

Behavioral Health in the Emergency Department

The following tables depict the distribution of behavioral health patients in Union County hospital emergency departments (ED) by age and payer mix. Behavioral health diagnoses encompass both mental health and substance use disorder conditions. Emergency department visits include visits to all hospitals within Union County.

The number of behavioral health ED visits increased, but accounted for a similar percentage of all ED visits

The percentage of ED visits due to a primary behavioral health diagnosis remained stable from the 2016 CHNA at approximately 5% to 6%. The number of behavioral health ED visits continued to rise, increasing 1,792 visits from 2012 to 2016.

At the time of the 2016 CHNA, behavioral health ED visits were increasing among adults age 55 or over and decreasing among children under 13 years. This trend continued through the current report and is consistent with an aging demographic.

The percentage of Medicaid behavioral health patients increased two-fold from 2012 to 2016, likely driven by the expansion of Medicaid in New Jersey. Medicaid patients accounted for the highest percentage of behavioral health patients, followed by Blue Cross/Commercial and charity care/uninsured.

Behavioral Health Patients in the ED (Primary Diagnosis)

	2012	2013	2014	2015	2016
Total Behavioral Health Visits	8,945	9,332	9,287	10,168	10,737
Percentage of ED Visits Due to a Behavioral Health Diagnosis	5.5%	5.6%	5.4%	5.8%	6.0%

Source: New Jersey Hospital Association, 2012-2016

Behavioral Health Patients (Primary Diagnosis) in the ED by Age

	2012	2013	2014	2015	2016
0 – 12	560	519	503	452	499
13 - 21	1,577	1,555	1,620	1,516	1,563
22 – 54	5,429	5,595	5,298	5,822	6,465
55 and over	1,379	1,663	1,866	2,378	2,210
Total Behavioral Health Visits	8,945	9,332	9,287	10,168	10,737

Source: New Jersey Hospital Association, 2012-2016

Behavioral Health Patients (Primary Diagnosis) in the ED by Payer

	2012	2013	2014	2015	2016
Medicare – HMO & FFS	12.4%	12.8%	14.3%	14.4%	13.7%
Medicaid – HMO & FFS	19.5%	18.3%	32.0%	38.3%	38.6%
Blue Cross/Commercial	26.7%	26.6%	25.6%	26.2%	24.5%
Charity Care/Uninsured	39.4%	40.8%	26.7%	19.6%	21.6%
Other	2.1%	1.5%	1.5%	1.6%	1.5%
Total Behavioral Health Visits	8,945	9,332	9,287	10,168	10,737

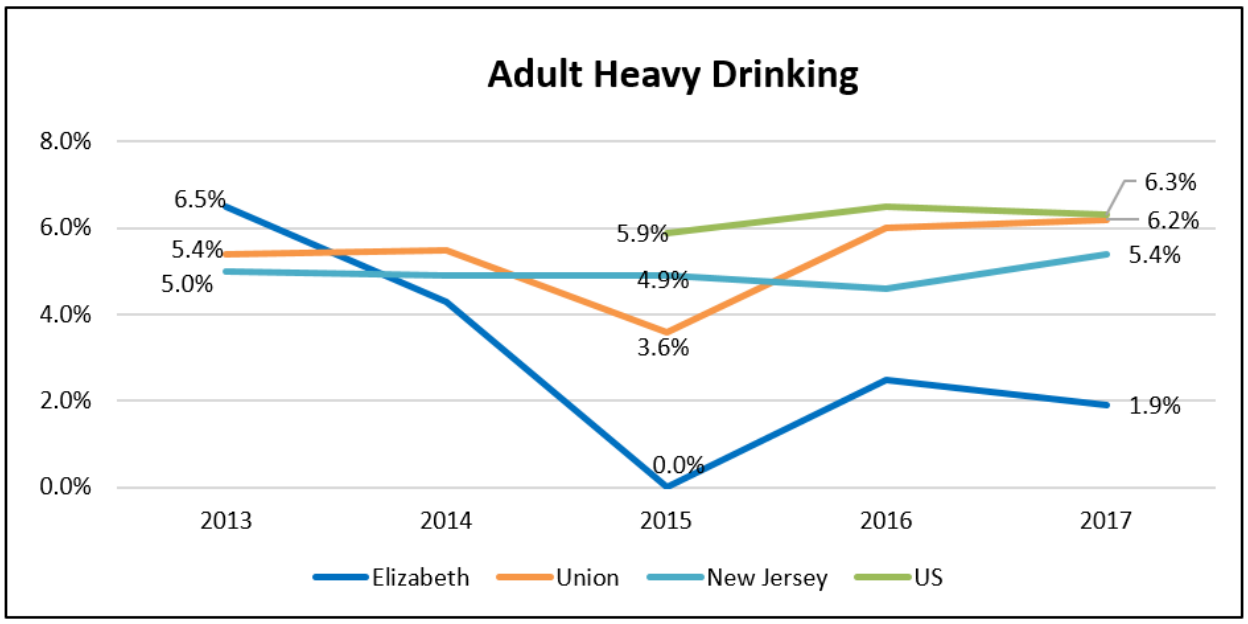
Source: New Jersey Hospital Association, 2012-2016

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.

Heavy drinking is defined as two or more drinks per day for men and one or more drinks per day for women. Fewer Elizabeth adults report heavy drinking compared to the county, state, and nation. The percentage of adult heavy drinkers across Union County is slightly higher than the state percentage and increasing. The percentage of driving deaths due to DUI also increased in Union County from the 2016 CHNA to present (26.4% vs. 28.5%), while the state percentage decreased (28.2% vs. 23.3%).

The percentage of adult heavy drinkers and DUI deaths increased countywide



Source: NJ Department of Health, 2013-2017
*Note: Elizabeth data are based on a small sample size and should be interpreted with caution.

Drug-induced deaths include all deaths for which drugs are the underlying cause, including drug overdoses and deaths from medical conditions resulting from chronic drug use. The Union County death rate has historically been lower than state and national death rates, but it increased sharply from 2014 to 2017, rising 13 points. The death rate now exceeds the Healthy People 2020 goal and is nearly equal to the national death rate.

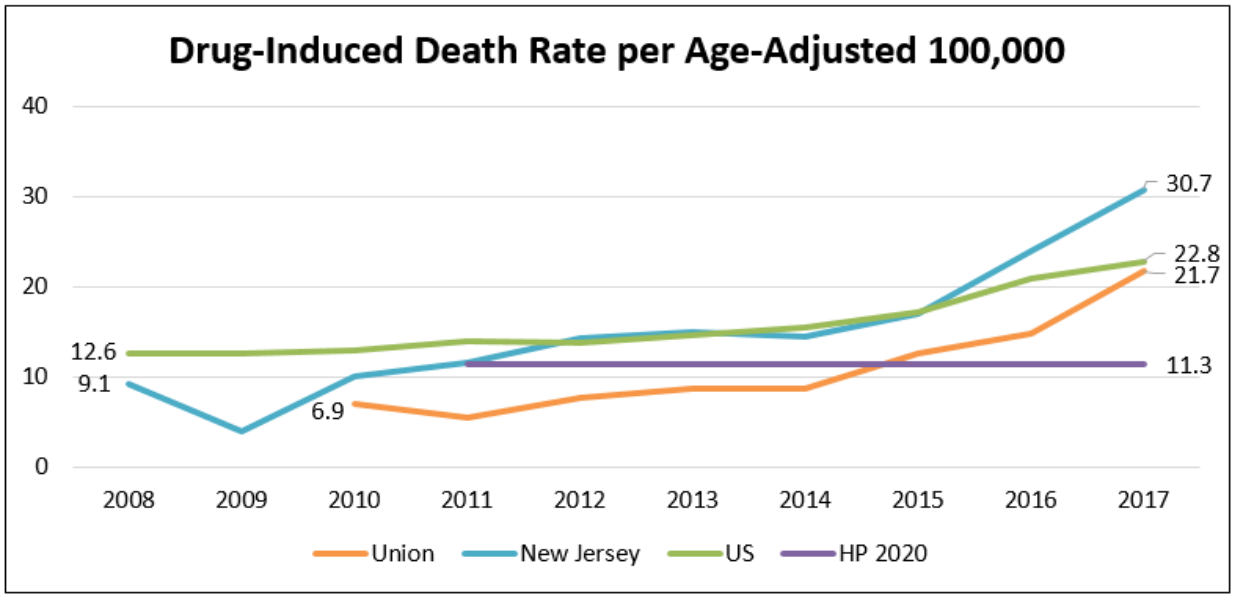
The Union County drug-induced death rate increased 13 points from 2014 to 2017; the number of drug-induced deaths in Elizabeth more than tripled from 2014 to 2017

Drug-induced death rates are not reportable for Elizabeth due to low counts. Consistent with an increasing countywide death rate, the number of drug-induced deaths among Elizabeth residents more than tripled from 10 deaths in 2014 to 33 deaths in 2017.

According to New Jersey Department of Law & Public Safety preliminary results, the majority of drug-induced deaths in 2017 were due to fentanyl and fentanyl analogs, followed by heroin. A fentanyl analog is a drug that mimics the pharmaceutical effects of the original drug (fentanyl).

Consistent with an increasing drug-induced death rate, the number of suspected opioid overdoses and naloxone administrations increased over the past five years. A positive finding is that the number of dispensed opioid prescriptions declined.

Suspected drug overdoses and naloxone administration increased, but opioid prescriptions decreased



Source: Centers for Disease Control and Prevention, 2008-2017
*The Union County 2008 drug-induced death rate is 6.3. The 2009 death rate is unreliable, leading to an incomplete trend.

2017 Drug-Related Deaths by Primary Drug (Preliminary)

	Union County	New Jersey
Fentanyl and Analogs	84	1,379
Heroin	64	1,132
Cocaine	55	605
Oxycodone	17	225
Morphine	10	123
Methadone	4	87
Total	**131**	**2,750**

Source: New Jersey Department of Law & Public Safety, 2017

Union County Historic Opioid-Related Data

	2013	2014	2015	2016	2017	2018
Suspected Overdose Deaths	45	47	67	98	131	153
Naloxone Administrations	NA	NA	276	438	709	770
Opioid Prescriptions Dispensed	267,283	250,763	265,456	249,316	226,862	192,079

Source: New Jersey Department of Law & Public Safety, 2013-2018

The following tables depict 2017 substance use disorder treatment admissions for residents within Union County, regardless of where they sought treatment in New Jersey. Admissions are reported by treatment providers through the web-based New Jersey Substance Abuse Monitoring System (NJ-SAMS). Admissions represent visits, not unique patients.

Union County had 3,341 treatment admissions in 2017, an increase from 3,096 admissions at the time of the 2016 CHNA. Treatment clients were primarily between the ages of 35 and 54 years (44%), followed by 25 to 34 years (29%). A similar percentage of clients were Black/African American, Non-Hispanic (37%) or White, Non-Hispanic (38%). Approximately 20% were unemployed and 9% were homeless. The largest percentage of admissions were due to heroin, followed by alcohol.

Heroin is the primary drug in 41% of substance use disorder treatment admissions for Union County residents

Substance Use Disorder Treatment Admissions by Primary Drug

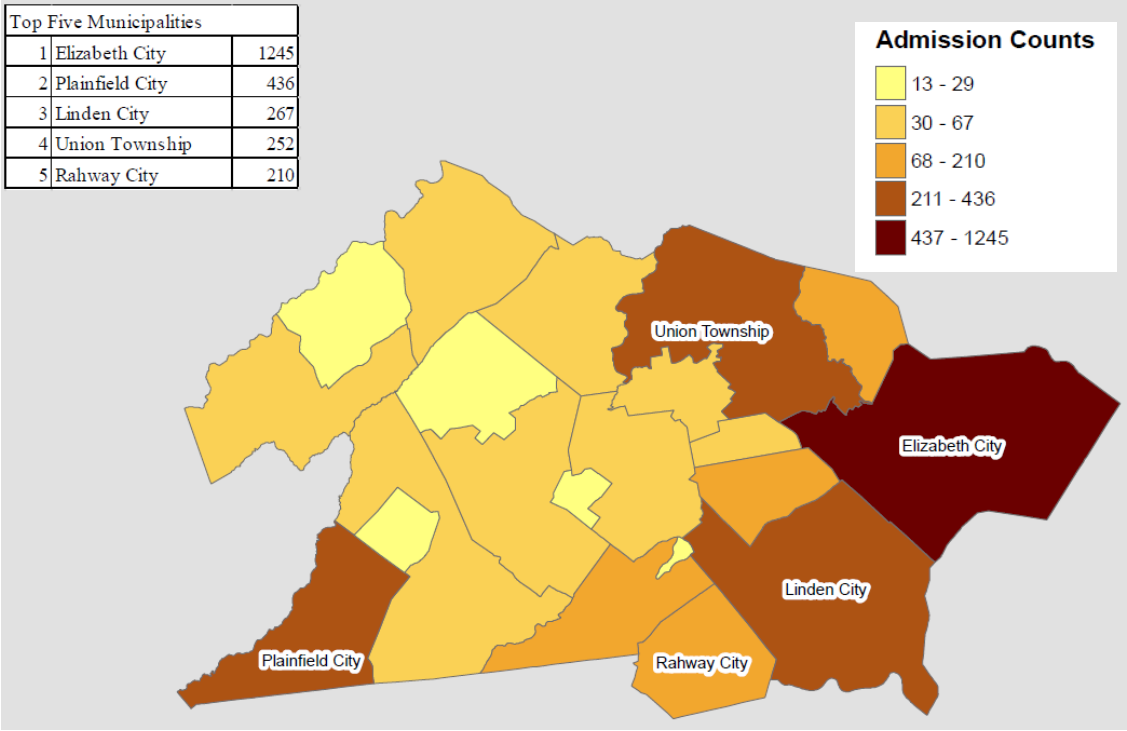
	Count	Percent
Heroin	1,373	41.0%
Alcohol	1,110	33.0%
Marijuana	472	14.0%
Cocaine	157	5.0%
Other Opiates	140	4.0%
Other Drugs	81	2.0%
Total Admissions	**3,341**	
IV Drug Users	**24.0%**	
Unduplicated Clients	**2,411**	

Source: NJ Department of Health, January 1, 2017 – December 31, 2017

The following map shows treatment admissions by client municipality of residence, highlighting the top five municipalities. Elizabeth was the top municipality of residence with 1,245 total admissions. Consistent with findings for the county, the primary drug upon admission for Elizabeth clients was heroin, followed by alcohol.

Elizabeth is the top municipality of residence for substance use disorder treatment clients

Union County Substance Use Disorder Treatment Admissions by Municipality of Residence



Source: NJ Department of Health, January 1, 2017 – December 31, 2017

Substance Use Disorder Treatment Admissions by Primary Drug for Top Five Municipalities in Union County

	Alcohol		Cocaine/ Crack		Heroin		Other Opiates		Marijuana/ Hash		Other/ Unknown		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N
Elizabeth	391	31	70	6	482	39	39	3	225	18	38	3	1,245
Plainfield	131	30	22	5	185	42	16	4	75	17	7	2	436
Linden	99	37	17	6	91	34	15	6	38	14	7	3	267
Union Township	79	31	6	2	120	48	6	2	28	11	13	5	252
Rahway	63	30	7	3	103	49	14	7	17	8	6	3	210

Source: NJ Department of Health, January 1, 2017 – December 31, 2017

Maternal and Child Health

Total Births and Teen Pregnancy

The birth rate for Union County is similar to the state rate. More than 40% of births are to Latina mothers. The county also has a higher percentage of births to Black/African American mothers.

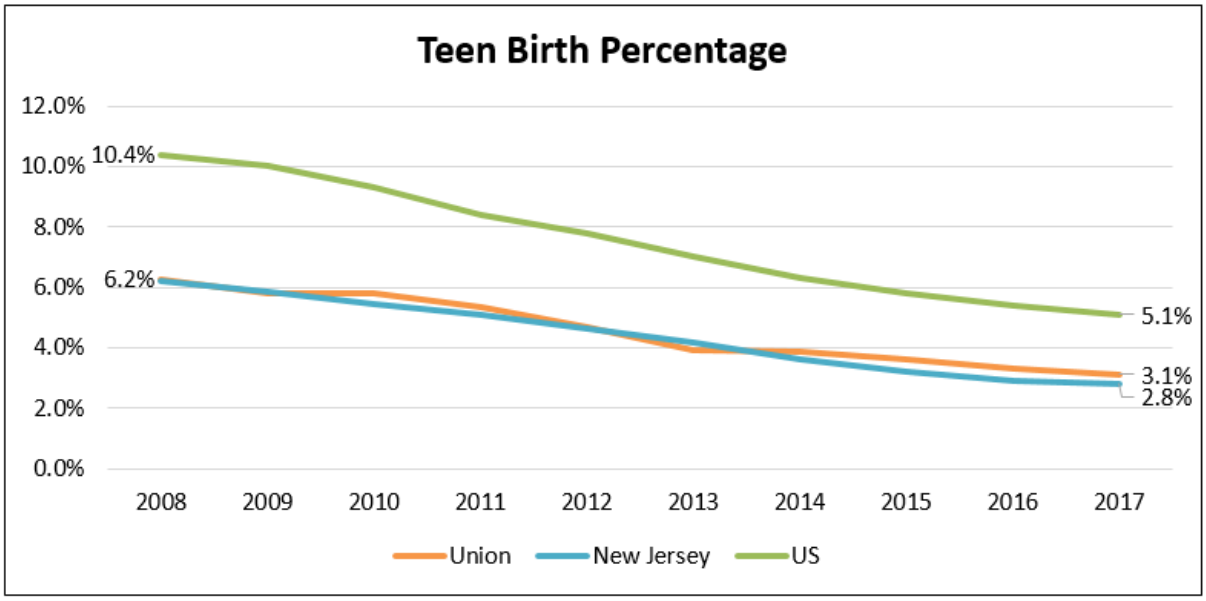
The birth rate for Elizabeth exceeds Union County and the state. Nearly 70% of births are to Latina mothers, consistent with the demographics of the city.

2017 Union County Births by Race and Ethnicity

	Total Births	Total Birth Rate per 1,000	White, Non-Hispanic Births	Black/African American, Non-Hispanic Births	Asian/Pacific Islander, Non-Hispanic Births	Latina Births
Elizabeth	2,018	15.8	7.6%	17.4%	2.1%	69.1%
Union County	6,845	12.1	28.8%	18.2%	6.7%	42.7%
New Jersey	101,154	11.2	44.5%	13.4%	11.6%	26.9%

Source: NJ Department of Health, 2017

The percentage of births to teenagers declined nationally. The Union County teen birth percentage is similar to the state and lower than the nation. The Elizabeth teen birth percentage is equal to the nation and followed a similar trend over the past decade.



Source: Centers for Disease Control and Prevention, 2008-2017; NJ Department of Health, 2008-2017

Elizabeth Teen Births

	Total Teen Births	Percentage of Total Births
Elizabeth	100	5.0%

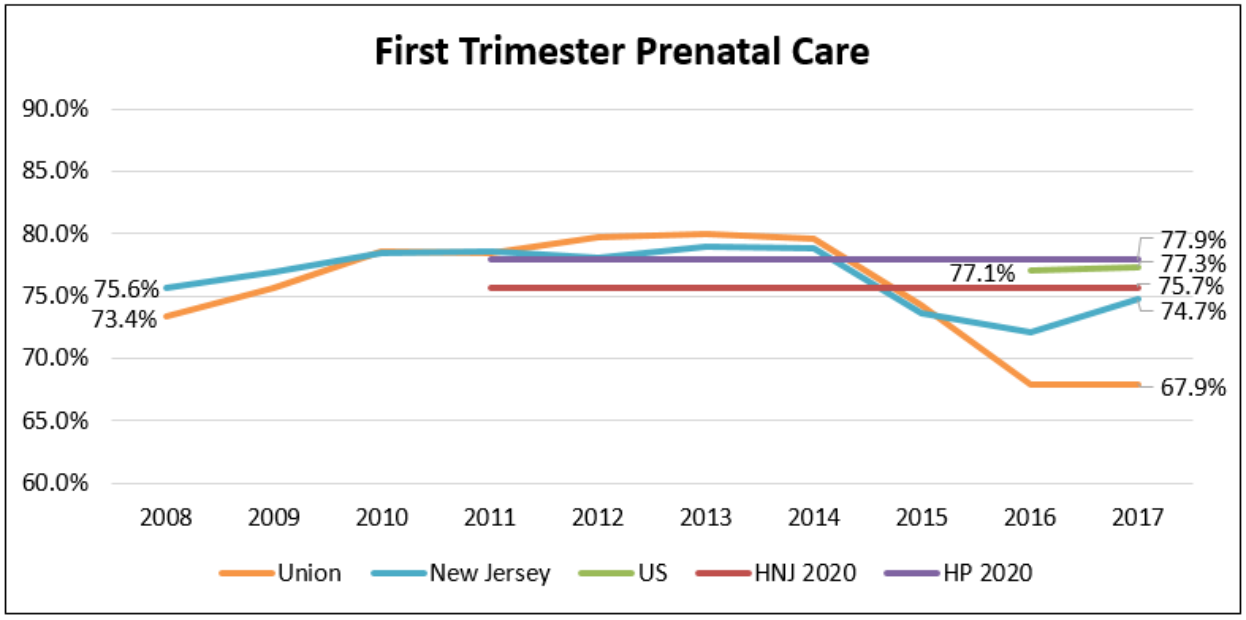
Source: NJ Department of Health, 2017

Prenatal Care

Union County does not meet HNJ or HP 2020 goals for first trimester prenatal care; measures for Elizabeth are the second lowest in the county

Engaging in early prenatal care increases the chances that a mother and her baby will have a healthy pregnancy and a healthy birth. Entry into prenatal care after the first trimester can suggest barriers to accessing care. Measures for prenatal care are less favorable for Union County compared to the state and Healthy New Jersey and Healthy People 2020 goals. Measures for Elizabeth are the second lowest in the county, behind Plainfield.

Note: In 2014-2015, the New Jersey Department of Health changed its data collection methods for calculating prenatal care, which resulted in a sharp decline statewide in 2015.



Source: NJ Department of Health, 2008-2017
*Starting in 2016, all of the US reported data based on the 2003 US Certificate of Live Birth, providing national indicators for timing of prenatal care. Data prior to 2016 are not reported.

Elizabeth Mothers Receiving First Trimester Prenatal Care

	Mothers Receiving First Trimester Prenatal Care	Total Births
Elizabeth	56.1%	2,018

Source: NJ Department of Health, 2017

Low Birth Weight and Premature Birth

Union County and Elizabeth meet HNJ and HP 2020 goals for low birth weight and premature birth

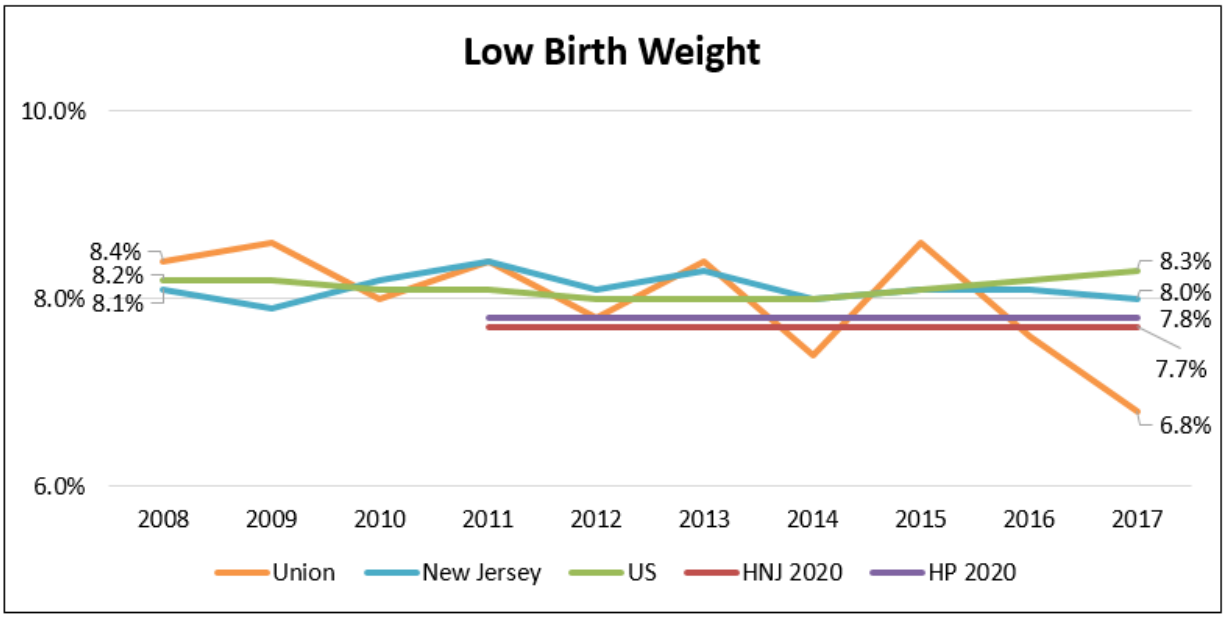
Low birth weight is defined as a birth weight of less than 5 pounds, 8 ounces. Low birth weight is often a result of premature birth, fetal growth restrictions, or birth defects and can be associated with a variety of negative birth outcomes. The Union County low birth weight percentage has been variable, but declined sharply from 2015 to 2017. The current percentage meets Healthy New Jersey and Healthy People 2020 goals. Elizabeth also meets the goals.

Premature birth is defined as birth before 37 weeks of pregnancy, and can contribute to infant death or disability. Union County and Elizabeth meet the Healthy People 2020 goal for premature birth; the percentage countywide has been declining steadily.

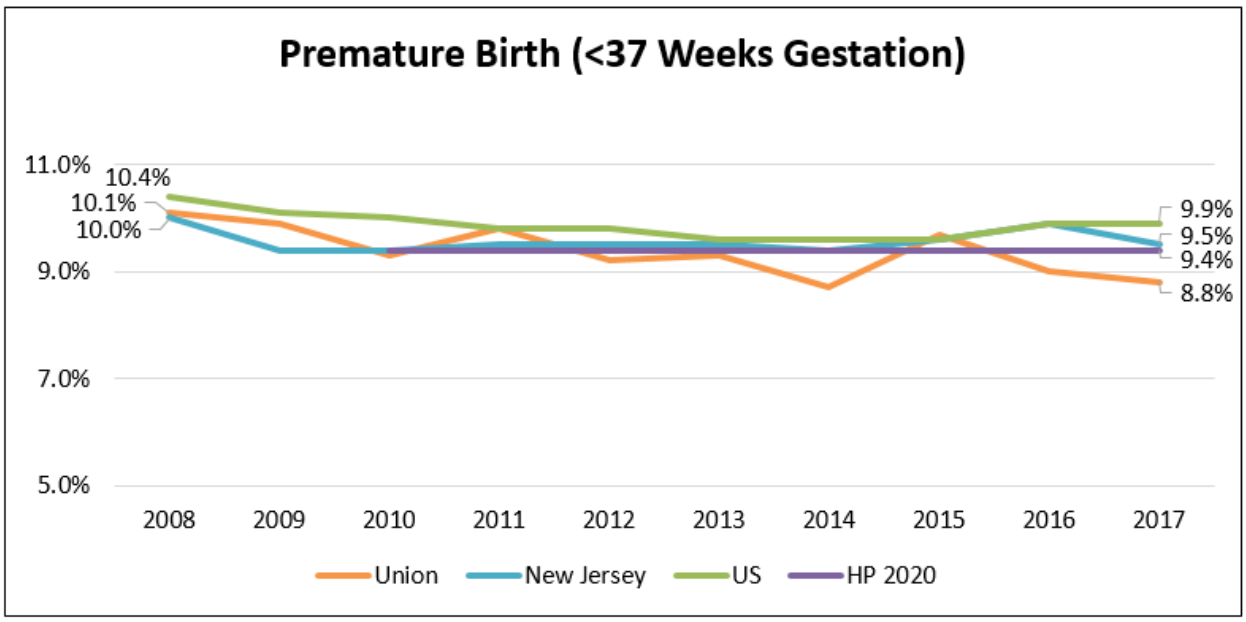
Low Birth Weight and Premature Births in Elizabeth

	Low Birth Weight	Premature Births
Elizabeth	7.2%	9.1%

Source: NJ Department of Health, 2017



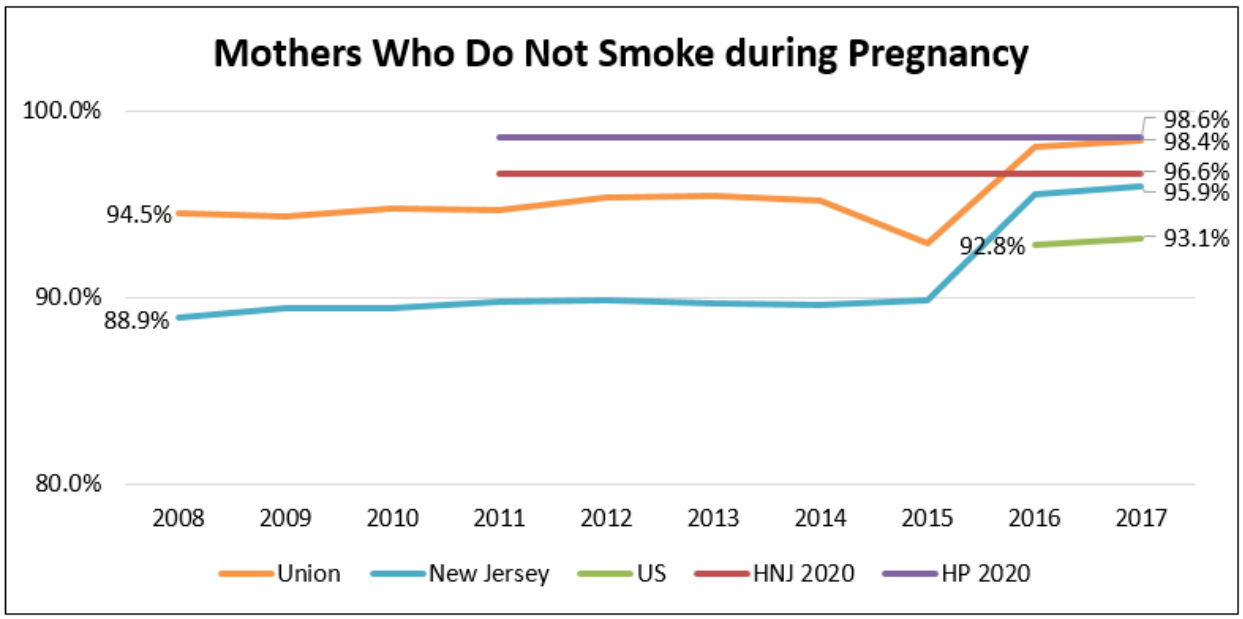
Source: Centers for Disease Control and Prevention, 2008-2017; NJ Department of Health, 2008-2017



Source: Centers for Disease Control and Prevention, 2008-2017; NJ Department of Health, 2008-2017

Smoking during Pregnancy

Smoking during pregnancy is associated with a variety of negative birth outcomes. Healthy People 2020 set a goal of reducing the number of pregnant women who smoke to 1.4%. Consistent with having a lower percentage of adults who report smoking, Union County and Elizabeth nearly meet Healthy New Jersey and Healthy People 2020 goals for mothers who do not smoke during pregnancy.



Source: NJ Department of Health, 2008-2017

*Starting in 2016, all of the US reported data based on the 2003 US Certificate of Live Birth, providing national indicators for tobacco use during pregnancy. Data prior to 2016 are not reported.

Non-Smoking Mothers in Elizabeth

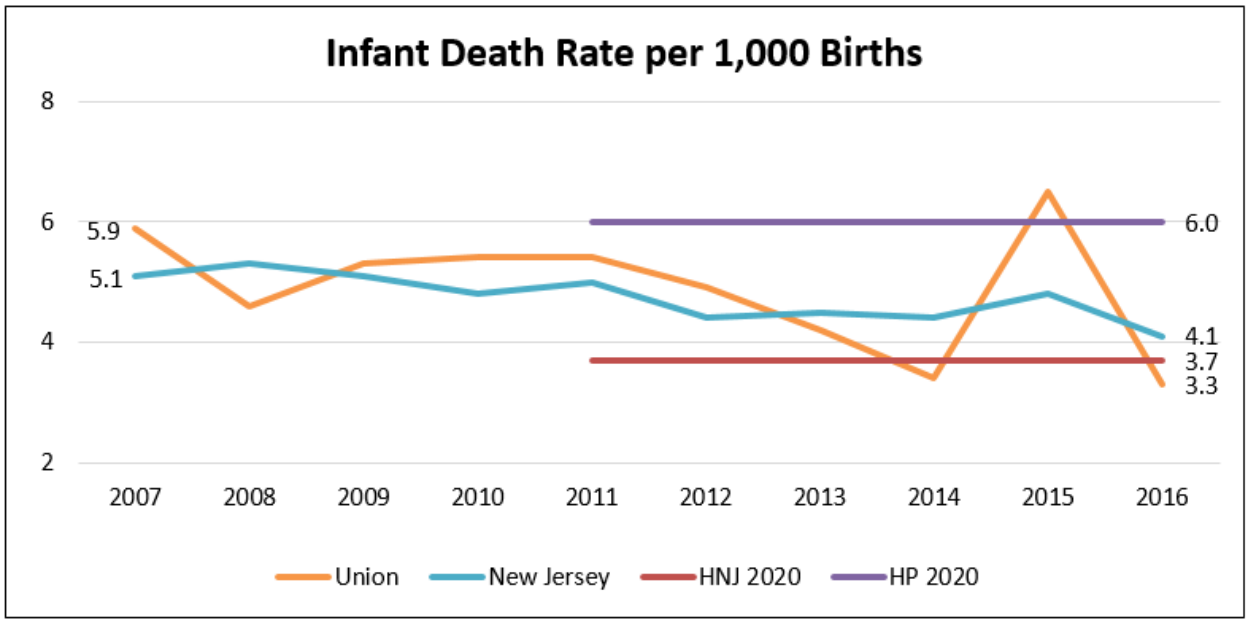
	Non-Smoking Mothers
Elizabeth	97.4%

Source: NJ Department of Health, 2017

Infant Mortality

The infant death rate for Union County has historically met the Healthy People 2020 goal with the exception of a peak in 2015. The current death rate is the lowest rate in a decade and meets both Healthy New Jersey and Healthy People 2020 goals.

The 2016 infant death rate for Union County is the lowest in the past decade



Source: NJ Department of Health, 2007-2016

Maternal and Child Health Disparities

Maternal and child health indicators are presented in the table below by race and ethnicity. In Union County, measures for prenatal care are less favorable for Black/African American and Latina mothers compared to White mothers. Union County does not meet the Healthy New Jersey 2020 goal for early prenatal care for either demographic.

The percentage of Black/African American and Latina mothers receiving first trimester care is 30% points lower than the percentage for White mothers

Consistent with experiencing prenatal care access barriers, the premature birth percentage is higher for Black/African American and Latina mothers. The low birth weight percentage is also higher for Black/African American mothers, although the current percentage meets the Healthy New Jersey 2020 goal.

Maternal and Child Health Indicators by Race and Ethnicity

	Union County	New Jersey	HNJ 2020
Mothers Who Receive First Trimester Care			
Total Population	67.9%	74.7%	75.7%
White, Non-Hispanic	87.7%	83.6%	83.5%
Black/African American, Non-Hispanic	58.2%	60.1%	61.5%
Asian/Pacific Islander, Non-Hispanic	81.4%	81.1%	82.4%
Latina	56.5%	65.4%	68.3%
Low Birth Weight Infants			
Total Population	6.8%	8.0%	7.7%
White, Non-Hispanic	5.3%	6.4%	6.0%
Black/African American, Non-Hispanic	10.4%	12.3%	12.4%
Asian/Pacific Islander, Non-Hispanic	7.5%	9.1%	7.9%
Latina	6.1%	7.7%	7.1%
Mothers Who Do Not Smoke During Pregnancy			
Total Population	98.4%	95.9%	96.6%
White, Non-Hispanic	98.8%	94.8%	95.5%
Black/African American, Non-Hispanic	97.1%	93.6%	94.4%
Asian/Pacific Islander, Non-Hispanic	100.0%	99.5%	99.7%
Latina	98.5%	97.4%	98.2%
Premature Births			
Total Population	8.8%	9.5%	NA
White, Non-Hispanic	6.9%	8.3%	NA
Black/African American, Non-Hispanic	11.4%	13.1%	NA
Asian/Pacific Islander, Non-Hispanic	7.2%	8.6%	NA
Latina	9.1%	9.7%	NA

Source: NJ Department of Health, 2017

Consistent with the 2016 CHNA, the percentage of students who meet immunization requirements is generally higher in Union County compared to the state.

Immunizations among Children by Grade

	Childcare/Pre-K	Kindergarten	Sixth
Union County	95.6%	96.8%	96.1%
New Jersey	93.7%	96.1%	96.5%

Source: NJ Department of Health, 2017-2018

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. The measure for high levels of lead exposure or lead poisoning was recently revised from 10 micrograms per deciliter of blood (µg/dL) or higher to 5 µg/dL of blood or higher.

In 2018, 5,655 children age 6 or younger residing in Elizabeth were screened for lead poisoning. Of those screened, 5,569 or 98.5% had readings within the normal range (less than 5 µg/dL). Nurse case management services were provided to children with elevated levels and housing inspections were conducted for children with levels greater than 10 µg/dL.

Lead Screening and Poisoning among Elizabeth Children 6 Years of Age and Under

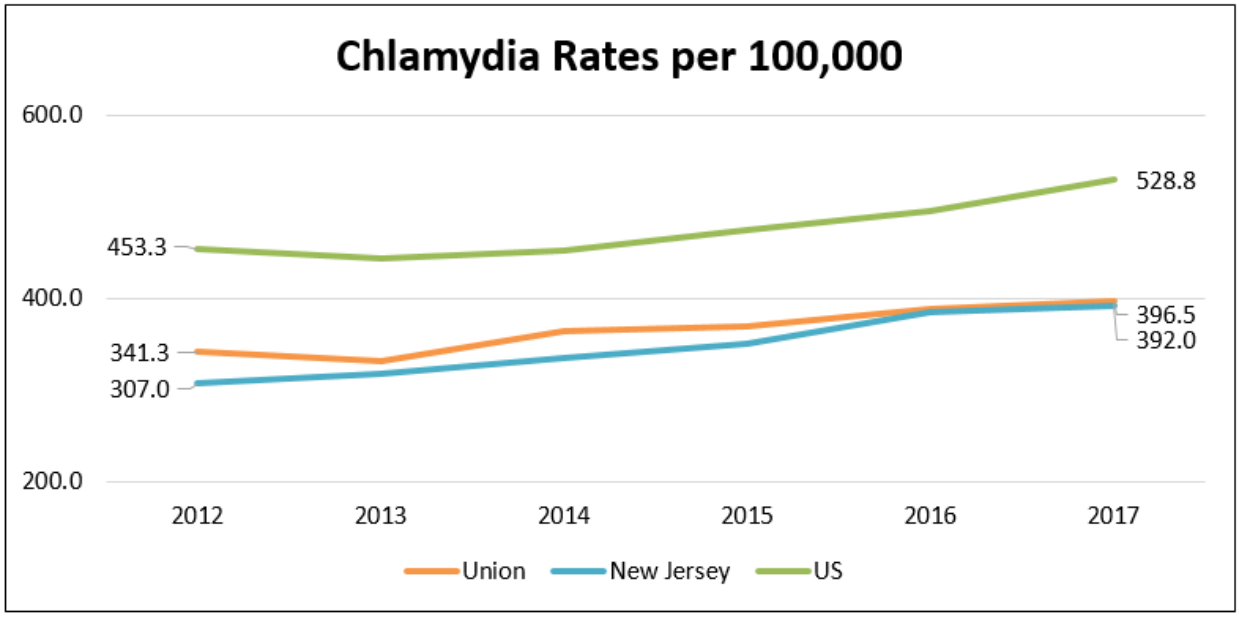
	Count
Normal range (Zero to less than 5)	5,569
Elevated (Greater than 5)	57
Unable to be calculated	29

Source: City of Elizabeth Department of Health and Human Services, 2018

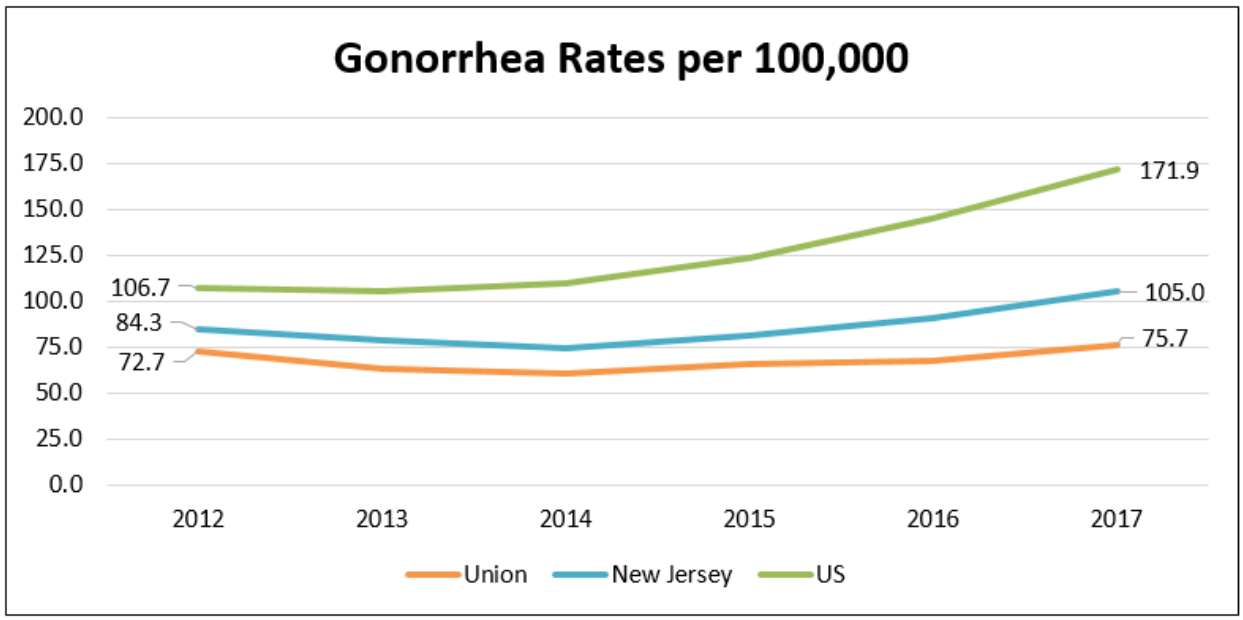
Sexually Transmitted Infections

Sexually transmitted infections (STIs) that require reporting to the CDC and state and local health bureaus upon detection include chlamydia, gonorrhea, and HIV. The Union County chlamydia rate is similar to the state and lower than the nation; the gonorrhea rate is lower than both the state and the nation. Rates for both conditions are gradually increasing.

Union County rates of chlamydia and gonorrhea are lower than the nation, but slowly increasing



Source: Centers for Disease Control and Prevention, 2012-2017; NJ Department of Health, 2012-2017



Source: Centers for Disease Control and Prevention, 2012-2017; NJ Department of Health, 2012-2017

The table below shows STI clinic data from the City of Elizabeth Department of Health and Human Services for fiscal year 2018. Data includes the number of individuals tested, the number of positive results, and how many individuals were linked to treatment.

Males were more likely than females to be tested for STIs and to have a positive diagnosis. Gonorrhea or chlamydia were the most commonly diagnosed STIs among both males and females. Nearly all individuals who tested positive for a STI were linked to treatment.

Sexually Transmitted Infections in Elizabeth

	Number Tested		Number Positive		Linked to Treatment	
	Male	Female	Male	Female	Male	Female
Syphilis – Primary	216	126	2	0	2	0
Syphilis – Secondary	216	126	4	1	4	1
Syphilis – Early Latent	216	126	9	0	9	0
Syphilis – Late/Unknown	216	126	21	5	20	5
Gonorrhea	222	127	29	5	28	4
Chlamydia	222	127	21	13	21	13
Trichomoniasis	NA	128	NA	10	NA	9

Source: City of Elizabeth Department of Health and Human Services, 2018

Union County has a higher prevalence of HIV/AIDS compared to the state. Nearly 3,000 individuals in the county are living with HIV/AIDS.

Elizabeth and Plainfield are among the top 10 cities in New Jersey for HIV/AIDS prevalence

The New Jersey Department of Health IMPACT initiative aims to lower the incidence of HIV/AIDS in the top 10 cities in the state with the highest number of cases. Elizabeth and Plainfield are among the top 10 cities participating in the initiative. Collectively, the cities are home to 57% of all Union County residents living with HIV/AIDS. In Elizabeth, a similar number of Latinxs and Blacks/African Americans are living with HIV/AIDS. In Plainfield, 65% of people living with HIV/AIDS are Black/African American.

HIV/AIDS Prevalence

	Total People Living with HIV/AIDS	Percentage of Total Union County Cases
Elizabeth	1,150	39.9%
Whites, NH	95	8.0%
Blacks/African Americans, NH	487	42.0%
Latinx (any race)	562	49.0%
Transmission by IV drug use	203	18.0%
Plainfield	490	17.0%
Whites, NH	47	10.0%
Blacks/African Americans, NH	319	65.0%
Latinx (any race)	122	25.0%
Transmission by IV drug use	73	15.0%
Union County	2,883	518.9
New Jersey	37,411	418.3

Source: NJ Department of Health, 2017

Secondary data findings were analyzed as part of the 2019 CHNA to inform health priorities for Union County. Secondary data is valuable for tracking and benchmarking community health status indicators, as well as for identifying emerging community needs. Additional research collected as part of the 2019 CHNA are summarized in the following report sections.

Key Informant Survey Results

Background

A Key Informant Survey was conducted with community representatives within the greater Elizabeth area to solicit information about health needs among residents. A total of 30 individuals responded to the survey, including health and social service providers; community and public health experts; civic, religious, and social leaders; policy makers and elected officials; and others representing diverse populations including minority, low-income, and other underserved or vulnerable populations. A list of the represented community organizations and the key informants' respective titles is included in Appendix B. Key informant names are withheld for confidentiality.

These "key informants" were asked a series of questions about their perceptions of community health including health drivers, barriers to care, community infrastructure, and missing resources within the community. A summary of findings from their responses is included below.

Summary of Findings

- The top community health concerns, in rank order according to key informants, are diabetes, overweight/obesity, heart disease and stroke, and mental health conditions.
- Informants were asked to share freeform comments about the factors that most contribute to the community's top health concerns. The top factors, by number of mentions by informants, are access to healthy and fresh foods, low-income/poverty, and health habits.
- Minority populations, including Blacks/African Americans and Latinxs, were seen as the most impacted by community health concerns. Other populations most impacted by health concerns were low-income populations and immigrants.
- When asked if various community and healthcare services are available in the area, respondent mean scores were between 2.37 and 3.07 out of 5, indicating overall disagreement or neutral perspectives. Affordable, safe housing, preventive screenings and checkups, and affordable, nutritious foods were considered the least available services.
- When asked to rate community dimensions impacting social determinants of health, respondent mean scores were between 2.03 and 2.57 out of 5, indicating overall "poor" or "average" ratings. Social and community context and health and healthcare were seen as the strongest dimensions.
- Two-thirds of informants rated affordable housing and healthy food options as the top missing resources in the community. Mental health services were chosen as a missing resource by 63% of informants.

Survey Participants

More than two-thirds of key informants indicated that they served residents of Elizabeth. Nearly 60% of informants served all of Union County. “Other” geographies served by informants included Middlesex and Monmouth counties and all of New Jersey.

Geographies Served by Key Informants

	Percent of Informants*	Number of Informants
Elizabeth, NJ	70.0%	21
All of Union County, NJ	56.7%	17
East Central Union County, NJ	33.3%	10
North Central Union County, NJ	33.3%	10
Southeast Union County, NJ	30.0%	9
Southwest Union County, NJ	23.3%	7
Northwest Union County, NJ	13.3%	4
West Central Union County, NJ	13.3%	4
Other	13.3%	4

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

Four in 10 key informants indicated that they served all populations within their service area. The most commonly served special population groups were Black/African American, children/youth, families, and Latinx. “Other” populations served included developmentally disabled residents.

Populations Served by Key Informants

	Percent of Informants*	Number of Informants
Black/African American	60.0%	18
Children/Youth	53.3%	16
Families	53.3%	16
Latinx	53.3%	16
Low Income/Poor	50.0%	15
Women	50.0%	15
Uninsured/Underinsured	46.7%	14
Men	43.3%	13
Seniors/Elderly	43.3%	13
Not Applicable (serve all populations)	40.0%	12
Homeless	36.7%	11
LGBTQ+ Community	36.7%	11
Immigrant/Refugee	33.3%	10
Disabled	30.0%	9
Asian/Pacific Islander	16.7%	5
Migrant Workers	16.7%	5
American Indian/Alaska Native	13.3%	4
Other	6.7%	2

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

Health Perceptions

Choosing from a wide-ranging 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 to "write in" any issue not included on the list was provided. The top responses are depicted in the table below. The table is rank ordered by the percentage of respondents that selected the issue within the top three health concerns. The number of informants that selected the issue as the #1 health concern is also shown.

Half or more of informants chose diabetes and overweight/obesity as top community health concerns. Heart disease and stroke and mental health conditions were also selected as top health concerns with 43% of informants selecting them among their top three choices. Across these four conditions, approximately 1 in 10 informants selected them as the #1 health concern.

Top Health Concerns Affecting Residents

Ranking	Health Concern	Informants Selecting as a Top 3 Health Concern		Informants Selecting as the Top (#1) Health Concern	
		Percent*	Count	Percent	Count
1	Diabetes	60.0%	18	13.3%	4
2	Overweight/Obesity	50.0%	15	13.3%	4
3	Heart disease and stroke	43.3%	13	10.0%	3
3	Mental health conditions	43.3%	13	10.0%	3
5	Cancers	23.3%	7	13.3%	4
6	Substance use disorder	16.7%	5	6.7%	2
7	Domestic violence	10.0%	3	6.7%	2
7	Other**	10.0%	3	6.7%	2
8	Disability	10.0%	3	3.3%	1
9	Respiratory disease	10.0%	3	0.0%	0

*Key informants were able to select multiple health concerns. Percentages do not add up to 100%.
**Other responses included hunger and chronic disease such as high blood pressure and chronic pain.

To expand upon their quantitative responses to the previous question, informants' were invited to provide freeform comments about the factors that most contribute to the community's top health concerns. Comments have been compiled into overarching themes in the table below. Themes are shown in order by number of mentions.

Several key informants indicated that the area has an abundance of fast food dining options, and a lack of affordable nutritious food sources. Low-income and impoverished individuals were seen as most at risk for lack of access to healthy foods and poor food choices. Educational attainment and health education, including the connection between lifestyle choices and health outcomes, were also seen as related contributing factors.

The following contributing factors were mentioned by one informant: Access to medical providers, stigma, and lack of emphasis on preventative care (e.g. screenings).

Top Contributing Factors to Community Health Concerns

Contributing Factor	Number of Mentions
Access to healthy and fresh foods	7
Low-income/Poverty	7
Health habits (diet, exercise)	6
Education attainment	5
Lack of health education	4
Environment (safety, physical activity options)	4
Available community resources	3
Awareness of available resources	3
Immigration status/welcoming environment for immigrants	3
Language barriers/Lack of bilingual services	3
Mental health (stress, depression)	3
Transportation	3
Over-committed families (single head of household, working multiple jobs)	2
Maternal and child health barriers (prenatal care, family planning)	2
Inadequate or no health insurance	2
Substance abuse	2

Informants were asked to share their perceptions about the populations that are most impacted by top community health concerns. Informants overwhelmingly identified minority populations, including Blacks/African Americans and Latinxs. Health among these populations was seen as declining or stagnant. Other populations most impacted by top health concerns, as identified by informants, included low-income and immigrants.

Community Access

Key informants were asked to rate their agreement to statements pertaining to access to care and other community services using a scale of (1) “strongly disagree” to (5) “strongly agree.” Their responses are outlined in the table below.

The commitment of healthcare providers to meeting the needs of residents received the highest mean score among access indicators, but half of informants had neutral perceptions of this indicator, indicating they “neither agree nor disagree.” Access to public transportation and needed social services received the next highest mean scores, but informants had differing perspectives on their availability. An equal percentage (40%) of informants both “agreed” or “strongly agreed” and “disagreed” or “strongly disagreed” that they are available.

Informants noted the negative impact of social determinants of health on residents, with nearly 60% “disagreeing” or “strongly disagreeing” that residents have access to affordable, safe housing or affordable nutritious foods. Access to preventive care and screenings is also a top concern for residents according to informants, with only 13% “agreeing” or “strongly agreeing” that residents receive them.

Community Access Indicators in Descending Order by Mean Score

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	**Mean Score**
Area healthcare providers are committed to meeting the needs of residents.	3.3%	20.0%	50.0%	20.0%	6.7%	**3.07**
Residents can easily use public transportation to get to places in our community, e.g. stores, work, medical appointments, pharmacy, etc.	13.3%	26.7%	20.0%	26.7%	13.3%	**3.00**
Residents can get help with social needs when they need it.	10.0%	30.0%	20.0%	30.0%	10.0%	**3.00**
Providers in our community are culturally sensitive to race, ethnicity, and cultural preferences of patients.	10.0%	33.3%	16.7%	30.0%	10.0%	**2.97**
Residents feel safe in their neighborhoods.	3.3%	33.3%	43.3%	13.3%	6.7%	**2.87**
Residents use their own or a family vehicle for transportation.	10.0%	30.0%	33.3%	23.3%	3.3%	**2.80**
Residents have a regular primary care provider that they see for healthcare.	6.7%	53.3%	23.3%	6.7%	10.0%	**2.60**
Residents can access a medical specialist (i.e. Cancer, Cardiovascular, Neuroscience, Orthopedics, etc.) when they need care.	6.7%	53.3%	26.7%	6.7%	6.7%	**2.53**
Residents are able to regularly access and afford nutritious foods.	20.0%	36.7%	26.7%	13.3%	3.3%	**2.43**
Residents receive recommended preventive screenings and check-ups.	10.0%	60.0%	16.7%	6.7%	6.7%	**2.40**
Safe housing is affordable and available.	26.7%	30.0%	30.0%	6.7%	6.7%	**2.37**

Informants provided the following comments related to community access.

- *"Healthcare providers work hard to meet needs of the population, however, Union County is a mix of populations…some of the poorest and most in need and others who are well off and can afford healthcare, food, etc."*
- *"Many providers are not equipped to assess people with Developmental disabilities. Quite a few providers have expressed that they do not want to treat our members."*
- *"Residents are not aware of many programs that are available to them, and even when they know they choose not to go."*
- *"Residents who can afford cars use their own or a family member's, otherwise they walk or use public transit. Many residents may not have insurance or regularly visit their doctors, and affordable housing is getting harder to find with the building of luxury apartments citywide."*
- *"Shaping Elizabeth's focuses are underserved in the community. Through our data we have found people struggle for primary care in their own language and often are not able to access the care they need due to cost. Lack of urgent care facilities close to their homes has been mentioned at focus groups and surveys."*

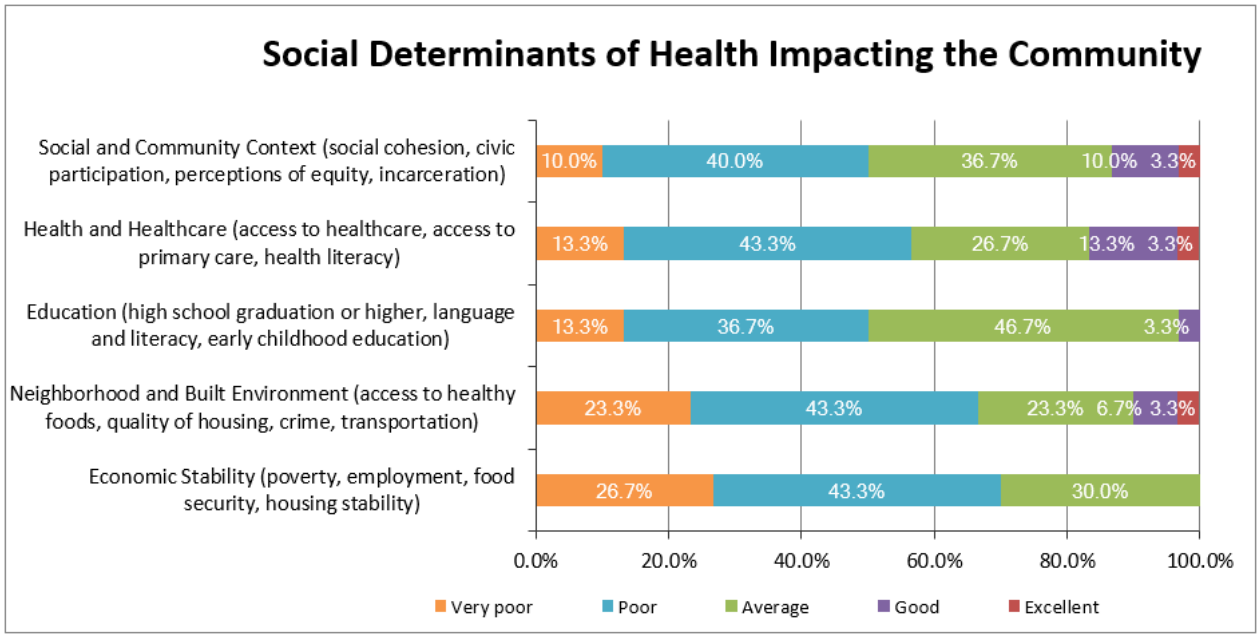
Social Determinants of Health

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 five community dimensions that most highly impact social determinants of health: 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 score for each dimension is listed in the table below in rank order, followed by a graph showing the scoring frequency. Mean scores were between 2.03 and 2.57 out of 5, with most respondents rating the listed dimensions as "poor" or "average." Social and community context was seen as the strongest community dimension, while economic stability was seen as the weakest community dimension.

Ranking of Community Dimensions Impacting Social Determinants of Health in Descending Order by Mean Score

Ranking	Community Dimension	Mean Score
1	Social and Community Context	2.57
2	Health and Healthcare	2.50
3	Education	2.40
4	Neighborhood and Built Environment	2.23
5	Economic Stability	2.03



Key informants acknowledged the impact of social determinants as key underlying factors of health issues within the community. Specific comments by informants are included below.

- *"Economic stability is the greatest social determent to health: poverty, under employment, low wages, rising cost of housing, lack of affordable housing. Additionally, environment; poor air quality."*
- *"It has been very difficult for the majority of the immigrants to find a job in which they can earn a decent amount of money to provide for their family. They lack health benefits for them and their families. Many clients do not have health screenings because they can't miss work. They don't have transportation to go for their healthcare. They are discriminated and many live in fear. Domestic violence is a huge issue in this community because they don't have an education; they rely on the abuser for basic needs."*
- *"Most residents graduate high school and are able to find jobs, although mostly in lower paying industries such as manufacturing and warehouses."*
- *"The majority of the families are working families that do not have enough resources to afford rent, food, basic needs. Families are one emergency/crisis away from homelessness."*

Leveraging Community Resources to Impact Health

Key informants were asked what resources are missing in the community that would help residents optimize their health. Respondents could choose as many options as they saw as needed. Approximately two-thirds of informants chose affordable housing, healthy food options, and mental health services as missing resources within the community. Community clinics/Federally Qualified Health Centers (FQHCs) and transportation options rounded out the top five selections by informants with 57% selecting them as missing resources.

Top Missing Resources within the Community to Optimize Health

Ranking	Resource	Percent of Informants	Number of Informants
1	Affordable housing	66.7%	20
1	Healthy food options	66.7%	20
3	Mental health services	63.3%	19
4	Community clinics/Federally Qualified Health Centers (FQHCs)	56.7%	17
4	Transportation options	56.7%	17
6	Health and wellness education and programs	50.0%	15
7	Multi-cultural or bilingual healthcare providers	46.7%	14
7	Social services assistance (housing, electric, food, clothing)	46.7%	14
9	Child care providers	43.3%	13
9	Community health screenings (blood pressure, cancer risk, stroke, etc.)	43.3%	13

Specific comments related to missing resources in the community are included below.

- *"I believe the city could convert the abandoned rail line, a four track main line of the Jersey Central Railroad, just west of the Elizabeth station, helping people in the city be active."*
- *"In areas of the community residents feel the services provided are lacking. Residents need services close to home and affordable. Urgent care centers have come up as well as waiting long periods of time in the ER or to get an appointment."*
- *"Most of the services are not culturally or linguistically relevant to the communities we serve. The transportation barriers make it difficult for youth/individuals that don't drive to access the services. Most of the nonprofits do not provide high quality services and there is limited quality school-community partnerships."*
- *"People use word of mouth when they need help. Some services are available and the Shaping Elizabeth project is bringing providers and agencies together to provide services, but overall that project needs money to really market all the resources available."*
- *"There is a need for an outlet for physical activity that is secured. For example, what outlet do the seniors have during the winter? What if we utilized indoor mall facilities in the morning before opening to customers?"*
- *"These services are available but there are not enough based on the needs. Finding a mental health provider that REALLY speaks another language is too hard. Services are provided on regular schedules, Monday to Friday from 9:00 to 5:00, and these schedules do not work for working people or working parents. Community screenings are done in sites one time per year but there is not any follow up with people with high numbers. We need case management for these people to make sure they are connected to health providers and getting what they need."*

- *"We need to have more nutritious foods available to all. Staying healthy should not be expensive…I had clients who have said, "If I buy food and medicine I would not be able to pay my rent, or a utility bill, please help me"."*
- *"Residents feel the services provided are lacking. Residents need services close to home and affordable."*

Lastly, informants were asked to share any other insights that could help improve health among residents in the greater Elizabeth area. Informants provided the following suggestions.

- *"Due to the current lifestyle of people working several part time jobs at low wages with no medical coverage or with very high out of pocket expenses, people are forgoing medical care until it is an emergency. Mental health and substance abuse are topics of every coalition meeting and people do not know how to access services or do not participate. Food Insecurity continues to grow. Affordable housing and transportation continue to surface as concerns. Medical field providing information and communication in Spanish and Creole is a particular concern."*
- *"Emergency shelter and housing for individuals and couples."*
- *"Front Street in Elizabeth area is ill-equipped and unsafe. …Build rented kiosks for more robust summer month recreation activities. We know Elizabeth City has little river or water front space, but we should enhance what we have just like our neighboring cities, Clark and Perth-Amboy."*
- *"Spanish is my first language, and not everybody has the right level to work or translate. I assume that something similar happens with other languages. Mental health services could be provided by phone using Skype or FaceTime. Of course, this is not appropriate for all patients but could help to improve appointment compliance."*
- *"Provide transportation to every client who needs to seek healthcare without discriminating their immigration status. Ask for more funds to keep the Elizabeth community safe. Offer more community workshops for clients. Offer incentives such as gift cards or vouchers for healthy lifestyles, blood pressure monitors, glucometers, first aid kits."*
- *"Require restaurants to provide information on their food and to provide healthy options. Increase access to affordable housing and ensure families have access to basic needs regardless of their immigration status. Ensure every aspect of the service community is culturally and linguistically appropriate."*

Key Informant Survey findings were considered in conjunction with statistical secondary data to determine health priorities. Key Informant Survey data is valuable in informing community strengths and gaps in services, as well as wider community context for secondary data findings.

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

In 2016, Trinitas completed a CHNA and developed a supporting three-year Implementation Plan for community health improvement. The strategies implemented to address the health priorities reflect Trinitas' mission to provide excellent, compassionate healthcare to the people and communities we serve, including those among us who are poor and vulnerable.

Guided by the findings from the 2016 CHNA and input from key community stakeholders, Trinitas leadership identified the following priorities for 2017-2019:

- Cancer
- Chronic Disease Prevention
- Mental Health and Substance Abuse

Trinitas' Implementation Plan outlined strategies to address the identified priority health needs among service area residents. 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.

Cancer

Trinitas was a partner in the New Jersey Cancer Education and Early Detection (NJCEED). As a partner, the hospital provided free, comprehensive screening services for breast, cervical, prostate, and colorectal cancers. Persons eligible for these services were at or below 250% of the Federal Poverty Level and were uninsured or under-insured. NJCEED services also included education and outreach, along with case management, tracking, and follow-up.

Trinitas participated in community events and offered additional free screenings to promote cancer education and early detection. Specific cancer-related programs offered by the hospital included:

- *Breast Health and You*
- *Cervical Cancer Wellness Forum*
- *Colon Cancer and Preventative Care*
- *Let's Spin for Breast Cancer*
- *Real Men Wear Gowns: Understanding the Need to Screen*
- *Share a Pink Evening! Join our Expert Physicians to Discuss Breast Health*
- *What Does Your Skin Say about You*

Chronic Disease Prevention

As part of the 2016 Implementation Plan, Trinitas sought to reduce risk factors for chronic disease and improve chronic disease management through increased access to healthy foods. Trinitas supported local farmers' markets in Elizabeth and Roselle Park, provided staffing for food pantries, and partnered in the following community initiatives:

- **Groundwork Elizabeth Come Grow With Us! (CGWU!)**: A community gardening program, CGWU! strives to increase access to sustainably grown foods and provide accompanying education in order to build sustainable and equitable communities.
- **New Jersey Corner Store Initiative**: A project of the American Heart Association, The Food Trust, and the New Jersey Partnership for Healthy Kids that is increasing healthy food access by linking community partners with corner store owners to help them profitably stock, market, and sell nutritious, affordable foods in communities that are underserved by supermarkets.

Trinitas partnered with Shaping Elizabeth, a coalition focused on addressing health disparities among residents by addressing the health behaviors facilitating high rates of chronic disease. The coalition brings education, services, information, resources and interactive programs to the community. In 2018, the coalition launched *A Better You in 2018*, providing residents the opportunity to participate in fun healthy activities to learn about healthy nutrition on a budget, getting active, relaxation, and getting and staying healthy.

Trinitas partnered with The Gateway Family YMCA to offer a diabetes prevention program. This program focused on weight loss and increased physical activity. Over 12 weeks, staff worked with a small group of participants to help them adopt everyday habits to improve overall health and well-being while reducing the risk of chronic disease. After the program, participants were able to meet with a coach monthly to sustain their weight loss.

Trinitas participated in community health events and offered free screenings to provide chronic disease education and identify at-risk patients. The hospital also offered the following programs:

- *Be the Healthiest You Can Be! Let Us Help!*
- *Caring for Your Kidneys*
- *Every Bite Counts*
- *Healthy Leap Into Summer*
- *How to Stay Active While Stuck Indoors*
- *Keeping You a Step Ahead (Diabetes)*
- *Learn Stroke's Risk Factors*
- *Let's Make Eating Simple*
- *Reducing Salt and Enhancing Flavor*
- *Shopping for my Health*
- *Spotlight on Alzheimer's and Dementia*

Mental Health and Substance Abuse

Trinitas implemented the hospital-wide Substance Use Screening program, a project from the Center for Medicare and Medicaid Services' (CMS) Delivery System Reform Incentive Payment (DSRIP) Program. All patients admitted to the Williamson Street Campus' medical-surgical units, Intensive Care Unit and Obstetric Unit are screened for substance use with an evidence-based tool called AUDIT. Based upon the screened risk, patients receive a brief intervention for drug and/or alcohol use and are referred to treatment pending patient interest. The program staff work with community partners to support patients in their ongoing treatment successes. The program efforts have resulted in decreased length of stay and readmissions among the substance using population and have improved care for patients experiencing withdrawal symptoms during their acute care hospital stay.

Trinitas, in collaboration with the New Jersey Institute for Successful Aging at the University for Medicine and Dentistry of New Jersey, provided the Statewide Clinical Outreach Program for the Elderly (S-COPE). S-COPE is a crisis response and clinical outreach service for older adults residing at nursing facilities who experience mental health and/or behavioral crises. S-COPE provides on-site assessments, consultations, and clinical interventions at screening centers, psychiatric inpatient units, and within long-term care facilities. The team provides 24/7 response, free of charges. S-COPE also offers in-service trainings, on-site coaching of staff, short term counseling to residents, and consultations with staff and families. Regional trainings on topics relevant to older adult nursing home residents are provided free of charge.

Crisis Assessment Response and Enhanced Services (CARES) was initiated in 2016 through a grant by the Division of Mental Health and Addiction Services. CARES provides crisis response and stabilization services for a period up to 120 days for adults age 21 or older with intellectual and developmental disabilities experiencing mental and/or behavioral crisis.

CARES staff work out of regional offices in various parts of the state to provide support to people in crisis wherever they are located. They work with clients and their families, and staff and mental health providers, by offering direct consultation at the time of crisis; technical support, training, and resource referrals; and consultations at psychiatric inpatient units.

Trinitas participated in community health events to promote mental health and substance use disorder awareness. The hospital also offered the following programs:

- *Break the Silence: Building Healthy Relationships*
- *Bullies to Buddies*
- *Coping with Loss*
- *Caregiver Stress: Tips for Taking Care of Yourself*
- *Crisis Intervention Training (first responders)*
- *Domestic Violence Symposium*
- *Prevent Overdoses, Save Lives, Act Now! (Narcan training)*
- *Suicide Risk Factors and Assessments (public school training)*
- *Take Time Out for Your Mental Health*

Prioritization Process and Identified Priority Areas

Trinitas Regional Medical Center shared findings from the CHNA research, including health status indicators and socioeconomic measures, with its Community Advisory Committee members to solicit input on community health priorities. A formal presentation of data was made to the Community Advisory Committee followed by facilitated dialogue to gather feedback on the research and insights from members' expertise within the community.

In determining community health priorities, stakeholders were asked to consider the following rationale and criteria:

- Scope: How many people are affected?
- Severity: How critical is the issue?
- Ability to Impact: Can we achieve the desired outcome?
- Community Readiness: Is the community prepared to take action?

Trinitas Regional Medical Center leadership reviewed findings from the CHNA research along with feedback from the Community Advisory Committee to determine priority health needs on which to focus community health improvement efforts. In consideration of Trinitas' existing community and hospital services, resources, and areas of expertise, the following health needs were determined to be priorities for focus over the 2020-2022 reporting cycle.

Trinitas Regional Medical Center Community Health Priorities for 2020-2022

Behavioral Health

Cancer

Chronic Disease

Maternal and Child Health

Social determinants of health are intrinsically tied to health status. While Trinitas can best apply its health expertise and resources to improving equitable outcomes for these health priorities, the medical center will continue to work with community partners to collectively impact the socioeconomic factors that multiply health disparities for the most vulnerable in the community.

Following the identification of priority health needs, a subcommittee of Trinitas leaders developed the 2020-2022 Implementation Plan.

Trinitas 2020-2022 Community Health Implementation Plan

Trinitas developed an Implementation Plan to guide community benefit activities related to the identified priority areas. 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 environment identified in the 2019 CHNA. Goals, objectives, and strategies from the plan are outlined below.

Behavioral Health

Goal: Increase access to behavioral health services.

Objective: Reduce stigma associated with behavioral health conditions.
Strategies:

- Provide behavioral health education and awareness programs at Trinitas and in collaboration with community organizations.

Objective: Identify patients that could benefit from behavior health services.
Strategies:

- Provide hospital-wide screening of patients for substance use disorders (SUD).

Objective: Develop partnerships to provide behavioral health services to diverse populations.
Strategies:

- Partner with the New Jersey Institute for Successful Aging to provide the Statewide Clinical Outreach Program for the Elderly (S-COPE) for older adults who experience mental health and/or behavioral crises.
- Provide addiction specialists to promote treatment and supportive services among patients.
- Provide Crisis Assessment Response and Enhancements Services (CARES) to improve crisis response and stabilization services for adults with intellectual and developmental disabilities.

Cancer

Goal: Reduce death from cancers and improve quality of life for patients living with cancer.

Objective: Increase the number of adults who receive recommended cancer screenings.
Strategies:

- Provide cancer education and screening programs at Trinitas and in collaboration with community organizations.

Objective: Reduce disparities among low-income, at-risk, and minority populations.
Strategies:

- Provide free, comprehensive screening services for breast, cervical, prostate, and colorectal cancers in partnership with the New Jersey Cancer Education and Early Detection (NJCEED) program.

Objective: Increase caregiver and patient support.
Strategies:

- Provide psychosocial services for patients and their families to assist with counseling, community resources, and other social needs.

Chronic Disease

Goal: Reduce health disparities for chronic disease.

Objective: Reduce risk factors for chronic disease and improve chronic disease management through increased access to healthy foods.
Strategies:

- Partner with the New Jersey Corner Store Initiative to improve healthy food access in neighborhood stores.
- Support Groundwork Elizabeth's Come Grow With Us! community gardening program.
- Support local farmers' markets and food pantries.

Objective: Initiate early stage interventions for individuals at high risk for chronic disease.
Strategies:

- Offer a diabetes prevention program in partnership with The Gateway Family YMCA.
- Provide chronic disease education and screening programs at Trinitas and in collaboration with community organizations.
- Support Shaping Elizabeth initiatives to address health disparities related to chronic disease.

Objective: Increase the number of residents who have a medical home.
Strategies:

- Identify a medical home for all patients at discharge and provide a "warm handoff."
- Use care navigators to follow up with patients to ensure connection with medical home.

Objective: Ensure patients can receive medications, treatments, follow up appointments, and other needed healthcare.
Strategies:

- Explore partnership opportunities for ride services to medical appointments.
- Explore partnership opportunities with pharmacies for home delivery.
- Use CRNPs, paramedics to provide home visits, transitions of care with high priority patients post discharge.

Objective: Identify and address social services needs of patients.
Strategies:

- Develop partnerships with social service agencies for warm handoff to services, e.g., housing caseworkers.
- Develop protocols to screen for social determinants of health.
- Develop resource directory for staff and protocols for "on demand" response.
- Partner with community organizations to reach priority populations.

Maternal and Child Health

Goal: Optimize pregnancy and birth outcomes for women and children.

Objective: Increase the proportion of pregnant women who receive early and adequate prenatal care.
Strategies:

- Collaborate with organizations that serve target populations to advocate for and advance access to prenatal care.
- Explore opportunities to sponsor nationally recognized maternal programs like Nurse Family Partnership and Healthy Beginnings Plus.
- Provide culturally competent and diverse midwifery, doula, and prenatal services.

Objective: Reduce disparities in birth outcomes.
Strategies:

- Participate in or host free community health fairs (e.g. Baby Shower) targeting underserved communities.
- Provide education and counseling in nutrition, exercise, physiological and emotional changes, and sexuality.
- Provide lactation education and counseling for all new mothers and postpartum follow up.
- Provide substance use disorder counseling and services for pregnant women.

Objective: Decrease teenage pregnancies.
Strategies:

- Partner with schools, community organizations, faith based institutions, and other CBOs to collaborate on initiatives.
- Provide education and mentoring for young women to increase self-esteem.

Objective: Increase number of teen mothers who earn a high school diploma.
Strategies:

- Explore opportunities to sponsor nationally recognized maternal programs like Nurse Family Partnership and Healthy Beginnings Plus.
- Partner with schools, community organizations, faith based institutions, and other CBOs to collaborate on initiatives.
- Provide education and mentoring for young women to increase self-esteem.

In support of the medical center's continued investment in the communities it serves, the Trinitas Regional Medical Center Board of Directors reviewed and approved the 2019 CHNA Final Report and Implementation Plan on December 4, 2019. A copy of the 2019 CHNA can be found at www.trinitasrmc.org.

Appendix A: Public Health Secondary Data References

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Appendix B: Key Informant Survey Participants

Key Informant Organization	Key Informant Title/Role
American Heart Association	Community Impact Director
Bayway Family Success Center	Volunteer and Community Partnership Coordinator
City Of Elizabeth Department of Health & Human Services	Case Manager, Office on Aging
City of Elizabeth Department of Health and Human Services	Health Officer
Community Access Unlimited	Assistant Director of Nursing
Community Access Unlimited	Managing Behaviorist
Community Access Unlimited	Residential Director of Nursing
Community Foodbank of New Jersey	Engagement Specialist
Elizabeth Public Library	Library Director
Elizabeth Public Library	Supervising Librarian, Branch Services
Elizabeth Public Library	Trustee
Elizabeth Public Library	Assistant Director
Greater Elizabeth Chamber of Commerce	CEO/President
Groundwork Elizabeth	Executive Director
Housing Authority of The City of Elizabeth	Deputy Executive Director
Jefferson Park Ministries, Inc.	Executive Director
Jewish Family Service of Central New Jersey	Assistant Project Manager
PROCEED, Inc.	PrEP and HIV coordinator
PROCEED, Inc.	Director, Family Success and Early Childhood Learning Center 1
Rutgers Cooperative Extension of Union County	Department Head/Family and Community Health Sciences Educator/Dietitian/Nutritionist
Shaping Elizabeth	Nutrition Consultant
St. Joseph Social Service Center	Nurse
St. Joseph Social Service Center	Caseworker
The Gateway Family YMCA	Director of Association Initiatives
The Gateway Family YMCA, Shaping Elizabeth	Senior Director of Community Initiatives
Trinitas Regional Medical Center	Vice President
Trinitas Regional Medical Center	Outreach Coordinator
Union County Office of Health	Director of Public Health
Union County Office of Health	Public Health Practice Standards Partnership Coordinator
United Way of Greater Union County	Vice President of Programs and Operations

Appendix C: Federally Qualified Health Center Locations

Location	Address
Neighborhood Health Center Elizabeth	184 1st St, Elizabeth, NJ 07206
Neighborhood Health Center Cardinal	950 Park Ave, Plainfield, NJ 07060
Neighborhood Health Center The Healthy Place	427 Darrow Ave, Plainfield, NJ 07060
Neighborhood Health Center Plainfield	1700 Myrtle Ave, Plainfield, NJ 07063