

# 2015 WARREN COUNTY Community Health Profile & Improvement Plan



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## EXECUTIVE SUMMARY

This Community Health Improvement Plan (CHIP) was developed to identify, summarize, and prioritize important health issues for Warren County, NJ. This edition of the Warren County CHIP was developed in partnership with the Community Health Improvement Coalition (CHIC), a group of government agencies, local non-profit partners, and additional community stakeholders using the Mobilizing Action through Planning and Partnership (MAPP) process.

The health of Warren County residents is impacted by a variety of diverse factors. While it may be obvious that germs have the ability to make you sick, how do your environment, socio-economic status, or individual behaviors affect your health? These components all influence our health on an individual level and as a greater community. In order to improve the health of Warren County residents, we must first understand where our community's strengths and weaknesses lie, and then work together with individuals, community-based organizations, healthcare providers, and other public health partners. To prevent disease and premature death, neighborhood resources are required that allow for high-quality, appropriate, affordable, and accessible health care, in addition to health education that empowers people to make healthy decisions and engage in pro-healthy behaviors.

The 2014 Warren County CHIP is a data driven approach to determining the health status, behaviors, and needs of our resident population. The process to complete this health plan has involved input from a variety of community constituents, both public and private stakeholders, and residents of all ages. This report was based on a series of county-wide needs assessments conducted during the last 5 years including the 2010 Community Health Surveys I and II, the Forces of Change Assessment Survey, and analysis of secondary data collected by the New Jersey Department of Health (NJDOH), the Centers for Disease Control and Prevention (CDC), and other research institutions. While primary data was collected through the Community Health Surveys, the reliance on primarily secondary data introduces limitations in understanding which groups (i.e. groups by race/ethnicity, age, education level, etc.) of Warren County residents are suffering most from adverse health outcomes.

The following document outlines the overall status of health of the county, priority health issues, and accompanying strategies that the local government, community-based organizations, and additional stakeholders are working on together to improve the health of Warren County residents.

The Community Health Profile and Improvement Plan was presented to CHIC members in February, 2015. Members were encouraged to share the plan with their constituents. The plan was also made available to the general public through the WCHD website and promoted through the county Public Information Office.



# COMMUNITY PARTNERS

The Community Health Improvement Coalition is an essential partnership of local non-profits, educational institutions, healthcare providers, government entities, private businesses, and citizens. Each CHIC member brings an important perspective to the conversation about our community's health; without their collaboration, the assessment, strategic planning, and solution implementation for improving the health of Warren County residents would not be possible.



The Warren County CHIC meets several times yearly, and more frequently during the assessment and strategic planning processes. Together, using the MAPP process, a shared vision for the health of the county is developed. After coming to a consensus on the priority issues for Warren County residents, CHIC members develop goals and strategies for attaining these goals. Finally, CHIC member organizations work together to implement programs and move into the action cycle of the MAPP process. (For more information on the MAPP process, see page 4).

# MAPP PROCESS

## What is MAPP?

**Mobilizing for Action through Planning and Partnerships (MAPP)** is a strategic approach to community health improvement. This tool helps communities improve health and quality of life through community-wide strategic planning. Using MAPP, communities seek to achieve optimal health by identifying and using their resources wisely, taking into account their unique circumstances and needs, and forming effective partnerships for strategic action.

The following seven principles are integral to the successful implementation of MAPP:

- *Systems thinking* — to promote an appreciation for the dynamic interrelationship of all components of the local public health system required to develop a vision of a healthy community.
- *Dialogue* — to ensure respect for diverse voices and perspectives during the collaborative process.
- *Shared vision* — to form the foundation for building a healthy future.
- *Data* — to inform each step of the process.
- *Partnerships and collaboration* — to optimize performance through shared resources and responsibility.
- *Strategic thinking* — to foster a proactive response to the issues and opportunities facing the system.
- *Celebration of successes* — to ensure that contributions are recognized and to sustain excitement for the process.

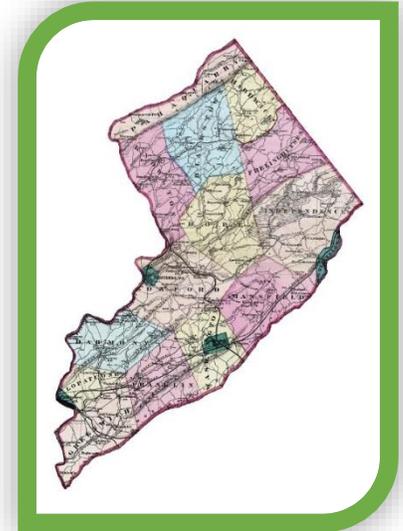
The MAPP process then incorporates these principles into a six-phase process: **Organizing, Visioning, Assessments, Strategic Issues, Goals/Strategies, and Action Cycle**. After organizing community partners and developing a vision for the health of Warren County, a combination of assessments were conducted. These assessments sought to answer the following questions:

*What is important to our community? How is quality of life perceived in our community? What assets do we have that can be used to improve community health? What are the components, activities, competencies, and capacities of our local public health system? How are the services being provided to our community? How healthy are our residents? What does the health status of our community look like? What is occurring or might occur that affects the health of our community or the local public health system? What specific threats or opportunities are generated by these occurrences?*

In turn, the answers to these questions help in the development of a data-driven, strategic plan for improving the health of Warren County residents, through the development of programs, availability of services, environmental improvements, and community engagement.

# WARREN COUNTY AT A GLANCE

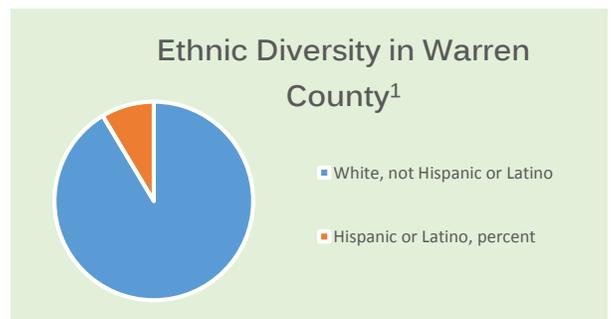
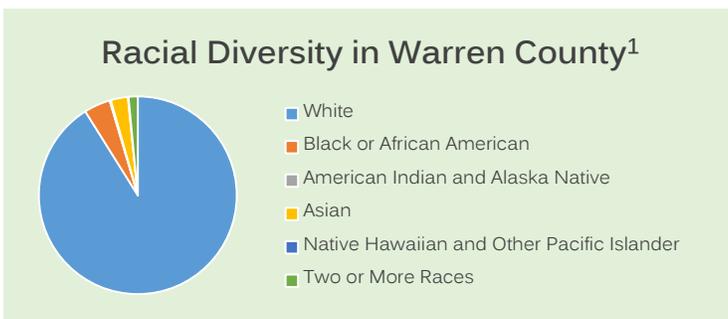
Nestled in the Northwest corner of New Jersey, Warren County is a predominately rural county with beautiful outdoor spaces, charming small towns, and close-knit communities. The location, natural and man-made features of the county, as well as the size and distribution of the county’s population all have an influence on the citizens of Warren County. The county is governed by the Board of Chosen Freeholders (3) that are elected for three-year terms. Interstates Route 80 and 78 both cross the county, connecting citizens to neighboring counties as well as Pennsylvania and New York.



With a population of approximately 107,370 and an area of 357 square miles, the population density is markedly lower (304.4 persons/sq. mile) than the overall state population density (1,195.5 persons/sq. miles). The county’s three small cities include Phillipsburg (pop. 14,720), Hackettstown (pop. 9,640), and Washington Borough (pop. 6,450).<sup>1</sup> The rest of Warren County’s citizens live in suburban and rural communities. More than 31% of Warren County residents are aged 35-54.<sup>1</sup> While most Warren County residents are white, the minority populations continue to grow. For example, the Hispanic/Latino community essentially doubled, from 3.7% in 2000 to 7.9% in 2013.<sup>1</sup> Almost 12% of Warren County households speak a language other than English at home and 8.9% of residents were born outside of the United States.<sup>1</sup>

Geography <sup>1</sup>	Warren County	New Jersey
Land area in square miles	356.92	7,354.22
Persons per square mile	304.5	1,195.5

Population Quick-Facts (2013) <sup>1</sup>	Warren County	New Jersey
Population, 2013 estimate	107,379	8,899,339
Population, 2010	108,692	8,791,909
Persons under 5 years,	5.1%	6.0%
Persons under 18 years	22.0%	22.7%
Persons 65+ years	15.3%	14.4%



<sup>1</sup> U.S. Census Bureau. (2013). *American Community Survey: State and County QuickFacts, New Jersey*. Retrieved from <http://quickfacts.census.gov/qfd/states/34000.html>

## Socio-Economic Characteristics

Economic prosperity and educational attainment are intimately tied with health outcomes. Research shows that socio-economically disadvantaged individuals typically suffer from poorer health outcomes than their wealthier, more educated peers (e.g., Edwards, R. D. & Tuljapurkar, S., 2005<sup>2</sup>; Backlund, E. et al., 2007<sup>3</sup>).

Fortunately, the latest figures show that the rate of unemployment is lower in Warren County (8.3%) than the state rate (9.5%). While the median household income in Warren County is higher than the New Jersey median household income, the mean (or average) household income is approximately \$10,000 less than the state mean.

Thus, while most Warren County households earn more than most New Jersey households, there are also many households earning much less – an amount great enough to pull down the average by about \$10,000. As shown in the table to the right, there are greater portions of people living below the poverty level in

Economic Quick-Facts (2008-2012) <sup>1</sup>	Warren County	New Jersey
<b>Employment Status</b>		
Civilian Labor Force	58,812	4,663,005
Employed	62.6%	60.4%
Unemployed	8.3%	9.5%
<b>Income &amp; Benefits</b>		
Median household income	\$73,056	\$71,637
Mean household income	\$86,854	\$96,602
Persons below poverty level	7.2%	9.9%
<i>Phillipsburg</i>	18.2%	
<i>Washington Borough</i>	13.6%	
Received Food Stamp/SNAP benefits in past 12 months	5.0%	6.8%
Enrolled in NJ FamilyCare 2013 (public medical assistance)	5.2%	10.6%

Phillipsburg (18.2%) and Washington Borough (13.6%) compared to both the state overall (9.9%) and Warren County (7.2%). With the introduction of the Affordable Care Act (ACA), New Jersey expanded its public medical assistance program NJ FamilyCare (which includes Medicaid) and seen an increase in enrollment state-wide.<sup>4</sup>

As shown in the table to the below, approximately 90% of Warren County residents over 25 have at least a high school diploma, with 29% of residents have a bachelor's degree or higher. In the state overall, only 88% of the population over 25 have a high school diploma. Warren County is home to two higher-education institutions, Warren County Community College and Centenary College, six public and two private high schools, and 34 public and eight private Kindergartens, elementary and middle schools.

Educational Quick-Facts (2008-2012) <sup>1</sup>	Warren County	New Jersey
Population 25 years and over	74,388	5,969,516
Less Than a High School Diploma	10.7%	12.1%
High School Diploma to some college	60.3%	52.5%
Bachelor's Degree or Higher	29%	35.4%
Number of Colleges or Universities	2	44

<sup>2</sup> Edwards, R. D., & Tuljapurkar, S. (2005). Inequality in life spans and a new perspective on mortality convergence across industrialized countries. *Population and Development Review*, 31, 645-675.

<sup>3</sup> Backlund, E, Rowe, G., Lynch, J., Wolfson, M. C., Kaplan, G. A., & Sorlie, P. D. (2007). Income inequality and mortality: A multilevel prospective study of 521,248 individuals in 50 US states. *International Journal of Epidemiology*, 36, 590-596.

<sup>4</sup> [http://www.state.nj.us/humanservices/dmahs/news/reports/Enrollment\\_2013.pdf](http://www.state.nj.us/humanservices/dmahs/news/reports/Enrollment_2013.pdf)

# COMMUNITY HEALTH PROFILE

The process for developing the CHIP is grounded in the Community Health Assessment (CHA) that was conducted between 2009 and 2014. The results of this multi-faceted assessment comprise the Community Health Profile.

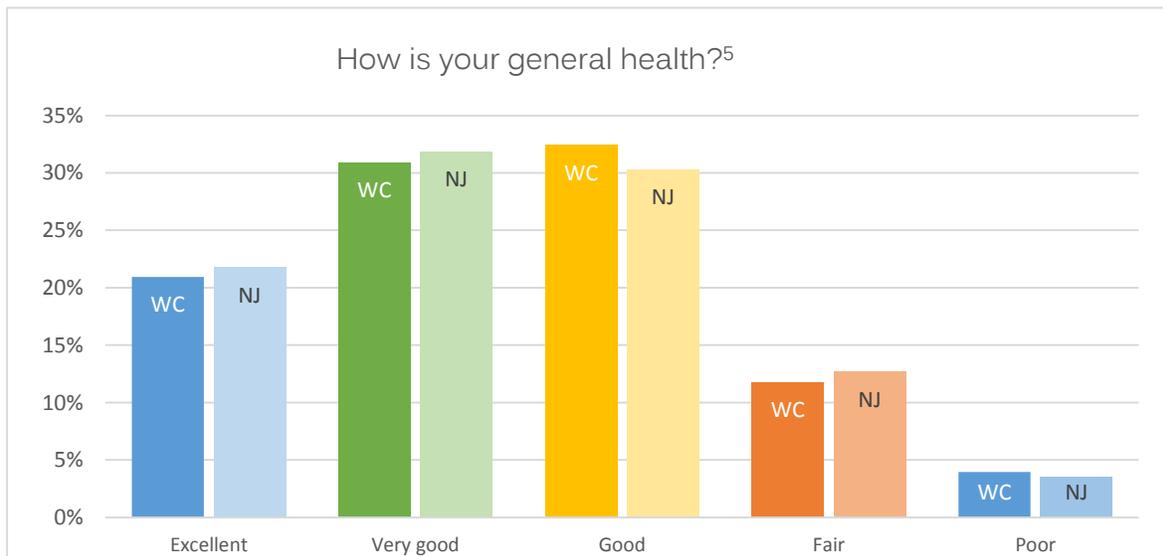
The following tables and charts describe a wide variety of health factors and outcomes in Warren County. These factors and outcomes help us to understand the health of the county's citizens, identify the priority health issues, and develop appropriate strategies for improving the health of Warren County residents.



## General Health & Healthcare Access

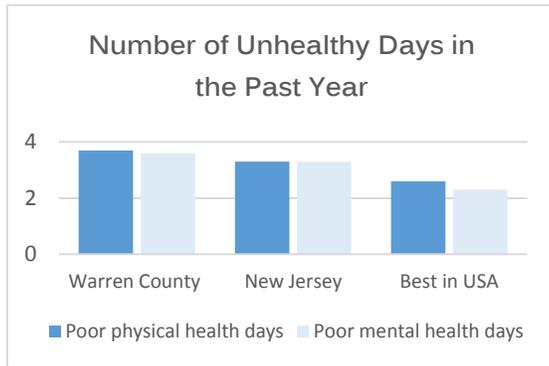
Each year residents from all over the state of New Jersey, including Warren County, participate in the CDC [Behavioral Risk Factor Surveillance System \(BRFSS\) Survey](#).<sup>5</sup> This survey collects information on a variety of health-related topics, from smoking and stress to injuries and immunizations. This survey allows us to compare health outcomes of Warren County residents with those from residents of New Jersey as a whole.

Among the dozens of questions posed in the BRFSS Survey, respondents are asked to rate their general health. As shown in the graph below, 84.25% of Warren County residents report having “good” to “excellent” health, which is slightly better than the state average of 83.90%.



<sup>5</sup> Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2005-2012].

According to the [County Health Rankings](#),<sup>6</sup> Warren County residents reported having more poor physical and mental health days each year than New Jersey residents overall. While residents generally report themselves as



being in good health, as seen on page 6, it is important to note the differences between Warren County residents, New Jersey residents, and the best-ranked counties across the United States. Additionally, in the 2010 Community Health Survey conducted in Warren County,<sup>7</sup> 22.1% of residents reported being disabled or limited in some way. Those with lower education, over the age of 65, and male were more likely to report being disabled or limited. The following sections will explore potential underlying factors influencing those Warren County residents with poor health outcomes.

In addition to self-reported measures of health, it is critical to consider the availability of healthcare resources throughout the county. The county is home to two hospitals – St. Luke’s Warren Hospital and Hackettstown Regional Medical Center. In the 2013 County Health Rankings, Warren County ranked 9/21 in health outcomes and 10/21 in health factors, including 17/21 for access to care.<sup>6</sup> Insurance coverage among the county population, and the number of physicians, dentists, and hospital services all influence access to care for Warren County residents.

The residents of Warren County are better insured than the average New Jersey resident. Between private and public health insurance options, 90.7% of the county population is covered. However, while we celebrate the achievement of having a great majority of the population covered by insurance, we should consider the barriers preventing the remaining 9.3% of adults and 5.4% of children in the county from obtaining health insurance.

Health Insurance Coverage <sup>1</sup>	Warren County	New Jersey
With health insurance coverage	90.7%	87.4%
With private health insurance	79.1%	72.8%
With public coverage	22.7%	25.3%
No health insurance coverage	9.3%	12.6%
Uninsured children	5.4%	5.8%

Rate of Physicians, Dentists, and Hospital Beds in the Total Population	Warren County	New Jersey
Licensed Dentists <sup>6</sup>	1,537:1	1,371:1
Licensed PCPs (per 100,000 pop.) <sup>8</sup>		
Family Practice	40.8	21.1
Internal	31.9	43.2
OB/GYN	10.6	15.3
Pediatrics	12.4	28.7
Licensed Acute Hospital Beds (per 100,000 pop.)	310.1	299.5

As demonstrated in the table to the left, Warren County has fewer dentists (1 dentist per 1,537 residents) compared to the state average (1 dentist per 1,371 residents). Additionally, according to the [NJ Physician Workforce Task Force Report](#),<sup>8</sup> the county has proportionally more family practice physicians (40.8 per 100,000 residents) and acute hospital

<sup>6</sup> University of Wisconsin Population Health Institute. *County Health Rankings* 2012.

<sup>7</sup> Community Health Survey. (2010). Warren County Health Department.

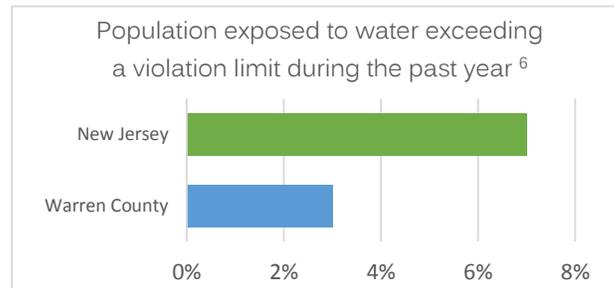
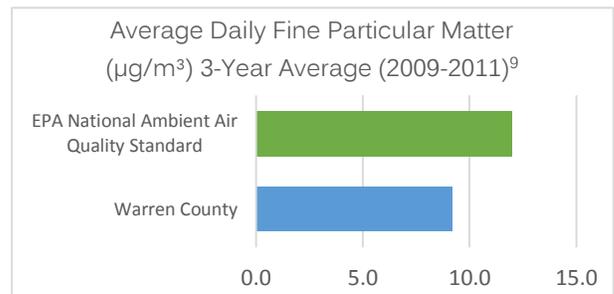
<sup>8</sup> New Jersey Council of Teaching Hospitals. (2009). New Jersey Physician Workforce Task Force Report. Retrieved from: <http://njcth.org/NJCTH/media/NJCTH-Media/pdfs/FINAL-NJ-Physician-Workforce-Report--w-appendices-012910.pdf>

beds (310.1 per 100,000) but fewer internal medicine doctors, obstetrician/gynecologists, and pediatricians compared to the state average.

## Environmental Health

Our physical environment also has a great impact on our general health. Warren County is home to great natural beauty, much of which is easily accessible to residents through parks and trails. Additionally, our indoor environments influence our health. From safe food preparation in restaurants to lead exposure through paint in older homes, the places where we live, work, and play all have a part in our health.

While Warren County is predominately rural, industries within the county and in neighboring counties, as well as motor vehicles and other sources contribute to air pollution. In 2012, the Environmental Protection Agency (EPA) reported that the average daily fine particulate matter (9.2  $\mu\text{g}/\text{m}^3$ ) was lower than the EPA's National Ambient Air Quality Standard (NAAQS) of 12.0  $\mu\text{g}/\text{m}^3$  over three years.<sup>9</sup> In 2012, there was only one day that air quality was unhealthy for sensitive populations due to ozone levels.<sup>6</sup> Furthermore, Warren County residents typically have access to clean and healthy water. In 2013, only 3% of the Warren County population obtained water from public water systems with at least one health-based violation (such as a contaminant or treatment violation), compared to 7% of the New Jersey population.<sup>6</sup>



### Research Spotlight: Why does “Fine Particulate Matter” matter?

#### Daily fine particulate matter

Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter <2.5 micrometers. These particles may come from sources such as forest fires, or they can form when gases from power plants or automobiles react in the air.

#### Potential Health Impact

The relationship between fine particulate matter and negative health effects has been well documented.<sup>1,2</sup> The negative effects of air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.<sup>1</sup>

<sup>1</sup> Pope, C. A., Dockery, D. W., & Schwartz, J. (1995). Review of epidemiological evidence of health-effects of particulate air-pollution. *Inhalation Toxicology*, 7, 1-18. <sup>2</sup> Pope, C. A., Ezzati, M., Dockery, D. W. (2009). Fine-particulate air pollution and life expectancy in the United States. *New England Journal of Medicine*, 360, 376-386.

<sup>9</sup> Environmental Protection Agency. Air Quality System Monitoring Data. State Air Monitoring Data. Annual PM 2.5 Level (Monitor only). Accessed From Environmental Public Health Tracking Network: [www.cdc.gov/ephrtracking](http://www.cdc.gov/ephrtracking). Accessed on August 12, 2014.

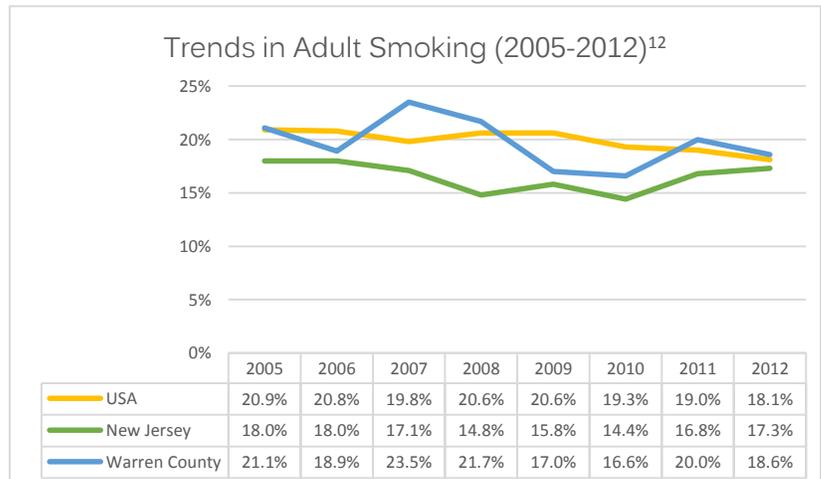
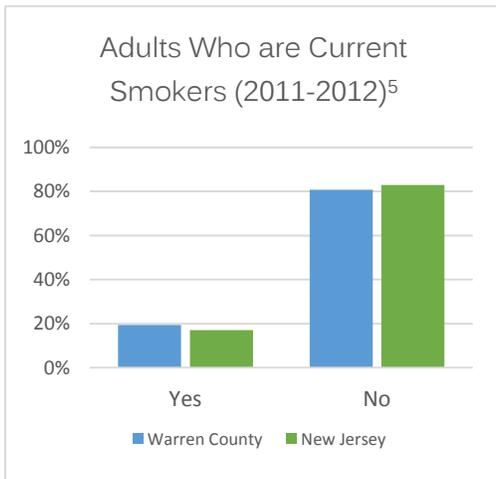
## Behavioral Risk Factors

Along with the socio-economic, geographic, environmental, and genetic influences on health, individuals make choices every day that have a great impact on their wellbeing. For example, using drugs or alcohol, smoking, and exercising may all have an influence on our health through the aggravation of existing chronic conditions or the development of new diseases, like diabetes or cancer.

### BRFSS Survey Highlights

- *Lifetime Cigarette Use:* 56% of Warren County residents responded that they had *never* smoked.
- *Physical Activity:* 76% of Warren County residents responded that they had participate in physical activity sometime in the past month.

Although it is well established that tobacco use is associated with a variety of adverse health outcomes, such as lung cancer, reducing tobacco use continues to be a priority public health battle.<sup>10</sup> Cigarette smoking causes more than 480,000 – or about 1 in 5 – deaths each year in the United States.<sup>11</sup> The rate of smoking among Warren County residents (19.3%) is higher than the rate among New Jersey residents overall (17.0%).<sup>5</sup> (See the section on [Chronic Diseases](#) for an overview of conditions that are linked to cigarette smoking). Additionally, since 2005, the rate in Warren County has been consistently higher than the New Jersey rate, though both groups have seen an overall decline<sup>5</sup> that is consistent with the national trend, as shown in the graph below.<sup>12</sup>

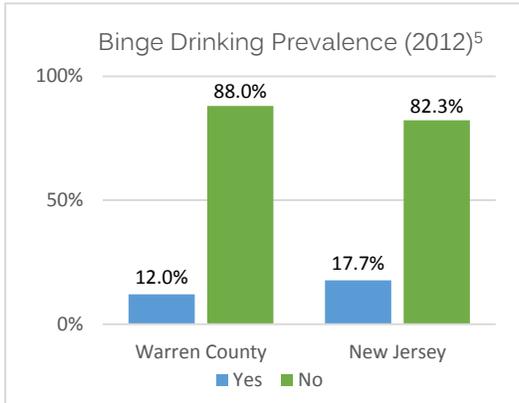


<sup>10</sup> Centers for Disease Control and Prevention – Office on Smoking and Health. (2014). [The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General](#). Atlanta, GA.

<sup>11</sup> Centers for Disease Control and Prevention. (2013). [QuickStats: Number of deaths from 10 leading causes—National vital statistics system, United States, 2010](#). *Morbidity and Mortality Weekly Report*, 62, 155.

<sup>12</sup> Centers for Disease Control and Prevention. (2014). [Current cigarette smoking among adults—United States, 2005–2012](#). *Morbidity and Mortality Weekly Report*, 63, 29–34

Like tobacco, excessive alcohol use can have negative health effects. Excessive drinking is a risk factor for alcohol poisoning, high blood pressure, heart attacks, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, suicide, interpersonal violence, and motor vehicle crashes.<sup>13</sup> While research also shows that moderate alcohol consumption may have certain health benefits, it is important for adults of legal drinking age to use alcohol responsibly. Excessive drinking is the percent of adults that report either binge drinking [consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days], or heavy drinking [drinking more than one (women) or 2 (men) drinks per day on average].

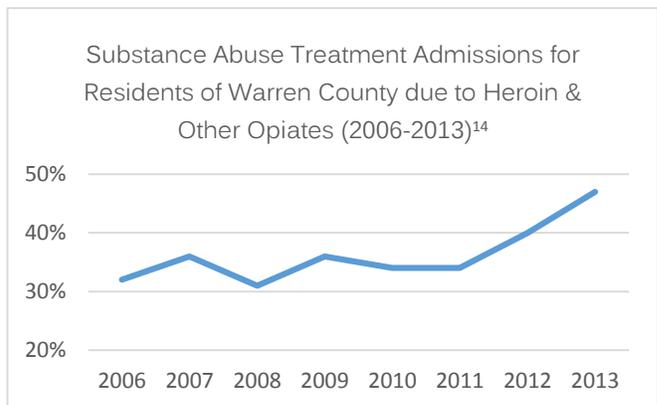


Both 16% of Warren County and New Jersey residents reported binge drinking in the past 30 days or heavy drinking on average.<sup>6</sup> As shown in the graph to the left, the BRFSS survey shows that binge drinking, specifically, is less prevalent than in New Jersey overall.<sup>5</sup> The rate of alcohol-related arrests is higher among Warren County residents (5.44 per 1,000 people) than across the state (5.17 per 1,000 people).<sup>14</sup>

Over-the-counter, prescription, and illicit drugs also have the potential to cause harm. While Warren County residents report similar rates of overall alcohol use to New Jersey residents, the reported use of marijuana and other drug use is markedly lower<sup>14</sup>, as shown in the table to the right. The rate of drug-related arrests is also lower in Warren County (4.62 per 1,000 people) than across the state (7.21 per 1,000 people), though the rate in Phillipsburg (7.14 per 1,000 people).<sup>14</sup>

	Alcohol	Marijuana	Other Drugs
Warren County	54.3%	1.5%	1.7%
New Jersey	54.0%	2.7%	3.7%

Recent national trends show an increase in opiate use from both heroin and prescription drugs. According to the Trust for America’s Health, the number of drug overdose deaths in New Jersey, a majority of which are from prescription drugs, has seen a 51% increase from 6.5 to 9.8 per 100,000 since 1999.<sup>15</sup> While overall drug use in Warren County is lower than the state, the graph to the right shows an alarming rise in treatment admissions due to heroin and other opiates over the past seven years (from 32% of admissions to 47%).<sup>14</sup>

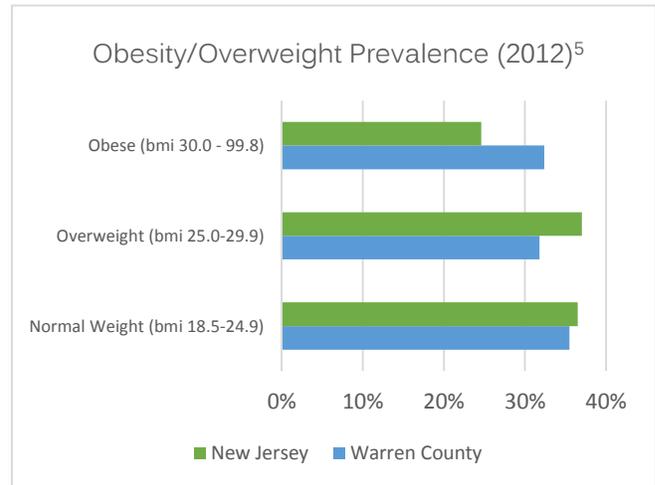


<sup>13</sup> Centers for Disease Control and Prevention. (2009). Sociodemographic differences in binge drinking among adults-14 states, 2004. *Morbidity and Mortality Weekly Report*, 58, 301-304

<sup>14</sup> Division of Mental Health & Addiction Services. *New Jersey Chartbook of Substance Abuse Related Social Indicators – Warren County*. May 2013.

<sup>15</sup> The Trust for America’s Health. (2013) Prescription Drug Abuse: Strategies to Stop the Epidemic. Retrieved from: <http://healthyamericans.org/reports/drugabuse2013/release.php?stateid=NJ>

What we choose to eat and our level of physical activity have a great impact on our health. The causes of obesity (BMI  $\geq 30$ ) and overweight (BMI  $\geq 25$ ) are linked to physical activity, diet, genetics and family history, environment, smoking, other health conditions, taking certain medications, lack of sleep, aging, and stress. The impact of overweight/obesity on the community is far reaching; it is associated with a variety of adverse health outcomes, such as heart disease, cancers, and type 2 diabetes, as well as an increased cost burden. Obesity is one of the Healthy New Jersey 2020 leading health indicators. The objective by 2020 is to prevent an increase in the proportion of the population that is obese, based on the 2011 baseline rate of 23.8% of adults. Warren County residents are beginning far above this target, as 32.4% of residents are obese.<sup>5</sup> Unfortunately there is no simple answer to why obesity prevalence is higher in Warren County than the rest of the state.



According to the 2011 BRFSS Survey, only 52% of Warren County residents reported participating in 150 minutes of more of aerobic physical activity per week, which is similar to the response of New Jersey residents (53.3%).<sup>5</sup> Warren County is fortunate to have ample public outdoor spaces, including parks and trails. Besides Stephens State Park, Worthington State Forest, Allamuchy Mountain State Park, Jenny Jump State Forest, Marble Hill Natural Resource Area, Rockport Pheasant Farm, White Lake Natural Resource Area, West Oxford Mountain Natural Resource Area, the Paulinskill Valley Rail Trail, the Pequest Wildlife Management Area Trail, and the Appalachian Trail, the county is home to municipal parks, sports fields, and public pools. 79.2% of residents report having access to recreational areas within their communities.<sup>7</sup> Due to the county's rural nature sidewalks are typically only located in the small municipal business districts and 46.2% of residents cite the lack of sidewalks as a pedestrian safety concern.<sup>7</sup> While there are many opportunities

to be outdoors during the warmer spring and summer months, extreme cold, snow, and ice may make physical activity challenging for Warren County residents during the winter. Additionally, Warren County residents typically spend 34.6 minutes traveling from home to work, thus spending approximately 5 hours and 45 minutes commuting each week.<sup>1</sup> Over 90% of Warren County residents commute alone or via carpool in a car, truck, or van.<sup>16</sup>

Overweight and obesity are also linked to diet. Warren County residents are fortunate to have access to four farmers markets, four community supported agriculture (CSA) farm sharing



<sup>16</sup> Environmental Protection Agency. Air Quality System Monitoring Data. State Air Monitoring Data. Annual PM 2.5 Level (Monitor only). Accessed From Environmental Public Health Tracking Network: [www.cdc.gov/ephracking](http://www.cdc.gov/ephracking). Accessed on August 12, 2014.

programs, and 40 farm stands from the late spring to early fall. Local produce is also available at grocery stores throughout the local growing season. Due to the lack of public transportation or distance, some residents may be unable to take advantage of these resources, thus contributing to unhealthy eating habits. Overall changes in the American diet, particularly eating more food prepared away from home, have impacted individuals across the country. For example, 55% of all restaurants in Warren County are fast food restaurants.<sup>6</sup> Overweight and obesity among Warren County residents is an alarming and complex issue that will require community cooperation and multifaceted strategies.

## Death: Illness & Injury

For all causes, Warren County has approximately the same mortality compared to New Jersey overall. However, the years of potential life lost per 100,000 people under the age of 75 is less than the state.<sup>1</sup> The leading causes of death in Warren County include heart disease, cancer, all other diseases (residual), stroke, chronic lower respiratory diseases (CLRD), unintentional injuries, kidney disease, atherosclerosis, and Alzheimer's disease.<sup>17</sup> These are comparable to the leading causes of death in New Jersey with the exception of notably higher rates of CLRD (47.8 vs. 31.1 deaths per 100,000 people), kidney disease (22.8 vs. 15.5 deaths per 100,000 people), atherosclerosis (19.1 vs. 1.9 deaths per 100,000 people), and Alzheimer's (15.3 vs. statistically insignificant deaths per 100,000 people) in Warren County.<sup>17</sup> New Jersey, however, has higher rates of death from heart disease, diabetes mellitus, septicemia, flu, and a variety of other conditions.

Mortality per 100,000 Population (2010) <sup>1</sup>			
	Number of Deaths	Number in the Population	Age-adjusted Rates (Per 100,000)
Warren County	895	108,693	686.7
New Jersey	69,246	8,803,388	685.8

Years of Potential Life Lost (2010) <sup>1*</sup>				
	Total deaths <75	Population <75	Total YPLL	YPLL rate per 100,000
Warren County	333	101,192	5,540.5	5,475.2
New Jersey	26,705	821,8697	482,499.5	5,870.8

\*Years of Potential Life Lost (YPLL) is a measure of the number of years not lived by each individual who died before reaching the age of 75. This measure weights deaths at younger ages more heavily than deaths at older ages; the younger the age at death, the greater the number of years of potential life lost.

In addition to the leading causes of death described above, injuries account for a noticeable portion of deaths in the United States (60.2 deaths per 100,000 people)<sup>18</sup> and New Jersey (40.5 deaths per 100,000 people).<sup>19</sup> Injuries, both accidental and intentional, accounted for 48 of the 895 deaths in Warren County in 2010.<sup>19</sup> Most of these injuries were accidental (37 accidents vs. 10 suicides vs. 1 undetermined), and the leading accidental cause of death was poisoning (15) followed by motor vehicle accident (9).<sup>19</sup>

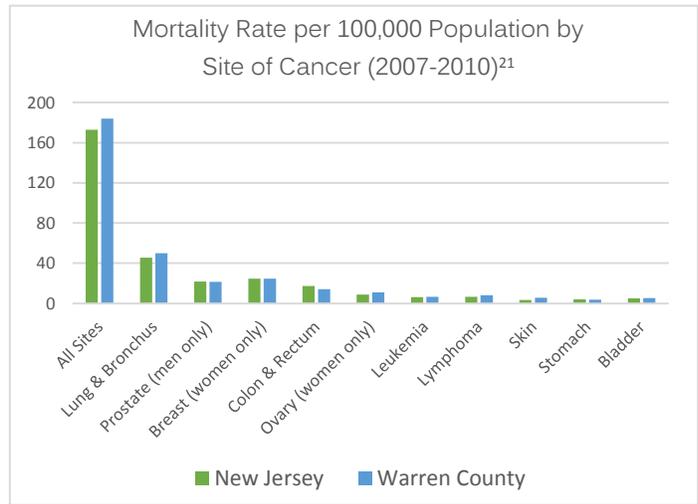
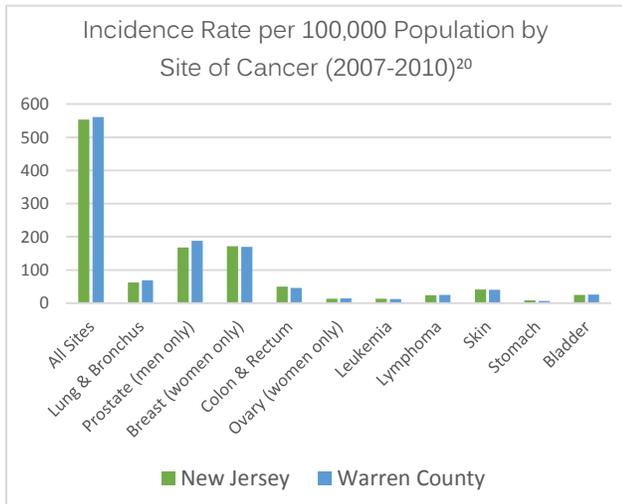
<sup>17</sup> NJ DOH. (2011). Center for Health Statistics, New Jersey State Health Assessment Data - Age-Adjusted Mortality All Causes. Retrieved from: <http://nj.gov/health/shad>

<sup>18</sup> CDC. (2011). All Injuries – Mortality. Retrieved from: <http://www.cdc.gov/nchs/fastats/injury.htm>

<sup>19</sup> NJ DOH. (2010). Center for Health Statistics, New Jersey State Health Assessment Data - Causes of Injury. Retrieved from: <http://nj.gov/health/shad>

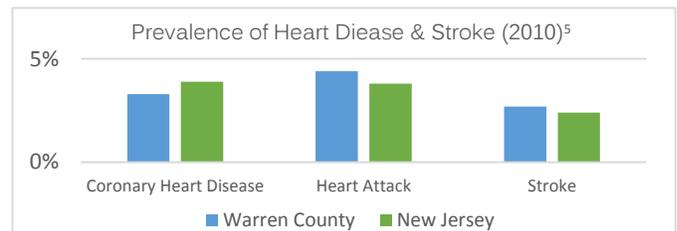
## Chronic Diseases

As advances in healthcare and sanitation during the 20<sup>th</sup> century reduced the incidence of communicable diseases and increased life expectancy, chronic diseases have come to the forefront of public health issues. Chronic diseases are complex conditions that may be influenced by a variety of environmental, genetic, and lifestyle factors, including tobacco use. Cancer, type II diabetes, and heart disease are among the most concerning chronic conditions faced by Americans today.



The most recent data, from 2007-2010, shows that the overall rate of cancer in Warren County (560.7 cases per 100,000 people) was slightly higher than in New Jersey (553.7 cases per 100,000 people).<sup>20</sup> Mortality from all types of cancer was also higher during this time period (184.1 deaths vs. 173.0 deaths per 100,000 people).<sup>21</sup> Cancer incidence rates in Warren County are generally comparable to the state rates, with the exception of higher incidences of prostate cancer (188.0 cases vs. 168.2 cases per 100,000 people) and lung cancer (69.0 cases vs. 62.5 cases per 100,000).<sup>20</sup> Additionally, cancer death rates from lung and ovarian cancers are higher in Warren County and mortality rates from lymphoma (8.2 deaths per 100,000 people) and skin cancer (5.5 deaths per 100,000 people) are the highest in the state.<sup>21</sup> Both cancer incidence and mortality are higher among males than females at the county and state level, however female cancer mortality is higher in Warren County than the state rate (165.7 per 100,000 vs. 150.5 per 100,000 from 2008-2010).<sup>21</sup>

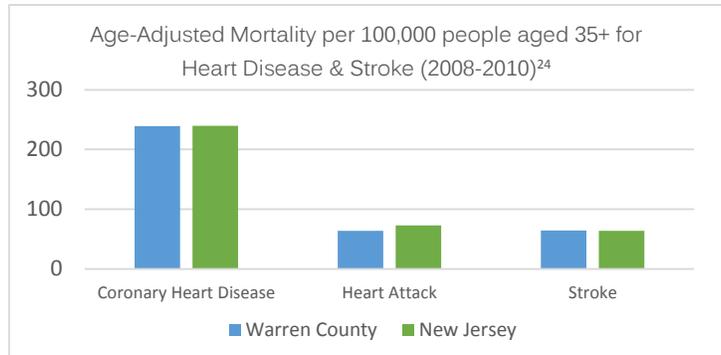
Heart disease is the leading cause of death in New Jersey and stroke is the third leading cause. High blood pressure, high cholesterol, diabetes, tobacco use, obesity, unhealthy diet, and physical activity are all risk factors for heart disease (including heart attacks,



<sup>20</sup> NJ Cancer Registry Incidence 2007-2010

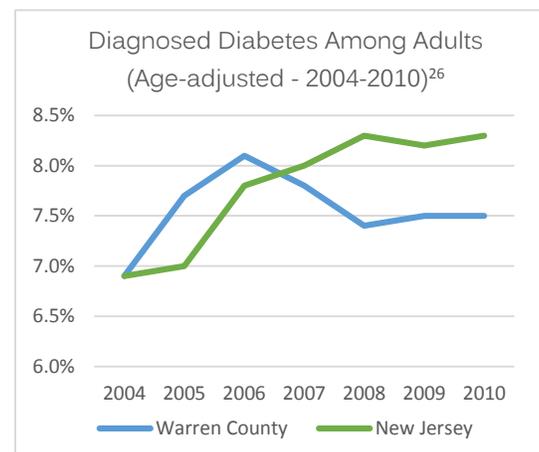
<sup>21</sup> NJ Cancer Registry Mortality 2007-2010

coronary heart disease, and heart failure) and stroke. For example, 34.5% of Warren County residents report being treated for high blood pressure, and only 57.4% report knowing their most recent blood pressure reading, with younger residents being less likely to know that those over 50.<sup>7</sup> Furthermore, 24.8% of residents report being treated for elevated cholesterol, with the majority being older and less educated.<sup>7</sup> Many of these risk



factors are influenced by lifestyle choices, and it is estimated that many of these deaths are preventable (at least 200,000 deaths nationally).<sup>22</sup> In Warren County, the percentage of residents who report being diagnosed with coronary heart disease is lower than in New Jersey overall, but the rates of heart attack (4.4% vs. 3.8%) and stroke (2.7% vs. 2.4%) are higher.<sup>5</sup> Deaths from heart attacks are notably lower (63.9 per 100,000 vs. 72.6 per 100,000) but deaths from coronary heart disease and stroke are comparable to the state rates.<sup>23</sup> Some of the differences in these rates may be attributed to national, state, and county demographic differences, as nationally blacks are nearly twice as likely as whites to die early from heart disease and stroke and black men have the highest risk of all age, ethnic, and racial groups.<sup>21</sup> Coronary heart disease, heart attack, and stroke mortality are also higher among black New Jersey residents (e.g., age-adjusted mortality rates for coronary heart disease among persons aged 35+ in New Jersey are 270.6 per 100,000 among black residents and 247.2 among white residents<sup>22</sup>). Between male and female residents in Warren County, heart disease mortality is much higher among men (266.6 per 100,000) than among women (135.8 per 100,000).<sup>24</sup>

The CDC estimates that in 2012, diabetes resulted in \$245 billion in direct (medical expenditures) and indirect (disability, lost work, etc.) costs.<sup>25</sup> In New Jersey, diabetes rates have continued to increase<sup>26</sup> over the past several decades and diabetes is the seventh leading causes of death in the state. In Warren County, diabetes rates have also grown, though not as extremely as across the state. In 2011 (the most recent data for this measure), there were 614 new cases of diabetes diagnosed in the county, or an age-adjusted rate of 7.7 cases for every 1,000 people.<sup>26</sup> Results from the 2010 Community Health Survey I show that 7.6% of residents report having ever been diagnosed with Type II Diabetes.<sup>7</sup> The CDC



estimates that more than 27% of those with diabetes are undiagnosed, and thus it is likely that the rate of diabetes among Warren County residents is actually higher. Like heart disease and stroke, some of the risk factors for diabetes are related to lifestyle choices, such as physical inactivity, diet, and overweight/obesity.

<sup>22</sup> CDC – Division for Heart Disease and Stroke Prevention. (2014). Vital Signs: Preventable Deaths from Heart Disease & Stroke. Retrieved from: [http://www.cdc.gov/dhdsp/vital\\_signs.htm](http://www.cdc.gov/dhdsp/vital_signs.htm)

<sup>23</sup> CDC - Division for Heart Disease and Stroke Prevention. (2014). Interactive Atlas. Retrieved from: <http://hccd.cdc.gov/DHDSAtlas/>

<sup>24</sup> NJDOH. (2011). Center for Health Statistics, New Jersey State Health Assessment Data - Age-Adjusted Mortality All Causes. Retrieved from: <http://nj.gov/health/shad>

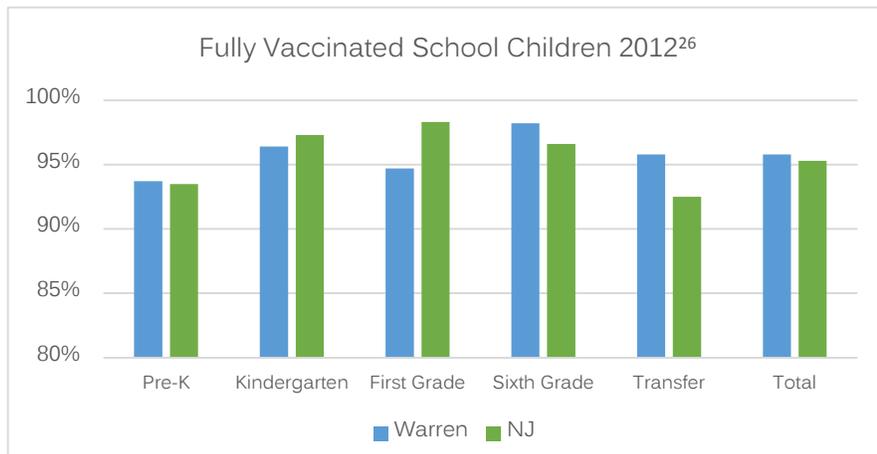
<sup>25</sup> CDC. (2014). 2014 National Diabetes Statistics Report. Retrieved from: <http://www.cdc.gov/diabetes/pubs/estimates14.htm>

<sup>26</sup> CDC. (2014). Diabetes – Data and Statistics. Retrieved from: <http://www.cdc.gov/diabetes/surveillance/index.htm>

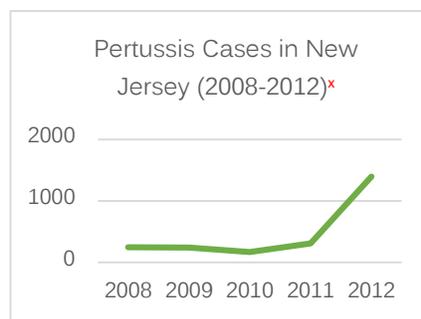
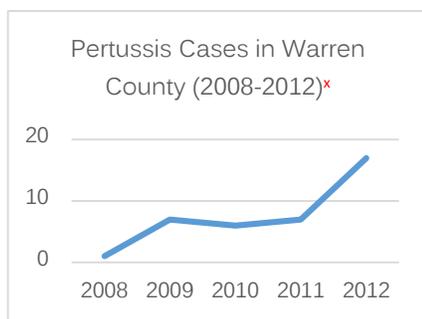
Cancer, heart disease, stroke, and diabetes are only a few of the many chronic conditions that affect Warren County residents. Residents also suffer from asthma, arthritis, high blood pressure, and obesity. Fortunately, while there is no one-size-fits-all cure for these and other chronic illnesses, abstaining from tobacco, maintaining a healthy weight, remaining physically active, and eating healthy food all have a positive impact on health and help reduce the incidence of many of these diseases.

## Communicable Diseases & Sentinel Events

Although the rates of communicable diseases have steadily decreased with the advent of vaccines, sanitation, and other control measures, these illnesses still pose a public health threat. The New Jersey Department of Health requires health care providers and laboratories to report the incidence of certain illnesses to the local and state health departments. Communicable disease investigation is an important part of keeping our entire community healthy and early notification helps aid the health department in preventing further spread of illnesses.



Vaccinations play an important role in minimizing the transmission of communicable diseases. New Jersey requires that children in day care and schools provide documentation of vaccination status or proof of exemption. Vaccine requirements for school children in New Jersey include those for diphtheria, tetanus, and pertussis (DTap/Tdap), polio, measles, mumps, and rubella (MMR), hepatitis B, varicella (chicken pox), meningococcal disease, haemophilus influenzae type B, and influenza (for preschool/daycare). Warren County has similar levels of childhood vaccinations compared to New Jersey (95.8% vs. 95.3% of children).<sup>27</sup> There is a slight dip in



the number of fully vaccinated first graders in Warren County compared to the state overall (94.7% vs. 98.3%). Vaccination rates among sixth graders and transfer students are higher than the state average. The rates of vaccine-preventable diseases are generally low in Warren County. Recent declines in vaccinations throughout the United States, however, have resulted in a rise in pertussis (whooping cough) cases. 2012 was a record year for pertussis, as we saw more pertussis cases in the United States than any year since 1955.<sup>28</sup> In 2012, the number of

<sup>27</sup> NJDOH (2012). New Jersey Annual Immunization Status Reports: Number of Fully Vaccinated Students, by Grade Type and County, New Jersey, 2011-2012.

<sup>28</sup> CDC. (2013). Pertussis outbreak trends. Retrieved from: <http://www.cdc.gov/pertussis/outbreaks/trends.html>

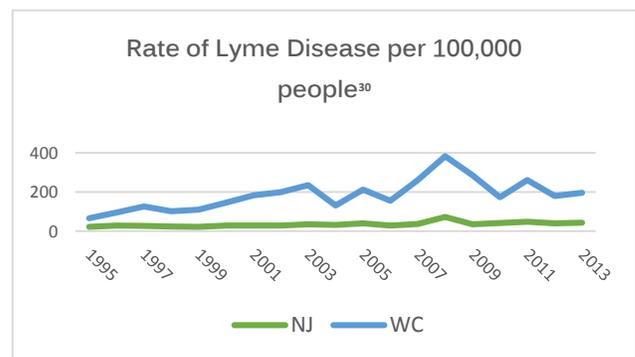
cases was still very small in Warren County, but as indicated in the charts above, there has been a recent spike in Warren County and New Jersey in pertussis cases.

The U.S. influenza surveillance system is a collaborative effort between CDC and its many partners in state, local, and territorial health departments, public health and clinical laboratories, vital statistics offices, healthcare providers, clinics, and emergency departments. Information is collected that allows the CDC to find out when and where influenza activity is occurring, track influenza-related illness, determine what influenza viruses are circulating, detect changes in influenza viruses, and measure the impact influenza is having on hospitalizations and deaths in the United States. WCHD receives weekly reports about influenza illness. While influenza patterns in Warren County typically mimic the activity in the larger region, persistent surveillance allows the health department to identify unusual trends. Influenza vaccines also play an important role in reducing the incidence of seasonal flu in Warren County. In 2012, 66.1% of Warren County residents over age 65 reported having a flu vaccine in the past year, versus only 61.2% of New Jersey residents.<sup>5</sup> The Public Health Nursing Agency helps administer low-cost flu vaccines, and in 2001, administered almost 1600 vaccines to adults and children.

In the United States, the number of tuberculosis cases has steadily fallen over the past several decades. While the CDC estimates that one third of the world's population is infected with tuberculosis, rates have reached historic lows in America. The majority of tuberculosis cases occur in foreign-born individuals. Tuberculosis disproportionately affects racial and ethnic minorities and HIV-positive individuals in the United States. Warren County has the lowest rate of tuberculosis in New Jersey.<sup>29</sup> Due to the changing demographics of the county, with more individuals emigrating from areas with higher incidence of tuberculosis, it is crucial for health professionals to remain alert and for tuberculosis testing to be available for those who are at risk. This vigilance will ensure that the rate of tuberculosis remains extremely low in Warren County.

Sexually transmitted diseases, including HIV/AIDS are relatively rare in Warren County. However, although there are overall few cases, the number of chlamydia and gonorrhea have both increased each year since 2009. The 2013 prevalence rate of HIV/AIDS in Warren County is less than half of the state rate (158 vs. 423 current cases per 100,000 people).<sup>30</sup>

Lyme disease continues to pose a threat to Warren County residents. Rates of Lyme disease are highest in the north eastern and north midwestern regions of the United States, including New Jersey. New cases of Lyme disease have steadily increased in Warren County throughout the past decade and the rate is currently 4.5 times higher than the New Jersey average.<sup>31</sup>



<sup>29</sup> NJDOH. (2010). Tuberculosis rates by county. Retrieved from: <http://www.state.nj.us/health/cd/documents/tbstats/county.pdf>

<sup>30</sup> NJDOH (2013) HIV/AIDS Overview. Retrieved from: [http://www.state.nj.us/health/aids/documents/hiv\\_aids\\_overview.pdf](http://www.state.nj.us/health/aids/documents/hiv_aids_overview.pdf)

<sup>31</sup> New Jersey Communicable Disease Reports 1995-2013. Retrieved from: [http://www.nj.gov/health/cd/reportable\\_disease\\_stats.shtml](http://www.nj.gov/health/cd/reportable_disease_stats.shtml)

## Social & Mental Health

While social and mental health issues may not be at the forefront of residents' vision of community health factors, violence, child abuse and neglect, and mental illnesses affect more of our fellow community members than we realize. Crimes such as domestic violence and child abuse have serious implications for the health of families, particularly women and children. Furthermore, continued societal stigma toward psychological illnesses continues to leave those suffering from these conditions marginalized, especially with regards to social and economic opportunities. Combining these conditions with a lack of awareness and availability of services for individuals and families in need has far reaching consequences on the community's health.

The New Jersey Department of Law and Public Safety reported that the rate of domestic violence offenses among Warren County residents was 15.02 per 1,000 versus 8.0 per 1,000 across the state.<sup>32</sup> The rate of domestic violence arrests, however is more similar among Warren County and New Jersey residents (2.55 and 2.46 per 1,000 respectively).<sup>32</sup> Overall crime rates, 16.3 per 1,000 residents in Warren County vs. 23.4 per 1,000 residents in New Jersey, are quite different. Warren County's rate of violent crime is less than one third of that in New Jersey.<sup>32</sup>

Child neglect and abuse rates in Warren County are also higher than the state. In 2011, approximately 10% of all child neglect and abuse investigations in Warren County and New Jersey were substantiated.<sup>33</sup> In 2012, 32.7 of every 1,000 children in Warren County received case management services from the NJ Department of Children & Families (both in-home services and out-of-home placements), versus 25.6 of every 1,000 children in New Jersey.<sup>34</sup>

Child Neglect/Abuse Investigations and Substantiation (per 1,000 people under age 18 - 2011) <sup>28</sup>		
	Child Abuse or Neglect Investigation	Child Abuse Substantiation
Warren County	60	6.33
New Jersey	44	4.55

While research shows that there is not an increased incidence of crime among those suffering from psychological illnesses<sup>35</sup>, these individuals are more likely to struggle with substance abuse<sup>36</sup> and are overrepresented in the criminal justice system.<sup>37</sup> Psychological illness affects approximately 14.66% of New Jersey adults, according to the Substance Abuse and Mental Health Services Administration's (SAMHSA) latest estimates.<sup>38</sup> New Jersey has the lowest rates of both Serious Mental Illness (SMI) and Any Mental Illness (AMI) among adults in the United

<sup>32</sup> New Jersey State Police. (2013). 2012 Uniform Crime Report. Retrieved from: <http://njsp.org/info/ucr2012/index.html>

<sup>33</sup> Kids Count Data Center – Annie E. Casey Foundation. Retrieved from: <http://datacenter.kidscount.org/data#NJ/5/0>

<sup>34</sup> NJ DCF. (2013). Retrieved from: [http://www.state.nj.us/dcf/childdata/dcppdemo/Caseload\\_ChildrenReceivingServices.pdf](http://www.state.nj.us/dcf/childdata/dcppdemo/Caseload_ChildrenReceivingServices.pdf)

<sup>35</sup> Peterson, J. K., Skeen, J., Kennealy, P., Bray, B., & Zvonkovic, A. (2014). How often and how consistently do symptoms directly preceded criminal behavior among offenders with mental illness? *Law and Human Behavior*. doi: [10.1037/lhb0000075](https://doi.org/10.1037/lhb0000075)

<sup>36</sup> National Alliance on Mental Illness. (2013). Dual Diagnosis: Substance Abuse and Mental Illness. Retrieved from: [www.nami.org/factsheets/dualdiagnosis\\_factsheet.pdf](http://www.nami.org/factsheets/dualdiagnosis_factsheet.pdf)

<sup>37</sup> James, D. J., & Blaze, L. E. (2006). Mental health problems of prison and jail inmates. Bureau of Justice Statistics. Washington, D. C. Retrieved from: [http://www.nami.org/Content/ContentGroups/Press\\_Room1/2006/Press\\_September\\_2006/DOJ\\_report\\_mental\\_illness\\_in\\_prison.pdf](http://www.nami.org/Content/ContentGroups/Press_Room1/2006/Press_September_2006/DOJ_report_mental_illness_in_prison.pdf)

<sup>38</sup> Substance Abuse and Mental Health Services Administration. (2014). State estimates of adult mental illness from the 2011 and 2012 National Surveys on Drug Use and Health. Retrieved from: <http://www.samhsa.gov/data/2k14/NSDUH170/sr170-mental-illness-state-estimates-2014.htm>

States.<sup>33</sup> According to the 2012 BRFSS Survey, 17.6% of Warren County residents report having been told by a medical professional that they had depression, versus 13% of New Jersey residents.<sup>5</sup> In Warren County, 17% of residents report that someone in their household has an SMI such as schizophrenia, bipolar disorder, or anxiety; of participants living in the northern region of the country, 35.5% responded that they had a family member with an SMI, versus 13.0% in the central region, and 15.1% in the southern region.<sup>7</sup> Fortunately, the suicide rate in Warren County is low. In the last reporting year, 2010, there were 10 suicides, five of which were from firearm use. The leading cause of suicide death in New Jersey is suffocation, followed by firearms and poisoning.<sup>39</sup>

The Warren County Department of Human Services Mental Health Board maintains a Mental Health Plan to serve as a guide for the delivery of mental health services in the county. Warren County's Department of Human Services Division of Administration assists in connecting Warren County residents with a variety of mental health and substance abuse treatment services, including case management, inpatient/outpatient treatment, and family support services. For a list of local services available to Warren County residents, please see the Warren County Mental Health Plan (2011), available from the Warren County Department of Human Services.

## Maternal & Child Health

Healthy New Jersey 2020 also includes reducing the infant death rate among its five health indicator objectives from 5.1 per 1,000 live births to 4.8 per 1,000 live births. The latest data available for Warren County shows that there were only 3 infant deaths in 2010, which is already a lower rate than the target of 4.8 per 1,000 live births.<sup>40</sup> Out of 998 births in 2011, only 8 mothers (or approximately 0.8%) reported receiving no prenatal care in Warren County, compared to 1.3% of New Jersey mothers.<sup>41</sup> In 2011, 7.5% of Warren County births were classified as "preterm" or before 37 weeks, compared to 9.5% of New Jersey births.<sup>42</sup> The World Health Organization and the American Academy of Pediatrics recommend exclusive breastfeeding for the first six months with the gradual introduction of iron-enriched solid food in the next six months and for breastfeeding to continue at least one year and then for as long as mother and baby desire. In a 2012 comparative report on breastfeeding in New Jersey hospitals, Hackettstown Regional Medical Center reported a 79% exclusive breast feeding rate – the highest of any hospital surveyed in the report.<sup>43</sup> In 2010, 42.9% of Warren County residents reported that of their children, at least one was breastfed, with 11.6% having breastfed between six weeks and six months, and 17% over six months.<sup>7</sup>

Number of Children with Elevated Blood Lead Levels (2013) <sup>39</sup>				
	4.5-9.4 µg/dL	10-14 µg/dL	15-19 µg/dL	Total
Warren County	20	9	1	30

Childhood exposure to lead is another important measure of child health. Lead can disrupt the normal growth and development of a child's brain and

central nervous system. The CDC defines lead poisoning in children as a blood lead level of 10 micrograms per deciliter (µg/dL) or above. All New Jersey children are required to be screened for lead exposure. NJDOH

<sup>39</sup> NJ DOH. (2010). Center for Health Statistics, New Jersey State Health Assessment Data – Intentional Injury. Retrieved from: <http://nj.gov/health/shad>

<sup>40</sup> NJ DOH. (2010). Center for Health Statistics, New Jersey State Health Assessment Data – Infant Mortality. Retrieved from: <http://nj.gov/health/shad>

<sup>41</sup> NJ DOH. (2011). Center for Health Statistics, New Jersey State Health Assessment Data – Prenatal Care. Retrieved from: <http://nj.gov/health/shad>

<sup>42</sup> NJ DOH. (2011). Center for Health Statistics, New Jersey State Health Assessment Data – Preterm Births. Retrieved from: <http://nj.gov/health/shad>

<sup>43</sup> NJ DOH. (2014). Breastfeeding and New Jersey Maternity Hospitals: A Comparative Report.

recommends that all children should be screened for lead poisoning at 12 and 24 months of age. Additionally, any child between three and six years of age who has never previously been screened and any child who is six months of age or older, and is exposed to a known or suspected lead hazard, should be screened. In 2013, there were 30 childhood cases of elevated blood lead levels in Warren County; 10 of these cases were above 10 µg/dL.<sup>44</sup>

## Adolescent Health

As children move into adolescence and young adulthood, new health and social challenges emerge. The CDC's Youth Risk Behavior Surveillance System (YRBSS) survey seeks to monitor the following priority health issues among students in grade 9-12: six categories of priority health-risk behaviors among youth and young adults: 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted infections (STIs), including human immunodeficiency virus (HIV) infection; 5) unhealthy dietary behaviors; and 6) physical inactivity. In addition, YRBSS monitors the prevalence of obesity and asthma. The state of New Jersey participates in the YRBSS survey, through the distribution of the New Jersey Student Health Survey to high school students, and administers the New Jersey Middle School Risk and Protective Factor Survey to middle school students. County-level data for the New Jersey Student Health Survey is unavailable, and extrapolating New Jersey high school students' results for use in the Warren County population would likely be unrepresentative.

There are numerous reasons to encourage teens and young adults to refrain from using tobacco, alcohol, and illicit drugs, including legal and health consequences. According to the latest research, substance use (both alcohol and marijuana) in adolescence leads to "abnormalities in brain functioning, including poorer neurocognitive performance, white matter quality, changes in brain volume, and abnormal neuronal activation patterns."<sup>45</sup> The latest data regarding middle school students in Warren County reveals that these students are significantly less likely to use marijuana and prescription drugs when compared to New Jersey students.<sup>46</sup> Warren County students are, however, slightly more likely to be involved with a gang or carry a handgun.<sup>44</sup> More than half of Warren County residents believe that alcohol laws/regulations (such as carding) are *not* enforced or only sometime enforced in their communities.<sup>7</sup> It is unclear if these differences can be seen county-wide or if they are specific to certain municipalities, racial/ethnic groups, or socio-economic groups in the county. The table on the following page details additional measures of substance use and behavioral risk factors with comparisons from 2007, 2010, and 2012 as well as to New Jersey students overall.

Among New Jersey's adolescents in grades 9 through 12, 14.2% were overweight (between the 85<sup>th</sup> and 95<sup>th</sup> percentiles for BMI by age and sex) 10.3% were obese (>95<sup>th</sup> percentile for BMI by age and sex). This is a marked increase from the 2009 results, of According to the 2010 Community Health Survey, 19.5% of parents responded that their children spent at least one hour sitting watching television, playing video games, or on the computer each day.<sup>7</sup>

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<sup>44</sup> 2013 Welligent LeadTrax Report

<sup>45</sup> Squeglia, L. M., Jacobus, J., & Tapert, S. F. (2009). The influence of substance use on adolescent brain development. *Clinical EEG & Neuroscience*, 40, 31-38.

<sup>46</sup> NJ (2012). Middle School Risk and Protective Factor Survey

The number of live births to mothers aged 15-19 per 1,000 adolescent girls of the same age in the population was 7.95 per 1,000 in Warren County compared to 18.3 per 1,000 in New Jersey.<sup>47</sup>

The following table, taken from the New Jersey Middle School Risk and Protective Factor Survey, shows a selection of survey items and their outcomes. This data allows us to compare Warren County middle school students to the average student across the state, as well as yearly trends, starting with data in 2007.

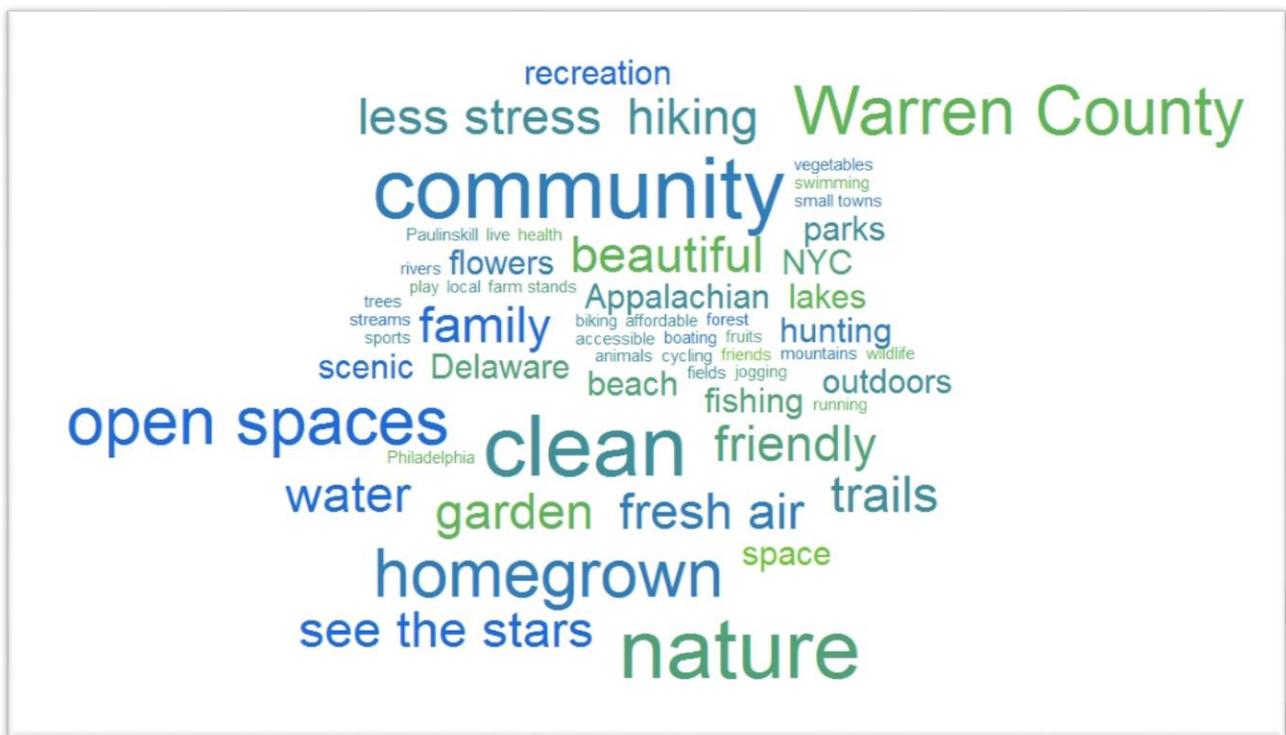
New Jersey Middle School Risk and Protective Factor Survey						
	County vs. State (2012)			County Trends		
	Warren County	New Jersey	Difference	2007	2010	2012
<b>Alcohol Use</b>						
Lifetime use of alcohol	21.0%	23.1%	-2.1	-	18.5%	21.0%
Past 30 days use of alcohol	5.8%	9.0%	<b>-3.2</b>	-	4.3%	5.8%
Early onset of alcohol use	5.9%	7.8%	-1.9	-	5.4%	5.9%
Lifetime binge use of alcohol	4.7%	7.6%	<b>-2.9</b>	-	5.0%	4.7%
<b>Cigarette Use</b>						
Lifetime use of cigarettes	6.1%	7.6%	-1.5	5.7%	4.1%	6.1%
Past 30 day use of cigarettes	2.6%	3.2%	-0.6	2.7%	0.3%	2.6%
Early onset of cigarette use	1.8%	2.7%	-0.9	1.8%	1.9%	1.8%
<b>Marijuana Use</b>						
Lifetime use of marijuana	2.9%	5.4%	<b>-2.5</b>	2.2%	2.0%	2.9%
Past 30 day use of marijuana	1.2%	3.3%	<b>-2.1</b>	1.4%	0.9%	1.2%
<b>Prescription Drug Use</b>						
Lifetime use of prescription drugs	0.7%	5.6%	<b>-4.9</b>	2.9%	5.1%	0.7%
Past 30 day use of prescription drugs	0.4%	2.0%	<b>-1.6</b>	-	1.7%	0.4%
<b>Use of Other Illicit Drugs</b>						
Lifetime use of any other illicit drug	1.3%	2.5%	-1.2	1.1%	0.5%	1.3%
<b>Gambling</b>						
Gambling in past year	11.5%	15.6%	<b>-4.1</b>	-	16.7%	11.5%
<b>Anti-Social Behavior</b>						
Getting suspended	5.4%	9.6%	<b>-4.2</b>	4.1%	3.4%	5.4%
<b>Attacking someone with intent to harm</b>	4.7%	7.9%	<b>-3.2</b>	5.7%	6.2%	4.7%
<b>Being drunk or high at school</b>	3.3%	3.3%	0.0	1.5%	1.4%	3.3%
Being involved in a gang	2.6%	2.3%	0.3	4.1%	1.3%	2.6%
Being arrested	0.8%	2.0%	-1.2	1.1%	0.8%	0.8%
Carrying a handgun	2.4%	1.6%	0.8	0.9%	1.8%	2.4%
Selling drugs	0.4%	1.3%	-0.9	0.3%	0.0%	0.4%
Attempting to steal a vehicle	0.4%	0.5%	-0.1	0.0%	0.0%	0.4%

**Blue** denotes a statistically significant deviation below the state estimate, at 95% confidence.

<sup>47</sup> NJ DOH. (2011). Center for Health Statistics, New Jersey State Health Assessment Data – Birth Count. Retrieved from: <http://nj.gov/health/shad>

## COMMUNITY STRENGTHS

What do you think are Warren County's greatest strengths as a place to live, work, and play?



## FORCES OF CHANGE

A key component of the MAPP assessment phase includes a “Forces of Change” assessment which seeks to identify the trends, events, and additional factors that are affecting the health of Warren County residents. These forces may include social, economic, political, technological, environmental, legal, and ethical components, as well as others. The data presented in the previous sections provides us with a quantitative picture of the influences on residents’ health, but the Forces of Change assessment expands upon these facts.

The Forces of Change assessment was presented to CHIC members and produced the following results:

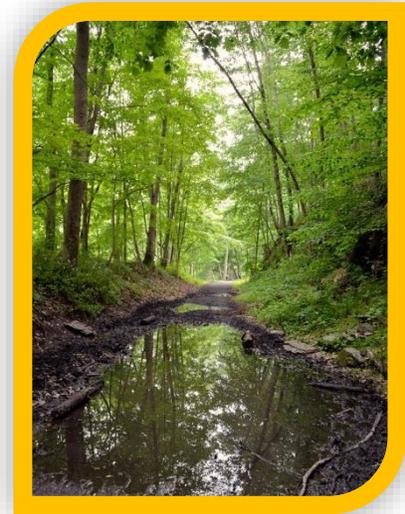
Question	Responses
<i>What do you believe has impacted Warren County's health within the last three years?</i>	<ul style="list-style-type: none"> <li>• Lingering effects of the recession – unemployment, lower wages, lack of health insurance for part-time workers, inability to afford healthcare</li> <li>• Superstorm Sandy</li> <li>• Shifting county demographics – from immigration, aging, and economic changes</li> <li>• Lack of services and infrastructure – shortage of specialists, dentists, hard to get to resources that are available, resources not well promoted</li> <li>• Long commutes and technology don't allow/discourage physical activity</li> </ul>
<i>What do you see happening in the next three years that will impact Warren County's health?</i>	<ul style="list-style-type: none"> <li>• Affordable Care Act/Expansion of Medicaid/Changes in Medicare</li> <li>• Continued demographic shifts – from immigration, aging, and economic changes</li> <li>• Continued economic hardship - increase in taxes and health care costs</li> <li>• Increased in stress-related adverse health outcomes</li> </ul>
<i>What characteristics of Warren County may positively impact health?</i>	<ul style="list-style-type: none"> <li>• Rural area – availability of recreational opportunities, open spaces, small close-knit towns</li> <li>• St. Luke's Hospital Network expansion to Warren Hospital</li> </ul>
<i>What barriers to improving health exist in Warren County?</i>	<ul style="list-style-type: none"> <li>• Lack of public transportation services makes accessing available services difficult for some residents</li> <li>• Lack of mental health providers and specialists</li> </ul>

# COMMUNITY HEALTH IMPROVEMENT PLAN

After examining the health assessment of Warren County, it is clear that there is ample room for improvement. While the county ranks ahead of more than half of other New Jersey counties in the County Health Rankings, we still see significant problems with a variety of health behaviors and outcomes, as well as socio-economic and environmental factors.

Through dynamic partnerships the Community Health Improvement Coalition strives to support a broad, integrated system of health services, education, environmental changes, and policies within Warren County that improve physical and mental wellness. By promoting dialogue between the coalition partners, the diverse voices and perspectives of these partners help us assess our community's health status, strategize our goals for the future, take action toward improvement, and celebrate our successes.

The following section will outline the four key priority areas and their proposed strategies to help address the health issues plaguing county residents. Many of these solutions involve multidisciplinary collaboration between community public, privates, and non-profit partners. These strategies include education programs, environmental improvements, and policy changes.



## Warren County Priority Health Issues



# PRIORITY 1: TOBACCO

Strategic Issue: How can we decrease the rate of tobacco use in Warren County?

**Current Situation:**

The NJ 2020 Goal for tobacco use is to see a reduction to 13.6%. Currently, 19.3% of Warren County residents report that they use tobacco.

**Assets and Resources:**

The Warren County Health Department, as a member of the Sussex-Warren Chronic Disease Coalition, is a key player in reducing the prevalence of tobacco use in Warren County through providing education, advocating for policy initiatives, and connecting individuals to cessation resources. The Coalition is currently partnering with Mom’s Quit Connection, a program of the Southern New Jersey Perinatal Cooperative, to provide “Ask, Advise, Refer: Brief Intervention” training. Additionally, all New Jersey residents have access to the free NJ Quitline and the Mom’s Quit Connection hotline.

Goal: By 2020, the rate of tobacco use in Warren County will decline by 5%.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 1</p>	<p>Training program for tobacco cessation screening-linking to NJ Quitline resources</p>	<p>Through the partnership with the Sussex-Warren Chronic Disease Coalition and its relationship with the Mom’s Quite Connection training program, all WCHD nurses and MRC members will be trained in Ask, Advise, Refer: Brief Intervention tobacco counseling. In turn, these nurses and volunteers will be able to implement the intervention and connect residents with tobacco cessation resources.</p> <p>Both WCHD nurses and MRC volunteers have opportunities throughout the year, including at the annual Warren County Farmers Fair health screenings, to interact with residents and provide this counseling service. The Mom’s Quit Connection/NJ Quitline program also provides data to evaluate the individuals who take advantage of the free services.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 2</p>	<p>Smoke free parks in 100% of municipalities by 2020</p>	<p>Through the Sussex-Warren Chronic Disease Coalition, the Global Advisors for Smokefree Policy in NJ (NJ GASP), WCHD, and the Sussex County Health Department have worked to encourage municipalities to pass smoke-free ordinances for recreation areas and parks throughout both counties via an Integrate Municipal Advisory Council (IMAC). As of October, 2014, six of the twenty-one municipalities in Warren County have passed 100% smokefree parks policies, and two of those six have also passed smoke free policies on other municipal property or near municipal buildings.</p> <p>WCHD would like all twenty-one municipalities to pass smokefree park/recreation area ordinances by the end of 2020.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 3</p>	<p>Assess e-cigarette use among residents</p>	<p>The Family Guidance Center of Warren County’s Prevention Connections is a consistent champion for substance use prevention among the youth of Warren County. WCHD and Prevention Connections are developing a plan to survey county residents about e-cigarette use. This survey will assess the attitudes and perceptions toward, as well as the use of e-cigarettes among middle school, high school, and college students in the county. The survey will be piloted at Centenary College and local high schools, and potentially distributed more widely in the county.</p>

# PRIORITY 2: Obesity

Strategic Issue: How can we decrease the rate of obesity in Warren County?

**Current Situation:**

The NJ 2020 Goal for obesity is to see the rate remain stable (23.7%). Currently, 32.4% of Warren County residents are obese. Based on the CDC guidelines for adults of 150 minutes of moderate physical activity per week, the NJ 2020 goal is to increase the percentage of residents who reach that goal from 53% to 58%. 52% of Warren County residents reported participating in the recommended amount of physical activity.

**Assets and Resources:**

Warren County has an abundance of outdoor recreation areas, of which many residents report taking advantage. There are also many farms, farmers markets, and farm stands throughout the county, which provide many residents with easy access to affordable fruits and vegetables in the growing seasons. Through the Warren County Department of Human Services, residents can apply for farmer’s market vouchers. To date, eight municipalities are committed to the Mayors Wellness Campaign. The Rutgers Cooperative Extension Family and Community Health Sciences and SNAP-Ed programs promote healthy eating and physical activity programs in the county.

Goal 1: By 2020, the rate of obesity in Warren County will not increase.

Goal 2: By 2020, 58% of Warren County residents will report being physically active for 150 minutes per week.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 1</p>	<p>Healthy Menu Options Program</p>	<p>In the 2010 Community Health Survey, 78% of respondents reported being somewhat or very likely to choose “healthier” items indicated on fast food restaurant menus. Using the National Policy and Legal Analysis Network (PLAN) to Prevent Childhood Obesity’s “Putting Health on the Menu” Toolkit, WCHD plans to develop a healthy menu options program. The program aims to encourage restaurants to provide healthier options for diners and for diners to change what they order. WCHD will promote participating restaurants through local media, including newspaper and radio, and these restaurants will have a menu insert and/or table tent to display in their establishments. The program will be piloted in Hackettstown, NJ, using grant funding through ShapingNJ.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 2</p>	<p>Mayor’s Wellness Campaign</p>	<p>New Jersey Health Care Quality Institute’s Mayors Wellness Campaign (MWC) is a statewide community health initiative in partnership with the New Jersey State League of Municipalities. The MWC is a program that gives mayors tools and strategies to champion healthy and active living and to improve the overall health of their communities. Currently, eight of the twenty-one municipalities in the county participate in the MWC. Through a ShapingNJ grant, we intend to double the number of participating municipalities by September, 2015. We will organize a kick-off event to promote the program throughout the communities. By 2018, we would like all municipalities to participate in this program. Emphasis will be placed on obtaining the commitment of additional municipalities and increasing the number of physical activity events, such as community walks or fun runs, throughout those municipalities.</p>

# PRIORITY 3: Chronic Disease

Strategic Issue: How can we improve residents' awareness of chronic disease?

**Current Situation:**

34.5% of Warren County residents report being treated for high blood pressure, and only 57.4% report knowing their most recent blood pressure reading, with younger residents being less likely to know that those over 50. Warren County has the highest skin cancer mortality rate in New Jersey. 26% of women and 36% of men have not been screened for skin cancer in past 5 years.

**Assets and Resources:**

WCHD is a member of the Sussex-Warren Chronic Disease Coalition that works to combat all chronic illnesses in our counties through programs such as cancer screenings for un/under-insured individuals and anti-tobacco policy initiatives. At the annual farmers fair, WCHD nurses screen attendees for hypertension and provide general wellness counseling. The county is also home to many churches with active parishes. WCHD nurses also provide health screenings for seniors at six sites throughout the county.

*Goal: By 2020, at least 65% of Warren County residents will report knowing their most recent blood pressure reading.*

*Goal: By 2020, 80% of Warren County residents will report having a skin cancer screening in the past 5 years.*

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 1</p>	<p>Know Your Numbers</p>	<p>Know Your Numbers is a health screening program that includes total cholesterol, HDL, LDL, and triglycerides, glucose, blood pressure, weight, body mass index (BMI), and waist circumference. These numbers indicate risk-factors for a variety of chronic conditions, including heart disease and diabetes. WCHD will develop a county-wide plan to increase the number of residents who are screened for these indicators through partnership with the Sussex-Warren Chronic disease coalition and other local organizations as well as the WCHD nurses and health educator.</p> <p>Faith based programs have been successful throughout the United States. Many Warren County residents are active in local churches and WCHD believes that a faith-based chronic disease screening program would likely be successful in communities throughout the county. In the next five years, WCHD will develop this program and seek to involve at least ten churches in the initiative.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Strategy 2</p>	<p>Skin cancer initiative</p>	<p>There is no official recommendation from the USPSTF regarding how often skin cancer screenings should be performed, but the Task Force recommends that doctors remain alert for skin lesions with malignant features while performing physical examinations for other purposes and that suspicious lesions should be biopsied. Increasing awareness of skin cancer, as well as self-screening and screenings conducted by physicians may help reduce the skin cancer mortality rate in Warren County.</p> <p>Pending endorsed recommendations from national advisory groups, WCHD has the opportunity to develop a county-wide skin cancer initiative. At a minimum, this initiative will include expanded screening, sun-safety education, and collaboration with the Sussex-Warren Chronic Disease Coalition.</p>

# PRIORITY 4: Primary Data Collection

**Strategic Issue: How can we develop improved collection system for county-specific data in Warren County?**

*Current Situation:*

Much of the data gathered for the CHA is secondary data from the CDC or NJDOH. Often, the demographic attributes of this data cannot be examined, as the sample sizes within the county are too small for reliability. The 2010 Community Health Survey had a reliable sample size for the first phase but not the second phase. Surveying the general population has always been a challenge in Warren County.

**Assets and Resources:**

WCHD has the capability to obtain interns from several local public health programs, including Rutgers and ESU. The two area hospitals, HRMC and St. Luke’s Warren have already expressed interest in partnering to share data and better serve constituents. WCHD conducts surveys at the annual county fair and a broader, county-wide survey for the CHA.

*Goal: Define target health disparities and establish specific targets for reduction based on quantifiable data by 2020.*

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Strategy 1</b></p>	<p>Partnerships with hospitals, universities, and businesses</p>	<p>Non-profit hospitals are required to conduct a Community Health Needs Assessment and develop an action plan every three years. This assessment leads local hospitals in Warren County to collect valuable data about many county residents. Additionally, the admission records of area hospitals may provide important information regarding health issues in the county.</p> <p>Our ultimate goal is to strengthen relationships with nearby institutions in to collect rich local data and clearly identify disparate and disadvantaged groups in our communities in the next five years. As a starting point for the development of this data-sharing partnership, WCHD will study the intersection between air quality and asthma. This study will be conducted with the help of East Stroudsburg University.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Strategy 2</b></p>	<p>Data collection at the county fair</p>	<p>For many years, WCHD has provided free blood pressure screenings at the annual Warren County Farmer’s Fair in July. WCHD has also taken the opportunity to collect some basic health information of those who patronize this service. We plan to develop a better health survey to utilize at the County Fair, as well as expand survey collection more generally to fair attendees. WCHD nurses, MRC volunteers, and local university students will be employed to help with this effort. Through consistent and expanded data collection, we will obtain richer data specific to Warren County and be able to identify trends over time.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Strategy 3</b></p>	<p>Leveraging GIS capabilities</p>	<p>The Warren County Planning Department often employs Geographic Information Systems (GIS) capabilities to visualize, question, analyze, and interpret data to understand relationships, patterns, and trends. These tools have wide applications, including public health. GIS systems help us picture population health problems within the context of demographic variables, environmental changes, available medical and social services.</p> <p>To coincide with the expansion of data collection in the next five years, we plan to use the GIS capabilities of other county agencies to gain better understanding of health issues in the population.</p>