



**A Community Health Needs Assessment
Penn Highlands Tryone**

May 2021

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A MESSAGE FROM OUR PRESIDENT



PENN HIGHLANDS TYRONE

187 Hospital Drive
Tyrone, PA 16686
Telephone 814-684-1255

Dear Friends of Penn Highlands Healthcare:

As president of Penn Highlands Tyrone, I believe deeply in what we are setting forth in support of the Community Health Needs Assessment (CHNA). I would like to take this opportunity to share with you my thoughts and support on the goals we are working toward and the enormous enthusiasm that drives our continued work.

Penn Highlands Tyrone employees, friends of Penn Highlands Healthcare and local community members have been the hospital's voice in educating and gaining support for CHNAs initiatives, programs and services.

Penn Highlands Tyrone remains steadfast in the delivery of care and outreach efforts. The COVID-19 pandemic has considerably impacted program initiatives. Penn Highlands Healthcare system continues to be dedicated to all healthcare services that are imperative to the community residents. Today, our goals are even more "concrete," as we look with considerable hope and anticipation toward the future. We have improved healthcare for all of us which reflects the excellence of care that has already been provided and demonstrates the need for the whole community's support of this vital resource.

Penn Highlands Tyrone is a beacon of hope, providing exceptional care for all who come through our doors. I invite you to join in supporting the Penn Highlands Tyrone CHNA and the future of healthcare in our community.

Gratefully,

A handwritten signature in black ink that reads "Anna M. Anna".

Anna M. Anna
President

COMMUNITY HEALTH NEEDS ASSESSMENT INTRODUCTION

As a not-for-profit organization, Penn Highlands Healthcare (PHH) is required by the Internal Revenue Service (IRS) to conduct a community health needs assessment (CHNA) every three years. Penn Highlands Tyrone's (PHT) CHNA report aligns with the parameters and guidelines established by the Affordable Care Act (ACA) and complies with IRS requirements. The CHNA document is a comprehensive review of primary and secondary data analyzing socioeconomic, public health, and demographic data at the local, state, and national level. Penn Highlands Tyrone is proud to present its 2021 CHNA report and its findings to the community.

Penn Highlands Tyrone's CHNA utilized a systematic approach to identify and address the needs of the underserved and disenfranchised communities across the hospital's geography. The CHNA report and subsequent implementation strategy planning (ISP) report will provide ways strategies to improve health outcomes for those affected by diseases as well as social and environmental barriers to health.

The community needs assessment process is a meaningful engagement, and input was collected from a broad cross-section of community-based organizations, establishments, and institutions. The CHNA was spread among seven Pennsylvania counties and 98 ZIP codes. The CHNA process undertaken by Penn Highlands Tyrone, with project management and consultation by Tripp Umbach, included input from various representatives of the community served by the hospital, notably those with special knowledge of public health issues; data related to underserved, hard-to-reach, vulnerable populations; and representatives of vulnerable populations served by each hospital. Tripp Umbach in collaboration with Working Group members oversaw and accomplished the assessment and its goals.

Penn Highlands Tyrone would like to thank the region's stakeholders, community providers, and community-based organizations (CBOs) that participated in this assessment. Penn Highlands Healthcare and Penn Highlands Tyrone appreciates their valuable input throughout the CHNA process.



ABOUT PENN HIGHLANDS TYRONE¹

Penn Highlands Healthcare, established in 2011, is a health system in Northwestern/Central Pennsylvania that brings together the services of Penn Highlands Brookville, Penn Highlands Clearfield, Penn Highlands DuBois, Penn Highlands Elk, Penn Highlands Huntingdon, and Penn Highlands Tyrone. Through this partnership, Penn Highlands Healthcare has evolved into an organization with over 4,000 employees in 100-plus locations throughout North Central/Western Pennsylvania that include community medical buildings, outpatient facilities, surgery centers, and physician practices.

Providing exceptional quality care to the region, Penn Highlands Healthcare has over 500 physicians and over 300 advanced practice providers on staff. Combined, the facilities have over 700 beds. The system offers a wide-range of care and treatments with specialty units that care for cancer, cardiovascular/thoracic, lung, neurosurgery, orthopedics, behavioral health, and neonatal intensive care.

Penn Highlands Healthcare provides residents with access to the region's best hospitals, physicians, two nursing homes, home care agency, and other affiliates who believe that health care should be managed by local board members who live and work in the communities they serve.

Each facility is the largest employer in its hometown and is rooted deeply in both the popular and economic culture of their communities. The vision is to be an integrated health care delivery system that provides premier care with a personal touch, no matter where one lives in the region. Many quality services are available in or near every community, but additional advanced services might also be available at one of the affiliates. That's one of the greatest strengths of Penn Highlands Healthcare.



The hospitals of Penn Highlands Healthcare have been serving the residents of Northwestern/Central Pennsylvania as non-profit, community organizations for more than 100 years, a commitment that is valued and cherished.

Founded by the community in 1954, Penn Highlands Tyrone, formerly known as Tyrone Hospital, was a twenty-five-bed community hospital that provides general medical and surgical care, three primary care physician offices which included Tyrone Rural Health Center, Pinecroft Medical Center and Houtzdale Rural Health Center. Its services included the Breast Cancer & Women's Health Institute, an orthopedic clinic, a cardiology clinic, Company Healthcare and the Tyrone Fitness & Wellness Center. On November 4, 2020 Tyrone Hospital joined Penn Highlands Healthcare to expand their premier services available throughout more of Pennsylvania.



Penn Highlands Tyrone Highlights:

- 25 Inpatient Beds
- Critical Access Hospital
- 199 Employees
- Outpatient Diagnostic
- 2 Rural Health Clinics
- 1 Hospital Based Health Clinic
- Surgical Services
- Outpatient Physical, Occupational & Speech Therapy
- 24-hour Emergency Room
- Outpatient Dialysis
- Breast Care Institute
- Diabetes Center
- Occupational Health Services

Awards:

- 2020 American Heart Association/American Stroke Association's Get With The Guidelines® Target: Stroke Honor Roll Elite Silver Plus Quality Achievement Award
- 2019 HAP Donate Life Hospital Challenge Platinum Award

Mission Statement:

To provide you with exceptional care through our community-based health system while maintaining a reverence for life.

Vision Statement:

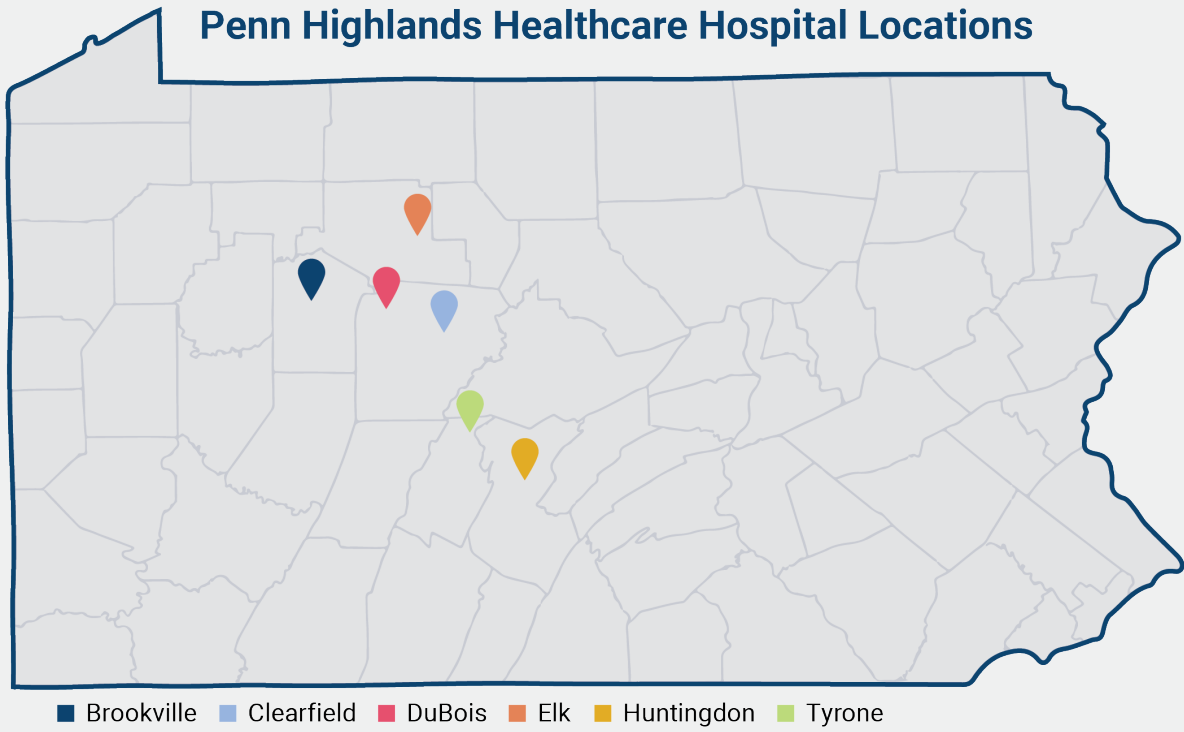
To be the integrated health system of choice through excellent quality, service, and outcomes.

Value Statement:

- Quality & Safety
 - Provide a safe environment with high-quality outcomes.
- Teamwork
 - Foster a culture of teamwork, support, trust, and loyalty.
- Integrity
 - Practice the principles of honesty, confidentiality, respect, and transparency.
- Person-Centered
 - Recognize those we serve as equal partners.
- Service
 - Demonstrate compassion by listening, engaging, anticipating, and exceeding needs and expectations.
- Stewardship
 - Commit to investing in our human and material resources while practicing fiscal responsibility.
- Partnership
 - Offer services and programs through partnerships with our physicians, providers, stakeholders, and other organizations.
- Education
 - Expand our emphasis on education and enhance our position as a learning organization.

Penn Highlands Healthcare's mission statement focuses on improving regional access to a wide array of premier primary care and advanced services, it does so while supporting a reverence for life and the worth and dignity of each individual. The linkage provides the ability to keep control of the hospitals in the hands of a local board and is providing many other community benefits. Increased local access to physician specialists, improved quality, coordination of care and increased physician recruitment and retention are just some of the major benefits that have come from the linkage.

Map 1: Penn Highlands Healthcare Hospital Locations Map



EXECUTIVE SUMMARY

The hospitals of Penn Highlands Healthcare have been serving the residents of Northwestern/Central Pennsylvania as a non-profit, community organization for more than 100 years. The Founders recognized this commitment by establishing Penn Highlands Healthcare on the principles that the system be community-based and be a controlled health care system to improve regional access to an array of premier primary care and advanced health care services.

The vision is to be an integrated health system of choice through excellent quality, service, and outcomes. Many quality services are available in or near every community, but additional advanced services might also be available at one of the affiliates.² As a comprehensive health care provider, Penn Highlands Healthcare serves a seven-county area employing more than 4,000 employees.

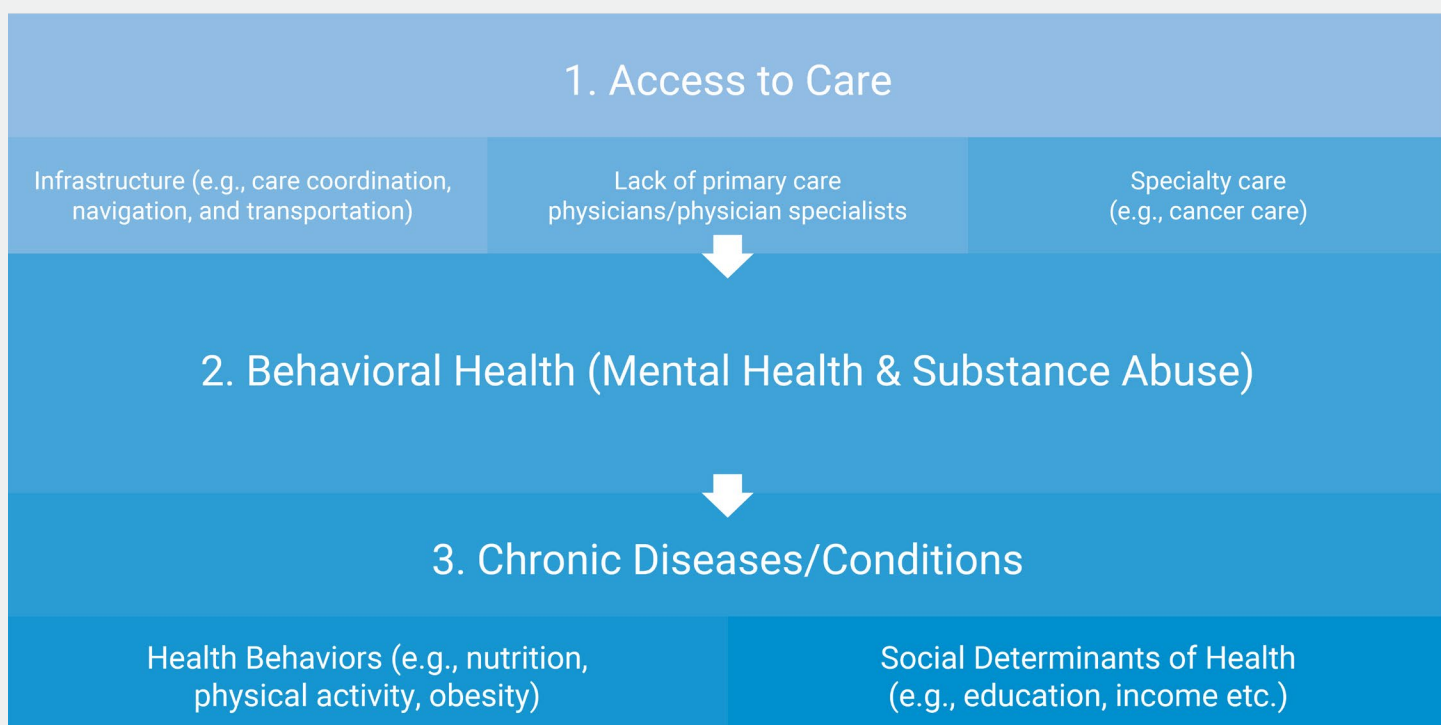
The health system's facilities include:

- Penn Highlands Brookville: 35 beds
- Penn Highlands Clearfield: 50 beds
- Penn Highlands DuBois: 216 beds
- Penn Highlands Elk: 163 beds
- Penn Highlands Huntingdon: 71 beds
- Penn Highlands Tyrone: 25 beds

(Beds include: acute, long-term care, and behavioral health beds.)

The completion of the 2021 community assessment revealed the below community needs for Penn Highlands Tyrone. Penn Highlands Tyrone's community health needs assessment (CHNA) determined the health status of the community with direct initiatives and future planning strategies to advance the health status of the community. Without a doubt, the CHNA connected new partners and solidified existing relationships with local and regional agencies with the overall goal to improve the health outcomes of residents in the region.

Figure 1: 2021 CHNA Identified Needs



In 2019-2020, Tyrone Hospital completed its CHNA cycle with The Healthy Blair County Coalition. The Healthy Blair County Coalition (HBCC) is a partnership of local individuals and organizations working to promote the social, economic, emotional, and physical well-being of area residents. The mission of the HBCC is to assess and impact all aspects of a healthy Blair County by sharing resources, engaging local partnerships, and implementing strategies and programs to make a difference in the lives of the people in our community.³ As such, Tyrone Hospital tackled obesity and diabetes based on the needs of the assessment and the ability for the hospital to address these diseases due to the limitations of the facilities resources. The priority areas of obesity and diabetes align with chronic diseases/conditions in the 2021 CHNA assessment.

The previous CHNA report completed by Tyrone Hospital in conjunction with The Healthy Blair County Coalition is available to the community on Penn Highlands Healthcare's website.

www.phhealthcare.org/health-wellness/community-health-needs-assessment

The final CHNA report for Penn Highlands Healthcare (specifically for Penn Highlands Brookville, Penn Highlands Clearfield, Penn Highlands DuBois, Penn Highlands Elk, Penn Highlands Huntingdon, and Penn Highlands Tyrone) was approved by the Penn Highlands Healthcare Board of Directors in June 2021.

Community Definition

Community Served by the Hospital

In this Central PA region, there are covered bridges, tree-sheltered streams and little Victorian towns. This is the home of The Pennsylvania State University (Penn State), their Nittany Lions, and the Berkey Creamery. The county was created on February 26, 1846, from parts of Huntingdon and Bedford Counties. Blair County is located midway between the cities of Pittsburgh and Harrisburg. The ridge-and-valley terrain in the east gives way to the Allegheny Mountains in the west. The county is drained by Clover Creek and the Little Juniata and Frankstown Branch Juniata rivers. Recreational areas include Canoe Creek State Park.⁴

The Delaware, Shawnee, and Tuscarora Indians occupied the area before the arrival of white settlers in the 1760s. Fort Roberdau (1778) was built for the protection of lead miners during the American Revolution. Blair county was named for John Blair, a local settler. Hollidaysburg, the county seat, was the eastern terminus of the Allegheny Portage Railroad (1834–54), which transported Pennsylvania Canal barges across the Allegheny Mountains. The city of Altoona was founded by the Pennsylvania Railroad Company (1849) as a base for railroad building over the Alleghenies. Other communities include Tyrone, Roaring Spring, and Martinsburg. The primary economic activities are services, retail trade, and manufacturing.⁵



Defined Community

A community is defined as the geographic area from which a significant number of the patients utilizing hospital services reside. While the community health needs assessment considers other types of health care providers, the hospital is the single largest provider of acute care services. For this reason, the utilization of hospital services provides the clearest definition of the community.

The primary service area of Penn Highlands Tyrone encompasses 9 ZIP codes. The following table represents the study area focus for Penn Highlands Tyrone’s 2021 CHNA. The ZIP codes are based on 80 percent of Penn Highlands Tyrone’s patient discharges. Penn Highlands Tyrone’s discharges originate in Blair and Centre County; however, Penn Highlands Tyrone patients have derived from neighboring counties.

The following table and map of Penn Highlands Tyrone’s geographical location displays the hospital’s defined community, which relates to the 9 ZIP codes. (See Map 2).

Map 2: 2021 CHNA ZIP Code Study Area/Primary Service Area

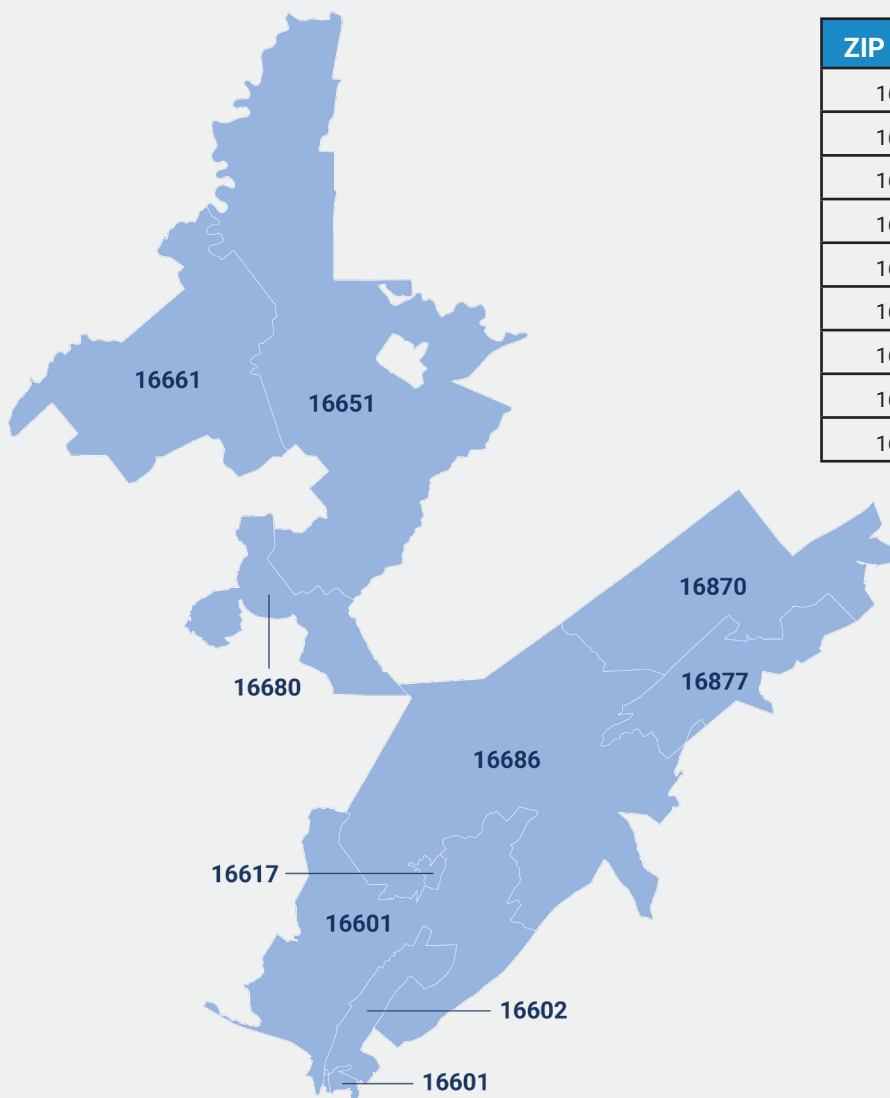


Table 1: 2021 Penn Highlands Tyrone ZIP Codes – Primary Service Area/Study Area

ZIP Codes	Town/City	County
16686	Tyrone	Blair
16601	Altoona	Blair
16602	Altoona	Blair
16617	Belwood	Blair
16651	Houtzdale	Blair
16877	Warriors Mark	Blair
16661	Madera	Blair
16680	Smithmill	Blair
16870	Port Matilda	Centre

Methodology

Tripp Umbach, a planning and research firm specializing in health care, education, government, and corporate clients to improve the economic, social, and physical well-being in communities, was contracted by Penn Highlands Healthcare to conduct the system’s 2021 CHNA. The CHNA report complies with the Internal Revenue Service’s (IRS) guidelines for charitable 501(c)(3) tax-exempt hospitals and includes input from individuals representing the broad interests of the communities served by Penn Highlands Tyrone, including those with direct knowledge of the needs of the medically underserved, disenfranchised populations, and populations suffering from chronic diseases.

The CHNA process began in December 2020, and the conclusion of collecting both quantitative and qualitative data concluded in April 2021. The data collected and used allowed for further group engagement of internal and external stakeholders to inform the CHNA needs and deliverables. While multiple steps made up the overall CHNA process, Tripp Umbach worked closely with members of the CHNA Working Group to collect, analyze, and identify the results to complete the hospital’s assessment.

Figure 2: Penn Highlands Tyrone CHNA Methodology



Community Health Needs Assessment Data Collection

Penn Highlands Healthcare with assistance from Tripp Umbach created a 26-person Working Group consisting of system-level leadership as well as hospital personnel who have direct patient care/contact and who are well-versed in community service. Working Group members have vast knowledge on the needs of the underserved and marginalized populations, specifically those who have chronic diseases and behavioral health issues, and those who face socioeconomic challenges.

Monthly scheduled conference calls and teleconference calls began in December 2020 with frequent weekly communications with Penn Highlands Healthcare's assigned project contact. Project calls provided insight and awareness to Working Group members on all of the CHNA project components.

To fulfill IRS requirements related to the ACA, Penn Highlands Tyrone's study methodology employed both a qualitative and quantitative data collection. The implementation of a comprehensive CHNA proved to be a challenge for the hospital and members of the community due to COVID-19; however, because of the Working Group, hospital administration, and Tripp Umbach working closely, the results of the CHNA included feedback collected from interviews and provider surveys, coupled with secondary data providing information on the needs, issues, and concerns for the underserved and disenfranchised.

Secondary Data

Secondary data sources at the local, state, and national levels included disparity data, public health priorities related to disease prevalence, socioeconomic factors, health outcomes, and health determinants to create a regional community health data profile based on the location and service areas of Penn Highlands Tyrone. Secondary data was gathered primarily through Community Commons, a publicly available dashboard of multiple health indicators drawn from a number of national data sources allowed for the review of past developments and changes related to demographics, health, social, and economic factors. Additional data sources include County Health Rankings, Community Needs Index, and U.S. Census Bureau. The data is also peer-reviewed and substantiated, providing a deep level of validity as a source.

The robust community profile generated a greater understanding of regional issues, particularly to assist in identifying regional and local health and socioeconomic issues.

The secondary quantitative data collection process included:

- America's Health Rankings
- American Community Survey
- Behavioral Risk Factor Surveillance Survey (BRFSS) data collected by the Centers for Disease Control and Prevention
- Centers for Medicare and Medicaid services
- Community Needs Index Demographic
- County Health Rankings and Roadmaps
- Dartmouth College Institute for Health policy and clinical practice
- FBI – Uniform Crime Reports
- Feeding America
- Health Resources and Services Administration (HRSA)
- Pennsylvania Department of Health – State Cancer Profiles
- Pennsylvania Departments of Health and Vital Statistics
- U.S. Census Bureau
- U.S. Department of Education National Center for Education Statistics
- U.S. Department of Agriculture
- U.S. Department of Health and Human Services
- U.S. Department of Labor

Provider Survey

A provider survey was implemented to collect data from community health partners from the hospital's service areas and region that would not only identify the needs of the community and vulnerable populations but those partners/organizations that will be instrumental in addressing prioritized needs. A database was created to identify regional providers who would receive a survey link. A survey instrument was developed and used to obtain vital information through the lens of local providers.

Collecting data through the key informant survey will allow the perspective of individuals who provide care to populations most in need. The provider audience is also important to gauge how patients and residents have adjusted their health needs during the pandemic and how providers are assisting them during this time period.

The provider survey was active February 1-23, 2021. In total, 175 surveys were collected. Below are the top health problems providers reported in their community. The health problems are in descending order from the most identified to the least identified.

1. Behavioral health/mental health
2. Obesity
3. Diabetes
4. Aging problems (e.g., arthritis, hearing/vision loss, etc.)
5. Drug/alcohol use
6. Heart disease
7. Substance abuse
8. Poor diet
9. Respiratory/lung disease
10. Cancers

Community Leader Interviews

As part of the CHNA phase, telephone interviews were completed with community stakeholders in the service area to better understand the changing environment. The interviews offered community leaders an opportunity to provide feedback on the needs of the community, suggestions on secondary data resources to review and examine, and other information relevant to the study. Community stakeholder interviews were conducted during December 2020 – February 2021. Community stakeholders targeted for interviews encompassed a wide variety of professional backgrounds including:

1. Public health experts
2. Professionals with access to community health-related data
3. Social service representatives
4. Representatives of underserved populations
5. Government leaders

Twenty-six interviews were conducted with community leaders and stakeholders as part of Penn Highlands Healthcare. The qualitative data collected from community stakeholders are the opinions, perceptions, and insights of those who were interviewed as part of the CHNA process. The information provided insight and added great depth to the qualitative data.

Within the interview and discussion process, overall health needs, themes, and concerns were presented. Within each of the overarching themes, additional topics fell under each category. Below are key themes community stakeholders identified as being the largest health concerns in their community from the most discussed to the least discussed.

1. Drug/Alcohol Use and Behavioral/Mental Health
2. Obesity
3. Cancer
4. Diabetes
5. Heart disease
6. Lack of exercise
7. Poor diet
8. Dental health
9. Access to healthy foods
10. High blood pressure

Public Commentary

As part of the CHNA, Tripp Umbach solicited comments related to the 2018 CHNA and Implementation Strategy Plan (ISP) on behalf of Penn Highlands Healthcare. The solicitation of feedback was obtained from community stakeholders. Observations offered community representatives the opportunity to react to the methods, findings, and subsequent actions taken as a result of the 2018 CHNA and implementation planning process. Stakeholders were posed questions developed by Tripp Umbach. Feedback was collected from 26 community stakeholders related to the public commentary survey. The public comments below are a summary of stakeholders' feedback regarding the former documents. The collection period for the survey covered December 2020-February 2021.

When asked whether the assessment "included input from community members or organizations," 88.0% reported that it did and 12.0% indicated that it did not.

The assessment reviewed, 8.0% reported, that the report did exclude community members or organizations that should have been involved in the assessment; 58.0% did not feel any community members or organizations were excluded; 33.0% did not know. Mental health organizations were identified as excluded groups/organizations.

In response to the question, "Are there needs in the community related to health that were not represented in the CHNA," 4.35% reported there were needs that were not represented, 73.9% reported no, and 21.7% did not know.

More than three-quarters, or 76.0% of respondents, indicated that the ISP was directly related to the needs identified in the CHNA, 4.0% indicated that it was not, and 20.0% did not know.

According to respondents, the CHNA and the ISP benefited them and their community in the following manner (in no specific order):

- The document highlighted the help community-based organizations provided to the region and to the hospitals.
- The documents provided needed data and assisted my department with the available information and drove some of my initiatives.
- The CHNA and ISP launched new projects and plans that the region needed.
- The CHNA and ISP improved services in DuBois.
- The resulting CHNA and ISP benefited the more populated towns as they have more resources due to the geographic nature.
- The reports gave us information we needed to improve services in the region.
- The community is learning more about the overall needs in the community – education is a good thing.
- The reports provided communication on the work that is being completed.
- Penn Highlands Healthcare is constantly growing and evolving – it took action to address the health issues of the area. The reports provided the rationale on the need for behavioral health expansion. The additional services will help the community at large.
- The reports were very informative – they were used in our internal strategic plan to address the needs of the region with our organization.
- The documents gave us information and provided the opportunity to learn more.
- The CHNA and ISP lead to regional collaborations that will directly benefit the underserved population.
- The results are steps in the right direction. We are unsure if all of these needs can be accomplished; however, it is moving in the right direction.
- The reports are trying to address the needs of the community – the hospital is doing it correctly and helping the region.

Additional feedback survey respondents believed was not covered (in no particular order).

- We need additional emphasis on being healthy and exercising, etc. We need involvement with insurance providers to provide additional educational opportunities for residents.
- PHH can partner with Penn State DuBois as this can create a partnership with students in the school's health sciences programs. Penn State Extension should be involved, as well as churches and schools.
- We look forward to more involvement in the future.

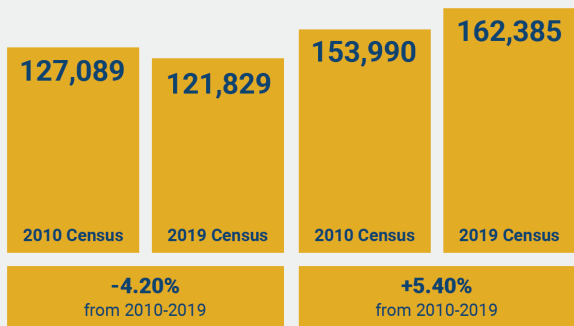
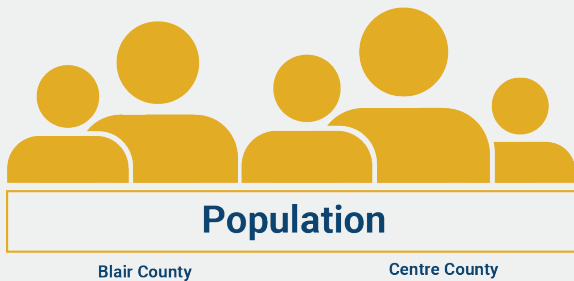
Data Limitations

It is important to note that data collected for the 2021 CHNA has limitations in information. Secondary data utilized for the report is not specific to the hospital's primary service area but rather provides a scope or picture to a larger geographic region. Primary data obtained through interviews and surveys is also limited in representation of the hospital's service area as information was collected through convenience sampling.

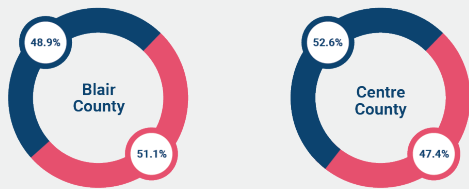
DEMOGRAPHICS

Figure 3 : Penn Highlands Tyrone – Demographic Profile

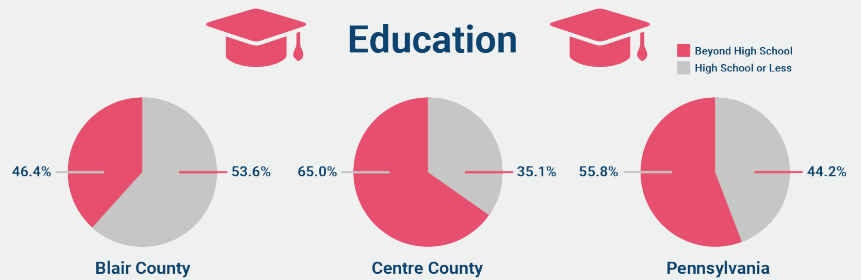
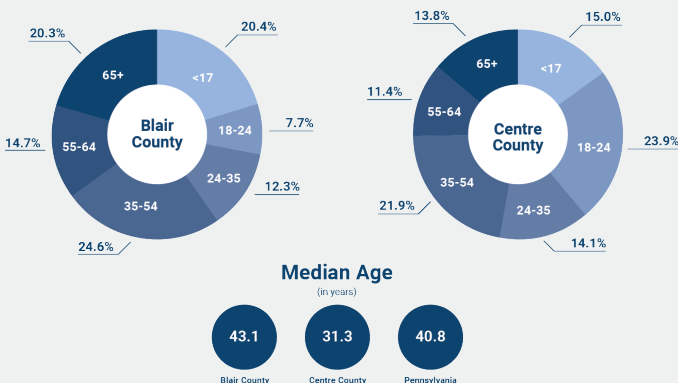
Penn Highlands Tyrone Hospital Demographic Profile



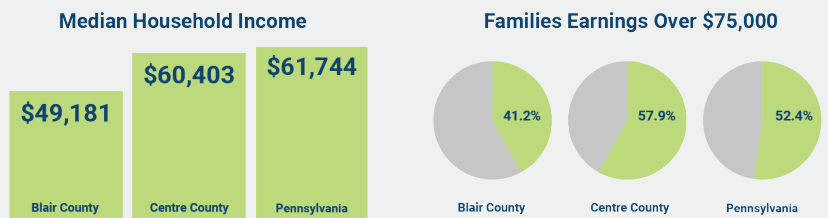
Gender



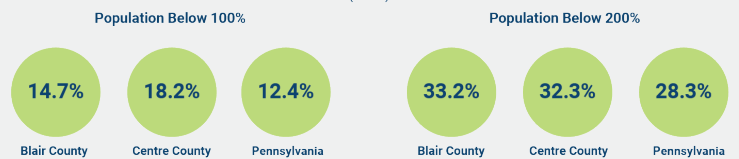
Age



Income Data



Poverty Levels



Health Care Coverage (2018)

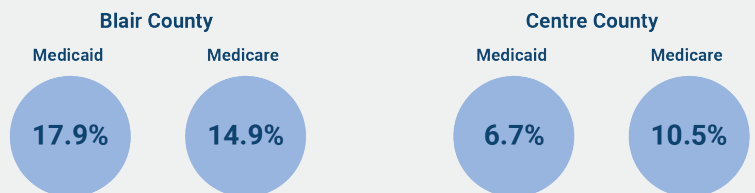


Table 2 lists the unemployment rate for Penn Highlands Tyrone’s community. The PHT service area encompasses two counties; therefore, data presented below references Blair and Centre counties.

The unemployment rate in Blair County (7.8%) is higher than the nation (6.6%). Unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor health status.⁶

Table 2: Unemployment Rate

	Labor Force	Number Employed	Number Unemployed	Unemployment Rate
Blair County	58,861	54,246	4,615	7.8%
Cameron County	2,047	1,853	194	9.5%
Centre County	73,217	69,604	3,613	4.9%
Clearfield County	35,783	32,408	3,375	9.4%
Elk County	14,632	13,387	1,245	8.5%
Huntingdon County	19,667	17,598	2,069	10.5%
Jefferson County	19,915	18,147	1,768	8.9%
PA	6,322,924	5,820,764	502,160	7.9%
U.S.	161,052,991	150,485,945	10,567,046	6.6%

Source: Community Commons; U.S. Census Bureau

Census data reveals that Penn Highlands Tyrone’s community decreased in population within a nine-year span by -4.2% in Blair County; however, increased in Centre County by 5.4%.⁷ The community also has fewer female representation in Centre County (47.4%) when compared to males (52.6%). Blair County has more females (51.1%) when compared to males (48.9%) in Blair County in years 2015-2019⁸ with a majority of the community being predominantly White (non-Hispanic) (94.6% in Blair County and 97.0% in Centre County).⁹

The median household income level in years 2015-2019 of \$49,181 was lower in Blair and Center counties (\$60,403) when compared to the state (\$61,744).¹⁰ The percentage of residents living in Blair County with an education beyond high school is lower than in Pennsylvania (46.4% vs. 55.8%). More than half of Centre County residents (65.0%) have an education beyond high school. (These percentages include some college, an associate degree, bachelor’s degree, graduate or professional degree.)¹¹

In 2020, 14.7% of Blair County residents and 18.2% of Centre County residents lived in households with an income below 100% of the Federal Poverty Level (FPL); this percentage is higher when compared to the state (12.4%). Also revealing is that close to one-third of individuals (33.2% (Blair) and 32.3% (Centre) are living in households with an income below 200% of the FPL. Poverty is considered a key driver of health status. Economic and social insecurity often are associated with poor health. Poverty, unemployment, and lack of educational achievement affect access to care and a community's ability to engage in healthy behaviors.¹² Residents and families cannot thrive without a network that ensures support, safety, and a strong socioeconomic foundation. Providing and reaffirming such resources can ensure a healthy community and environment.

Community Resources – Inventory

An inventory of programs and services specifically related to the key prioritized needs was cataloged by Tripp Umbach. The inventory highlights programs and services within the focus area. The inventory identifies the range of organizations and agencies in the community that are serving the various target populations within each of the prioritized needs. It provides program descriptions, contact information, and the potential for coordinating community activities by creating linkages among agencies. The resource inventory was provided as a separate document due to its interactive nature and is available on Penn Highlands Healthcare's website.

(www.phhealthcare.org/health-wellness/community-health-needs-assessment)



Evaluation of 2018 CHNA Implementation Strategy

The flow chart below identifies the health needs of Penn Highlands Tyrone in 2018. Penn Highlands Tyrone concentrated efforts and plans addressed the health needs identified in the previous assessment.

Figure 4: Penn Highlands Tyrone 2018 CHNA Needs



Representatives from the hospital have worked over the last three years to develop and implement strategies to address the health needs and issues in the study area and evaluate the effectiveness of the strategies created in terms of meeting goals and combating health problems in the community.

Tripp Umbach received the 2018 CHNA implementation plan status and outcome summary assessments provided by the working group charged with assisting Tripp Umbach in completing the CHNA. Tripp Umbach provided the PHT Hospital Working Group with an implementation strategy planning evaluation matrix to use to assess the 2018 implementation strategy planning efforts. The purpose of the evaluation process is to determine the effectiveness of the previous plan, including each of the identified priorities: diabetes and obesity.

The following tables reflect highlights and accomplishments from Penn Highlands Tyrone. The Working Group tackled the problem statements for each past priority and strategies and developed ways to address its effectiveness. Within the past three years the hospital has modified some of its goals to better fulfill the identified needs from the 2018 CHNA. Specific metric information/measurable indicators can be obtained from the hospital's administrative department. The self-assessment on each of the strategies are internal markers to denote how to improve and track each of the goals and strategies within the next three years.

It is important to note that Tyrone Hospital most recently became part of Penn Highlands Healthcare on November 4, 2020. As such the previous CHNA and implementation strategies were in partnership with Blair County Coalition. Tyrone Hospital participated in the Blair County Coalition CHNA during 2016-2019 and selected two initiatives to assist with due to size, resources, and capacity of the hospital.

Tyrone Hospital did not take lead and or implement strategies solely; rather planning efforts were in collaboration with regional and local partners of the hospital. As Tyrone Hospital is part of PHH, the facility will address their community needs and plan initiatives under the health system umbrella but also in conjunction with their regional and local partners. For the CHNA current cycle 2021-2023, Penn Highlands Tyrone will play a greater role in their efforts within their community to improve health.

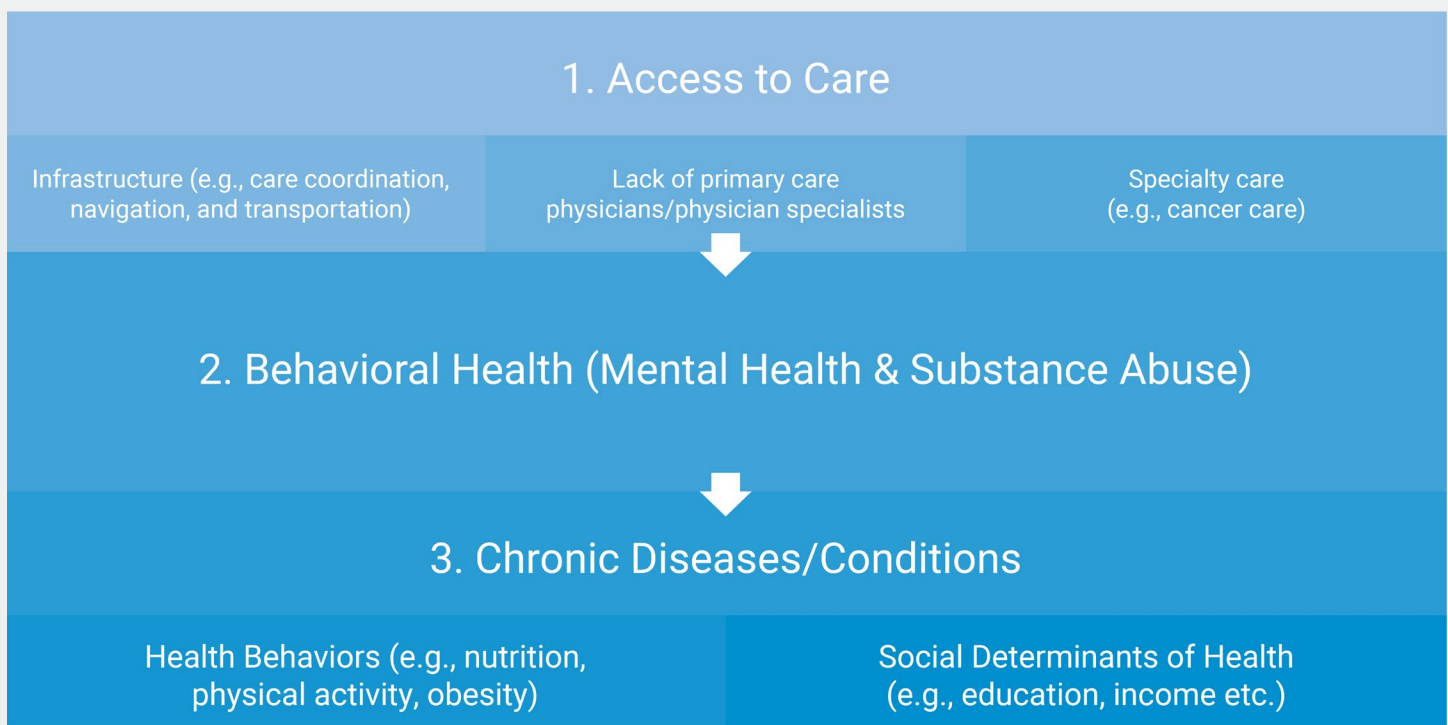
Table 3: Evaluation of 2018 Access to Care Implementation Strategies – Highlights

<p>1. Diabetes and Obesity</p>	<ul style="list-style-type: none"> • Promote obesity prevention, such as eating healthier and engaging in physical activity throughout the community. <ul style="list-style-type: none"> ◦ Multiple workgroups & participants from 3 county hospitals, health care providers and businesses involved. Over 800+ employees, adults children engaged in healthy eating, physical activity and limited screen time. • Promote the Corporate Wellness Challenge to encourage employees to attain their optimal state of health. <ul style="list-style-type: none"> ◦ Over 50 organizations, businesses, and employees, engaged in programs to encourage healthy eating and becoming more physically active. • Develop and promote an Active Living Steps Challenge <ul style="list-style-type: none"> ◦ Broadly encouraged community residents to heighten physical activity and walking • Provide classes on healthier eating, physical activity, diabetes education, and stress reduction. <ul style="list-style-type: none"> ◦ Conducted 2019-2020 Prevent T2 Cohort-(6) attendees ◦ Conducted 2020-2021 Prevent T2 Cohort-(4) attendees • Host health fair and offer screenings, educational classes, and cooking demonstrations. <ul style="list-style-type: none"> ◦ Due to COVID-19 health fairs postponed. • Provide exercise classes, cardio equipment, treadmills, and other state-of-the-art fitness equipment. <ul style="list-style-type: none"> ◦ Over 450 participants at Tyrone Fitness programs • Market, promote, and preserve local trails, pedestrian routes/facilities and other recreational destinations/facilities. <ul style="list-style-type: none"> ◦ Conducted frequent marketing, promotions on use of trails, routes to broad community, employees, businesses and schools.
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2021 Community Health Needs Assessment Findings

Many factors and elements contribute to the definition of a health community and a healthy individual. Genetics and environmental settings play vital roles. Residents of a healthy community have good physical, mental, and emotional health. Healthy communities ensure and promote well-being and provide high-quality health and social services and accessibility to those services on a regular basis. This wholesome community also creates an environment that allows residents and people to thrive on many levels, addressing unhealthy behaviors, and reduces illnesses. Communities plagued with unhealthy environmental factors tend to lead to higher rates of chronic diseases, such as diabetes, high blood pressure, heart disease, cancers, and respiratory illnesses. A healthy community is reachable if adequate resources are accessible, a safe living environment is present, and engagement from residents is maintained toward a healthy lifestyle.

Communities across the United States are confronted with numerous challenges and issues that negatively affect the overall health status of residents and hinder growth and development. In the Penn Highlands Tyrone study area, three specific community health needs and concerns were identified:



Multiple factors must be considered within each community when reviewing and addressing community concerns/issues. Socioeconomic/environmental conditions, human behaviors, and education; these factors greatly influence an individual's health outcome and status and one's ability to overcome health issues in the region. Health providers and community-based organizations must understand the regional health issues and be aware of the most needed services and improvements in order to reduce chronic diseases and illnesses and improve the health of community residents.

Access to Care

The Office of Disease Prevention and Health Promotion indicates that access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing diseases, reducing unnecessary disability and premature death, and achieving health equity for all Americans.¹³ As such, Penn Highlands Tyrone will continue to address access to care based on its communities' need.

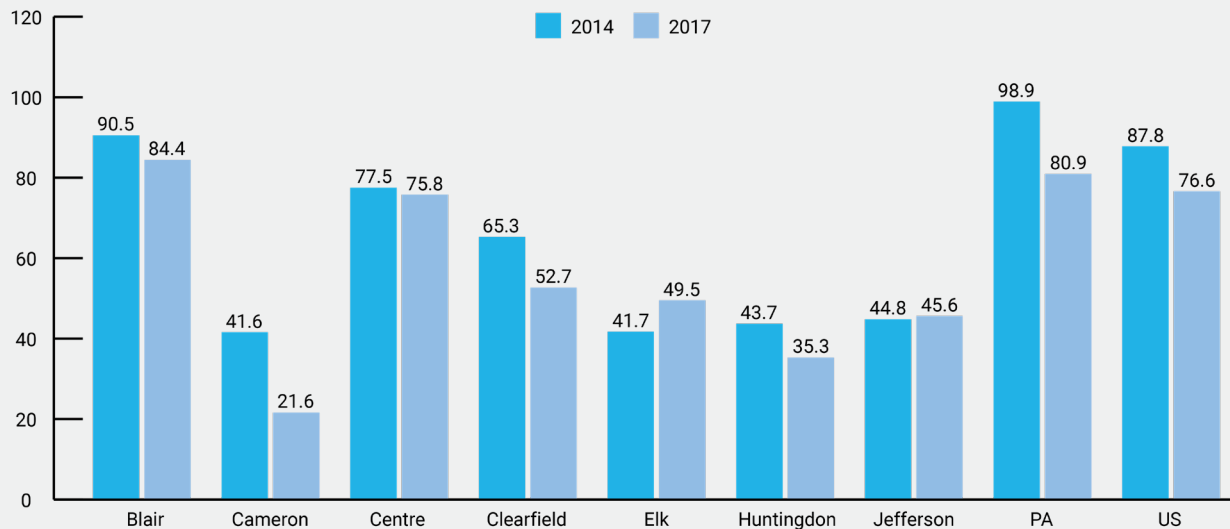
Access to care, in particular primary care and specialty care is important to residents in order to manage their health, receive treatments, and take preventative measures. Access to care tends to include insurance coverage, lack of health services, and timeliness of care. It can also include high cost of services, transportation issues, and availability of providers. Penn Highlands Tyrone will specifically address access to care emphasizing the need for additional primary and specialty physicians and specialty services such as cancer.

Across the United States, according to the Association of American Medical Colleges (AAMC) a shortage of 139,000 physicians by 2033 is predicted due to a growing older patient population and physicians retiring.¹⁴ The study projects a shortage of

9,300 to 17,800 medical specialists; 17,100 to 28,700 surgical specialists; and 17,100 to 41,900 other specialists, including pathologists, neurologists, radiologists, and psychiatrists. The Robert Graham Center reports that to maintain current rates of utilization, Pennsylvania will need an additional 1,039 primary care physicians by 2030, a 11% increase compared to the state's current (as of 2010) 9,096 PCP workforce.¹⁵

Local data in 2017 shows Blair County has the highest access rate to primary care physicians in the overall study area (84.4 per 100,000 per population); also, higher than the state (80.9 per 100,000 population). However, the county also showed a decrease in the number of available physicians between years 2014 and 2017 (90.5 vs. 84.4 per 100,000). Elk (49.5) and Jefferson (45.6) counties are experiencing higher accessibility rates between the years while in the remaining study area counties, Cameron (21.6), Centre (75.8), Clearfield (52.7), and Huntingdon (35.3) counties displayed reduced or lower rates of access to primary care physicians when compared to the state (80.9) and nation (76.6). In the overall study area, the state and the nation revealed a decrease in primary care accessibility in years 2014 to 2017. (See Graph 1)

Graph 1: Access to Primary Care (Rate of Physicians per 100,000 Population)

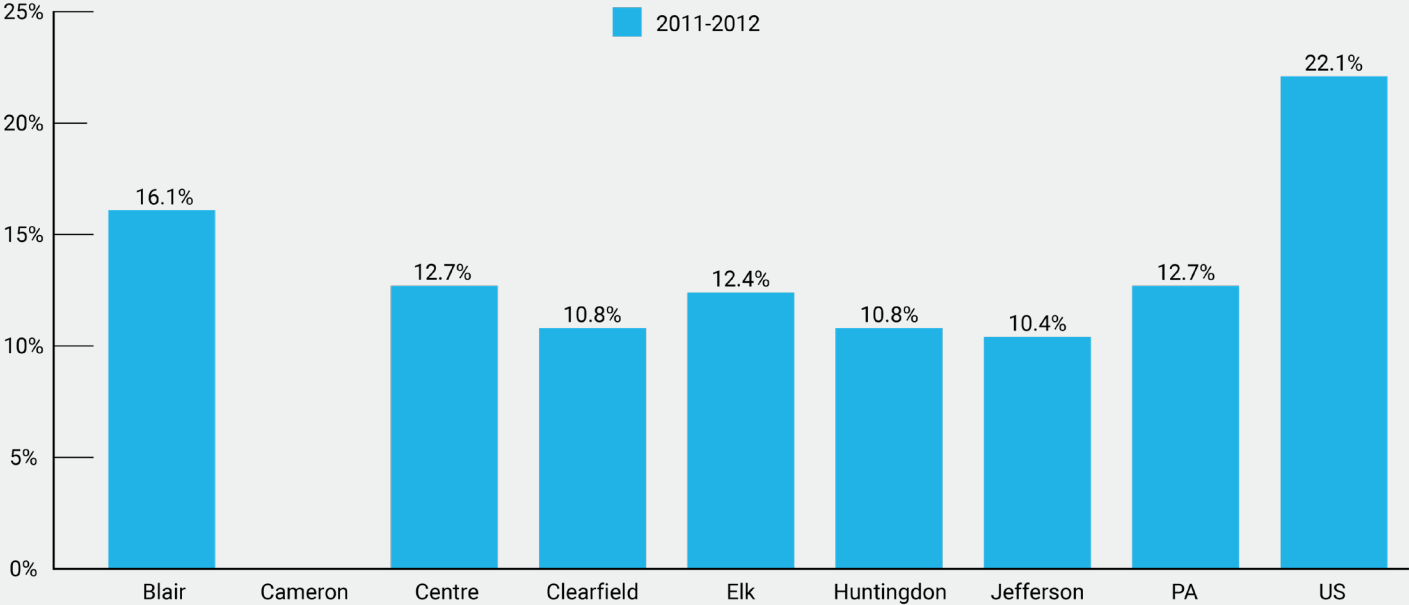


Source: U.S. Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File. 2017.

Serving the front lines for health care services are primary care professionals. For many patients, they are the first point of contact within the health care system. The direct interface between a physician and patient means they are often the first to see signs of diseases, mental health distress, and other health concerns. Physicians ensure patients receive the appropriate care, in the right setting, and in a manner consistent with the patient's needs and values. Primary care professionals are vital to the delivery of health care services.

Secondary data reported in years 2011-2012 illustrates that 16.1% of Blair County and 12.7% of Centre County residents lack a consistent primary care source. This rate is lower than the nation (22.1%). Cameron County data was unavailable. This reporting indicator is relevant because access to regular primary care is important to preventing major health issues and emergency department visits. (See Graph 2).

Graph 2: Lack of Consistent Source of Primary Care



Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12.



Additional information for Pennsylvania reveals a requirement of 114 practitioners needed to remove a Health Professional Shortage Area (HPSA) designation, according to the Bureau of Health Workforce. HPSA designations are used to identify areas and population groups within the United States that are experiencing a shortage of health professionals. (See Table 4). Three categories of HPSA designations are based on the health discipline that is experiencing a shortage: 1) primary medical; 2) dental; and 3) mental health. The primary factor used to determine an HPSA designation is the number of health professionals relative to the population with consideration of high need. To be considered as having a shortage of providers, an area must have a population-to-provider ratio of a certain threshold. For primary medical care, the population to provider ratio must be at least 3,500 to 1 (3,000 to 1 if there are unusually high needs in the community).¹⁶

Table 4: HPSA by State

	Total Primary Care HPSA Designations	Population of Designed HPSAs	Percent of Need Met	Practitioners needed to remove HPSA Designations
Pennsylvania	139	510,983	44.94%	114

Table 5 below highlights that in 2019 the Penn Highlands Tyrone service area reported six designated health professional shortage area facilities in Centre County (primary care, mental health, and dental health care). Blair County does not report any HPSA facilities. Huntingdon County (14) reported the highest total number of HPSA facilities and Cameron County (4) reported the fewest in the overall study area.

Table 5: Facilities Designated as Health Professional Shortage Area (HPSA)

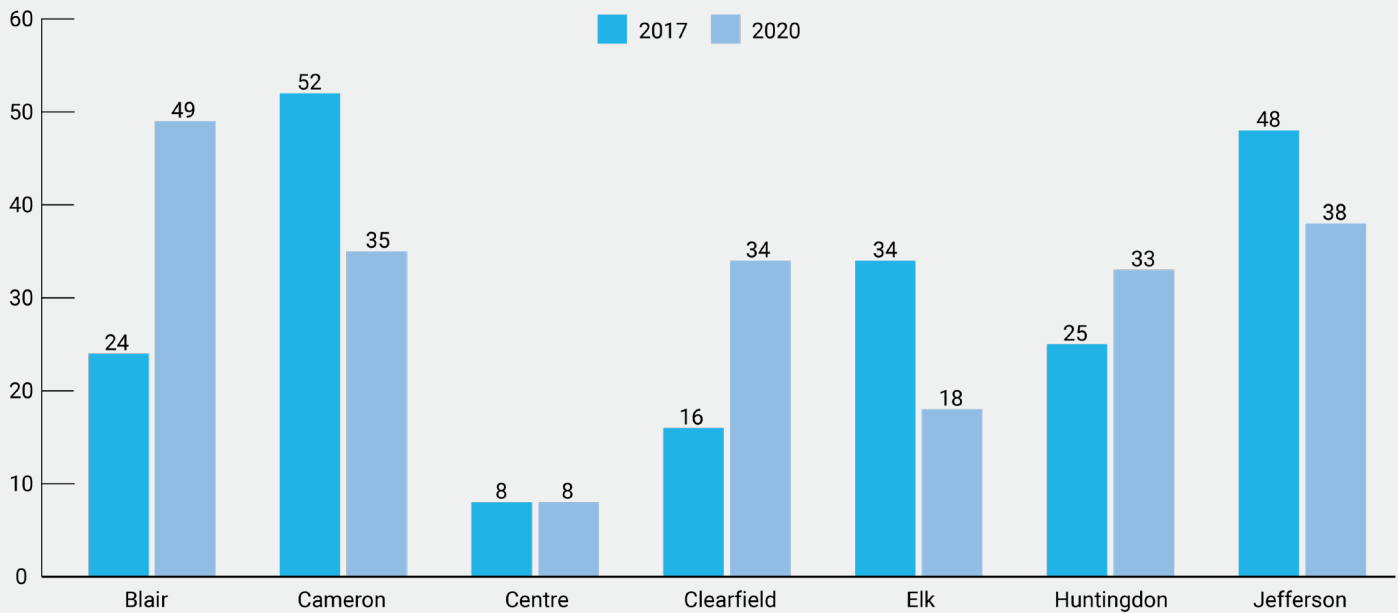
Report Area	Primary Care Facilities	Mental Health Care Facilities	Dental Health Care Facilities	Total HPSA Facility Designations
Blair County	0	0	0	0
Cameron County	2	1	1	4
Centre County	3	1	2	6
Clearfield County	2	2	2	6
Elk County	0	0	0	0
Huntingdon County	5	4	5	14
Jefferson County	2	2	2	6
Pennsylvania	117	100	108	325
United States	3,979	3,617	3,432	11,028

Source: 2019 U.S. Dept of Health & Human Services, Health Resources and Services Administration, Health Resources and Services Administration. April 2016.

Graph 3 below shows that Jefferson, Elk, and Cameron counties improved their clinical care rankings from 2017 to 2020; however, Blair County rose in ranking from 24 to 49. The higher-ranking scores indicate an unhealthy standing out of the 67 counties in Pennsylvania. Continuing to examine data from 2017 and 2020, Centre County rankings remained the same; unfortunately, Huntingdon County score increased (again, indicating an unhealthy standing). (See Graph 3).

Clinical care ranking considers the availability of health services and the quality of those services. It also considers the preventive care measures that patients take to manage their health, including immunization rates, cancer screening rates, and percentage of the population that receives a yearly dental examination. The clinical care ranking is vital to understanding the ebb and flow of where clinical services are lacking in the state.

Graph 3: Clinical Care – County Health Rankings



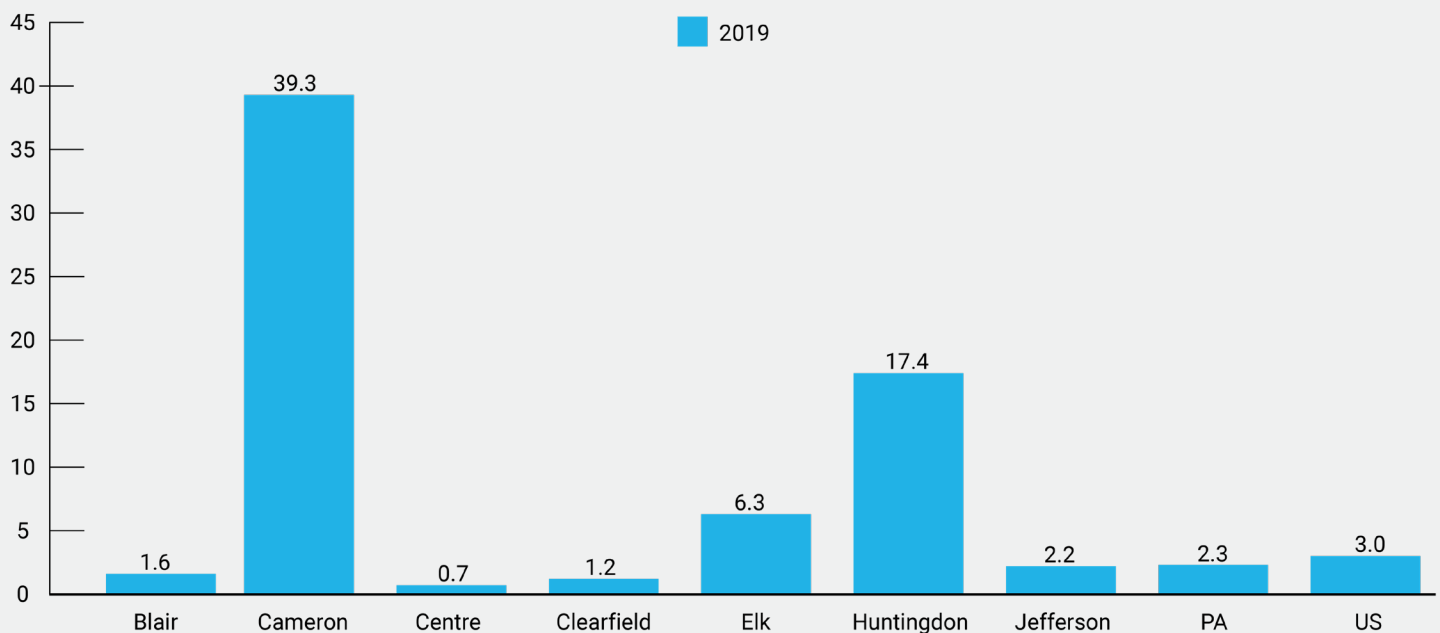
Source: County Health Rankings & Roadmaps

Closing the gaps of disparities, Pennsylvania’s safety net providers play a vital role in delivering health care to the state’s underserved and disenfranchised populations. Pennsylvania’s Federally Qualified Health Centers (FQHCs) provide continuous access to primary and preventive services for low-income and underserved residents.

Secondary data related to FQHCs reported that in 2019 Cameron County has the highest rate of FQHCs (39.3 per 100,000 population) in the study area followed by Huntingdon County (17.4 per 100,000 population), these rates are higher than the state (2.3) and the nation (3.0). This measure indicates the vast need in Cameron County for health care for the underserved populations. On the polar end, Centre County (0.7 per 100,000 population) reports the lowest rate of FQHCs in the study area. (See Graph 4).

Data related to FQHCs is relevant as they are community assets that provide health care to vulnerable populations; they receive additional funding from the federal government to promote access to ambulatory care in areas designated as medically underserved.

Graph 4: Federally Qualified Health Centers (Rate per 100,000 Population)



Source: U.S. Department of Health & Human Services, Center for Medicare & Medicaid Services, Provider of Services File. September 2020.

Accessing care plays a vital role to having a healthy life. Typically, access to care refers to the opportunity (and ease) in which people can obtain health care, but it can also refer to having or utilizing health care coverage. Disparities in health service access can significantly affect an individual's and a community's quality of life in a negative way. A lack of available health resources can serve as some of the top barriers to accessing health care services.

While an overall predicted physician shortage is anticipated by 2033, this is especially true for specialty physicians in the United States. The AAMC workforce report projects a shortage of 9,300 to 17,800 medical specialists; 17,100 to 28,700 surgical specialists; and 17,100 to 41,900 other specialists, including pathologists, neurologists, radiologists, and psychiatrists.¹⁷

The following table provides information related to breast cancer, colon/rectal cancer, lung cancer, and prostate cancer, all of which require physician specialty care. Centre County is above the state rate for breast cancer incidence rate (141.4 vs 132.3 per 100,00 per population) and Blair County has a higher lung cancer incidence rate compared to the state (72.6 vs. 63.5 per 100,000 population). High county cancer rates can indicate variations in medical care accessibility, gender, racial/ethnic, and aging influences. It is important to keep variances in mind when interpreting and understanding data rates. Figures highlighted in red in Table 6 depict county incidence rates of cancer that are higher than the state. (See Table 6).

Physician specialists are medically trained doctors who have completed advanced education and clinical training in their specific area of medicine. The ruralness of Penn Highlands Tyrone plays a role in recruiting and retaining of physician specialists; however, with the commitment and the pledge from Penn Highlands Healthcare the opportunity to continue to recruit specialists will be ongoing.

Table 6: Cancer Screenings

Pennsylvania (per 100,000 population)	Breast Cancer Incidence (2013-2017)	Colon/Rectum Cancer Incidence (2013-2017)	Lung Cancer Incidence (2013-2017)	Prostate Cancer Incidence (2013-2017)
Blair County	116.6	41.0	72.6	90.3
Cameron County	119.3	47.6	66.6	107.8
Centre County	141.4	34.2	44.9	96.8
Clearfield County	118.2	42.5	61.0	116.0
Elk County	123.3	50.9	61.1	146.1
Huntingdon County	121.4	39.0	56.6	86.7
Jefferson County	110.3	40.3	57.6	123.5
Pennsylvania	132.3	41.1	63.5	103.7

Source: State Cancer Profiles. 2013-17.

Access to health care services is critical to good health, yet residents still face a variety of access barriers. Access to services such as primary care, dental care, behavioral health, emergency care, and public health services should ideally be convenient and available. Access to health care can improve one's overall health status, improve quality of life, reduce diseases, and provide treatment to illnesses and other abnormalities. Overall, reducing barriers and improving accessibility to primary care services is critical for improving population health and reducing health disparities.

In an effort to respond to the growing physician shortage in Pennsylvania and to improve health care access and enhance the quality of life for residents in the Penn Highlands Healthcare service area, graduate medical education (GME) opportunities are offered not only as an avenue to increase physical retention and improve physician recruitment, but also as an avenue to improve health outcomes and lower health care costs. Penn Highlands Healthcare is committed to addressing the needs of the community, as such, GME opportunities in the Northwestern/Central regions of Pennsylvania will supply the community with health care providers currently and well into the future.

Pennsylvania needs more physicians, specifically in underserved areas. Particularly, residents living in rural areas face greater health challenges, as distance from health providers often creates disparities that are difficult to overcome.

Infrastructure

Undoubtedly health care cost will rise and the need for additional health care providers will grow as the U.S. population grows older. Primary care physicians and specialists are vital to communities as they assist in the health and care coordination of community residents. Impacted by the growing need for more primary care and specialty physicians in the region, PHH must grapple with this community concern.

In addition to manpower issues, transportation difficulties in rural regions create accessibility

Access issues — such as lack of health insurance, lack of available providers, and health care affordability — all lead to an increased risk of illness or death.

PHH is in the forefront of addressing the looming physician shortage in Pennsylvania. PHH leadership recognizes that GME is a key component in supporting underserved areas, therefore, ACGME accredited programs such as Family Medicine and Psychiatry Residency Programs are offered at PHH. PHH will continue to educate and produce the next generation of high-quality physicians and increase the number of health care professionals who choose to remain and practice in Pennsylvania. Northwestern/Central Pennsylvania, especially, has a great need in communities throughout Blair, Cameron, Clearfield, Elk, Jefferson, and Huntingdon counties where population health indicators are among the worst in the state.

problems to health care services and impact how rural residents obtain care. It is clear that the need for physicians will grow; however, it is also imperative to support and provide pathways to assist residents in obtaining care in order to reduce and close the gaps in health care disparities. As primary care and specialty physicians tend to practice in more populated communities rural residents are forced to travel further for services — making access to services more difficult. It will be important for Penn Highlands Tyrone to seek innovative and thoughtful ways to fill this transportation issue.





Navigation and Care Coordination

Health system navigation is an approach to reduce barriers to care.¹⁸ Residents with health and social support needs experience gaps in service delivery and often require assistance. Navigators assist those in chronic care settings or larger integrated health networks because they help patients “navigate” the health care system. Navigators educate consumers and provide the skills to properly access and self-manage their health care effectively.

Health care navigators assist patients through the logistical infrastructure in health insurance coverage or undergoing complex care management regimens. Assisting patients in a complex health care environment empowers patients to be confident and become self-reliant to ensure their interactions can be more effective.

Navigators are vital to the health system because they assist patients in understanding an industry that can often be complicated. Roles and responsibilities can include assisting patients to find and access treatment, understanding their illnesses/disease, and understanding their care plans. Without navigators, the inability to obtain assistance can hinder a patient’s ability to obtain care or adequately recuperate from an injury. Navigators can also streamline and ease the discharge process.

Health care providers use care coordination to organize patient care events and share patient information with all of the health care participants and caregivers concerned with the patient’s outcome to achieve safe and more effective care. Care coordination can assist residents and address potential gaps in meeting educational, medical, social, and financial needs in order to achieve optimal health. Both navigation and care coordination are intertwined as they aim to achieve the desired result of assisting the patient with their health care needs.

Geography, economics, and culture contribute to how residents obtain care. Health care access plays a tremendous role on an individual’s overall health. Transportation, care coordination, and navigation were identified as issues in the current community cycle; thus, PHH will explore strategies to address this community need.

Access to services such as primary care, behavioral health, emergency care, and public health services should be convenient and available. Access to health care can improve one’s overall health status, improve quality of life, reduce diseases, and provide treatment to illnesses and other abnormalities. Overall, reducing barriers and improving accessibility to primary care services are critical for improving population health and reducing health disparities.

Behavioral Health

Behavioral health, which includes mental health and substance abuse, affects families and individuals throughout the United States, and the Penn Highlands Healthcare service area is no exception. The disease and the number of residents diagnosed with the disease continue to grow exponentially. Along with the growth, the needs for mental health services and substance abuse programs have not diminished. According to the American Hospital Association, in 2016, only 43% of the 44.7 million adults with any mental health disorder received treatment, and less than 11% of adults with a substance use disorder received treatment.¹⁹ Regrettably, behavioral health disorders affect nearly one in five Americans and have community-wide impacts.²⁰

While hospitals and health systems provide essential behavioral health care services every day, timely access to affordable services remains a significant challenge for many Americans. It has been shown that increasing access to behavioral health services can improve outcomes and lower health care costs.²¹ Genetics and socioeconomic are factors in individuals who are diagnosed with a mental health problem, and oftentimes societal factors increase the likelihood for one to engage in unhealthy life choices such as alcohol and drug use. The 2021 CHNA prioritized behavioral health as a top need and continues to highlight the need for additional mental health and substance abuse services and programs regionally.

Mental Health

Behavioral health includes ways of promoting well-being by preventing or intervening in mental illness such as depression or anxiety, but it also has as an aim of preventing or intervening in substance abuse or other addictions.²²

Generationally, mental health is oftentimes passed down; while future family members may be more likely to inherit the disease, individual genetic composition will ensure the disease will differ due to the environment in which they live and, in some cases, the individual may not develop the disease. Living in poverty, poor education, and lack of employment opportunities are socioeconomic factors that can elevate one's stress level, producing a mental health issue. Having and increasing access to mental health providers can give residents a direct pathway to care and treatment, ensuring a direct route to a healthier life. The Substance Abuse and Mental Health Services Administration (SAMHSA) cited that good behavioral health is essential to wholesome/positive overall health. Treatment and preventative measures allow individuals to recover from a mental health crisis.

The Centers for Disease Control and Prevention cites those problems with mental health are very common, with an estimated 50% of all Americans diagnosed with a mental illness or disorder at some point in their lifetime. Mental illnesses, such as depression, are the third-most common cause of hospitalization in the United States for those ages 18-44, and adults living with serious mental illness die on average 25 years earlier than others.^{23,24} Mental health illnesses are among the top conditions that cause disability and carry a high burden of disease nationally, resulting in significant costs to families, employers, and publicly funded health systems.

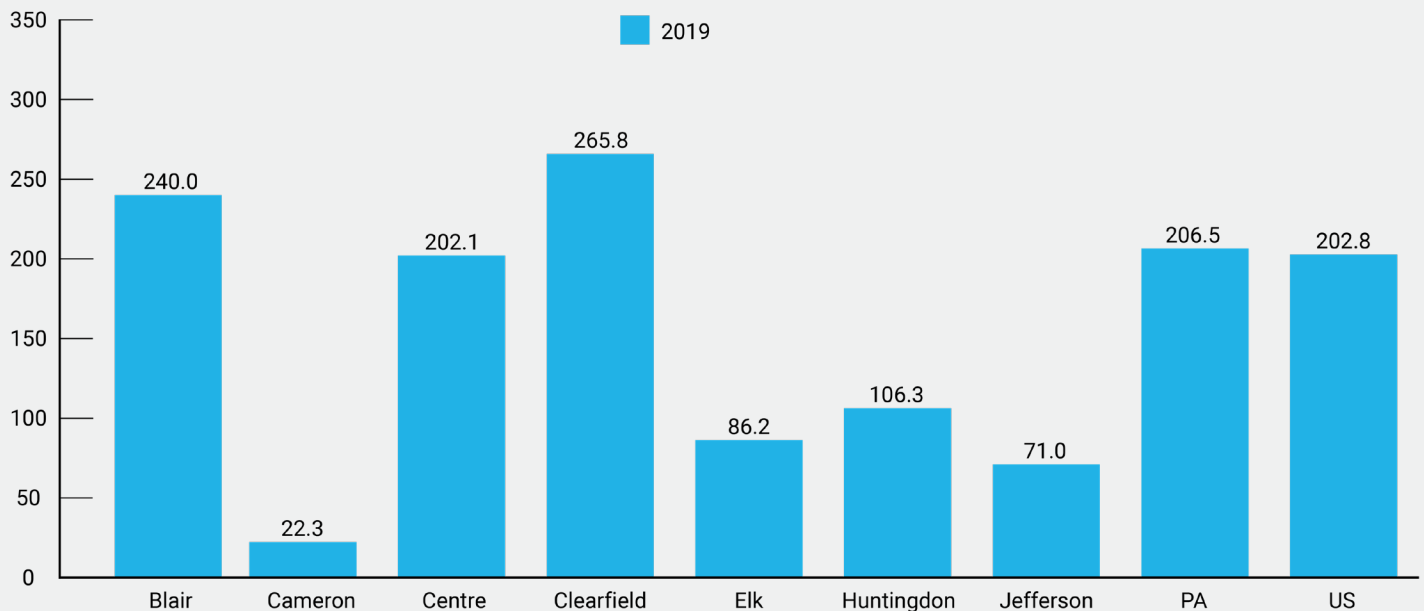
According to the National Alliance on Mental Illness (NAMI), approximately 1 in 5 adults in the United States (46.6 million) experiences mental illness in a given year. In addition, approximately 1 in 25 adults (11.2 million) experiences a serious mental illness in a given year that substantially interferes with or limits one or more major life activities. Also, important to note, of the 20.2 million adults in the United States who experienced a substance use disorder, 50.5 percent – 10.2 million adults – had a co-occurring mental illness.²⁵

The ripple effects of mental health are long-lasting. Residents experiencing homelessness tend to have serious mental health issues (roughly 21.0%), while 37.0% of people incarcerated in state and federal prisons have a diagnosed mental health condition, as one in eight visits to the emergency department are related to mental and substance use disorders.²⁶ The overall ripple effects show how serious and detrimental mental health conditions can be, especially those who are undiagnosed and untreated.

Looking at a regional perspective, County Health Rankings reported the rate of mental health providers is highest in Clearfield County at 265.8 per 100,000 population when compared to the remaining counties; Blair County follows closely at 240.0 per 100,000 population. Cameron County reported a rate of 22.3 per 100,000 population, the lowest in the study area and roughly more than nine times lower than the state (206.5) and the national (202.8) rates. Access to mental health providers is vital to community residents in order to reduce the risk of chronic diseases related to stress, anxiety, and substance abuse. Access to mental health services improve the outlook for people who may feel helpless and lost. (See Graph 5).

Note: This indicator reports the rate of the county population to the number of mental health providers including psychiatrists, psychologists, clinical social workers, and counselors who specialize in mental health care.

Graph 5: Access to Mental Health Providers (Rate per 100,000 Population)

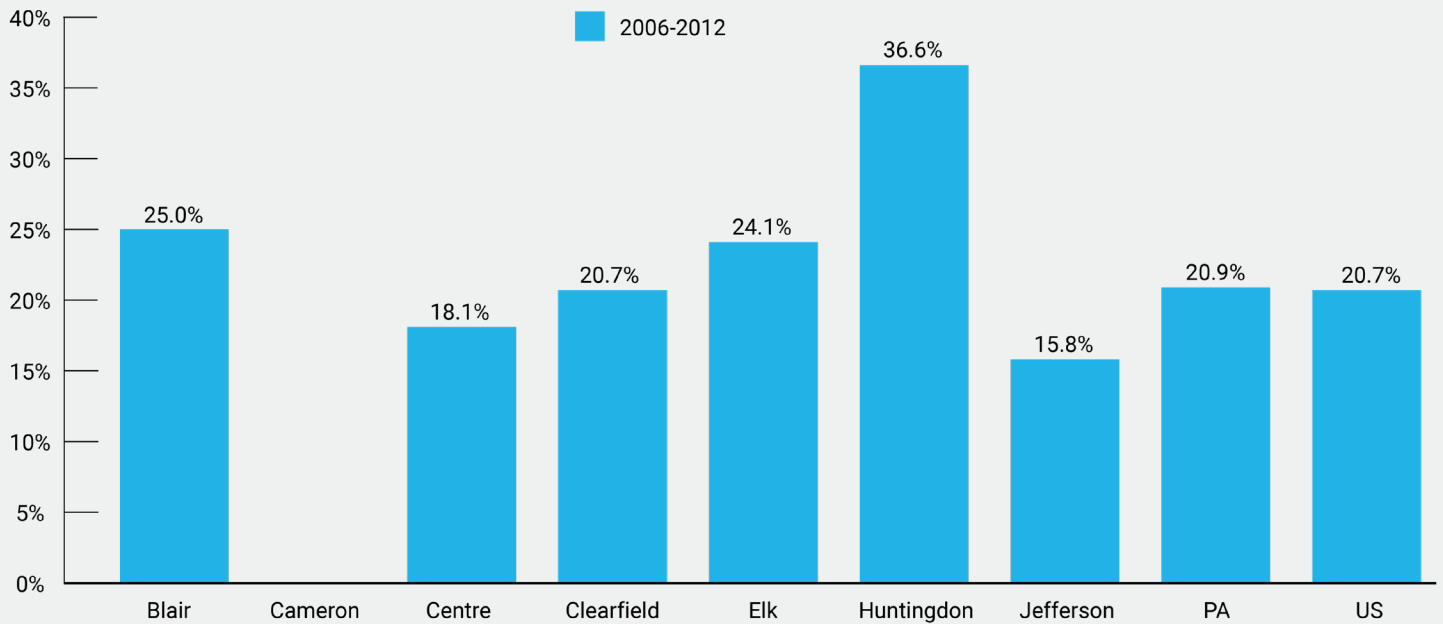


Source: County Health Ranking & Roadmaps

Additional regional data reveals that Huntingdon County, at 36.6%, has a higher percentage of residents who lack social or emotional support when compared to the state (20.9%) and the nation (20.7%). This is followed by Blair County (25.0%) and Elk County (24.12%). Data was not available for Cameron County. (See Graph 6).

This indicator is significant because social and emotional support is critical for navigating the challenges of daily life, as well as for good mental health. Social and emotional support is also linked to educational achievement and economic stability.

Graph 6: Lack of Social or Emotional Support



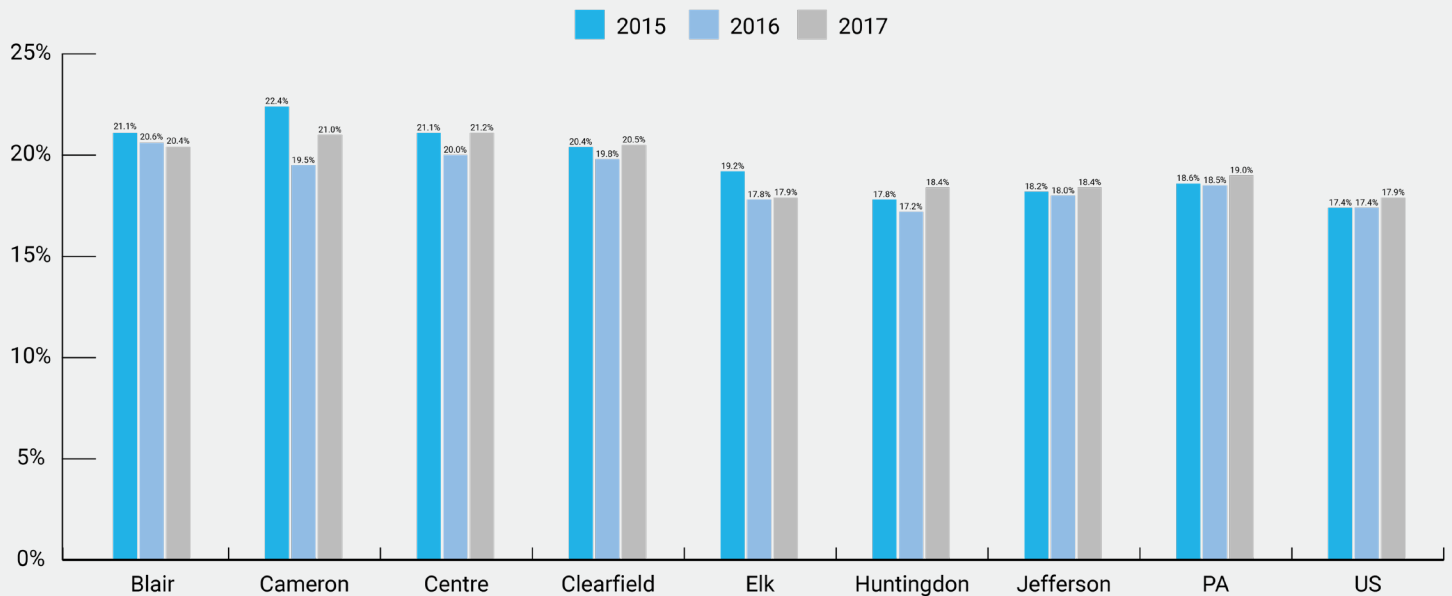
Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System





Data from the Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System reported that residents in 2017 in Centre (21.2%), Cameron (21.0%), Clearfield (20.5%), and Blair (20.4%) counties have more Medicare residents diagnosed with depression when compared to the remaining counties in the study area, the state (19.0%), and the nation (17.9%). Elk County (17.9%) reported the lowest percentage of Medicare residents with depression. (See Graph 7).

Graph 7: Medicare Population Diagnosed with Depression



Source: Centers for Disease Control and Prevention; Behavioral Risk Factor Surveillance System

Residents with untreated mental health conditions face daily challenges. Behavioral health problems will prevent individuals from maintaining employment or obtaining an education, elements that are essential to an individual’s well-being. Accessibility to behavioral health care services will assist those dealing with mental illness and substance abuse problems.

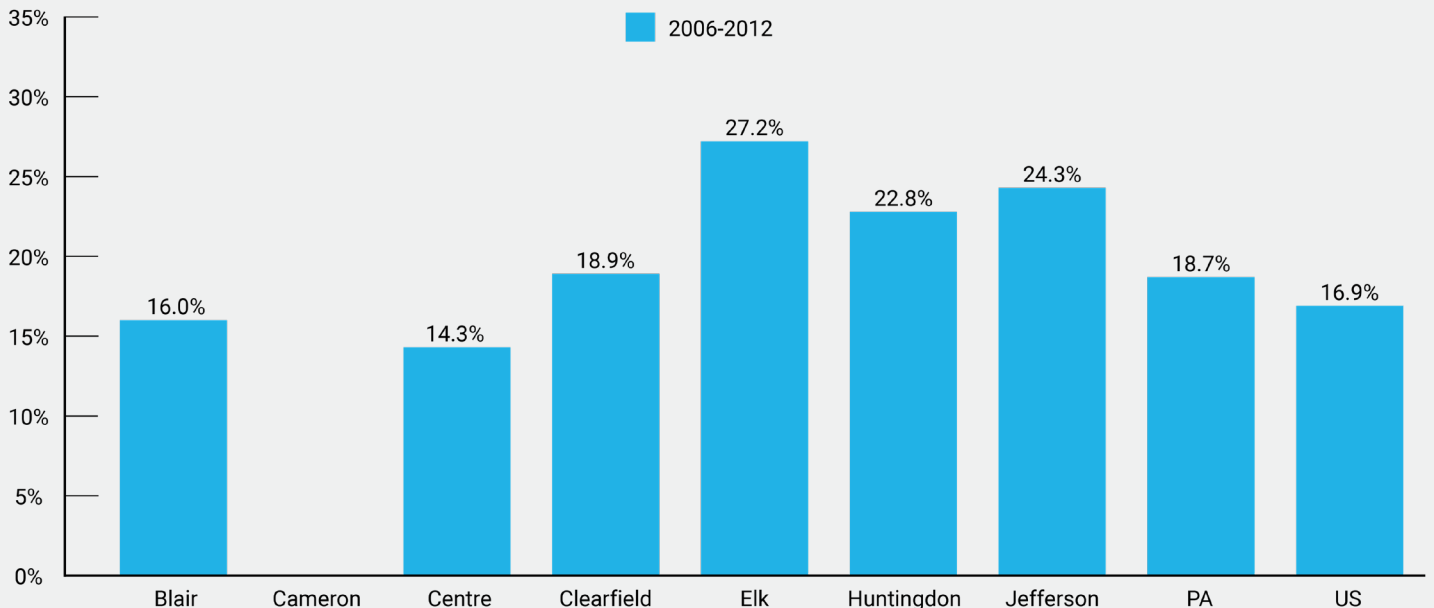
Substance Abuse

Besides the growing behavioral health problems, use of drugs and alcohol is increasing. Substance abuse is often intertwined with those who also have a mental health illness. SAMSHA reported in its 2018 National Drug Use and Health Survey that an estimated 164.8 million people aged 12 or older in the United States (60.2 percent) were past-month substance users (i.e., tobacco, alcohol, or illicit drugs). About two of five people aged 12 or older (108.9 million, or 39.8 percent) did not use substances in the past month. The 164.8 million past-month substance users in 2018 include 139.8 million people who drank alcohol, 58.8 million people who used a tobacco product, and 31.9 million people who used an illicit drug.²⁷

In 2006-2012, national data showed that residents in Clearfield (18.9%), Elk (27.2%), Jefferson (24.3%), and Huntingdon (22.8%) counties aged 18 and older were heavy alcohol consumers; this is higher than the state (18.7%) and higher than the nation rate (16.9%). Of the available data, Centre County showed the lowest percentage of residents 18 and older who are heavy drinkers (See Graph 8). Data for Cameron County and data for the current CHNA year were unavailable.

This indicator is relevant because current behaviors are determinants of future health and this indicator may illustrate a cause of significant health issues, such as cirrhosis, cancers, and untreated mental and behavioral health needs. A heavy drinker is considered to have more than two drinks a day for men or one or more drinks a day for women.

Graph 8: Alcohol Consumption (Percent of Adults 18 and Older who are Heavy Drinkers)



Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

About 139.8 million Americans aged 12 or older were past-month alcohol users, 67.1 million were binge drinkers in the past month, and 16.6 million were heavy drinkers in the past month. About 2.2 million adolescents aged 12 to 17 drank alcohol in the past month, and 1.2 million adolescents binge-drank in that period. Although the percentage of adolescents who drank alcohol decreased from 2002 to 2018, about 1 in 11 adolescents in 2018 were past-month alcohol users.²⁸

The survey revealed nearly 1 in 5 people aged 12 or older (19.4%) used an illicit drug in the past year, which is a higher percentage than in 2015 and 2016. The estimate of past-year illicit drug use for 2018 was driven primarily by marijuana use, with 43.5 million past-year marijuana users. The percentage of people aged 12 or older in 2018 who used marijuana in the past year (15.9%) was higher than the percentages in 2002 to 2017.²⁹

Prescription pain reliever misuse was the second-most common form of illicit drug use in the United States in 2018, with 3.6% of the population misusing pain relievers. For people aged 12 or older and for young adults aged 18 to 25, the percentages who misused prescription pain relievers in the past year were lower in 2018 than in 2015 to 2017. Similar decreases in pain reliever misuse were observed for adolescents aged 12 to 17 and adults aged 26 or older in 2018 compared with 2015 and 2016 but not when compared with 2017. Among people aged 12 or older in 2018 who misused pain relievers in the past year, the most common main reason for their last misuse of a pain reliever was to relieve physical pain (63.6%). More than half (51.3%) of people who misused pain relievers in the past year obtained the last pain reliever they misused from a friend or relative.³⁰

The Penn Highlands Healthcare community stakeholders cited that their community has a behavioral health problem. Community stakeholders reported that the demand for behavioral health services has placed a significant strain on existing recourses. Lengthy waiting periods, low numbers of accessible health counselors/mental health providers in the rural area, lack of prevention programs, and the difficulties in navigating the health care system are a few factors that place barriers onto residents when seeking care and assistance.

The use of drugs and alcohol in the community is commonplace and being underinsured or uninsured places greater roadblocks to these types of services. Being properly diagnosed will create a pathway for treatment and management.

Community stakeholders have reported that the effects of COVID-19 have also dramatically increased the use of drugs and alcohol as more residents are self-medicating. The mental angst and anxiety from the pandemic have made the issue more prevalent, increasing the call and need for services.

Data from the provider survey cited that the top health problem in the community was behavioral/mental health problems (61.5%). The top improvement providers would like to see in the health care system is access to mental health care (65.8%).

Left untreated, behavioral health disorders (mental and substance abuse) can lead to physical and emotional issues. Access to adequate services and resources as well as navigation and education on the disease can improve the well-being of a resident. The need for communities to address the crisis is growing, and cooperation, collaboration, and partnerships with community-based organizations and health care institutions can reduce and close the gap to assist those who are tackling this disease.

Chronic Diseases/Conditions

Broadly defined, chronic conditions are conditions that last more than one year and require ongoing medical attention or limit daily activities. Heart disease, cancer, and diabetes are leading causes of death and disability in the United States. They are also leading drivers of the nation's \$3.8 trillion in annual health care costs.³¹

Many chronic diseases are caused by a short list of risk behaviors:³²

- Tobacco use and exposure to secondhand smoke.
- Poor nutrition, including diets low in fruits and vegetables and high in sodium and saturated fats.
- Lack of physical activity.
- Excessive alcohol use.

The engagement of healthy behaviors and positive habits such as regular physical activity, getting adequate amounts of sleep, eating/following a healthy diet, and eliminating the use of tobacco and alcohol can significantly reduce disease and improve one's quality of life. Living a healthy lifestyle is essential to addressing a specific health problem or maintaining one's health, and it reduces the likelihood to be diagnosed with a chronic disease.

According to the American Public Health Association (APHA), poor behaviors lead the nation in chronic diseases. In 2014, nearly half of U.S. adults did not meet recommended guidelines for weekly physical activity.³³ A diet full of fruits and vegetables helps reduce chronic diseases; unfortunately, less than 18% of adults ate recommended amounts of fruit and less than 14% ate recommended amounts of vegetables. U.S. children do not eat enough fruits and vegetables.³⁴ Chronic diseases, while readily common, are the most preventable of all health problems. Poor, unhealthy behaviors can change. Screenings, check-ups, monitoring treatment, and patient education are methods in which chronic diseases can be properly managed.



Diabetes

Roughly 84 million U.S. adults have prediabetes, a serious health condition in which blood sugar levels are higher than normal but not high enough to be diagnosed as type 2 diabetes, and more than 30 million Americans have diabetes. A person with prediabetes is at high risk to develop type 2 diabetes, heart disease, and stroke. People with diabetes spend more on health care, have fewer productive years, and miss more workdays compared to people who are not diabetic. In 2017, the total estimated cost of diagnosed diabetes was \$327 billion, including \$237 billion in direct medical costs and \$90 billion in absenteeism, reduced productivity, and inability to work.

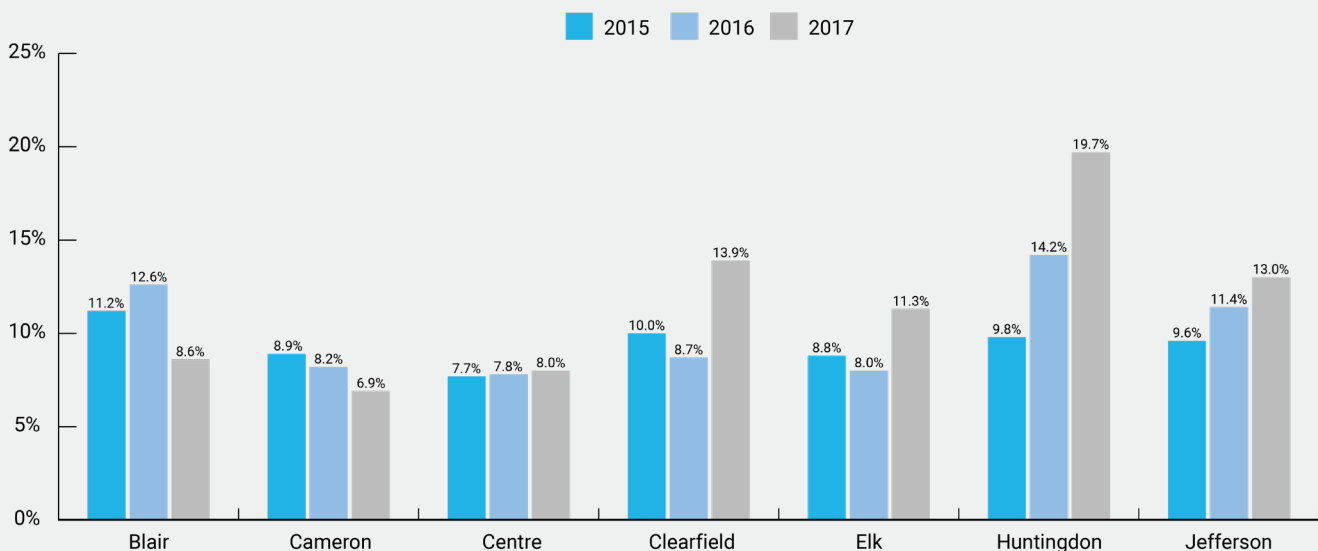
Residents who are overweight/obese, 45 years or older, have a family history, are sedentary, and are of a certain race or ethnicity are at a higher risk of having type 2 diabetes.³⁵ In the United States, 72% of adults are overweight or have obesity; thus, they are at a higher risk to be type 2 diabetic. The number of adults with diagnosed diabetes has nearly doubled in the last two decades as the U.S. population has increased, aged, and become more overweight.³⁶ To reduce the likelihood to being prediabetic, residents are encouraged to exercise, eat healthy, and eliminate tobacco use while organizations nationally and regionally are working closely to help reduce and modify risk factors to prevent or delay the development of type 2 diabetes and improve their overall health.

Data shows that Cameron County, in 2017, reported the lowest percentage of adults 20 and older who have diabetes (6.9%), while Huntingdon County (19.7%) reported the highest percentage of adults with diabetes among the study area and is the only county to exceed the state rate at 18.8%.

Centre, Huntingdon, and Jefferson counties have seen a progression increase within the years for adults who are diabetic. Cameron County is the only county in the study area have has seen a decrease throughout the years. The national rate also decreased from 19.7% in 2016 to 18.8% in 2017.

Examining this data point is important as diabetes is preventable in the United States and the disease may indicate an unhealthy lifestyle and put individuals at risk for further health issues. (See Graph 9).

Graph 9: Adults 20 years and Older with Diabetes

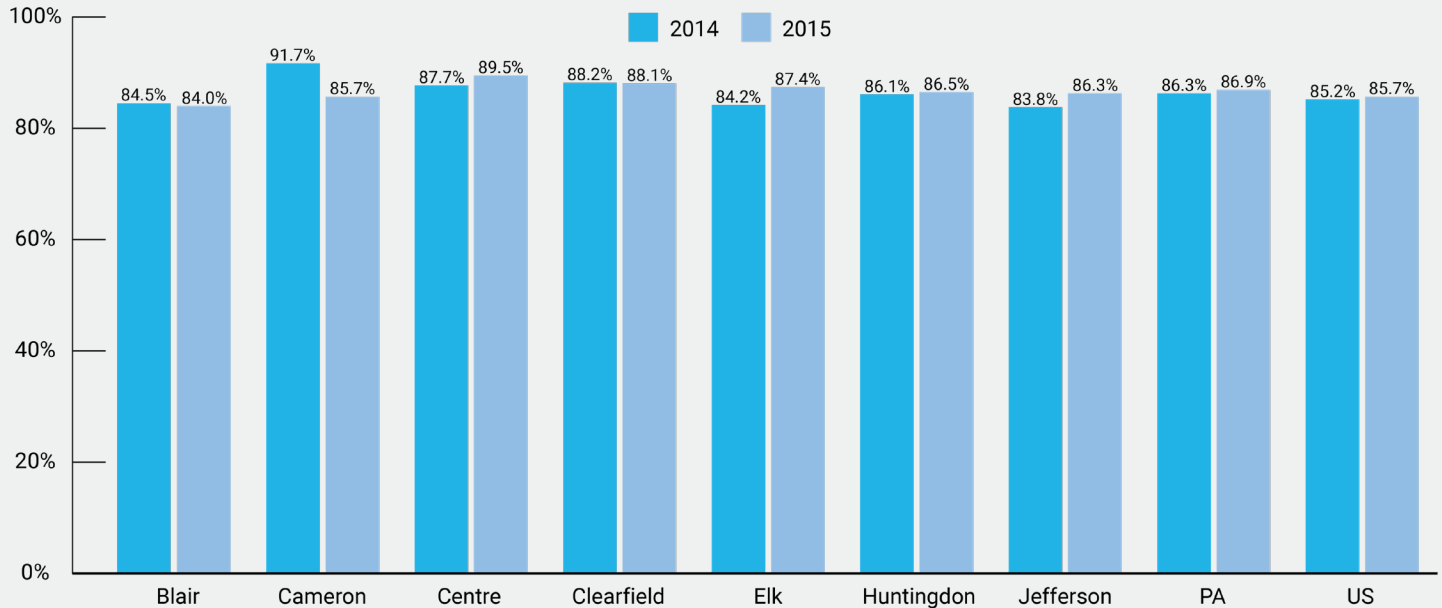


Source: Centers for Disease Control and Prevention

Graph 10, in 2015, depicts Blair (84.0%), Cameron (85.7%), Huntingdon (86.5%), and Jefferson (86.3%) counties all reported lower rates of Medicare enrollees receiving the hemoglobin A1c blood test when compared to the state (86.9%). When compared to the entire study area, Centre County (89.5%) reported the highest rate of Medicare enrollees receiving the hemoglobin A1c blood test while Blair County (84.0%) reported the lowest rate.

A hemoglobin A1c (hA1c) test is a blood test that measures blood sugar levels and is administered by a health care professional. This indicator is relevant because engaging in preventive screenings allows for early detection and treatment of health problems. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

Graph 10: Diabetes Management (Medicare Enrollees with Diabetes with Annual Exam 20 years and Older with Diabetes)



Source: Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care. 2015

Diabetes complications tend to be more common and more severe among people whose diabetes is poorly controlled, which makes diabetes an immense and complex public health challenge. Preventive care practices are essential to better health outcomes for people with diabetes.

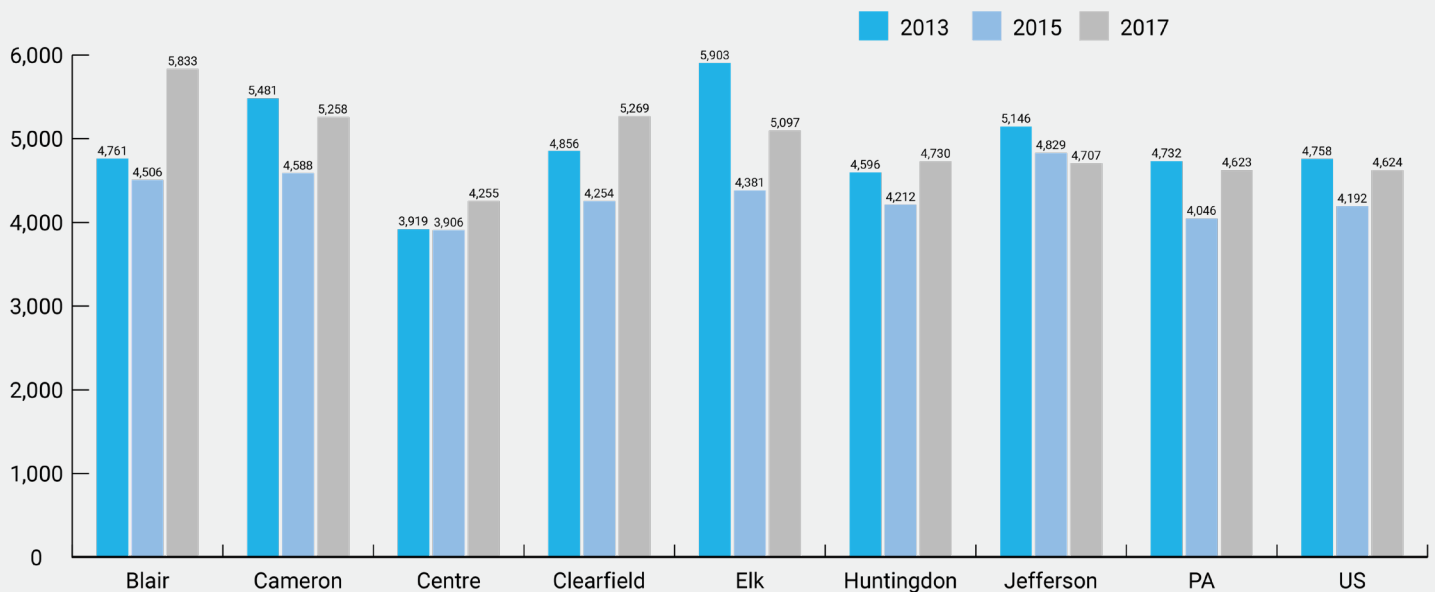
The estimated total financial cost of diabetes in the United States in 2012 was \$245 billion, which includes the cost of medical care, disability, and premature death. Diabetes is the seventh-leading cause of death in the United States. Diabetes also increases the all-cause mortality rate 1.8 times; increases the risk of heart attack by 1.8 times; and is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness. The number of diabetic cases in the United States and worldwide is predicted to rise.³⁷

Preventable hospital stays are relevant to health outcomes because analysis of Ambulatory Care Sensitive (ACS) discharges demonstrates a possible “return on investment” from interventions that reduce admissions (for example, for uninsured or Medicaid patients) through better access to primary care resources. ACS conditions include pneumonia, dehydration, asthma, diabetes, and other conditions that could have been prevented if adequate primary care resources were available and accessed by those patients. Hospitalization for ambulatory-care sensitive conditions suggests that the quality of care provided in the outpatient setting was less than ideal.

Centre County reports the lowest rate of preventable hospital events per 100,000 Medicare beneficiaries at 4,255; lower than the state (4,623) and the nation (4,624). Jefferson County was the only county to report a decrease in preventable hospital events from 2015 to 2017, going from 4,829 to 4,707. Blair County reported the highest rate of preventable hospital events in 2017 with 5,833 per 100,000 Medicare beneficiaries.

Preventable hospital events in Blair and Centre counties increased over the years. Access to health care services, the implementation of the Affordable Care Act, and additional resources for residents might have played an instrumental role in reducing the preventable discharge rates for Medicare enrollees. (See Graph 11).

Graph 11: Preventable Hospital Events
(Ambulatory Care Sensitive Condition Discharge Rate per 100,000 Medicare enrollees)



Source: Centers for Medicare and Medicaid Services, Mapping Medicare Disparities Tool. 2017

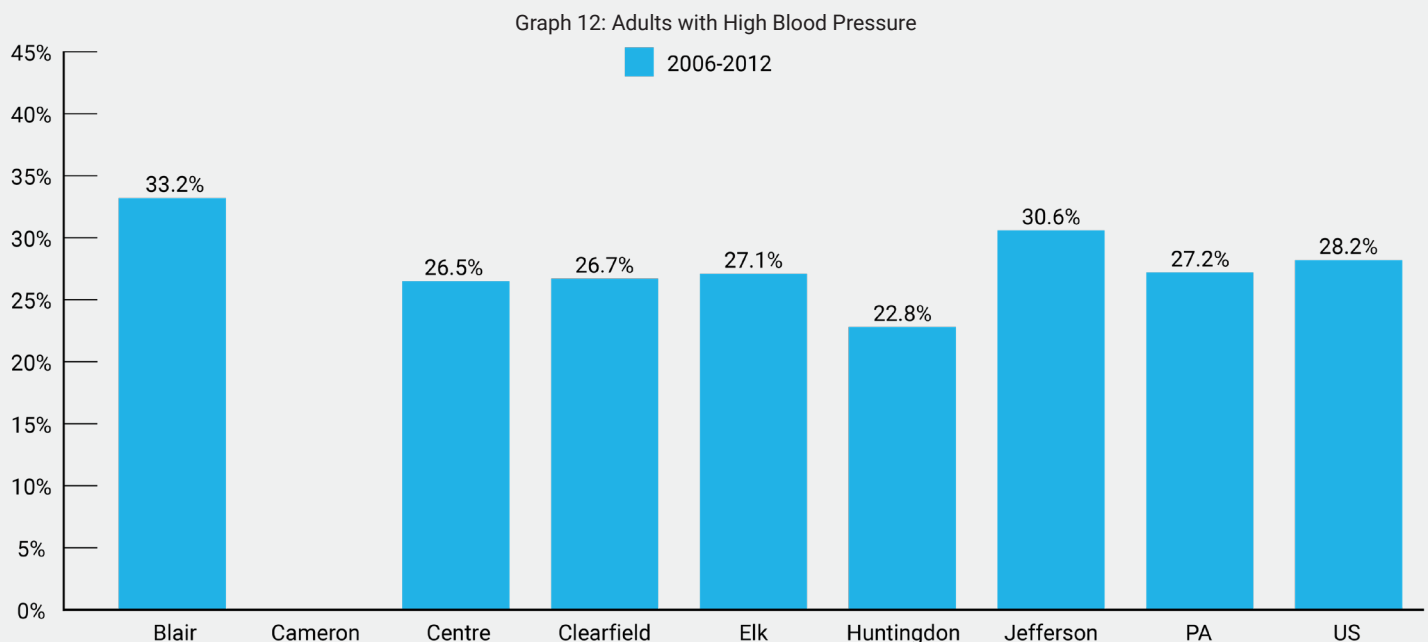
High Blood Pressure

High blood pressure (HBP) is a common condition affecting millions of Americans. High blood pressure increases the risk for heart disease and stroke, two leading causes of death for Americans.³⁸ Tens of millions of adults in the United States have high blood pressure and many do not have it under control. Residents may have high blood pressure without any symptoms as uncontrolled HBP raises one's risk of serious health problems. With medical intervention, high blood pressure can be controlled once detected. Many risk factors are associated with HBP, including age, race, family history, being overweight or obese, sedentary lifestyle, tobacco use, sodium intake, lack of potassium, alcohol abuse, stress, and certain chronic conditions.³⁹ In 2018, nearly a half-million deaths in the United States included hypertension as a primary or contributing cause.⁴⁰

It is known that certain groups of people are more likely to have HBP when compared to other groups of people. They include:⁴¹

- A greater percentage of men (47%) have HBP than women (43%).
- HBP is more common in non-Hispanic black adults (54%) than in non-Hispanic white adults (46%), non-Hispanic Asian adults (39%), or Hispanic adults (36%).
- Among those recommended to take blood pressure medication, blood pressure control is higher among non-Hispanic white adults (32%) than in non-Hispanic Black adults (25%), non-Hispanic Asian adults (19%), or Hispanic adults (25%).

Data shows in years 2006-2012 that close to one-third of residents 18 and older in Blair County (33.2%) were been told by a doctor that they had high blood pressure or hypertension. This rate is higher than the remaining study area counties, the state (27.2%) and the nation (28.2%). Residents in Huntingdon County reported the lowest percentages of adults who have high blood pressure (22.8%). Data for Cameron County was not available. (See Graph 12)

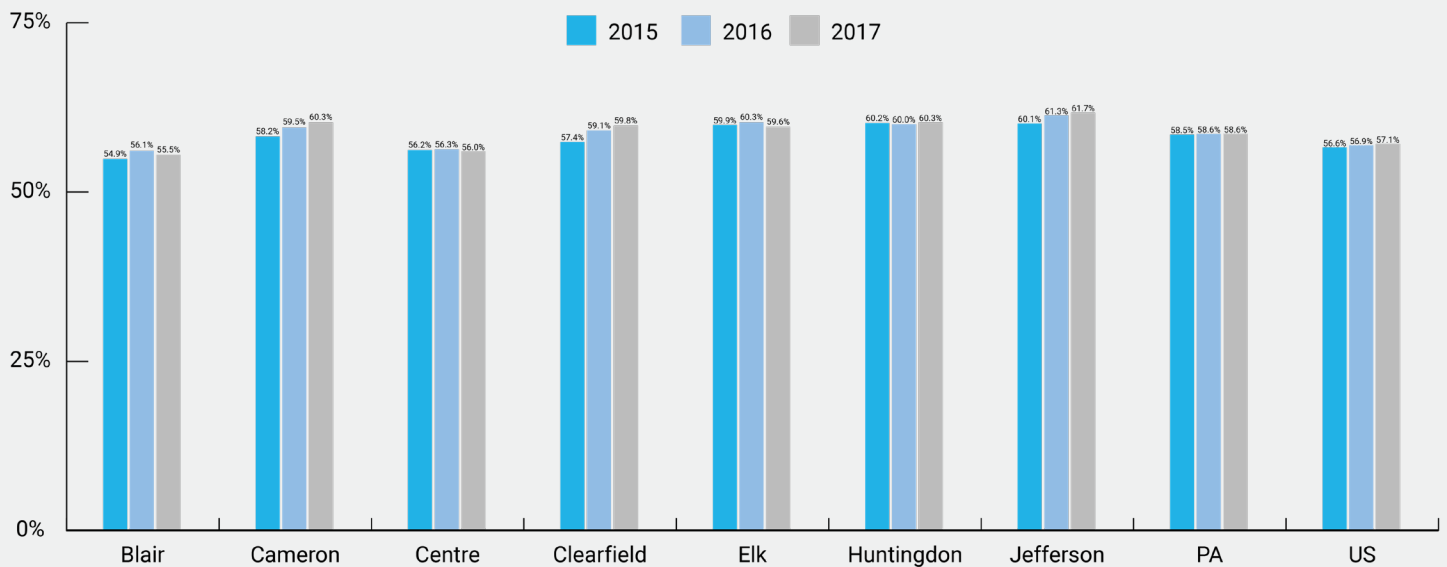


Source: Centers for Disease Control, Behavioral Risk Factor Surveillance System

Secondary data shown on graph 13 shows that similar percentages of Medicare beneficiaries with high blood pressure are reported across the study area, the state, and the nation. Blair County reports the lowest percentage of Medicare beneficiaries with high blood pressure at 55.5%, while 61.7% of Jefferson County Medicare beneficiaries, the highest percentage for the study area in 2017, have high blood pressure. Cameron, Clearfield, and Jefferson counties had incremental increases for adults with HBP in the Medicare population over the years.

This data is vital as community organizations and health care institutions must identify why rates in the specific counties have increased within the study years.

Graph 13: Adults with High Blood Pressure (Medicare Population)



Source: Centers for Medicare and Medicaid Service

The American Heart Association recommends the adoption of a heart-healthy lifestyle to reduce high blood pressure by reducing the sodium intake in one’s diet, limiting alcohol, engaging in regular physical activity, managing stress, maintaining a healthy weight, quitting smoking, and taking medications properly. Educational information and proper steps taken can reduce and assist those who seek to maintain one’s blood pressure. Preventing high blood pressure starts with intervention and is completed by making healthy choices and managing health conditions.

Chronic Obstructive Pulmonary Disease (COPD)

Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production, and wheezing. It is typically caused by long-term exposure to irritating gases or particulate matter, most often from cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer, and a variety of other conditions.⁴²

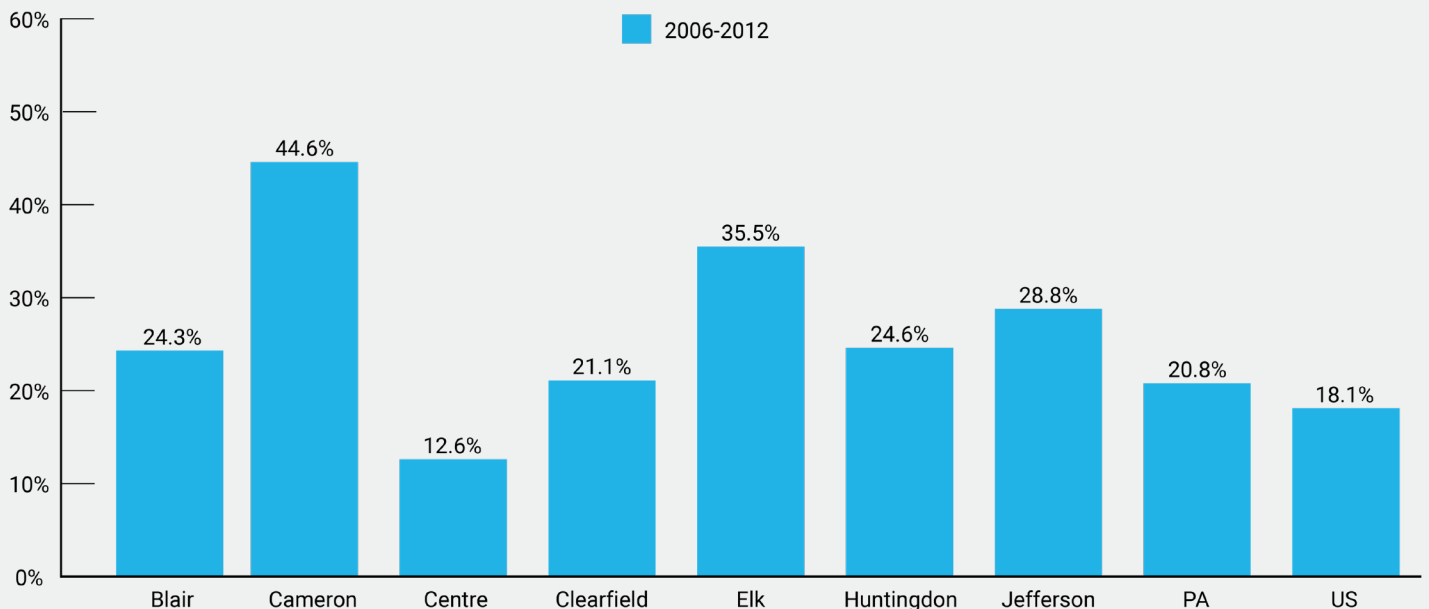
While COPD is a progressive disease that gets worse over time, COPD is treatable. With proper management, most people with COPD can achieve good symptom control and quality of life, as well as reduced risk of other associated conditions.

The 2021 CHNA assessment has highlighted the issue of COPD within the region and the need for health care institutions, health care entities, and community-based organizations to confront the disease. People with cases of COPD have lung damage that leads to COPD, which is caused by long-term cigarette smoking. Additional irritants that can cause COPD include cigar smoke; secondhand smoke; pipe smoke; air pollution; and workplace exposure to dust, smoke, or fumes.⁴³

Graph 14 showed that in 2006-12 more than four in 10 of Cameron County residents 18 years and older (44.6%) were smokers, followed by Elk (35.5%) and Jefferson County residents (28.8%); this is higher than the state (20.8%) and national rate (18.1%). Residents in Centre County have the lowest percentage of smokers 18 and older (12.6%). Overall, all of the counties in the study area with the exception of Centre County have a higher percentage of adults 18 and older who are smokers when compared to the nation (18.1%).

This indicator is relevant because tobacco use is linked to leading causes of death such as cancer and cardiovascular disease.

Graph 14: Tobacco Use (Adults 18 and Older who are Current Smokers)



Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

Secondary data from SAMHSA from its 2018 survey reported an estimated 47.0 million people aged 12 or older were past-month cigarette smokers, including 27.3 million people who were daily cigarette smokers and 10.8 million who smoked a pack or more of cigarettes per day. Fewer than 1 in 6 people aged 12 or older in 2018 were past-month cigarette smokers. Cigarette use generally declined from 2002 to 2018 across all age groups. Some of this decline may reflect the use of electronic vaporizing devices (“vaping”), such as e-cigarettes, as a substitute for delivering nicotine. NSDUH does not currently ask separate questions about the vaping of nicotine.⁴⁴

Data from the provider survey cited that tobacco abuse (20.5%) was a top health problem in the community, while community stakeholders voiced their concern related to an uptick in vaping use among the younger populations. While information and data are still being collected on the long-term and the secondhand effects of vaping, experts in time will have a better understanding of how vaping damages the lungs and other internal organs.

Strategies, programs, and offerings for prevention and management of chronic diseases must play a large role to stem and manage the disease on a personal and community level. Negative health behaviors can significantly impact an individual’s overall health status, shortening their lifespan by creating diseases and illnesses that will make daily life difficult for an individual. Health care institutions, health providers, and community-based organizations must be able to provide tools, services, and evidence-based measures and programs to address the growing issue in the region in order to halt and stem the illness.

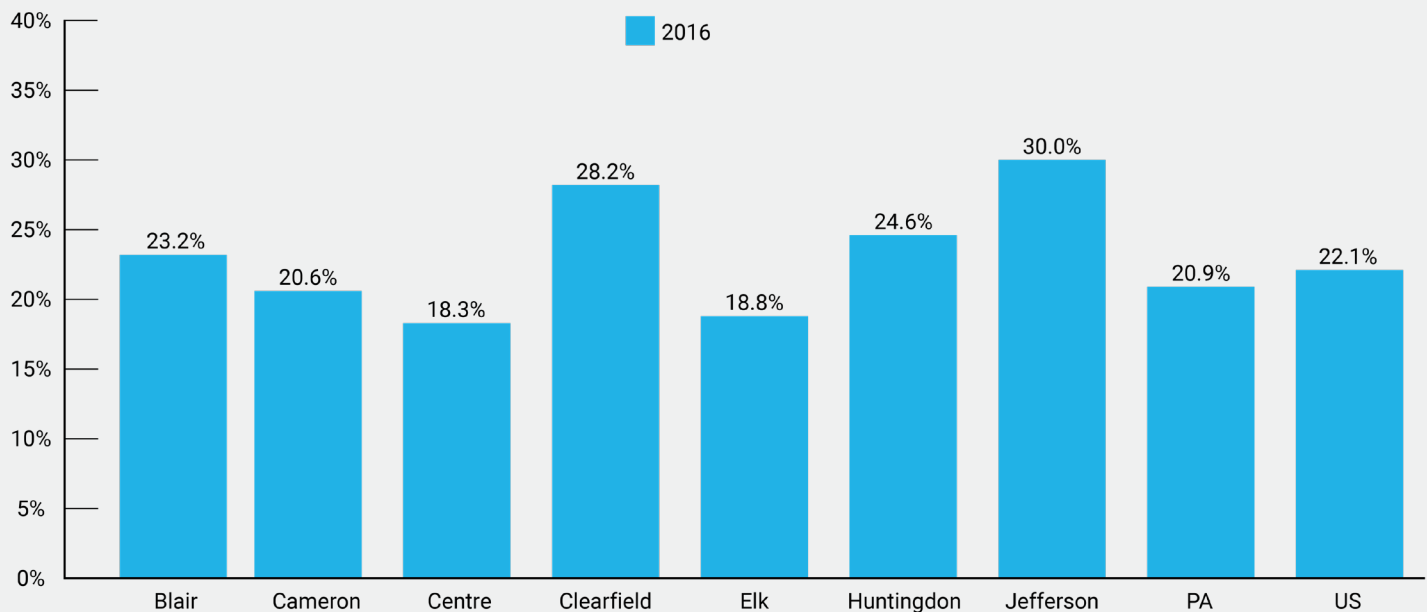
Health Behaviors

Health behaviors are actions in which individuals engage that affect their health. They include positive and negative behaviors that can impact the long-term physical health effects, such as eating well and being physically active, and actions that increase one’s risk of disease, such as smoking, excessive alcohol intake, and risky sexual behavior. Health behaviors shape the well-being of residents.

Examining data related to exercise, adult residents ages 20 and over in Jefferson (30.0%) and Clearfield (28.2%) reported no leisure time or physical activity based on the question: “During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?” Centre County reported the lowest percentage of adults with no leisure time for physical activity at 18.3%; this is lower than state (20.9%) and nation (22.1%). This is a positive sign that residents are becoming more proactive toward their physical fitness regimen. (See Graph 15).

It is important to understand that this health indicator is relevant as current behaviors are determinants of future health and may illustrate a cause of significant health issues, such as obesity and poor cardiovascular health. Physical activity is important to prevent heart disease and stroke, two of the leading causes of death in United States. To improve overall cardiovascular health, the American Heart Association suggests at least 150 minutes per week of moderate exercise or 75 minutes per week of vigorous exercise.

Graph 15: Physical Inactivity (Adults 20 and Older with No Leisure Time Physical Activity)



Source: Centers for Disease Control and Prevention

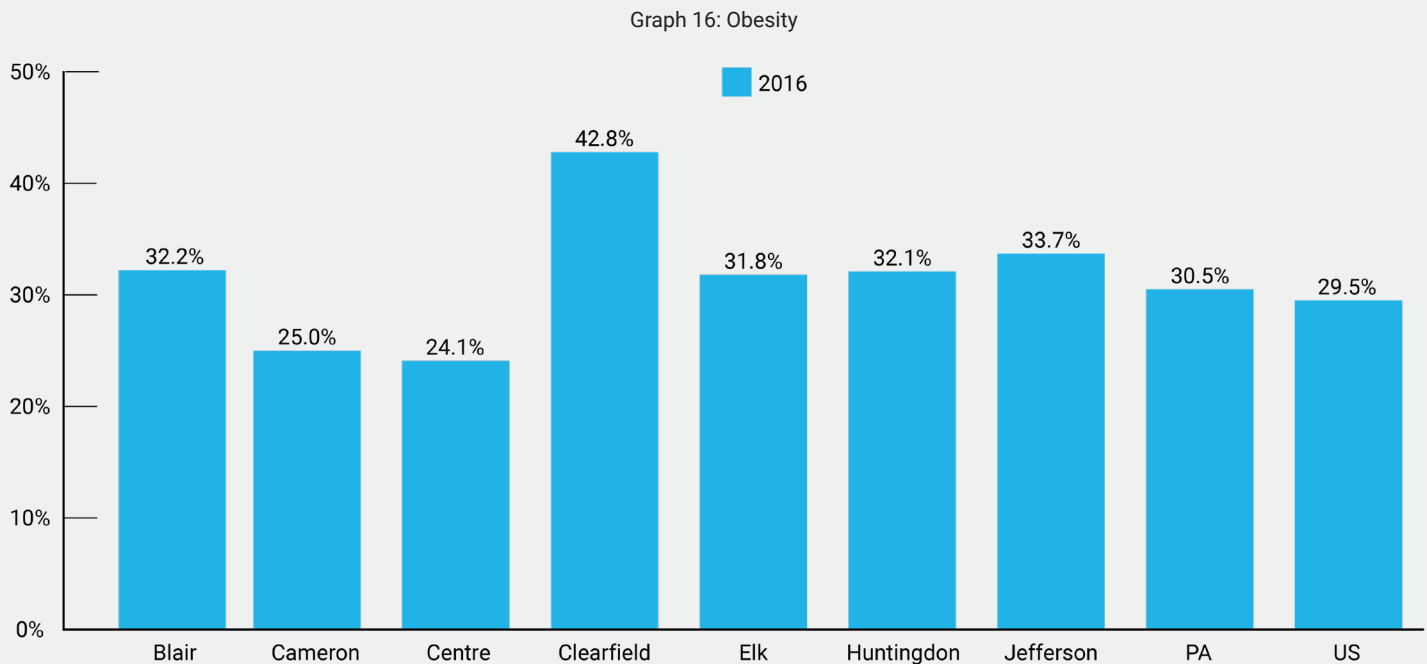
Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A body mass index (BMI) over 25 is considered overweight, and over 30 is obese. The issue has grown to epidemic proportions, with more than 4 million people dying each year as a result of being overweight or obese in 2017.⁴⁵

Obesity is a disease and is not just a cosmetic concern. The disease increases one's risk of other diseases and health problems. Obesity can be hereditary but can also be in combination with the environment, personal diet, and exercise choices. Modifying and making dietary changes with physical activity and personal behavior changes can help with weight loss.

In 2016, Blair (32.2%), Clearfield (42.8%), Elk (31.8%), Huntingdon (32.1%), and Jefferson (33.7%) counties all reported a greater percentage of obese residents than both the state (30.5%) and the nation (29.5%). Centre County (24.1%) reported the lowest percentage of obese residents. (See Graph 16).

Data from 2020 showed that residents in Elk (41.0%) and Clearfield (37.2%) are overweight. These percentages are higher than the state (35.9%) and the nation (35.8%). Blair County (29.0%) reported the lowest rate of overweight residents across the study area. (Chart not shown).

Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. A BMI below 18.5 is underweight; 18.5-24.9 is normal or healthy weight; 25.0-29.9 is overweight; 30.0 and above is obese.

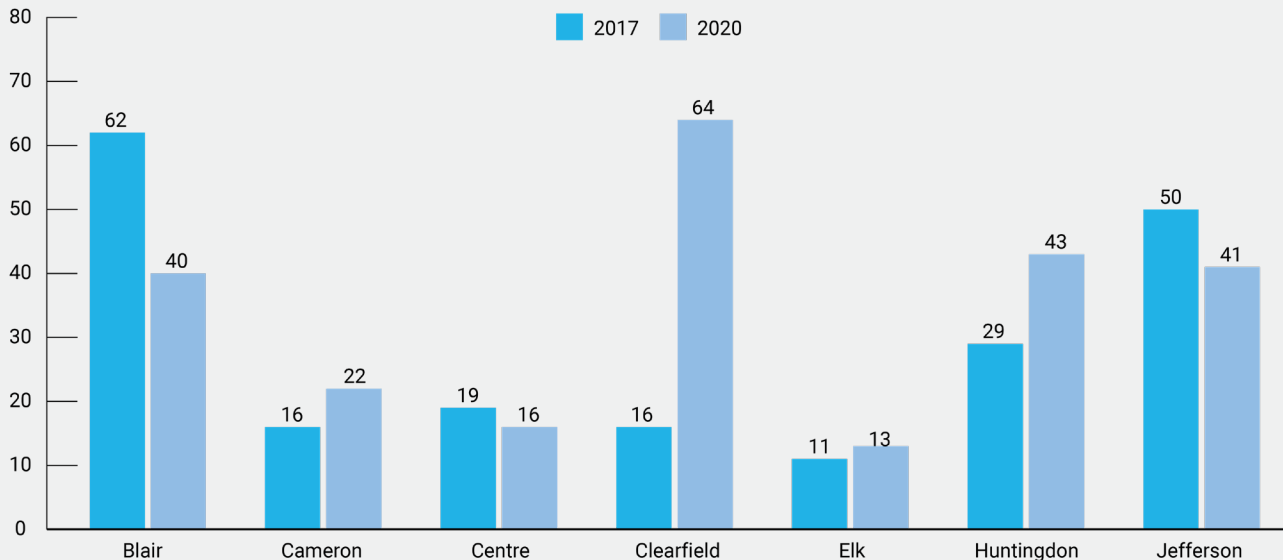


Source: Centers for Disease Control and Prevention

Graph 17 shows a dramatic shift in ranking in PHH’s study area, in particular, Clearfield County, which showed a dramatic shift from a ranking of 16 in 2017 to a ranking of 64 in 2020 for health behaviors. It may be beneficial to further examine why the ranking scores in Clearfield County were intense.

Blair, Centre, and Jefferson counties improved their ranking scores from 2017 to 2020. Cameron, Clearfield, Elk, and Huntingdon counties increased their ranking score. Overall, Elk County ranks exceptionally well in Health Behaviors. County Health Rankings examine tobacco use, diet and exercise, alcohol and drug use, and sexual activity to formulate their health behaviors ranking grade.

Graph 17: Health Behaviors



Source: County Health Rankings & Roadmaps

While chronic disease is a leading cause of death in Pennsylvania, data collected from the Behavioral Risk Factor Surveillance System survey has produced projects based on the outcomes measures. The ongoing projects include:⁴⁶

- Formulate annual cardiovascular risk reduction program plans and assess behavior changes over time.
- Monitor diabetes trends over time and develop program interventions.
- Monitor cancer trends over time, develop program interventions, and produce media campaigns.
- Develop annual program plans and identify emerging issues in injury prevention.
- Support findings from a statewide oral health needs assessment indicating that low income and educational status is linked to increased oral disease.
- Evaluate adult educational programs designed to address oral health issues.
- Assess progress toward Healthy People 2010 objectives for osteoporosis, arthritis, and asthma.
- Adjust arthritis and asthma intervention programs on a regional or population basis.
- Adjust asthma and arthritis program planning and priorities.
- Compare Pennsylvania with other states on progress toward Healthy People 2010 objectives.
- Develop annual osteoporosis program plans, refine public health education and promotion programs, and measure behavioral changes over time.

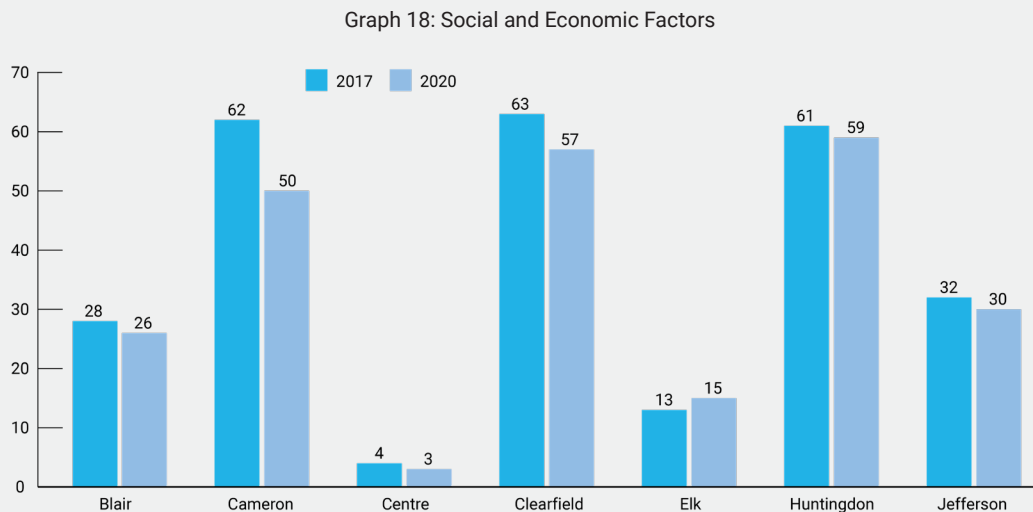
The projects generate significant impact to chronic diseases based on outcome measures. The projects can define early success, are measured, and can demonstrate positive or negative results.

Social Determinants of Health (SDOH)

Socioeconomic factors are key drivers of the settings in which people live, learn, work, and play. Employment, safety, income, housing, transportation, educational attainment, and social support are influential to the overall health of an individual. Socioeconomic factors play into how we live and how long we live; they also affect our ability to make healthy choices, afford health care services, and choose a place to live.

The social and economic opportunities, such as good schools, employment, and strong social networks, are foundational to achieving long and healthy lives. For example, employment provides income that shapes choices about housing, education, childcare, food, medical care, and more. In contrast, unemployment limits these choices and the ability to accumulate savings and assets that can help cushion in times of economic distress. Socioeconomic factors disproportionately affect people of color – especially children and youth.⁴⁷

County Health Rankings for years 2017 and 2020 reveal improved rankings in Blair, Cameron, Centre, Clearfield, Huntingdon, and Jefferson counties. Improved ranking scores indicated an improvement in health equalities and reducing inequalities in specific areas of concerns within the subsequent years. (See Graph 18).



Source: County Health Rankings & Roadmaps

The Penn Highlands Healthcare study area has stated its community concerns related to chronic diseases. According to the survey, the top health problems in the community, according to providers, were: obesity (56.8%), diabetes (53.8%), heart disease (33.9%), and poor diet (24.3). It was reiterated in the survey with 39.1% of providers reporting lack of exercise/inadequate physical activity; other risky behaviors or outcomes included poor eating habits (29.5%), unhealthy dietary habits (25.0), and lack of education (25.0%). High rates of chronic diseases among residents can be tied to socioeconomic factors. Social and economic factors shape our choices and having a positive setting can bring about good lifestyles choices and outcomes.

Strategies, programs, and offerings for prevention and management of chronic diseases must play a large role to stem and manage the disease on a personal and community level. Negative health behaviors can significantly impact an individual's overall health status, shortening their lifespan by creating diseases and illnesses that will make daily life difficult for an individual. Health care institutions, health providers, and community-based organizations must be able to provide tools, services, and evidence-based measures and programs to address the growing issue in the region in order to halt and stem the illness.

COMMUNITY HEALTH NEEDS ASSESSMENT PRIORITIZATION PROCESS

Penn Highlands Healthcare System Forum

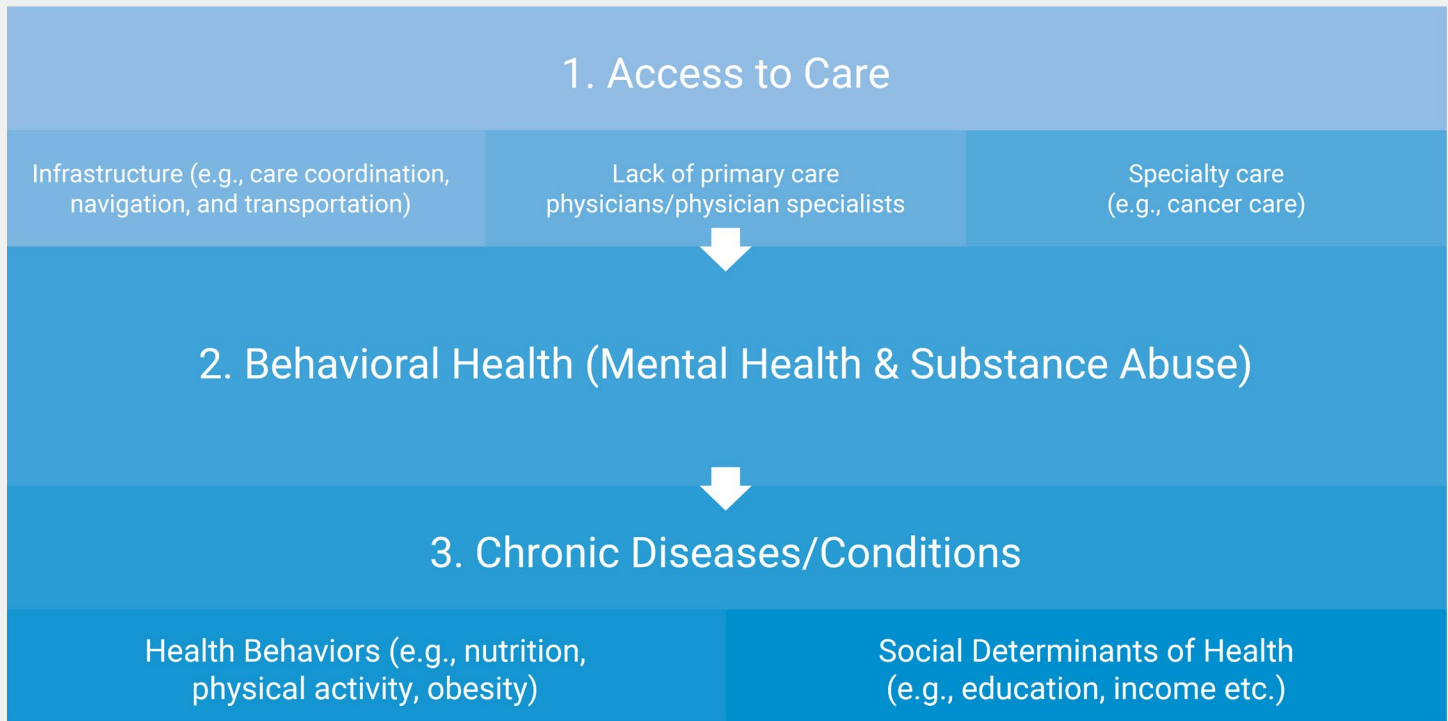
On March 29, 2021, Tripp Umbach facilitated a virtual health system forum with 22 attendees who included hospital representatives, community leaders, and key informants. The participants consisted of internal administrative staff and team players who played an instrumental role leading up to the forum. The purpose of the forum was to present the CHNA findings, which included existing data, in-depth community stakeholder interview results and provider survey findings, and input regarding the needs and concerns of the community overall.

Hospital attendees prioritized top community concerns/issues, stated the rationale why the community concern/issue was a problem, and identified proposed solutions and evidence-based strategies to the identified needs. Hospital attendees were also prompted to consider existing partnerships and collaborations to addressing the needs of the region. These components and factors were used to identify priority areas. In small breakout groups, the attendees discussed the data, shared their visions and plans for community health improvement for each hospital within Penn Highlands, identified specific hospital needs, and prioritized the top community health concerns/needs for their hospital region. Collectively, the needs were streamlined and prioritized.

The prioritization exercise had attendees keep in mind the considerations below.

1. Generate a list of needs/concerns surrounding your region's community needs. This list becomes the decision-making criteria, and the prioritization is the ultimate result of consensus and a vote to order the criteria.
2. When thinking about and identifying your region's community needs, please consider the below criteria for prioritization:
 - Consider the CHNA needs from the previous assessment. Were those needs addressed? Or are they still being addressed?
 - What were the top needs/issues from the community stakeholders data?
 - What were the top needs/issues from the provider survey?
 - What were the top needs/issues from the secondary data?
 - What is the magnitude/severity of the problem?
 - What are the needs among vulnerable populations?
 - What is the community's capacity and willingness to act on the issue?
 - What is the hospital's ability to have a measurable impact on the issue?
 - What hospital and community resources are available?
3. Generate a list of ideas or concerns surrounding your region's community needs. This list becomes the decision-making criteria, and the prioritization is the result of consensus among the group.

The prioritization process helped determine how to support the highest prioritized needs, while utilizing and more importantly capitalizing on available community assets and resources. With input received from forum participants, Penn Highlands Tyrone prioritized and identified top priority areas. They included (in order): access to care, behavioral health, and chronic diseases/conditions. Each of the prioritized areas had subcategories, which further illustrate the identified need.



High cost of health care and poverty were both discussed as a community need at the hospital forum. Penn Highlands Healthcare will not be addressing high cost of health care and poverty directly. Providing and improving the income gap locally and regionally would enable residents to afford health care services and improve household income, thus reducing levels of poverty. Both of these community needs were placed under SDOH. The issues surrounding high health care cost and poverty cannot be addressed by one organization alone. Rather, improved coordination among employers, labor, and educators can ensure job seekers are prepared, connecting residents to employment opportunities and providing training when and where needed to improve income/economic status. While Penn Highlands Healthcare employs thousands of employees and has vast partnerships with regional businesses, the issues surrounding poverty and high health care cost must include local, state, and federal government bodies, small and large businesses, educational institutions, philanthropic groups, and public and private sectors pooling resources together to collectively address the problem.

The topic of telecommunications was a subject of discussion at the hospital forum. While data was not supplied from Tripp Umbach related to the issue (i.e., neither primary or secondary data), the development and overall need for an improved telecommunication infrastructure in the region was highlighted due to the impact of COVID-19 on telemedicine. PHH wants to explore the development of building a better/stronger framework for telecommunications with communication partners in the region such as Comcast, Verizon, and other broadband companies. The community concern of poor telecommunications is of interest to PHH as the health system understands the significance of having a strong communications network in the region to support telehealth/telemedical services. While the overall issue is of interest, this community need was not identified collectively from the group nor prioritized as part of the event. PPH has a long-range goal of working toward building a strong telecommunications infrastructure as a separate interest and not as an identified 2021 community need.

In the 2021 assessment Penn Highlands Huntington reported dental health as a CHNA need. Penn Highlands Healthcare will not address this specific CHNA need; rather, Penn Highlands Huntington will work with local community organizations to address this need at the hospital level.

It is important to note that PH Huntington (acquired in June 2019) and PH Tyrone (acquired November 2020) were recently obtained by Penn Highlands Healthcare. As the CHNA process was initiated in 2020, it was important to consider the identified needs from both hospital facilities going into the 2021 assessment year. One community need PH Huntington addressed in its previous assessment was Lyme Disease. In this year's assessment, PH Huntington will no longer address this need as financial resources are limited and the hospital will refocus to streamline and align the hospital's needs with that of the health system.

Tyrone Hospital completed its 2019-2020 CHNA in partnership with The Healthy Blair County Coalition.⁴⁸ The focus for Tyrone Hospital was on obesity and diabetes as a result of their most recent assessment. The Blair County Coalition had multiple areas of focus with multiple workgroups to address areas of need; however, Tyrone Hospital, due to limited resources, selected obesity and diabetes as its facility focus. The multiple workgroups have participants from all three county hospitals and various health care providers/businesses.

Tyrone Hospital worked in collaboration with these workgroups, but the specific focus included reduced rates for all Blair County residents at the hospital's Fitness & Wellness Center/Facility. Pre-diabetes and obesity classes are offered, presented by a hospital's diabetic educator and dietician. Participation was included to the Healthy Blair County Optimal Health Challenge offering lipid testing before and after the challenge, along with information on nutrition and exercise, both written and in person. These initiatives were part of Tyrone Hospital implementation strategies.

2021 Implementation Strategy and Planning

With the completion of the community health needs assessment, an implementation phase will begin with the onset of work sessions facilitated by Tripp Umbach. Penn Highlands Tyrone over the next few months will develop an implementation strategy plan based on its 2021 CHNA. The process will include Working Group members consisting of clinical and administrative hospital staff to provide strategies and planning efforts to address the CHNA needs. The plan will consider causes of issues, available internal resources, and community-based organizations and regional resources to respond to the issues. Work sessions will be utilized to bridge system cohesion and synergies, during which leaders from Penn Highlands Tyrone will be guided through a series of identified processes. The strategy planning process will ultimately result in the development of an implementation plan that will meet hospital, health system, and IRS standards.



APPENDIX

A. Secondary Data

Secondary Data Profile

Tripp Umbach completed a comprehensive analysis of health status and socioeconomic environmental factors related to the health and well-being of residents in the community from existing data sources, such as state and county public health agencies, The Centers for Disease Control and Prevention (CDC), County Health Rankings, Community Commons, The Substance Abuse and Mental Health Services Administration (SAMHSA), America's Health Rankings, and additional data sources. Tripp Umbach benchmarked data against state and national trends where applicable.

The secondary data profile includes information from multiple health, social, and demographic resources. Tripp Umbach used secondary data sources to compile information related to disease prevalence, socioeconomic factors, and behavioral habits. The information supplied is an overview of the secondary figures collected as part of the CHNA. A robust secondary data report was provided to the Working Group of Penn Highlands Healthcare to review and evaluate the region's needs.

The data provided does not replace existing local, regional, and national sites but rather provides a thorough though not all-inclusive overview that complements and highlights existing and changing health and social behaviors of community residents for the health system and social and community health organizations involved in the community health needs assessment. Specific data measures included in the secondary compilation are listed below. The full secondary data report is available from the Penn Highlands Healthcare administration.

- Demographic Trends
- Socioeconomic Factors
- Food Access
- Housing
- Obesity
- Physician Activity and Nutrition
- Clinical Care
- Health Outcomes
- Sexually Transmitted Diseases/Infections
- Behavioral Health (Mental Health and Substance Abuse)
- Children's Health

Community Need Index

Tripp Umbach obtained data from Dignity Health and Truven Health Analytics to quantify the severity of health disparities. Truven Health Analytics provides data and analytics to hospitals, health systems, and health-supported agencies.

The Community Need Index (CNI) data source was used in the health assessment. CNI considers multiple factors that are known to limit health care access; the tool is useful in identifying and addressing the disproportionate and unmet health-related needs of neighborhoods. The five prominent socioeconomic barriers to community health quantified in the CNI are income, cultural/language, educational, insurance, and housing.

A score of 5.0 represents a ZIP code area with the most socioeconomic barriers (high need), while a score of 1.0 indicates a ZIP code area with the lowest socioeconomic barriers (low need). A low score is the ultimate goal; however, ZIP codes with a low score should not be overlooked. Rather, communities should identify what specific entities are succeeding, which ensures a low score.

The ZIP codes reflected in the maps below reflect the primary service area of Penn Highlands Healthcare. CNI scores within each of the ZIP codes will assist PHH as the implementation planning strategies will require efforts in specific geographic locations.



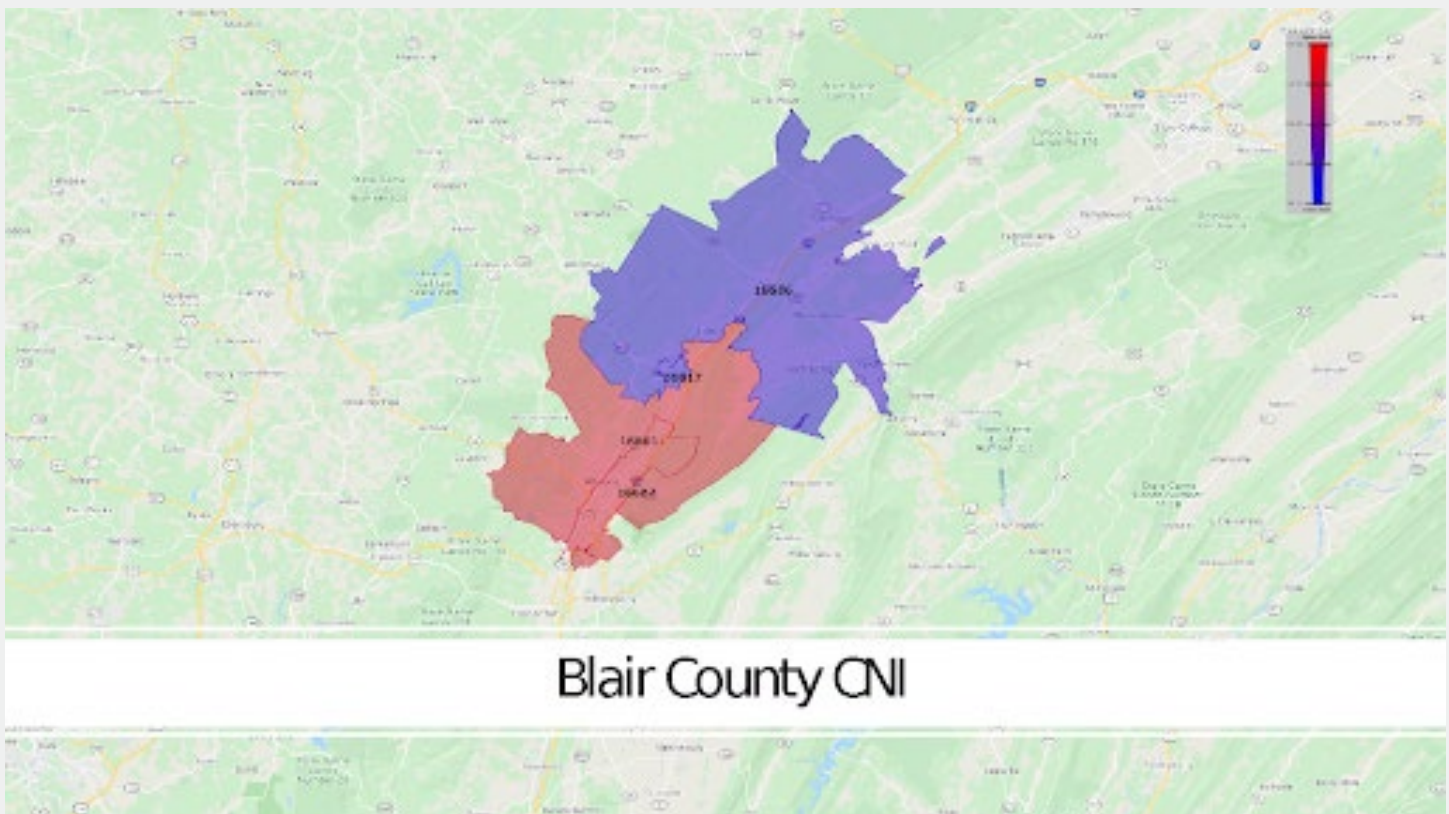
Blair County

- PHH communities located in Blair County include four ZIP codes.
- Within Blair County, ZIP codes 16601 and 16602 (Altoona) have the highest CNI scores (3.4), which indicates that residents in this ZIP code face higher socioeconomic barriers to care.

Table 7: Blair County ZIP Codes

ZIP code	City	CNI
16686	Tyrone	2.4
16601	Altoona	3.4
16602	Altoona	3.4
16617	Belwood	2.4

Map 2: Blair County PSA CNI Scores



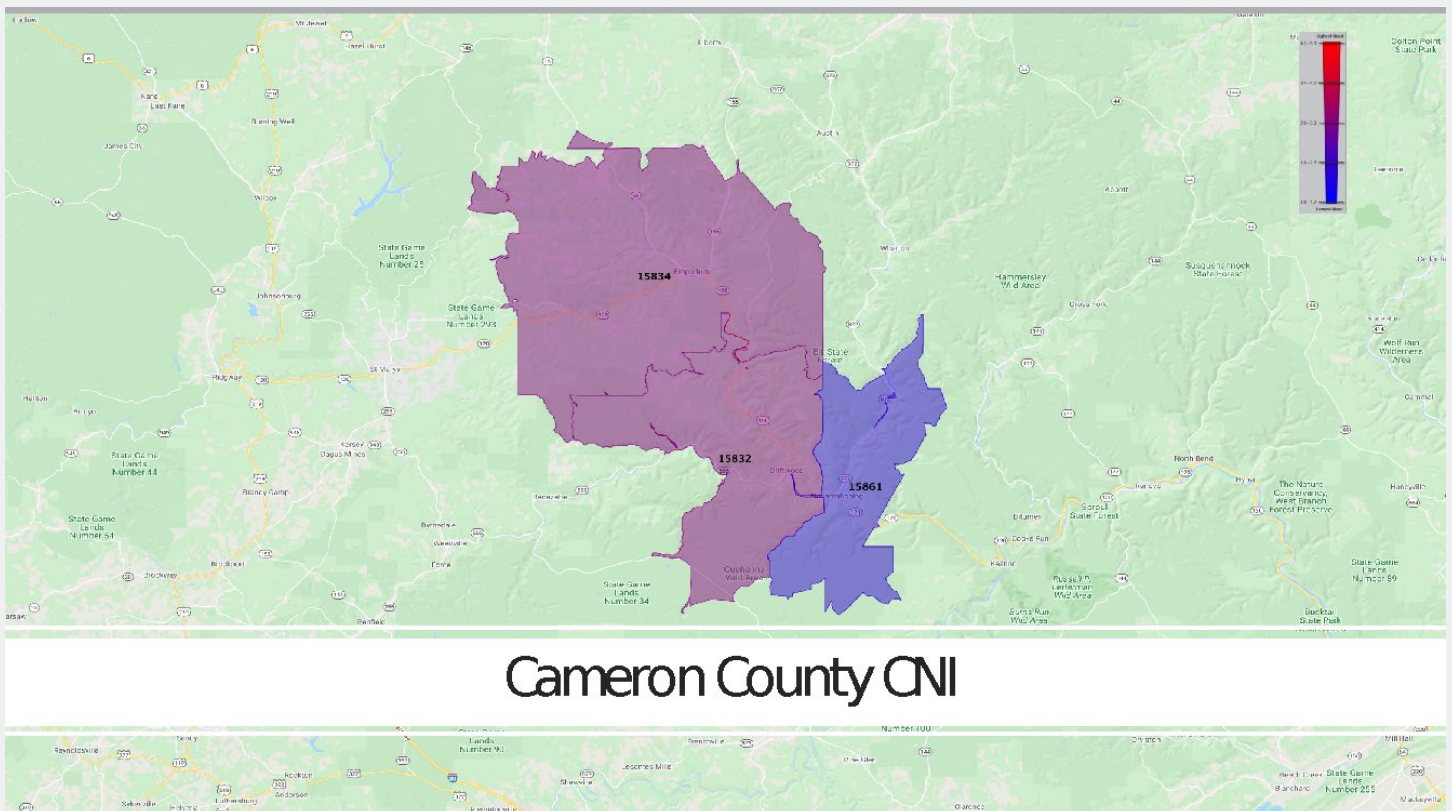
Cameron County

- The PHH communities located in Cameron County include three ZIP codes.
- Within Cameron County, Emporium (15834) has the highest CNI score (2.8), which indicates residents that in this ZIP code face higher socioeconomic barriers to care.

Table 8: Cameron County ZIP Codes

ZIP code	City	CNI
15832	Driftwood	2.6
15834	Emporium	2.8
15861	Sinnamahoning	2.4

Map 3: Cameron County Primary Service Area (PSA) CNI Scores



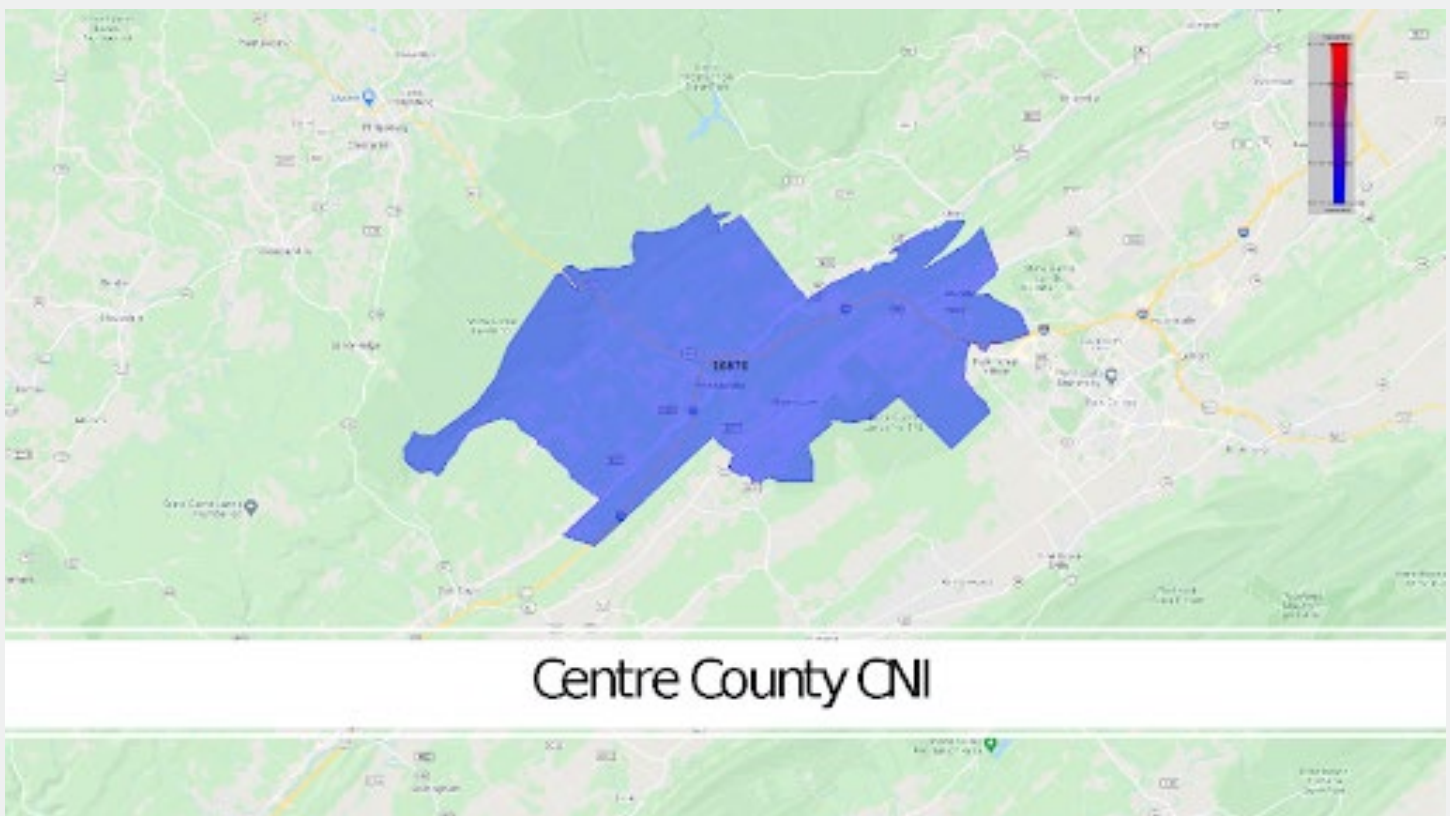
Centre County

- The PHH community located in Centre County includes one ZIP code.

Table 9: Centre County ZIP Codes

ZIP code	City	CNI
16870	Port Matilda	1.2

Map 4: Centre County PSA CNI Scores



Clearfield County

- PHH communities located in Clearfield County include 37 ZIP codes.
- Within Clearfield County, ZIP code 16651 (Houtzdale) has the highest CNI score (3.8), which indicates that residents in this ZIP code face higher socioeconomic barriers to care.

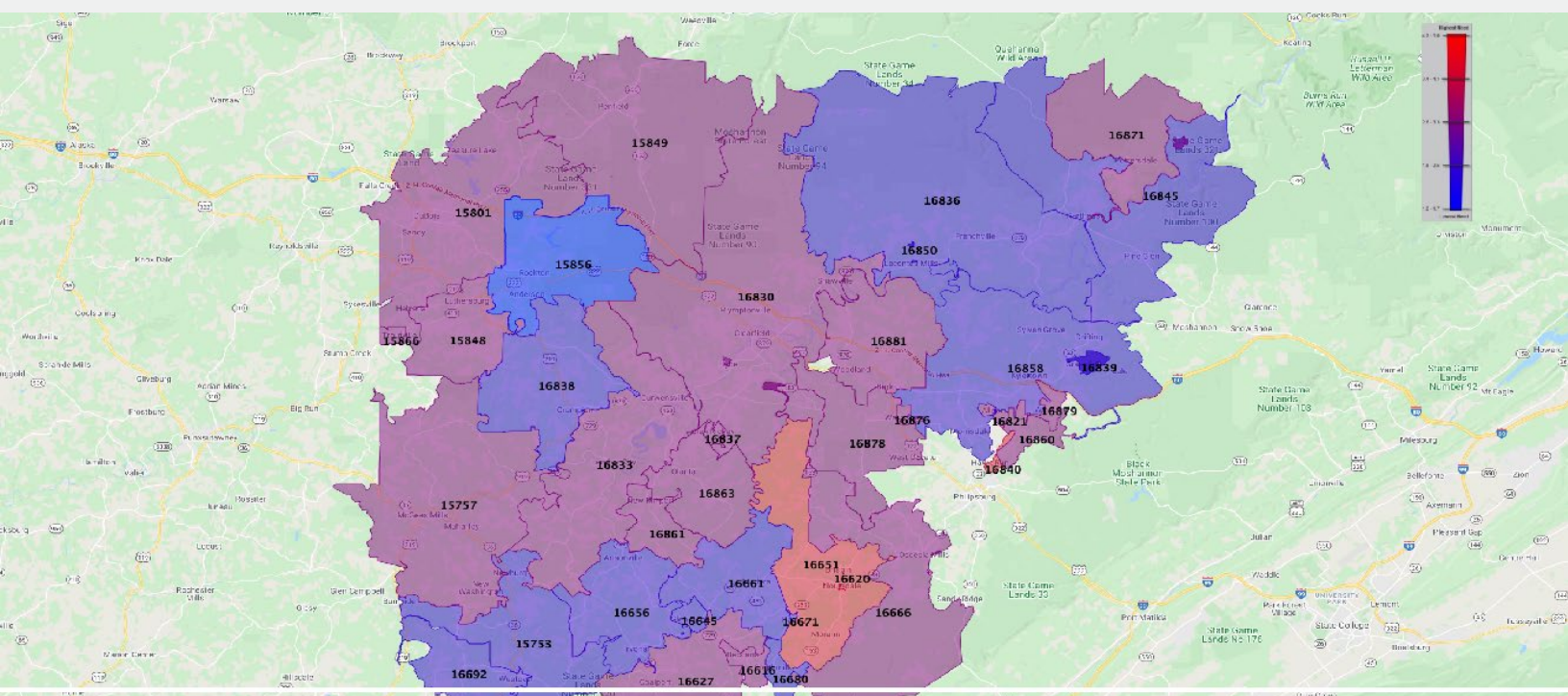
Table 10: Clearfield County ZIP Codes

ZIP code	City	CNI
15753	La Jose	2.0
15757	Mahaffey	2.6
15801	DuBois	2.8
15848	Luthersburg	2.6
15849	Penfield	2.6
15856	Rockton	1.2
15866	Troutville	3.0
16616	Beccaria	2.6
16620	Brisbin	2.8
16627	Coalport	2.8
16645	Glen Hope	2.2
16651	Houtzdale	3.8
16656	Irvona	2.4

ZIP code	City	CNI
16661	Madera	2.2
16666	Osceola Mills	3.2
16671	Ramey	2.4
16680	Smithmill	2.4
16692	Westover	1.8
16821	Allport	3.0
16830	Clearfield	2.8
16833	Curwensville	3.0
16836	Frenchville	2.4
16837	Glen Richey	2.6
16838	Grampian	2.4
16839	Grassflat	2.4
16840	Hawk Run	3.4

ZIP code	City	CNI
16845	Karthus	2.4
16850	Lecontes Mills	2.0
16858	Morrisdale	2.4
16860	Munson	3.0
16861	New Millport	2.8
16863	Olanta	3.0
16871	Pottersdale	2.6
16876	Wallaceton	3.0
16878	West Decatur	3.6
16879	Winburne	2.6
16881	Woodland	2.8

Map 5: Clearfield County PSA CNI Scores



Clearfield County CNI

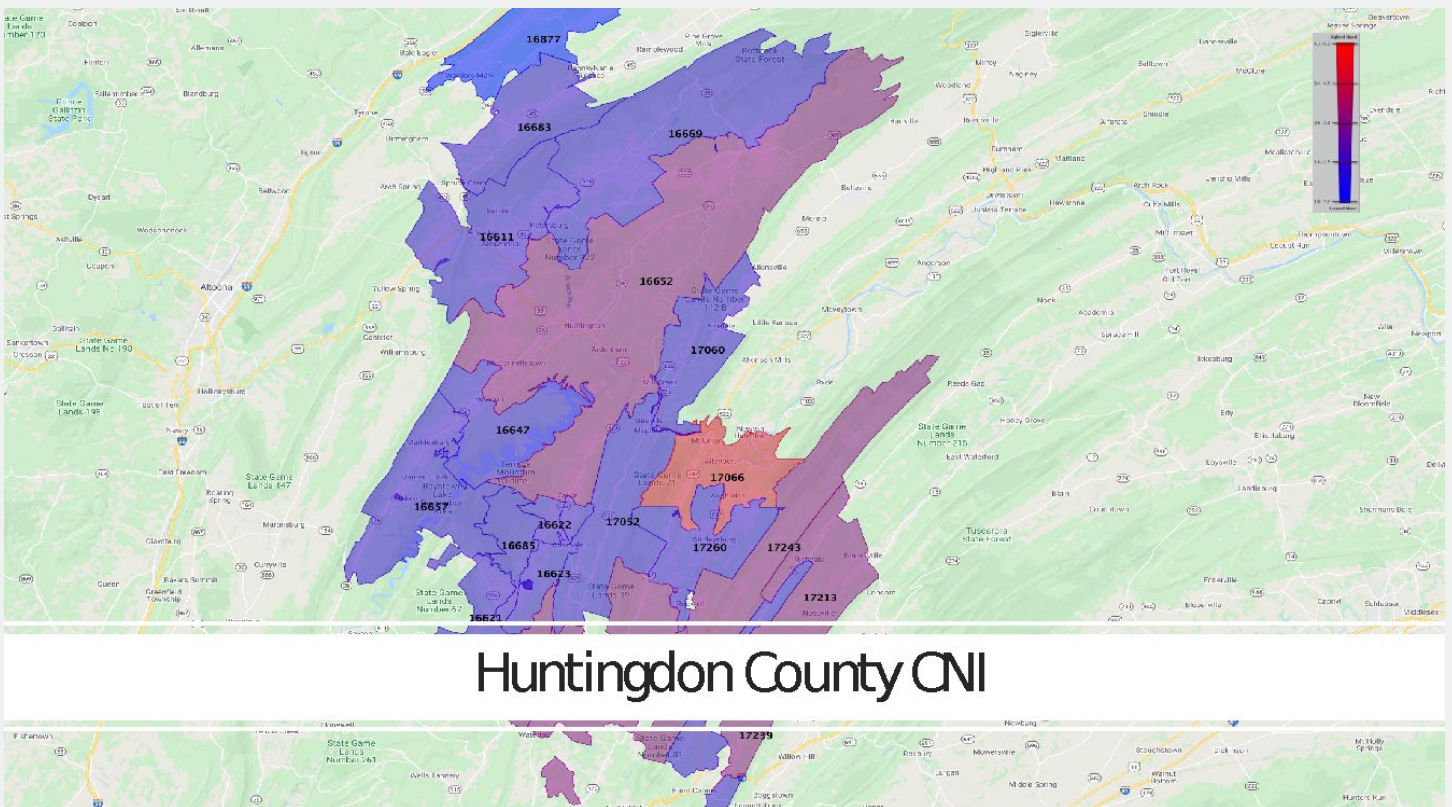
Elk County

- PHH communities located in Elk County include 10 ZIP codes.
- Within Elk County, ZIP code 15845 (Johnsonburg) has the highest CNI score (2.8), which indicates that residents in this ZIP code face higher socioeconomic barriers to care.

Table 11: Elk County ZIP Code

ZIP code	City	CNI
15821	Benezett	2.4
15823	Brockport	2.0
15827	Byrnedale	2.2
15845	Johnsonburg	2.8
15846	Kersey	1.6
15853	Ridgway	2.6
15857	St. Marys	1.8
15868	Weedville	2.4
15870	Wilcox	1.8
16734	James City	1.8

Map 6: Elk County PSA CNI Scores



Jefferson County

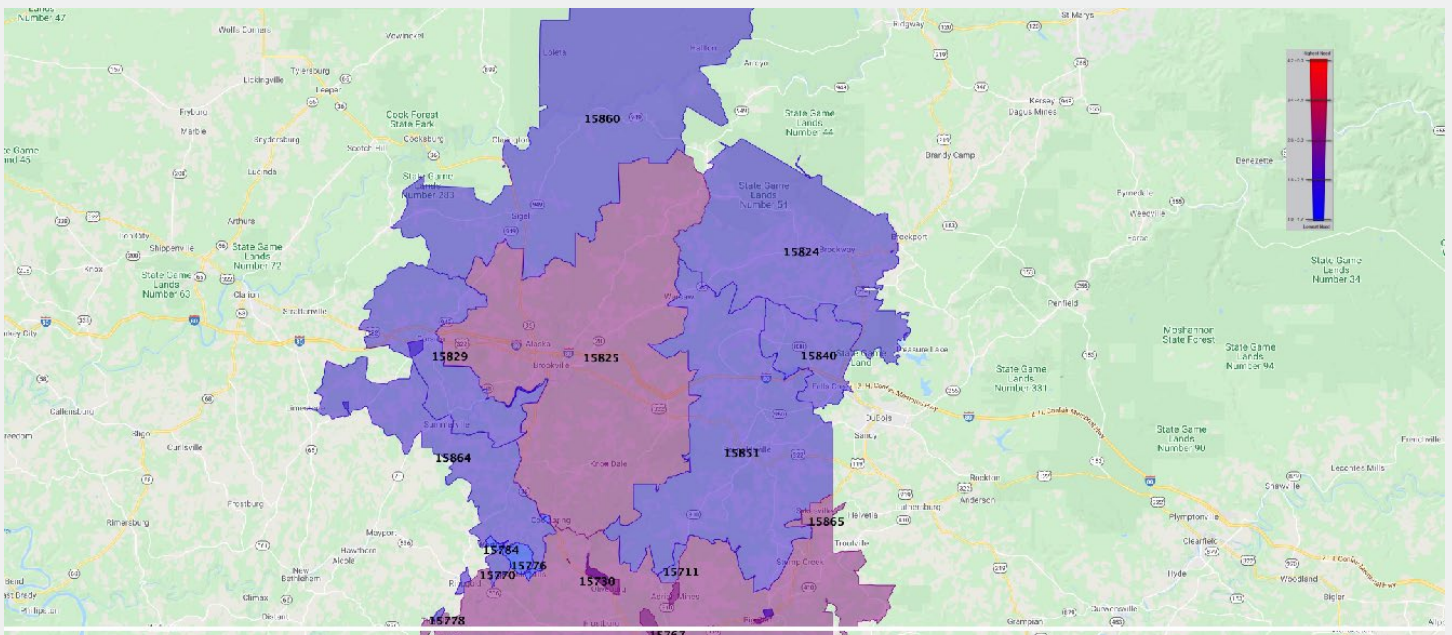
- PHH communities located in Jefferson County include 17 ZIP codes.
- Within Clearfield County, ZIP code 15865 (Sykesville) has the highest CNI score (3.2), which indicates that residents in this ZIP code face higher socioeconomic barriers to care.

Table 12: Jefferson County ZIP Codes

ZIP code	City	CNI
15865	Sykesville	3.2
15767	Punxsutawney	3.0
15825	Brookville	2.6
15778	Timblin	2.4
15851	Reynoldsville	2.4
15824	Brockway	2.2
15840	Falls Creek	2.2
15860	Sigel	2.2
15711	Anita	2.0

ZIP code	City	CNI
15829	Corsica	2.0
15770	Ringgold	1.8
15864	Summerville	1.8
15730	Coolspring	1.6
15776	Sprankle Mills	1.6
15744	Hamilton	1.4
15780	Valier	1.4
15784	Worthville	1.4

Map 7: Jefferson County PSA CNI Scores



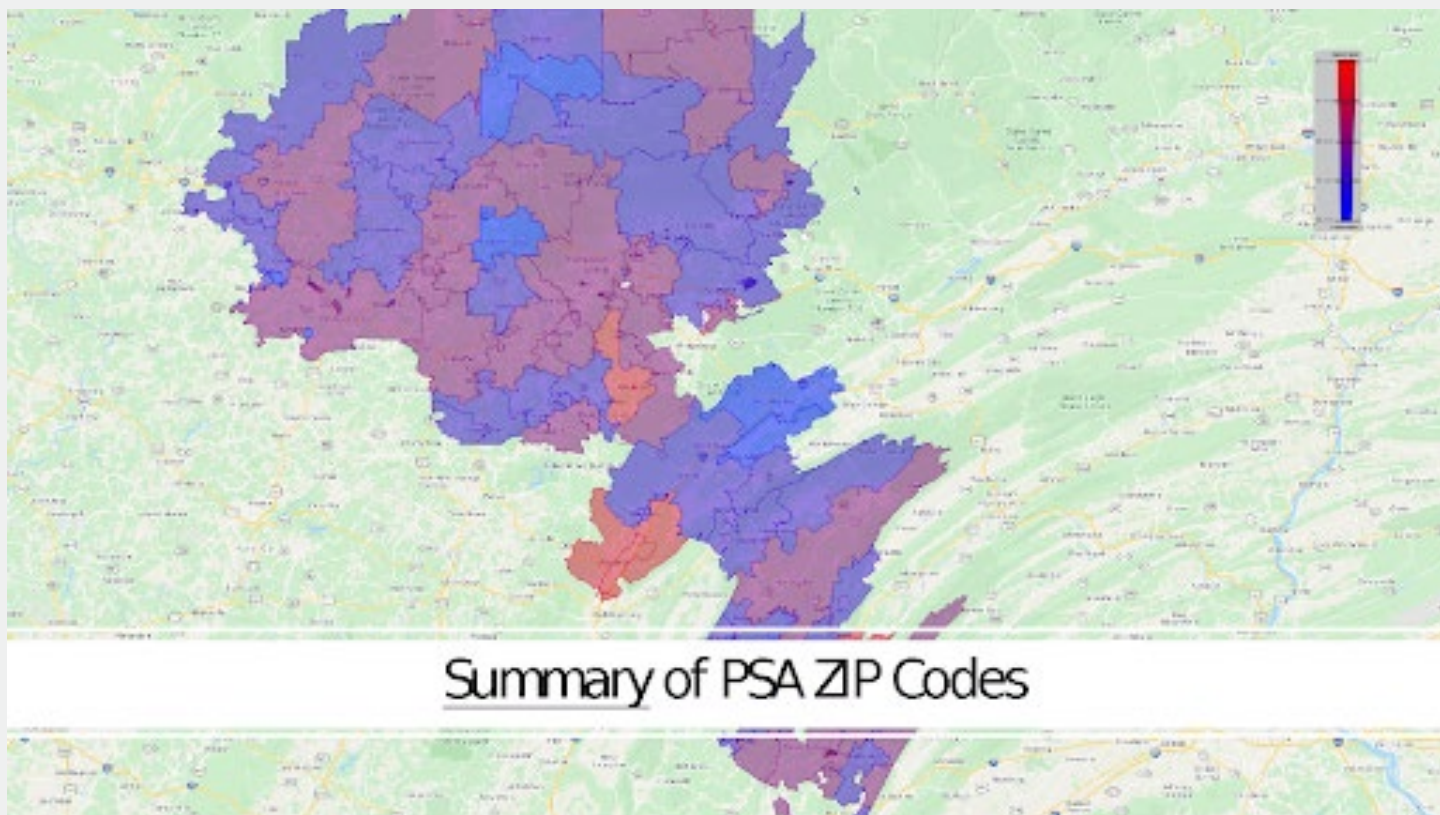
Jefferson County CNI



Summary ZIP Codes

- The map below is a summary of all of the ZIP codes in the PHH primary service area.
- ZIP codes 15856 (Rockton) and 16870 (Port Matilda) have the lowest CNI scores for the study area, indicating reduced barriers to health care.
- ZIP codes 16551 (Houtzdale; 3.8), 17066 (Mount Union; 3.6), 16601 (Altoona; 3.4), 16602 (Altoona; 3.4), 16840 (Hawk Run; 3.4), 15865 (Sykesville; 3.2), 16652 (Huntingdon; 3.2), 16666 (Osceola Mills; 3.2), and 16674 (Robertsdale; 3.2) are above the median score of 3.0 for the study area, indicating higher barriers to health care.

Map 8: Summary of PHH PSA ZIP Code CNI Scores



County Health Rankings

The County Health Rankings were completed as a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

Each county receives a summary rank for its health outcomes, health factors, and also for the four different types of health factors: health behaviors, clinical care, social and economic factors, and the physical environment. Analyses can also drill down to see specific county-level data (as well as state benchmarks) for the measures upon which the rankings are based. Counties in each of the 50 states are ranked according to summaries of more than 30 health measures. Those having high ranks, e.g., 1 or 2, are considered to be the “healthiest.”

Pennsylvania has 67 counties. A score of 1 indicates the “healthiest” county for the state in a specific measure. A score of 67 indicates the “unhealthiest” county for the state in a specific measure. Below are the counties that hold the lowest rankings, symbolizing the unhealthiest of the study area, in various categories (2020):

- Blair County:
 - No. 49 for clinical care
 - No. 52 for physician environment

- Cameron County:
 - No. 50 for morbidity
 - No. 50 for social and economic factors

- Centre County:
 - No. 1 for mortality (Healthiest ranking)
 - No. 2 for health outcomes

- Clearfield County:
 - No. 62 for health factors
 - No. 64 for health behaviors

- Elk County:
 - No. 52 for mortality

- Huntingdon County Parish:
 - No. 59 for social and economic factors
 - No. 51 for health factors

- Jefferson County
 - No. 42 for morbidity
 - No. 41 for health behaviors

America's Health Rankings⁴⁹

America's Health Rankings® is the longest-running annual assessment of the nation's health on a state-by-state basis. For the past 25 years, America's Health Rankings® has provided a holistic view of the health of the nation. America's Health Rankings® is the result of a partnership among United Health Foundation, American Public Health Association, and Partnership for Prevention™.

Pennsylvania's key findings/rankings:

- 27th in social and economic factors
- 46th in physical environment
- 8th in clinical care
- 33rd in behaviors
- 34th in health outcomes

Pennsylvania's Summary:

- High immunization coverage among children
- Low economic hardship index score
- Low uninsured rate

Pennsylvania's Strengths:

- High-Speed Internet: Availability, 2015 and 2018, increased from 81.2% to 88.1% of households (increased 8%)
- Flu Vaccination Coverage: Vaccinations, from 2018 and 2019, increased from 40.3% to 48.1% of adults (increased 19%)
- Smoking: Smoking, from 2013 and 2019, decreased from 21.0% to 17.3% of adults (decreased 18%)

Pennsylvania's Top Challenges:

- High percentage of housing with lead risk
- High racial disparity in low birthweight
- High residential segregation

Additional Pennsylvania Challenges:

- Low Birthweight Racial Gap: The percent of low birthweight racial gap increased from 6.7% in 2017 to 8.6% in 2018 (increased 28%).
- Obesity: The percentage of obese adults rose from 28.6% in 2011 and to 33.2% in 2019 (increased 16%)
- Suicide: The number of suicides per 100,000 population rose from 12.2 in 2010 to 15.4 deaths in 2018 (increased 26%).

B. Primary Data

Provider Survey

Tripp Umbach employed an online provider survey methodology to distribute surveys to providers within the community. Collecting data through the lens of a provider allowed the perspective of individuals who provide care to underserved populations and populations most in need. The provider audience is also important to gauge how patients and residents have adjusted their health needs during the pandemic and how providers are assisting them during this time period.

A database provided from PHH was utilized to disseminate the survey link to PHH providers. Emails were sent from Penn Highlands Healthcare to providers at their facilities requesting survey participation. Email communication was followed up by Tripp Umbach to increase response rate.

In total, 175 surveys were collected and used for analysis. The information below represented key survey findings collected from the online provider survey.

Methodology:

- An online provider survey was employed to collect input from providers in PHH facilities to identify health risk factors and health needs in the community through a provider lens.
- The survey collection process was implemented February 1-23, 2021, through Survey Monkey.
- In total, 175 surveys were collected. This assured statistical accuracy to within +/-6.7% at the 95% significance level. A 17% response rate was achieved.

Overall Key Findings:

- 63.0% of respondents worked primarily in Clearfield County, followed by 11.0% working in Elk County.
- 33.1% of respondents represented ZIP code 15801, followed by ZIP code 16830 (26.8%).
- 24.6% of survey respondents identified themselves as being a physician specialist followed by respondents identifying themselves as being a physician assistant (14.9%).
- 44.0% of survey respondents provided services in a hospital setting followed by services in a doctor's office (30.3%).
- On average, survey respondents see 76.2 patients in a week.
- 18.6% of respondents volunteer their services to residents in the community.
- 70.0% of respondents volunteer 1-5 hours of health services per month in their community.

- 91.6% of respondents rate the care given at their facility as “very good/good.”
- 32.3% of respondents rate the health of the community where care is provided as being “unhealthy/very unhealthy.”
- 56.3% of respondents “strongly agree/agree” that there are high-quality health care programs and services in the community where they provide care or services.
- 58.2% of respondents “strongly agree/agree” that their facility addresses the needs of diverse and disparate populations.
- 97.0% of respondents “strongly agree/agree” that their facility ensures access to care for everyone, regardless of race, gender, education, and status.
- 58.2% of respondents “strongly agree/agree” that their facility addresses the needs of diverse and disparate populations.
- 97.0% of respondents “strongly agree/agree” that their facility ensures access to care for everyone, regardless of race, gender, education, and status.
- 32.3% of respondents reported that there are ample employment opportunities in the community where they provide care or services.
- 35.4% of respondents “strongly agree/agree” that there are ample human and social services programs in the community where I provide care or services.
- 34.8% of respondents “strongly agree/agree” reported there are sufficient services to address food insecurities and the provision of healthy foods.
- 82.9% of respondents reported that the community where they provide care or services is a safe place to live.
- 70.3% of respondents reported out-of-pocket costs, no transportation (55.1%), and no insurance coverage (53.8%) as the biggest barriers for people to not receiving care.
- The top three most pressing health problems in the community, according to survey respondents, are behavioral/mental health (61.5%), obesity (53.8%), and diabetes (51.2%).
- 40.4% of survey respondents reported that substance abuse, drug abuse (40.4%), alcohol abuse (39.7%), lack of exercise/inadequate physical activity (39.1%), and tobacco use (34.0%) are the top five risky behaviors in the community.
- 65.8% of survey respondents reported that access to mental health care (65.8%), affordable health care (63.0%), and affordable medication (61.9%) are the top three improvements they would like to see in the health care system.

- Survey respondents indicated that roughly 54.3% of patients are compliant with their treatment plans. (Not shown on chart)
- High cost of health care or medications (67.1%), difficulty “getting around” (61.8%), and personal reasons (52.0%) were the top three reasons why survey respondents reported that patients were non-compliant.
- 18.6% of providers have adequate access to interpreter services at the main facility where they provide care.
- 60.6% of respondents reported that their organization was prepared and equipped to adapt to the challenges of COVID-19.
- 74.0% of respondents reported that their organization implemented efficient and effective lines of communication to adapt to the challenges of COVID-19.
- 75.3% of respondents reported that their organization provided virtual platforms to ensure client/patient access to care and services.
- 42.0% reported the same/average number of clients/patients before COVID-19.
- Insufficient staff (68.0%), inadequate supplies (43.3%), and difficulty in engaging clients/patients (41.3%) were the top challenges respondents faced due to COVID-19.

C. Penn Highlands Healthcare – Community Resource Inventory

An inventory of programs and services specifically related to the key prioritized needs was cataloged by Tripp Umbach. The inventory highlights programs and services within the study area. The inventory identifies the range of organizations and agencies in the community that are serving the various target populations within each of the prioritized needs. It provides program descriptions, contact information, and the potential for coordinating community activities by creating linkages among agencies. The resource inventory was provided as a separate document due to its interactive nature and is available on Penn Highlands Healthcare’s website.

(www.phhealthcare.org/health-wellness/community-health-needs-assessment)

D. Community Stakeholder Interviewees

Tripp Umbach completed 26 interviews with community stakeholders throughout the region to gain a deeper understanding of community health needs from organizations, agencies, and government officials with a deep understanding from their day-to-day interactions with populations in greatest need. Interviews provide information about the community's health status, risk factors, service utilizations, and community resource needs, as well as gaps and service suggestions.

Listed below in alphabetical order by last name are the community stakeholders who participated in the community health need assessment for Penn Highlands Healthcare. (See Table 13).

Table 13: Community Stakeholders

	Name	Organization
1.	Shawn Arbaugh	Township Manager, Sandy Township
2.	Mike Armanini	State Representative
3.	Wendy Benton	Superintendent, DuBois Area School District
4.	Cindy Brown	Executive Director, Huntingdon United Way
5.	Cheryl Burton	Community Health Nurse at PA Department of Human Services
6.	Carla Boni	Manager, Innovative Sintered Metals
7.	Virginia Cooper	Register & Recorder, Huntingdon Courthouse
8.	John Dippold	CEO, Innovative Sintered Metals
9.	Susan Ford	Executive Director, Clearfield Jefferson Drug and Alcohol Commission
10.	Kathy Gillespie	CEO, Clearfield County Area on Aging
11.	Coleen Heim	Director of Healthy Blair County Coalition
12.	Don Herres	CEO, Clearfield YMCA
13.	Cindy Kolarik	Executive Director, The Jared Box Project
14.	Robin Kuleck	School Nurse, Cameron County School District
15.	Fritz Lecker	Commissioner, Elk County
16.	Yvonne Martin	Chamber Director, Huntingdon
17.	Heather McMahon	Superintendent, Ridgway School District
18.	Molly McNutt	Executive Director, Jefferson County Area Agency on Aging
19.	Eric Miller	President, Miller Fabrication Solutions
20.	Richard Pflingstler	Chairman of the Board for PHH and retired President of Atlas Pressed Metals
21.	Lori Reed	Commissioner, Cameron County
22.	Lisa Rorabaugh	Community Health Nurse at PA Department of Human Services
23.	Tammy Schnarrs	Community Health Nurse - Pennsylvania Department of Health, Bureau of Community Health Systems
24.	John Suplizio	City Manager, DuBois
25.	Heidi Thomas	CFO, Journey Health System
26.	Tracy Zents	Director, Jefferson County Department of Emergency Services

E. Penn Highlands Healthcare Working Group

E. Members

The CHNA was overseen by a committee of representatives who worked diligently during the process. (See Table 14).

Table 14: Working Group Members (Listed alphabetically by last name)

	Name
1.	Anna Anna
2.	Wanda Barnett
3.	Greg Bauer
4.	Valerie Brady
5.	Danyell Bundy
6.	Megan Bussard
7.	Russ Cameron MD
8.	Rhonda Chilson
9.	Lainie Drenning
10.	Danielle Ebeling
11.	Murray Fetzer
12.	Shannon Flanders
13.	Jeril Goss
14.	Lindsey Herzing
15.	Leanne Huey
16.	Liz Kauruter
17.	Stephanie Keniston
18.	Phallen Magill
19.	James Miller
20.	Samantha Morgan
21.	Karin Pfingstler
22.	Amy Rankin
23.	Holly Schreckengost
24.	Penny Shope
25.	Jennifer Tollini
26.	Dave Trudell

F. Tripp Umbach

Penn Highlands Healthcare contracted with Tripp Umbach, a private health care consulting firm with offices throughout the United States, to complete a community health needs assessment (CHNA). Tripp Umbach has worked with more than 300 communities in all 50 states. In fact, more than one in five Americans lives in a community where our firm has worked.

From community needs assessment protocols to fulfilling the new Patient Protection and Affordable Care Act (PPACA) IRS 990 requirements, Tripp Umbach has turned needs assessments into practical action plans with sound implementation strategies, evaluation processes, and funding recommendations for hundreds of communities. Tripp Umbach has conducted more than 400 community health needs assessments and has worked with more than 800 hospitals.

Changes introduced as a result of the PPACA have placed an increased level of importance on population health and well-being and on collaborative efforts among providers, public health agencies, and community organizations to improve the overall health of communities.

**Tripp
Umbach**

G. Endnotes

- ¹ Penn Highlands Healthcare: www.phhealthcare.org
- ² LinkedIn: www.linkedin.com/company/penn-highlands-healthcare/
- ³ The Healthy Blair County Coalition: www.healthyblaircountycoalition.org
- ⁴ Britannica: www.britannica.com/place/Blair
- ⁵ Britannica: www.britannica.com/place/Blair
- ⁶ Community Commons: www.communitycommons.com (Bureau of Labor Statistics)
- ⁷ Data USA: <https://datausa.io/profile/geo/jefferson-county-pa#health>
- ⁸ U.S. Census Bureau: www.census.gov/
- ⁹ Data USA: <https://datausa.io/profile/geo/jefferson-county-pa#demographics>
- ¹⁰ U.S. Census Bureau: www.census.gov/
- ¹¹ Community Commons: www.communitycommons.org/
- ¹² Community Commons: www.communitycommons.org/
- ¹³ Office of Disease Prevention and Health Promotion: www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services
- ¹⁴ Association of American Medical Colleges: www.aamc.org/news-insights/us-physician-shortage-growing
- ¹⁵ Robert Graham Center: www.graham-center.org/content/dam/rgc/documents/maps-data-tools/state-collections/work-force-projections/Pennsylvania.pdf
- ¹⁶ Kaiser Family Foundation: www.kff.org/other/state-indicator/primary-care-health-professional-shortage-areas-hpsas/?currentTimeframe=0&selectedRows=%7B%22states%22:%7B%22pennsylvania%22:%7B%7D%7D%7D&sort-Model=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D
- ¹⁷ Association of American Medical Colleges: www.aamc.org/news-insights/us-physician-shortage-growing
- ¹⁸ The Body Pro: www.thebodypro.com/article/health-navigation-a-review-of-the-evidence
- ¹⁹ American Hospital Association: www.aha.org/system/files/media/file/2019/05/aha-trendwatch-behavioral-health-2019.pdf
- ²⁰ American Hospital Association: www.aha.org/system/files/media/file/2019/05/aha-trendwatch-behavioral-health-2019.pdf
- ²¹ American Hospital Association: www.aha.org/system/files/media/file/2019/05/aha-trendwatch-behavioral-health-2019.pdf
- ²² Psychology Today: www.psychologytoday.com/us/blog/promoting-hope-preventing-suicide/200910/behavioral-health-versus-mental-health
- ²³ Centers for Disease Control and Prevention: www.cdc.gov/mentalhealth/data_publications/index.htm
- ²⁴ Mental illnesses include many different conditions that vary in degree of severity, ranging from mild to moderate to severe. Two broad categories can be used to describe these conditions: Any Mental Illness (AMI) and Serious Mental Illness (SMI).
- ²⁵ National Alliance on Mental Illness: www.nami.org/Learn-More/Mental-Health-By-the-Numbers
- ²⁶ National Alliance on Mental Illness: www.nami.org/NAMI/media/NAMI-Media/Infographics/NAMI_Impact_RippleEffect_2020_FINAL.pdf
- ²⁷ Substance Abuse and Mental Health Services Administration: www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf
- ²⁸ Substance Abuse and Mental Health Services Administration: www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf
- ²⁹ Substance Abuse and Mental Health Services Administration: www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf
- ³⁰ Substance Abuse and Mental Health Services Administration: www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf
- ³¹ Centers for Disease Control and Prevention: www.cdc.gov/chronicdisease/about/index.htm
- ³² Centers for Disease Control and Prevention: www.cdc.gov/chronicdisease/about/index.htm
- ³³ American Public Health Association: www.apha.org/what-is-public-health/generation-public-health/our-work/healthy-choices

- ³⁴ American Public Health Association: www.apha.org/what-is-public-health/generation-public-health/our-work/healthy-choices
- ³⁵ Centers for Disease Control and Prevention: <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/diabetes-prediabetes.htm>
- ³⁶ Centers for Disease Control and Prevention: <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/diabetes-prediabetes.htm>
- ³⁷ Healthy People: www.healthypeople.gov/2020/topics-objectives/topic/diabetes
- ³⁸ Centers for Disease Control and Prevention: www.cdc.gov/bloodpressure/
- ³⁹ Mayo Clinic: www.mayoclinic.org/diseases-conditions/high-blood-pressure/symptoms-causes/syc-20373410
- ⁴⁰ Centers for Disease Control and Prevention: www.cdc.gov/bloodpressure/facts.htm
- ⁴¹ Centers for Disease Control and Prevention: www.cdc.gov/bloodpressure/facts.htm
- ⁴² Mayo Clinic: www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679
- ⁴³ But there are likely other factors at play in the development of COPD, such as a genetic susceptibility to the disease, because not all smokers develop COPD.
- ⁴⁴ Substance Abuse and Mental Health Services Administration: www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf
- ⁴⁵ World Health Organization: www.who.int/health-topics/obesity#tab=tab_1
- ⁴⁶ Centers for Disease Control and Prevention: www.cdc.gov/brfss/state_info/brfss_use_examples.htm
- ⁴⁷ County Health Rankings: www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model/health-factors/social-and-economic-factors
- ⁴⁸ Penn Highlands Tyrone: <https://tyroneregionalhealthnetwork.org>.
- ⁴⁹ America's Health Rankings: www.americashealthrankings.org/explore/annual/measure/CHC/state/PA