

June, 2016

Dear members of our community,

On behalf of Lehigh Valley Health Network, I am pleased to present “The Road to Health” Community Health Needs Assessment (CHNA) report to you. This report represents the needs assessment for all of our Lehigh Valley regional campuses—Cedar Crest, Tilghman, 17th Street, and Muhlenberg. It was our privilege to work with the Health Care Council of the Lehigh Valley to help produce this helpful document.

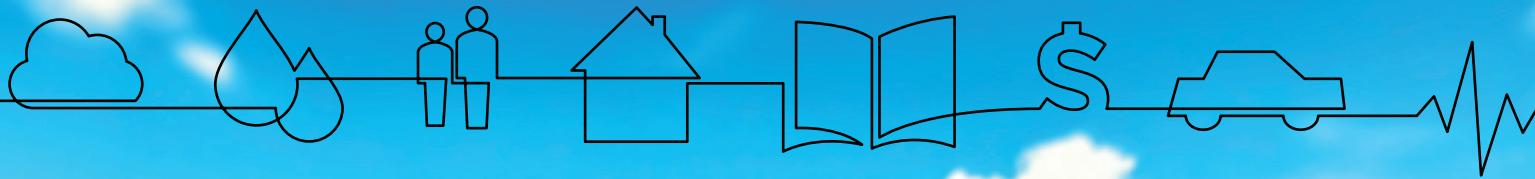
Please read through the pages of this report and the highlights outlined on our LVHN website: www.lvhn.org. Look for the 2016 Community Health Needs Assessment tab under the “About us” section. We will use the CHNA report to inform our implementation plan for improving the care of our patients and the health of our community. We will share our CHNA plan with you in November, 2016.

Respectfully submitted,



Robert J. Motley, MD, MHCDS
Leonard Parker Pool Chair, Community Health & Health Studies
Lehigh Valley Health Network

The Road to Health



HEALTH CARE COUNCIL OF THE LEHIGH VALLEY

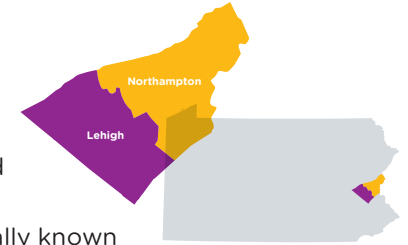
HEALTH PROFILE FOR THE 2016 COMMUNITY HEALTH NEEDS ASSESSMENT FOR THE LEHIGH VALLEY

About This Report

As part of the Affordable Care Act (also known as Obamacare), starting in 2013, all non-profit hospitals and health care systems are required to conduct a Community Health Needs Assessment (CHNA) every 3 years. A CHNA includes a report that looks at all of the factors that go into making all people in a particular area healthy, including social and environmental factors like employment, education and air quality, individual behaviors like smoking or healthy eating, and the quality and availability of health care in their area. This report combines statistics from local, state and national sources about disease, the environment, social factors and individual behaviors, with ideas, stories and experiences from regular people from many different walks of life from Lehigh and Northampton Counties, gathered through three focus groups.

In 2011, the five non-profit health care systems in the Lehigh Valley partnered with the Dorothy Rider Pool Health Care Trust to create the Health Care Council of the Lehigh Valley (HCC). The aim of the Council was to work together to make one, strong Community Health Needs Assessment that applied to all people living in the Lehigh Valley. Since 2011, the HCC has added the Allentown Health Bureau, the Bethlehem Health Bureau, and Neighborhood Health Centers of the Lehigh Valley. This combined group has collaborated to create the 2016 report.

Report Area



The Lehigh Valley is comprised of Lehigh and Northampton Counties, and is located in the Northeastern region of Pennsylvania. Historically known as a key industrial hub, the Lehigh Valley has transformed into a place that celebrates its industrial past while embracing the growing opportunities in higher education, engineering, the arts and health care.

Health Care Council of the Lehigh Valley

The Health Care Council of the Lehigh Valley (HCC) was formed to measure and improve the broadly defined health of the Lehigh Valley. Created by the not-for-profit health care systems of the Lehigh Valley and expanded to include local health departments and the community health center, the HCC's objective is to cooperatively update our world-class Community Health Needs Assessment (CHNA) to continue to galvanize action and provide a dramatic, demonstrable and sustained impact on the health of the citizens of the Lehigh Valley.

HEALTH CARE COUNCIL OF THE LEHIGH VALLEY MEMBERS



Special focus areas



What can one person do about it? When you see this symbol on the following pages, it highlights steps you can take to make improvements for yourself, your neighborhood and the Lehigh Valley.



From our focus groups. In order to better understand what the statistics we collected mean, for this report we conducted three focus groups comprised of regular people from all walks of life who live in Lehigh and Northampton Counties. One focus group was conducted at Lehigh Carbon Community College Campus in Allentown, another at Northampton Community College in South Bethlehem, and the third was comprised completely of teens from Lehigh and Northampton Counties. When you see this symbol, it represents the ideas shared directly from the focus group participants.

2020 GOAL

What is Healthy People 2020? Healthy People is a set of goals and objectives with 10-year targets designed to guide national health promotion and disease prevention efforts to improve the health of all people in the United States. Released by the U.S. Department of Health and Human Services each decade, Healthy People reflects the idea that setting objectives and providing science-based benchmarks to track and monitor progress can motivate and focus action.

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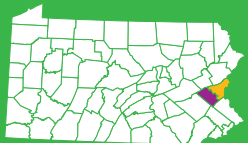
Credits:

Funding for the HCC and “The Road to Health” has been generously provided by the Dorothy Rider Pool Health Care Trust. Project Management for the HCC and all research, analysis and content for “The Road to Health” has been provided by 35th Street Consulting, LLC. Design work for “The Road to Health” has been provided by DOXA.

According to the County Health Rankings, people in the Lehigh Valley live long lives.* Our region's strength continues to be high-quality medical care; in the Lehigh Valley we do a good job at making people who are sick well again. But, as a region, we could do a better job at encouraging prevention, and supporting one another in making a community that helps all of us lead healthier and better quality lives.

Length of Life and Quality of Life Rankings in PA for Lehigh and Northampton Counties, 2015

1 = best, 67 = worst



Length of Life

14

Quality of Life

33



Length of Life

11

Quality of Life

54



How can we improve health?

We must first look at the things that influence health. This includes housing, education, our air and environment and our individual behaviors. It also includes supporting each other by building relationships with our neighbors and highlighting role models who have overcome adversity. These social factors and individual behaviors have a big impact on what it means to live healthy lives; together these changes work to restore pride in ourselves and our homes. If individuals and institutions work together to make small changes, we can improve the quality of our lives.



Leading Causes of Death:

Before we understand how we can improve our health, we need to know the leading causes of death in the Lehigh Valley. Since the 2013 Health Profile, we have generally seen an improvement in the treatment of the diseases that represent the most common causes of death in our area. As a result, people in the Lehigh Valley continue to live long lives.

Although it is great to know that if we get sick we have quality health care available to us in the Lehigh Valley, we are not improving on the other things that can help keep us healthy and avoid disease.

Improving

- 2005 - 2009
- 2011 - 2013

Getting Worse

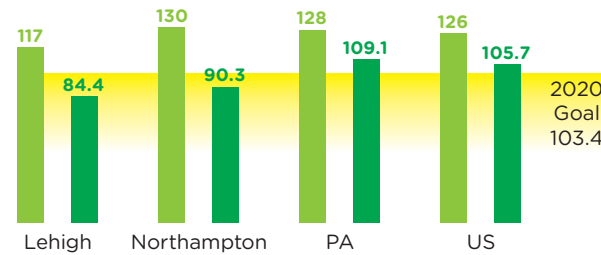
- 2005 - 2009
- 2011 - 2013

NOTE / Charts Depict Age Adjusted Deaths per 100,000

Source: CDC NVSS-M

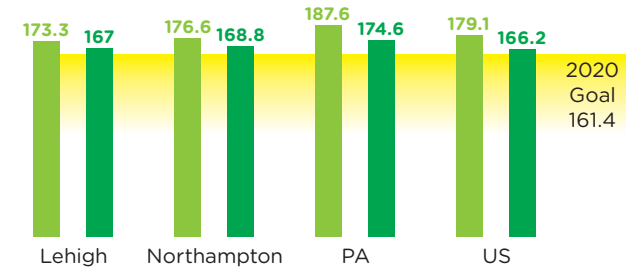
Heart Disease Improving +

Coronary heart disease-related deaths



Cancer Improving +

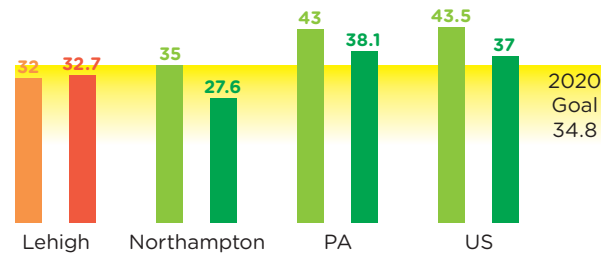
Number of deaths due to cancer (all Cancers)



Stroke Improving +

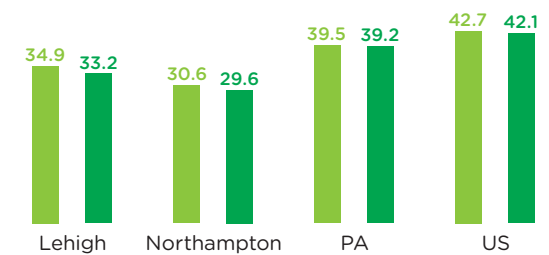
Exceeding HP 2020 Goal

Number of stroke deaths



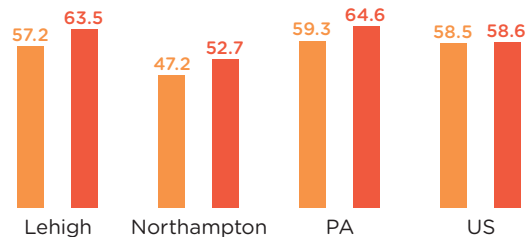
Lung Disease Improving +

Chronic lower respiratory disease deaths



Injury & Violence Getting Worse -

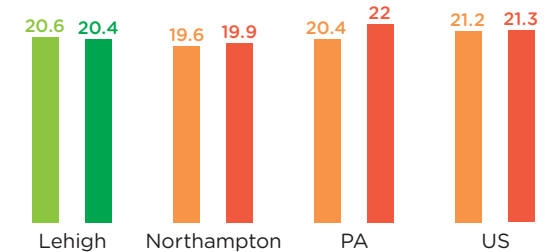
Number of deaths with an underlying cause of injury



Diabetes Getting better in LC +

Getting worse in NC and PA -

Number of persons with diabetes as the underlying cause of death





Factors that contribute to our health and well-being:

Our homes, our families and how we spend our time

- o **Who we are**
 - Language
 - Age
 - Disability
 - Race
 - Ethnicity
- o **Work and how we get there**
 - Income
 - Unemployment
 - Poverty
- o **How we live**
 - Housing
 - Education and Schools
- o **Intersections**
 - Income and education
 - Transportation and air quality

Taking care of our own bodies

- o **Healthy Behaviors**
 - Physical activity
 - Nutrition and food security
 - Obesity
- o **Healthy Habits**
 - Cigarettes
 - Alcohol
- o **Healthy Relationships**
 - Friends and family
 - Sexual relations

Medical care and local institutions

- o **Access to Health Care**
 - Primary care providers
 - Patient centered health homes
 - Making connections
- o **Access to Mental Health Care**
 - Mental health
 - Barriers to care
- o **Clinical Prevention Interventions**
 - For seniors
 - For moms and babies



Who Are We?

Research shows that there are groups of people who face greater obstacles to health based on their geographic location, race, ethnicity, gender, age, disability or other characteristics historically linked to discrimination or exclusion.

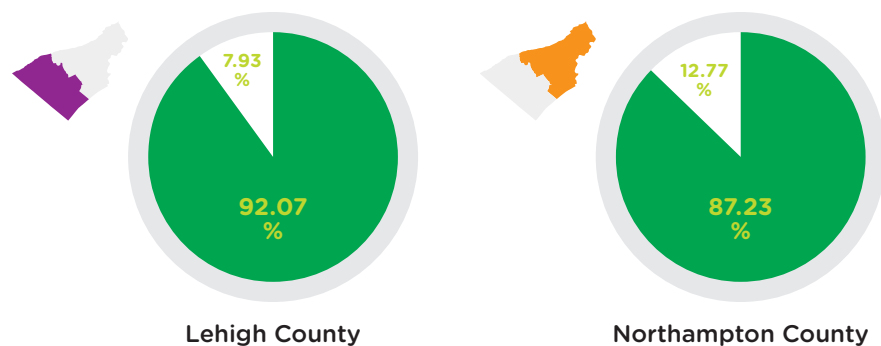
We are urban and suburban

In the Lehigh Valley, more of our population lives in our cities and suburban areas than in our rural areas.

Population Distribution

(County Health Rankings, 2015)

Rural Urban and suburban



We are growing

The population in the Lehigh Valley generally has grown in the decade between 2000 and 2010, and has continued to grow through 2014.

Population Change, Percent by Tract

(US Census Bureau, ACS 2009-13)

- Over 10.0% Increase (+)
- 1.0 - 10.0% Increase (+)
- Less Than 1.0% Change (+/-)
- 1.0 - 10.0% Decrease (-)
- Over 10.0% Decrease (-)
- No Population or No Data



We are older

The population in the Lehigh Valley has proportionately more people ages 45 and older than both Pennsylvania and the US, and has proportionately fewer people in all age categories 35 and below. This difference in age distribution which has greater numbers in the older age categories contributes to the types of ailments and causes of death most prevalent in the Lehigh Valley.

Who Are We?

We are not all the same

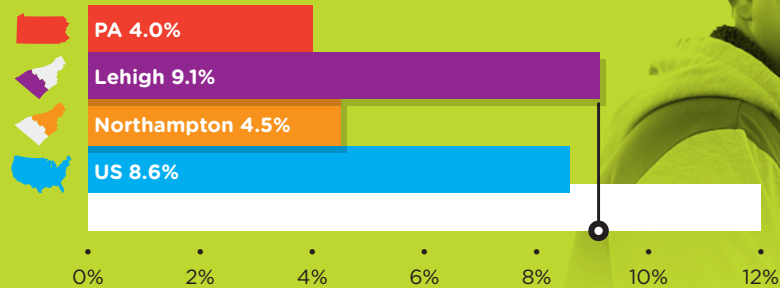
The Lehigh Valley is less racially diverse than other places, with a greater proportion of people in the Lehigh Valley identifying as white compared to Pennsylvania and the broader US. When viewed separately, Lehigh County has a more people identifying as Hispanic or Latino ethnicity than Northampton County, Pennsylvania and the nation. Nearly 13% of people living in the Lehigh Valley have a diagnosed disability, which is consistent with Pennsylvania, but slightly more than the nationwide average.

We speak many languages

People in the Lehigh Valley speak many languages. In the Lehigh Valley, we have more households with no one over age 5 who speaks English “very well” than Pennsylvania. If we look by county, Northampton County has a lower percentage than the US in general, but Lehigh County has a higher percentage than even the US generally.

Percent Population Age 5+ with Limited English Proficiency

(US Census Bureau, ACS 2011-2013)



Who Are We?

As we age, our health needs grow

The people living in the Lehigh Valley tend to be older than the rest of the state and the nation; Lehigh and Northampton Counties have more people in the 45-54 age range and fewer ages 35 and younger than the rest of Pennsylvania or the nation. People in this age range are often responsible for family members both older and younger than them, placing unique responsibilities and stress on people in this age group. However, this also means that providing social support and assistance to this particular group could have a dramatic impact on older and younger generations in the Lehigh Valley.

Total Age Group Distribution, percent (US Census Bureau, ACS 2009-13)

	Age 0-4	Age 5-17	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65
Report Area	5.68%	16.77%	9.43%	11.72%	12.87%	15.19%	12.79%	15.54%
• Lehigh County	6.04%	17.25%	8.94%	12.35%	12.95%	15%	12.41%	15.07%
• Northampton County	5.25%	16.2%	10.01%	10.98%	12.78%	15.42%	13.25%	16.1%
Pennsylvania	5.68%	16%	9.88%	12.18%	12.43%	14.94%	13.13%	15.75%
United States	6.44%	17.28%	9.97%	13.39%	13.12%	14.29%	12.08%	13.43%

People with disabilities have health needs beyond the treatment of their identified disability

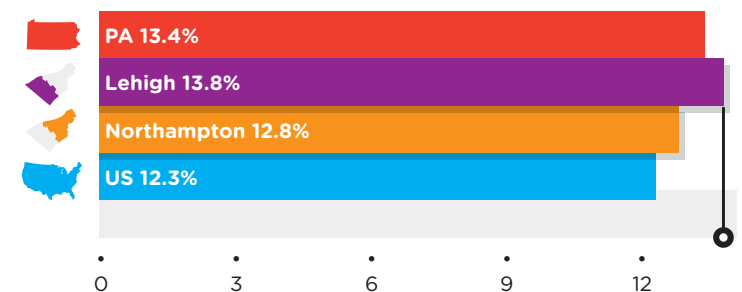
How we think about disability is directly related to what we do as a community to assist persons with disabilities to live as equally, fully and healthy as possible. Within the Lehigh Valley, the population for whom disability status is determined is slightly higher than national averages, but generally consistent with Pennsylvania as a whole. In addition to the diagnosed disability, people with disabilities become ill, have healthy and unhealthy habits, and are influenced by social and environmental factors, but with a stronger impact on their overall health because of their disability. Therefore, interventions to improve social and environmental factors and influence individual behaviors could have a profound impact on the quality of life and health of people with disabilities in the Lehigh Valley.

“Disability is defined as an environmentally health-related and activity participation limitation on a person’s existing or emerging ability to perform appropriate activities of daily living and instrumental activities of daily living within society.”

–Good Shepherd Rehabilitation Network

Percent Population with a Disability

(US Census Bureau, ACS 2011-2013)







Who Are We?

We are a mix of races

The current racial composition of the Lehigh Valley is less diverse than Pennsylvania and the nation, consisting of a greater proportion of the population identifying as white compared to Pennsylvania and the broader United States Population as reflected in the table below:





Population by Race (US Census Bureau, V2014)

	White	Black	Asian	Some Other Race	Multiple Races
Report Area	83.54%	5.81%	2.87%	5.21%	2.58%
 • Lehigh County	80.8%	6.45%	3.08%	7.02%	2.65%
 • Northampton County	86.76%	5.06%	2.62%	3.07%	2.49%
 Pennsylvania	82.22%	10.88%	2.86%	2.13%	1.91%
 United States	74.02%	12.57%	4.89%	5.72%	2.8%

We are home to many people who identify as Hispanic or Latino

Lehigh and Northampton Counties have a greater percentage of people identifying as Hispanic or Latino than Pennsylvania. Lehigh County has a greater percentage of people identifying as Hispanic or Latino than the US in general. Hispanics may be of any race.

Population by Ethnicity (US Census Bureau, V2014)

	Hispanic or Latino*, Percent, July 1, 2014	White Alone, Not Hispanic or Latino, percent, July 1, 2014
 • Lehigh County	21.5%	68.1%
 • Northampton County	12%	78.5%
 Pennsylvania	6.6%	77.9%
 United States	17.4%	62.1%

* Hispanics may be of any race, so also are included in applicable race categories



What can one person do about it?

- Recognize diversity**
 Educate social institutions (such as religious organizations or clubs), private institutions (such as colleges, hospitals and corporations) and public institutions (such as schools, police and elected officials) about resources or people you may know who can share their language or cultural skills to help others.
- Show others the way**
 Role models play an important part in showing others what is possible, and the effect a small change can have. Honor those around you in your family, your neighborhood, at work, at school and in your social and religious organizations who have made small changes that have improved their lives.
- Build awareness**
 Build awareness among the people you know regarding the contributions and potential of persons with disabilities.



Work and How We Get There

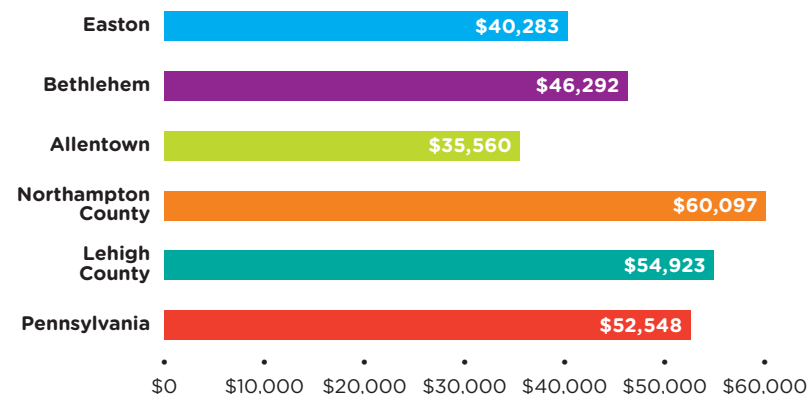
Income and unemployment affect our health because they affect our ability to access a livable wage, health insurance, health care, healthy food, appropriate shelter and education.

How are we doing?

Income

When analyzed at the county level, both Lehigh Valley counties report a higher median income than the Pennsylvania median income for the same year (2013). However, when the median income is evaluated at the city level (Allentown, Bethlehem, Easton), the median income is far below the state median. This suggests that the median income in the rural and suburban areas is likely higher than those in the cities in the Lehigh Valley. The values are reflected below:

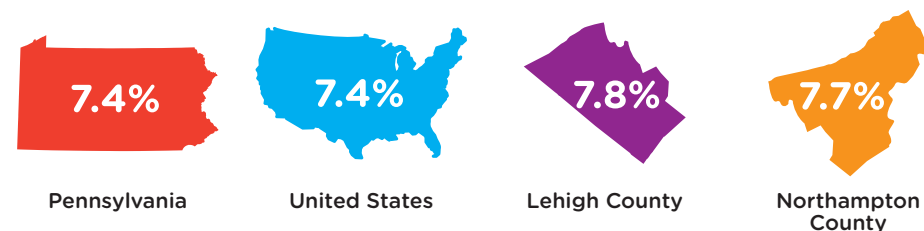
Median Household Income, 2013 (US Census Bureau, 2013)



Unemployment

Unemployment in the Lehigh Valley was slightly higher than Pennsylvania and National averages.

Unemployment, 2013 (US Census Bureau 2009-2013)



Income Inequality

Income inequality is a ratio representing the ratio of household income at the 80th percentile of income compared to household income at the 20th percentile of income. This indicator measures relative disadvantage within a geographic area. The higher the ratio, the wider the division between those at the top and those at the bottom. The ratios are fairly consistent across the Lehigh Valley and Pennsylvania, with 4.6 in Lehigh County, 4.2 in Northampton County and 4.7 in Pennsylvania. (County Health Rankings 2015)

Work and How We Get There

Poverty is both the cause and result of poor health, and is both a cause and consequence of disability. Poverty also causes economic insecurity, which has a significant negative impact on physical and mental health.

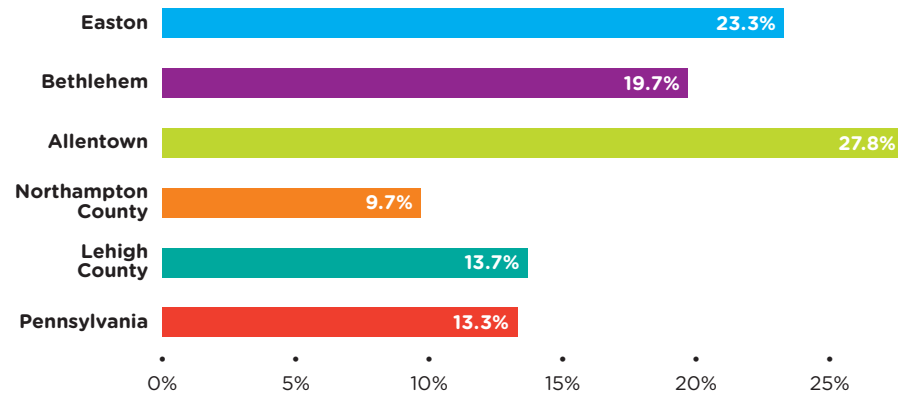


Poverty

The percent of persons living below the poverty level in Lehigh County is consistent with the state, and the percent of persons living below the poverty level in Northampton County is lower than the Pennsylvania percent. However, the cities in the Lehigh Valley (Allentown, Bethlehem, Easton) experience a far greater percent of persons living below the poverty level than the counties and the state. The numbers are reflected below:

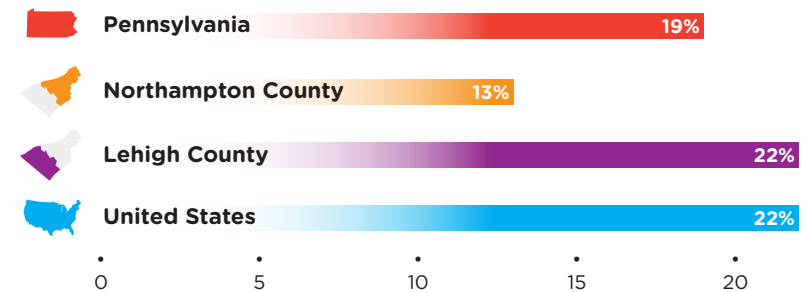
Percent of Persons Below the Poverty Level

(US Census Bureau 2009-2013)



Children Living in Poverty

The percentage of children—those under the age of 18—living in poverty is a strong indicator of the current and future health of a population. Poverty status is defined by family; either everyone in the family is in poverty or no one in the family is in poverty. This measure is helpful in understanding how many children and families with children struggle to meet day-to-day needs, thereby affecting their physical and mental health. In the Lehigh Valley, the percentage of children living in poverty is very different between Lehigh (22%) and Northampton (13%) Counties as represented in the graph below. (County Health Rankings 2015)





How We Live: Housing

“Stable, healthy housing is inextricably tied to individual health.”

(FY 2010-2015 HUD Strategic Plan)

Housing affects health because:

- Living in a home that costs too much or needs repairs makes it harder to feel pride in oneself, one’s home and one’s community
- A stable home makes it easier to have healthy habits such as healthy eating, exercising and staying on top of a disease management program
- Environmental hazards in homes such as lead, asbestos and mold can cause disease
- Children who move homes and schools frequently have a harder time keeping up with schoolwork
- Frequent moving makes it difficult for people to maintain and create social support networks



“... if you have a decent place, you feel decent.”

How are we doing?

When people who live in the Lehigh Valley participated in focus groups regarding this report, housing was consistently mentioned as one of the biggest contributors to poor health and poor quality of life in the Lehigh Valley. In all of the focus groups we consistently heard that pride in essential to an increased quality of life. Specifically, participants expressed that pride in oneself, pride in one’s home and prides in one’s community were necessary to have the strength and hope to work towards a better life.

Our homes are older

Because many homes in the Lehigh Valley are older than in other parts of the country, they are more likely to contain environmental hazards like lead paint, asbestos, and mold. According to the focus groups, many of these housing issues were a big source of stress, hopelessness, depression and anxiety. When this is combined with the limited number of other affordable housing opportunities, people feel they are being taken advantage of and they feel “trapped” in unhealthy and sometimes dangerous housing situations.

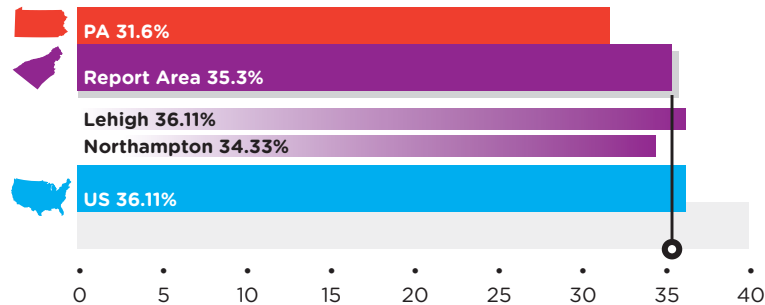
Housing

We have more substandard housing violations than other areas

More than 1 in 3 (35.3%) occupied housing units in Lehigh and Northampton Counties have one or more housing problem including overcrowding, high housing costs, or lack of kitchen or plumbing facilities. Living with these kinds of housing problems makes it harder to feel pride and harder to do the things we know we need to do to be healthier. When people have limited income and work long hours, and these types of problems arise in homes, sometimes people choose to move rather than invest in improving things. The lack of a stable home often makes doing well in school, buying healthy food, exercising regularly, and managing chronic disease or mental illness really hard.

% Occupied Housing Units with One or More Substandard Conditions

(US Census, ACS 2009-13)



What can one person do about it?

- **Create opportunities to build pride.** The focus group participants emphasized that as individuals and as a community we need to work together to create opportunities to foster pride in ourselves, our homes and our communities. Without pride, we cannot imagine something better, and cannot be motivated to work towards it.
- **Know your rights.** There are codes and standards that are designed to protect renters and homeowners from environmental toxins and predatory landlords. See <http://www.northpennlegal.org/get-help/basic-landlord-tenant-resources> for more information.
- **Lead by example.** Be a role model for positive change.
- **Start small.** Pride and care for what's yours is contagious and can work to change your whole neighborhood.



“You have to have pride in your home. If some of the landlords and renters have pride in where they're at then they would make it better because if you have pride in your home it makes you feel better about yourself.”

“When families are looking for a place and there's a financial aspect they just take what's available to them.”

“The poor are as deserving of clean, decent, affordable housing as anybody else is. It is unconscionable to see poor folk working two to three jobs are living in hovels.”

“You should have a nice house and if that's a sloppy house, who's going to take pride in that? Need to have something nice so people can have pride in their home.”



How We Live: Education

“Education leads to better jobs and income, but also to longer and healthier lives. Research shows that better-educated individuals live longer, healthier lives than those with less education, and their children are more likely to thrive.”

—Robert Wood Johnson Foundation, “Why does Education Matter So Much to Health?”
December 2012 (updated March 2013)

Education affects health because limited educational attainment impacts employment opportunities and one’s capacity to increase wealth and access insurance. These factors also affect housing choices and quality, access to transportation, affordability of healthy food, and the accessibility of exercise and other resources that can increase health.

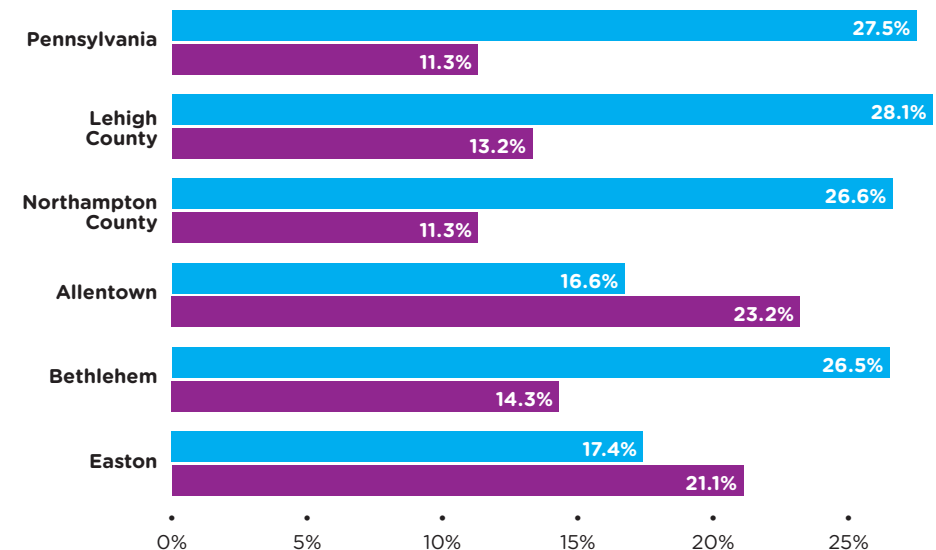
How are we doing?

In the Lehigh Valley, we have a significant percentage of adults who are college graduates. If we look at the county level, we have significantly more adults who have completed a Bachelor’s Degree than adults who have not completed high school. But, if we look at a smaller scale, both Allentown and Easton have far more adults who have not completed High School than adults who have completed a bachelor’s degree. This suggests that there are disparities in education in Allentown and Easton compared to other parts of the Lehigh Valley that do have an impact on the health of our community. This also suggests that exploring the educational attainment of adults using a smaller unit of measure can help better identify areas of greater need.

Percent of Adults ages 25+ with No High School Diploma and Percent of Adults ages 25+ with a Bachelor’s Degree

(US Census, ACS 2009-13)

● Bachelor’s Degree Completed ● No High School Diploma



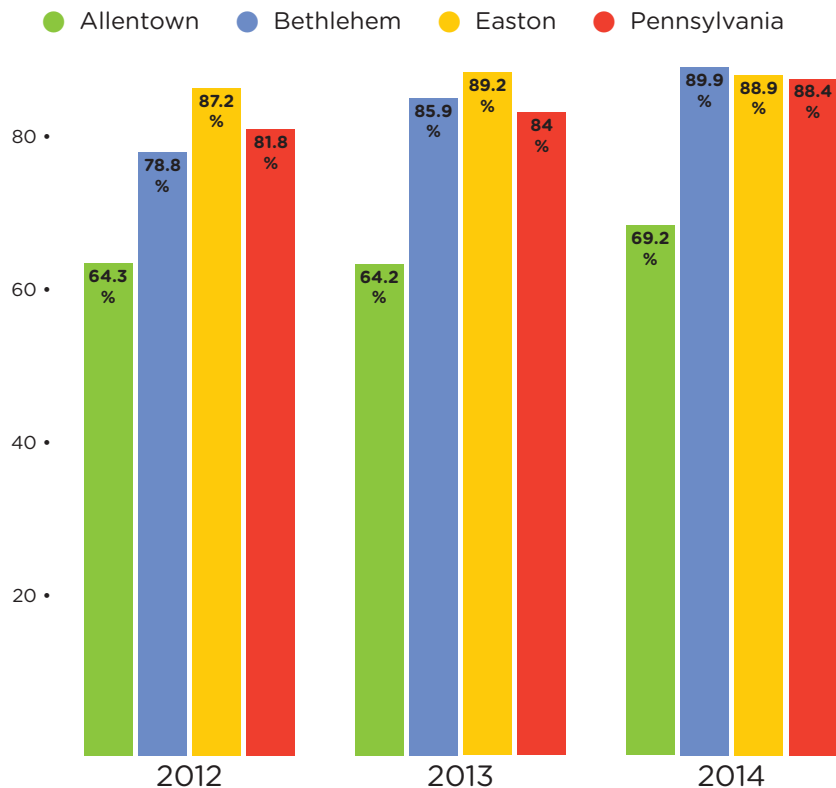
“You have to have a good environment to be able to learn... there are people who don’t want to learn, and if you don’t give them appropriate attention, they can send those who do want to learn down the wrong path.”

Education

More education is directly related to better health. Clearly, there is work to do to ensure that all Lehigh Valley residents, particularly in our cities, can graduate from high school on time. What we can do is work to make sure that the young people who are in school now are able to graduate on time in greater numbers than in the past.

Percent On Time Graduation for Allentown, Bethlehem, Easton and Pennsylvania for School Years ending 2012, 2013, and 2014

(Pennsylvania Department of Education)



Of the 17 school districts in the Lehigh Valley, most have on time graduation percentages above the Pennsylvania average. However, the three city school districts - Allentown, Bethlehem and Easton - generally have a lower percent of on time graduates than the suburban and rural school districts throughout the Lehigh Valley. Allentown consistently has the lowest percentage of on-time graduates in the area. But, if we look at the percentages in the three city school districts in the Lehigh Valley over three years, the percent of on-time graduates is increasing, especially in Allentown.

School is a significant source of reliable information for teens

School seems to be the center of information, both in terms of formal education and social information for youth. Every story shared by the teen focus group was about school or people from school. Ideas and actions expressed in school and school culture could have a noticeable impact on teens, both positively and negatively.

Schools as a welcome center to build relationships, pride, capacity

All of our focus groups felt that schools are some of the only established safe places for people across race, religion and income to congregate without fear or stigma. Therefore, they suggested that schools should be welcoming, inclusive, foster positive learning opportunities for people of all ages outside of school hours, serve as a source of information about what is going on in the area, and provide space for forums for parents to learn things to bring home and to share ideas without backlash for speaking up.



“We have to school good kids and bad kids... if you tell them they’re bad they won’t be instructed to access the resources that are positive.”

Intersections: Income and Education

“Education and income are the two indicators that have been demonstrated to be the primary social determinants that impact population health.”

-Community Commons

The intersection of low income and low educational attainment impacts health because lack of financial resources and a lack of education contribute to increased stress and a decreased self-confidence and pride, having a negative impact on health. These factors also affect one’s choices regarding the quality of one’s home, access to healthy foods, reliability of transportation, and the opportunity for leisure time where one can spend time nurturing family and social relationships.

How are we doing?

When we look at a map that combines education levels and income, we can see clearly that the reasons for lower on-time graduation are complex, and cannot be separated from poverty. The following maps demonstrate the areas within the Lehigh Valley where more than 20% of the population is below the Federal Poverty Level and 25% or more of the adult population 25+ have less than a High School Diploma. It is evident that the areas within the Lehigh Valley where these two factors intersect are also the same areas where on time graduation is lowest and the largest proportion of adults with less than a high school diploma live.



“I was a teacher and I saw kids coming to school [from low income families] who struggled but they wanted to be there, but then other kids came from wealthy families and they didn’t care. They [the kids from low income families] struggled not because they weren’t smart enough but they didn’t have the support because parents work so many jobs... It’s not parents’ fault - they need the money.”

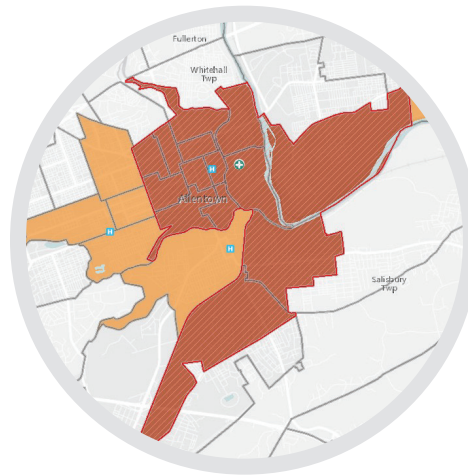
Vulnerable Population by Education and Poverty, Lehigh and Northampton Counties

(US Census Bureau, ACS 2009-13, from Community Commons)

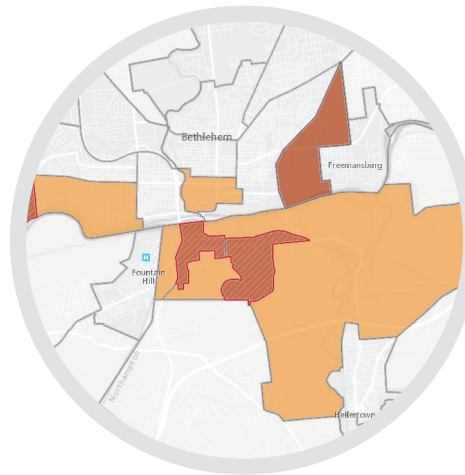
● Vulnerable Populations Footprint

20% of the population below the FPL

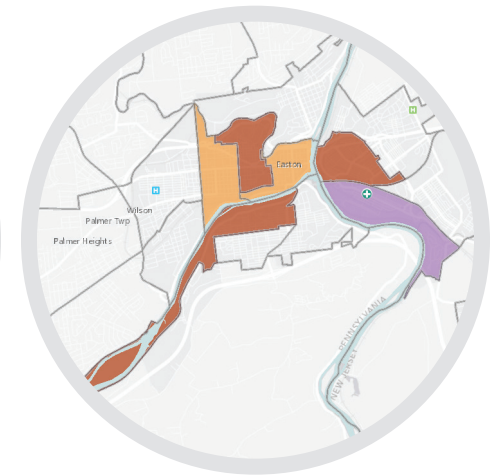
25% of the adult population have less than a HS Diploma



Allentown



Bethlehem



Easton



Intersections: Transportation and Air Quality

How are we doing?

“Walkable, bikeable, transit-oriented communities are associated with healthier populations that have more physical activity, lower body weight, lower rates of traffic injuries, less air pollution and improved mobility for non-drivers.”

-Robert Wood Johnson Foundation, “How Does Transportation Affect Health?” October 2012

Transportation

People in the Lehigh Valley spend more time in their cars and less time using public transportation than the Pennsylvania or US average. **More than 80% of people in Lehigh and Northampton Counties drive alone to work, and among those who do, roughly 1 in 3 commute more than 30 minutes alone in their cars every day.** Besides being inconvenient, inefficient and creating air pollution, long commutes alone also take away from the amount of time in a day that people can spend exercising, eating nutritious meals, engaging with their families and friends, furthering their educations and enjoying leisure time activities.

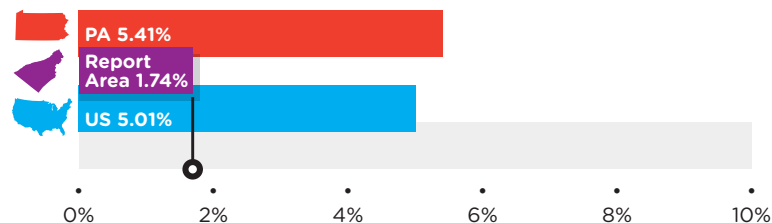
Limited public transportation and long commute times limit employment opportunities for many because of the distance and difficulty in commuting. And, lack of access to reliable transportation makes it difficult to keep doctor’s appointments, creating a barrier to health care access.



“If you don’t have a car out here, you are stuck.”

Percent Population Using Public Transit for Commute to Work

(US Census, ACS 2009-13)



Transportation and Air Quality

Air Quality

In the Lehigh Valley, we have air quality issues that are related to pollution. Increased levels of fine particulate matter in the air have negative effects on health, including increases in:

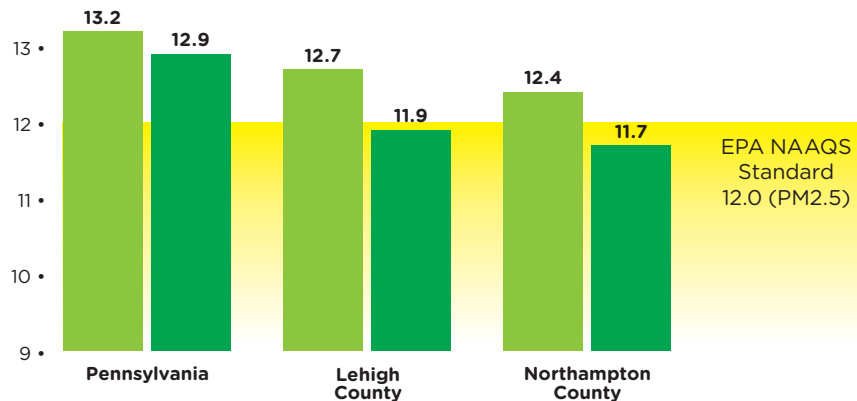
- Respiratory disease
- Stroke
- Low birth weight
- Heart disease

The Clean Air Act requires the EPA to set National Ambient Air Quality Standards (40 CFR part 50) for pollutants considered harmful to public health and the environment. The standard for PM2.5 is 12.0 (EPA, NAAQS), which Lehigh and Northampton Counties meet as of 2011, but there is still room for improvement.

Outdoor Air Quality Fine Particulate Matter for Pennsylvania, Average Daily Density of Fine Particulate Matter (PM2.5)

(CDC Wonder)

● 2008 ● 2011



What can one person do about it?

- **Carpool when you can.** Talk with your coworkers and employers about helping to connect employees who live near each other to share rides.
- **Explore car share initiatives in the Lehigh Valley.** There are new car sharing programs starting in different parts of the Lehigh Valley. Explore them more by looking on your town's website.
- **Talk to local leaders in government and industry.** Educate policy makers and others about the health effects of poor air quality.
- **Pay attention to air quality alerts.** Be mindful of poor air quality alerts, particularly for vulnerable loved ones such as children and seniors.



“For me, improving transportation would reduce stress, make life much more enjoyable, it would make a 20 minute appointment not take the whole morning. It would improve my quality of life and give me back hours in a day... a lot of stress would be reduced.”



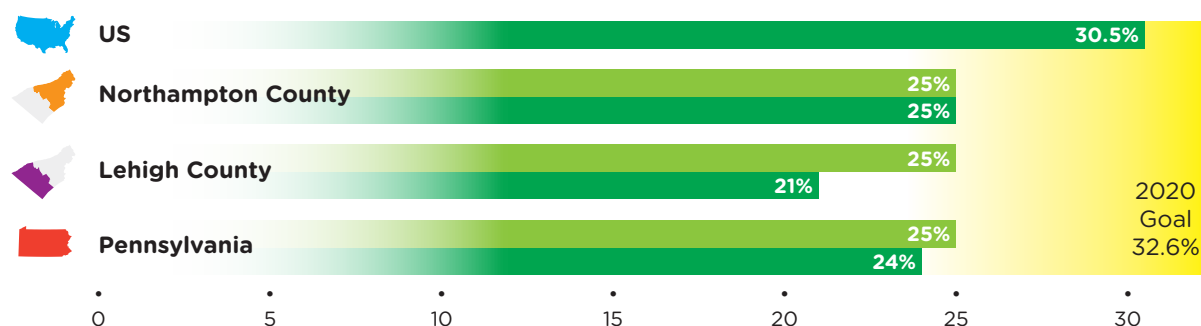
Healthy Behaviors: Physical Activity

“Physical activity has many health benefits for people of all ages, races, and genders. It helps maintain a healthy weight, makes it easier to do daily tasks such as climbing stairs. Physical activity lowers the risk for many diseases including depression, heart disease, diabetes and cancer.”

-US Department of Health and Human Services, National Institute of Health, National Heart, Lung and Blood Institute

Physical Inactivity Improving +

● County Health Rankings 2012 ● County Health Rankings 2015



How are we doing?

The Lehigh Valley has more parks and recreational opportunities than most of Pennsylvania, and we do exercise more than the average American, exceeding the Healthy People 2020 Goal. Better yet, we’re exercising more now than we were the first time we reported on this indicator for the 2013 CHNA in Lehigh County, and have held steady in Northampton County.

However, people in all focus groups said that in many places people have to work long hours and move often, so they don’t know their neighbors. Not knowing one’s neighbors can limit people’s comfort level in using outdoor public places. Although they may have parks nearby, the parks don’t have as many organized activities as they once did. So, parents, seniors and others are sometimes hesitant to use the park or send their children to play because of fear of crime or the unknown.



What can one person do about it?

- **Every little bit helps.** Gradually work to improve healthy eating habits and physical activity in your family.
- **Watch what you drink.** Choose water as a beverage. It has zero calories, is readily available, and is good for you.
- **Take a break and move.** Make it a priority to take 10-15 minute breaks to walk, climb stairs or move around. This is especially important if you work at a computer or desk most of the day.

Healthy Behaviors: Nutrition and Food Security

“Good nutrition is an important part of leading a healthy lifestyle. Combined with physical activity, your diet can help you to reach and maintain a healthy weight, reduce your risk of chronic diseases (like heart disease and cancer), and promote your overall health.”

-President’s Council on Fitness, Sports and Nutrition




How are we doing?

Where you live affects what you eat.

When we look at the Lehigh Valley as a whole, the robust urban-rural mix and the mix of incomes makes fresh foods an available resource.

The Food Environment Index which takes both proximity to healthy foods and income into account, is relatively high in the Lehigh Valley (0 = low, 10 = highest).

(County Health Rankings 2015)

	 Pennsylvania	 Lehigh County	 Northampton County
Food Insecurity	14%	13%	12%
Limited Access to Healthy Food	4%	4%	4%
Children Eligible for Free or Reduced Lunch	34%	37%	27%
Food Environment Index	7.7	7.9	8.1

But, just because healthy foods are for sale in many places, does not mean they are accessible to everyone. If we look deeper, we have a significant proportion of children eligible for free or reduced lunch (indicating family income less than 160% of the Federal Poverty Level).

In Lehigh County, nearly 2 out of 5 (37%) of all children are eligible for free and reduced lunch. In Northampton County, nearly 1 in 3 (27%) of all children are also living below 160% of the Federal Poverty Level.

In addition, 13% of households in Lehigh County and 12% of households in Northampton County are experiencing food insecurity. This means that for more than 10% of households in the Lehigh Valley, access to adequate food quality and amount is limited by a lack of money and other resources.

Exercise, Fruits and Vegetables Can:

- Reduce the risk of heart disease, stroke, digestive problems and certain types of cancer
- Lower blood pressure
- Help stabilize blood sugar, which can make you less hungry and lower the risk of Type II Diabetes



Healthy Behaviors: Obesity



Obesity affects health because it is a risk factor for a wide range of chronic diseases including diabetes, heart disease and depression. Obesity affects people of all ages, races and income levels.

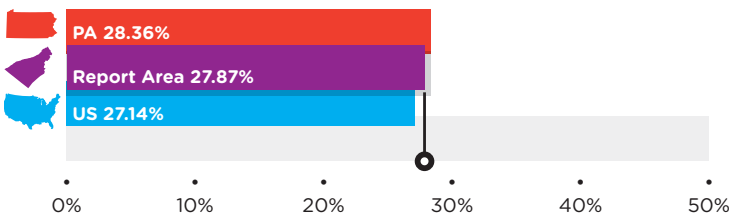
How are we doing?

Adult Obesity

Overweight and obesity also contribute to poor health and early death, and are often a result of an imbalance resulting from poor diet and physical inactivity. Obesity and overweight affect adults and children. Although Lehigh and Northampton Counties report overweight and obesity among adults below the Healthy People 2020 Goal, the proportion of adults reporting overweight and obesity nonetheless remain high, representing 1 in 3 adults in the Lehigh Valley. In addition, the rate of overweight and obesity is rising in all 3 geographies, with the Lehigh Valley rising higher than Pennsylvania and the nation as indicated by the charts below.

Percent Adults with BMI > 30.0 (Obese)

(CDC National Center for Chronic Disease Prevention and Health Promotion, 2012)



Getting Worse - Percent Adults Obese (BMI > 30.0) by Year, 2004 - 2012

(CDC National Center for Chronic Disease Prevention and Health Promotion, 2012)

- Report Area
- Pennsylvania
- US



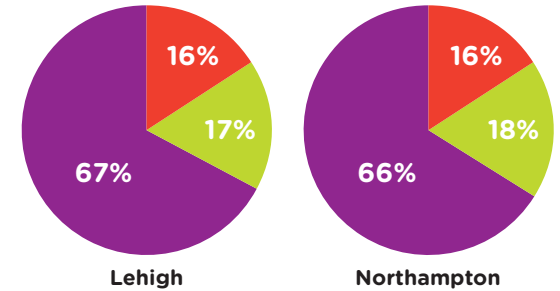
Youth Obesity

Unfortunately, obesity and overweight are factors that also affect children and youth. In the Lehigh Valley, in both Lehigh and Northampton Counties, nearly 40% of all school children in grades K-6th and 7th - 12th Grade are overweight or obese, with the proportions of overweight and obese slightly higher in the upper grades.

School Children Grades Kindergarten - 6th Grade, Overweight and Obesity

(Pennsylvania Department of Health, 2012-2013)

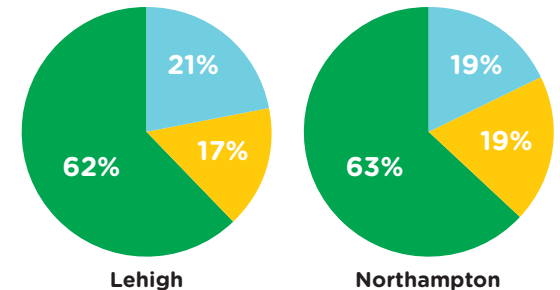
- Overweight
- Obese
- Normal or Below Weight

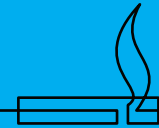


School Children Grades 7th - 12th Grade, Overweight and Obesity

(Pennsylvania Department of Health, 2012-2013)

- Overweight
- Obese
- Normal or Below Weight





Healthy Habits: Being Tobacco and Drug Free

“Cigarette smoking and binge drinking harms nearly every organ of the body, causes many diseases, and reduces overall health in general.”

-CDC and NIH

How are we doing?

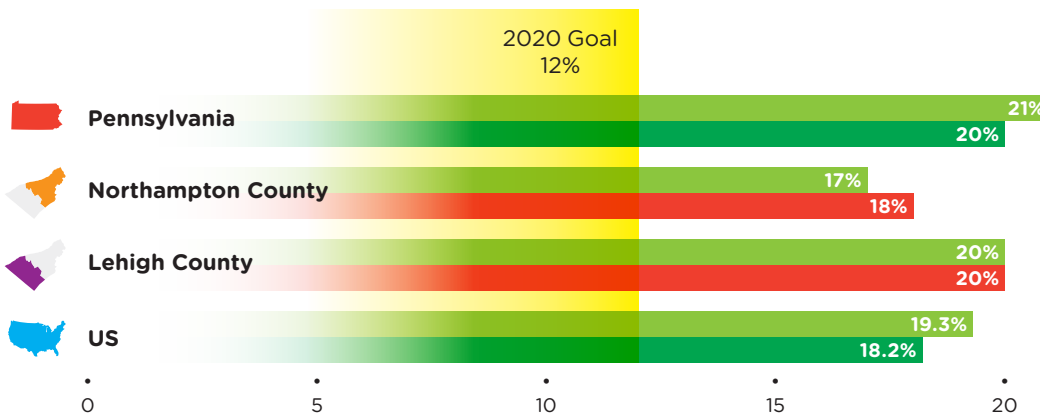
Cigarettes

Smoking cigarettes has been proven to lead to a wide range of disease and early death. Despite significant efforts to curb smoking, Lehigh and Northampton Counties as well as the state of Pennsylvania lag far behind the Healthy People 2020 Goals as well as national averages for reported smoking by adults. While adult smoking is decreasing slightly over the past few years at the national and state level, it has stayed the same or increased in the Lehigh Valley within the same time period, as indicated by the following graph.



Adult Smokers **Getting Worse** -

● County Health Rankings 2012 ●/● County Health Rankings 2015



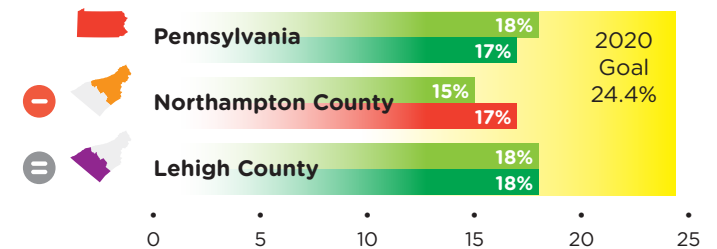
Alcohol

Excessive use of alcohol can cause physical illness, as well as psychosocial issues that affect well being such as strained family relationships and difficulty at work. It also puts individuals and others at risk of injury due to impaired functioning. Although the percent of adults reporting either binge drinking or heavy drinking in Lehigh and Northampton Counties is lower than the percentage across Pennsylvania and the nation, it has increased in Northampton County and stayed the same in Lehigh. This indicates a growing problem.

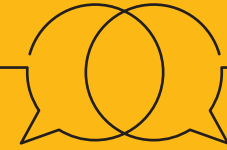
Excessive Drinking **Getting Worse** -

(BRFSS)

● 2004-2010 ● 2006-2012



Excessive Drinking is the percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average.



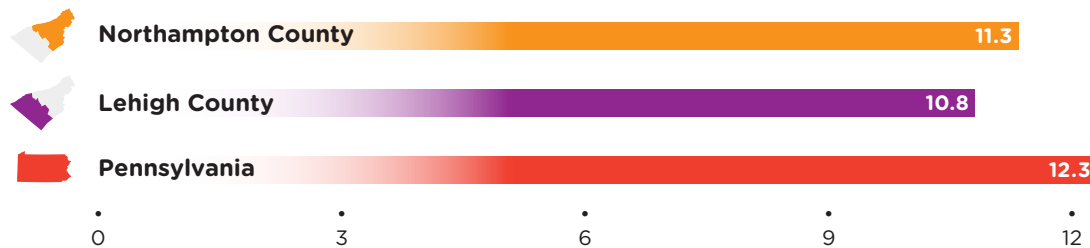
Healthy Relationships: Friends and Family

Having friends and family you can count on for support has many benefits for overall health. A sense of belonging to a family or group can increase self-image and a sense of security.

How are we doing?

According to the County Health Rankings, Lehigh and Northampton Counties have fewer organized social groups than in other parts of the state, which gives us fewer opportunities to build the social relationships that can help us all improve health.

Social Associations per 10,000 People, 2013 (County Health Rankings 2015)



“Parents work two to three jobs so social media takes care of their kids because there’s no one home.”

“[we need] more YMCAs and Boys and Girls Clubs... kids without fathers turn to the streets like where we live... a lot is happening where we live and there’s not much to do... little kids could end up on the streets.”

People in the focus groups strongly emphasized the need for more activities for youth.

According to the 2013 Pennsylvania Youth Survey (PAYS), in Lehigh and Northampton Counties, we do a pretty good job of controlling risks that could harm the health and well-being of teens. However, also according to the PAYS, we could do a better job of creating opportunities to create resilience and support for our teens.

Many of the young people who participated in the focus group expressed fear that younger kids would unknowingly attract negative attention from older people who could harm them, either regarding sex, drugs or crime. They overwhelmingly believed that many bad things that happen to young people could be prevented by organized positive interventions both in school and after school hours.

Healthy Relationships: Sexual Relations

Untreated sexually transmitted infections in people of any age can lead to serious long-term health consequences including cancer, infertility and compromised mental health.

Having a baby as a teenager can have negative consequences for the teenage parents, their children and society. Children born to teen parents are more likely to have lower education and health outcomes throughout their lives than children born to older parents.

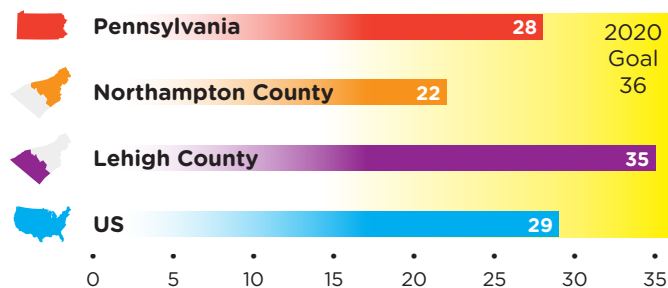
How are we doing?

Teen Births

Nationwide rates of teen births have been declining steadily, which is a trend that is also reflected in the Lehigh Valley counties. According to the most recent data years available (2006-2012), the number of births per 1000 female population ages 15-19 in Pennsylvania, Lehigh County and Northampton County all meet or exceed Healthy People 2020 Goals for teen births.

Teen Pregnancy Rates, 2006-2012

(County Healthy Rankings, 2015)



“I think they should change when they start talking about it [sex ed]... People are afraid to tell their children [about sex]... should start teaching kids earlier like middle school or before because people just don’t know.”

However, although teen birth rates are falling more rapidly in the Lehigh Valley cities than the rural areas, the city teen birth rates still remain high compared to state and national statistics.

Sexually Transmitted Infections

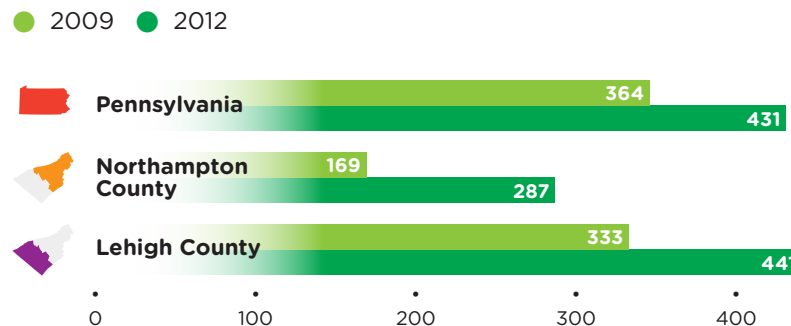
Chlamydia is the most common bacterial sexually transmitted disease in the US, and is a significant source of illness, which has a negative impact on society and a high cost for treatment. Chlamydia infection is associated with unprotected sexual activities, which is an indicator of other potentially harmful behaviors and situations. Therefore, the rate of Chlamydia infection can be an effective measure of health behavior that has a negative impact on health and quality of life.

Since 2009, the rate of Chlamydia infection has increased dramatically in Lehigh County, Northampton County and Pennsylvania, following similar trends nationwide. The graph below demonstrates the change in Chlamydia infection from 2009-2012 for Lehigh and Northampton Counties and Pennsylvania.

Getting Worse

Number of Newly Diagnosed Chlamydia Infections per 100,000 Population, 2009 and 2012

CDC (NCHSTP Atlas) 2012





Access to Health Care

“Access to affordable, quality health care is important to physical, social, and mental health. Health insurance helps individuals and families access needed primary care, specialists, and emergency care, but does not ensure access on its own—it is also necessary for providers to offer affordable care, be available to treat patients, and be in relatively close proximity to patients.”

-County Health Rankings, 2015

How are we doing?

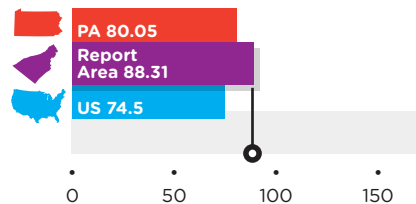
Per the most recently available data regarding health insurance coverage, rates of coverage within the Lehigh Valley appear to be consistent with or lower than state and national rates. However, with the implementation of the Affordable Care Act and the imminent expansion of Medicaid in Pennsylvania, we have strong reason to believe that insurance coverage and access to care in the Lehigh Valley should increase in the coming years, connecting more people in the Lehigh Valley with clinical care.

Primary Care Providers

Generally, Pennsylvania has more primary care doctors per person than the national average, and Lehigh and Northampton Counties have even more primary care providers per person than the Pennsylvania average.

Primary Care Physicians, (Rate per 100,000 Pop.)

(US Department of Health and Human Services Area Health Resource File, 2012)

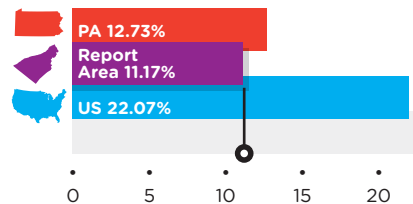


Patient Centered Health Homes

However, just because there are doctors here doesn't mean that people who need care are connecting with them.

Percent Adults Without Any Regular Doctor

(BRFSS 2011-12)



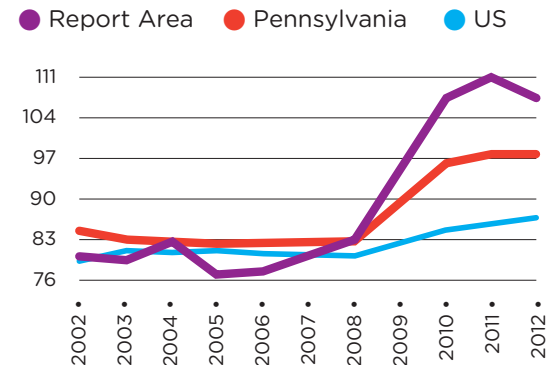
Making Connections

What our local health systems in the Lehigh Valley are working towards is connecting the doctors we have with the people who need them. We realize that accessing primary health care is not just about doctors and insurance, it is also about other things such as transportation, schedules, language, and information about how, where and when to see a doctor. As this graphic shows, our local health care institutions have made great progress in the last few years in connecting doctors with people who need them, but we still have more work to do.

Improving +

Access to Primary Care, Rate by Year (Per 100,000 Pop.)

(US Department of Health and Human Services, Health Resources and Services Administrations, 2012)



Access to Health Care: Mental Health

Mental health and physical well-being are directly connected. Research shows that good mental health and a positive outlook improves physical health. Poor mental health increases the risk for many health problems including heart disease, cancer and diabetes. Poor physical health also puts people at greater risk for mental health problems, just as people with mental health problems are at greater risk for physical health problems.

How are we doing?

Like primary care, the Lehigh Valley has a significant number of mental health providers across Lehigh and Northampton Counties. But, that does not mean that everyone who needs help gets it. In addition to the barriers of transportation, schedules, insurance, language and others that exist for primary health care, mental health care continues to have a negative stigma that often prevents people who need care from accessing it.



“If you are worried about someone’s safety, ask them! Asking will not make them worse - it will help you help them.”

People in the Lehigh Valley struggle with mental health issues

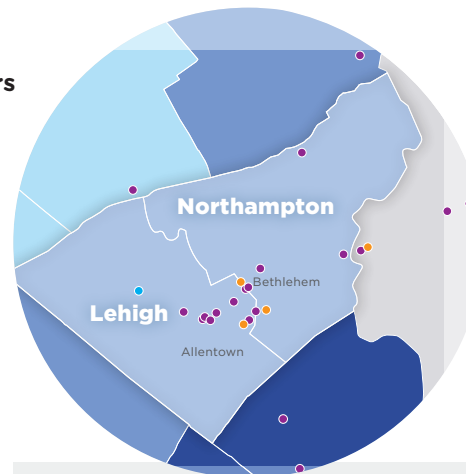
According to the 2013 Pennsylvania Youth Survey, more than 1 in 3 teens in Lehigh and Northampton Counties surveyed indicated they “felt depressed or sad most days in the last 12 months.” And, more than 15% of people over 65 in Lehigh and Northampton Counties were being treated for depression. (County Health Rankings 2015)

Additionally, according to the County Health Rankings report, people in Lehigh County reported an average of 3.4 and Northampton County reported having 3.9 “poor mental health days” out of the last 30 days. While these numbers are consistent with the Pennsylvania average of 3.6 poor mental health days in the last 30 days, we think we can do better.

Access to Mental Health Care Providers (Per 100,000 Pop.) by County

(SAMHSA 2014, County Health Rankings 2014, Community Commons)

- 55.1 - 120
- 30.1 - 55
- Under 30.1
- No Data or Data Suppressed



- Community Mental Health Center
- Mental Health Facilities: Adult Services
- Mental Health Facilities: Youth Services



What can one person do about it?

- Don't ignore a cry for help from someone you know. A coworker or family member may just need you to ask and show you care.
- If someone you know is struggling, show your support verbally and non-verbally. Encourage the person to seek help and talk to someone who is trained to help with emotional problems.
- Trust your suspicions and gently ask direct questions about whether someone you know is depressed or thinking about suicide.
- Take all talk of suicide seriously, even if it's only in passing. Help is available. Suicide Prevention Hotline: 1-800-784-2433

Access to Health Care: Clinical Prevention Interventions for Seniors

Preventable Hospital Stays

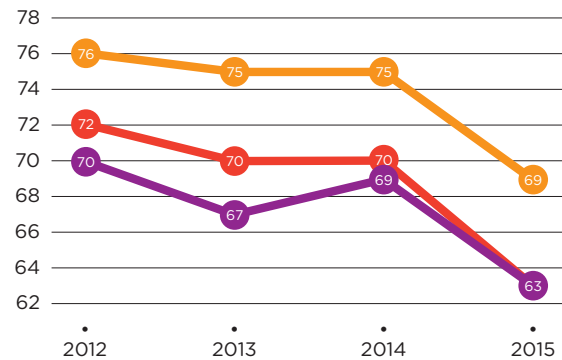
Both Lehigh and Northampton Counties have significantly improved their rate of preventable hospital stays in the past few years, as indicated by the graph below.

Improving +

Preventable Hospital Stays Per 1000 Medicare Population, 2012-2015

(County Health Rankings)

- Pennsylvania
- Lehigh County
- Northampton County



This decrease in the rate of preventable hospital stays among the Medicare population suggests that improvements are being made that are identifying and preventing the escalation of health problems that had been leading to hospital stays in the past, therefore improving healthy living and reducing health costs.

Clinical Prevention Activities: Diabetic Monitoring

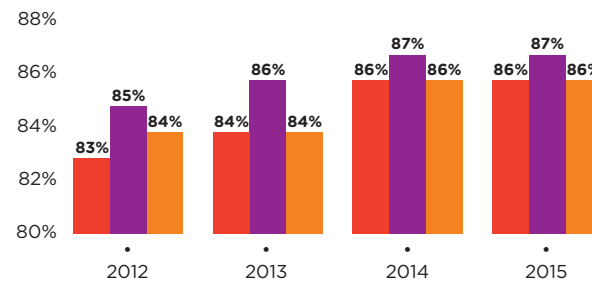
Evidence suggests that disease management programs that target chronic diseases can improve health outcomes and quality of care. Management of HbA1c blood glucose levels is considered the standard of care for diabetics, and represents how well diabetic patients are able to control their disease and prevent complications. The following graph represents the percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring in Pennsylvania, Lehigh and Northampton Counties from 2012-2015.

Improving +

Percentage of Diabetic Medicare Enrollees Ages 65-75 That Receive HbA1c Monitoring, 2012-2015

(County Health Rankings)

- Pennsylvania
- Lehigh County
- Northampton County



This graph indicates that from 2012-2015, there have been improvements in the percentage of patients among the Medicare population who have been receiving regular diabetic monitoring, thus leading to earlier detection and prevention of complications arising from diabetes.

Clinical Prevention Activities: Mammography

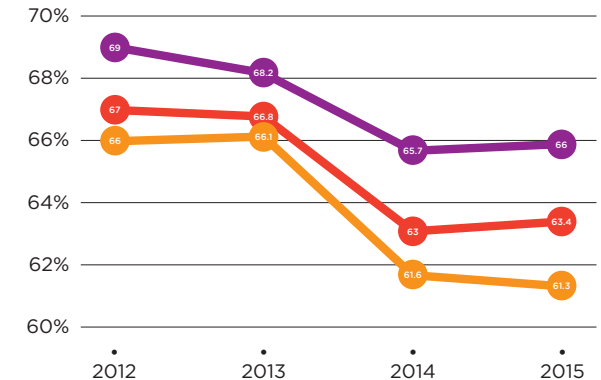
Breast Cancer is the second most common form of cancer among women in the United States. Evidence suggests that mammography screening significantly reduces breast cancer mortality, particularly among older women. As the following graph represents, the percentage of female Medicare enrollees ages 67-69 that receive mammography screening has fallen in Pennsylvania, Lehigh and Northampton Counties from 2012-2015.

Getting Worse -

Percentage of Female Medicare Enrollees Ages 67-69 That Receive Mammography Screenings, 2012-2015

(County Health Rankings)

- Pennsylvania
- Lehigh County
- Northampton County



However, this also coincides with a change in screening guidelines which now recommend less frequent screenings.

Access to Health Care: Clinical Prevention Interventions for Moms and Babies

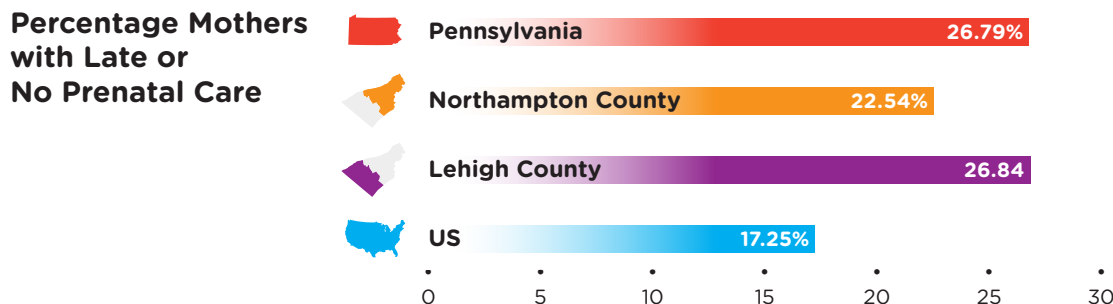
Accessing prenatal care early significantly increases the chances that both mother and baby will have a healthy pregnancy, healthy delivery and a healthy life.



How are we doing?

Clinical Prevention Activities: Prenatal Care

Engaging in prenatal care early significantly increases the chances that a mother and her baby will have a healthy pregnancy and healthy birth, which helps ensure a healthy life path for the baby and mother. A lack of prenatal care or late entry into prenatal care suggests a barrier such as a lack of access to care, a lack of information or knowledge about prenatal care or its benefits, a mental health barrier such as depression or anxiety, or social barriers that influence a pregnant woman's ability and willingness to access care. Pennsylvania has significantly more pregnant women with late or no prenatal care than the national average. Within this target area, when Lehigh and Northampton Counties are combined, the percent of pregnant women accessing prenatal care is better than Pennsylvania, but worse than the US in general. However, when the counties are separated, the percentage of pregnant women with late or no prenatal care in Lehigh County is worse than the Pennsylvania, indicating that significantly fewer pregnant women are accessing prenatal care in Lehigh County than statewide, national or regional averages; we think we can do better.



Note: This indicator is compared with the state average.

Data Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. Centers for Disease Control and Prevention, Wide-Ranging Online Data for Epidemiologic Research. 2007-10. Source geography: County



“Prenatal care keeps moms and babies healthy. When doctors see pregnant women regularly throughout their pregnancy, they can spot health problems early, which often cures problems and prevents other problems from affecting both moms and babies.”

People in the Lehigh Valley continue to live longer than in most other counties in Pennsylvania. Lehigh and Northampton Counties have consistently been in the top 30% of counties in the state regarding the quality and availability of clinical care, and continue to rank in the top 40% of Pennsylvania counties as far as overall health outcomes.

Lehigh Valley residents overall health status has not changed dramatically from the first community health needs assessment in 2013, but key social factors and individual behaviors are keeping us from recognizing an even better quality of life for all Lehigh Valley residents.

With individuals and institutions making small changes and working together, we can improve the quality of our lives. Unfortunately, factors that influence our health and the quality of our lives- individual behaviors, and social and environmental factors - continue to negatively impact our overall health. With increased numbers of people living in the Lehigh Valley and an aging population, improving the overall health of the Lehigh Valley relies on both individual behavior change and proactive improvement on structural forces such as educational opportunity, social support, housing, environmental health and employment - all significant factors that have a direct effect on health and well-being.

HEALTH CARE COUNCIL OF THE LEHIGH VALLEY

HEALTH PROFILE FOR THE 2016 COMMUNITY HEALTH NEEDS ASSESSMENT FOR THE LEHIGH VALLEY