



Rural West Community Health Needs Assessment

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St. Luke’s Partner Quote (Key Informant/Community Forum Attendee)



St. Luke’s Community Health Needs Assessment Data

Executive Summary

..... Key Findings

From our analysis of primary and secondary data, as well as the Community Health Needs Assessment (CHNA) key informant interviews and work with our community members, we see significant issues facing our communities that impede healthy lifestyles. Our efforts in prevention, care transformation, research, and partnerships help support our work to promote sustainable programs and opportunities for our reach to focus on a wide range of health promotion and quality of life initiatives. While there are many issues that need to be addressed, the results from the 2022 CHNA found the top priorities for the St. Luke’s network include:

2022 Community Health Needs Assessment
Top Priority Outcomes
COVID-19
Access to Care
Workforce Development
Food Insecurity
Obesity Reduction
Physical Activity Promotion
Mental Health
Opioids and other Substance Use
Housing
Transportation

The needs discussed within the health categories outlined in this document will serve as our guide in creating a detailed campus-specific implementation plan to best address the specific needs of the St. Luke’s Rural West service area using three pillars:

***Wellness and Prevention**

***Care Transformation**

***Research and Partnerships**

We will work collaboratively in partnership with our community and network partners to create a more equitable society with better health outcomes, especially among our most vulnerable populations such as our Hispanic communities, seniors, women, and children.

Introduction

..... Background

As part of the Patient Protection and Affordable Care Act, nonprofit hospitals are required to conduct a Community Health Needs Assessment (CHNA) every three years to maintain tax-exempt status under section 501(c)(3) of the Internal Revenue Code. The goal of the assessment is to identify critical health disparities faced by populations within St. Luke's University Health Network (SLUHN) service areas. The assessments state health priorities unveiled by community stakeholders, hospital professionals, and public health experts. Additionally, regional implementation plans will be crafted to build collaborative partnerships to determine the allocation of resources to address the specified health needs. To view our previous CHNA reports, please refer to the following link: <https://www.slhn.org/community-health/community-health-needs-assessment>. If you have any questions regarding any of these reports, please contact the Department of Community Health at (484) 526-2100.

..... Methodology

The CHNA is comprised of both primary and secondary data. The primary data were collected through three methods. First, key informant interviews were performed with leaders from each campus community to identify high level strengths and needs in their respective communities. A list of the interview questions can be found in Appendix A. Second, a community forum was held for each campus community through SLUHN and facilitated by Dr. Christopher Borick of Muhlenberg College. A list of organizations represented at the forum can be found in Appendix B. *Disclaimer: quotes from key informants and community forum participants are noted throughout in the text and highlighted in grey boxes unless otherwise noted. Due to the COVID-19 pandemic, key informant interviews were conducted through Microsoft Teams and the community forums were conducted through Zoom. Third, 11,523 voluntary community health surveys were administered throughout our fourteen campus geographic regions, where the main priority health needs were identified for each entity, and a total of 1,004 surveys were collected from the top 80 percent zip codes in the Rural West service area. We used snowball sampling to reach respondents, especially those represented in our vulnerable populations. Snowball sampling is most effective when used to reach vulnerable populations to help to shed light on social determinants of health (SDOH) within hard-to-reach populations. To reach populations with diverse resources, surveys were completed in either paper or digital format. The survey findings document, also posted online, lists questions and responses recorded from CHNA surveys conducted in 2012, 2016, 2019, and 2022. Secondary data included the use of hospital network data as well as county, state, and national level data obtained from the following: U.S. Census, the Robert Wood Johnson Foundation, Vital Statistics, Community Commons, the American Community Survey (ACS), U.S. Department of Labor, the Behavioral Risk

Factor Surveillance System, as well as other data sources, which can be found in the footnotes. The needs identified in the interviews and community forums were supplemented by the survey data and secondary data to provide a comprehensive picture of the contributing factors and needs in the community.

..... Existing Rural West Community Assets

When describing Carbon county, many respondents said that the population is committed to getting things done with a strong sense of community. For example, when asked about a sense of community, one informant responded, "I see people from Carbon county putting two feet in and committed. I do believe it is a strong sense in all aspects." Another key informant said, "I would say committed. Both professionally and personally, there are people who are committed to whatever the cause is." Some informants also mentioned poverty within Carbon county's population. One informant responded, "I think we are close knit with a majority of people who work hard that try to face all of the obstacles in front of us. We certainly have a lot of poverty and substance [use disorders] and a lot of generational needs that a lot of our clientele fall into." Another informant put this sentiment in other words: "The phrase that always comes to mind is 'the working poor.' It seems like everyone we serve- they are working but they may be underemployed, or their employment may not carry over to cover the expenses for the entire month."

When describing Schuylkill county, key informants mentioned that it has a strong, tightknit community where people work together. Some also mentioned that it is caring, warm, and generous. Many informants said that there is a willingness to work with others and build collaborative partnerships. One informant mentioned, "we all work together for the same common cause. You don't see that in all communities. It is one of the things that I cherish." Some informants mentioned that the strength of the community has a long history, one mentioning that "I think it goes back to the coal mining days. It is a strong community. It is a small county, but it is fierce when looking at all the collaboration." Another agreed saying that there is a deep sense of pride in Schuylkill county heritage. Though these are great strengths, one informant said "it is rural and diverse. When looking at different levels of wealth in the districts, some have more resources than others. The community is diverse with various levels of resources." A community forum attendee also touched on the pandemic, mentioning how members of the community have worked together, "the working relationship between government, nonprofits, and community members has been enhanced during the pandemic. The scope of the problems necessitated cooperation."

St. Luke's Miners, Lehigh, and Carbon campuses have all been instrumental with community health programming in Rural West. Some of the initiatives include the breast and cervical cancer early detection screening programs, literacy, oral health literacy, training community health workers, and the Adopt a School Program with Panther Valley School District.

In response to COVID-19, physical initiatives like Walk with a Doc were held virtually and spread the message of COVID-19 safety protocols and personal well-being. Rural community health staff continued to promote education on social distancing, working on partnerships with local nonprofits and schools, and meeting to ensure that the Substance Use Disorder Response team could continue to educate and reduce

overdose deaths in our rural regions. Throughout the pandemic, SLUHN has been able to pivot and meet the needs of the community through existing relationships built with nonprofits, schools, and community-based organizations who have assisted in events, education, and providing services in our service areas.

..... County Health Rankings

Every year, the Robert Wood Johnson Foundation releases data that compare counties to state averages, as well as U.S. top performers. The table below depicts select health indicators for 2021 for each of the counties in SLUHN's service area. There are 20 indicators evaluated for each county, with the U.S. top performers being the counties at the 90th percentile in the nation. The indicators are color-coded using a stoplight approach, in which green indicates that the value is better than both state and U.S. top performers, yellow indicates that the value is in between state and U.S. top performers, and red indicates that the value is at or worse than both state and U.S. top performers. In looking at the 2021 data table out of 180 values, 60% of values are red (108), 21% are yellow (38), and 19% are green (34). There was a 47.8% overall increase in green tiles, previously 23 total, since 2018 during the last CHNA cycle.

Additionally, in Carbon county, there are 75% red values, 20% yellow values, and 5% green values. In 2018, there were 60% red values, 40% yellow values, and 0% green values. From 2018 to 2021, there was a 25% increase in red values, a 50% decrease in yellow values, and a 100% increase in green values.

Similarly in Schuylkill county, there are 75% red values, 20% yellow values, and 5% green values. In 2018, there were 55% red values, 45% yellow values, and 0% green values. From 2018 to 2021, there was a 36.4% increase in red values, a 55.6% decrease in yellow values, and a 100% increase in green values. Out of all St. Luke's counties that house a hospital (not including Berks county) Schuylkill county and Carbon county are tied with Monroe county with the least amount of green values. There is great room for improvement in Carbon and Schuylkill county's health indicators.

*Disclaimer: The Robert Wood Johnson Foundation reports their findings as the year 2021, but many of the measures are reported from previous years. Please see <https://www.countyhealthrankings.org/> for more information.

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2021	U.S. Top Performers*	Pennsylvania (PA)	Berks (BR) County, PA	Bucks (BU) County, PA	Carbon (CR) County, PA	Lehigh (LH) County, PA	Monroe (MO) County, PA	Montgomery (MT) County, PA	Northampton (NO) County, PA	Schuylkill (SC) County, PA	New Jersey (NJ)	Warren (WA) County, NJ
Unemployment	2.6%	4.4%	4.3%	3.8%	5.4%	4.5%	5.4%	3.5%	4.5%	5.4%	3.6%	3.3%
Uninsured	6%	7%	7%	5%	6%	8%	8%	5%	6%	6%	9%	7%
Primary care physicians	1,030:1	1,230:1	1,600:1	1,180:1	2,380:1	990:1	2,420:1	730:1	1,210:1	1,870:1	1,180:1	1,680:1
Dentists	1,210:1	1,410:1	1,780:1	1,150:1	2,290:1	1,130:1	2,580:1	920:1	1,700:1	2,210:1	1,140:1	1,350:1
Poor physical health days	3.4	4.0	4.0	3.1	4.3	4.1	4.0	3.3	4.0	4.5	3.7	3.9
Food environment index	8.7	8.4	8.6	9.1	8.3	8.4	8.0	9.1	8.7	8.3	9.4	8.7
Physical inactivity	19%	22%	22%	18%	24%	17%	24%	18%	27%	24%	27%	28%
Access to exercise opportunities	91%	84%	86%	89%	75%	82%	86%	95%	87%	75%	95%	97%
Adult obesity	26%	31%	34%	28%	34%	31%	33%	25%	31%	37%	27%	32%
Excessive drinking	15%	20%	21%	23%	22%	22%	20%	22%	22%	21%	16%	21%
Adult smoking	16%	18%	20%	16%	23%	18%	20%	14%	19%	23%	13%	17%
Poor mental health days	3.8	4.7	4.6	4.4	5.1	4.7	4.9	4.4	4.7	5.2	3.8	4.6
Mental health providers	270:1	450:1	680:1	390:1	1,600:1	510:1	830:1	280:1	420:1	1,210:1	420:1	470:1
Low birthweight	6%	8%	8%	8%	9%	8%	9%	7%	8%	8%	8%	8%
Teen births	12	17	21	6	19	21	11	7	12	22	12	9
Sexually transmitted infections	161.2	463.4	475	245.1	175.4	511.9	367.8	295.1	411.0	244.8	405.5	206.9
High school graduation	94%	91%	87%	94%	89%	89%	90%	94%	91%	89%	90%	91%
Children in poverty	10%	17%	16%	7%	14%	18%	17%	7%	10%	16%	12%	9%
Severe housing problems	9%	15%	15%	15%	14%	16%	18%	15%	14%	11%	21%	15%
Social associations	18.2	12.2	11.4	7.7	13.9	10.2	7.6	11.2	10.6	13.2	8.7	9.5

University of Wisconsin Population Health Institute. County Health Rankings and Roadmaps. 2021.	KEY	At or above State/Top Performer	Between Top Performers and State	At or below State/Top Performer
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Figure 1

Demographics

..... Population

For the purposes of the CHNA, we define the top zip codes as those that account for 80% of the population served by the Miners, Lehighton and Carbon campuses, also collectively referred to as the Rural West service area (Figure 2). In the Rural West service area, 45% of the patients served reside in 18235 (Lehighton), 18252 (Tamaqua), and 18071 (Palmerton). The Rural West service area includes both Carbon and Schuylkill counties.

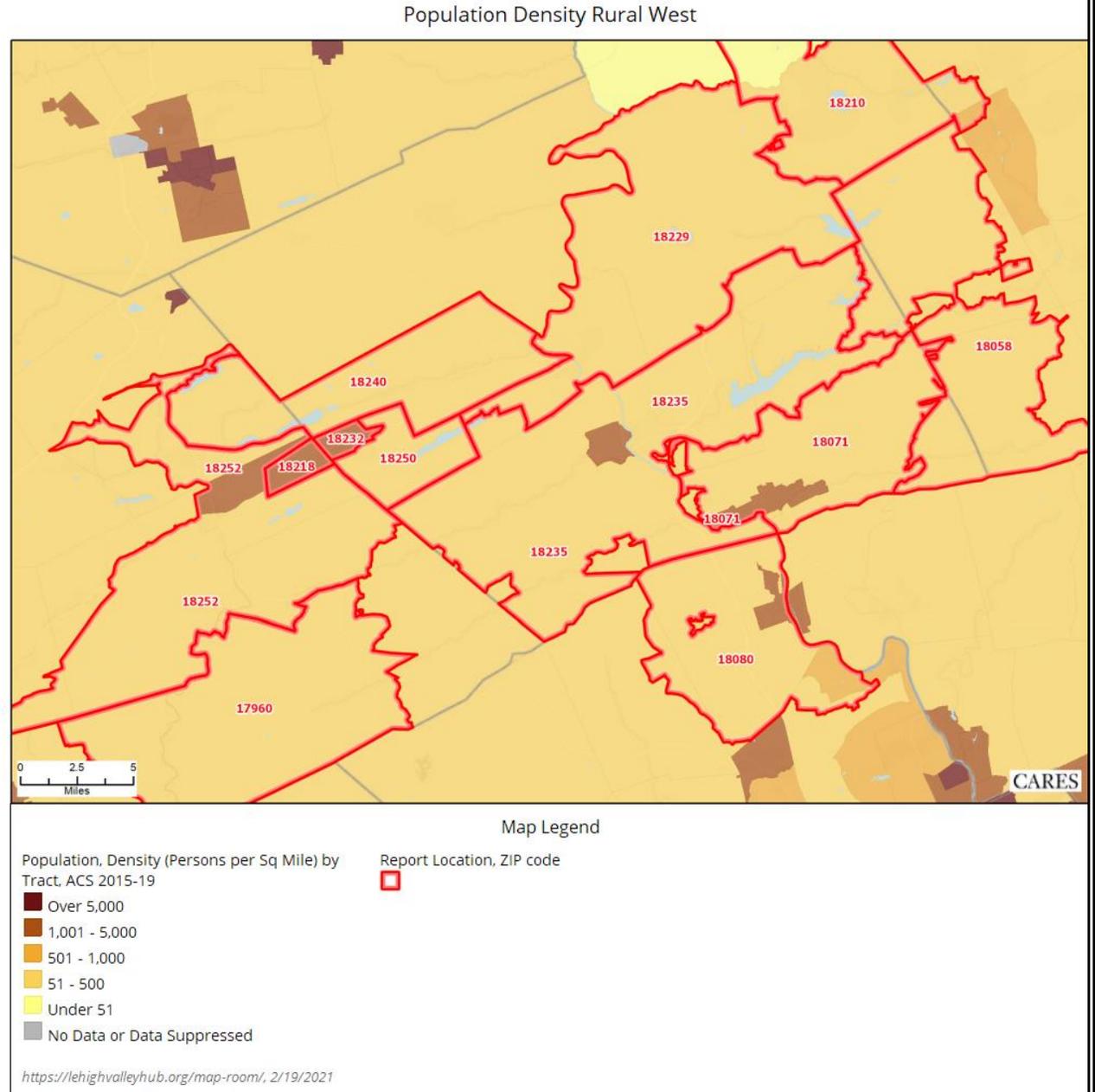
A total of 95,103 people live in the 438.03 square mile area outlined in Figure 3 according to the U.S. Census Bureau American Community Survey (ACS) 5-year estimates (2015-2019). The population density for this area is estimated at 217.11 persons per square mile, compared to 285.89 persons per square mile in Pennsylvania and 91.93 persons per square mile nationally. According to the 2010 Decennial Census, 56.5% of the Rural West service area lives in an urban setting and 43.5% of the service area live in a rural setting. Urban areas are defined by population density, count, size thresholds and the amount of impervious surface or development (i.e., areas impervious to water seeping into the ground, concrete-heavy areas). Rural areas are all other areas not defined as urban. The Pennsylvania percentages for urban and rural living are 78.7% and 21.3%, respectively. The United States urban and rural percentages are 80.9% and 19.1%, respectively.

Zip code	% SLBM & SLM Total (n = 194,303)	% Network Total (n = 1,554,201)
18235	21%	2.6%
18252	15%	1.8%
18071	9%	1.1%
18229	7%	0.9%
18232	7%	0.9%
18240	5%	0.6%
18250	4%	0.5%
18218	4%	0.4%
18210	3%	0.3%
17960	2%	0.3%
18080	2%	0.2%
18058	2%	0.2%
Total	80%	10.0%

Figure 2

2022 St. Luke's University Health Network Rural West Community Health Needs Assessment

The following sections give a brief overview of the populations that Rural West serves. Understanding the demographics of the service area is essential to addressing needs and improving upon the region's health services. The following data comes from ACS 5-year estimates (2015-2019) by the Census Bureau and St. Luke's survey data unless otherwise noted.¹ Please refer to the Network and Campus Community Health Needs Assessment Survey Findings document for more detailed information from the survey.



¹ <https://www.census.gov/programs-surveys/acs/>

Figure 3

Age

The ACS reports 20% of the service area population are people under 18 years old and 19.4% are 65 years and older (Figure 4). Combined, these groups account for 39.4% of the service area population, leaving 60.6% between the ages of 18 and 64. In Carbon county, 19.4% of the population is under 18 years old and 20.7% are 65 years and older, leaving 59.9% between the ages of 18 and 64. In Schuylkill county, 19.8% of the population are under 18 and 20% are 65 years and older, leaving 60.2% between the ages of 18 and 24.

Most CHNA survey respondents from the Rural West service area were 55 and above; 22% were 55 to 64 years old and 33% were 65 years and older. Only 19% of respondents were ages 45 to 54, 13% ages 35 to 44, 10% ages 25 to 34, and 3% ages 18 to 24. The survey was only administered to people 18 years and older, therefore, younger ages are not reflected in the survey results. The median age of respondents was 57 years old.

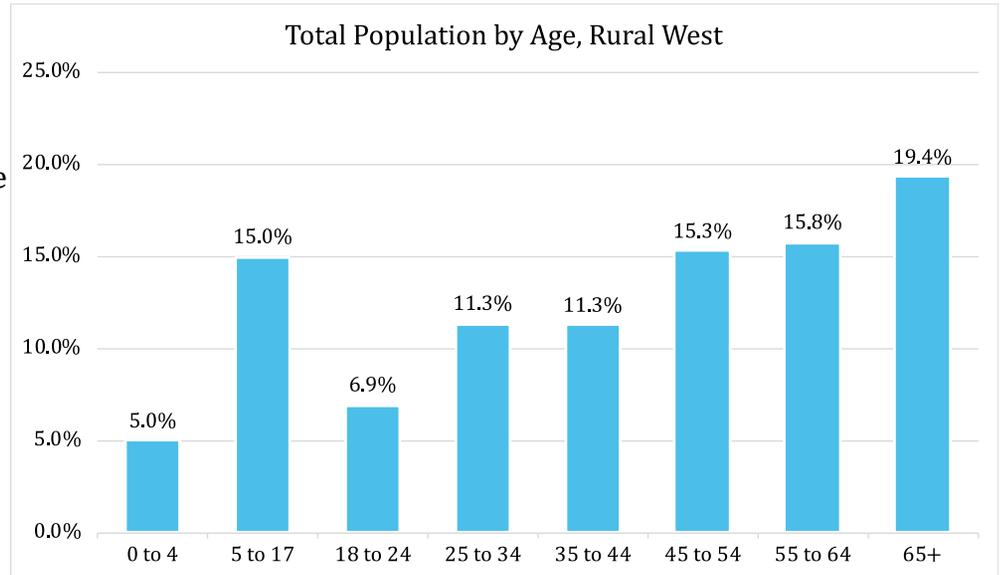


Figure 4

Sex

According to the ACS, 49.7% of people identified as female and 50.3% identified as male in the Rural West service area (Figure 5). This is similar to the national average, 50.8% and 49.2%, respectively. In Carbon county, conversely to Rural West, 50.3% of people identify as female and 49.7% as male. In Schuylkill county, 48.9% of people identify as female and 51.1% as male.

When asked about sex assigned at birth in the CHNA survey, 66% of Rural West service area respondents indicated female and 34% indicated male.

Total Population by Sex, Rural West

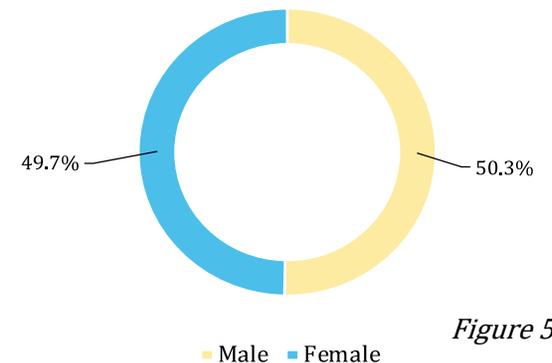


Figure 5

Ethnicity

Total Population by Ethnicity, Rural West

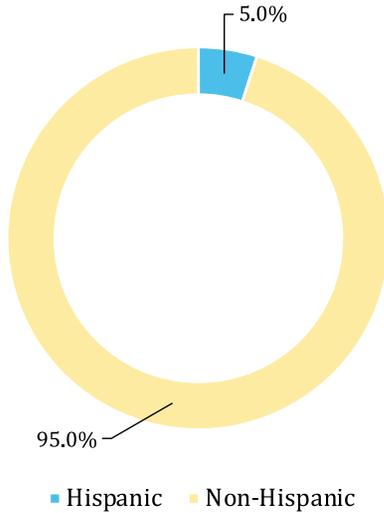


Figure 6

The ACS reports that 95% of the Rural West service area identifies as non-Hispanic and 5% identifies as Hispanic (Figure 6). The population in Pennsylvania is 92.7% non-Hispanic and 7.3% Hispanic; the United States population is 82% and 18%, respectively. In Carbon county, 95.2% of people identify as non-Hispanic while 4.8% identify as Hispanic. In Schuylkill county, 95.6% of identify as non-Hispanic and 4.4% identifies as Hispanic.

The majority of Rural West CHNA survey respondents identify as non-Hispanic (96%), while 4% of respondents identify as Hispanic.

Race

The ACS reports that 95.6% of the service area identifies as White, followed by Black (2.2%), Other Race (1.7%), and Asian (0.5%). Data for individuals identifying as Native Hawaiian/Pacific Islander, Native American/Alaska Native, and Multiple Races were combined with Other Race due to small sample sizes. In Carbon county, 95.7% of people identify as White, followed by Black (2.3%), Other Race (1.7%), and Asian (0.6%). In Schuylkill county, the majority of people identify as White (93.7%), followed by Black (3.2%), Other Race (2.6%), and Asian (0.5%).

Similar to ACS findings, 95% of CHNA survey respondents from the Rural West service area identified as White, followed by Other Race (4%), and Black (1%).

Total Population by Race, Rural West

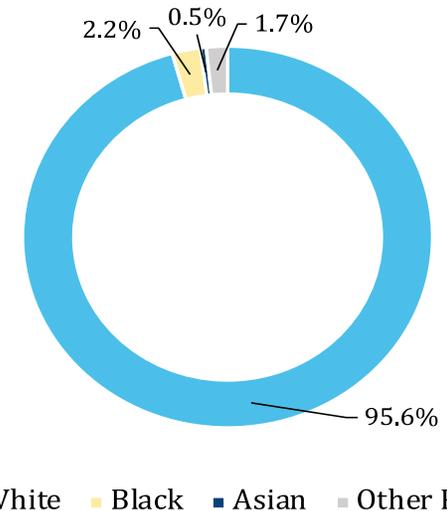


Figure 7

..... Vulnerable Populations

The following data was retrieved from the 5-year American Community Survey (2015-2019) by the Census Bureau.²

..... Black, Indigenous, People of Color (BIPOC)

It is important for St. Luke's to identify the BIPOC communities within the St. Luke's community in order to address specific needs. For example, Indigenous peoples historically lack proper access to health resources and information and often face discrimination when accessing healthcare facilities.³ Additionally, in regard to the COVID-19 pandemic, more than half of the infections have occurred among Black Americans, despite only comprising approximately 14% of the United States Population.^{4,5} Disparities in access to care for BIPOC communities can be detrimental to health outcomes and generate mistrust in healthcare.⁶ In the Rural West service area, 1% of survey respondents identify as Black and 4% identify as Hispanic. Out of the BIPOC individuals who were surveyed for the network, 32% identified as Black, 10% identified as Asian, 2% as American Indian/Alaskan Native, 23% as multiple races, and 33% as another race.

..... Uninsured Population

Lack of insurance or adequate coverage is a primary barrier to healthcare because it prevents people from accessing crucial services required to monitor and maintain a healthy lifestyle. Medicare, a federal healthcare program in the United States available to most of the population ages 65 years and older, helps to nearly eliminate the uninsured population in that age demographic, with only 0.4% in Pennsylvania and 0.8% in the United States ages 65 years and older uninsured. While Medicare is available to most of the population over 65 years old, lack of health insurance, or adequate health insurance, can lead to serious barriers to care. Of the population less than 65 years old, 7% in Pennsylvania and 10.2% in the United States are uninsured.

² <https://www.census.gov/programs-surveys/acs/>

³ <https://www.bsr.org/en/our-insights/blog-view/respecting-the-rights-of-vulnerable-groups>

⁴ <https://www.bsr.org/en/our-insights/blog-view/respecting-the-rights-of-vulnerable-groups>

⁵ <https://covid.cdc.gov/covid-data-tracker/>

⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4194634/>

In the Rural West service area, only 0.2% of the 65 and older population are uninsured, 6.1% of ages 18 to 64 are uninsured, and 2.7% of children under 18 years old are uninsured. According to CHNA survey results, 3.4% of all surveyed respondents in the network either have no coverage and pay cash or do not know if they have insurance. The discrepancy between service area statistics and CHNA survey respondents is important to note as we continue to increase our outreach efforts in the communities we serve to reach our most vulnerable populations, which includes the uninsured population.

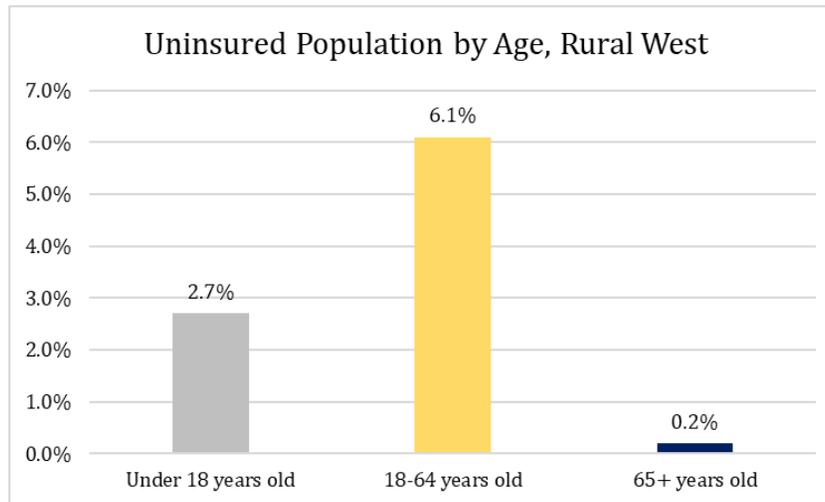


Figure 8

Multiple key informants touched on issues with insurance in the Rural west service area:



“I think insurance and access is also a challenge...Making referrals can be difficult because not everyone takes all insurances and you need parent permission. My school only takes medical assistance, so I need to go out looking for people that take private insurance, and that kid's private insurance because not all offices take every insurance. I wish there were rainy day funds where you could have a cash session to help a kid.”



“In the past, people had the same types of insurances and they could access their local hospitals and things like that. The cost of insurance skyrockets...They have to change their doctors, they can only go here, they have to do this, the copays are going up. I think that then changes where you can go and what you can afford to access.”

..... ALICE

Asset Limited, Income Constrained, Employed (ALICE) are households that earn more than the Federal Poverty Level, but less than the basic cost of living.⁷ Because ALICE households do not qualify for Federal assistance, they cannot always pay bills and have little money left over to

⁷ <https://www.unitedforalice.org/>

put towards savings. ALICE households are often forced to make difficult decisions like choosing between paying rent or quality childcare. Problems that ALICE families face are often intertwined and affect each other, all of which can pose risks to health, safety, and financial stability.⁸ These areas often include housing, childcare and education, food, transportation, health care, technology, and taxes. The most recent ALICE report (2018) found that 29% of households in Schuylkill county were considered ALICE.⁹ This is 2% higher than the Pennsylvania state average of 27%. In Schuylkill county, 5,106 single or cohabitating households were ALICE, 2,290 families with children were ALICE, and 9,649 people 65 years and older were ALICE. This is partially due to the increase in living costs while wages have stayed stagnant. In 2018, the average cost of living for a single adult in Schuylkill county was \$1,846 a month and \$22,152 a year, while the average hourly wage was \$11.08.¹⁰ Out of all of the cities, boroughs and townships in Schuylkill county, the Coaldale borough has the highest ALICE percent with 42% of households and Delano township is second with 41% of households.

In Carbon county, 31% of households were considered ALICE. 3,007 single or cohabitating households were ALICE, 889 families with children were ALICE, and 4,032 people 65 years and older were ALICE. In Carbon county, the average cost of living in 2018 was \$1,987 a month and \$23,844 a year, while the average wage was \$11.92 an hour. Kidder township had the most ALICE households with 48% and Beaver Meadows borough was the second highest with 46%.

..... Children and Adolescents

According to 5-Year ACS (2015-2019) estimates, 20% of the Rural West population is below 18 years old. Childhood is a crucial time for development in all aspects of life, thus it is important to study health behaviors and target initiatives towards addressing negative health patterns in youth. The 2019 Pennsylvania Youth Survey (PAYS)¹¹ is run by the Pennsylvania Commission on Crime and Delinquency and asks a variety of questions pertaining to drug use, violence, mental health, school safety, and more. PAYS is administered biennially (by paper or online) in odd years to students in grades 6, 8, 10, and 12. According PAYS, 44.7% of students in Schuylkill county report lifetime alcohol use and 15.7% marijuana use.¹² Additionally, 29.7% of students in Schuylkill county reported experiencing bullying within the past 12 months of being surveyed. In Carbon county, 44.7% of students indicated a lifetime use of alcohol, 16.5% lifetime use of marijuana¹³, and 26.4% of students indicated experiencing bullying in the last 12 months. Lifetime use refers to using the drug at any point in their life and 30-day use refers to using the drug in the past 30 days. The data in this section is reported from PAYS unless stated otherwise.

⁸ <https://www.unitedforalice.org/consequences>

⁹ <https://www.unitedforalice.org/pennsylvania>

¹⁰ <https://www.unitedforalice.org/pennsylvania>

¹¹ [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\)-2019.aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS)-2019.aspx)

¹² [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\).aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS).aspx)

¹³ <https://www.pccd.pa.gov/Juvenile-Justice/PAYS/Carbon%20County%20Profile%20Report%202019.pdf>

..... Tobacco, Nicotine, and Vaping

In Carbon county, 12.4% of students report a lifetime use of cigarettes compared to 13.9% of students in Schuylkill county, both over 3% higher than state level (10.8%). In Carbon county, 21.1% of students report a 30-day vape use, which has increased by 6.6 percentage points from 2017. In Schuylkill county, 34.3% of students report a 30-day vape use, which is much higher than the state at 19% and an increase from 19.1% of Schuylkill county students in 2017.

In Carbon county, 59.3% of students use nicotine in their vapes and 23.2% use marijuana/hash oil. These are a 175.8% increase and 160.5% increase from 2017, respectively. In Schuylkill county, 57.5% of student respondents have used a nicotine vape, including 74% of 12th graders and 46.5% of 8th graders. 16% of students report using marijuana/hash oil in their vapes, a 142.4% increase from 6.6% in 2017.

..... Other Substance Use

Substance use in children and adolescents can have a significant impact on their health and well-being.¹⁴ Substance use can affect their growth and development, especially brain development, lead to risky behaviors such as unprotected sex, dangerous driving, as well as contribute to health problems in adulthood (e.g., heart disease, sleep disorders).¹⁵ In 2019, the PAYS survey found that lifetime alcohol use across the state was 41% and lifetime use of marijuana was 17.3%.¹⁶ In Carbon county, 44.7% of students have lifetime alcohol use and 16.5% have lifetime marijuana use. In Schuylkill county, 44.7% of students have lifetime alcohol use and 15.7% use of marijuana. State lifetime use was 4.1% for prescription pain medication and 3.9% for over-the-counter drugs. In Carbon county, lifetime prescription use was 5.4% and 4.4% for over the counter drugs. In Schuylkill county, lifetime prescription use was 4.5% and 3.9% for over-the-counter drugs. Students often view these drugs as safer than illicit drugs because they are prescribed by a doctor or available legally for adults. Small portions of the state used cocaine, methamphetamines, heroin, ecstasy, and synthetic drugs. However, the most frequent “other drug” used were hallucinogens, with a 2.7% lifetime use. Carbon county had 2.0% and Schuylkill county students had a 2.9% lifetime use of hallucinogens.

Regarding risky behavior while under the influence of drugs and other substances, 7.4% of students in Pennsylvania engaged in binge drinking in the past two weeks and 1.5% of students reported driving while or shortly after drinking. Additionally, 3% of students indicated driving after using marijuana in the past year. In Carbon county, 6.7% of students reported binge drinking in the past two weeks, 1.7% report driving while or shortly after drinking, and 2.4% reported driving after using marijuana in the past year. In Schuylkill county, 7.3% of

¹⁴ <https://www.cdc.gov/ncbddd/fasd/features/teen-substance-use.html>

¹⁵ <https://www.cdc.gov/ncbddd/fasd/features/teen-substance-use.html>

¹⁶ [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\).aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS).aspx)

students engaged in binge drinking in the past 2 weeks, 1.8% of students reported driving while or shortly after drinking, and 2.9% report driving after using marijuana in the past year. Finally, 34.3% of students in the state, 40.6% of students in Carbon county, and 31.7% of students in Schuylkill county, report *taking without permission* as their most frequent source/method of obtaining alcohol. The next highest source for Carbon county was *parents providing it to them*, which was 29.5% of students and 25.7% of students in the state. The next highest source for Schuylkill county was *giving money to someone to buy it for them*, which was 28% of students and 26.7% of students in the state. For prescription drugs, the most common method for obtaining was *taking them from a family member in the house*, a method used by 41.4% of students in the state, 52.4% of students in Carbon county, and 45.1% of students in Schuylkill county. For willingness to use, 24.5% of students across the state, 24.4% of students in Carbon county, and 26.3% of students in Schuylkill county indicated a willingness to use alcohol if presented with the chance.

..... Violence and Bullying

It is important for all children to feel safe at school in order to learn, socialize, and develop. However, PAYS found that violence on school property is a concern, with 24.6% of Schuylkill county students reported being threatened with violent behavior on school property in the past year. This is well above the state at 18.9% and increased 1.6 percentage points since 2017. Additionally, 10.3% of students reported being attacked on school property, 1.4% attacked with a weapon. Finally, 0.9% of Schuylkill county students reported bringing a weapon to school in the past 30 days, which is on par with the state (0.9%) and has decreased in recent years.

In Carbon county, 20.5% of students reported having been threatened with violent behavior on school property, 8.4% of students reported having been attacked on school property, 0.9% of them with a weapon. Additionally, 0.5% of students reported bringing a weapon to school in the past 30 days, 0.4 percentage point drop from 2017.

Bullying is also a factor contributing to violence in schools, prompting some students to skip school, and potentially lowering self-esteem. In Schuylkill county, 29.7% of students reported being a victim of bullying in the past 12 months. The most common way Schuylkill county students reported being abused was emotional abuse, insults, and name calling (60%), followed by physical injury (24%), and threats (21.1%). Additionally, 17.7% of Schuylkill county students report being cyberbullied compared to 14% at the state level. Of the students in Schuylkill county that indicated having been cyberbullied, 49.7% indicated feeling so sad or hopeless every day for the past 2 weeks they stopped doing usual activities; and in the past year, 39.1% of those students seriously considered suicide, 34% made a suicide plan, and 29.5% attempted suicide.

In Carbon county, 26.4% of students reported being a victim of bullying in the past 12 months, an almost 5 percentage point decrease from 2017. The most common way students reported being abused was emotional abuse, insults, and name calling (61.2%), followed by physical injury (24.3%), and threats (23.7%). Additionally, 19% of Carbon county students reported being bullied via text or social media. Of the

students in Carbon county that indicated having been cyberbullied, 54.5% indicated feeling so sad or hopeless every day for the past 2 weeks they stopped doing usual activities; and in the past year, 37.5% of those students seriously considered suicide, 32.4% made a suicide plan, and 27.3% attempted suicide.

..... Mental Health

Mental health is an important indicator for children and adolescents social and emotional development. Important mental health habits such as resilience and good judgment aid in overall well-being. When asked about depression, the most common depressed thought expressed by Schuylkill county students was *at times I think I am no good at all* (37.1%), compared to Carbon county (39.3%) and 36.3% at the state level. Additionally, 38.0% of children in Pennsylvania, 40.6% in Schuylkill county, and 41.7% in Carbon county reported feeling sad or depressed MOST days in the past 12 months.

PAYS also asks questions pertaining to self-harm and suicide. In Pennsylvania, 14.4% of students indicated using self-harm (e.g., cutting, scraping, burning) in the past 12 months. In Schuylkill county, 15.4% of students indicated using self-harm (14.7% in Carbon county). Across the state, 16.2% of students indicated seriously considering suicide, 12.9% planned suicide, 9.7% attempted suicide, and 2.0% needed medical treatment as a result. In Schuylkill county, 17.5% of students seriously considered suicide, 15.0% planned suicide, 11.5% attempted suicide, and 2.4% needed medical treatment as a result. In Carbon county, 17.5% of students seriously considered suicide, 13.5% planned suicide, 10.9% attempted suicide, and 2.8% needed medical treatment as a result.

..... Risk and Protective Factors

The 2019 PAYS illustrated some concerning trends in regard to perceived importance of school with only 53.3% of students in Schuylkill county and 49.3% in Carbon county feeling that school is going to be important for their future. Only 37.2% of students in Schuylkill county reported enjoying being in school during the past year, a 3.4% reduction from 2017. In Carbon county, 38.5% enjoyed being in school. Only 79% of all Schuylkill county students and 79.8% of all Carbon county students report feeling safe at school.

Many risk and protective factors come into play when understanding observed rates of drug use and mental health issues addressed in the CHNA. A risk factor is something that poses potential harm to a student's life and a protective factor is something that can help keep the student safe. The total risk factor profile is evaluated to be at 44% among Schuylkill students and 48% among Carbon students, while total protection risk factor profile is at 53% for Schuylkill students and 54% for Carbon students. The key risk factors were low commitment toward school, perceived risk of drug use and parental attitudes encouraging antisocial behavior. The key protective factors included family opportunities for prosocial involvement, family attachment, and family rewards for prosocial involvement.

..... **Seniors**

According to the ACS (2015-2019), there are an estimated 18,296 people 65 years and older living in the Rural West service area.¹⁷ In Carbon county, the population ages 65 and older is estimated to be 13,196; 28,561 in Schuylkill county. According to the U.S. Census Bureau, the 65 and older population grew 34.2% in the last ten years and by 3.2% from 2018 to 2019.¹⁸ Projections indicate that the 65 and older population will outnumber children by the year 2034.¹⁹ By 2060, adults 65 and older will account for 23.4% of the population, approximately 94.7 million people.

In 2018, 19.2% of the Medicare beneficiaries in Rural West area reported suffering from depression.²⁰ In the same time frame, 19.5% of the Medicare beneficiaries in Carbon county reported suffering from depression and 18.2% in Schuylkill county. The Pennsylvania state average was 19.3% and the United States average was 18.4%.

Important factors to observe in the senior population are related to the prevalence of diseases that begin to appear or worsen with age. Examples include diabetes, heart disease, high blood pressure and high cholesterol. Figure 9 illustrates the percentage of Medicare beneficiaries within the Rural West service area that report having these diseases.²¹ The service area has higher percentages in all categories in comparison to Pennsylvania and the United States; this means there is a large need to improve to reduce disease prevalence in our senior Medicare population.

	Percent of Medicare Beneficiaries					
	St. Luke's Survey	Rural West Service Area	Carbon County	Schuylkill County	Pennsylvania	United States
Diabetes	24.7%	28.7%	29.3%	27.9%	25.8%	27.0%
Heart Attack and other Disease	10.2%	28.8%	29.6%	29.6%	27.3%	26.8%
High Blood Pressure	60.2%	62.9%	63.8%	62.1%	58.5%	57.2%
High Cholesterol	35.8%	56.2%	56.5%	55.9%	52.7%	47.7%

 *Figure 9: Data reported from the St. Luke’s survey and Centers for Medicare and Medicaid Services 2018 and gathered from lehighvalleyhub.org*

¹⁷ <https://www.census.gov/programs-surveys/acs/>

¹⁸ <https://www.census.gov/newsroom/press-releases/2020/65-older-population-grows.html>

¹⁹ <https://www.census.gov/library/visualizations/2018/comm/historic-first.html>

²⁰ https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF

²¹ https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF

Of adults 65 years and older surveyed from the Rural West service area, 24.7% have diabetes, 10.2% have experienced a heart attack or other heart disease, 60.2% have high blood pressure, and 35.8% have high cholesterol. While these numbers are lower than previously reported, chronic disease in seniors continues to be a focus area for healthy aging.

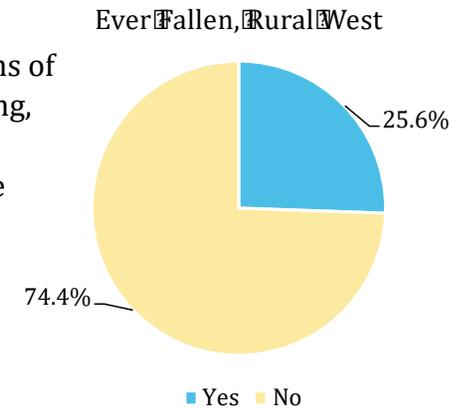
Food insecurity is another important factor in terms of senior health. Feeding America released a 2020 food insecurity report on seniors in America and found that 7.3% of seniors are food insecure.²² The report found that of the food insecure senior population, the highest insecure rates were found in racial and ethnic minorities, those with lower incomes, those who are younger seniors (ages 60-69) and those who are renters.

Each year America's Health Rankings produces senior health reports for each state in the United States. The organization assesses the state on six categories: overall, behaviors, social and economic, physical environment, clinical care and health outcomes, on a scale of 1-50 with a score of 1 as the best. Pennsylvania's best ranking appeared in clinical care (19), and worst in physical environment (46).²³ Clinical care assesses factors like access to care, quality of services provided, and preventive services. Physical environment assesses factors like air and water quality, pollution, and housing conditions.

Senior mental health is a growing concern in the United States, especially with isolation during the COVID-19 pandemic. According to America's Health Rankings (2020), 8.3% of seniors in Pennsylvania experience frequent mental health distress compare to 7.9% nationally.²⁴ Frequent mental distress is defined as 14 or more poor mental health days a month and is associated with physical inactivity, insufficient sleep, obesity, smoking, and alcohol consumption.

Other factors that can contribute to frequent mental distress are the inability to afford healthcare, living alone, activity limitations due to chronic conditions, physical disabilities, or mental health problems.²⁵

One reason that the senior population may not receive adequate mental care is due to the fact that symptoms of some mental health issues like depression or lapses in memory often get dismissed as typical aspects of aging, preventing seniors from getting the care they need.²⁶ Other health conditions related to aging also impact mental health in seniors; older adults with diabetes have a higher risk of developing depression or cognitive



 **Figure 10**

²² <https://www.feedingamerica.org/research/senior-hunger-research/senior>

²³ https://www.americashealthrankings.org/explore/senior/measure/overall_sr_3/state/PA

²⁴ https://www.americashealthrankings.org/explore/senior/measure/overall_sr_3/state/PA

²⁵ https://www.americashealthrankings.org/explore/senior/measure/mental_distress_sr/state/NJ

²⁶ <https://www.agingcare.com/articles/understanding-mental-health-issues-in-seniors-209387.htm>

impairment while adults with coronary heart disease or whom have had a stroke are more likely to have frequent mental distress.^{27,28}

Falls are an important warning sign to look at in senior populations because falls are costly in dollars but also in quality of life. Falls are the leading cause of fatal and nonfatal injuries in older Americans.²⁹ The 2020 senior health report found that 24.2% of older adults in Pennsylvania had fallen within the last 12 months.³⁰ One in five falls among older adults causes serious injury,

including hip fractures and head injuries.³¹ Common factors that can lead to falls are balance and gait, vision, medications, environment, and chronic conditions. However, the number of falls can be reduced through practical lifestyle adjustments, educational programs, and community partnerships.³² Of the adults 65 years and older surveyed for the CHNA from the Rural West service area, 25.6% have ever fallen. Of this group, 19% have fallen 1-2 times, 4% have fallen 3-4 times, and 2% have fallen 5 or more times.

Along with all other health concerns that increase with aging, polypharmacy is one of the hardest to track. Polypharmacy lacks a central definition, but authors Dagli and Sharma define polypharmacy as the use of multiple medications generally referred to as five or more prescribed drugs per day.³³ This is common among the senior population because of the need to treat various diseases and injuries that increase with age. Some symptoms of polypharmacy include tiredness, decreased alertness, incontinence, lack of appetite, falls, depression, tremors, hallucinations, and more.³⁴ In 2020 it was estimated that 44% of men and 57% of women 65 and older take five or more prescription and/or nonprescription drugs a week.³⁵ Polypharmacy has severe negative impacts on patient care and increases the risk for adverse drug reactions.³⁶

By increasing protective factors in the community, the effects of aging can be mitigated, and the senior population can thrive. A protective factor is a condition or characteristic that helps people deal more effectively with stressful events and lessens risk of vulnerability.³⁷ Engaging in physical activities, hobbies, and eating well can have a positive impact on senior well-being. Regular exercise can reduce the risk of some diseases, lower blood pressure, and help cognitive function.³⁸ Self-efficacy, the belief in one's ability to achieve goals and influence life events, is also a potential protective factor and associated with increased energy, better sleep, decreased pain or discomfort, and

²⁷ <https://www.cdc.gov/aging/publications/coronary-heart-disease-brief.html>

²⁸ <https://www.nia.nih.gov/health/diabetes-older-people>

²⁹ <https://www.ncoa.org/healthy-aging/falls-prevention/preventing-falls-tips-for-older-adults-and-caregivers/>

³⁰ https://www.americashealthrankings.org/explore/senior/measure/falls_sr/state/PA

³¹ https://www.americashealthrankings.org/explore/senior/measure/falls_sr/state/NJ

³² <https://www.ncoa.org/healthy-aging/falls-prevention/>

³³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4295469/>

³⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4295469/>

³⁵ <https://www.uspharmacist.com/article/polypharmacy-and-drug-adherence-in-elderly-patients>

³⁶ [https://www.njournal.org/article/S1555-4155\(19\)31051-7/fulltext](https://www.njournal.org/article/S1555-4155(19)31051-7/fulltext)

³⁷ https://www.respectaging.ca/training/Participant_Manual_-_Module_08.pdf

³⁸ <https://www.ncbi.nlm.nih.gov/books/NBK316205/>

increased overall satisfaction with life.³⁹ Engaging seniors in meaningful relationships and coordinating resources in the community can help their overall well-being and protect against some negative effects from aging. Healthy People 2030 initiatives for the senior population include reducing the rate of hospital admissions for diabetes among older adults, falls related deaths, and the proportion of older adults who use inappropriate medicines.⁴⁰

..... **Lesbian, Gay, Bisexual, Transgender (LGBT)**

In 2020, the Bradbury-Sullivan LGBTQ Community Center in Allentown, Pennsylvania, with funding from the PA Department of Health, conducted a Pennsylvania statewide LGBT Needs Assessment (N= 6,582). Results showed that 23.6% of Bradbury-Sullivan respondents have not visited the doctor for a routine check-up in a year or longer and 36% did not visit the dentist in the past year. Additionally, 1 in 3 Bradbury-Sullivan respondents feared seeking healthcare services because of past or potential negative reactions from healthcare providers. Carbon and Schuylkill county data was combined due to the number of participants from each county. The mean age of respondents was approximately 36 years old, and the ages ranged from 12 to 68. Within these two counties, 35% of respondents report being dissatisfied with their life and 80% of people have considered suicide at some point in their life. Figure 11 summarizes the key health outcomes and social determinants of health of Pennsylvania LGBT Health Needs Assessment respondents in Carbon and Schuylkill counties.

From the St. Luke’s CHNA survey, we found that 3.5% of respondents from the Rural West service area identify as LGBT. Additionally, 0.28% of all respondents in the network identify as non-binary, 0.08% identify as genderqueer, 0.06% identify as gender fluid, and 0.1% identify as another gender. When comparing Bradbury-Sullivan LGBT respondents to St. Luke’s CHNA LGBT respondents, rates of cigarette use and e-cigarette use fares similar; cigarettes are the most used tobacco product by respondents in both surveys. However, hookah use (21.9%) and cigar use (20.2%) is much higher in Bradbury-Sullivan respondents than St. Luke’s respondents, 9.7% and 1.6%, respectively.

Category	Outcome Measures	Carbon and Schuylkill County PA LGBT Respondents
Mental Health	Ever Considered Suicide	80.0%
	Dissatisfied with Life	35.0%
Mental Health Access	Had a Mental Health Challenge in the last 12 months	85.0%
	Seen by a Mental Health Provider in the las 12 months	45.0%
Healthcare Barriers	Uninsured	9.5%
	no Primary Care Provider	33.3%
Discrimination and Violence	Experienced Discrimination	70.0%
	Experienced Violence	35.0%
Financial, Food and Housing Insecurity	Financially Insecure	52.4%
	Food Insecure	30.0%
	Ever Homeless	20.0%
Chronic Disease	Diabetes Diagnosis	10.0%
	Pre-Diabetes Diagnosis	20.0%
	HIV Diagnosis	15.0%
Tobacco and Drug Use	Current Cigarette Smoker (18+ years)	38.9%
	Curren E-Cigarette Smokers (all ages)	5.0%
	Ever Engaged in Chemsex	31.6%

Figure 11

³⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4437657/>

⁴⁰ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/older-adults>

LGBT Identification, Rural West

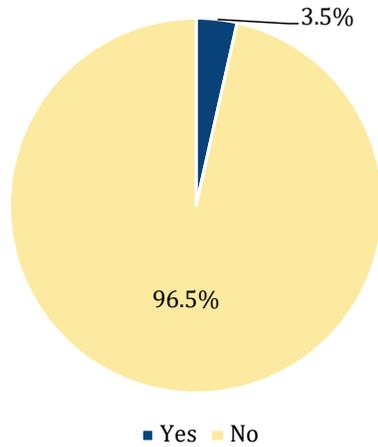


Figure 12

Tobacco Usage, by Network LGBT Respondents and PA Bradbury Sullivan LGBT Respondents

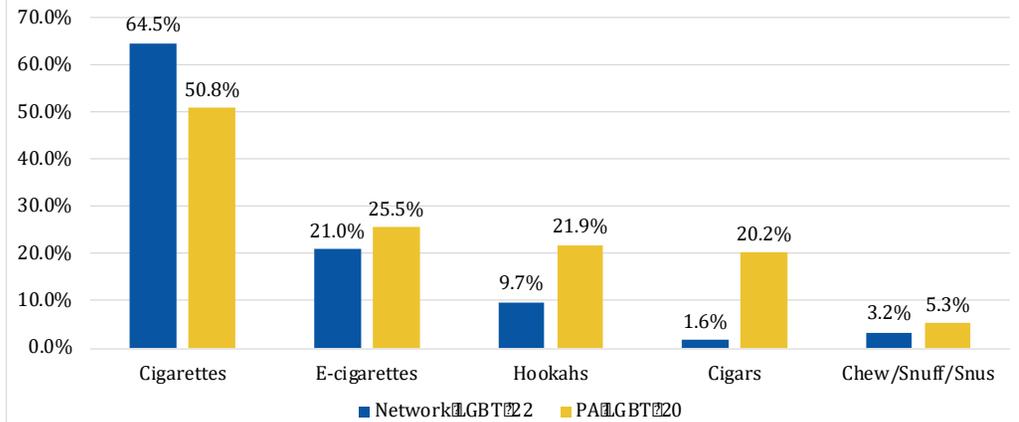


Figure 13

Disabled Population

In the Rural West service area, 16.3% of people have a disability.⁴¹ The six disability types considered in this category are hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty (serious difficulty walking or climbing stairs), self-care difficulty, and independent living difficulty.⁴² Of those who have a disability in the Rural West service area, 7.3% are under 18 years old, 53.1% are between 18 and 64 years, and 39.6% are 65 years and older.

Veteran Population

Of the Rural West population 18 years and older, 9.3% are veterans. The Census Bureau classifies a veteran as “a person 18 years old or over who has served (even for a short time), but is not now serving, on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast

⁴¹ data.census.gov/ Table (S1810)

⁴² <https://www.census.gov/topics/health/disability/guidance/data-collection-ac.html>

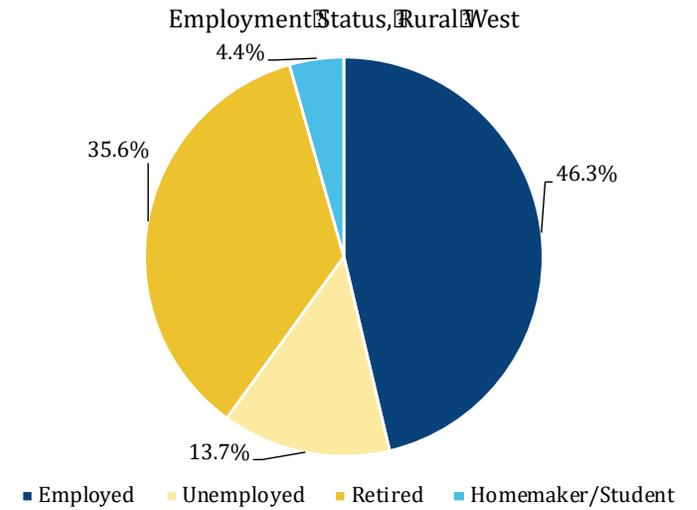
Guard, or who served in the U.S. Merchant Marine during World War II.”⁴³ Of the 9.3% of veterans in the Rural West service area, 92.3% are male and 7.7% are female.⁴⁴

Social and Economic Environment

..... Employment

Unemployment and underemployment have serious impacts on an individual's health. Income is a social determinant of health, and in addition to affecting one's income, unemployment and underemployment can leave individuals without health insurance, paid sick leave and parental leave—exacerbating negative health outcomes when people are at their most vulnerable.

The unemployment rate is 4.4% in Pennsylvania⁴⁵, but rates varied widely during the year due to the COVID-19 pandemic. In January of 2020, Pennsylvania started off the year with an unemployment rate of 4.7%. However, that unemployment rate sky-rocketed to 16.1% by April of 2020—the highest observed since the U.S. Great Depression. Pennsylvania reached unemployment rates below 10% by September of 2020, and 5.4% of residents of both Carbon and Schuylkill counties are unemployed. In recent years, Schuylkill county follows very closely the unemployment trends of both Pennsylvania and the United States, with slightly higher rates, indicating a need for more job opportunities in the county.⁴⁶



 **Figure 14**

The majority of CHNA survey respondents from the Rural West service area are employed (42.5%) or retired (35.6%), while 3.8% of respondents are self-employed, 3.6% are homemakers, and 0.8% are students. Additionally, 13.7% of respondents are unemployed, 1.7% have been out of work less than 1 year, 2.5% have been out of work more than 1 year, and 9.5% are unable to work.

⁴³ <https://www.census.gov/content/dam/Census/topics/population/veterans/guidance/acs-topic-information-veterans.pdf>

⁴⁴ [Data.census.gov/ Table \(S2101\)](https://data.census.gov/ Table (S2101))

⁴⁵ <https://www.countyhealthrankings.org/>

⁴⁶ <https://www.countyhealthrankings.org/>

Household Income and Poverty

The 2020 Federal Poverty Level (FPL) poverty guideline is measured at \$12,880 a year for one person and \$26,500 for a family of four.⁴⁷ If one person is 200% of the FPL, they make \$25,760; if a family of four is 200% of the FPL, they make \$53,000. The ACS (2019) reports that 28.1% of the Rural West service area live 200% below the FPL. This is lower than both Pennsylvania (28.3%) and the United States (30.9%), with zip code 18232 most affected by poverty. The ACS also reports that the median household income in Carbon county is \$57,006 and the median household income in Schuylkill county is \$52,280, which are both lower than the median household income in Pennsylvania (\$61,744) and the United States (\$62,843).

Percent Population with Income at or Below 200% FPL

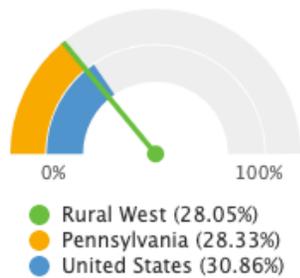


Figure 15

The majority of the CHNA survey respondents in the Rural West service area have a household income of \$60,000 and above (41%), 24% of respondents have a household income of \$24,999 and below, while 35% of respondents have a household income between \$25,000 and \$59,999. While we cannot determine how many people live below the FPL based on household size, these survey results do reveal that there are many people who could use support from food pantries, Federally Qualified Health Centers, government assistance, rent assistance, and more to supplement their income.

Household Income, Rural West

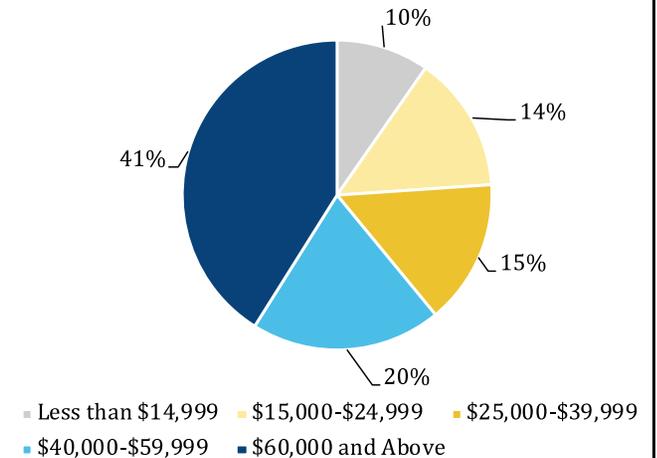


Figure 16

Education

While income and employment are linked to health status, educational attainment is linked to income and employment. These lay the building blocks for the next generation to have improved socioeconomic status and correlated positive health outcomes. The Healthy People

⁴⁷ <https://aspe.hhs.gov/2021-poverty-guidelines>

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2030 high school target graduation rate is 90.7%.⁴⁸ In Pennsylvania, 91% of people have a high school diploma or equivalent. In both Carbon and Schuylkill counties, 89% of people have a high school diploma or equivalent.⁴⁹

Of all CHNA survey respondents from the Rural West service area, 96.2% of respondents have a high school degree or higher, 0.8% of respondents have less than a high school education, and 2.9% have some high school education. Broken down further, 29.9% have only a high school degree, 37.5% have some college or an associate's degree (21% have some college and 16.5% have an associate's), 14% have a bachelor's, and 14.8% have a graduate degree. CHNA survey results show that respondents have much higher rates of higher education than the general public (Figure 17). Additionally, CHNA survey data has lower percentages of respondents with less than a high school diploma compared to ACS findings. It should be noted that people with higher levels of education are more likely to live healthier and longer lives than those with lower education levels.⁵⁰ Healthy People 2030 states that children with less access to quality education are less likely to get safe, high-paying jobs and will be more likely to have health problems (e.g., heart disease, diabetes). This is a significant concern because it is crucial to identify and work with populations with lower access to education and healthcare in order to support healthy lifestyles and overall well-being.

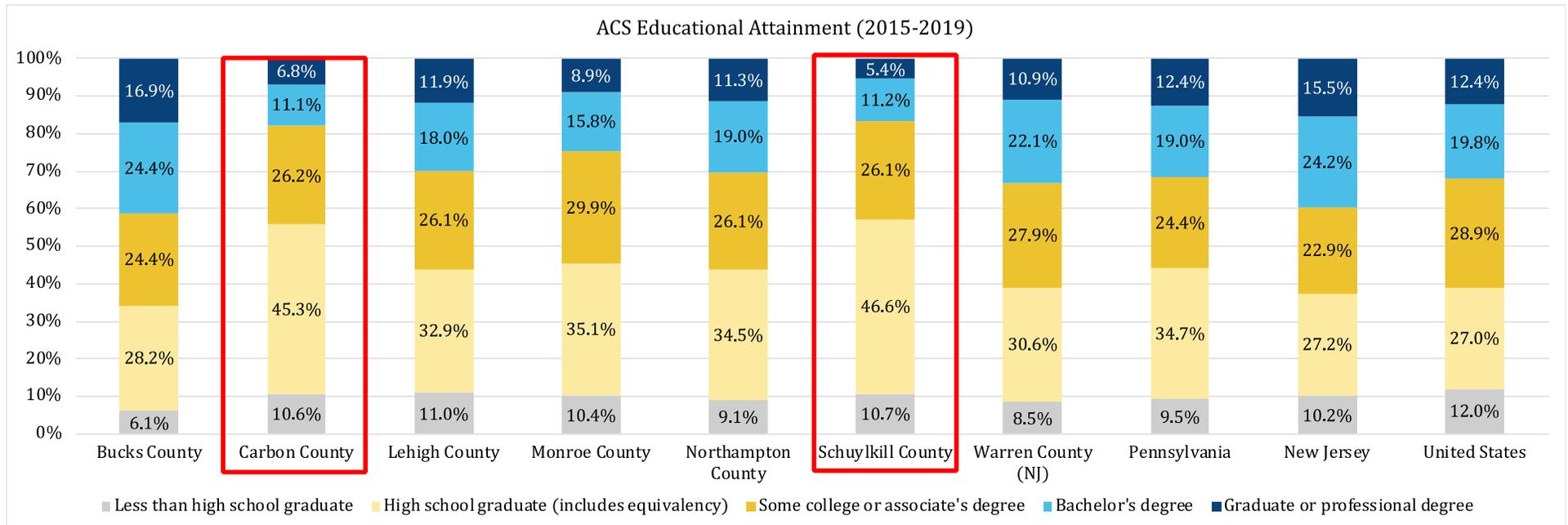


Figure 17

⁴⁸ <https://health.gov/healthypeople/>

⁴⁹ <https://www.countyhealthrankings.org>

⁵⁰ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/education-access-and-quality>

Language

English is the language that is most widely spoken in the Lehigh Valley area and surrounding areas of Pennsylvania. However, many people in our service area may be identified as having limited English proficiency. Limited English proficiency is reported as the percentage of the population five years and older who speak a language other than English at home and speak English less than “very well.” Respondents were not instructed on how to interpret the meaning of “very well.”⁵¹ Speaking and understanding English is important in this service area because most health services are provided in English. Language can also be a large barrier to educational attainment, higher income, employment, accessing healthcare, and good health outcomes. In the Rural West service area, 1.1% of the population is considered to have limited English proficiency, compared to 4.3% in Pennsylvania and 8.4% in the United States (Figure 18).

Population Age 5+ with Limited English Proficiency, Percent

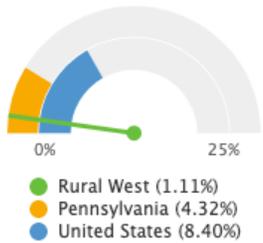


Figure 18

Translators and interpreters are required in locations where either 5% of the community speaks a different language or over 1,000 members speak a different language.⁵² A translator typically only translates the written word while interpreters translate orally. Figure 19 shows the Rural West service area zip codes. Columns shown in red text indicate areas that require translator or interpreter services. Only one zip code in the Rural West service area requires services for Spanish speakers (18210).

Rural West Service Area Languages			
Top Zip Codes	Percentage and Number of Spanish Speakers in Zip Code	Percentage and Number of Spanish Speakers in Zip Code Who Speak English Less than "Very Well"	Next Frequent Language
18235	2.7% (492 people)	6.9% (34 people)	Russian, Polish, or other Slavic languages (1.1%- 195 people)
18252	1.3% (130 people)	21.5% (28 people)	German or other West Germanic languages (1.0%- 103 people)
18071	1.5% (143 people)	46.2% (66 people)	Russian, Polish, or other Slavic languages (1.4%- 131 people)
18229	0.4% (35 people)	25.7% (9 people)	Russian, Polish, or other Slavic languages (0.9- 75 people)
18232	0.8% (28 people)	0.0% (0 people)	Russian, Polish, or other Slavic languages (0.5%- 18 people)
18240	3.6% (138 people)	9.4% (13 people)	German or other West Germanic languages (1.0%- 37 people)
18250	3.3% (92 people)	38.0% (35 people)	Russian, Polish, or other Slavic languages (1.3%- 37 people)
18218	4.4% (92 people)	10.9% (10 people)	Russian, Polish, or other Slavic languages (0.6%- 12 people)
18210	5.2% (363 people)	24.5% (89 people)	Other Indo-European languages (1.2%- 83 people)
17960	0.8% (32 people)	0.0% (0 people)	German or other West Germanic languages (1.7%- 67 people)
18080	2.1% (219 people)	21.0% (46 people)	German or other West Germanic languages (0.7%- 74 people)
18058	0.7% (70 people)	0.0% (0 people)	Russian, Polish, or other Slavic languages (0.8%- 80 people)

Figure 19

⁵¹ https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf

⁵² https://www.hud.gov/program_offices/fair_housing_equal_opp/promotingfh/lep-faq#q3

Safety

Perceived safety is an important component of integrating into one’s community. People who do not feel safe in their neighborhood are less likely to participate in outdoor activities and are more likely to isolate themselves, which can have negative impacts on both physical and mental health. Violent crime, defined as “offenses that involve face-to-face confrontation between a victim and a perpetrator, including homicide, rape, robbery, and aggravated assault”⁵³, is one measure of community safety. In Pennsylvania, the violent crime rate is 315 per 100,000 and the U.S. top performer rate is 63 per 100,000. Carbon county has a violent crime rate of 249 per 100,000, which has declined in recent years. Schuylkill county has a violent crime rate of 319 per 100,000, which have increased significantly since 2014.⁵⁴

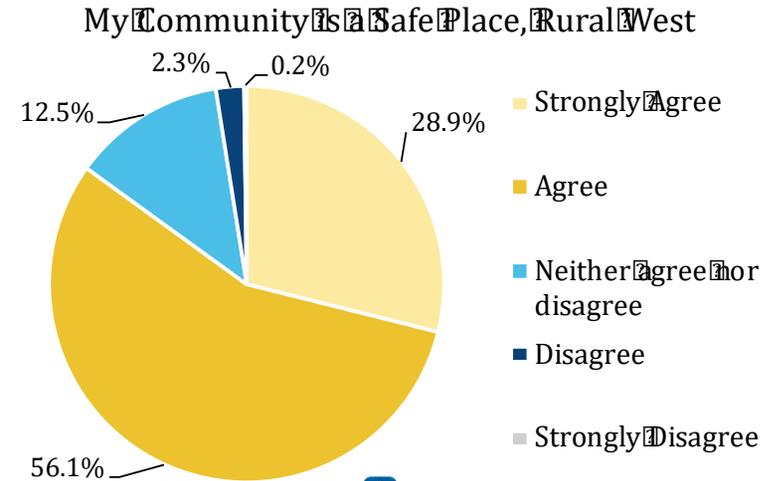


Figure 20

When asked to rate the degree to which they agree that their community is a safe place to live, the majority of CHNA survey respondents from the Rural West service area agreed (56.1%), 28.9% strongly agreed and, 12.5% neither agreed nor disagreed. Additionally, 2.3% of respondents disagreed that their community is a safe place and 0.2% strongly disagreed.

Social Associations

Related to safety, social association is a measure of the emotional and social support available to an individual. This indicator measures the number of membership associations per 10,000 population. The social association indicator in Carbon county is 13.9 and 13.2 in Schuylkill county. These are about 1 point per 10,000 population above Pennsylvania (12.2), but well below U.S. top performers (18.2).⁵⁵

⁵³ <https://www.countyhealthrankings.org/app/new-jersey/2021/measure/factors/43/data>

⁵⁴ <https://www.countyhealthrankings.org>

⁵⁵ <https://www.countyhealthrankings.org>

Physical Environment

..... Food Insecurity

Food insecurity, according to the United States Department of Agriculture (USDA), is the lack of consistent access to a variety of foods for a quality diet.⁵⁶ A quality diet is one with access to a variety of foods that meet the individual's taste and nutritional needs. Very low food security (VLFS) is when normal eating patterns are disrupted and households lack money or other resources to obtain food. The USDA's annual report (2019) found that 10.5% of households nationwide are food insecure, 6.5% of which have low food security and 4.1% have VLFS.⁵⁷ Among households with children, 6.5% are food insecure and 0.6% have VLFS. The USDA report stated that households with children facing VLFS had to skip meals or not eat for entire days due to a lack of money for food.⁵⁸ In 2019, Pennsylvania had a food insecurity rate of 10.2% and VLFS rate of 4.1%. Government assistance programs aim to help reduce food insecurity through national programs such as the Supplemental Nutrition Assistance Program (SNAP), the National School Lunch Program (NSLP), and Women, Infants and Children (WIC). In 2019, an estimated 49.7% of households receiving SNAP were food insecure, 36.9% of households receiving free or reduced school lunches were food insecure, and 34.1% of households receiving WIC were food insecure.⁵⁹

Percent Households Receiving SNAP Benefits

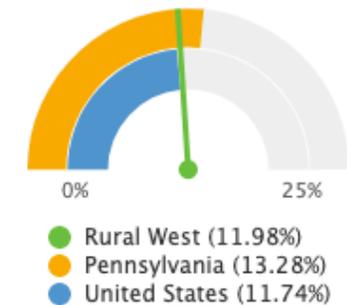


Figure 21

Additionally, 57.7% of households classified as VLFS reported participating in one of these three federal assistance programs, with SNAP having the largest number of participants (47.8%). According to the ACS (2015-2019), 12% of the Rural West service area households received SNAP benefits.⁶⁰ Figure 22 depicts households receiving SNAP benefits by Census tract and Figure 21 illustrates the Rural West service area compared to Pennsylvania and the United States.

⁵⁶ <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx>

⁵⁷ <https://www.ers.usda.gov/webdocs/publications/99282/err-275.pdf?v=4396.4>

⁵⁸ <https://www.ers.usda.gov/webdocs/publications/99282/err-275.pdf?v=4396.4>

⁵⁹ <https://www.ers.usda.gov/webdocs/publications/99282/err-275.pdf?v=4396.4>

⁶⁰ data.census.gov/

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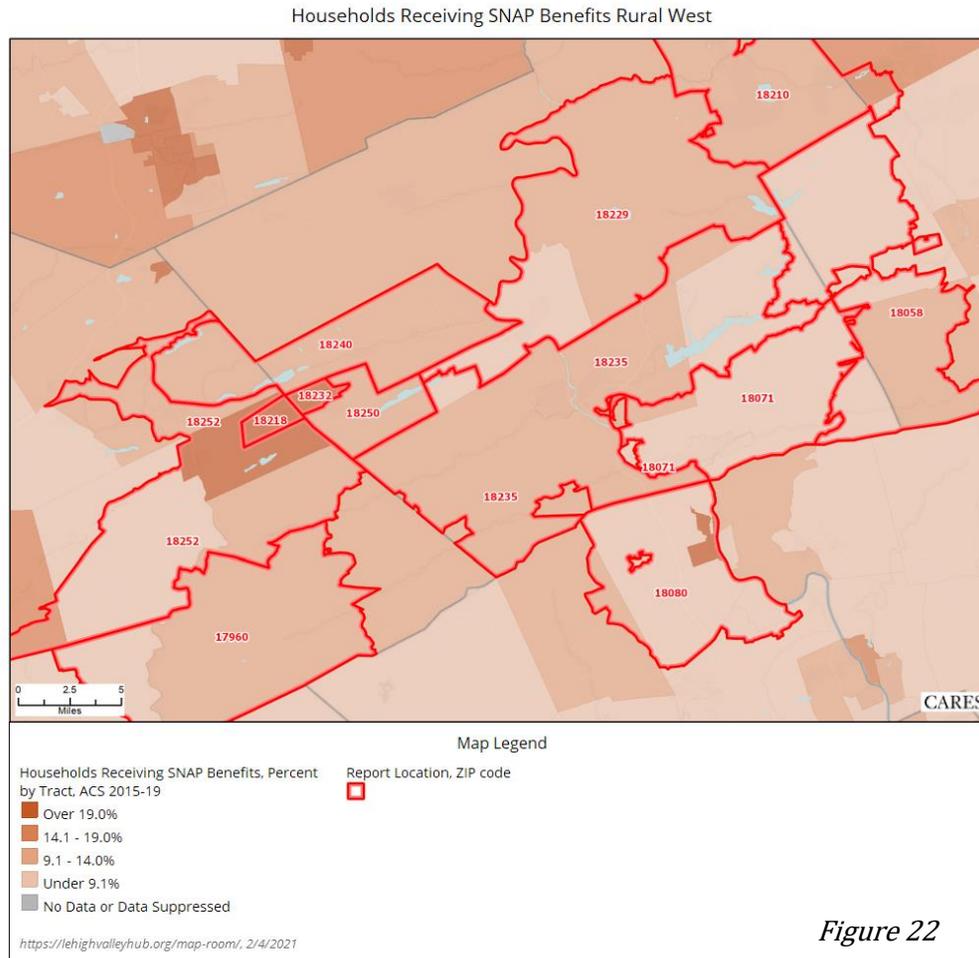


Figure 22

The COVID-19 pandemic required shutdowns across the county in 2020, resulting in many people losing jobs and their ability to afford food and other essential items to survive. Feeding America (2021) projected the potential rates of food insecurity because of COVID-19, estimating more than 50 million people experiencing food insecurity because of the pandemic.⁶¹ Feeding America projects the annual food insecurity rate to increase to 12.9% in 2021, meaning that 1 in 8 people will be food insecure, along with 1 in 6 children. Additionally, the report projects the unemployment rate to be around 6.7% and the annual poverty rate to be 12% in 2021, which is a 0.9% increase from 2020.⁶² The 2020 food insecurity rate in Carbon county was 14.8%, a 24% increase from 2019. In Schuylkill county, the food insecurity rate

⁶¹ <https://www.feedingamerica.org/research/coronavirus-hunger-research>

⁶² <https://www.feedingamerica.org/research/coronavirus-hunger-research>

was 14.9%, a 24% increase from 2019. In 2021, Carbon county is projected to have a food insecurity rate of 12.6%, Schuylkill county 13%, and 12% in Pennsylvania. In 2021, 18.4% of children in Carbon county are projected to be food insecure. Carbon county ranked 34 out of 67 counties, with 1 ranked at the highest food insecurity rate. In Schuylkill county, 18% of children are projected to be food insecure in 2021, ranking 28 out of 67 counties.

Carbon and Schuylkill County Feeding America COVID-19 Food Insecurity Projections						
County	Rank 2021	2021	2020	2019	Change 2019-2020	2021 Child
Carbon	34/67	12.6%	14.8%	11.7%	27.0%	18.4%
Schuylkill	28/67	13.0%	14.9%	12.0%	24.0%	18.0%

Figure 23

Additionally, availability of food can be a concern for children. PAYS asked students if they have been worried about running out of food one or more times in the past year. Across Pennsylvania, 11.7% of students, along with 16.8% of students in Carbon county and 14.6% of students in Schuylkill county, agreed with this statement.⁶³

It is also important to note that the pandemic affected people of color (BIPOC) communities hardest in terms of unemployment and food insecurity. The Latino population had the highest unemployment rate among all racial and ethnic groups, spiking to 18.9% in April 2020. Additionally, Black individuals were already 2.4 times more likely to live in food insecure households than White individuals prior to the pandemic, and now 18 of the 25 counties across the country projected to have the highest food insecurity rates in 2020 are predominantly Black.⁶⁴

Research studies have found that stress from inconsistent access to food can play an active role in fat accumulation and chronic disease.⁶⁵ In non-senior adults, food insecurity is associated with decreased nutrient intakes, increased rates of mental health problems, hypertension, and poor sleep outcomes.⁶⁶ In children, food insecurity is associated with increased risks of asthma, lower nutrient intakes, cognitive problems, aggression, and anxiety. Food insecure children may also have higher risks of hospitalization, poor overall health, asthma, depression, and worsened oral health.⁶⁷ Food deserts also play a role in food insecurity and chronic disease. A food desert is an area that has

⁶³ [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\)-2019.aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS)-2019.aspx)

⁶⁴ <https://www.feedingamerica.org/research/coronavirus-hunger-research>

⁶⁵ <https://doi.org/10.3945/an.112.002543>

⁶⁶ <https://www.healthaffairs.org/doi/10.1377/hlthaff.2015.0645>

⁶⁷ <https://www.healthaffairs.org/doi/10.1377/hlthaff.2015.0645>

limited or nonexistent access to affordable and healthy grocery stores.⁶⁸ Living in a food desert has been linked to a poor diet and a greater risk for obesity, while people who live near a grocery store are more likely to consume fruits and vegetables and less likely to be obese.⁶⁹ Typically, in food deserts, there is a large amount of fast food and corner stores with inexpensive, high calorie food that lacks nutritional value. Long term consumption of unhealthy food can increase likelihood of obesity, type 2 diabetes, heart disease, and other diet-related conditions.⁷⁰

The Robert Wood Johnson Foundation ranks counties based on their food environment index; the food environment index is measured by the “percentage of the population that is low income and does not live close to a grocery store.”⁷¹ Carbon county and Schuylkill county both scored 8.3 out of 10, with 10 as the best. When speaking about challenges in the community, one key informant mentioned the struggle to buy healthy food:



“I see many families struggling with healthy living. It is expensive to buy healthy food... it is much easier to buy the cheaper items that are not healthier. The fast food and dollar items are what concern me with healthy living.”

..... Housing and Blight

Stable and safe housing is an important factor that sets the foundation to achieve quality education, valuable social interactions, and access to nutritious foods. According to Healthy People 2030, safe housing is considered a social determinant of health, which are “conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.”⁷² Housing affects other sectors including education, health, racial equity, economic stability, homelessness, hunger, crime, the environment, and disability rights.⁷³ Over time, homeownership can help build wealth and savings, which are important in relation to health; but not everyone has had equal opportunity to homeownership. Decades of discriminatory practices and inability to benefit from homeownership programs has led to a disproportionate homeownership rate between races.⁷⁴ Healthy People 2030 has made housing a focus, including efforts to reduce the proportion of families that spend 30% or more of income on housing, increase the proportion

⁶⁸ <https://foodispower.org/access-health/food-deserts/>

⁶⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5708005/>

⁷⁰ <https://foodispower.org/access-health/food-deserts/>

⁷¹ <https://www.countyhealthrankings.org/app/pennsylvania/2020/measure/factors/133/description>

⁷² <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>

⁷³ <https://www.opportunityhome.org/related-sectors/>

⁷⁴ <https://www.countyhealthrankings.org/reports/2019-county-health-rankings-key-findings-report>

of homeless adults who get mental health services, and to increase the proportion of homes that have an entrance without steps to make it accessible for people with disabilities.⁷⁵

The COVID-19 pandemic has resulted in thousands of people losing jobs, leaving them vulnerable to evictions or foreclosures. The CDC issued a moratorium on September 4, 2020 temporarily halting evictions. The moratorium was set to end December 31, 2020, however it was pushed back until January 31, 2021 and was extended further to March 31, 2021 as the virus persisted.⁷⁶ The moratorium was meant to keep people in their current housing situations regardless of ability to pay rent, however it did not exclude tenants from paying rent. While this is a temporary solution, people facing eviction are likely to experience high rates of depression, anxiety, and psychological distress.⁷⁷

To get an understanding of how the Rural West service area lives, we asked CHNA survey respondents to indicate their housing type. Due to small sample size, "Other" consists of individuals living in a shelter (0%), group home (0%), senior living (0.3%), homeless (0.2%), or Other (1.4%). The majority of respondents own or have a mortgage on their home (72.2%), followed by renting their home (19.3%), living at a relative's home (5.6%), Other (1.9%) and living at a friend's home (1%).

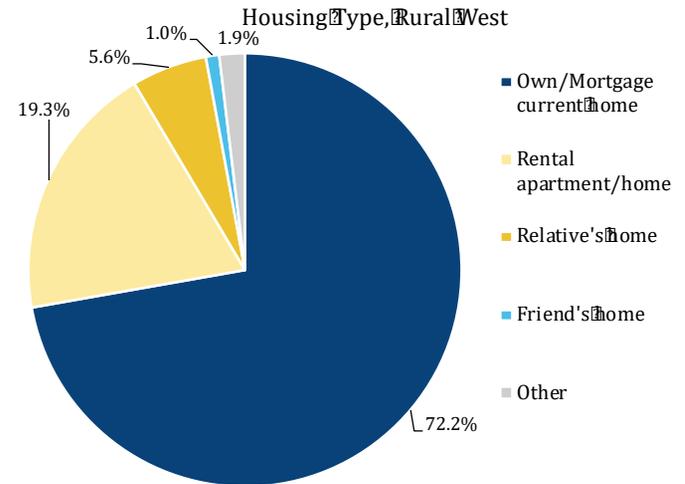


Figure 24

 ***“There are a lot of people in Carbon County that are only in their homes because of the eviction moratorium. Many were living check-to-check and when the pandemic hit their ability to pay rent was gone. I think we are going to have a very bad situation with the moratorium is over.”***

One indicator used to assess housing status is the percentage of households that are cost-burdened. According to the department of Housing and Urban Development (HUD), a household is considered cost-burdened if 30% or more of the income goes toward their mortgage or rent.⁷⁸ A household is considered to be severely cost-burdened if 50% or more of their income goes toward paying mortgage or rent. These situations can be detrimental to an individual's overall well-being because there is less disposable income to pay for food, healthcare

⁷⁵ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/housing-and-homes>

⁷⁶ <https://www.cdc.gov/coronavirus/2019-ncov/more/pdf/CDC-Eviction-Moratorium-01292021.pdf>

⁷⁷ <https://doi.org/10.1016/j.socscimed.2017.01.010>

⁷⁸ https://www.huduser.gov/portal/pdredge/pdr_edge_featd_article_092214.html

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costs, transportation, and other expenses. A 2019 report by the County Health Rankings and Robert Wood Johnson (RWJ) Foundation found that 1 in 10 households across the United States spend more than half of their income on housing costs (severe cost-burdened).⁷⁹ The report also found that severe cost-burdened households are more likely to be affected by food insecurity, child poverty, and poor health.⁸⁰ Additionally, segregated counties across the United States have higher cost-burdened rates for both Black and White households. However, nearly 1 in 4 Black households spend more than half of their income on housing.⁸¹ Cost-burdened housing is a significant problem in the St. Luke's service area as wages and housing costs are not always aligned.

Further assessing the wage disparities, the National Low Income Housing Coalition (NLIHC) released a report on fiscal year 2020's housing costs and wages. Out of all states, Pennsylvania ranks 26 for highest housing costs.⁸² In Pennsylvania, the fair market rent for a two-bedroom apartment is \$1,000, meaning that for a household to not be cost-burdened, they must earn \$3,333 a month or \$39,992 annually.⁸³ This translates into an hourly wage of \$19.23, however Pennsylvania's state minimum wage is only \$7.25 an hour. Someone living on the state minimum wage would need to work 106 hours a week to afford rent each month. The Lehigh Valley (Allentown, Bethlehem, Easton) is the fourth most expensive area in Pennsylvania, requiring \$19.73 an hour to afford an apartment and not be cost-burdened. In Carbon county, the fair market rent price for a two-bedroom apartment is \$1,026 a month, requiring \$19.73 an hour or \$41,040 annually to afford an apartment and not be cost-burdened. Based on the 2020 estimated hourly mean wage for renters in Carbon county, which is \$10.58 an hour, an individual would need to work 1.9 full time jobs to afford an apartment.

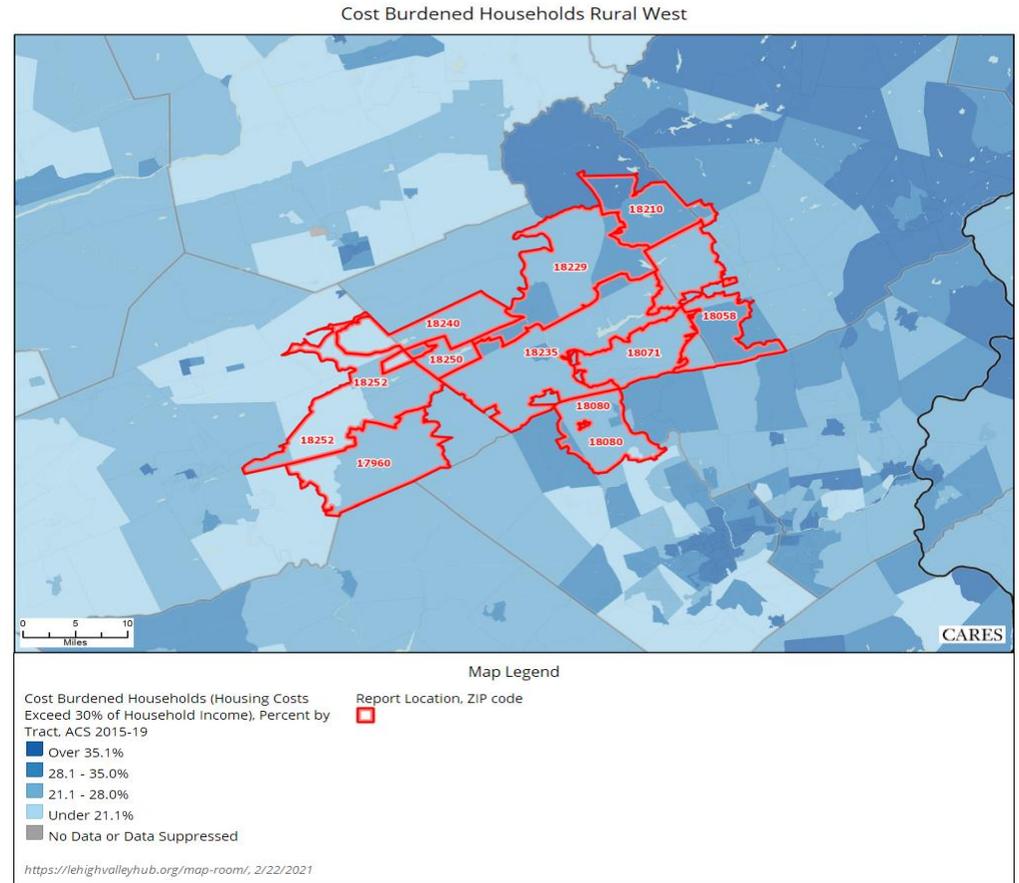


Figure 25

⁷⁹ <https://www.countyhealthrankings.org/reports/2019-county-health-rankings-key-findings-report>

⁸⁰ <https://www.countyhealthrankings.org/reports/2019-county-health-rankings-key-findings-report>

⁸¹ <https://www.countyhealthrankings.org/reports/t>

⁸² <https://reports.nlihc.org/oor>

⁸³ <https://reports.nlihc.org/sites/default/files/oor/files/reports/state/PA-2020-OOR.pdf>

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In Schuylkill county, the fair market rent price for a two-bedroom apartment is \$723, requiring a household to make \$13.90 an hour or \$28,920 a year, the lowest of all SLUHN service area counties. Based on the 2020 estimated hourly mean wage for renters in Schuylkill county, which is \$11.52 an hour, an individual would need to work 1.2 jobs to afford an apartment.⁸⁴ Figure 25 depicts the cost-burdened households in the Rural West service area.



***“The biggest need is housing. Adequate and safe affordable housing. It is cheaper to live in Schuylkill county, but is it adequate? We have the oldest housing stock in the county and in the state of Pennsylvania. Our median year is 1943 and we do not have a lot of new development so there is an incredible need to preserve what we already have and prevent vacancies that contribute to blight. This happened pre-COVID and during COVID.*”**

The average cost-burdened rate of the 10 lowest income census tracts in Carbon county is 29.7%, which is slightly above the Pennsylvania percentage (28.9%), but below the national percentage (31.8%). Census tract 201.06 has the highest number of cost-burdened households in Carbon county with 39% of households paying 30% or more of their income towards mortgage or rent (Figure 26).

Rural West (Carbon)		
Geographic Area Name (Zip Code)	Median Household Income (lowest first)	% Cost Burdened
Census Tract 204, Carbon County, PA (18232)	\$ 34,426	30.7%
Census Tract 201.06, Carbon County, PA (18210, 18229, 18264, & 18661)	\$ 39,613	39.0%
Census Tract 206, Carbon County, PA (18212 & 18235)	\$ 42,294	35.1%
Census Tract 203, Carbon County, PA (18232, 18240, 18250, & 18252)	\$ 50,448	28.5%
Census Tract 202, Carbon County, PA (18201, 18216, 18224, 18230, 18237, 18254, & 18255)	\$ 52,112	23.2%
Census Tract 207, Carbon County, PA (18071, 18229, & 18235)	\$ 59,304	28.3%
Census Tract 201.02, Carbon County, PA (18229, 18235, & 18250)	\$ 59,349	31.1%
Census Tract 201.05, Carbon County, PA (18210, 18229, & 18235)	\$ 61,250	31.9%
Census Tract 205, Carbon County, PA (18053, 18211, & 18235)	\$ 64,317	24.9%
Census Tract 209, Carbon County, PA (18012, 18030, 18071, & 18244)	\$ 66,353	24.6%
Average 10 Census Tracts	\$ 52,947	29.7%
Pennsylvania	\$ 61,744	28.9%
National	\$ 62,843	31.8%

Figure 26: Data is reported from the 5-year ACS (2015-2019) estimates by the U.S. Census Bureau

⁸⁴ <https://reports.nlihc.org/sites/default/files/oor/files/reports/state/PA-2020-OOR.pdf>

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The average cost-burdened rate in Schuylkill county is higher than the Pennsylvania state average (28.9%), and the national average (31.8%). Additionally, 9 out of these 10 counties have over 25% of houses qualifying as cost-burdened. Census tracts 19, 15 and 2 have the highest number of houses paying more than 30% of income towards rent or mortgage. These percentages are 46.9%, 42.0% and 41.9%, respectively (Figure 27).

Two other important metrics to look at are the percentage of households that lack complete kitchens and the percentage of households that lack complete plumbing. It is important to assess the conditions inside of houses because they give an indication of living standards and assess the quality of household facilities. According to the 2019 ACS subject definitions guide, a complete kitchen must include a sink with a faucet, a stove or range, and a refrigerator.⁸⁵ If a household lacks any one or more of these facilities, the household is considered to lack a complete kitchen. A complete plumbing facility must include hot and cold running water, and a bathtub or shower.⁸⁶ If a household lacks one or both facilities, the house is considered to lack complete plumbing. Without a complete kitchen, families are unable to cook nutritious meals and may rely more

Rural West (Schuylkill)		
Geographic Area Name (Zip Code)	Median Household Income (lowest first)	% Cost Burdened
Census Tract 19, Schuylkill County, PA (17901)	\$ 27,054	46.9%
Census Tract 6.02, Schuylkill County, PA (17976)	\$ 27,614	34.5%
Census Tract 6.01, Schuylkill County, PA (17976)	\$ 28,603	39.2%
Census Tract 15, Schuylkill County, PA (17954)	\$ 31,100	42.0%
Census Tract 5, Schuylkill County, PA (17948 & 17976)	\$ 32,669	30.8%
Census Tract 2, Schuylkill County, PA (18231 & 18237)	\$ 33,315	41.9%
Census Tract 26, Schuylkill County, PA (18252)	\$ 36,574	28.7%
Census Tract 28, Schuylkill County, PA (18218 & 18252)	\$ 36,953	20.8%
Census Tract 10, Schuylkill County, PA (17921)	\$ 37,457	26.5%
Census Tract 23, Schuylkill County, PA (17970 & 17971)	\$ 40,884	29.1%
Average 10 Census Tracts	\$ 33,222	34.0%
Pennsylvania	\$ 61,744	28.9%
National	\$ 62,843	31.8%

Figure 27: Data is reported from the 5-year ACS (2015-2019) estimates by the U.S. Census Bureau

Rural West (Schuylkill)		
Geographic Area Name (Zip Code)	Median Household Income (lowest first)	% Lacking complete kitchen
Census Tract 19, Schuylkill County, PA (17901)	\$ 27,054	9.9%
Census Tract 6.02, Schuylkill County, PA (17976)	\$ 27,614	12.4%
Census Tract 6.01, Schuylkill County, PA (17976)	\$ 28,603	14.3%
Census Tract 15, Schuylkill County, PA (17954)	\$ 31,100	3.2%
Census Tract 5, Schuylkill County, PA (17948 & 17976)	\$ 32,669	22.7%
Census Tract 2, Schuylkill County, PA (18231 & 18237)	\$ 33,315	3.5%
Census Tract 26, Schuylkill County, PA (18252)	\$ 36,574	3.5%
Census Tract 28, Schuylkill County, PA (18218 & 18252)	\$ 36,953	5.5%
Census Tract 10, Schuylkill County, PA (17921)	\$ 37,457	13.1%
Census Tract 23, Schuylkill County, PA (17970 & 17971)	\$ 40,884	4.1%
Average 10 Census Tracts	\$ 33,222	9.2%
Pennsylvania	\$ 61,744	3.4%
National	\$ 62,843	2.8%

Figure 28: Data is reported from the 5-year ACS (2015-2019) estimates by the U.S. Census Bureau

⁸⁵ https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf

⁸⁶ https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf

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heavily on fast food or other ready-made food. For households lacking complete plumbing facilities, families may not be able to bathe regularly leading to worsened hygiene.

The average number of households that lack a complete kitchen in the lowest income census tracts from Carbon county is 4.2%, which is well above both the Pennsylvania and national percentages. Census tract 206 has the highest number of households who lack a complete kitchen (9.1%).

The average percent of households lacking a complete kitchen in the 10 lowest income tracts from Schuylkill county is 9.2%, which is well above the Pennsylvania and national percentage. Schuylkill county has 4 out of 10 census tracts who have 10% or more households lacking a complete kitchen; 12.4% of households in tract 6.02, 14.3% in tract 6.01, 22.7% in tract 5, and 13.1% in tract 10. This is the most out of any county that St. Luke’s serves.

Rural West (Carbon)		
Geographic Area Name (Zip Code)	Median Household Income (lowest first)	% Lacking complete kitchen
Census Tract 204, Carbon County, PA (18232)	\$ 34,426	5.5%
Census Tract 201.06, Carbon County, PA (18210, 18229, 18264, & 18661)	\$ 39,613	0.7%
Census Tract 206, Carbon County, PA (18212 & 18235)	\$ 42,294	9.1%
Census Tract 203, Carbon County, PA (18232, 18240, 18250, & 18252)	\$ 50,448	4.3%
Census Tract 202, Carbon County, PA (18201, 18216, 18224, 18230, 18237, 18254, & 18255)	\$ 52,112	5.7%
Census Tract 207, Carbon County, PA (18071, 18229, & 18235)	\$ 59,304	3.2%
Census Tract 201.02, Carbon County, PA (18229, 18235, & 18250)	\$ 59,349	0.8%
Census Tract 201.05, Carbon County, PA (18210, 18229, & 18235)	\$ 61,250	2.2%
Census Tract 205, Carbon County, PA (18053, 18211, & 18235)	\$ 64,317	4.4%
Census Tract 209, Carbon County, PA (18012, 18030, 18071, & 18244)	\$ 66,353	6.1%
Average 10 Census Tracts	\$ 52,947	4.2%
Pennsylvania	\$ 61,744	3.4%
National	\$ 62,843	2.8%

Figure 29: Data is reported from the 2015-2019 5 year ACS estimates by the US Census Bureau

Rural West (Carbon)		
Geographic Area Name (Zip Code)	Median Household Income (lowest first)	% Lacking complete plumbing
Census Tract 204, Carbon County, PA (18232)	\$ 34,426	3.6%
Census Tract 201.06, Carbon County, PA (18210, 18229, 18264, & 18661)	\$ 39,613	1.1%
Census Tract 206, Carbon County, PA (18212 & 18235)	\$ 42,294	6.1%
Census Tract 203, Carbon County, PA (18232, 18240, 18250, & 18252)	\$ 50,448	3.9%
Census Tract 202, Carbon County, PA (18201, 18216, 18224, 18230, 18237, 18254, & 18255)	\$ 52,112	4.8%
Census Tract 207, Carbon County, PA (18071, 18229, & 18235)	\$ 59,304	2.7%
Census Tract 201.02, Carbon County, PA (18229, 18235, & 18250)	\$ 59,349	0.8%
Census Tract 201.05, Carbon County, PA (18210, 18229, & 18235)	\$ 61,250	2.2%
Census Tract 205, Carbon County, PA (18053, 18211, & 18235)	\$ 64,317	2.2%
Census Tract 209, Carbon County, PA (18012, 18030, 18071, & 18244)	\$ 66,353	2.3%
Average 10 Census Tracts	\$ 52,947	3.0%
Pennsylvania	\$ 61,744	2.6%
National	\$ 62,843	2.1%

Figure 30: Data is reported from the 5-year ACS (2015-2019) estimates by the U.S. Census Bureau

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The average percent of households lacking complete plumbing in the 10 lowest income tracts from Carbon county is 3.0%. This is slightly above the Pennsylvania and national percentages. Similar to kitchens, census tract 206 has the highest number of households lacking complete plumbing, with 6.1% of households.

The average percent of households lacking complete plumbing in the 10 lowest income tracts from Schuylkill county is 9.4%. Similar to lacking a complete kitchen, this is well above the Pennsylvania and national percentages.

Additionally, 4 out of the 10 census tracts have 10% or more households who lack complete plumbing, 12.8% in tract 19, 20.4% in tract 6.02, 19.6% in tract 6.01, and 17.0% in tract 5. These percentages are highest among the lowest income tracts from the counties that St. Luke's serves.

Homelessness is another important indicator when assessing housing. Each year, HUD collects homeless data across the country, also known as the Continuums of Care data. As of January 2020, an estimated 13,375 people in Pennsylvania experienced homelessness on any given day.⁸⁷ Of the 13,375 people who reported experiencing homelessness, 1,550 were family households, 977 were Veterans, 716 were unaccompanied young adults (ages 18-24), and 1,772 were individuals experiencing chronic homelessness.⁸⁸

Each school year, the Pennsylvania Education for Children and Youth Experiencing Homelessness Program records the number of homeless students served by the program. The population includes children under the age of 5 and youth enrolled in pre-K through 12th grade.⁸⁹ The unique count is based on where the child was identified as homeless and attributed to the local education agency.⁹⁰ Of the eight counties that

Rural West (Schuylkill)		
Geographic Area Name (Zip Code)	Median Household Income (lowest first)	% Lacking complete plumbing
Census Tract 19, Schuylkill County, PA (17901)	\$ 27,054	12.8%
Census Tract 6.02, Schuylkill County, PA (17976)	\$ 27,614	20.4%
Census Tract 6.01, Schuylkill County, PA (17976)	\$ 28,603	19.6%
Census Tract 15, Schuylkill County, PA (17954)	\$ 31,100	2.1%
Census Tract 5, Schuylkill County, PA (17948 & 17976)	\$ 32,669	17.0%
Census Tract 2, Schuylkill County, PA (18231 & 18237)	\$ 33,315	3.3%
Census Tract 26, Schuylkill County, PA (18252)	\$ 36,574	5.3%
Census Tract 28, Schuylkill County, PA (18218 & 18252)	\$ 36,953	1.3%
Census Tract 10, Schuylkill County, PA (17921)	\$ 37,457	8.4%
Census Tract 23, Schuylkill County, PA (17970 & 17971)	\$ 40,884	3.7%
Average 10 Census Tracts	\$ 33,222	9.4%
Pennsylvania	\$ 61,744	2.6%
National	\$ 62,843	2.1%

Figure 31: Data is reported from the 5-year ACS (2015-2019) estimates by the U.S. Census Bureau

⁸⁷ <https://www.usich.gov/homelessness-statistics/pa/>

⁸⁸ https://files.hudexchange.info/reports/published/CoC_PopSub_State_PA_2019.pdf

⁸⁹ <https://www.education.pa.gov/Documents/K-12/Homeless%20Education/Reports/2018-19%20Pennsylvania%20ECYEH%20Counts%20by%20Region%20County%20State.pdf>

⁹⁰ <https://www.education.pa.gov/Documents/K-12/Homeless%20Education/Reports/2018-19%20Pennsylvania%20ECYEH%20Counts%20by%20Region%20County%20State.pdf>

St. Luke's reaches in Pennsylvania, 7,656 students were identified as homeless in the 2018-2019 school year. This number does not encompass the entire child homeless population as it does not include children who were not served by this program (i.e., students not in the Pennsylvania public school system). During the 2018-2019 school year, Schuylkill county reported 436 homeless students, which is well above the previous year with a reported 358 homeless students.⁹¹ Carbon county reported 111 homeless students in the 2018-2019 school year, which is slightly above the previous school year which reported 89 homeless students.

 ***“Homelessness, and the lack of shelters, has been a big issue in the area. Those pressures from the pandemic are just adding to the problem.”***

The Robert Wood Johnson Foundation produces County Health Rankings measuring many social determinants of health. One measure pertinent to housing is the percent of people living with severe housing problems. A household is considered to have a severe housing problem if one or more of these conditions is met: lacking a complete kitchen, lacking complete plumbing facilities, house is overcrowded, or the house is severely cost-burdened.⁹² Carbon county ranks 50 and Schuylkill county ranks 25 out of 67 Pennsylvania counties for severe housing problems, with 1 ranked as the least amount of problems. In Carbon county, 14% of residents have one or more of the problems listed above, compared to 11% of residents in Schuylkill county and 15% of households in Pennsylvania.⁹³

..... Air and Water Quality

Air quality is a growing concern, especially in urbanized and industrialized areas. Poor air quality can irritate the eyes, nose, and throat, and cause long term health effects.⁹⁴ Air quality is typically assessed by two components, ozone (O₃) and Particulate Matter (PM). Ozone is a gas molecule that is harmful to breathe and aggressively attacks lung tissue. Ozone is dangerous because it can be carried by wind far downstream, causing harm to people in multiple areas. Ozone can also cause premature death, immediate breathing problems, long term exposure risks, and potential cardiovascular harm.⁹⁵ PM is a particle that occupies the air we breathe but is small enough that we cannot see it unless there are large amounts of PM in one area. Large amounts of PM would result in reduced visibility, or haziness in the air. PM 2.5 is the smallest particle and most dangerous size because it can easily pass through lung tissue and into the blood stream.⁹⁶ Objectives for environmental health determined by Healthy People 2030 are to increase the proportion of people with safe water to drink, reduce the

⁹¹ <https://www.education.pa.gov/Documents/K-12/Homeless%20Education/Reports/2017-18%20Unique%20and%20Duplicate%20Counts%20by%20County.pdf>

⁹² <https://www.countyhealthrankings.org/app/pennsylvania/2020/measure/factors/136/description>

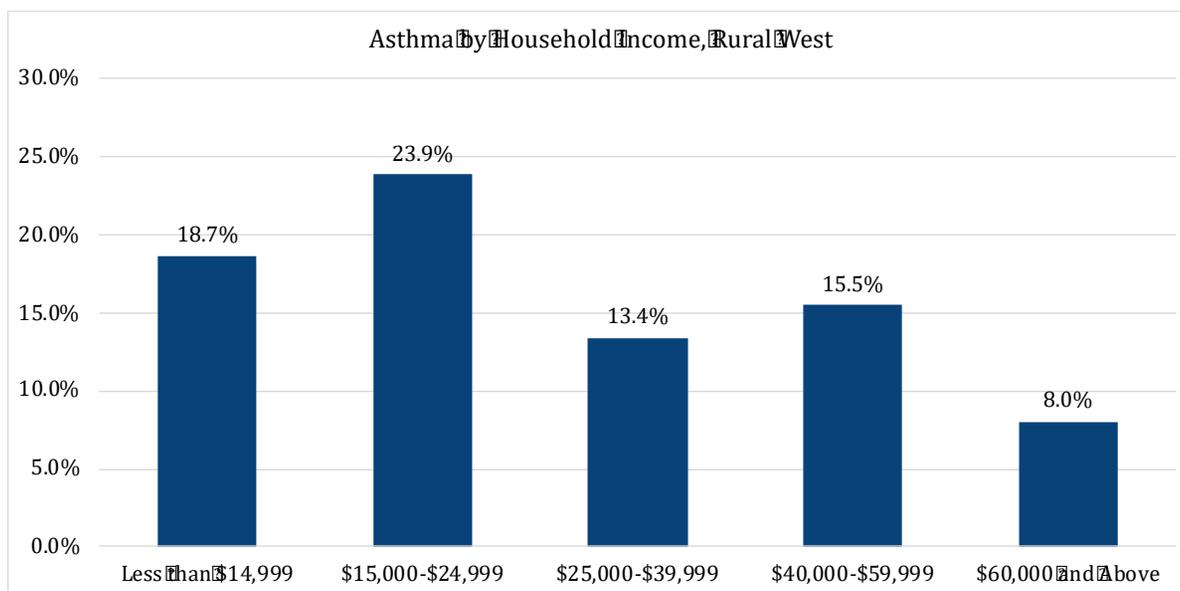
⁹³ <https://www.countyhealthrankings.org/app/pennsylvania/2021/measure/factors/136/data?sort=sc-2>

⁹⁴ <https://www.sparetheair.org/understanding-air-quality/air-pollutants-and-health-effects/whos-at-risk>

⁹⁵ <https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/ozone>

⁹⁶ <https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/particle-pollution>

amount of toxic pollutants in the environment, and to reduce the number of days people are exposed to unhealthy air.⁹⁷ Neither Carbon nor Schuylkill county reported data for O₃ or PM in 2016-2018.



 *Figure 32*

Additionally, our survey asks respondents to indicate if they have ever been diagnosed with asthma. When distributed by income, 23.9% of respondents in the Rural West service area who make \$15,000-\$24,999 have asthma. While there is no consistent trend by income and asthma, those whose household income is lower than \$40,000 have somewhat higher rates of asthma than above \$40,000.

Water quality is another important aspect of the environment. Water is delivered in two ways, through wells and through municipalities. Each municipality is required to report water quality reports each year, but well quality is difficult to track because it is unregulated by the state.

The 2019 Pennsylvania Department of Environmental Protection (DEP) water report indicated that 11% of Pennsylvania households use well water and 89% of households use community water systems.⁹⁸ The report tracks violations within the Maximum Contaminant Level (MCL) which is the highest level of contaminant allowed in drinking water. The water is permitted to have some contaminants if it does not exceed the MCL. This is important to note because even though a water system does not have violations, it does not necessarily mean the water is completely safe. The water report also tracks the Maximum Residual Disinfectant Level (MRDL) which limits the amount of disinfectants allowed in safe drinking water.⁹⁹ Some of the typical contaminants tested are chlorine, fluoride, radium, turbidity, organic carbon, lead and copper.¹⁰⁰ Water contaminants can result in a variety of negative health impacts, like gastrointestinal illness, worsened nervous or reproductive system, and a variety of diseases (e.g., cancer).¹⁰¹ The effects can also be short term or long term, while also going unseen, potentially worsening the effects over time.

⁹⁷ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/environmental-health>

⁹⁸ http://files.dep.state.pa.us/Water/BSDW/DrinkingWaterManagement/PublicDrinkingWater/PA_DEP_2019_Annual_Compliance_Report.pdf

⁹⁹ <https://www.state.nj.us/dep/watersupply/pdf/violations2019.pdf>

¹⁰⁰ http://files.dep.state.pa.us/Water/BSDW/DrinkingWaterManagement/PublicDrinkingWater/PA_DEP_2019_Annual_Compliance_Report.pdf

¹⁰¹ <https://www.epa.gov/report-environment/drinking-water>

Carbon county is served mostly by well water, but there is data from the Jim Thorpe Borough Water Department.¹⁰² Jim Thorpe West 2019 water reports indicated there were no contaminants that exceeded limits set by the Environmental Protection Agency (EPA). However, the water department did receive eight violations for late reports throughout the year. Jim Thorpe East also reported no water quality violation, but they received six violations for late reports.

Schuylkill county residents receive water from the Schuylkill County Municipal Authority.¹⁰³ The Authority has seven water treatment facilities across the county. The 2019 report concluded there were no MCLs or treatment techniques exceeded. A treatment technique is a process to reduce the number of contaminants in water. Though there were no contaminant violations, the county failed to collect four samples of total trihalomethanes (TTHMs) and halo acetic acids (HAA5s) for the 2nd and 3rd quarters. Instead, the county only collected three samples. This resulted in a monitoring violation, but the county did meet the reporting requirements for the 4th quarter. It is also important to understand the risk of lead in drinking water. While most counties in the St. Luke’s service area do not have lead that contaminates drinking water from the source, lead pipes, faucets, and other risks of lead poisoning may exist in homes. Higher prevalence for lead poisoning is found in low income homes.¹⁰⁴

..... Transportation

The type of transportation a person takes to work can be a good indicator of health. Walking, biking, or taking public transportation to work promotes regular physical activity and decreases air pollution, which in turn decrease chronic diseases and obesity rates.¹⁰⁵ A goal of Healthy People 2030 is to increase the amount of people using public transportation to get to work.¹⁰⁶ People who drive to work are less likely to reach the recommended physical activity goal for the day. Driving to work can also have a significant effect on obesity, diabetes and heart disease.¹⁰⁷ However, it is not always feasible for someone to

Rural West (Schuylkill & Carbon)				
Mode of Transportation to Work	Schuylkill %	Carbon %	PA %	US %
Drive Alone (Car, Truck or Van)	83.4%	83.3%	75.9%	76.3%
Carpool	9.7%	8.9%	8.5%	9.0%
Use Public Transportation	0.5%	0.5%	5.6%	5.0%
Taxi	0.2%	0.0%	0.1%	0.2%
Motorcycle	0.1%	0.0%	0.1%	0.2%
Bike	0.1%	0.1%	0.5%	0.5%
Walk	2.6%	1.9%	3.6%	2.7%
Other	0.6%	0.7%	0.8%	0.9%
Work From Home	2.8%	4.6%	4.9%	5.2%

Figure 33

¹⁰² <https://www.jtborough.org/water/pages/2019-annual-drinking-water-quality-reports>

¹⁰³ <https://www.scmawater.com/wp-content/uploads/2020/10/WQR-Rev-1PDF.pdf>

¹⁰⁴ https://www.cdc.gov/nceh/lead/prevention/populations.htm?CDC_AA_refVal=https%3A%2F%2F

¹⁰⁵ <https://ephtracking.cdc.gov/showCommunityDesignAddLinkTypesOfTransportationToWork>

¹⁰⁶ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/transportation>

¹⁰⁷ <https://ephtracking.cdc.gov/showCommunityDesignAddLinkTypesOfTransportationToWork>

walk, bike or take public transportation to work as many cities lack the proper infrastructure. Figure 33 illustrates the modes of transportation used to get to work in Schuylkill county, Carbon county, Pennsylvania and the United States. For each geography, driving alone is the most common mode of transportation, 83.4% in Schuylkill county, 83.3% in Carbon county, 75.9% in Pennsylvania, and 76.3% in the United States. However, a large portion of people in Schuylkill county (9.7%) and Carbon county (8.9%) carpool to work, which is slightly above Pennsylvania and the United States averages. However, only a small amount of people use public transportation or walk to work in both counties.

Though a large portion of Schuylkill county residents drive to work, 9.0% of people in Schuylkill county do not have access to a car. This percentage is above the United States (8.6%) but still below Pennsylvania (10.9%).¹⁰⁸ Additionally, this is the highest percentage among all St. Luke's service area counties. In Carbon county, 5.7% of people do not have access to a car, which is much lower than Schuylkill county, Pennsylvania, and the United States. People who do not have access to a car must then rely on public transportation, walking or other modes of transportation. This can be an issue because poor public transportation and lack of walkability in some parts of the county may lead to individuals missing health appointments or screenings, which are crucial to healthy living.

In Schuylkill county, residents have access to two public transportation systems, Schuylkill Transportation System (STS) and Berks Area Regional Transportation Authority (BARTA). Both STS and BARTA have fixed bus routes as well as special van services for people with disabilities, people in need of medical assistance, and people 65 years and older. Though BARTA mainly has routes in Berks county, there are many routes with stops in Schuylkill county. There is also a connection point to transfer on to BARTA from STS or vice versa.^{109,110}



“Getting people to jobs and to services is a big hurdle in the area. Public transportation is quite limited and if you don’t have access to a car, you are stuck.”

Residents in Carbon county have access to the Carbon County Community Transit (CCCT) for public transportation. CCCT offers a fixed bus route throughout the county as well as a shared-ride/van service for people with disabilities, people who need medical assistance, and people 65 years and older.¹¹¹ Effective March 26, 2020, the Lehigh and Northampton Transportation Authority (LANTA) began administering these transportation services in contract with CCCT.

Key informants from both Carbon and Schuylkill county touched on the need for better access to public transportation:



“We do have a lot of people who are struggling because of the whole transportation piece that they are unable to get to medical appointments and take care of basic medical needs. Transportation plays an issue there.”

¹⁰⁸ Data.census.gov (Table B25044)

¹⁰⁹ <http://www.bartabus.com/>

¹¹⁰ <https://go-sts.com/>

¹¹¹ <https://www.carboncounty.com/index.php/2-uncategorised/131-public-transportation>



“Clients need a way to get around if they do not have a vehicle. Typically, our clients have a car or have someone to depend on but it would be so much easier if they didn't have to depend on other people, so they could call and get a bus ride to go to appointments.”

Clinical Care

..... Access to Care

Many community forum participants mentioned how COVID-19 has impacted access to care:



“With the high number of cases we experience, finding sufficient care options and support is difficult.”

..... Primary Care Providers (PCPs)

Primary care providers (PCPs) are gatekeepers to the healthcare system. Often, they are a patient's first point of contact and referral to further care by specialists. Carbon county has a severe shortage of primary care providers, with a ratio of individuals to PCPs of 2,380:1, which significantly underperforms compared to Pennsylvania overall ratio at 1,230:1 and U.S. top performers with a ratio of 1,030:1.¹¹² There are almost half as many PCPs in Carbon county than in Pennsylvania overall. Schuylkill county also has a severe shortage of primary care providers, with a ratio of individuals in the population to PCPs of 1,870:1, which significantly underperforms compared to Pennsylvania overall ratio at 1,230:1 and U.S. top performers with a ratio of 1,030:1.

To assess the frequency of visits, the CHNA survey asked how long it has been since the respondent last visited their PCP. The majority of all respondents from the Rural West service area have seen a PCP within the past year (82.4%), followed by within the past 2 years (9.2%), within the past 5 years (3.3%), and 5 or more years (2.3%). Additionally, 2.7% of all respondents do not know the last time they saw a PCP (1.5%) or do not have a PCP (1.2%).

¹¹² <https://www.countyhealthrankings.org/>

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It is also important to look at an individual's last visit to a PCP with their type of insurance. Lack of insurance or high copays may hinder individuals from seeking medical attention, which could result in worsened health conditions. As seen in the CHNA survey results, lack of insurance does hinder the frequency of doctor's visits (Figure 35). Only 30% of respondents who do not have insurance coverage have seen a PCP in the last year and 15% do not have a PCP. This finding reinforces the need for Federally Qualified Health Centers who provide services on a sliding pay scale.

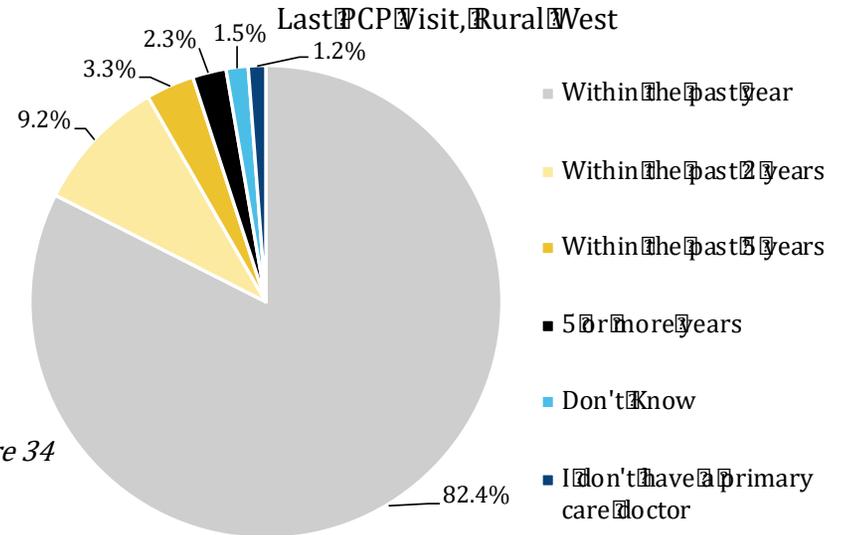


Figure 34

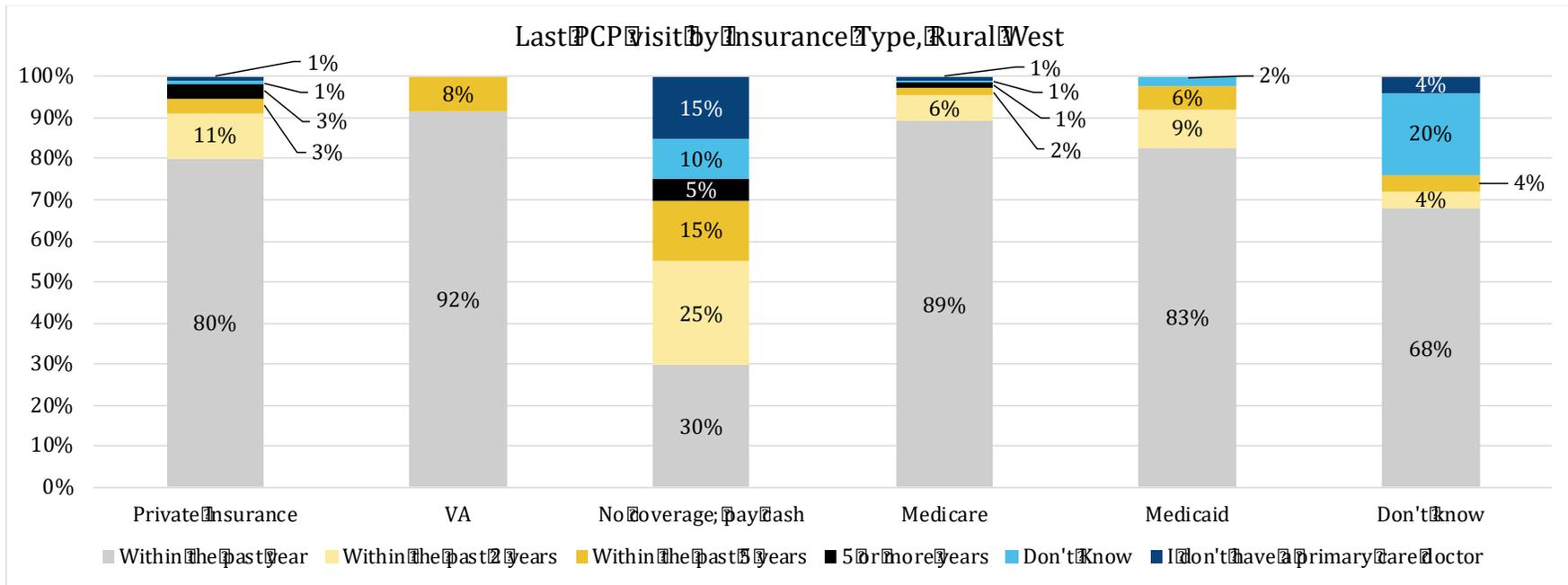


Figure 35

Finally, the CHNA survey asks respondents where they go most often when they are sick or in need of medical advice to get and understanding of their use of service providers. The majority of respondents go to a doctor's office (79.2%), followed by an urgent care center (9.8%), using the Internet (5.1%), along with hospital emergency room and other both accounting for 2.3%. While a majority of respondents use a doctor's office, bringing in more PCPs who have diverse backgrounds and accept many types of insurances will allow more individuals to seek help at a doctor's office rather than on the Internet or in an emergency room.

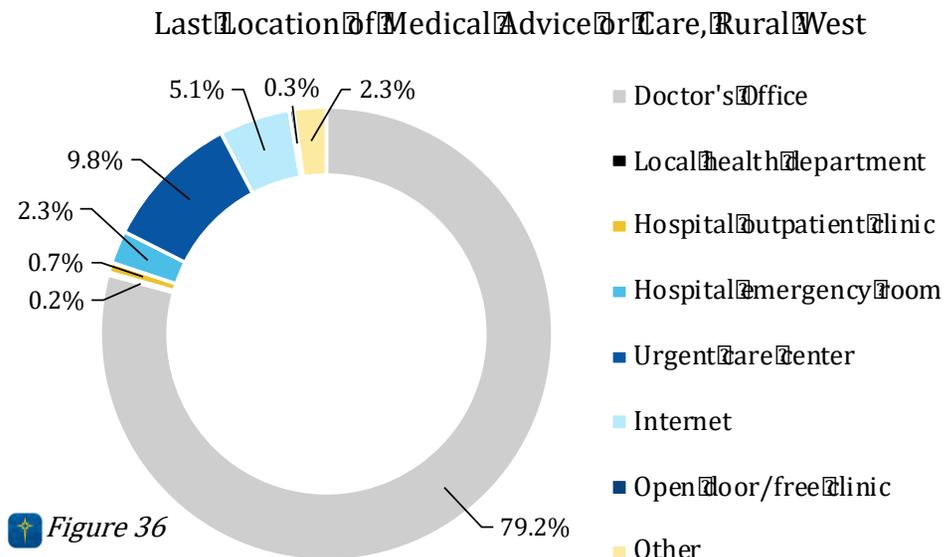


Figure 36

..... Dentists

The Mayo Clinic refers to dental health as “a window to your overall health.”¹¹³ Oral pain can be debilitating in some circumstances and can affect one's overall daily life, impacting their ability to go to work or school. Poor oral health can also lead to a host of other issues in the body. A build-up of bad bacteria in your mouth due to poor oral hygiene can cause respiratory, digestive, and cardiovascular diseases.

Carbon county has a ratio of individuals in the population to dentists of 2,290:1, which is significantly worse than Pennsylvania overall with a ratio of 1,410:1 and U.S. top performers with a ratio of 1,210:1.¹¹⁴ In recent years, there has been a trend of an increasing number of dentists in the county. Schuylkill county has a ratio of individuals in the population to dentists of 2,210:1, which is also significantly worse than Pennsylvania and U.S. top performers. However, in recent years, there has been a trend of an increasing number of dentists in the county.

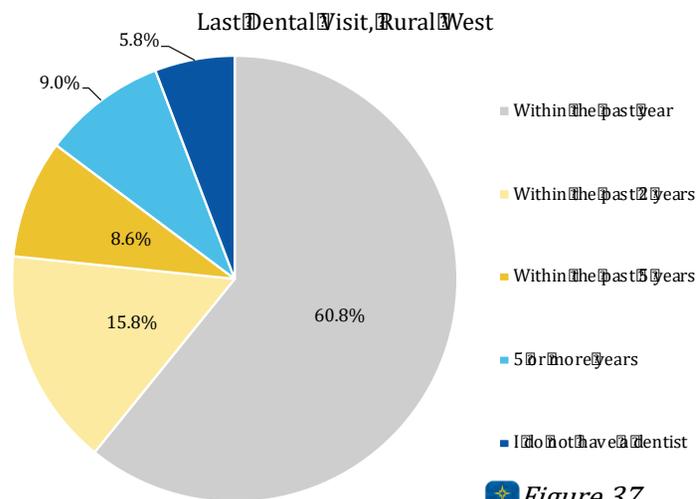


Figure 37

¹¹³ <https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/dental/art-20047475>

¹¹⁴ <https://www.countyhealthrankings.org/>

Within the past year, 60.8% of respondents from the Rural West service area have seen a dentist. 15.8% have seen a dentist within the past 2 years, 8.6% within the past 5 years, and 9% have seen a dentist 5 or more years ago; 5.8% do not have a dentist. Additionally, 56.6% of respondents use private insurance for dental care, followed by no insurance (29%), Medicaid (13.4%), and Veteran's Administration (1%).

One key informant mentioned the lack of dental care providers in Schuylkill county that take Medicaid:



“Access to care is one of the things that popped up in our needs assessment. Specifically the dental services. Kids that were receiving Medicaid had to go to Wilkes-Barre to get dental services because the only office that accepted it was there.”

..... Mental Health Providers

Mental health has also been identified as a large challenge facing the communities in all our counties. The COVID-19 pandemic has greatly impacted access to mental healthcare. As an indicator of mental healthcare providers and access in the county, Carbon has an overall ratio of population to mental healthcare providers of 1,600:1 which is far worse than Pennsylvania at 450:1 and U.S. top performers at 270:1. There are 3.6 times less mental healthcare providers in Carbon county than Pennsylvania overall, demonstrating the great challenges with access to care faced by our rural communities.¹¹⁵

Schuylkill has an overall ratio of population to mental health providers of 1,210:1 which is also worse than Pennsylvania. There are almost three times less mental healthcare providers in Schuylkill county than Pennsylvania overall, demonstrating challenges with access to care in our rural communities.



“We do not have enough service providers to address the needs. If someone is referred for mental health services, by the time they get an evaluation it is so far out.”

..... Health Insurance

Uninsured rates represent a major barrier to access to care. Often, uninsured patients get very ill before seeking care, leading to higher medical costs. An issue that is prevalent in many areas is the lack of providers ability to take a range of insurances. Federally Qualified Health Centers (FQHC) are a crucial step in treating people without insurance and insurance that has minimal coverage. The Health Resources and

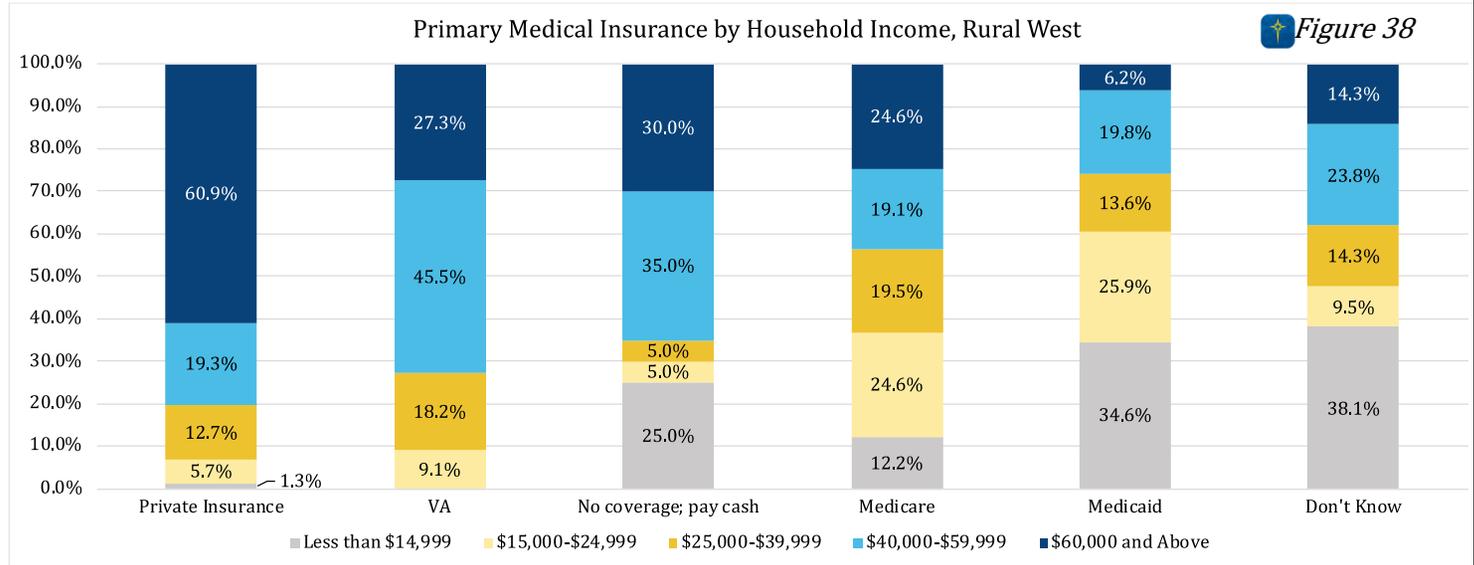
¹¹⁵ <https://www.countyhealthrankings.org/>

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Services Administration (HRSA) defines a community-based health care provider as one who offers primary care services to underserved areas.¹¹⁶ FQHCs must provide services on a sliding fee scale based on the patient’s ability to pay. While FQHCs are crucial to addressing health needs, knowledge that FQHCs exist and take all or no insurance is crucial. Community Health Workers (CHW) are the next step in bridging the health gap. CHWs are defined as “a frontline public health worker who is a trusted member and/or has an unusually close understanding of the community served.”¹¹⁷ The CHW is the liaison between health and social services and the community. They serve an important role in improving quality of services with cultural competency, increasing health knowledge in the community, and by providing advocacy. CHWs help inform people of the services available, regardless of insurance type or being uninsured, helping to increase access.

Uninsured rates in Carbon county stand at 4.2% and 5.2% in Schuylkill county, compared to 4.3% in the Rural West service area. When examining by age, 2.7% of the uninsured people in the service area are under 18 years old, 6.1% are between 18-64 years, and 0.2% are 65 years and older.¹¹⁸ In Pennsylvania, 5.7% of people are uninsured and 8.8% in the United States.

Of the CHNA survey respondents from the Rural West service area, those with a household income less than \$14,999 primarily use Medicaid (34.6%), do not know their primary insurance (38.1%), or use cash (25%) as their primary form of insurance. Conversely, those whose household income is \$60,000 or above primarily use private insurance (60.9%), Veteran’s Administration (27.3%), and pay cash (30%).



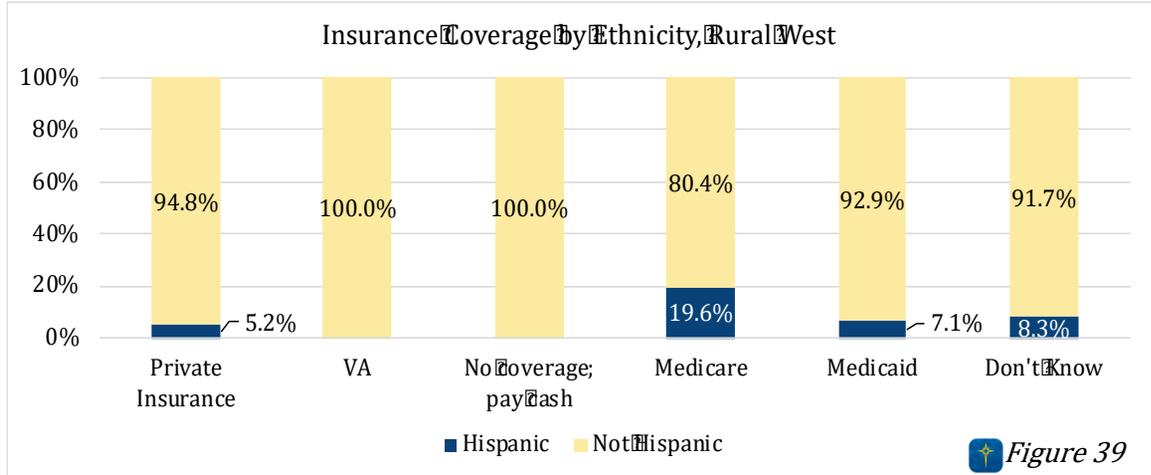
¹¹⁶ <https://www.hrsa.gov/opa/eligibility-and-registration/health-centers/fqhc/index.html>

¹¹⁷ <https://www.apha.org/apha-communities/member-sections/community-health-workers>

¹¹⁸ <https://data.census.gov/cedsci/>

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These findings reinforce the need for FQHCs in St. Luke's service areas along with doctors who accept Medicaid and uninsured patients. In addition, to assess the relationship between income and insurance, it is also important to look at ethnicity and insurance. Of CHNA survey respondents in the Rural West service area with private insurance, 5.2% are Hispanic, with Medicare, 19.6% are Hispanic, with Medicaid, 7.1% are Hispanic, and of those who do not know, 8.3% are Hispanic.



..... Hospital Data

St. Luke's is one of two major health networks in the Lehigh Valley with a variety of health services ranging from behavioral health to cardiology to gastroenterology and more. St. Luke's addresses the inequities through partnerships in the communities with nonprofits, schools, and businesses. Through these partnerships we implement enhanced care, health initiatives, support, as well as outreach for health education, healthy lifestyles, and preventative care.

When asked to indicate reasons for any recently missed medical appointments, the top three reasons reported in the Rural West service area were: the copay was too high and did not think the problem was serious enough both accounting for 6.8% of responses and couldn't get an appointment accounting for 6.4%. Only 0.1% of respondents indicated their reason for missing an appointment was due to the hospital not taking their insurance. These findings further reinforce the need for more adequate health insurance and facilities that offer assistance or sliding scales to lessen the financial burden of healthcare. In order to better support our service area population, St. Luke's provides charity care to help alleviate some of the financial burden. During the 2020 fiscal year, St. Luke's provided \$287.3 million dollars in charity care throughout the network.

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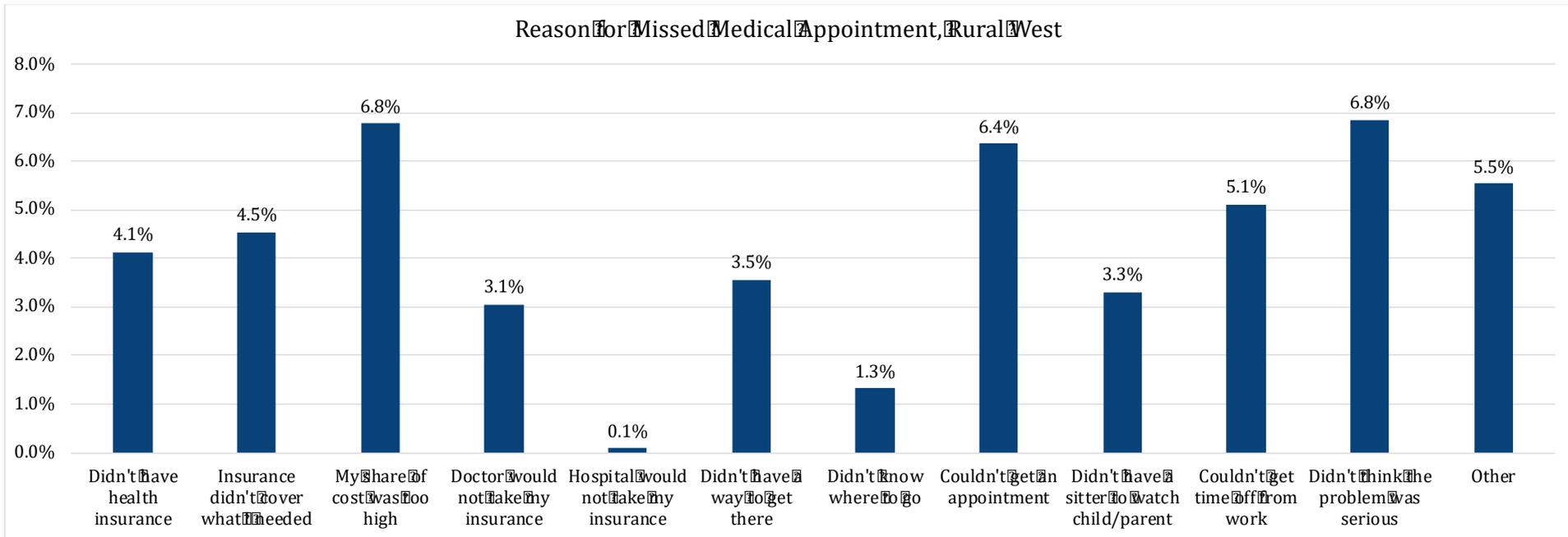


 Figure 40

..... **Top Reasons for Hospitalization**

Hospital data helps us to better understand the major health issues in our community. This allows us, from both a treatment and prevention perspective, to focus efforts on priority areas most affecting the health of our patient population. The top 10 reasons for hospitalization at St. Luke's Rural West campuses are listed in Figure 41. Sepsis is the most common diagnosis during an inpatient encounter; accounting for 7.1% of Rural West campuses total inpatient encounters.

Principal Diagnosis	Ranking
Sepsis, unspecified organism	1
Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	2
Acute kidney failure, unspecified	3
Hypertensive heart disease with heart failure	4
Pneumonia, unspecified organism	5
Chronic obstructive pulmonary disease with (acute) exacerbation	6
Acute and chronic respiratory failure with hypoxia	7
Acute respiratory failure with hypoxia	8
Other specified sepsis	9
Cellulitis of left lower limb	10

Figure 41

Emergency Department Encounters

In fiscal year 2020, the average number of Emergency Department (ED) encounters per ED patient seen at St. Luke’s Rural West campuses was 1.49, which is below the network average of 1.75 and the second highest number of average ED encounters per patient in the network. Note that multiple service areas contain multiple hospitals and therefore multiple EDs. The ED encounters are an average of the encounters at those hospitals.

Emergency department utilization can be used as an indicator to gauge lack of PCP coverage. When comparing ED visits by household income, a clear finding emerges: those who make less than \$14,999 frequent emergency departments the most of any income bracket. Results indicate that 35.7% of respondents who visited an ED 5 or more times in the past year make less than \$14,999. Additionally, those who make \$60,000 and above frequent the ED the lowest of any income bracket; 45.4% of respondents who have not visited an ED in the past year make \$60,000 and above. These findings suggest that there needs to be more affordable PCP access for lower income patients, as well as education related to appropriate ED use.

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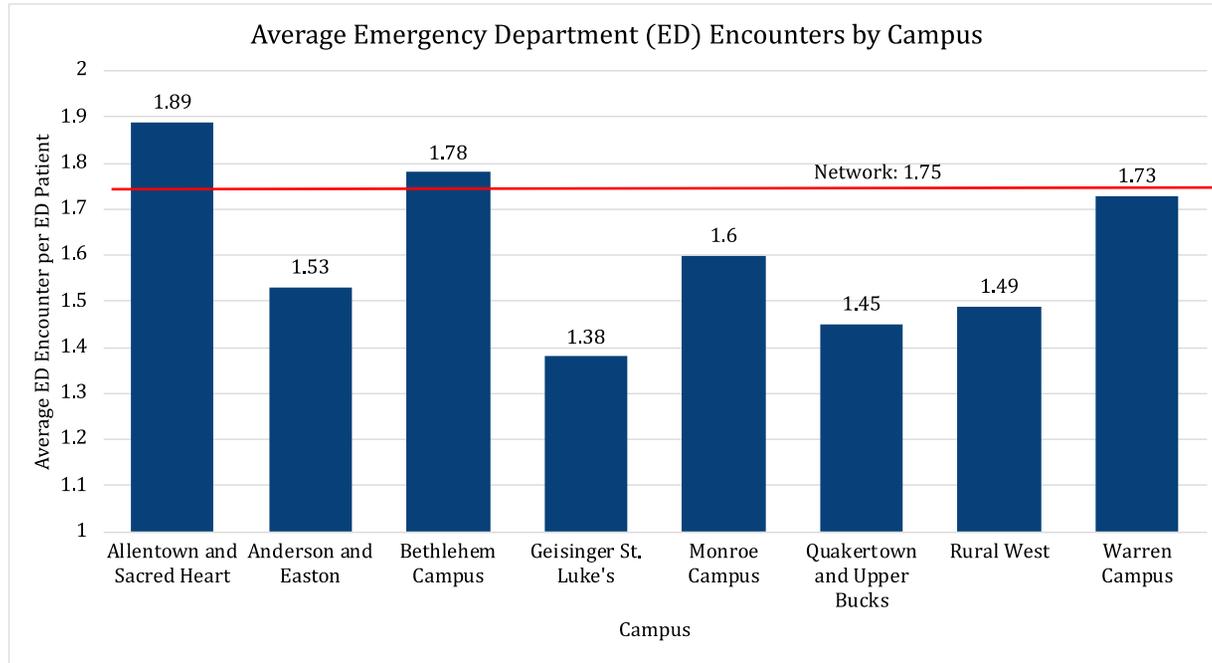


Figure 42

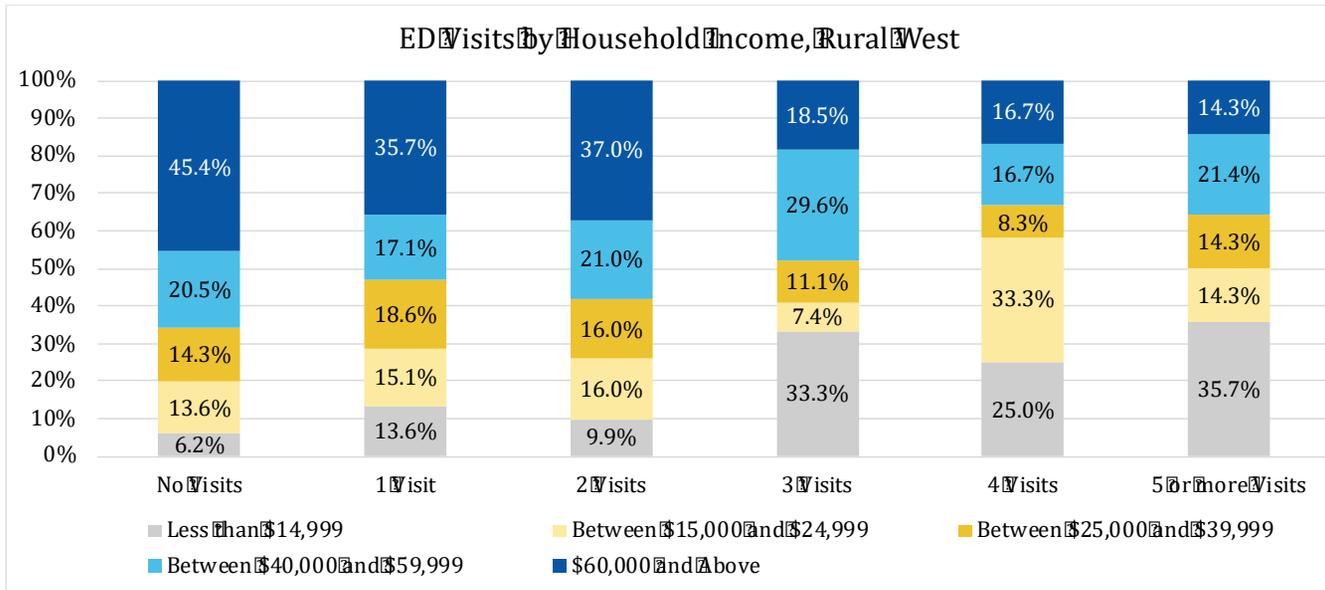


Figure 43

Health Behaviors

..... Obesity

According to the CDC, obese adults have a higher risk for developing heart disease, type 2 diabetes and certain cancers, and, as a result, obesity is estimated to cost the U.S. healthcare system \$147 billion annually.¹¹⁹ For each obese individual, their medical costs are estimated to be \$1,429 higher than the medical costs of an individual whose BMI falls into the normal weight category. Many factors play a role in the obesity epidemic and its rapid increase over the last few decades including: a lack of vegetable consumption, a lack of physical activity, poor portion control, and poor access to outdoor recreational activities and healthy foods.

In 2018, 42.4% of U.S. adults were obese—an almost 12% increase in obesity rates since 2000.¹²⁰ The 2020 report by Trust for America's Health (TFAH) using 2019 data reports that “socioeconomic factors such as poverty and discrimination have contributed to higher rates of obesity among certain racial and ethnic populations. Black adults have the highest level of adult obesity nationally at 49.6%; that rate is driven in large part by an adult obesity rate among Black women of 56.9%.”¹²¹ Additionally, concerns have risen in recent years as obesity is an underlying health condition associated with some of the most serious consequences of COVID-19. This means that 42% of all Americans are at increased risk of serious, possibly fatal, health impacts from COVID-19 due to their weight and health conditions related to obesity.¹²²

The TFAH reported that Pennsylvania ranks 22 out of 51 states (including Washington, DC) for percentage of adults with obesity and ranks 21 for adults who are overweight.¹²³ Additionally, 41.5% of Black adults, 30.9% of Hispanic/Latino adults and 31.3% of White adults in Pennsylvania are obese. The age bracket with the greatest number of adults with obesity in Pennsylvania is 45-64 years old, accounting for 38.2% of adults with obesity. When assessing childhood obesity, the most recent TFAH report found that 12.8% of children ages 2-4 and 17.4% of children ages 10-17 in Pennsylvania are obese.

Robert Wood Johnson's County Health Rankings also assess obesity by measuring the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m². According to the CDC, “Body Mass Index (BMI) is a person's weight in kilograms divided by the square of height in meters. A high BMI can be an indicator of high body fatness. BMI can be used to screen for

¹¹⁹ <https://www.cdc.gov/obesity/adult/causes.html>

¹²⁰ <https://www.cdc.gov/obesity/data/adult.html>

¹²¹ <https://www.tfah.org/report-details/state-of-obesity-2020/>

¹²² <https://www.tfah.org/report-details/state-of-obesity-2020/>

¹²³ https://www.tfah.org/wp-content/uploads/2020/09/TFAHObesityReport_20.pdf

weight categories that may lead to health problems, but it is not diagnostic of the body fatness or health of an individual.”¹²⁴ A BMI below 18.5 is considered underweight, 18.5-24.9 is considered normal, 25.0-29.9 is considered overweight, and 30 or above is considered obese. The County Health Rankings reports that 31% of adults in Pennsylvania are obese. Carbon county reports 34% of adults as obese and Schuylkill county reports that 37% of adults in the county are obese, the highest of all service area counties. Results from the 2022 CHNA survey show that in the Rural West service area, 0.3% of respondents are underweight, 19.1% are healthy, 30.5% are overweight, and 50.1% are obese, according to BMI.

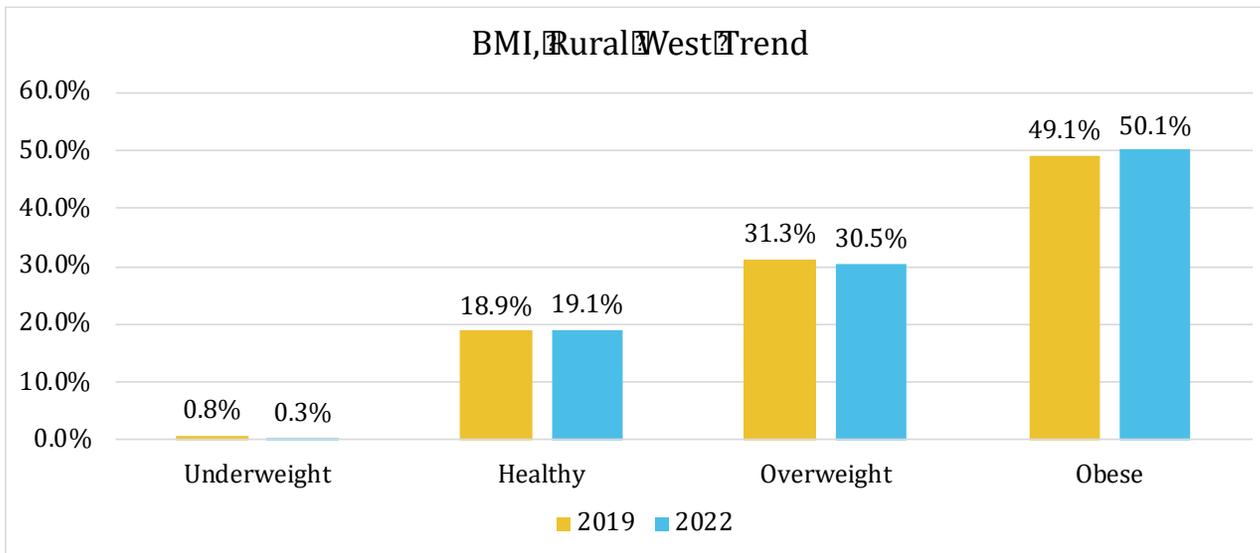


 Figure 44

“I think some people are fine with sitting on their couch and not getting up. I think there is a portion of our county who are not in to getting out which leads to obesity. Professionally and personally, I think the challenge is it takes a little bit of motivation and time to do it.”

..... Physical Inactivity

According to the CDC, fewer than 1 in 4 children get enough physical exercise and only 1 in 4 adults meet physical activity guidelines.¹²⁵ Healthy People 2030 aim to reduce the proportion of adults who engage in no leisure time physical activity and increase the proportion of adults who meet current physical aerobic physical activity recommendations of exercising 30 minutes a day for 5 days a week.¹²⁶

¹²⁴ <https://www.cdc.gov/healthyweight/assessing/bmi/index.html>
¹²⁵ <https://www.cdc.gov/physicalactivity/data/index.html>
¹²⁶ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/physical-activity/>

County Health Rankings measure physical inactivity as the percentage of adults aged 20 and over reporting no leisure-time physical activity. Robert Wood Johnson reports that “physical activity improves sleep, cognitive ability, and bone and musculoskeletal health, as well as reduces risks of dementia. Physical inactivity is not only associated with individual behavior but also community conditions such as expenditures on recreational activities, access to infrastructure, and poverty.”¹²⁷ In Pennsylvania, 22% of adults have no leisure-time physical activity along with 24% of adults in both Carbon and Schuylkill counties. Additionally, the Rankings measure access to exercise opportunities, which “measures the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Individuals are considered to have access to exercise opportunities if they: reside in a census block that is within a half mile of a park; or reside in an urban census block that is within one mile of a recreational facility; or reside in a rural census block that is within three miles of a recreational facility.”¹²⁸ In Pennsylvania, 84% of individuals have access to exercise opportunities along with 75% of individuals in both Carbon and Schuylkill counties, which is the lowest access of all service area counties.

When asked how many days a CHNA survey respondent exercises 30 minutes, 29% of respondents from the Rural West service area indicated 0 days. However, 34.4% of respondents indicated exercising 1-2 days a week, 21.2% exercising 3-4 days a week, and 15.4% exercising 5 or more days a week- the Healthy People 2030 recommendation. The number of respondents who exercise 5 or more days per week has increased 1.4 percentage points since 2019.

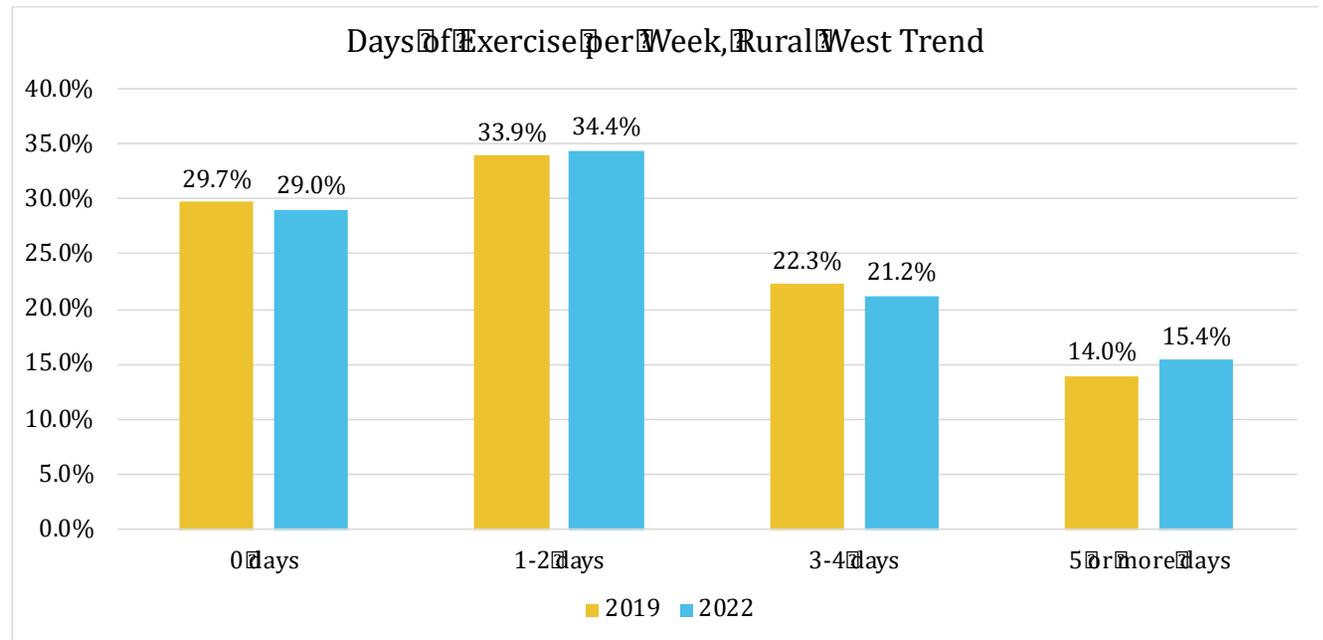


 Figure 45

¹²⁷ <https://www.countyhealthrankings.org/>

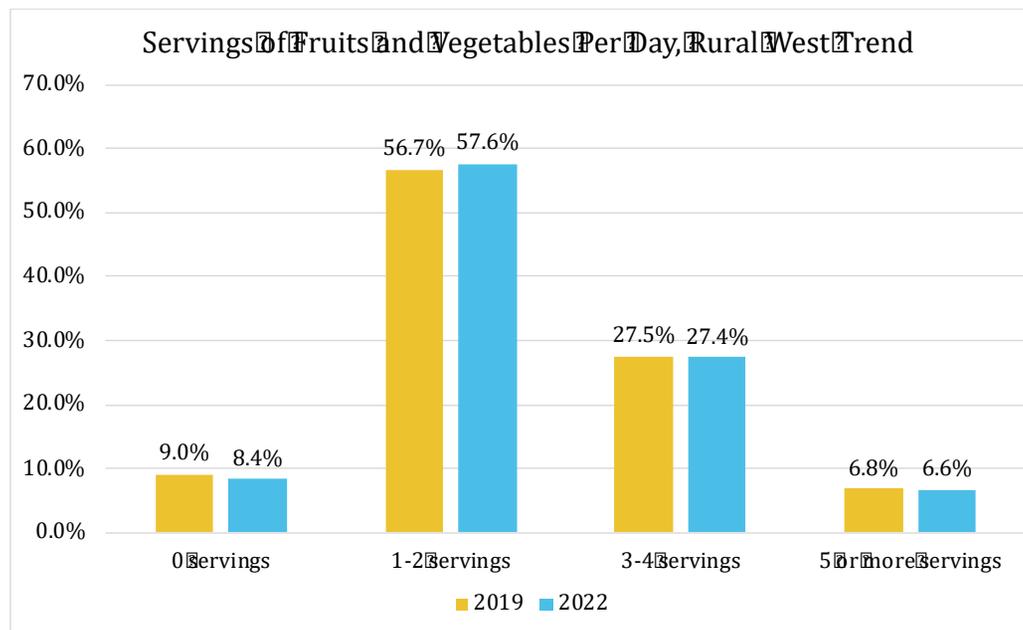
¹²⁸ <https://www.countyhealthrankings.org/>

..... Diet

Diet (i.e., fruit and vegetable consumption) plays a large role in overall health and reducing chronic disease. The CDC states that eating a diet filled with a variety of fruits and vegetables can reduce the risk of type 2 diabetes, certain cancers, and cardiovascular disease,¹²⁹ all which play a role in the top leading causes of death nationally.

Released in February 2021, the CDC surveyed adults 20 years and older, finding that the majority of adults consumed a serving of fruit (67.3%) or vegetable (95%) on a given day, with more women reporting eating a serving of a fruit and vegetable on a given day.¹³⁰ Compared to CHNA survey results, 93.3% of network survey respondents and 91.6% of Rural West service area respondents report eating at least one serving of fruit or vegetables per day. Additionally, America's Health Rankings surveyed adults across the country asking respondents to indicate consuming two or more servings of fruit and three or more servings of vegetables daily (five servings total).¹³¹ In Pennsylvania, 7% of adults consume two or more servings of fruit and three or more servings of vegetables daily along with 8% of adults in the U.S.

The sweet food consumption NHANES survey assessed sweet food consumption of snack or meal bars, sweet bakery products, candy, and other desserts, but excluded fruit and all types of beverages. Sweet foods are typically a major source of energy, added sugar, and saturated fats with limited essential ingredients.¹³² It is recommended to limit this consumption and emphasize a diet with nutrient-dense foods. The surveyed was asked to adults 20 and older, finding that 61% of adults ate sweet foods on any given day, with the percentage increasing among adults 60 years or older.¹³³ Sweet food consumption was also highest among the middle and highest income groups compared to the lowest income group.



¹²⁹ <https://www.cdc.gov/nccdphp/dnpao/division-information/media-tools/adults-fruits-vegetables.html>
¹³⁰ <https://www.cdc.gov/nchs/data/databriefs/db397-H.pdf>
¹³¹ <https://www.americashealthrankings.org/explore/annual/measure/fvcombo/state/U.S.>
¹³² https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/34_Sweet_foods_children_1518.pdf
¹³³ https://www.ars.usda.gov/ARSUserFiles/80400530/pdf/DBrief/33_Sweet_foods_adults_1518.pdf

Figure 46

2022 St. Luke's University Health Network Rural West Community Health Needs Assessment

In the CHNA survey, we found that 6.6% of respondents from the Rural West service area eat 5 or more servings of fruits and vegetables per day. The majority of respondents (57.6%) eat 1-2 servings per day and 8.4% do not eat any servings. The number of servings respondents eat have generally stayed the same since 2019.

Furthermore, looking at fruit and vegetable consumption by income shows that serving size increases with income. Of respondents who make less than \$14,999, 19.1% do not consume any fruits and vegetables. Most respondents in each income bracket consume 1-2 servings of fruits and vegetables a day, followed by 3-4 servings per day. Additionally, 10.1% of respondents who make \$25,000-\$39,999 consume 5 or more serving per day, the highest of any income bracket.

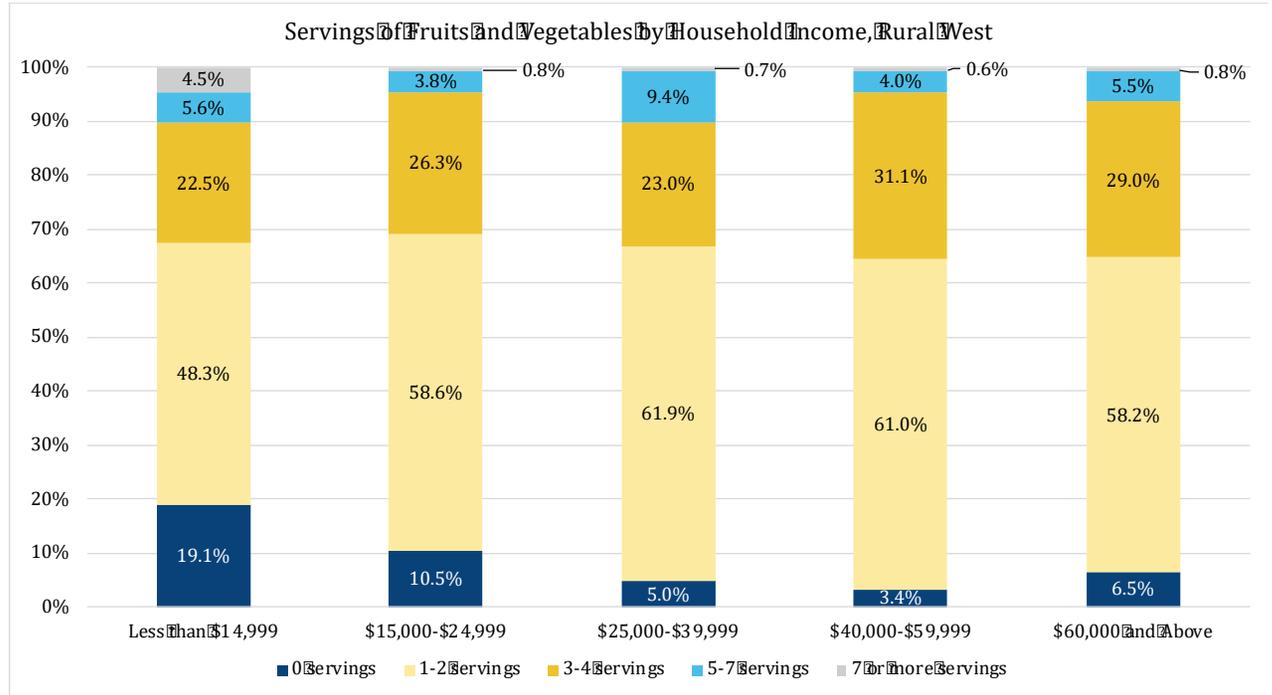


Figure 47

Free or Reduced Lunch

During the 2018-2019 school year, 53.3% of students in Pennsylvania were eligible for free or reduced lunch.¹³⁴ Free or reduced lunch is a part of the National School Lunch Program (NSLP), a federally assisted meal program providing nutritionally balanced, low cost or free

¹³⁴ <https://datacenter.kidscount.org/data/tables/2720-school-lunch--students-eligible-for-free-or-reduced-price-lunch>

school lunches each day in public, private, and residential child care institutions.¹³⁵ To qualify for the NSLP, families must have an income at or below 130% of the poverty level. In 2016, the NSLP reached 30.4 million children nationwide.

In Carbon county, an average of 57% of students qualify for free or reduced lunch. Panther Valley reports 98% of students eligible and Palmerton reports the lowest number of students (37.6%). In Schuylkill county, an average of 57.2% of all students qualify for free or reduced lunch, the highest of all service area counties. Shenandoah Valley report 100% of their students as eligible for free or reduced lunches and Blue Mountain reports the lowest number of children eligible (28.2%).¹³⁶

Percent of Children During 2018-2019 School Year with Free or Reduced Lunch Eligibility	
Carbon--Palmerton Area (Suburban)	37.6%
Carbon--Carbon Career & Technical Institute	48.4%
Carbon--Jim Thorpe Area (Suburban)	48.5%
Carbon--Lehighon Area (Suburban)	49.5%
Carbon--Weatherly Area (Suburban)	59.9%
Carbon--Panther Valley (Rural)	98.0%
Average Carbon	57.0%

Figure 48

Percent of Children During 2018-2019 School Year with Free or Reduced Lunch Eligibility	
Schuylkill--Blue Mountain (Rural)	28.2%
Schuylkill--Tri-Valley (Rural)	33.6%
Schuylkill--Pine Grove Area (Rural)	40.5%
Schuylkill--Schuylkill Haven Area (Rural)	47.5%
Schuylkill--Tamaqua Area (Rural)	48.7%
Schuylkill--Minersville Area (Rural)	49.3%
Schuylkill--North Schuylkill (Rural)	53.2%
Schuylkill--Schuylkill Technology Centers	58.1%
Schuylkill--Pottsville Area (Rural)	60.5%
Schuylkill--Saint Clair Area (Rural)	60.6%
Schuylkill--Gillingham CS	68.4%
Schuylkill--Williams Valley (Rural)	70.4%
Schuylkill--Mahanoy Area (Rural)	82.2%
Schuylkill--Shenandoah Valley (Rural)	100.0%
Average Schuylkill	57.2%

Figure 49



“For some students, the only meals they are getting come from a school setting. When COVID first set in, that was one of the first conversations with the superintendents. How do we distribute food so that the students have it for that day and multiple days at a time? They were creative with the distribution of food. Food is a major need and special challenge, especially with the pandemic.”

¹³⁵ <https://www.fns.usda.gov/nslp>

¹³⁶ <https://datacenter.kidscount.org/data/tables/2720-school-lunch--students-eligible-for-free-or-reduced-price-lunch>

..... Sexual Activity

Healthy People 2030 reports that there are more than 20 million new cases of preventable sexually transmitted infections (STI) in the United States each year.¹³⁷ Healthy People 2030 objectives are to increase knowledge and education of sexual education across adolescents and adults, and to decrease the rate of STIs and sexually transmitted diseases (STDs). Adolescents may experience developmental changes that affect physical and mental health, potentially increasing risky behaviors. Risky behaviors increase the chances of STIs and teen pregnancy. Healthy People 2030 objectives for teen pregnancy are to reduce pregnancies in adolescents, increase the percentage of adolescents using effective birth control, and to increase the number of adolescents who receive formal sexual education before age 18.¹³⁸

The Robert Wood Johnson Foundation's County Health Rankings assess two sexual activity measures: STI and teen births. The 2021 rankings use STI data that reflects the number of new chlamydia cases per 100,000 population; there was a reported 21% increase in both chlamydia and gonorrhea. Chlamydia is important to assess because it is the "most common bacterial sexually transmitted infection (STI) in North America and is one of the major causes of tubal infertility, ectopic pregnancy, pelvic inflammatory disease, and chronic pelvic pain."¹³⁹ Chlamydia also disproportionately impacts adolescent women with 1 in 20 sexually active women ages 14-24 diagnosed with chlamydia.¹⁴⁰ In Pennsylvania, the rate is 463.4 per 100,000 population. The rate in Carbon county is 175.4. The rate in Schuylkill county is 244.8.

There are also strong connections between teen birth, poor socioeconomic status, and/or mental outcomes. Teenage mothers who give birth are less likely to achieve an education level beyond high school and are more likely to experience psychological distress.¹⁴¹ The measure is represented by the number of births per 1,000 female population ages 15-19 years. In Pennsylvania, the rate is 17. In Carbon county the rate is 19 and in Schuylkill county the rate is 22, the highest of all service area counties. In addition to the impact of teen pregnancy on mothers, the prevalence of low birthweight in teen pregnancy is significant. Low birthweight is when a baby is born weighing less than 5 pounds, 8 ounces. Approximately 1 in 12 babies (8%) in the United States is born with low birthweight. A low birthweight may have significant complications, including birth defects, infections, trouble eating, and trouble gaining weight.¹⁴² Teen mothers (and mothers over 40) are highly likely to have a low birthweight child. Between 2015-2019, 8.4% of births in Carbon county and 8.5% of births in Schuylkill county were low birthweight.

¹³⁷ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/sexually-transmitted-infections>

¹³⁸ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/adolescents>

¹³⁹ <https://www.countyhealthrankings.org/>

¹⁴⁰ <https://www.cdc.gov/std/chlamydia/stdfact-chlamydia-detailed.htm>

¹⁴¹ <https://www.countyhealthrankings.org/>

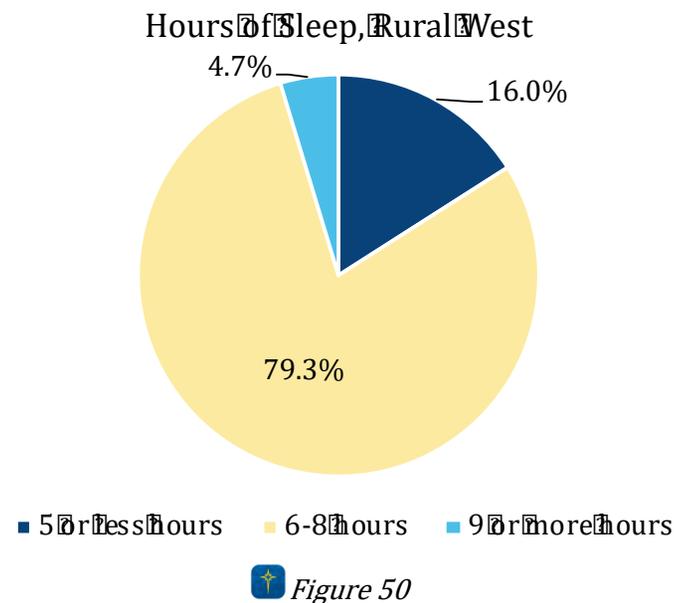
¹⁴² <https://www.marchofdimes.org/complications/low-birthweight.aspx#>

..... Sleep

The Robert Wood Johnson Foundation indicated that sleep is an important part of a healthy lifestyle and a lack of sleep can have serious and negative health effects.¹⁴³ Healthy People 2030 also reports that approximately 1 in 3 adults do not get enough sleep.¹⁴⁴ Ongoing sleep deficiency has been linked to a number of health conditions such as heart disease, stroke, depression, and anxiety. Objectives for Healthy People 2030 include the reduction of motor vehicle crashes due to exhaustion and to increase the number of children and adults who get enough sleep. The 2021 Robert Wood Johnson County Health Rankings assessed the percent of adults who report less than 7 hours of sleep on average. In Pennsylvania, 39% of adults report less than 7 hours of sleep, 40% of adults in Carbon county do not get enough sleep, and 41% of adults in Schuylkill county do not get enough sleep.

The 2019 PAYS survey asked students to indicate if on average, they get less than 7 hours of sleep a night.¹⁴⁵ In Pennsylvania, 37.9% of students reported averaging less than 7 hours of sleep a night and 35.9% of students in Carbon county do not get enough sleep, while 37.8% of students in Schuylkill county do not get enough sleep. The survey also asked if students “felt tired or sleepy during the day,” “every day,” or “several times” during the past two weeks and 64.7% of students across Pennsylvania indicated consistent sleepiness during the past 2 weeks. In Carbon county, 60.0% of students agreed with this statement, which is the lowest percent out of all service area counties while 60.6% of students in Schuylkill county agreed with this statement.

To get an understanding of how many hours of sleep respondents get, we asked CHNA survey respondents to indicate, on average, the number of hours they sleep in a 24-hour period. The majority of respondents in the Rural West service area (79.3%) get 6-8 hours of sleep per night, 4.7% of respondents get more than the recommended 8 hours per night, and 16% only get 5 hours or less per night.



¹⁴³ <https://www.countyhealthrankings.org/>
¹⁴⁴ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/sleep>
¹⁴⁵ [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\)-2019.aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS)-2019.aspx)

..... Mental Health

Mental health has been an increasing issue during the last 10 years, even prior to COVID-19. Mental health disorders can affect people of all age and racial groups, but some populations have disproportionately higher rates of diagnosis.¹⁴⁶ Mental health disorders like anxiety and depression can affect a person’s ability to take part in healthy behaviors and result in physical health problems making it harder for them to get treatment for mental disorders.¹⁴⁷ Goals related to mental health for Healthy People 2030 are to increase the proportion of people who get treatment for substance use and mental health disorders, increase the proportion of children and adolescents with symptoms of trauma who get treatment, increase quality of life for cancer survivors, reduce the suicide rate, and increase the proportion of public schools with a counselor, social worker, and psychologist. To help reach, educate, and connect people with mental health disorders to care, there is a local National Alliance on Mental Illness (NAMI) or related chapter in each service area. In Schuylkill county, there is the NAMI Schuylkill county¹⁴⁸ and for Carbon and Monroe there is the Carbon-Monroe-Pike Mental Health and Developmental Services.¹⁴⁹

 ***“Getting access to services, the stigma around getting services is still a challenge on all levels, even for professionals too. Just talking about it and seeing it as an illness and not just treating it as something you have to deal with.”***

According to the State of Mental Health in America 2021 Report, 19% of adults prior to COVID-19 experienced a mental illness. Now, 10.8% of Americans suffering from a mental illness are uninsured and 24% of adults with a mental illness report an unmet need for treatment.¹⁵⁰ The report ranks states on their prevalence rates and access to care for adults and youth. States ranked 1-13 have lower prevalence and higher access to care, while 40-51 (including The District of Columbia) have higher prevalence rates and lower access to care. For overall rankings, Pennsylvania ranks 5 for adults and 2 for

State of Mental Health in America 2021 State Youth Rankings			
	PA %	PA rank	US
Youth with at least on Major Depressive Episode (MDE) in the past year	11.9%	3	13.8%
Youth with Substance Use Disorder in the past year	7.1%	4	9.7%
Youth with severe MDE	3.4%	8	3.8%
Youth with MDE who did not receive mental health services	57.5%	28	59.6%
Youth with severe MDE who received some consistent treatment	37.1%	10	27.3%

Figure 51

¹⁴⁶ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/mental-health-and-mental-disorders>

¹⁴⁷ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/mental-health-and-mental-disorders>

¹⁴⁸ <https://www.nami.org/Find-Your-Local-NAMI/Affiliate/Details?state=PA&local=0011Q000022G9N0QAK>

¹⁴⁹ <http://www.cmpmhs.org/>

¹⁵⁰ <https://www.mhanational.org/issues/state-mental-health-america>

youth, indicating a lower prevalence rate and higher access to care.¹⁵¹ The 2021 report indicated that 19% of Americans report experiencing any mental illness (AMI) which is characterized as having a diagnosable mental, behavioral, or emotional disorder other than a developmental or substance use disorder. Pennsylvania ranks 11 with a 18.2% prevalence rate. Additionally, 4.6% of adults experience a severe mental illness. See Figure 51 for more information on questions covered in the report.

The 2021 Report also ranked states by youth measures. 13.8% of youth ages 12-17 report suffering from at least one major depressive episode in the past year. A major depressive episode is “a period of two weeks or longer in which a person experiences certain symptoms of major depression: feelings of sadness and hopelessness, fatigue, weight gain or weight loss, changes in sleeping habits, loss of interest in activities, or thoughts of suicide.”¹⁵² Additionally, 9.7% of youth cope with severe major depression. See Figure 52 for more information on questions asked.

During the COVID-19 pandemic, the National Center for Health Statistics (NCHS) partners with the U.S. Census Bureau to ask people about the frequency of anxiety and depression symptoms they have experienced in the Household Pulse Survey.¹⁵³ The survey has been ongoing, broken up into phases. Phase 1 ran April 23, 2020 to July 21, 2020. Phase 2 ran August 19, 2020 to October 26, 2020. Phase 3 ran October 28, 2020 to March 29, 2021. Phase 3.1 ran April 14 2021 to July 5, 2021. Phase 3.2 ran July 21 to October 11, 2021. All Phases had periods of break in between. Nationally, 27.3% of adults reported experiencing symptoms of an anxiety disorder within the past 7 days at mid-October 2021, with the highest percentage at 37.2% in November 2020 and the lowest at 25.5% at the beginning of July 2021. Additionally, 21.8% of adults report experiencing symptoms of a depressive disorder within the past 7 days at mid-October 2021, with the highest percentage at 30.2% in December 2020 and the lowest 20.9% at the beginning of July 2021. When anxiety and depression symptoms were surveyed together, 31.6% of adults report experiencing symptoms of either an anxiety disorder or depressive disorder in the past 7 days at mid-October 2021, with the highest 42.6% at the end of November 2020 and the lowest at 29% at the beginning of July 2021. However, in Pennsylvania at mid-October 2021, 31% of people reported symptoms of an anxiety disorder in the past 7 days, which ranks 7 out of 51 states including Washington, DC. The higher the ranking, the higher the percentage. During this time in Pennsylvania, 24% of people report

¹⁵¹ <https://mhanational.org/issues/2021/ranking-states>

¹⁵² <https://www.bridgestorecovery.com/major-depression/what-is-a-major-depressive-episode/>

¹⁵³ <https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm>

State of Mental Health in America 2021 State Adult Rankings			
	PA %	PA rank	US
Adults with Any Mental Illness (AMI)	18.2%	11	19.0%
Adults with Substance Use Disorder in the past year	7.3%	15	7.7%
Adults with serious thoughts of suicide	4.2%	12	4.3%
Adults with AMI who are uninsured	6.0%	8	10.8%
Adults with AMI who did not receive treatment	53.0%	21	57.0%
Adults with AMI reporting an unmet need	26.8%	44	23.6%
Adults with disability who could not see a doctor due to costs	22.5%	10	28.7%

Figure 52

experiencing a depressive disorder in the past 7 days, ranks 13 out of 51. Lastly, when asked together, 33.8% of people in Pennsylvania report experiencing an anxiety disorder or depressive disorder, ranked 14 out of 51.

Starting in Phase 2, the Pulse survey began asking about mental health care. At mid-October 2021, 11% of people in the U.S. report needing counseling or therapy in the last 4 weeks but not receiving care. 11% of people in Pennsylvania report needing counseling and not receiving care, ranking 25 out of 51. Additionally, as of July 5, 2021, 18.6% of respondents across the U.S. delayed or did not get care in the last 4 weeks. This has been on a downward trend since June 30, 2020 when 45.7% of people delayed or did not get care. This question did not get asked again after the completion of phase 3.1. As of July 5, 2021 in Pennsylvania, 19% of people delayed or did not get care in the last 4 weeks. Finally, in mid-October 2021, 10% of people in the U.S. at the time of the interview did not have health insurance. The uninsured rate at the time of the interview has consistently been between 10 and 14% since Phase 1. At this time in Pennsylvania, 8% of people were uninsured at the time of the interview, ranking 22 out of 51. To get an understanding of how people in the Rural West community have been impacted by the pandemic, we asked respondents to indicate if their mental health has been impacted by COVID-19 and 20.8% of respondents in the network said their mental health has been impacted.



“Mental health demands in the community are abundant, and I don’t think we have yet felt the full impact of the pandemic on mental health issues. The isolation among our seniors was a big concern even before the pandemic and it has gotten much worse.”

Prior to COVID-19, depression was already a significant issue facing the U.S. and the residents of our service area. The National Institute of Mental Health (NIMH) defines depression as a mood disorder that causes “severe symptoms [that] affect how you feel, think, and handle daily activities, such as sleeping, eating, or working. To be diagnosed with depression, the symptoms must be present for at least two weeks.”¹⁵⁴ Some signs of depression are, but not limited to: a persistent sad mood; feelings of hopelessness or pessimism; decreased energy or fatigue; difficulty

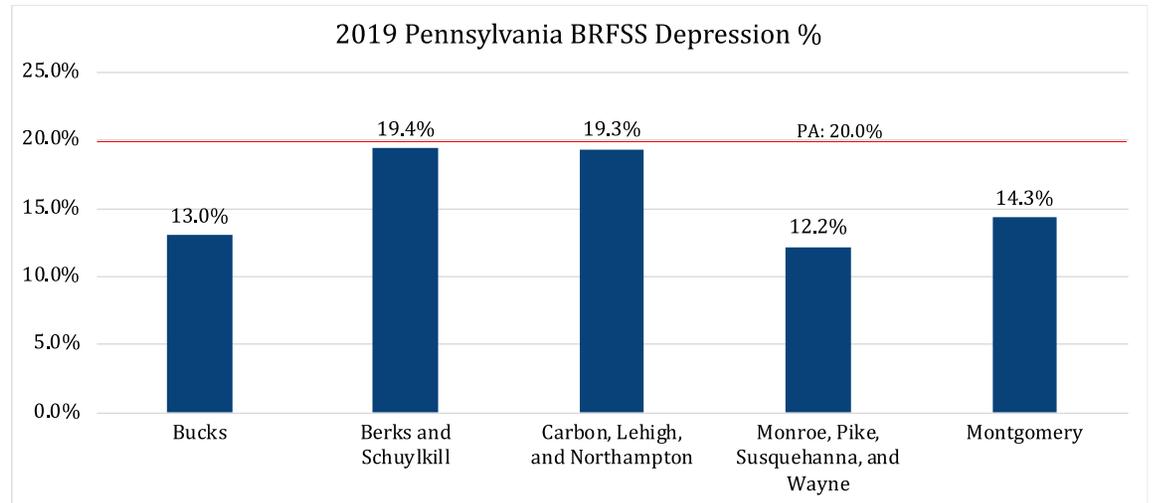


Figure 53

¹⁵⁴ <https://www.nimh.nih.gov/health/topics/depression/index.shtml>

concentrating, remembering or making decisions; and thoughts of death or suicide. Depression can happen at any age but is more common in adulthood. In midlife or older adults, depression can co-occur with other serious medical illnesses like diabetes, cancer, heart disease, and Parkinson’s disease.¹⁵⁵ Risk factors include personal or family history of depression, major life changes, trauma, or stress, and certain physical illnesses and medications. Depression can be treated with medications, psychotherapy (e.g., counseling), or a combination of both. In Pennsylvania, the state asked about depression on their 2019 Behavioral Health Risk Factor Surveillance System (BRFSS), which included depression, major depression, and minor depression (i.e., dysthymia). The survey found that 20% of people in Pennsylvania were depressed. The survey broke the counties into clusters, finding that 19.4% of Berks and Schuylkill report a depression diagnosis.¹⁵⁶



“On the mental health side, traditionally having enough providers is an issue. As well as finding beds in residential place particularly for youth has been an issue. There are lots of struggles for bed placement with youth needing to go to inpatient mental health. Again, with COVID, we have already seen increases in suicide and overdose, but I don't think we are even there yet. We are going to have a major fall out in both areas.”

Anxiety is another common mental disorder that affects people across the country. Anxiety is a normal part of life, but for a disorder, it is more than temporary worry or fear. The NIMH says “for a person with an anxiety disorder, the anxiety does not go away and can get worse over time. The symptoms can interfere with daily activities such as job performance, schoolwork, and relationships.”¹⁵⁷ Risk factors for anxiety disorders differ for each disorder, but generally include temperamental traits of shyness or behavioral inhibition in childhood, exposure to a stressful or negative life or environmental events in early childhood or adulthood, a history of anxiety in relatives, and some health conditions.¹⁵⁸ Anxiety disorders can be treated with psychotherapy, medication, or a combination.

In 2020, the CDC released a report of symptoms of Generalized Anxiety Disorder (GAD) among adults in the United States. GAD displays excessive anxiety or worry, most days for at least 6 months, about numerous things, causing significant problems in areas of life like social interactions, school, and work.¹⁵⁹

2019 CDC Percent of Adults in US Experiencing Anxiety Symptoms

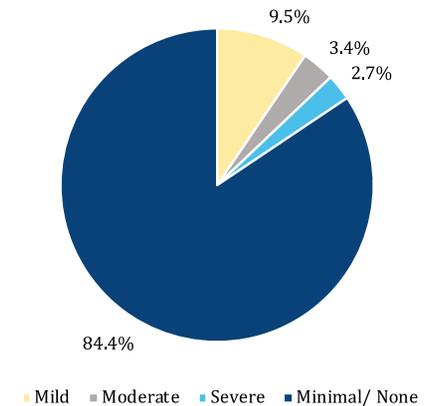


Figure 54

¹⁵⁵ <https://www.nimh.nih.gov/health/topics/depression/index.shtml>

¹⁵⁶ <https://www.health.pa.gov/topics/HealthStatistics/BehavioralStatistics/BehavioralRiskPAAadults/Pages/BehavioralRisksPAAadults.aspx>

¹⁵⁷ <https://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml>

¹⁵⁸ <https://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml>

¹⁵⁹ <https://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml>

The CDC survey found that 9.5% of adults experienced mild symptoms of anxiety, 3.4% experienced moderate symptoms of anxiety, and 2.7% experienced severe symptoms of anxiety in the past 2 weeks, while 84.4% of people reported no or minimal symptoms.¹⁶⁰ The percentage of adults who experienced all types of symptoms was highest among those 18-29 years and decreased with age. One significant finding in the study was that women are more likely to experience all levels of anxiety symptoms than men.

In addition to anxiety and depression, substance use is another disorder that has continued to affect many Americans. A substance use and suicide study done by Substance Abuse and Mental Health Services Administration (SAMHSA) in 2016 found that nearly 1 in 12 adults in the United States had a substance use disorder.¹⁶¹ The NIMH describes substance use disorder as a mental disorder that affects a person's brain and behavior with drug use and can interfere with a person's ability to work, to go to school, and to have good relationships with family and friends.¹⁶²

Substance use disorder vulnerability can largely be attributed with genetics, but physical and emotional trauma also puts people at a higher risk. The 2021 State of America report found that 7.7% of adults in America reported having a substance use disorder in the past year.¹⁶³ 7.3% of adults in Pennsylvania have a substance use disorder, which ranks 15 out of 51. In 2016, the SAMHSA study found that opiates, including heroin and prescription pain killers, were present in 20% of suicide deaths in the U.S. Additionally, 22% of all suicide deaths in 2016 involved alcohol intoxication. Alcohol is a commonly used substance, but its ability to increase aggressiveness and constrict cognition, which impairs coping strategies, may increase risk of suicidal behaviors.¹⁶⁴

Suicide involves dynamic interactions between national issues, community issues, families and relationships, and individual health and or well-being.¹⁶⁵ It has become a growing concern as it is now the 10th leading cause of death among all ages in the United States, but second leading cause of death for 10-34 years and fourth for 35-54 years.¹⁶⁶ Suicide is likely to remain a significant issue during, and well beyond, the pandemic. The long-term effects on the general population, the economy, and vulnerable groups is unknown, but the impact on mental health and suicide risk may also be increased during the pandemic due to the stigma towards individuals with COVID-19 and their families.¹⁶⁷ Therefore, responses to suicide should target the whole population, focusing on particular risk factors like financial stressors, alcohol consumption, isolation, and access to care.¹⁶⁸

¹⁶⁰ <https://www.cdc.gov/nchs/products/databriefs/db378.htm>

¹⁶¹ <https://store.samhsa.gov/sites/default/files/d7/priv/sma16-4935.pdf>

¹⁶² <https://www.nimh.nih.gov/health/topics/substance-use-and-mental-health/index.shtml>

¹⁶³ <https://mhanational.org/issues/2021/ranking-states>

¹⁶⁴ <https://store.samhsa.gov/sites/default/files/d7/priv/sma16-4935.pdf>

¹⁶⁵ https://www.mentalhealth.va.gov/docs/data-sheets/2019/2019_National_Veteran_Suicide_Prevention_Annual_Report_508.pdf

¹⁶⁶ <https://www.cdc.gov/nchs/products/databriefs/db398.htm>

¹⁶⁷ [https://doi.org/10.1016/S2215-0366\(20\)30171-1](https://doi.org/10.1016/S2215-0366(20)30171-1)

¹⁶⁸ [https://doi.org/10.1016/S2215-0366\(20\)30171-1](https://doi.org/10.1016/S2215-0366(20)30171-1)

A CDC Suicide Mortality report in the United States from 1999-2019 was released February 2021, outlining the suicide rate over a 10-year period. The age-adjusted rate in 2019 was 13.9 per 100,000 people, which is slightly lower than the rate in 2018 (14.2).¹⁶⁹ The 2019 crude rate is 24.5 per 100,000 people.¹⁷⁰ In 2018, the National Hospital Ambulatory Medical Care Survey (NHAMCS) reported 312,000 emergency visits for self-injury.¹⁷¹ CDC WONDER data shows the 2019 crude rate of suicide by intentional self-harm from 1999-2019.¹⁷² In 2019, 11.9 per 100,000 deaths were death by intentional self-harm.



“I think there is less stigma associated with mental health than ever before, and there is more willingness to seek help. Of course the problem then becomes having the care available and this is where we struggle.”

Released in September 2020, the National Vital Statistics Report and CDC published a report of suicide among adolescent and youth ages 10-24 years from 2000-2018. The average percent increase in suicide deaths among 10-24 years in the U.S. from 2007-2009 to 2016-2018 is 47.1% nationally and 53.6% in Pennsylvania.¹⁷³ After a period of stability from 2000-2007, the suicide rate among youth and adolescents increased 57.4%, which went from 6.8 deaths per 100,000 in 2007 to 10.7 per 100,000 in 2018. The northeast states had among the lowest suicide rates in the country from 2016-2018. Pennsylvania's suicide rate in 2016-2018 was 10.6 per 100,000 deaths.¹⁷⁴

In response to growing suicide rates, in September 2020 Pennsylvania created a suicide prevention plan, outlining 8 specific prevention goals including prevention awareness efforts that reduce stigma and promote safety, help-seeking, and wellness; promote trauma-informed approaches to support all Pennsylvania residents as part of upstream, universal suicide prevention efforts; and provide quality training on the prevention of suicide and management of suicide risk across multiple sectors and settings.¹⁷⁵

Some populations are more vulnerable than others to mental disorders, substance use and suicide. A SAMHSA study published in June 2020 found that Hispanic populations are more likely to lack high-quality evidence-based cultural grounded treatment options and have disparities in treatment outcomes.¹⁷⁶ Additionally, 1 in 20 Hispanic people do not receive services from a mental health specialist due to stigma, discrimination and lack of knowledge about services. This is a population that should be targeted by providing culturally appropriate counseling and specialized outreach and services to encourage care-seeking behaviors.

¹⁶⁹ <https://www.cdc.gov/nchs/products/databriefs/db398.htm>

¹⁷⁰ <https://wonder.cdc.gov/controller/datarequest/D76;jsessionid=BF94A69A2EA7B26A79CC60EBC4B1>

¹⁷¹ <https://www.cdc.gov/nchs/fastats/suicide.htm>

¹⁷² <https://wonder.cdc.gov/controller/datarequest/D76;jsessionid=808281E7650E525FCF44896FE0B4>

¹⁷³ <https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr-69-11-508.pdf>

¹⁷⁴ <https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr-69-11-508.pdf>

¹⁷⁵ <https://www.dhs.pa.gov/Services/Mental-Health-In-PA/Documents/PA%20Statewide%20Suicide%20Prevention%20Plan.pdf>

¹⁷⁶ https://mhttcnetwork.org/sites/default/files/2020-06/Mh_Disparities_Booklet.pdf

Another population particularly vulnerable to suicide are Veterans. A 2019 National Veteran Suicide Prevention Report by the U.S. Veterans Affairs found that in 2017, veterans accounted for 13.5% of all deaths by suicide in the U.S.¹⁷⁷ Additionally, an average of 16.8 veterans died by suicide each day in 2017. Suicide rates in veterans tend to be affected by economic disparities, homelessness, unemployment, disability status, community connection, and personal health and well-being. Veterans served by the Veterans Health Administration (VHA) who die by suicide are more likely to have sleep disorders, traumatic brain injuries, or a mental disorder diagnosis.¹⁷⁸ These suicide rates tend to be higher of individuals who live in rural areas and individuals who are isolated. Veterans ages 18-34 years old had the highest suicide rate in 2017, 44.5 per 100,000, which has increased 76% from 2005 to 2017.¹⁷⁹ Veterans are a group that require specialized services and care that addresses the needs of the population. One key informant touched on the need for veteran assistance in Carbon county:



“Carbon county is first in the Commonwealth for veteran suicide. Which was a very shocking statistic when I first learned that. There really aren’t any resources in the county for veterans to address mental health. Allentown was the closest, but they stopped doing peer to peer groups for the Vietnam vets. The Wilkes Barre VA had group sessions, but our van that we would use to get the disabled hasn’t been running since last March due to COVID. So now there is nothing here for them.”

..... Substance Use

According to a 2019 U.S. Health CDC report, 11.7% of people in the United States have used an illicit drug in the past month.¹⁸⁰ An illicit drug is one that is highly addictive and forbidden by law. Some of these include marijuana, opioids like fentanyl and heroin, and stimulants like cocaine and methamphetamine. The Substance Use and Mental Health Services Administration (SAMHSA) defines substance use disorders as occurring “when the recurrent use of alcohol and/or drugs causes clinically significant impairment, including health problems, disability, and failure to meet major responsibilities at work, school, or home.”¹⁸¹ Substance use commonly co-occurs with mental health disorders. Please refer to the mental health section for more detailed information. Substance use is a growing concern in the United States and within our service areas, particularly related to the COVID-19 pandemic. To address the concerns with alcohol, drug and tobacco use, some of Healthy People 2030’s objectives are to reduce the number of adults who used drugs in the past month, increase the rate of people with a

¹⁷⁷ https://www.mentalhealth.va.gov/docs/data-sheets/2019/2019_National_Veteran_Suicide_Prevention_Annual_Report_508.pdf

¹⁷⁸ https://www.mentalhealth.va.gov/docs/data-sheets/2019/2019_National_Veteran_Suicide_Prevention_Annual_Report_508.pdf

¹⁷⁹ https://www.mentalhealth.va.gov/docs/data-sheets/2019/2019_National_Veteran_Suicide_Prevention_Annual_Report_508.pdf

¹⁸⁰ <https://www.cdc.gov/nchs/data/hus/2019/020-508.pdf>

¹⁸¹ <https://www.samhsa.gov/find-help/disorders>

substance use disorder who got treatment in the past year, increase the proportion of adolescents who think substance use is risky, and to reduce the rate of opioid related emergency department visits.¹⁸²



“I think with certain areas when you talk about drug and alcohol, certain areas are impacted more than others. Sometimes there are not enough drug and alcohol resources. Some of the kids and families might be more open to resources. It is a huge issue. A lot of the kids I see have transgenerational trauma and substance abuse issues. Trying to help those kids move away from that is difficult.”

..... Alcohol

A 2019 CDC alcohol use report found that 25.1% of adults 18 and older have had at least one heavy drinking day (five or more drinks for men and four or more drinks for women) in the past year.¹⁸³ The percentage for binge drinking in women is 19.8% and 30.9% for men.¹⁸⁴ Nationally, 1 in 4 adults heavily drank in the past year. In 2019, there were 24,110 alcoholic liver deaths in the U.S. and 39,043 alcohol-induced deaths, which do not include accidents and homicides. Pennsylvania’s crude rate for alcohol-induced deaths was 8.2 per 100,000 population. In Carbon and Schuylkill county, the data was unreliable because the count was too small.¹⁸⁵

Pennsylvania’s Behavioral Risk Factor Surveillance System (BRFSS) surveyed about binge drinking, chronic drinking, and made an assessment about how many people in each county cluster would be at risk for a drinking problem. Binge drinking is “defined as a pattern of drinking that brings a person’s blood alcohol concentration (BAC) to 0.08 g/dl or above. This typically happens when men consume 5 or more drinks or women consume 4 or more drinks in about 2 hours.”¹⁸⁶ The CDC reports that binge drinking is the most common, costly, and deadly pattern of excessive alcohol use in the United States.¹⁸⁷ Binge drinking can be associated with unintentional car crashes, violence, sexually transmitted diseases, fetal alcohol spectrum disorders, cancer, and more. Chronic drinking is when someone drinks more than the recommended one (women) or two (men) drinks a day, and more than seven (women) and fourteen (men) drinks in a week.¹⁸⁸ In 2019, the binge drinking percentage in Pennsylvania was 17% and chronic drinking was 6%. The report clustered certain counties together and reported on risk for a drinking problem. The Berks and Schuylkill cluster was reported to have 7.1% of people at risk for a drinking problem

¹⁸² <https://health.gov/healthypeople/objectives-and-data/browse-objectives/drug-and-alcohol-use>

¹⁸³ <https://www.cdc.gov/nchs/fastats/alcohol.htm>

¹⁸⁴ https://public.tableau.com/profile/tina.norris#!/vizhome/FIGURE9_1/Dashboard9_1

¹⁸⁵ <https://wonder.cdc.gov/controller/saved/D76/D99F021>

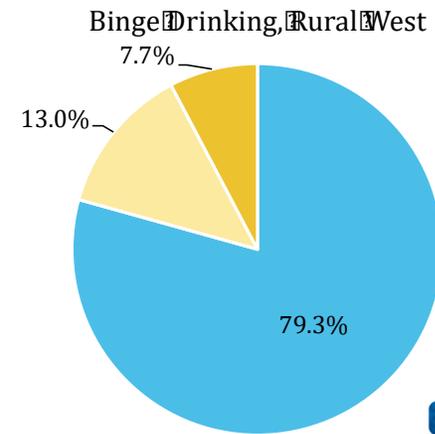
¹⁸⁶ <https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>

¹⁸⁷ <https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>

¹⁸⁸ <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking>

and the Carbon, Lehigh, Northampton cluster 7% of people.¹⁸⁹ When asked how many binge drinking episodes a respondent has had in the past month, 79.3% of respondents in the Rural West service area indicated no episodes. However, 13% have had 1-2 episodes in the past month and 7.7% had 3 or more episodes.

In 2018, the Census Bureau released a County Business Patterns (CBP) report. One of the businesses assessed were liquor stores. Liquor store access reports on places primarily engaged in retailing liquor and packaged alcoholic beverages, like beer and wine. This excludes places preparing alcohol for consumption (e.g., bars, restaurants) or places that sell alcohol as a secondary retail product (e.g., gas stations, grocery stores). Research has found that liquor stores are disproportionately located in predominantly Black census tracts.¹⁹⁰ This is an issue because increased access to liquor stores gives individuals easier access and poses a higher risk of developing alcohol use and/or a substance use disorder. The number of liquor stores is reported per 10,000 population. The Rural West service area has 2.26 liquor stores per 10,000 population, while Carbon county has 2.61 per 10,000 and Schuylkill county has 2.36 per 10,000 population.¹⁹¹



 *Figure 55*

■ No episodes ■ 1-2 episodes ■ 3 or more episodes

RWJ also measures excessive drinking and alcohol impaired driving deaths. Excessive drinking measures the percentage of the county's adult population that reports binge or heavy drinking in the past 30 days. Pennsylvania reported 20%, Carbon county reported 22% and Schuylkill county reported 21%. The alcohol impaired driving measure assesses the percentage of motor vehicle deaths with alcohol impairment. Alcohol reduces brain function and impairs thinking, which can hinder driving. Drivers 21-24 years old caused 27% of all alcohol impaired deaths in 2015-2019.¹⁹² Pennsylvania reported 26% of all vehicle deaths with alcohol impairment, Carbon reported 25%, and Schuylkill county reported 23%, the lowest of Pennsylvania service area counties.

¹⁸⁹ <https://www.health.pa.gov/topics/HealthStatistics/BehavioralStatistics/BehavioralRiskPAAAdults/Pages/BehavioralRisksPAAAdults.aspx>

¹⁹⁰ DOI: 10.1016/s0277-9536(00)00004-6

¹⁹¹ <https://www.census.gov/programs-surveys/cbp.html>

¹⁹² <https://www.countyhealthrankings.org/>

Vehicle Deaths with Alcohol Impairment

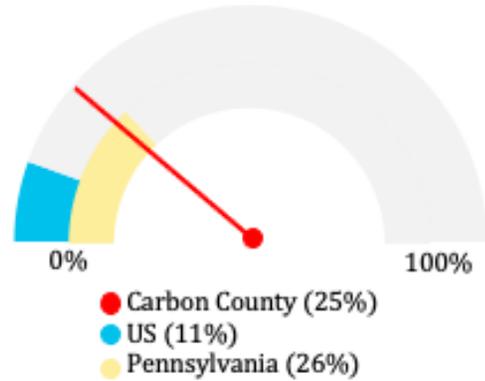


Figure 56

Vehicle Deaths with Alcohol Impairment

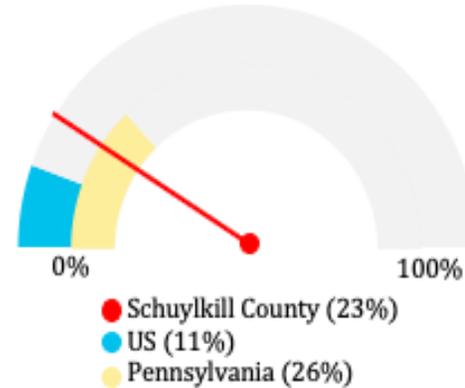


Figure 57



“I do believe there is a growing substance abuse issue that is underlying in our area. People think the amount of alcohol that they drink- they rationalize it and think that it is normal, but I don't think that they realize that it is not. It may seem normal in our area, but it is not in affluent areas.”

..... Stimulants

The drug overdose report for 1999-2019 by the CDC indicates that the age-adjusted rate of drug overdose deaths involving cocaine increased from 1.4 per 100,000 population in 1999 to 4.9 in 2019.¹⁹³ It is also reported that the age-adjusted rate of drug overdose deaths involving psychostimulants, which include drugs such as methamphetamine and methylphenidate, increased from 0.2 per 100,000 population in 1999 to 5.0 in 2019. Stimulants are dangerous and easily abused because they increase alertness, attention and energy. An overdose of stimulants can result in symptoms including rapid breathing, aggression, hallucinations, overactive reflexes, and more.¹⁹⁴ The 2019 Annual Surveillance Report of Drug-Related Risks and Outcomes from the CDC,¹⁹⁵ reported that in 2018, an estimated 5,529,000, or 2.0% of people 12 years and older, reported cocaine use in the past year. This is highest among people 26–29 years (6.0%) and people 18-25 years (5.8%). In 2018, an estimated 1,867,000, or 0.7% of people 12 years and older, reported methamphetamine use in the past year. This

¹⁹³ <https://www.cdc.gov/nchs/data/databriefs/db394-H.pdf>

¹⁹⁴ <https://www.drugabuse.gov/publications/drugfacts/prescription-stimulants>

¹⁹⁵ <https://www.cdc.gov/drugoverdose/pubs/related-publications.html>

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is highest among people 30–34 years (1.6%), and people 26-29 years (1.2%), and 35-39 years (1.1%). In 2018, an estimated 5,109,000, or 1.9% of people 12 years and older, reported misuse of prescription stimulants in the past year. This is highest among people 18-25 years (6.5%), followed by 26-29 years (4.4%) and 30-34 years (3.4%). Most recently according to the CDC health alert, overdose deaths involving cocaine increased by 26.5% from the 12-months ending in June 2019 to the 12-months ending in May 2020.¹⁹⁶

There is an average of about 510 new methamphetamine users a day 12 years and older, 70 new users a day 12 to 17 years old, 170 new users a day 18 to 25 years old, and 260 new users a day 26 years and older. SAMHSA reports that 27,000 people 18 years and older in New Jersey used methamphetamines in the past year. In the same time frame, 75,000 people 18 years and older in Pennsylvania used methamphetamines in the past year.¹⁹⁷ One key informant mentioned the increase in use of Methamphetamine over Opioid usage.

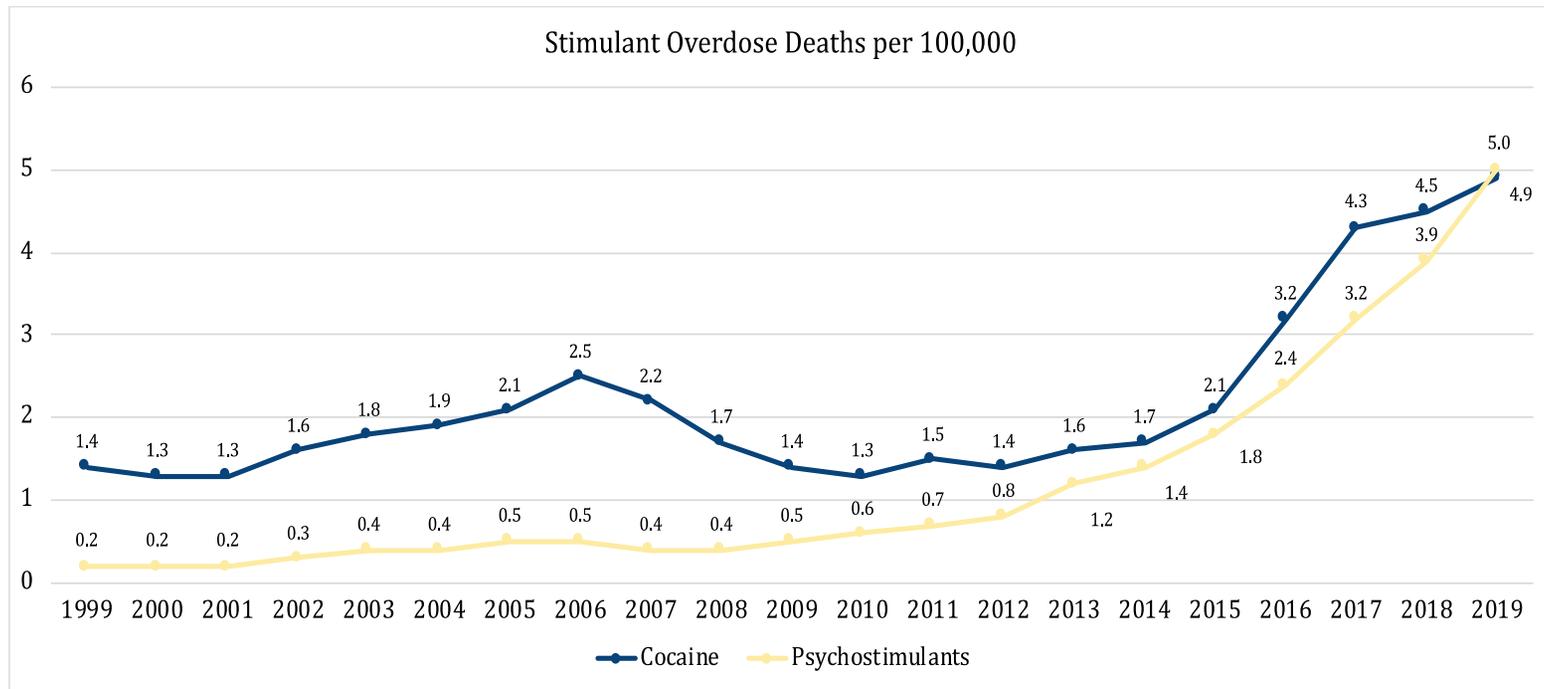


Figure 58

¹⁹⁶ <https://emergency.cdc.gov/han/2020/han00438.asp>

¹⁹⁷ <https://www.samhsa.gov/data/sites/default/files/reports/rpt32879/NSDUHsaeTotal2019/2019NSDUHsaeTotal.pdf>



“We are starting to see Methamphetamine in the last three months in Carbon county has over taken Opioids as the new drug of choice for people seeking treatment. We need money for drug and alcohol in general not so earmarked. The funding cannot catch up to the issues. I just did October through December stats and even with probation, the number one thing that they are seeing positive urine screens for is Methamphetamines. In fact, one month out of the three there was not one positive for Opioids.”

..... Tobacco

The 2019 CDC Health Report indicated that in 2018, 21.5% of the population 12 years and older used any type of tobacco product.¹⁹⁸ The CDC and National Health Interview Survey of 2019 reported that 14.2% of adults 18 years and older currently smoke cigarettes¹⁹⁹ and 8.1% of adolescents in grades 9-12 smoked cigarettes in the past 30 days.²⁰⁰

The Robert Wood Johnson 2021 County Health Rankings report on adult smoking using data from 2018. Cigarette smoking is an important data point to capture because it has been an identified cause of various cancers, cardiovascular disease, and other adverse health outcomes.²⁰¹ Measuring tobacco use can help St. Luke's and other health networks to identify needs for smoking cessation and other smoking reduction programs. Adult smoking is measured as the percent of the adult population that report currently smoking every day or most days and have smoked at least 100 cigarettes in their lifetime.²⁰²

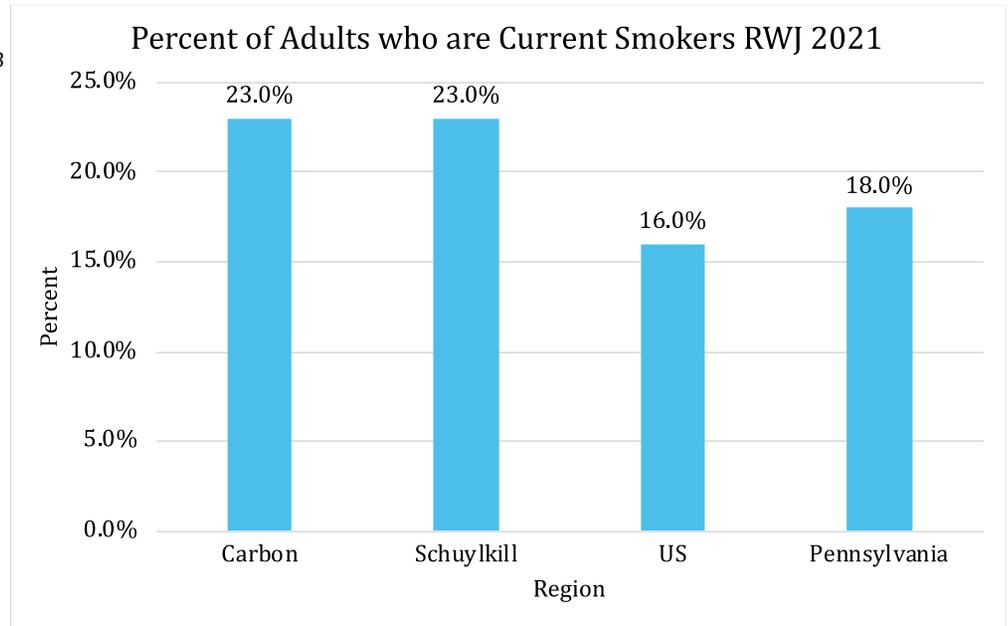


Figure 59

¹⁹⁸ <https://www.cdc.gov/nchs/data/hus/2019/020-508.pdf>

¹⁹⁹ <https://www.cdc.gov/nchs/data/nhis/earlyrelease/EarlyRelease202009-508.pdf>

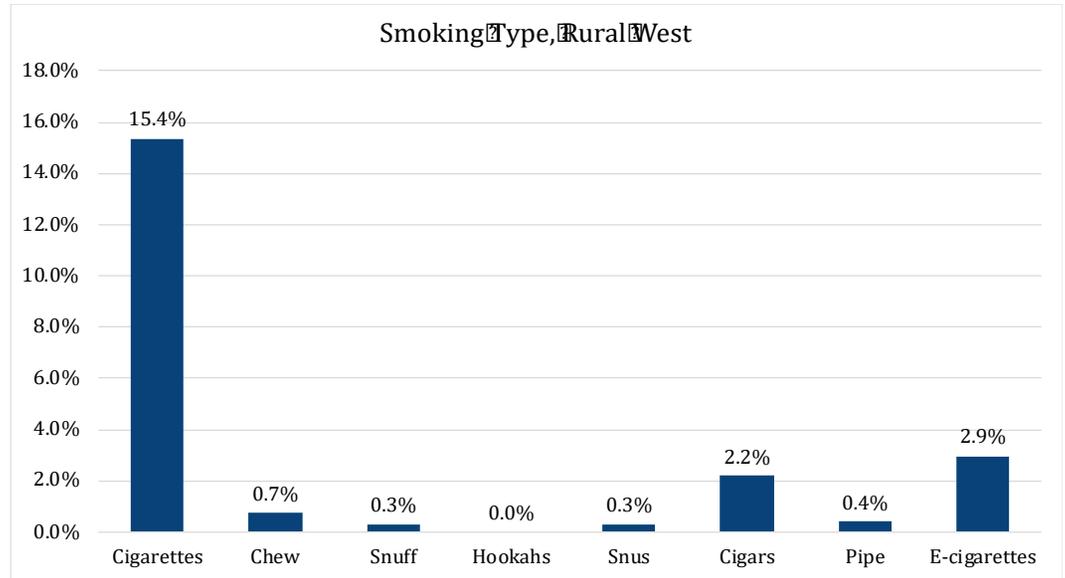
²⁰⁰ <https://www.cdc.gov/nchs/data/hus/hus19-508.pdf#fig09>

²⁰¹ <https://www.countyhealthrankings.org/>

²⁰² <https://www.countyhealthrankings.org/>

In Pennsylvania, 18% of adults smoke every day or have smoked at least 100 cigarettes in their lifetime. In Carbon and Schuylkill county, it is 23% of adults, which is the highest of all service area counties. Additionally, the CDC National Center for Health Statistics (NCHS) released a secondhand smoke exposure report among nonsmoking adults in February 2021. Using data from 2015-2018, the report indicates that 20.8% of nonsmoking U.S. adults 18 and over were exposed to secondhand smoke, which was measured by cotinine in their blood, a metabolite of nicotine.²⁰³ Some negative effects of secondhand smoke exposure include acute respiratory effects, coronary heart disease, stroke, lung cancer, and premature death. The prevalence of secondhand exposure was highest for adults 18-39 (25.6%) than for adults 40-59 (19.1%) and adults 60 and over (17.6%). The highest secondhand exposure for adults by race and ethnicity were for non-Hispanic Black adults (39.7%) and lowest for Hispanic adults (17.2%). A promising finding from the report is that the prevalence of secondhand exposure declined from 27.7% in 2009 to 20.8% in 2018.

When asked if CHNA survey respondents smoke, 16.5% of respondents from the Rural West service area responded yes. Of those who do smoke, cigarettes are the most common form of tobacco (15.4%), followed by e-cigarettes (2.9%), and cigars (2.2%). 0.7% of respondents use chew, 0.4% use pipes, 0.3% use snus, 0.3% use snuff, and 0% use hookahs.



 *Figure 60*

..... Vape

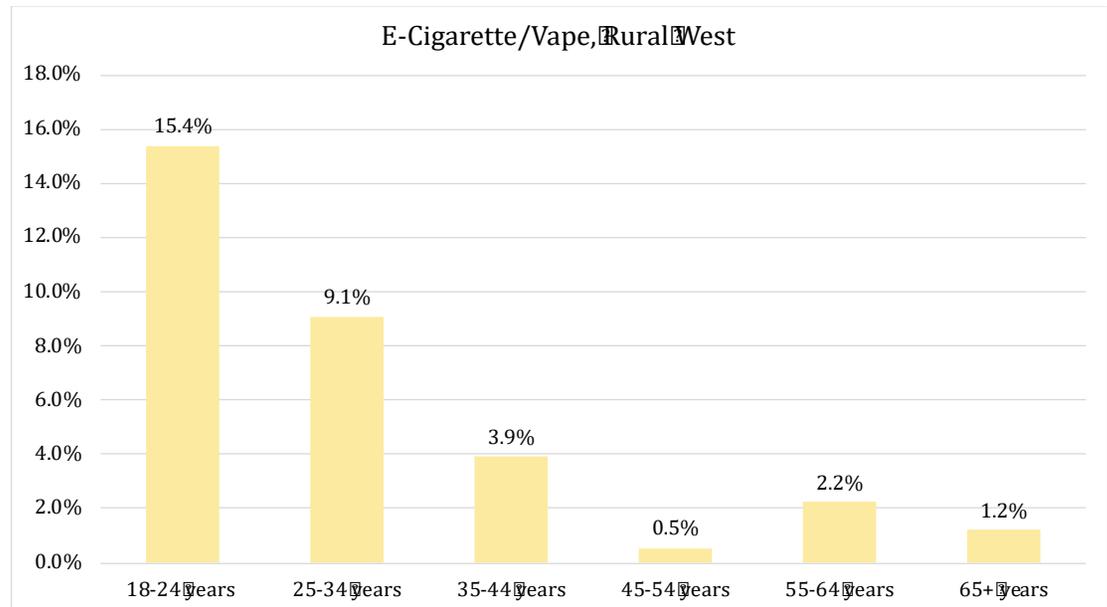
Vaping is another form of smoking nicotine, a highly addictive substance that is especially harmful to children and adolescents. Vapes, also known as e-cigarettes or electronic cigarettes, are “electronic devices that heat a liquid and produce an aerosol or mix of small particles in the air.”²⁰⁴ The CDC and National Health Interview Survey in 2019 found that 4.4% of adults 18 years and older use e-cigarettes²⁰⁵ and

²⁰³ <https://www.cdc.gov/nchs/data/databriefs/db396-H.pdf>

²⁰⁴ https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html

²⁰⁵ <https://www.cdc.gov/nchs/data/nhis/earlyrelease/EarlyRelease202009-508.pdf>

20.8% of adolescents grades 9-12 have used e-cigarettes in the past 30 days.²⁰⁶ Electronic cigarettes were introduced in the United States around 2007 and the highest percentage of use is seen in adolescents.²⁰⁷ Nicotine is most harmful for children and adolescents because the substance hinders brain development, which occurs until around age 25. Particularly, nicotine impacts attention, learning, mood, and impulse control, all of which are built and refined through childhood.²⁰⁸ An e-cigarette study among middle and high school students in the United States was performed in accordance with the CDC in 2020. Results from this study found that 19.6% of high school students and 4.7% of middle school students reported current e-cigarette use.²⁰⁹ Of the current users, 82.9% used flavored e-cigarettes, including 84.7% of high school users and 73.9% of middle school users. The introduction of flavors such as fruit, candy, and mint has increased youth initiation into the use of tobacco products.²¹⁰ Another CDC study found that 23.6% of high school students and 6.7% of middle school students reported 30-day use of any tobacco product.²¹¹ According to PAYS data, 19% of students in Pennsylvania used an e-cigarette or vape within the last 30 days.²¹² Similar to other findings, the community health survey showed the age group that uses e-cigarettes/vape most frequently are 18-24 year old (15.4%), while 9.1% of respondents 25-34 years old use vapes, followed by 3.9% 35-44 years old, 0.5% 45-54 years old, 2.2% 55-64 years old, and 1.2% 65 years and older.



 *Figure 61*

²⁰⁶ <https://www.cdc.gov/nchs/data/hus/hus19-508.pdf#fig09>

²⁰⁷ <https://www.cdc.gov/nchs/data/nhis/earlyrelease/EarlyRelease202009-508.pdf>

²⁰⁸ https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html

²⁰⁹ https://www.cdc.gov/mmwr/volumes/69/wr/mm6937e1.htm?s_cid=mm6937e1_w%20

²¹⁰ <https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a1.htm>

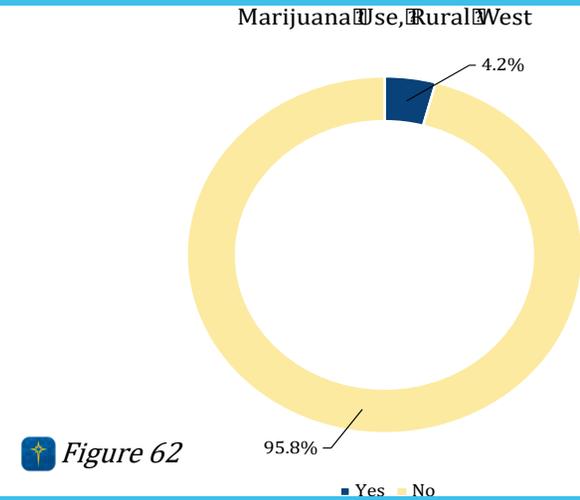
²¹¹ <https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a1.htm>

²¹² [https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-\(PAYS\).aspx](https://www.pccd.pa.gov/Juvenile-Justice/Pages/Pennsylvania-Youth-Survey-(PAYS).aspx)

..... Marijuana

Marijuana is a psychotropic drug that is commonly used throughout the United States. In the short-term, marijuana can alter senses, change mood, impair memory, and impair body movement. In the long-term, marijuana can affect thinking, memory, and learning functions crucial to brain development.²¹³ Marijuana can also have physical effects which result in breathing problems and increased heart rate. The CDC 2019 U.S. Health Report indicated that 10.1% of people 12 and older used marijuana in the past 12 months during 2018.²¹⁴

However, the 2019 Annual Surveillance Report of Drug-Related Risks and Outcomes reported that 15.9% of people in the U.S. during 2018 who are 12 years and older used marijuana in the past 12 months.²¹⁵ In the CHNA survey, usage was highest among people 18-25 (34.8%) and people 26-34 (29.6%) and 4.2% of respondents from the Rural West service area indicate use of marijuana.



..... Opioids

The CDC reports that the opioid epidemic has occurred in three phases.²¹⁶ First, prescription opioids increased in the 1990s with overdose deaths continually increasing since 1999. The second phase began around 2010 with increased overdoses involving heroin. Heroin is an alternative to prescription opioids due to its similar effect on the body. The third phase began in 2013 with the introduction of synthetic opioids, like illicitly manufactured fentanyl. The CDC provides descriptions on the most commonly used opioids: prescription opioids, fentanyl, and heroin. Prescription opioids can be used to treat pain and are often prescribed following surgery, an injury, or to manage a disease like cancer. However, there has been a dramatic increase in the prescription of opioids for chronic pain such as back pain or osteoarthritis, “despite serious risks and the lack of evidence about their long-term effectiveness.”²¹⁷ Prescription opioids are highly addictive, and once addicted it is incredibly difficult to stop using. As many as one in four patients receiving long-term opioid therapy in a

²¹³ <https://www.drugabuse.gov/publications/drugfacts/marijuana>

²¹⁴ <https://www.cdc.gov/nchs/data/abus/2019/020-508.pdf>

²¹⁵ <https://www.cdc.gov/drugoverdose/pubs/related-publications.html>

²¹⁶ <https://www.cdc.gov/drugoverdose/epidemic/index.html>

²¹⁷ <https://www.cdc.gov/drugoverdose/opioids/prescribed.html>

primary care setting struggle with an opioid addiction.²¹⁸ Common prescription opioids are Methadone, Oxycodone (OxyContin), Hydrocodone (Vicodin), and Benzodiazepines such as alprazolam (Xanax) and diazepam (Valium).

Fentanyl produced pharmaceutically is a synthetic opioid used to treat severe pain. It is 50 to 100 times more potent than morphine. However, the increase in overdose has been linked to illegally made fentanyl which has a heroin-like effect.²¹⁹ The CDC reports that rates of overdose deaths involving synthetic opioids other than methadone, which includes fentanyl and fentanyl analogs, increased over 16% from 2018 to 2019. Overdose deaths involving synthetic opioids were nearly 12 times higher in 2019 than in 2013."²²⁰ Heroin is an illegal and highly addictive drug that is typically injected, and heroin use increases the risk of serious infections like HIV, Hepatitis C, Hepatitis B, and bacterial infections. Heroin use has increased by 5 times from 2010 to 2018.²²¹ This is problematic because heroin is typically used with other substances, which can increase the risk of an overdose.

The CDC released a report (2020) on drug overdose in the United States from 1999-2019.²²² The age-adjusted rate of drug overdose deaths involving synthetic opioids increased from 1.0 per 100,000 population in 2013 to 11.4 in 2019. The average annual increase rate was lower from 2017-2019 (9% per year) than 2013-2017 (75% per year). The age-adjusted rate of drug overdose deaths involving natural and semisynthetic opioids, like oxycodone and hydrocodone, increased from 1.0 per 100,000 population in 1999 to 2.7 in 2011, then increasing again to 4.4 in 2016 and 2017. The rates in 2018 (3.8) and 2019 (3.6) were lower than 2017.²²³



“Our opioid problems are still a gigantic challenge. I think we have seen some of the stigma associated with the issue diminish, and while we have gotten better in response, the caseload is still extremely high.”

The Pennsylvania Health Care Cost Containment Council (PHC4) collects data for each calendar year (CY) on opioid overdose hospital admissions and opioid use disorder (OUD) hospital admissions. In CY 2019, there were 23.2 hospital admissions for an opioid overdose per 100,000 people and 293.2 hospital admissions with opioid use disorder per 100,000 people in Pennsylvania.²²⁴ In Carbon county, the rate of opioid overdose hospital admissions was 31.4 per 100,000 people and the rate of hospital admission with OUD was 589.1 per 100,000 people. Both of these rates are the highest out of the service area counties. In Schuylkill county, the rate of opioid overdose hospital admissions was 24.4 per 100,000 people and the rate of hospital admissions with OUD was 285.5 per 100,000 people.

²¹⁸ <https://www.cdc.gov/drugoverdose/opioids/prescribed.html>

²¹⁹ <https://www.cdc.gov/drugoverdose/opioids/fentanyl.html>

²²⁰ <https://www.cdc.gov/drugoverdose/opioids/fentanyl.html>

²²¹ <https://www.cdc.gov/drugoverdose/opioids/heroin.html>

²²² <https://www.cdc.gov/nchs/data/databriefs/db394-H.pdf>

²²³ <https://www.cdc.gov/nchs/data/databriefs/db394-H.pdf>

²²⁴ Phc4.org/m/Opioids/

Opioid use while pregnant can have severe negative outcomes for the child, potentially resulting in Neonatal Abstinence Syndrome (NAS). NAS births occur “in a newborn who was exposed to addictive substances while in the mother’s womb. The most common opiate drugs that are associated with NAS are heroin, codeine, oxycodone (oxycontin), methadone and buprenorphine.”²²⁵ The effects of NAS usually occur within 48-72 hours of birth, suffering from withdrawal, low birth weight, tremors, vomiting, fever and more. In Pennsylvania, there have been 5,596 NAS births from January 1, 2018 to March 6, 2021.²²⁶ In 2018, Carbon county had 30.8 NAS births per 1,000 births, 16 total, and Schuylkill county had 28.9 NAS births per 1,000 births, 36 NAS births in total.²²⁷

As a result of the COVID-19 pandemic, the CDC issued a health alert on December 17, 2020 indicating an increase in fatal drug overdoses across the United States driven by synthetic opioids before and during the pandemic. The purpose of the report was to alert public health departments, healthcare professionals, medical examiners, and coroners of substance use increase and drug overdoses across the U.S. with “a concerning acceleration of the increase in drug overdose deaths, with the largest increase recorded from March 2020 to May 2020, coinciding with the implementation of widespread mitigation measures for the COVID-19 pandemic.”²²⁸ The alert indicated that overdose deaths increased 18.2% from the 12-month period between June 30, 2019 and May 31, 2020. Overdose deaths went from 74,185 in February 2020 to 75,696 deaths in March 2020 to 77,842 deaths in April 2020, which is the largest monthly increases documented since January 2015 when monthly provisional estimates began.²²⁹ The report also claims that synthetic opioids are the primary driver of the increases in overdose deaths; “the 12-month count of synthetic opioid deaths increased 38.4% from the 12-months ending in June 2019 compared with the 12-months ending in May 2020.”²³⁰ Of the 38 jurisdictions in the U.S. with available synthetic opioid data, 37 jurisdictions reported increases in synthetic opioid overdose deaths, and 18 of the jurisdictions reported increases greater than 50%. Provisional state data is available based on records that meet certain data quality criteria. They should not be considered comparable with the final data and are subject to change. The 12 month-ending provisional counts of drug overdose deaths ending August 2020 for Pennsylvania is 5,008.²³¹ These numbers are underreported due to incomplete data and should not be assumed to be final. To prevent against the increase in overdose deaths, the CDC recommends states expand the use of naloxone with overdose prevention education; expand access to treatment for substance use disorders; intervene early with individuals at high risk for overdose; improve detection of overdose outbreaks.

One key informant mentioned the severity of opioid use in Schuylkill county:

“A challenge and need prior to the pandemic was opioid abuse. I couldn’t believe the amount of residents within Schuylkill County who have opioid addictions.”

²²⁵ https://nj.gov/health/populationhealth/opioid/opioid_nas.shtml

²²⁶ <https://data.pa.gov/stories/s/9q45-nckt/>

²²⁷ <https://data.pa.gov/Opioid-Related/Annual-Rate-of-Neonatal-Hospital-Stays-with-Withdr/drhe-nauc>

²²⁸ <https://emergency.cdc.gov/han/2020/han00438.asp>

²²⁹ <https://emergency.cdc.gov/han/2020/han00438.asp>

²³⁰ <https://emergency.cdc.gov/han/2020/han00438.asp>

²³¹ <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>

..... **Overdose**

Overdose has been discussed previously, as it is a growing concern with prevalence rates increasing, especially during the pandemic.²³² Drug overdose deaths are the leading contributor to premature death and are largely preventable.²³³ Additionally, since 2000, the rate of drug overdose deaths has increased by 137% across the county, which can be largely attributed to opioids, as there has been a 200% increase in opioid overdose deaths since 2000.²³⁴ The NORC, National Opinion Research Center, reports on drug overdose deaths in the United States. From 2015-2019, there has been a rate of 28.7 drug overdose deaths per 100,000 people in the U.S. aged 15-64 years old.²³⁵

In Pennsylvania, the rate is 53.3 per 100,000 population. In Carbon county, the rate is 69.0, the highest of all service area counties. In Schuylkill county, the rate is 52.5 overdose deaths per 100,000 people. The CDC also published a drug overdose death report for 1999-2019 in December 2020. They report that the age adjusted rate of drug overdose deaths in 2019 was 21.6 per 100,000, which is higher than in 2018 (20.7 per 100,000).²³⁶ Adults 35-44 had the highest rate of drug overdose deaths of any age group in 2019 (40.5 per 100,000 population). Increasing from 2012, drug overdose deaths involving cocaine increased from 1.4 to 4.9 per 100,000 population in 2019 and those deaths involving psychostimulants with abuse potential, such as methamphetamine and amphetamine, increased from 0.8 to

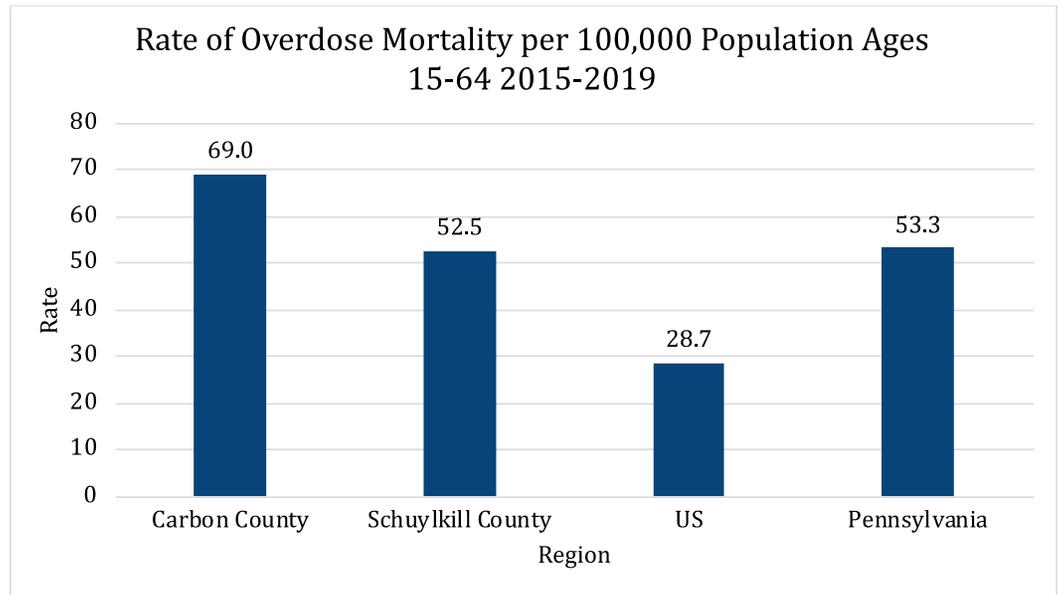


Figure 63

²³² <https://emergency.cdc.gov/han/2020/han00438.asp>

²³³ <https://www.countyhealthrankings.org/>

²³⁴ <https://www.countyhealthrankings.org/>

²³⁵ <https://opioidmisusetool.norc.org/>

²³⁶ <https://www.cdc.gov/nchs/data/databriefs/db394-H.pdf>

5.0 per 100,000 population, more than 6-fold.²³⁷ As of 2018, Pennsylvania ranks 4 overall for age-adjusted drug overdose deaths in the United States.²³⁸ During this time, Pennsylvania had 4,415 drug overdose deaths. Of the total drug overdose deaths in Pennsylvania, 65% involved opioids, a total of 2,866 deaths.²³⁹

..... Rural Substance Use

Substance use and misuse is commonly thought to be a city problem. However, it has been a growing problem in rural areas for many years. Rural adults have higher rates of use for tobacco and methamphetamines, while prescription drug misuse and heroin use has grown in all town sizes.²⁴⁰ Some factors contributing to substance use in rural areas are poverty, unemployment, education, lack of access to mental healthcare, and isolation. Substance use can be especially hard to treat in rural areas as the communities often have limited resources for prevention, treatment, and recovery. SAMHSA's National Survey on Drug Use and Health (NSDUH) found four areas where substance use is higher among non-metro areas than small metro and large metro areas: binge alcohol use in past month 12-17 years old, cigarette smoking, smokeless tobacco, and methamphetamine.²⁴¹ In non-metro areas, binge alcohol use is 5.4% compared to 4.7% and 4.8% in small metro and large metro areas, respectively. Cigarette smoking is 25.2% in non-metro areas compared to 22.0% and 18.0% in small metro and large metro areas, respectively. Smokeless tobacco use is 7.7% in non-metro areas compared to 5.1% and 2.8% in small metro and large metro areas, respectfully. Lastly, methamphetamine use is 1.2% in non-metro areas compared to 0.7% and 0.6% in small metro and large metro areas, respectively. These statistics show that geography does not make anyone immune to substance use, as it is a national issue.

..... Stigma

Stigma is another important component to substance use disorder regarding usage and receiving or accessing help. Stigma is defined as “a strong feeling of disapproval that most people in a society have about something.”²⁴² Stigma may be a barrier to seeking help for someone suffering from substance use due to fear of disapproval from family or friends. St. Luke's has worked with our own staff and other community organizations to inform people about stigma and how it can be minimized to help the most amount of people.

²³⁷ <https://www.cdc.gov/nchs/data/databriefs/db394-H.pdf>

²³⁸ <https://www.cdc.gov/drugoverdose/data/statedeaths/drug-overdose-death-2018.html>

²³⁹ <https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state>

²⁴⁰ <https://www.ruralhealthinfo.org/topics/substance-use>

²⁴¹ <https://www.samhsa.gov/data/report/2019-nsduh-detailed-tables>

²⁴² <https://dictionary.cambridge.org/us/dictionary/english/stigma>

In the Fall of 2019, a stigma reduction survey was sent to all the campuses whose employees are directly related to substance use disorders (SUD) as part of the Opioid Stewardship Program. 2,898 of 4,500 inpatient and outpatient network providers, nurses, and support staff received and completed the confidential stigma survey and education. Stigma campaigns are being piloted with phase two involving the entire network.



“My constant fight is stigma and making sure people understand that it is our neighborhoods and family members who are going through substance use disorder issues and getting people who aren't touched by it to understand. That is my forever challenge. We have such a great community that wants to help, but when it comes to drug and alcohol, there are some folks who it doesn't touch, they don't see it as important and don't see how it truly impacts every agency and group in our community. Just that awareness is our thing that we trudge on every meeting. It is the biggest thing for me. I think if we had a problem with a certain type of cancer, you could get people to rallying around people. How do we get people to rally more around our cause? Again, things that we do like our big recovery walk help, but not being able to have community gatherings from COVID, it takes away our momentum that we have had for a while.”

Beginning in the Fall of 2020, St. Luke's Rural Community Opioid Response committee partnered to develop Community Stigma Presentations. With the presentations, we have been able to reach 286 people as of Spring 2021. The stigma education included partners such as child development organizations, business organizations, churches, first responders, and mental health service organizations.

..... Naloxone

Naloxone is a drug that can quickly reduce the effects of an opioid overdose. The National Institute of Drug Abuse defines naloxone as “an opioid antagonist—meaning that it binds to opioid receptors and can reverse and block the effects of other opioids. It can very quickly restore normal respiration to a person whose breathing has slowed or stopped as a result of overdosing with heroin or prescription opioid pain medications.”²⁴³ Naloxone is safe and can be administered in three ways: injected, auto injected, or as a nasal spray. It is important for a variety of people to understand how to administer naloxone as it can quickly save someone's life. . In response to opioid use and substance use, St. Luke's was awarded a Health Resource Service Administration (HRSA) Rural Community Opioid Response Planning (RCORP) grant in 2018 to work within a consortium to improve OUD prevention, treatment, and recovery response. With the grant, along with funding from Lehigh County Authority on Drugs and Alcohol to fund our Sacred Heart Initiative, St. Luke's ran an urban (St. Luke's Sacred Heart) and rural (St. Luke's Miners Campus) pilot, which has educated and distributed naloxone to 730 and 255 people, respectively.

²⁴³ <https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-reversal-naloxone-narcan-evzio>

..... Warm Hand Off

A warm hand off is a process that has been implemented in St. Luke's and defined as "a transfer of care between two members of the health care team, where the handoff occurs in front of the patient and family. This transparent handoff of care allows patients and families to hear what is said and engages patients and families in communication, giving them the opportunity to clarify or correct information or ask questions about their care."²⁴⁴ Screening, Brief Intervention, and Referral to Treatment (SBIRT) is another approach adopted in St. Luke's care. SBIRT is used for early intervention in substance use disorders to quickly assess the severity of substance use and identify the appropriate level of care.²⁴⁵ During CY 2021, a total of 2,637 patients have received full SBIRT at 11 of St. Luke's campuses. Of those SBIRT patients, 56% have been referred with warm hand off and 32% have entered substance use treatment.

..... Opioid Encounters

While opioid use and overdoses have been increasing, especially in relation to the COVID-19 pandemic, St. Luke's has been rising to meet the needs of the community with support services including: Stigma training, naloxone education and distribution, SBIRT, and warm hand offs. From July 2019 to January 2021, St. Luke's has encountered 6,319 opioid use disorder cases and 2,097 overdose encounters. Encounters have fluctuated each month for both Opioid Use Disorder (OUD) and overdose, with no significant changes.

SUD Response at St. Luke's Monroe, St. Luke's Lehighton, St. Luke's Miners, and Geisinger St. Luke's is sponsored in part by the Pocono Mountains United Way and the All One Foundation as well as the Health Resource and Service Administration (HRSA)* Rural Community Opioid Response Program.

*This program was sponsored in part and supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$1,000,000 (implementation grant) with approximately 50% financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government.

²⁴⁴ <https://www.ahrq.gov/patient-safety/reports/engage/interventions/warmhandoff.html>

²⁴⁵ <https://www.samhsa.gov/sbirt>

Health Outcomes

In the 2021 Robert Wood Johnson County Health Rankings, Carbon county ranks 56 and Schuylkill county ranks 63 overall in Pennsylvania for health outcomes. Both counties are ranked among the least healthy counties in Pennsylvania, in the 0-25th percentile. America's Health Ranking ranks Pennsylvania 34 out of 50 for health outcomes. For both organizations, a ranking closest to 1 indicates healthier outcomes.

..... Morbidity, Mortality, and Life Expectancy

Morbidity, mortality, and life expectancy are key health outcomes that help us to determine the overall health of the populations we serve. 2021 Robert Wood Johnson Foundation County Health Rankings data reports a premature death health outcome, which measures the age-adjusted years of potential life lost before age 75 per 100,000 population. Carbon county has a premature death rate of 8,800 deaths per 100,000 which is far worse than Pennsylvania overall (7,500) and U.S. top performers (5,400).²⁴⁶ Schuylkill has a premature death of 9,800 deaths per 100,000. Since 1998, there has been a worsening trend in premature deaths within both counties.

According to the CDC, the average life expectancy from birth in the U.S. is 78.8 years.²⁴⁷ The Robert Wood Johnson County Healthy Rankings measures life expectancy as an age-adjusted, average number of years a person can expect to live.²⁴⁸ In Pennsylvania, the life expectancy is 78.4 and the range of life expectancy in the counties of Pennsylvania is 74.9-83. Life expectancy in Carbon county is 77.0 and 75.7 in Schuylkill county.

Finally, low birthweight is another health outcome that can contribute to life expectancy. Low birthweight is measured by the percentage of live births who are under 2,500 grams (5 pounds, 8 ounces), which can be an indicator for future health problems such as growth problems, cardiovascular disease, respiratory conditions, and visual, auditory, and intellectual impairments.²⁴⁹ The overall low birthweight percentage is 8% in Pennsylvania and 6% for U.S. top performers. The low birthweight percentage is 9% in Carbon county and 8% in Schuylkill county.

COVID-19 has also impacted mortality rates around the world. While we have yet to understand the impact the premature death rate due to pandemic, as of the end of December 2021 there were more than 57 million confirmed cases in the United States and more than 800,000 deaths, a mortality rate of 1.4%.²⁵⁰ In Pennsylvania, there were 2,147,482 cases reported (16,774.6 per 100,000), 37,111 deaths, and a

²⁴⁶ <https://www.countyhealthrankings.org/>

²⁴⁷ <https://www.cdc.gov/nchs/fastats/life-expectancy.htm>

²⁴⁸ <https://www.countyhealthrankings.org/>

²⁴⁹ <https://www.countyhealthrankings.org/>

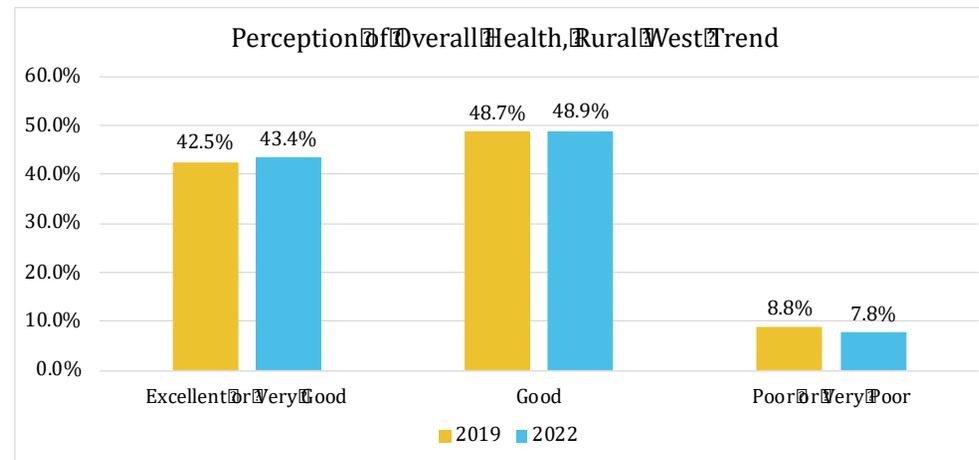
²⁵⁰ <https://coronavirus.jhu.edu/map.html>

mortality rate of 1.7%.²⁵¹ In Schuylkill county, there were 26,970 cases (18,984 per 100,000), 562 deaths, and a mortality rate of 2.1%. In Carbon county, there were 12,334 cases (19,203.8 per 100,000), 235 deaths, and a mortality rate of 1.9%.

Perceptions of Health

It is important to assess a community's perceived sense of health status to interpret their overall well-being, as well as highlight areas where health education would benefit the community. According to the 2022 CHNA survey, most individuals in the service area reported good health (48.9%), followed by excellent or very good (43.4%), and poor or very poor (7.8%).

 *Figure 64*



Chronic Disease

A 2020 study analyzing data from the 2018 National Health Interview Survey (NHIS) concluded that more than half of all U.S. adults have at least one chronic disease, and more than 1 in 4 have multiple chronic conditions.²⁵² Among the most common chronic conditions, diabetes, hypertension and hyperlipidemia frequently plague U.S. adults leading to a myriad of health complications and a heavy cost to the healthcare system. Our 2022 survey results conveyed that the highest percentage of Rural West service area respondents have high blood pressure (42.7%), followed by high cholesterol (26.6%), and arthritis or a rheumatic disease (21.7%). While 22.8% of respondents do not have any chronic disease, only 17.4% of respondents 45 years and older reported not having a chronic disease of any kind.

²⁵¹ <https://www.health.pa.gov/topics/disease/coronavirus/Pages/Cases.aspx>

²⁵² https://www.cdc.gov/pcd/issues/2020/20_0130.htm

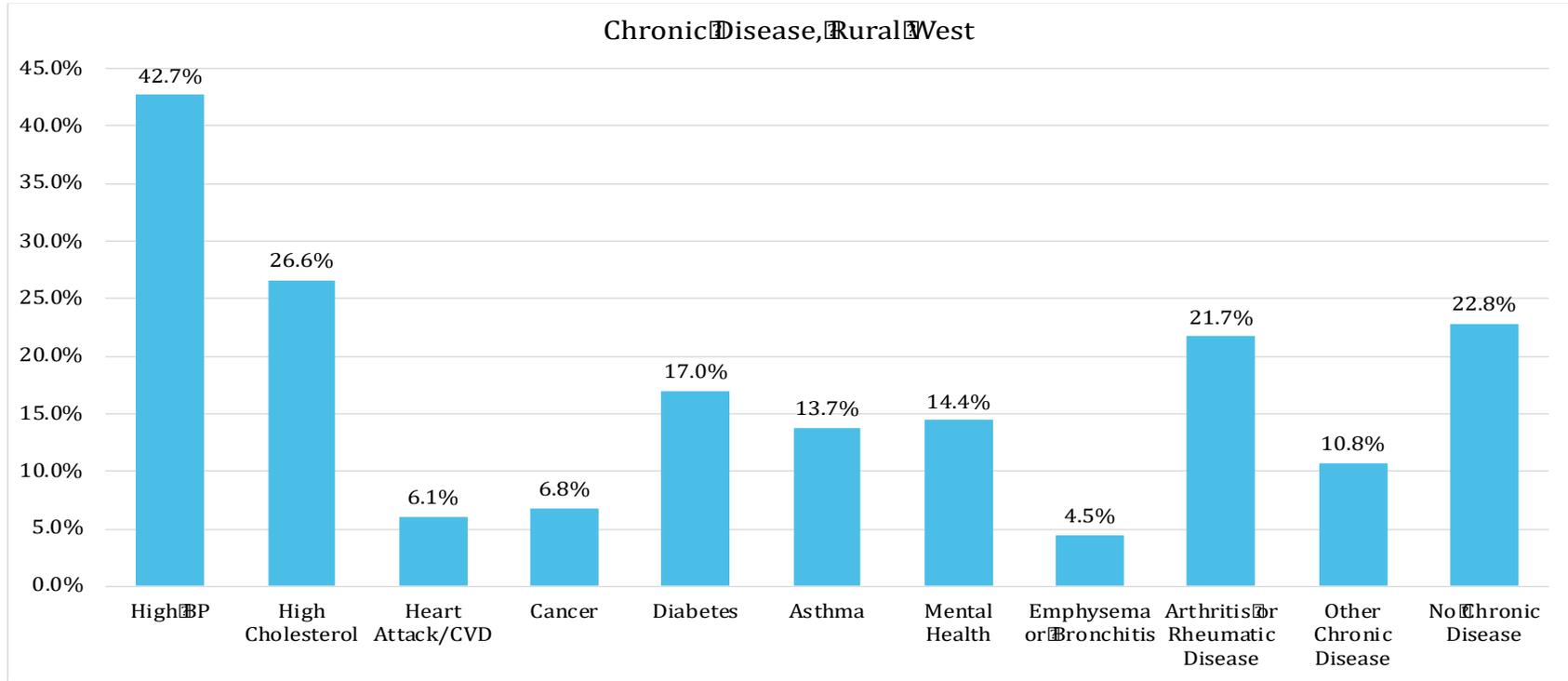


 Figure 65



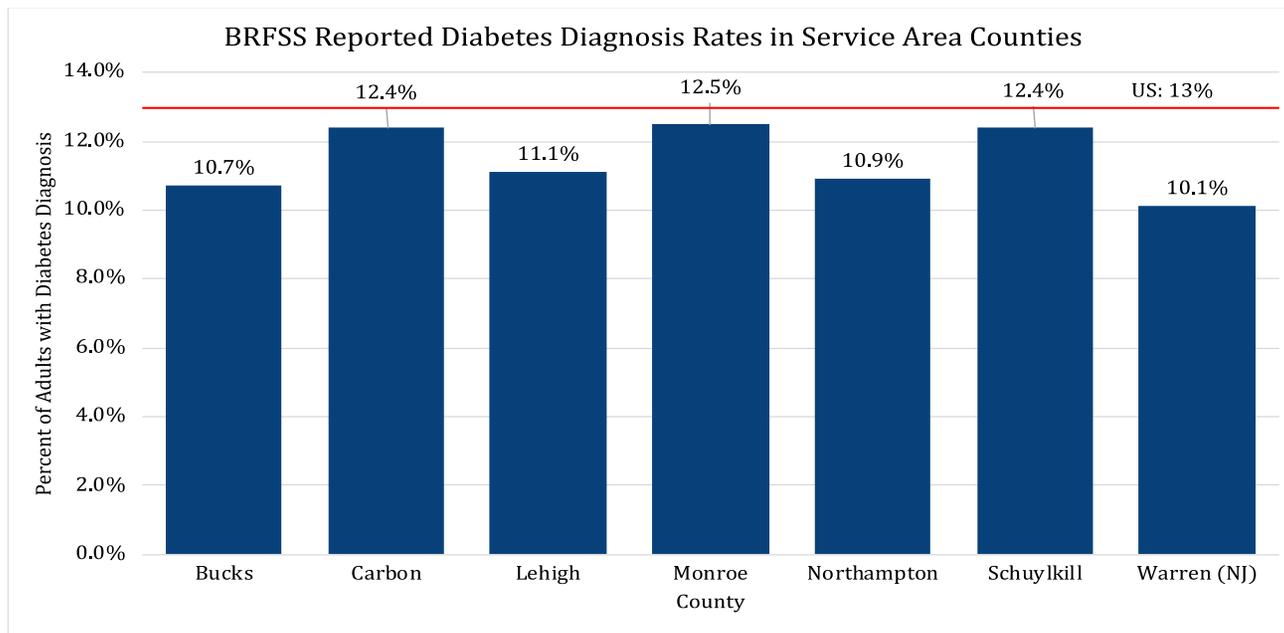
“Our community has high levels of chronic conditions such as obesity, heart disease and diabetes, especially among the older residents.”

..... **Diabetes**

According to the 2020 CDC National Diabetes Statistics Report, an estimated 34.2 million Americans (13.0% of all U.S. adults) have diabetes; 90 to 95% of all diabetes is type 2. Additionally, 21.4% of adults with diabetes were not aware they had diabetes and thus it went undiagnosed. According to the 2017 Behavioral Risk Factor Surveillance System (BRFSS), a national, health related survey, 12.4% of adults

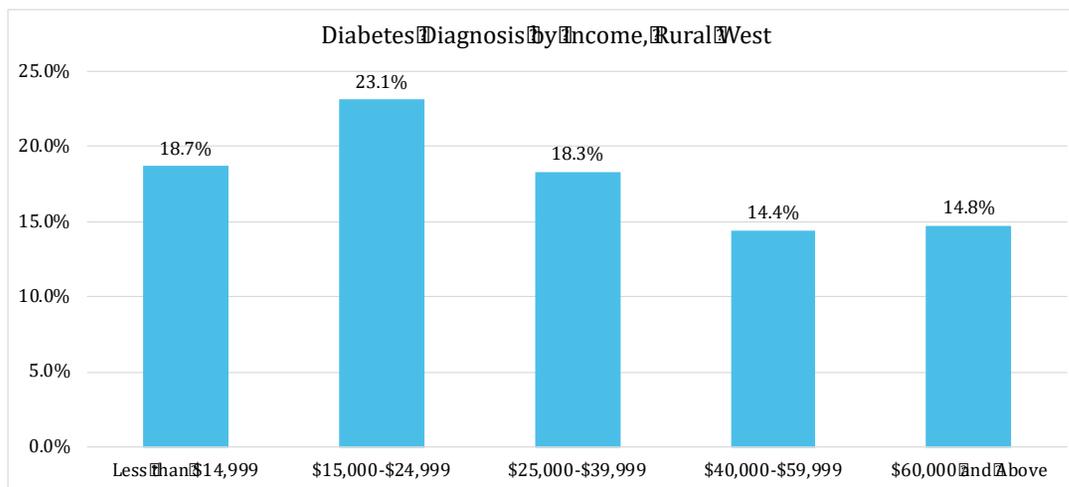
in both Carbon and Schuylkill counties aged 18 years and older have been diagnosed with diabetes.²⁵³ See Figure 66 which compares Carbon and Schuylkill counties' diabetes diagnosis rates to other service area counties and the U.S. overall.

Figure 66



In the Rural West service area, 17% of CHNA survey respondents have diabetes. When broken down by income, respondents whose household income is \$15,000-\$24,999 have the highest rates of diabetes (23.1%) and respondents whose household income is \$40,000-\$59,999 have the lowest rates (14.4%). Respondents who make less than \$40,000 have the highest rates of diabetes.

Figure 67

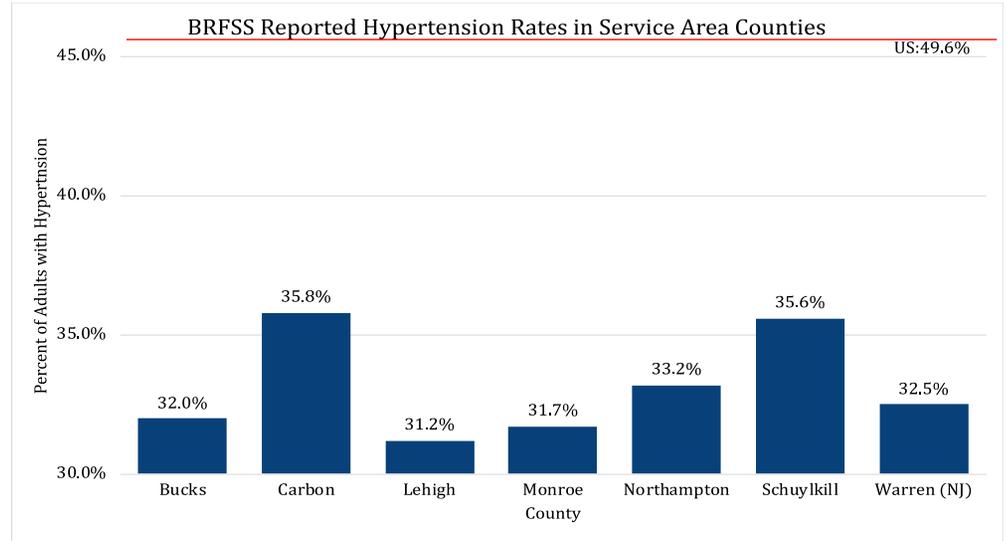


²⁵³ <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb/data>

Hypertension

Figure 68

Hypertension is defined as having a blood pressure that is at or above a systolic value of 130 mm Hg, which measures the pressure in your arteries when your heart beats,²⁵⁴ and a diastolic value of 80 mm Hg, which measures the pressure in your arteries when your heart rests between beats. In comparison, a normal blood pressure is less than 120/80 mmHg. Data regarding hypertension also includes individuals who are taking medications for hypertension that would otherwise be uncontrolled. According to the CDC 2019 report, the crude prevalence of hypertension in U.S. adults aged 20 and over is 49.6%. According to the 2017 Behavioral Risk Factor Surveillance System (BRFSS), a national, health related survey, 35.8% of adults in Carbon county and 35.6% of adults in Schuylkill county aged 18 years and older have been diagnosed with high blood pressure.²⁵⁵



In the Rural West service area, 42% of CHNA survey respondents have high blood pressure. When broken down by income, respondents whose household income is \$15,000-\$24,999 have the highest rates of high blood pressure (56%) while respondents whose household income is less than \$14,999 have the lowest rates (36.3%). It is important to note that all of these rates are relatively high, regardless of income.

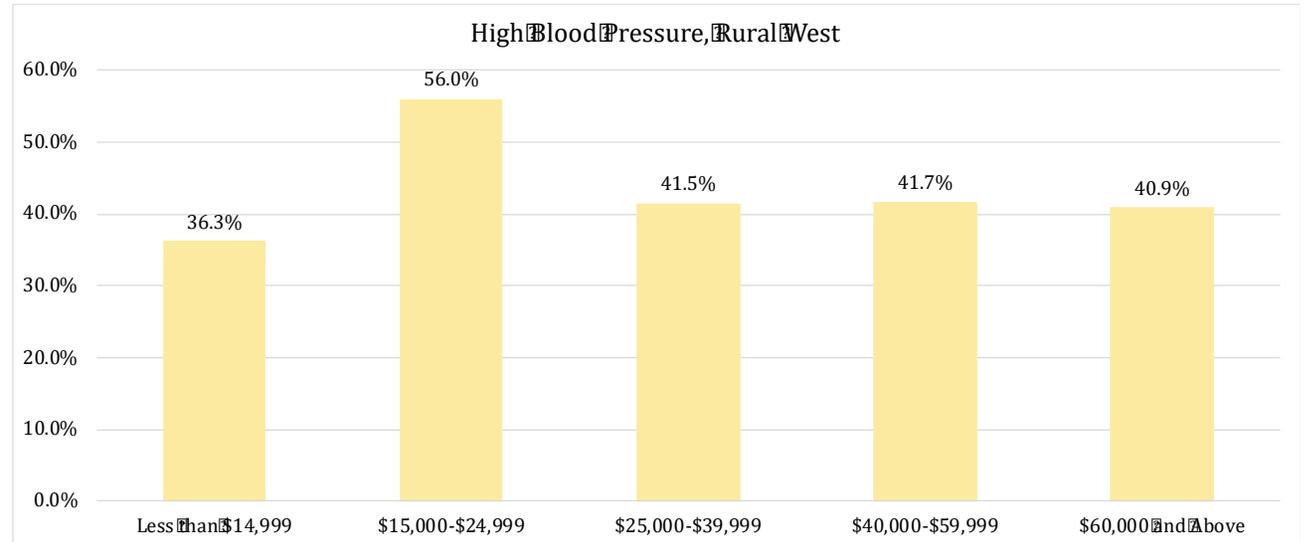


Figure 69

²⁵⁴ <https://www.cdc.gov/bloodpressure/about.htm>

²⁵⁵ <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb/data>

Hyperlipidemia

Hyperlipidemia, or high cholesterol, is defined as a total serum cholesterol at or above 240 mg/dL, which stands for milligrams per deciliter and is a unit of measure that shows the concentration of a substance in a fluid. Data regarding hyperlipidemia also includes individuals who are taking medications to control their high cholesterol. According to the 2019 CDC report, 26.7% of U.S. adults aged 20 and over have been diagnosed with hyperlipidemia; that is more than 1 in 4 U.S. adults. According to the 2017 BRFSS, 37.4% of adults in Carbon county and 37.1% of adults in Schuylkill county aged 18 years and older, who have been screened in the past 5 years have been diagnosed with high cholesterol.²⁵⁶

In the Rural west service area, 26.6% of all CHNA survey respondents have high cholesterol. When broken down by income, respondents whose household income is \$15,000-\$24,999 have the highest rates of high cholesterol (29.9%) and respondents whose household income less than \$14,999 have the lowest rates (20.9%).

 *Figure 71*

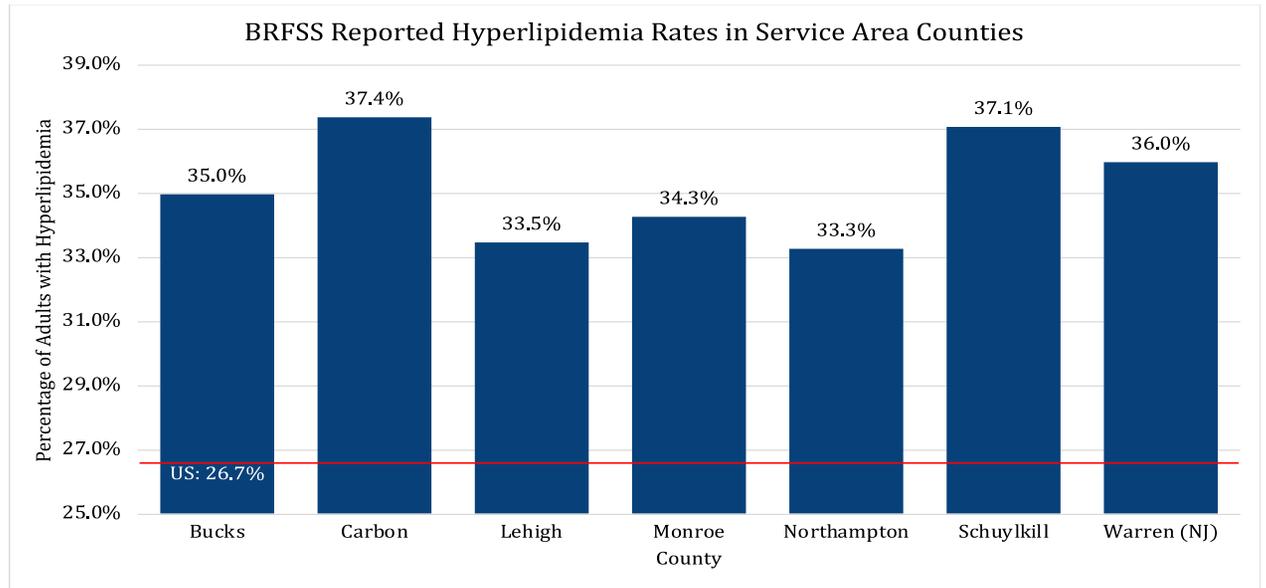
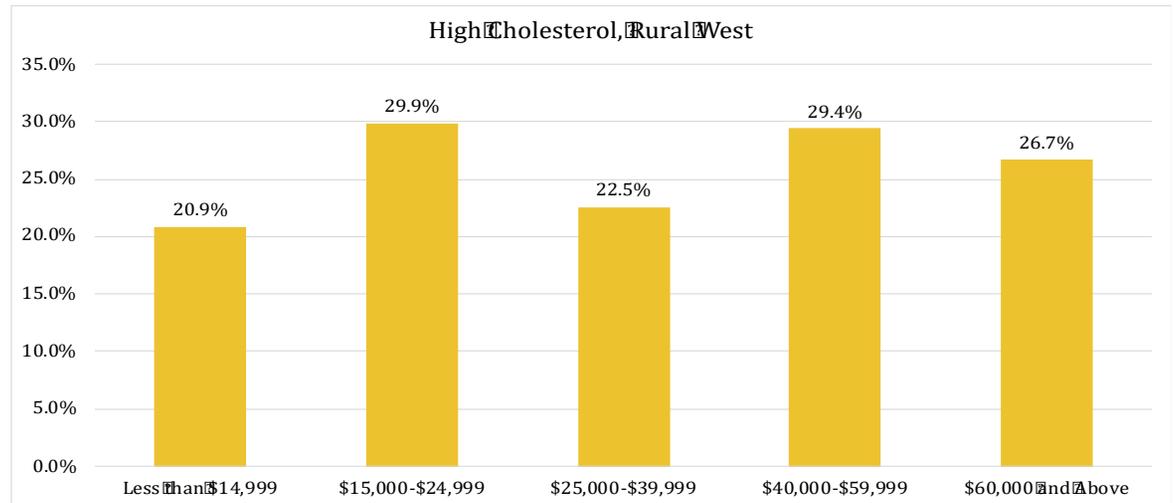


Figure 70



²⁵⁶ <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb/data>

..... Cancer

In the U.S., 1.7 million people are diagnosed with cancer each year and comes with an estimated healthcare cost of \$174 billion.²⁵⁷ Cancer is the 2nd leading cause of death nationally with over half a million deaths each year.²⁵⁸ According to the National Cancer Institute, cancer incidence in the U.S. is 448.7 per 100,000.²⁵⁹ Pennsylvania has a cancer incidence of 484.6 per 100,000 which falls higher than the U.S. overall. Carbon county has a cancer incidence of 487.0 per 100,000 and Schuylkill county has a cancer incidence of 504.7 per 100,000 which is higher than the state's cancer incidence overall. There are certain risk factors that increase one's chance of getting cancer. These include being overweight or obese, smoking and secondhand smoke exposure, exposure to sun and tanning beds, excessive alcohol use and some infectious diseases. These health behaviors have been discussed in earlier sections of this document and are also discussed in detail, as they related to cancer, in the St. Luke's Cancer Needs Assessment (CNA). The CNA helps set the strategy around cancer outreach and education in our communities.

Colorectal Cancer Screening, Rural West

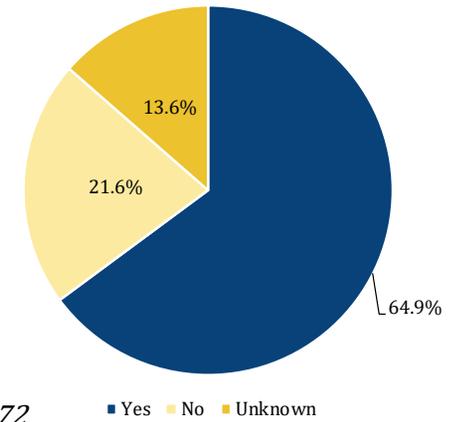


Figure 72

■ Yes ■ No ■ Unknown

In order to be considered up to date with screenings for this analysis, respondents must have had a screening date fall in the recommended time frame for their screening type (Figure 73). If a respondent was missing an answer to one of the questions, their screening status was marked “Unknown.” Our survey asked respondents ages 50-74 to indicate their most recent colon cancer screening. Of all Rural West service area respondents, 64.9% have been screened, 21.6% have not been screened, and 13.6% are unknown. The CHNA survey also assesses colon cancer screening by insurance type to uncover any disparities and perhaps see if insurance is a barrier to cancer screenings. A large percentage (58%) of respondents ages 50-74 who do not have insurance have never been screened for colon cancer. Since colon cancer can be prevented or caught early with screenings, this is a large gap in care. Additionally, 27% of respondents who use Medicaid have never been screened. Network data is used due to small sample size by campus.

²⁵⁷ <https://www.cdc.gov/chronicdisease/about/costs/index.htm>

²⁵⁸ <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/cancer.htm>

²⁵⁹ National Cancer Institute's State Cancer Profiles, 2013-2017

2022 St. Luke's University Health Network Rural West Community Health Needs Assessment

Time Frame for Colorectal Screening based on Screening Type	
Colonoscopy	Within 10 years
Sigmoidoscopy	Within 5 years
Stool Blood Test (i.e.: FIT/FOBT)	Within 1 year

Figure 73

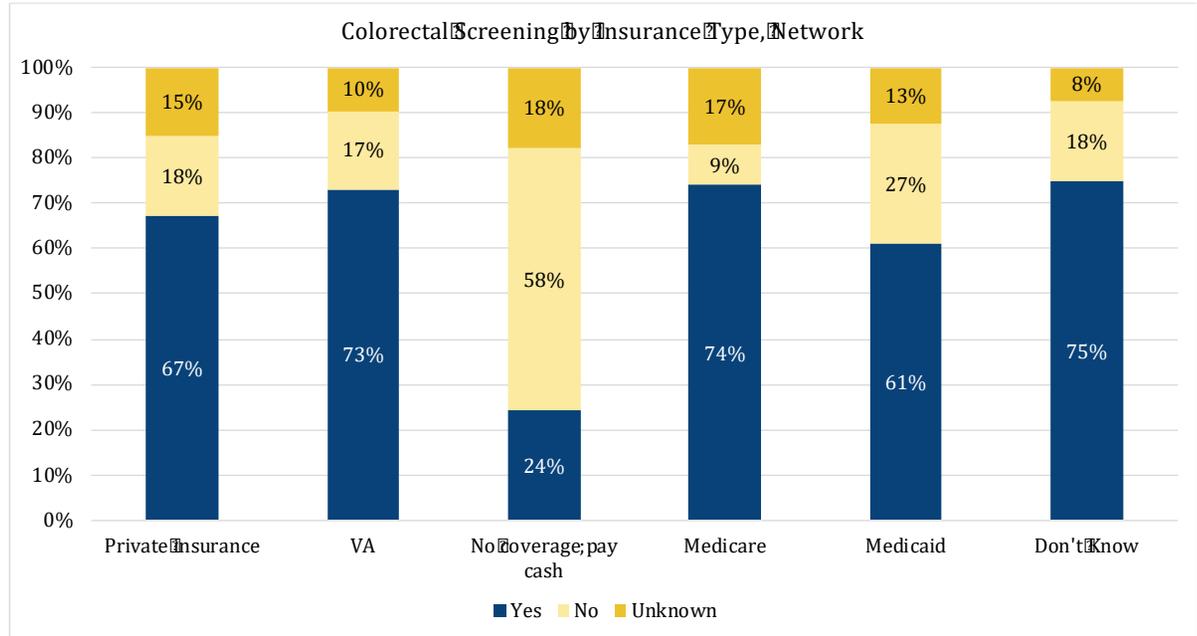


Figure 74

CHNA survey respondents were also asked about breast cancer screening and we compared breast cancer screening rates to insurance. Of all Rural West service area respondents ages 40-74 years old, 77.8% had a mammogram, 21.6% have not, and 0.7% it was not applicable. When looking at breast cancer screening by insurance, only 26.4% of respondents who do not have insurance have gotten a mammogram, which is drastically lower than any other type of insurance. The network data is used for insurance due to small sample size.

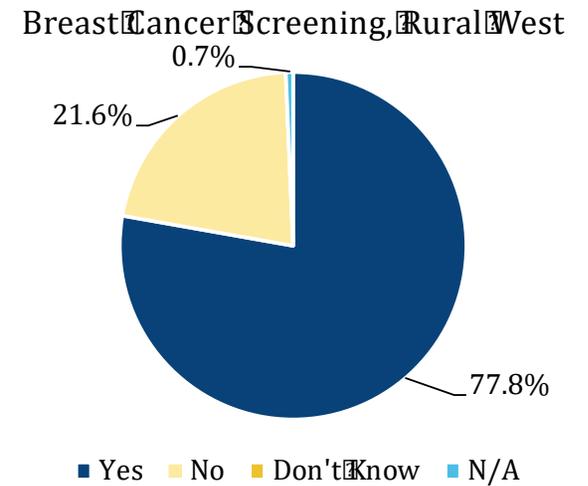


Figure 75

2022 St. Luke's University Health Network Rural West Community Health Needs Assessment

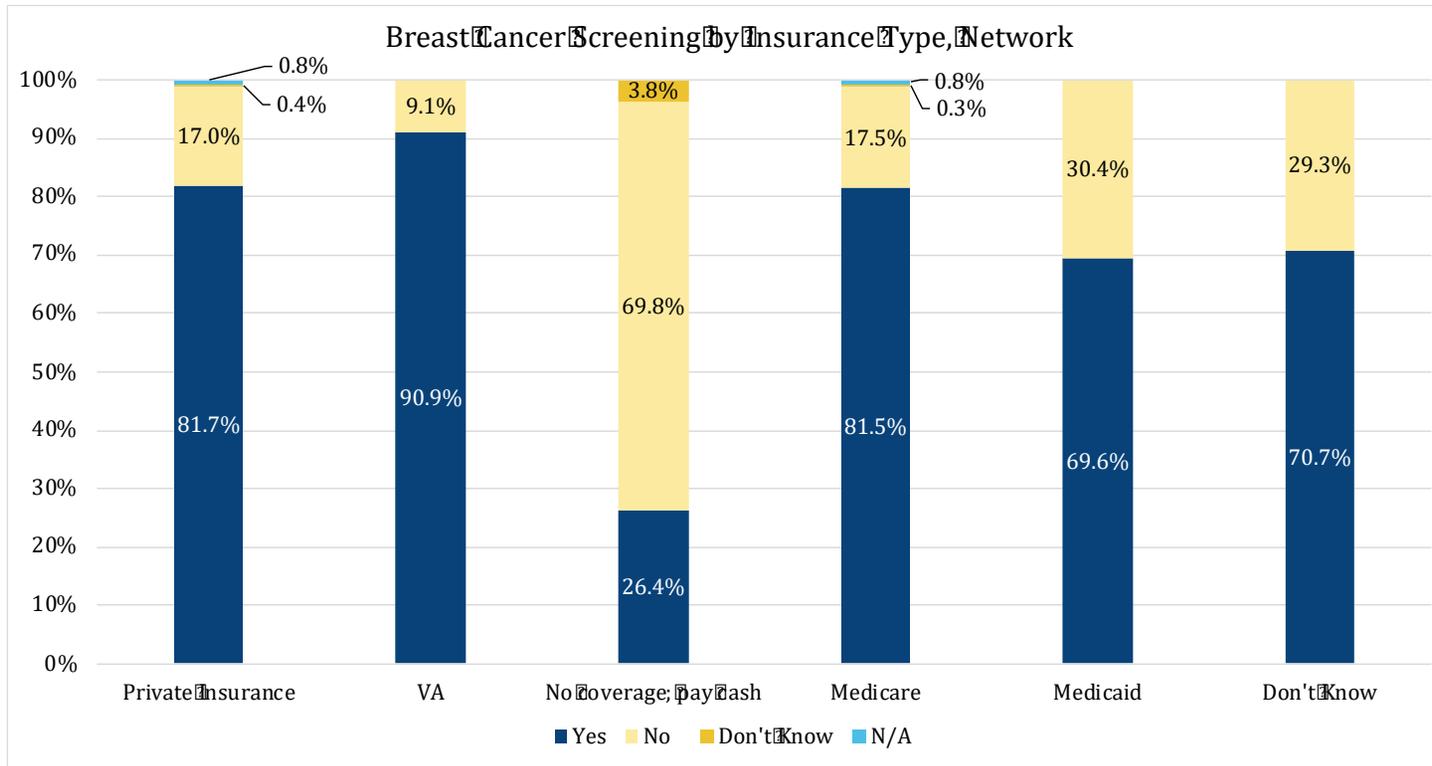


Figure 76

Days of Poor Physical Health

According to Healthy People 2030, daily physical activity can prevent disease, disability, injury, and premature death.²⁶⁰ Robert Wood Johnson County Health Rankings assesses the number of poor physical health days people have because it can be a predictor for negative outcomes associated with health like unemployment, poverty, and mortality. The poor physical health days question is measured by the average number of physical unhealthy days in the past 30 days. In Pennsylvania, the average is 4.0 unhealthy days, with Carbon county at 4.3 unhealthy days and Schuylkill county at 4.5 unhealthy days, the highest of all service area counties. The majority of respondents indicated no

²⁶⁰ <https://health.gov/healthypeople/objectives-and-data/browse-objectives/physical-activity>

physically unhealthy days in the past 30 days (50.5%), 24.9% of respondents indicated 1-2 sick days, 12.9% indicated 3-7 sick days, and 11.7% indicated 8 or more sick days in the past 30 days.

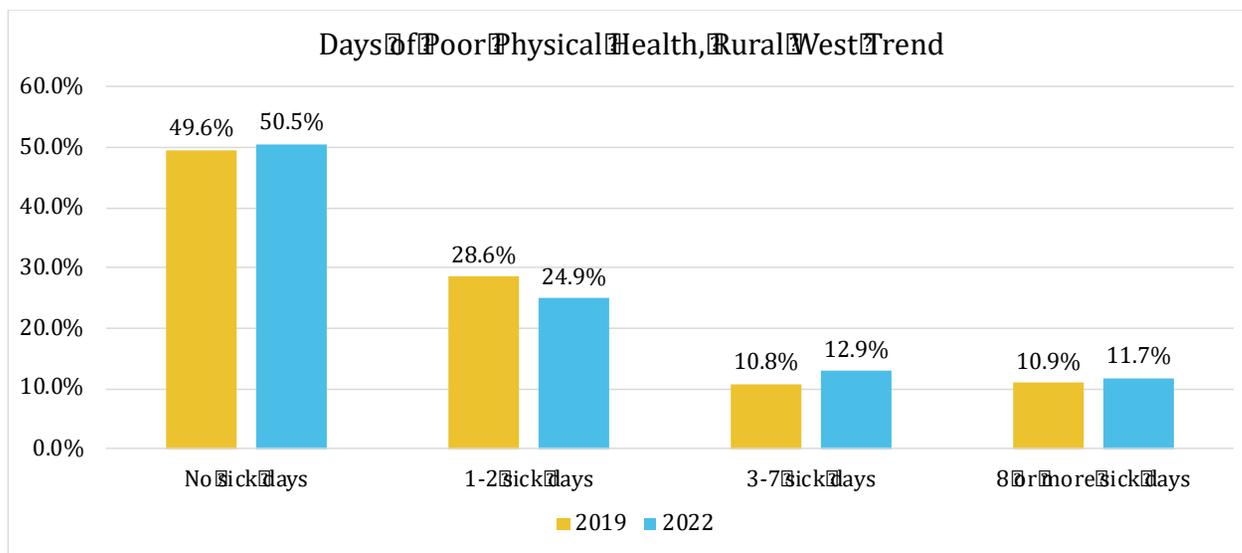


Figure 77

..... Days of Poor Mental Health

Poor mental health days is important to assess because it can be a good indicator for overall well-being. The Robert Wood Johnson County Health Rankings assess poor mental health days by the average number of mentally unhealthy days in the past 30 days.²⁶¹

The poor mental health days question is measured by the average number of mentally unhealthy days in the past 30 days. In Pennsylvania, the overall average is 4.7 unhealthy days, with Carbon county at 5.1 unhealthy days and Schuylkill county at 5.2 unhealthy days, the highest of all service area counties. The majority of respondents indicated no mentally unhealthy days in the past 30 days (58.8%), 20.2% of respondents indicated 1-2 sick days, 10.7% 3-7 indicated sick days, and 10.3% indicated 8 or more sick days in the past 30 days.

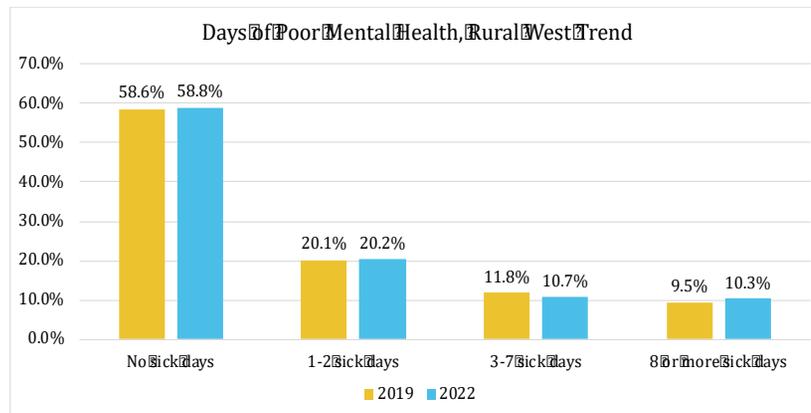


Figure 78

²⁶¹ <https://www.countyhealthrankings.org/app/new-jersey/2021/measure/outcomes/42/description>

..... Unintentional Injury

In 2019, the United States had 52.7 unintentional injury deaths per 100,000 population, which was the third ranked cause of death.²⁶² In 2018, there were 24.5 million visits to the emergency room for unintentional injuries and in 2016, there were 39.5 million visits to physician offices for unintentional injuries.²⁶³ Unintentional injuries are unplanned and preventable when using proper safety precautions; they are also a substantial contributor to premature death. When broken down further for the United States, there were 12 per 100,000 population unintentional fall deaths, 11.5 per 100,000 population motor vehicle traffic deaths, and 20 per 100,000 population unintentional poisoning deaths.²⁶⁴ In Pennsylvania, the unintentional injury death rate was 67.1. The rate in Carbon county was 90.4 and Schuylkill county was 63.7 per 100,000 population.²⁶⁵ Healthy People 2030 has set objectives for injury deaths because unintentional injury deaths are so prominent. Some of which are to reduce unintentional injury deaths, reduce deaths involving opioids, and to reduce emergency department visits for nonfatal injuries and unintentional injuries.

COVID-19 Impact

..... COVID-19

In December 2019, the SARS-CoV-2 virus (i.e., COVID-19), was discovered in Wuhan, China and quickly spread across the world. COVID-19 spreads when an infected person breathes out droplets that contain the virus, which can then be breathed in by other people or land on their eyes, nose, and mouth, resulting in quick transmission from person to person. On March 11, 2020, the World Health Organization declared COVID-19 a pandemic, resulting in worldwide shutdowns of workplaces, schools, and stores. To stop the transmission of the virus, the CDC recommended wearing a mask indoors, social distancing at least 6 feet away from other people, and to get vaccinated.²⁶⁶ Many pharmaceutical companies worked on vaccines to fight the virus and multiple vaccines were approved by the Food and Drug Administration (FDA) across all age groups and were readily available to everyone in the U.S. On July 27, 2021, the CDC recommended stricter guidelines in response to the Delta variant, which showed to be more contagious and caused more severe illness compared to other COVID-19 variants. In

²⁶² [Wonder.cdc.gov](https://www.cdc.gov/wonder/)

²⁶³ <https://www.cdc.gov/nchs/fastats/accidental-injury.htm>

²⁶⁴ [Wonder.cdc.gov](https://www.cdc.gov/wonder/)

²⁶⁵ [wisqars.cdc.gov/](https://www.wisqars.cdc.gov/)

²⁶⁶ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

late 2021, the Omicron variant emerged, proving to be more contagious than other COVID-19 variants, but not necessarily more deadly.²⁶⁷ The most common symptoms of COVID-19 include fever or chills, cough, shortness of breath, headache, and new loss of taste or smell.

Early on in the pandemic, Schuylkill county experienced low levels of COVID-19 community transmission. During the Fall 2020 surge of new cases, however, Schuylkill was one of the first counties to be hardest hit, reaching over 500 new cases per 100,000 in the last 14 days (10 times the recommended threshold). Similar to Schuylkill county, Carbon county experienced relatively low community transmission of COVID-19 during the Spring of 2020, but new cases surged in the Fall of 2020, peaking at 36 new cases in a single day. By the beginning of 2022, with the new Omicron variant and high levels of transmission, the highest number of new cases in one day was 180 in Schuylkill county and 160 in Carbon county.

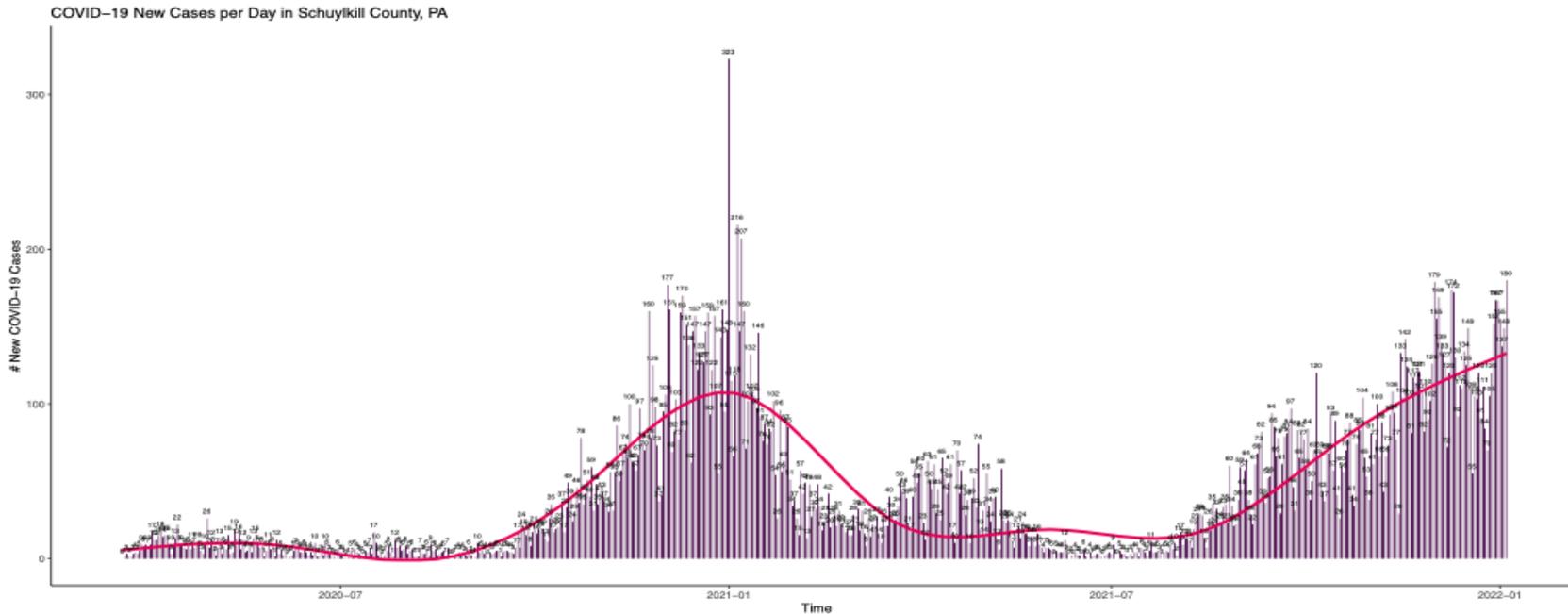


Figure 79



“[Internet Connectivity] It is a major issue state wide. I know that our local commissioners and leaders are looking into grant funding for this purpose to get more towers and connectivity. That is one of the biggest issues in the world of education because we rely on technology for students to access virtual instruction.”

²⁶⁷ <https://www.cdc.gov/coronavirus/2019-ncov/variants/omicron-variant.html>



“...looking at some kind of programs with our youth who have been unsocialized in the last year are going to need direction in where they are going with their life. They have missed out on major things that most of us take for granted. Being involved in things have been taken away from them and the fall out for when they are adults, even communication skills, all of those things will be impacted.”

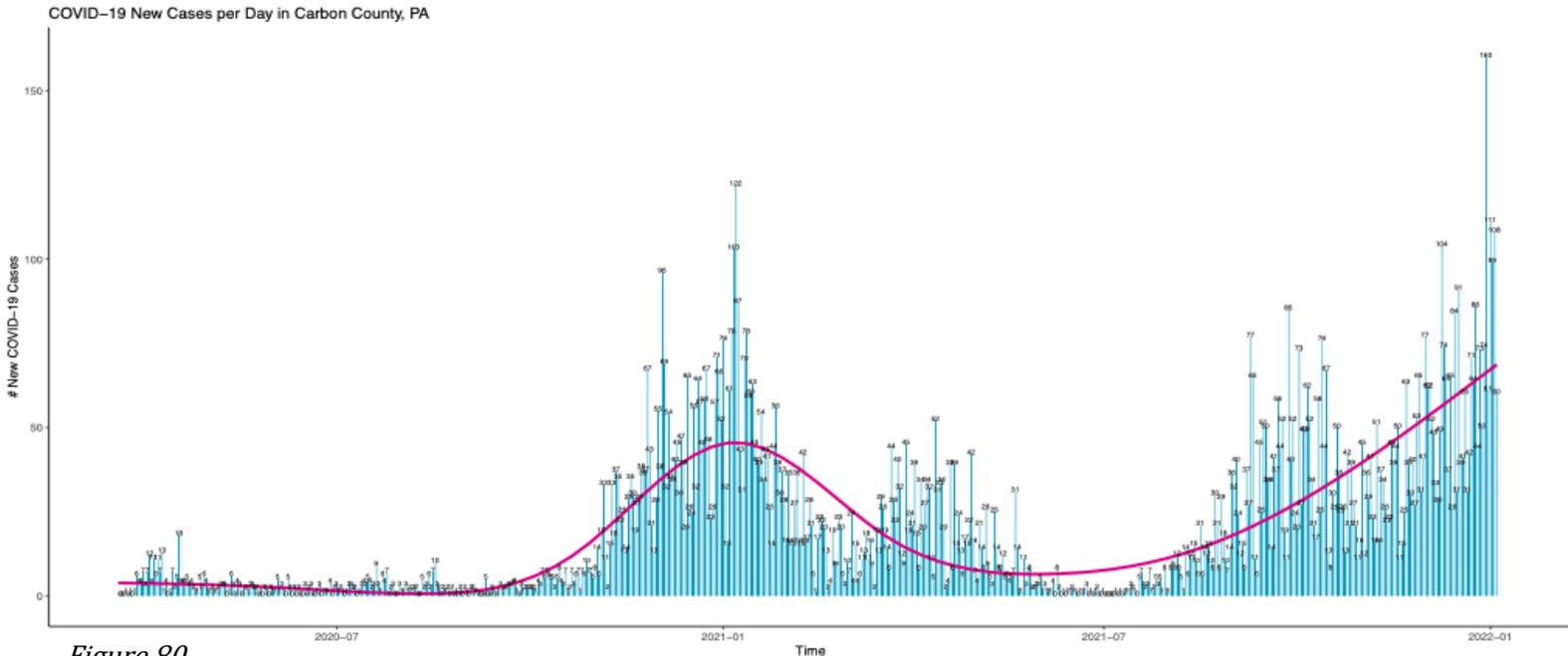


Figure 80

To get an understanding as to how COVID-19 impacted the Rural West service area we asked respondents to indicate if any of the categories in Figure 81 applied to them. Of those who indicated they had been impacted by COVID-19, the highest number of respondents said their mental health was affected (20.8%), 13.6% of respondents said they lost money due COVID-19, 9% said they had COVID-19 and fully recovered, and 7.9% said someone else in their household got COVID-19. Additionally, 3.1% said they got COVID-19 and are still having long term effects. 2.1% had limited food access, 3.2% had housing instability due to the pandemic, while 6.7% have gained money due to the pandemic.

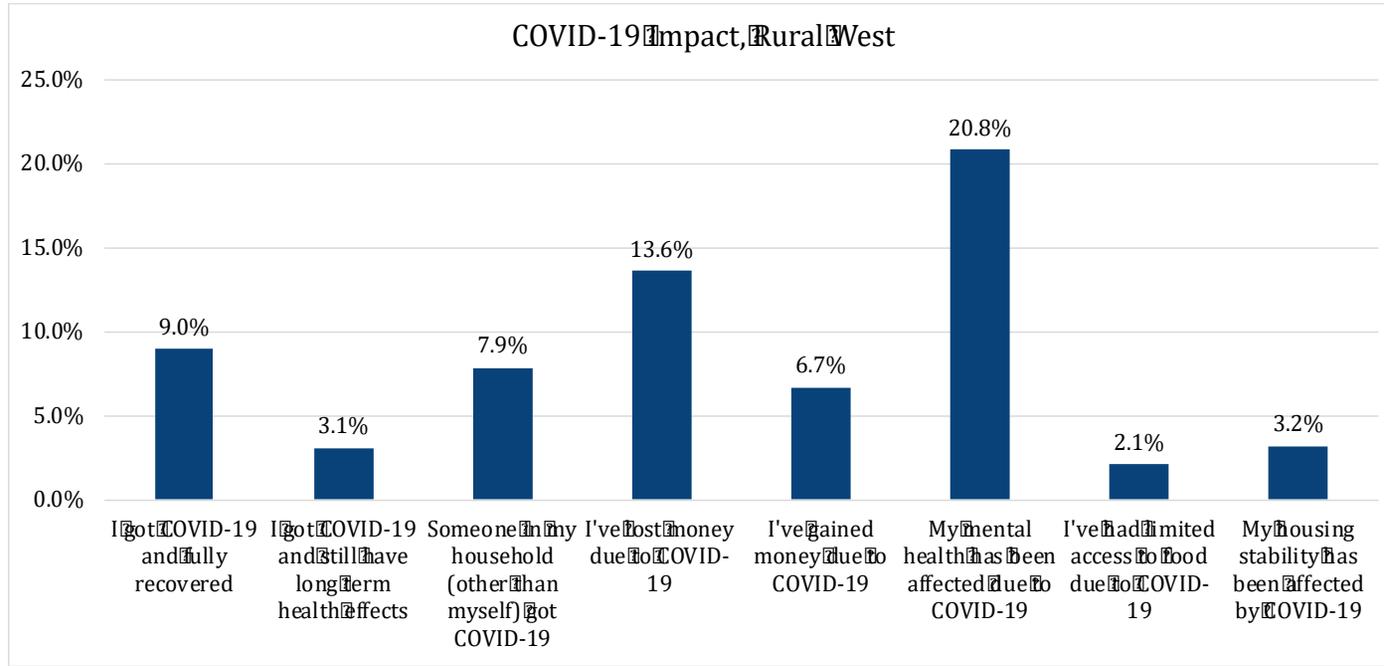
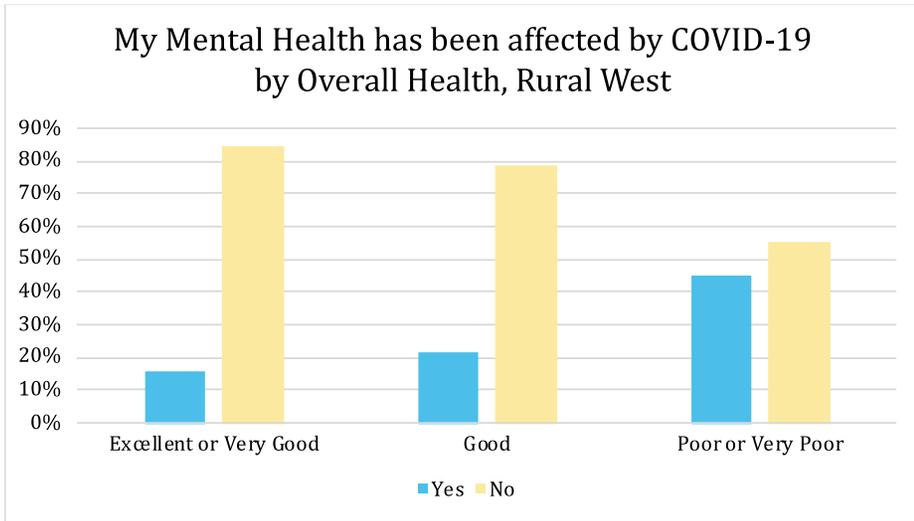


Figure 81

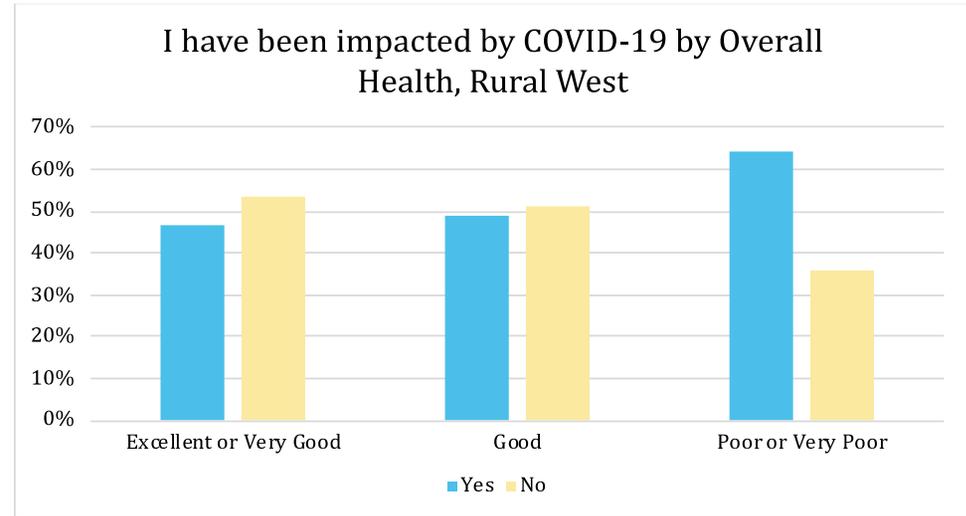
..... **Overall Health and COVID-19**

Overall health status can be an indicator of the ways COVID-19 affects individuals. Poor health, including cancer, illness, and chronic conditions, can make some individuals more susceptible to complications, hospitalization, and death compared to those in overall good health.²⁶⁸ CHNA survey respondents in the Rural West service area that reported excellent/very good health were less likely (47%) to report being impacted by COVID-19 compared to respondents reporting good health (49%) or poor/very poor health (64%). This is also the case when reporting the impacts of COVID-19 on mental health, with 15% of respondents in excellent/very good health, 22% in good health, and 45% in poor/very poor health reporting mental health issues due to the pandemic. The relationship between overall perceived health and the impacts of COVID-19 must be considered when analyzing the impact of the pandemic on the health of our already vulnerable populations.

²⁶⁸ <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>



 *Figure 82*



 *Figure 83*

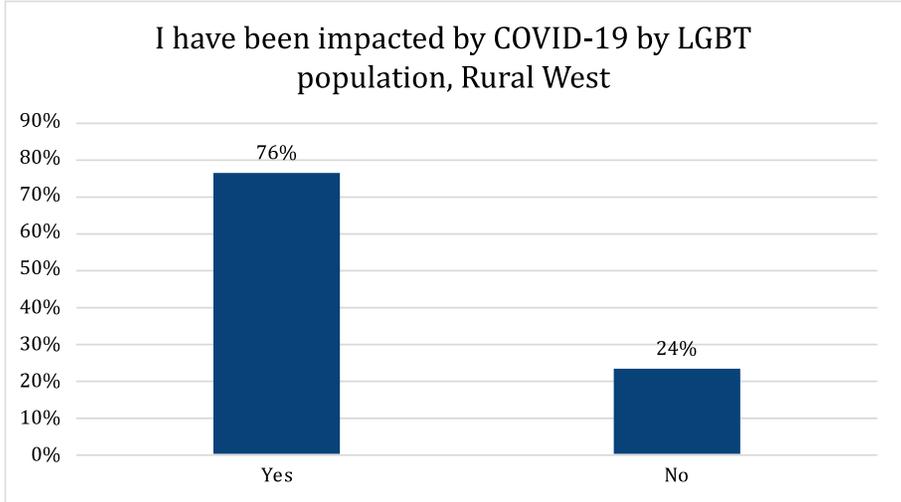
..... Gender and COVID-19

When assessing the impact of COVID-19 based on gender (i.e., sex assigned at birth), national findings indicate that women are more likely than men to worry about COVID-19 (e.g., if someone will get sick, financial burdens, children schooling). Almost 4 in 10 women (compared to 3 in 10 men) reported anxiety and other mental health concerns because of the pandemic.²⁶⁹ Findings from the CHNA survey in the Rural West service area showed similar discrepancies between gender, with female respondents more likely to be impacted by COVID-19 (51%) than males (44%). These findings are further supported when looking at the impact of COVID-19 on mental health, with female respondents having their mental health impacted by COVID-19 at higher rates (25%) than males (14%).

²⁶⁹ <https://www.kff.org/coronavirus-covid-19/issue-brief/coronavirus-a-look-at-gender-differences-in-awareness-and-actions>

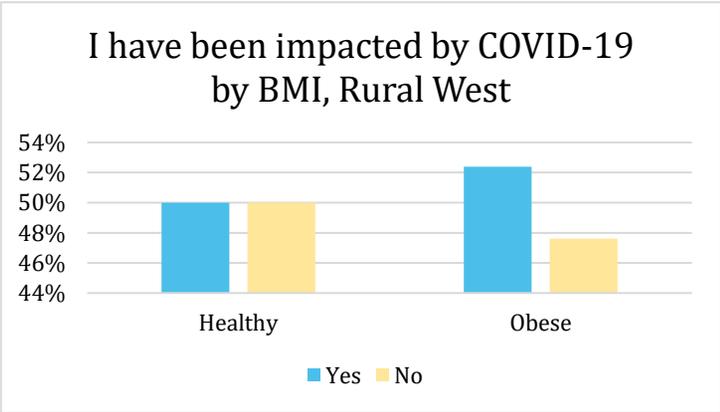
..... LGBT and COVID-19

The LGBT population also faces significant challenges related to the COVID-19 pandemic, and nationally the LGBT population faces more economic hardships and mental health issues than their peers.²⁷⁰ CHNA survey results from the Rural West service area also reflect these differences, with more than 76% responding that they had been impacted by the pandemic, compared to 49% of non-LGBT respondents in the Rural West service area. In addition, 59% of the LGBT respondents said their mental health had been affected by the COVID-19 pandemic, compared to 20.8% of total respondents in the service area.



 *Figure 84*

..... Obesity and COVID-19



Obesity puts people at risk for having serious complications and illness from COVID-19 and triples the risk of hospitalization when infected.²⁷¹ Obesity is shown to have negative impacts on COVID-19 recovery and outcomes. With a large population of the Rural West service area struggling with obesity (50.1%), the CHNA survey results reflect the correlation between obesity and COVID-19, with only 50% of respondents with a healthy weight being impacted compared to 52% of people living with obesity.

 *Figure 85*

²⁷⁰ <https://www.kff.org/coronavirus-covid-19/poll-finding/the-impact-of-the-covid-19-pandemic-on-lgbt-people>

²⁷¹ <https://www.cdc.gov/obesity/data/obesity-and-covid-19.html>

..... **Income and COVID-19**

Income is often seen as one of the most significant social determinants of health, as financial status either provides or denies access and opportunity to everything from housing to education to healthcare. Income also correlates with the impact of COVID-19 on individuals, and a recent study in the Journal of the American Medical Association found that income and COVID-19 illness and mortality rates are correlated with income.²⁷² These findings were also seen in our CHNA survey, with 55% of respondents in the Rural West service area earning \$14,999 or less responding that they were impacted by COVID-19, compared to 52% of respondents making \$60,000 and above.

..... **Social Vulnerability**

Figure 87 displays the CDC Social Vulnerability Index map, which considers factors such as socioeconomic, housing/transportation, language barriers, etc. in determining how vulnerable a population is to an unforeseen disaster, like COVID-19. Social vulnerability is defined by the CDC as “the resilience of communities (the ability to survive and thrive) when confronted by external stresses on human health, stresses such as natural or human-caused disasters, or disease outbreaks.”²⁷³ Reducing social vulnerability can minimize the impacts of stressors and or disasters, decreasing human suffering and economic loss. The index is scored from 0 (lowest vulnerability) to 1 (highest vulnerability). Census tract 206 in Carbon county and tracts 5, 6.01, 6.02, and 13 in Schuylkill county all have the highest overall vulnerability. Carbon county’s overall vulnerability is .3, low vulnerability, and Schuylkill county’s overall vulnerability is .45, a moderate to high vulnerability. Several of these factors are associated with higher rates of COVID-19 infection.²⁷⁴ Some of the most vulnerable populations during the pandemic crisis included the homeless population, who faced challenges being exposed to COVID-19 and not having private shelter to quarantine; school-aged children and their parents who had to undertake the momentous task of virtual learning, most for the very first time; those experiencing mental/behavioral health problems or substance use disorder, as challenging times not only exacerbated these issues but exhausted the number of resources available to deal with them.

²⁷² <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2779417>

²⁷³ https://www.atsdr.cdc.gov/placeandhealth/svi/at-a-glance_svi.html

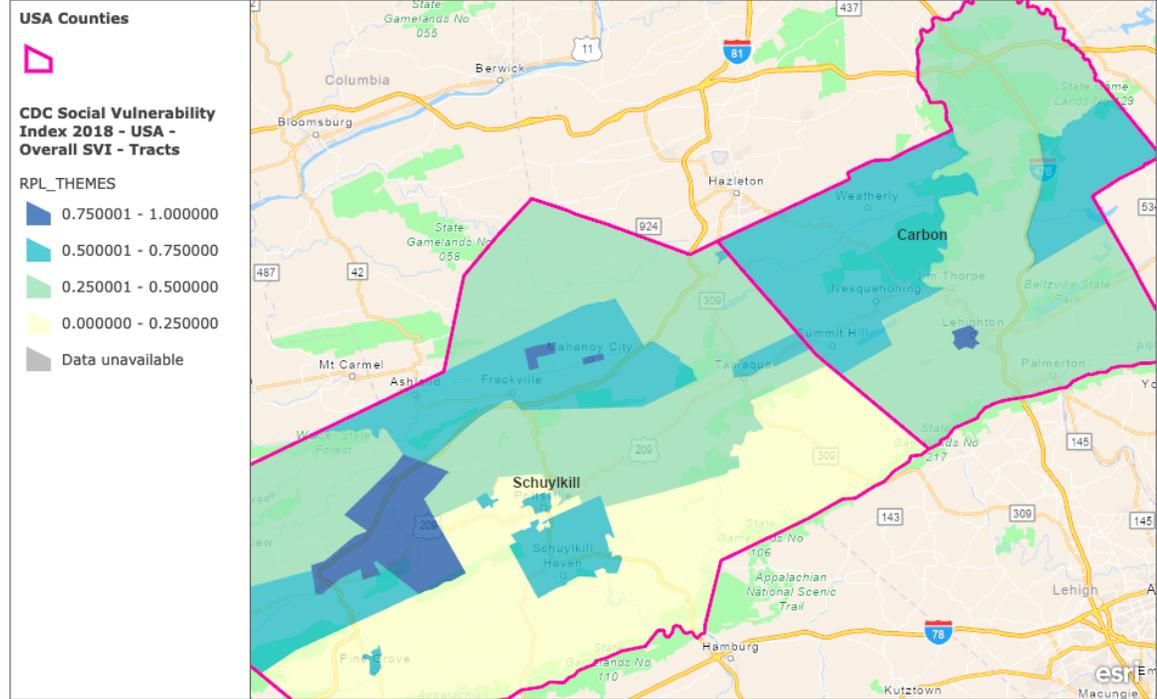
²⁷⁴ <https://www.sciencedirect.com/science/article/pii/S0749379720302592>

2022 St. Luke's University Health Network Rural West Community Health Needs Assessment

Social Vulnerability Index		
	Carbon	Schuylkill
Overall	0.3	0.45
Socioeconomic	0.48	0.49
Household Composition and Disability	0.32	0.57
Minority Status and Language	0.33	0.31
Housing Type and Transportation	0.22	0.47

Figure 86

CDC Social Vulnerability Index: Carbon and Schuylkill County



data.pa.gov, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Figure 87



“We have a bunch of people with underlying health conditions that have not been getting the care and treatment they need. They are afraid of getting COVID and forgo visits to the doctor. This will lead to bigger problems down the road.”



“The people themselves. A lot of people who grew up in Carbon county are in strong positions now. When you live and breathe the community your entire life, your dedication to making it a better place is stronger.”



“There are so many new places that have opened up to go to. The development of Lehigh Valley and St Luke’s have made it so people don’t have to travel to Allentown anymore. Most stuff is available more local. The Urgent Cares, the Care Now [facilities], everything is in our local community.”

Conclusion

Through this extensive review of the primary and secondary data, it is evident that there are significant needs to address within our communities. For the upcoming three-year (2022-2025) cycle, St. Luke's University Health Network will continue to work toward addressing the health priorities identified network-wide to improve the community's overall health and well-being. The three main priorities identified include: reducing health disparities; preventing chronic disease; and improving mental and behavioral health.

To analyze our findings in these areas, SLUHN has adopted the categorization system from the Robert Wood Johnson Foundation (Figure 88). The social determinants of health shape the status of a person's health and provide guidance for community health priorities. When addressing the priority health needs, it is crucial to consider the social determinants of health and lifestyle behaviors to effectively tackle the service area's health disparities. Some significant survey findings, which are consistent with trends seen widely, are related to health outcomes and income, access to care for minority and marginalized populations, healthy eating (i.e., fruit and vegetable consumption), diabetes and other chronic illnesses, the opioid epidemic, and other substance use.

From our analysis of primary and secondary data, as well as the key CHNA informant interviews and work with our community members, we see significant issues facing our communities that impede healthy lifestyles. Our efforts in prevention, care transformation, research, and partnerships help support our work to promote sustainable programs and opportunities for our reach to focus on a wide range of health promotion and quality of life initiatives.

While there are many that need to be addressed, the results from the 2022 CHNA found the most pressing needs to be specifically in areas related to:

- o COVID-19
- o Access to Care
- o Food insecurity
- o Obesity reduction
- o Physical activity promotion
- o Opioids and other substance use
- o Mental Health
- o Housing
- o Transportation

The needs discussed within the health categories outlined in this document will serve as our guide in creating a detailed campus-specific implementation plan to best address the specific needs of the St. Luke's Network service area using the three pillars of: Wellness and Prevention; Care Transformation; and Research and Partnerships. We will work collaboratively in partnership with our community and network partners to create a more equitable society with better health outcomes, especially among our most vulnerable populations such as our Hispanic communities, seniors, women, and children.

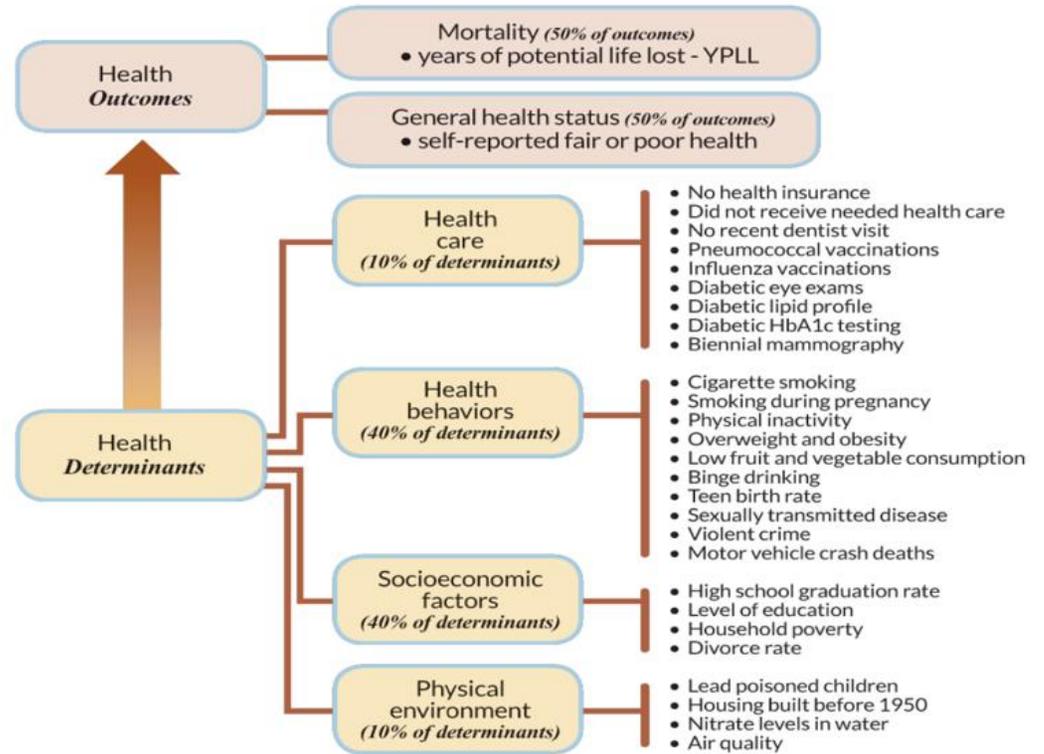


Figure 88

Appendix A

2022 CHNA Key Informant Interview

St. Luke's University Health Network (SLUHN) is a nationally recognized non-profit health network that has facilities serving counties in both Pennsylvania (Lehigh, Northampton, Carbon, Schuylkill, Bucks, Monroe) and New Jersey (Warren). As part of the Patient Protection and Affordable Care Act, all non-profit hospitals are required to conduct a Community Health Needs Assessment (CHNA) every three years. In order to accomplish our goals, St. Luke's is conducting key informant interviews to identify health needs within the community. Since you are a vital member of our community, you are being asked for your feedback to assist us in data collection. Your answers will be compiled by St. Luke's to determine health needs in the community.

Please note that your name will not be associated with your responses. Additionally, please complete your responses in a word document and email responses to the Community Health Needs Assessment Liaison for facilitated follow up during the interview.

1. Name:
2. Title:
3. Organization:

Please answer the following by including pre-covid and current covid impacts

4. How long have you been a part of this community and in what capacities?
5. When thinking about others you interact with here, do you feel a sense of community?
6. How would you describe your community?
7. What are the major needs/challenges within this community?
8. What are some of the challenges specific to your organization?
9. How do you feel this community has been successful in meeting its needs?
10. What improvements in policy and community infrastructure would assist you in meeting community needs?
11. Who are some of the key players in your community and what organization do they belong to?

12. What are some of the strengths and resources of your community?
13. Do you feel these strengths are shared and evenly distributed throughout the community? Please explain.
14. What are some concrete examples of strengths and challenges across the lifespan related to the following topics in your community?
 - a. Health disparities/Access to care
(example: access to medical, mental, dental and vision care)
 - b. Healthy Living (example: diet and physical activity)
 - c. Chronic Disease (example: diabetes, heart disease and cancer)
 - d. Mental/Behavioral Health (example: substance misuse/use disorder, depression and anxiety)
15. What are the **top three issues** that need to be addressed in your community?
16. Any additional comments?

Appendix B

2022 CHNA Community Forum Invited Organizations- Rural West

- Alliance for Building Communities
- Behavioral Health Associates
- Carbon-Monroe-Pike Drug and Alcohol
- Carbon Adult Probation
- Carbon Career and Technical Institute
- Carbon Chamber of Commerce
- Carbon County Action Committee for Human Services
- Carbon County Area Agency on Aging
- Carbon County Children and Youth
- Carbon County Commissioners
- Carbon County Community Foundation
- Carbon County Coroner
- Carbon County Workforce
- Carbon Veterans Affairs/Homelessness Task Force/St. Vincent DePaul Society
- Carbon-Monroe-Pike Mental Health and Development Services
- Coaldale CHOSE (Church, Home, Organization, School, Environment)
- Community Volunteer
- County Director of Emergency Management
- Department of Health
- Eastcentral Pennsylvania Area Health Education Center
- Family Promise
- Jim Thorpe Area School District
- Lansford Alive
- Lansford Townhouses
- Lehigh and Northampton Transportation Authority (LANTA)
- Lehigh Carbon Community College
- Lehighon Area School District
- Northern Valley Medical Center Board (Ringtown)
- Palmerton Area School District

2022 St. Luke's University Health Network Rural West Community Health Needs Assessment

- Panther Valley Food Pantry
- Panther Valley School District
- Pathstone Head Start
- Peaceful Knights
- Penn State Extension
- Salvation Army
- Schuylkill Community Action
- Schuylkill County Volunteer Firefighters Association
- Self Determination Housing of Pennsylvania
- Sexual Assault Resources and Counseling Center (SARCC)
- Shepherd House
- SHINE
- Silverline and Hope and Coffee
- St. Jerome's/Marian
- TACP
- Tamaqua Area School District
- Tamaqua Chamber of Commerce
- Tamaqua Police Chief
- Turn To Us
- United Disabilities Services, Independent Living Services
- United Way Carbon County
- Weatherly School District