



2025



## St. Luke's University Hospital, Bethlehem Campus and Star Community Health Community Health Needs Assessment

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### Icon Legend



**St. Luke's and Star Community Health Partner Quote (Key Informant/Community Forum Attendee)**



**St. Luke's and Star Community Health Community Health Needs Assessment Data**

# Executive Summary

## ..... Key Findings .....

From our analysis of primary and secondary data, including the Community Health Needs Assessment (CHNA) key informant interviews, community forums, and work with our community partners, we see significant issues facing our communities that impede health and wellbeing. Our efforts in prevention, care transformation, research, and partnerships help support our work to advance sustainable health promotion and quality of life initiatives. While there are many issues that need to be addressed, the results from the 2025 CHNA found the top priorities for the St. Luke's University Health Network and Star Community Health include:

2025 Community Health Needs Assessment
Top Priority Outcomes
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 network implementation plan to best address the needs of the St. Luke's University Health Network service areas using three pillars:

Wellness and Prevention	Care Transformation	Research and Partnerships
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We will work collaboratively with our community and network partners to create pathways for better health outcomes and address gaps in care, especially among our most vulnerable populations such as our Hispanic communities, unhoused individuals and families, 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) and Star Community Health service area. The assessments state health priorities unveiled by community stakeholders, health professionals, and public health experts. Additionally, regional reports and implementation plans will be crafted to build and strengthen collaborative partnerships to determine the allocation of resources to address the specified health needs. To view our 2022 and 2025 CHNA reports and Annual Reports, please refer to the following link: <https://www.slnh.org/community-health/community-health-needs-assessment>. If you have any questions regarding 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 conducted 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 with stakeholders invited to speak on behalf of those they serve. A list of organizations represented at the forum can be found in Appendix B. Quotes from key informants and community forum participants are reported throughout the assessment identified using the legend on page five. Key informant interviews were conducted through Microsoft Teams or in-person, and the community forums were conducted in person at SLUHN campuses throughout the service area. Third, 15,148 voluntary CHNA surveys were collected from adults 18 years and older throughout our fifteen campus geographic region to help establish the main priority health needs with 6,018 respondents in the Bethlehem Campus and Star Community Health service area. Snowball sampling was utilized 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 the 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, includes questions and responses recorded from CHNA surveys conducted in 2012, 2016, 2019, 2022, and 2025. Secondary data included the use of hospital network data as well as county, state, and national data obtained from numerous sources (e.g., U.S. Census, the University of Wisconsin Population Health Institute, Robert Wood Johnson Foundation, Vital Statistics, American Community Survey (ACS), U.S. Department of Labor, Behavioral Risk Factor Surveillance System). A resource list of all data sources can be found in Appendix C. Data were accessed directly from the resource, or through the ArcGIS (geographic information system) software Esri (Environmental Systems Research Institute). The software provides mapping and spatial analysis to help visualize, analyze, and interpret data to understand patterns, relationships, and trends. Finally, the needs identified in the interviews and community forums were supplemented by the survey and secondary data to provide a comprehensive picture of the contributing factors and needs in the community.

## ..... Existing Community Assets .....

The St. Luke's Department of Community Health prioritizes health initiatives and goals for each fiscal year in a strategic plan. These initiatives and goals are in place to help respond to the needs identified in the most recent assessment and addressing social determinants of health to improve health outcomes. The strategies St. Luke's uses to reach these goals are through prevention, care transformation, and research and partnerships. Our initiatives and goals for the 2022 CHNA addressed access to care, chronic disease, along with mental and behavioral health.

The partnership between Community Health and Bethlehem Area School District (BASD) began more than 25 years ago and continues to connect students and their families to a medical home (i.e., primary care physician), vision, dental, behavioral health, and other social services. These efforts have improved access and services to families in need. St. Luke's participated in the BASD Wellness Committee to strategize how best to improve and promote student and staff wellbeing and the BASD Attendance Committee. St. Luke's partners with the United Way of the Greater Lehigh Valley, as well as other local partners, to implement the Community School Model. This includes financial and programmatic support of a full-time school-based Community School Coordinator at Marvine Elementary School that works school-wide and a Family Development Specialist (FDS) at Donegan Elementary School that supports and connects students and families in need to services. During Fiscal Year 2024 (FY24), the Marvine Community School Coordinator worked with more than 700 elementary school families to address barriers to student attendance and improve parent and caregiver engagement. At Donegan Elementary, the FDS supported more than 70 families referred by staff. Literacy promotion through Read Across America was implemented at Marvine and Donegan Elementary Schools.

During FY24 the Mobile Youth Health Centers (MYHC) provided care and services to 334 unique students through 529 encounters at Broughal Middle School, Freedom High School, Liberty High School, and Northeast Middle School in the BASD. These encounters included connections to medical insurance, a medical home, vision and dental services, and additional community resources. The MYHC team also provided 4,350 health screenings, vaccines, and other services to students. The MYHC care team provided 142 vision vouchers to BASD students with a value of \$9,645.

St. Luke's supports workforce development initiatives for both adults and school-aged populations including the School-to-Work initiative, Health Career Exploration Program, and the new Cultural and Linguistic Workforce Centers. These opportunities promote education, experiential learning, and skills-based training to prepare individuals for the workforce and help them gain employment that provides them with a livable wage. Adolescent career mentoring programs target both in-school and out-of-school youth between the ages of 15-24 years old who reside in Lehigh and Northampton Counties through a combination of hospital rotations, professional development sessions, and work experience.

The Cultural and Linguistic Workforce Development Centers assist workers at any stage in their career to train for and access employment opportunities that meet the demands of local employers in the Lehigh Valley. During FY24, the Bethlehem Center engaged 163 individuals of which 73.6% enrolled in ESL classes or skill-based trainings with Northampton Community College and/or received employment services.

The Health Career Exploration Program (HCEP) was established more than 15 years ago. Through HCEP, St. Luke's provides experiential learning opportunities for students from diverse backgrounds to explore careers in the healthcare industry to help them gain insight into clinical and non-clinical roles, teach them job-keeping and job-seeking skills, help them understand future employment opportunities, and build confidence in their abilities. The students spend approximately 15 hours per week working in their assigned department and receiving group instruction in key life skills including financial literacy, leadership, resume development and interviewing skills. Since program inception, 98% of students who participated in HCEP have graduated from high school. During FY24, 29 HCEP students enrolled in the program, 15 of which were placed at the Bethlehem Campus. At the end of their program, students shared a final presentation where they highlighted their experiences and the skills they learned.



Within the chronic disease health priority, St. Luke's introduced Fit for Life, with the goal to promote healthy lifestyles and prevent chronic disease by increasing physical activity and fruit and vegetable consumption based on lifestyle medicine principles. Fit for Life includes Get Your Tail on the Trail, which is a partnership with the Delaware & Lehigh Corridor (D & L) to encourage overall physical activity among community residents in order to promote enjoyment of nature and reduce obesity rates. St. Luke's also has an organic farm at the Anderson Campus, in partnership with the Rodale Institute. School and community-based food security efforts, including school pantries and mobile markets, helped to provide healthy food to families in need.

In the mental and behavioral health priority, St. Luke's focused on employee mental health by providing online cognitive behavioral therapy to employees and their spouses. During the 2023-24 school year, the YESS! school-based therapy program supported 29,696 student visits Network-wide for students with therapy and mental health needs or who sought services. Located at the Easton Campus, the Adolescent Behavioral Health Unit provided services to 572 patients Network-wide during FY24. Many St. Luke's campuses participated in both the spring and fall "Take Back Days" in Fiscal Year (FY) 2024 and collected 2,340 pounds of unwanted medications to support safe drug disposal and harm reduction.

St. Luke's established collaborative processes with community partners, such as Hispanic Center Lehigh Valley (HCLV), to meet individuals where they are and promote connections and access to care and services, including a community food pantry that served 742 households, with 2,256 visits and a total of 7,556 encounters in FY24. St. Luke's continues to support the infrastructure and capacity building at HCLV.

St. Luke's transportation services, in collaboration with Lyft and Uber rideshares, ensures access to care by supporting rides to and from appointments. Transportation initiatives supported by SLUHN align with the primary goal of improving access to primary care for homeless and near homeless populations. By providing complimentary Lyft or Uber rides for established patients to and from appointments with primary care doctors and other specialists, this initiative allows patients to receive routine care in a timely manner, with the added goal of reducing the frequency and overuse of Emergency Department resources. More than \$900,000 in Lyft and Uber rides were provided for services Network-wide.

Star Community Health is a Federally Qualified Health Center Look Alike (FQHC-LA) outpatient center that provides health screenings, preventative care, care for acute illness and minor problems, care of chronic illnesses, primary care, OB/GYN care, immunizations, dental, pediatric health, financial literacy services and more to the medically underserved, including the uninsured and underinsured. Other community-based St. Luke's assets, apart from the top-ranked clinical care and teaching hospital features, include community engagement efforts that support our CHNA top priorities (e.g., Lyft and Uber program, Community Health Navigation, St. Luke's HOPE Clinic, St. Luke's Penn Foundation, Maternal and Child Health). Southside Medical and Family Medicine (Easton Avenue), located in Bethlehem, provided connection to care and services for families, medical, and dental service. In Bethlehem (FY24), the partnership between the Department of Community Health and Star Community Health provided dental van services at thirteen schools. They provided care to 575 students with a total of 634 sealants and 177 restorations.

Community Health Liaisons, CHWs, and case managers employed by SLUHN build trust in the community to improve access to care, services, and resources. Established pathways strengthen connections to primary care, social services, food access, financial literacy, career mentoring, and workforce development.

St. Luke's partners with findhelp, a free self-navigating online platform ([sluhn.findhelp.com](https://sluhn.findhelp.com)). Findhelp is a social care network established to provide a comprehensive platform for people to find social services in their communities and for nonprofit and other community-based organizations to coordinate their service delivery. St. Luke's Information Technology, Quality, Case Management, and Community Health teams work collaboratively, especially with Star Community Health, with 1,246 established (i.e., claimed) community-based partners. Findhelp allows community members to search for and connect to social determinants of health (SDOH) support such as financial assistance, food pantries, medical care, transportation, and more. During FY24, there were 30,227 searches on findhelp, with the top searches including food, housing, and utilities. This platform, as well as United Way's 211, are tools that Community Health Liaisons use to assist our community members, patients, and staff to connect to vital resources.

When asking key informants to speak to the Bethlehem community, one said “one of the strongest points of Bethlehem of a strong sense of identity and community. I think that’s what helps make our community, our city and our school district attractive.” Another said that the community is “progressive, open minded, and forward leaning. It looks to solve problems, not wallowing them. I would say it's a proud community. It has a diverse economy and diverse population. If you want to see what America is going to look like in ten years, come to Bethlehem now.”

Regarding the health of the Bethlehem community, one key informant said that “we need to pay attention to social isolation. We need to make sure that people can not only live safely by themselves from a physical health perspective, but also take into account their mental health. We need to make sure that people are connected to care and resources.” Regarding the health of youth in the Bethlehem community, one key informant said that “the Boys and Girls Club is working on nutrition education and physical activity programming, we are working on community gardens to help children get excited about nutrition. It is difficult to make real behavior changes, but if we can teach children when they are young then they can adopt those practices and take them home to their families.”



Another aspect of community needs was transportation. One key informant said that “transportation always comes to mind when we're talking about disparities. The public transportation system is difficult because of the geographic nature of our community, but if someone doesn't have vehicle access it is difficult to rely on public transportation. You can spend hours and hours on the bus trying to get to medical appointments or jobs or anywhere else you need to go.”

## ..... County Health Rankings and Roadmaps .....

Every year the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation releases County Health Rankings and Roadmaps (CHR&R) data that compare counties to state averages, and U.S. top performers. There are twenty indicators evaluated for each county with the US top performers being the counties at the 90<sup>th</sup> percentile for the nation. SLUHN uses CHR&R to better understand the Network top priorities from a county perspective, which promotes our understanding of resource needs within the eleven counties we serve.

Data 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. Data reported in 2024 showed that of the 220 total values that represent key indicators in the counties served by SLUHN, there were 123 red values (55.9%), 57 yellow (25.9%), and 40 green (18.2%). In 2021, 60% of values were red (108), 21% were yellow (38), and 19% were green (34). From 2021 to 2024, there was a 6.8% decrease in red values, a 21.2% increase in yellow values, and a 4.3% decrease in green values. In Northampton County, there are 31.8% red values, 40.1% yellow values, and 28.1% green values. In 2021, there were 55% red values, 25% yellow values, and 20% green values. In Lehigh County, there are 91% red values, 4.5% yellow values, and 4.5% green values. In 2021, there were 85% red values in Lehigh County, no yellow values, and 15% green values.

\*The County Health Rankings and Roadmaps report their findings as the year 2024, but many of the measures are reported from previous years. Please see <https://www.countyhealthrankings.org/> for more information.

2024	U.S. Top Performers*	Pennsylvania (PA)	Berks (BR) County	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	Luzerne County, PA	New Jersey (NJ)	Hunterdon County, NJ	Warren (WA) County, NJ
Unemployment	2.3%	4.4%	4.3%	3.8%	5.1%	4.4%	5.7%	3.5%	4.2%	5.0%	5.3%	3.7%	2.9%	3.5%
Uninsured	6%	7%	8%	5%	6%	8%	7%	5%	6%	7%	8%	8%	5%	7%
Primary care physicians	1,030:1	1,260:1	1,590:1	1,240:1	2,970:1	1,040:1	2,490:1	770:1	1,240:1	1,990:1	1,320:1	1,280:1	910:1	1,850:1
Dentists	1,180:1	1,400:1	1,790:1	1,140:1	2,420:1	1,140:1	2,700:1	930:1	1,690:1	2,020:1	1,530:1	1,160:1	1,190:1	1,400:1
Poor physical health days	3.1	3.4	3.7	2.9	3.9	3.4	3.6	3.0	3.3	3.8	3.9	3.2	2.7	3.5
Food environment index	8.9	8.5	8.6	9.1	8.3	8.4	8.5	9.2	8.7	8.3	7.9	9	9.6	8.5
Physical inactivity	20%	23%	25%	21%	27%	26%	25%	20%	23%	27%	28%	23%	18%	23%
Access to exercise opportunities	90%	86%	86%	92%	65%	85%	77%	97%	90%	75%	88%	96%	91%	90%
Adult obesity	32%	33%	36%	31%	36%	34%	33%	31%	32%	39%	37%	28%	28%	32%
Excessive drinking	13%	19%	17%	19%	17%	19%	16%	19%	19%	18%	17%	17%	20%	18%
Adult smoking	14%	15%	18%	15%	20%	17%	17%	13%	16%	21%	20%	11%	11%	14%
Poor mental health days	4.4	4.7	5	4.9	5.5	4.8	4.6	4.7	4.8	4.9	5.1	4.4	4.4	5.2
Mental health providers	230:1	370:1	560:1	330:1	1,280:1	420:1	660:1	230:1	360:1	970:1	750:1	340:1	350:1	390:1
Low birthweight	6%	8%	8%	7%	8%	8%	9%	7%	8%	9%	8%	8%	6%	8%
Teen births	9	13	18	5	15	17	8	6	9	19	20	10	2	7
Sexually transmitted infections	151.7	409.8	468.4	214.5	192.6	467.3	354.5	223.7	331.6	264.5	392.0	360.7	121.6	247.4
High school graduation	94%	87%	87%	93%	88%	86%	92%	89%	88%	91%	85%	89%	94%	89%
Children in poverty	10%	15%	14%	7%	16%	16%	16%	7%	14%	16%	21%	13%	4%	10%
Severe housing problems	8%	14%	13%	13%	14%	16%	16%	13%	13%	11%	13%	20%	12%	13%
Social associations	18	11.8	10.7	8	13.3	9.9	7.2	10.7	9.8	12.9	10.3	8.1	9.5	8.7

University of Wisconsin Population Health Institute.  
County Health Rankings and Roadmaps. 2024.

KEY

At or above State/Top Performer

Between Top Performers and State

At or below State/Top Performer

# Demographics

## ..... General 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 Bethlehem Campus and Star Community Health (i.e., service area). In the Bethlehem Campus and Star Community Health service area, 28% of the patients served reside in zip codes 18017, 18015, and 18018 (Bethlehem). The campus service area is defined by the area covered by the top zip codes. A total of 709,227 people live in the 691.59 square mile area defined as the Bethlehem Campus and Star Community Health service area. The population density for this area is estimated at 1,025.50 persons per square mile.

When looking at population, we also assess the percentage of the population living in urban and rural areas. 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. According to the 2020 Decennial Census, 88.9% of the Bethlehem Campus and Star Community Health service area lives in an urban setting and 11.1% of the service area lives in a rural setting. The Bethlehem Campus and Star Community Health service area has a larger urban community compared to Pennsylvania (75.9%) and the United States (78.8%).

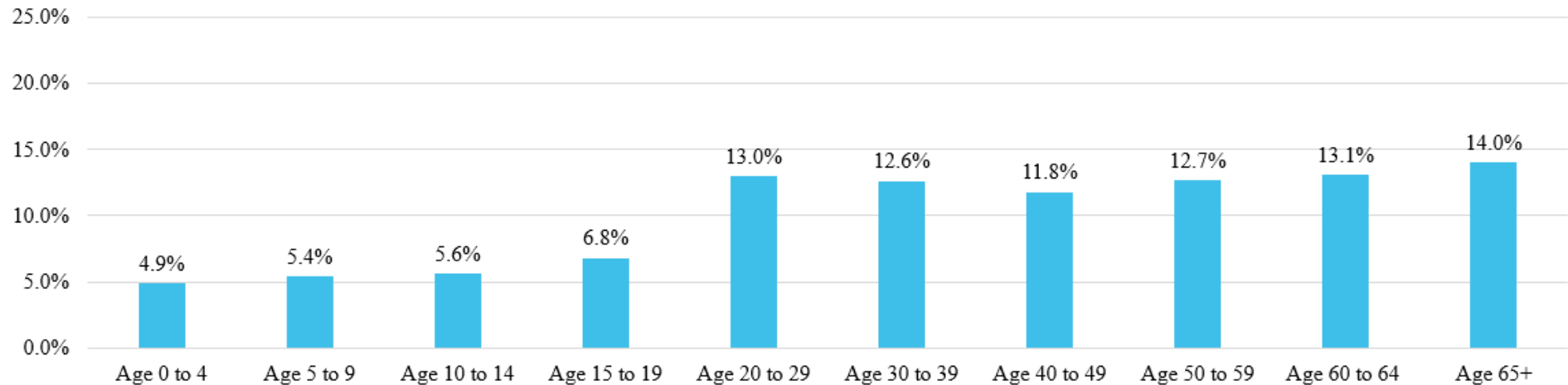
Understanding the demographics of the service area is essential to addressing need and improving upon the region's health services. The following data come from American Community Survey (ACS) 5-year estimates (2018-2022) reported in 2023 by the US Census Bureau and St. Luke's Community Health Needs Assessment (CHNA) survey data unless stated otherwise. Esri was used to access the ACS and US Census data. ACS data represents information over a 60-month period, which allows estimates to provide data for a wide range of demographic and social determinants of health for the United States population. For more information on ACS 5-year data please visit [www.census.gov/data/developers/data-sets](http://www.census.gov/data/developers/data-sets).

FY23 SLB - Zip Codes Comprising Top 80% of Facility Encounters		
Zip Code	% SLB Total (n = 543,966)	% Network Total (n = 2,133,822)
18017	10%	2.6%
18015	10%	2.5%
18018	8%	2.0%
18064	5%	1.3%
18042	4%	1.1%
18040	4%	1.0%
18020	4%	0.9%
18045	4%	0.9%
18103	3%	0.9%
18055	3%	0.8%
18014	2%	0.6%
18102	2%	0.6%
18036	2%	0.6%
18067	2%	0.5%
18109	2%	0.5%
18104	2%	0.5%
18034	2%	0.5%
18052	2%	0.4%
18951	2%	0.4%
18013	1%	0.3%
08865	1%	0.3%
18360	1%	0.3%
18062	1%	0.2%
18049	1%	0.2%
18032	1%	0.2%
18301	1%	0.2%
<b>Total</b>	<b>80%</b>	<b>20.3%</b>

## Age

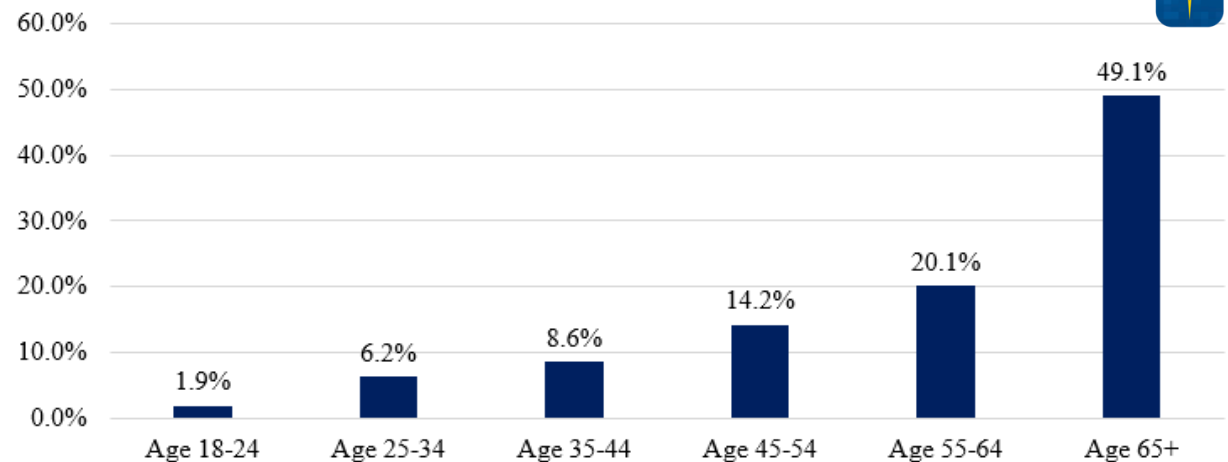
The 2024 population estimates (Esri) report that 19.6% of the Bethlehem Campus and Star Community Health service area population are under 18 years old and 20.3% are 65 years and older. Combined, these groups account for 40.3% of the service area population and 60.1% are between the ages of 18 and 64 years old with a total median age of 41.3 years old. Projected estimates for 2029 (Esri) show that 18.6% of the population will be under 18 years old and 22.8% ages 65 and older, with 58.6% of the population between 18-64 years old with a median age of 42.2 years old, indicating that the population is aging and the birth rate is decreasing, which is similar to trends seen throughout the United States.

Total Population by Age, Bethlehem Campus and Star Community Health Service Area (2024 Estimates, Esri)



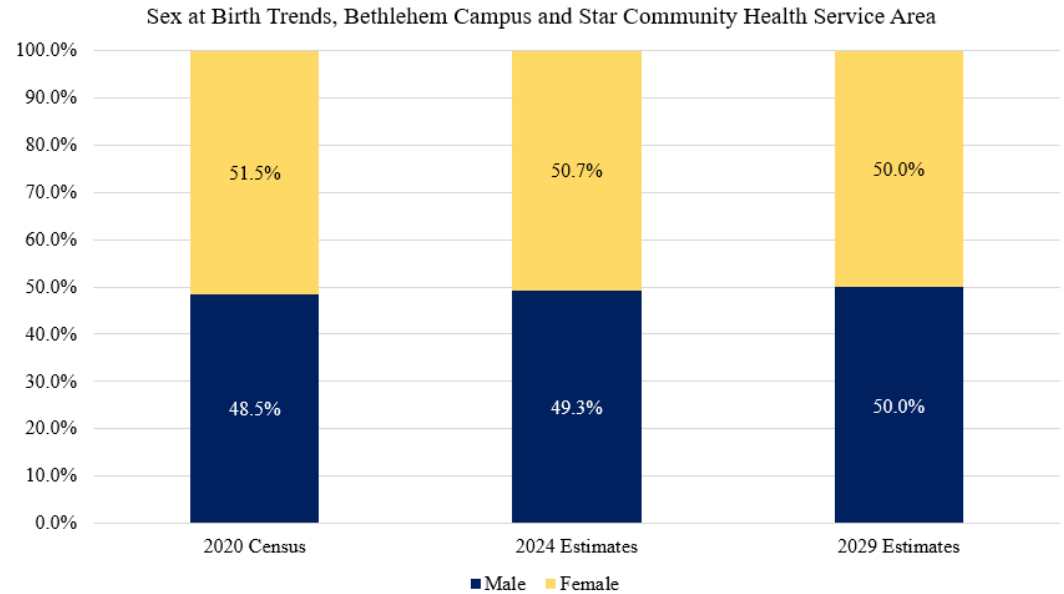
When compared to the total population distribution, most survey respondents in the Bethlehem Campus and Star Community Health service area were ages 65 and older (49.1%) followed by 55-64 years old (20.1%), 45-54 years old (14.2%), 35-44 years old (8.6%), 25-34 years old (6.2%) and 1.9% were ages 18-24 years old. The survey assessed individuals 18 and older, therefore ages under 18 are not reflected in survey results. The mean age of all respondents was 58.2 years old.

2025 CHNA Survey Results by Age, Bethlehem Campus and Star Community Health Service Area



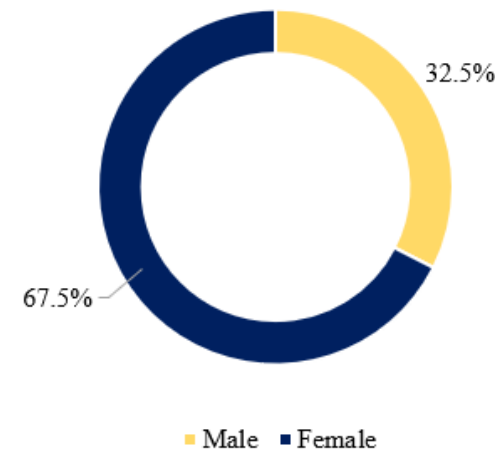
## ..... Sex at Birth.....

The 2022 ACS 5 year estimates asked respondents to indicate their sex (i.e., male, female) assigned at birth. While the state of New Jersey has three options for designation on birth certificates (i.e., male, female, undesignated/nonbinary), Pennsylvania has two options for designations on birth certificates (i.e., male, female). Generally, the population of all SLUHN service area communities are evenly split between male and female, with female as a slightly higher percentage of the population. According to the 2020 US Census and Esri forecasts for 2024 and 2029, there is a slight shift in population by sex at birth estimated, with an increase in the male population, projected to account for 50% of the population in the Bethlehem Campus and Star Community Health service area by 2029.



Of the CHNA survey respondents in the Bethlehem Campus and Star Community Health service area, 67.5% were assigned female at birth compared to 32.5% assigned male at birth. While the U.S. Census Bureau findings also showed a higher percentage of females in the Bethlehem Campus and Star Community Health service area (51.5%), the CHNA survey data has a disproportionately higher percentage of females compared to male respondents. Further information related to gender identification is found in the LGBTQ+ section.

2025 CHNA Respondents Sex at Birth, Bethlehem Campus and Star Community Health Service Area

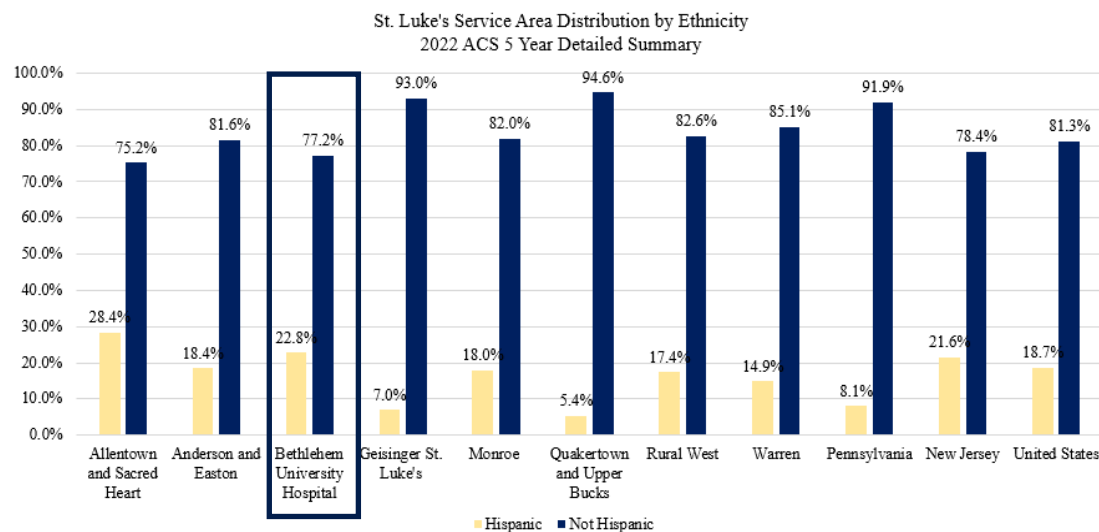




## ..... Ethnicity .....

Ethnicity trends in the United States have been evolving rapidly, reflecting the country's increasing diversity. Nationwide, Hispanic and Asian populations are among the fastest-growing groups as a result of both immigration and higher birth rates. These trends are also seen in Pennsylvania and New Jersey and in local communities within the SLUHN service areas.

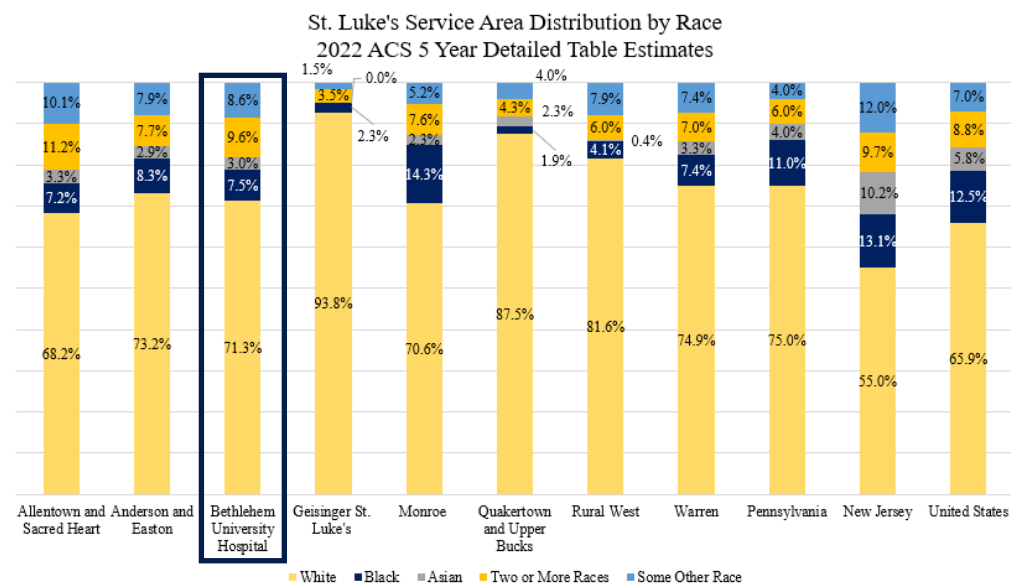
The 2022 ACS data indicates that 77.2% of the Bethlehem Campus and Star Community Health service area identifies as non-Hispanic and 22.8% identifies as Hispanic. The population in Pennsylvania is 92.7% non-Hispanic and 7.3% Hispanic. In Northampton County, 78.0% of people identify as non-Hispanic and 22.0% as Hispanic. In Lehigh County, 84.0% of people identify as non-Hispanic and 16.0% as Hispanic. When asked about ethnicity, 87.4% of survey respondents from the Bethlehem Campus and Star Community Health service area identify as non-Hispanic, while 12.6% of respondents identify as Hispanic.



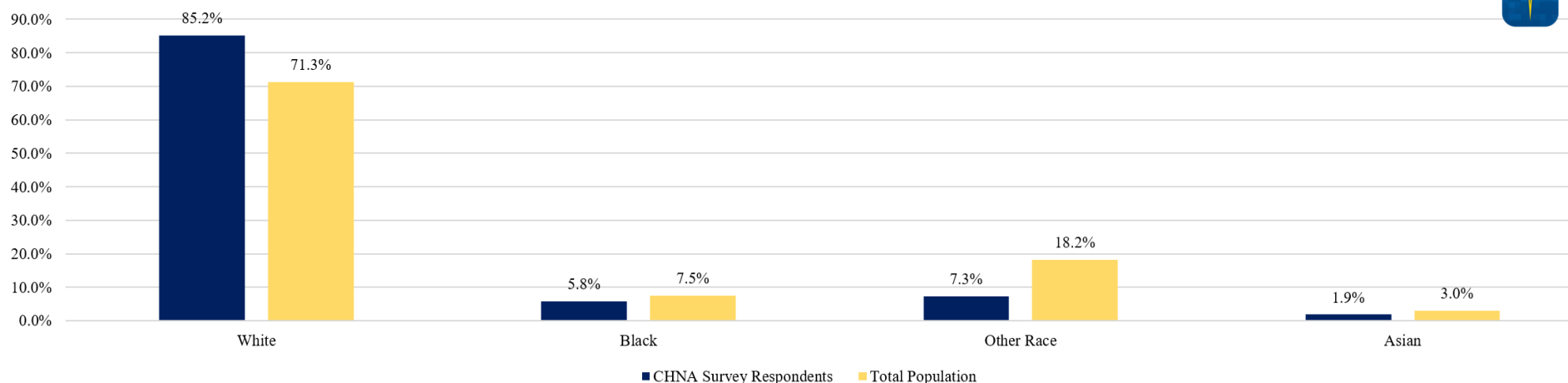
## ..... Race .....

Racial demographic trends have shifted significantly in recent years. According to the US Census, nationwide, the number of individuals identifying as two or more races increased more than 276% between 2010 and 2020, and the Some Other Race category increased 129%. Data for individuals identifying as Native Hawaiian/Pacific Islander, Native American/Alaska Native were combined into Other Race due to small sample sizes. These trends are also seen at the state level in Pennsylvania. The ACS reports that 71.3% of the Bethlehem Campus and Star Community Health service area identifies as White, followed by Other or Multiple Races (18.2%), Black (7.5%), and Asian (3.0%).

The majority of the Bethlehem Campus and Star Community Health service area CHNA survey respondents identified as White (85.2%), followed by Multiple or Other Race (7.3%), Black (5.8%), and Asian (1.9%).



Total Population and CHNA Survey Respondents by Race, Bethlehem Campus and Star Community Health Service Area



## ..... Vulnerable Populations .....

For the purpose of this CHNA, vulnerable populations are defined as a group or groups of individuals who experience greater obstacles and barriers to positive health outcomes and access to quality healthcare based on their economic status, racial or ethnic background, age, physical health status, mental health status, social support, geographical location, and other external factors that place them at risk of poor health outcomes. Vulnerable populations often face multiple obstacles that collectively contribute to limited access to consistent and quality care, which in turn correlates with disparities in health status due to external factors often out of the control of individuals. While these disparities are often addressed to promote a group or groups of vulnerable populations, it is important to note that many individuals face uniquely challenging circumstances that require support and services based on their personal situation. The following data was retrieved from the 5-year American Community Survey (2022), Esri estimates, and the US Census (2020) unless otherwise stated.

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

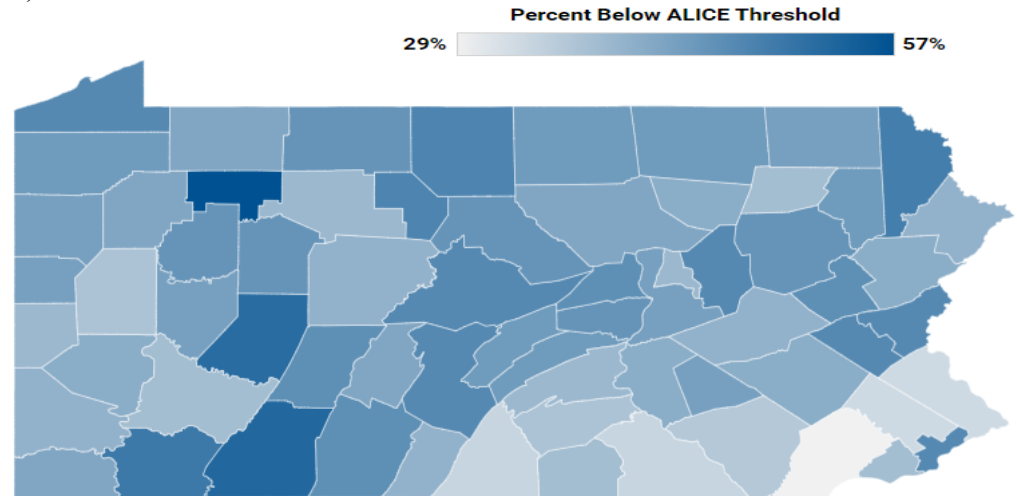
It is important to identify the BIPOC communities within the SLUHN service area to understand the unique perspectives and experiences, which are often influenced by both historical and current inequalities. For example, Indigenous peoples historically lack proper access to health resources and information and often face discrimination when accessing healthcare facilities. Black women have the highest rates of death during childbirth of any demographic, and black men high rates of Type 2 Diabetes. It is important to recognize the specific challenges faced by BIPOC communities, including SDOH (e.g., healthcare, education, employment, housing) in order to address needs and promote education, prevention, and quality care. Disparities in access to care for BIPOC communities can be detrimental to health outcomes and generate mistrust in healthcare. In the Bethlehem Campus and Star Community Health service area, 5.8% of survey respondents identify as Black and 12.6% of respondents identify as Hispanic. Out of the BIPOC individuals who were surveyed for the Network, 5.1% identified as Black, 1.4% identified as Asian, 6.17% as Other Race, and 9.3% Hispanic.



## ..... ALICE .....

Asset Limited, Income Constrained, Employed (ALICE) are individuals and households that earn above the Federal Poverty Level, but less than the basic cost of living. ALICE households do not qualify for federal assistance and they often struggle to afford basic necessities such as healthcare, housing, food, childcare, and transportation. ALICE individuals and households are typically employed, often working multiple jobs or in positions that do not make enough to earn a living wage. Because these individuals and households earn too much to qualify for public assistance, they struggle to not only obtain financial stability in the short term, but also have little-to-no savings or assets. The basic cost of living for ALICE populations is higher than what their incomes can support, and they are often one emergency (e.g., car repair, medical emergency) away from financial crisis. The Federal Poverty Level for a family of four (2024) is \$31,200.

The United Way uses the Household Survival Budget to examine the bare minimum costs for essentials in a geographic area (i.e., city, county) to understand the variance in financial constraints for individuals and households living and working within a given community. The most recent ALICE report was published in 2023 and was updated in 2024. The most recent data indicates that financial hardships in Pennsylvania and New Jersey continued to be affected by the COVID-19 pandemic, inflation, wage growth, and the expiration of public assistance provided during the pandemic. In Pennsylvania (2022), out of 5,279,632 households, there were 658,448 (12%) living in poverty and 1,493,199 (28%) that were ALICE, which equates to 2,151,647 (41%) living below the ALICE threshold. In New Jersey, these numbers are similar with 3,512,465 households in the state and 10% living in poverty and 36% classified as ALICE, which equates to 46% of the population living below the ALICE threshold. In the Pennsylvania counties that St. Luke's serves, Bucks county has the lowest amount of households living below the ALICE threshold (33%) and Lehigh and Northampton each have the highest in the counties served by SLUHN and Star Community Health (47%).



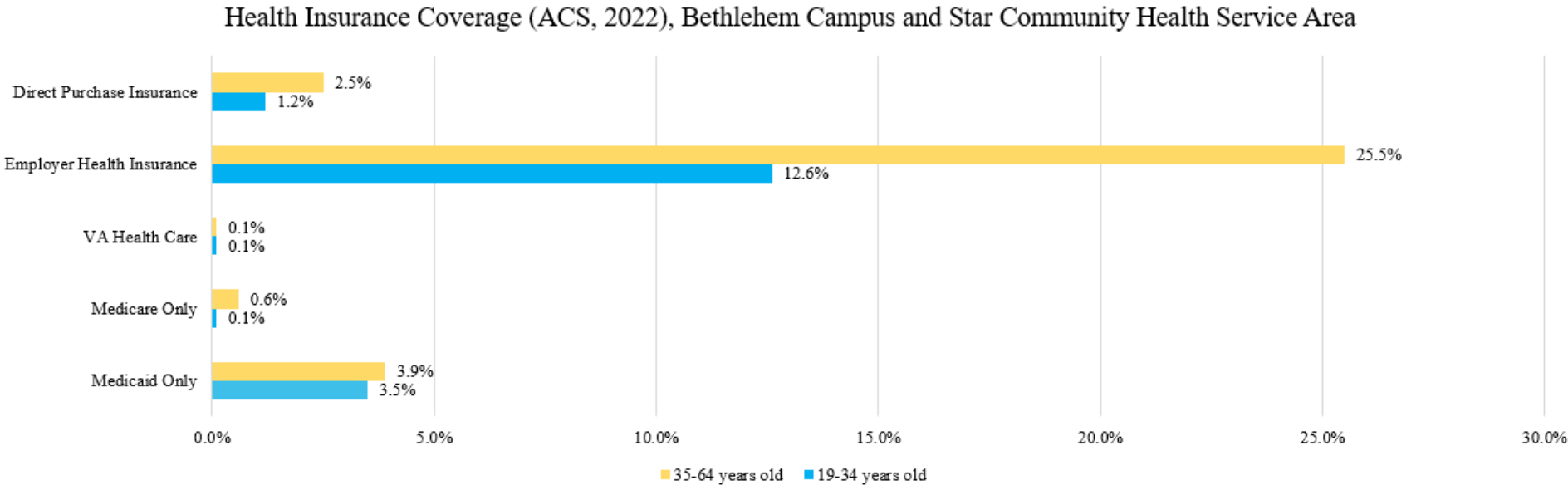
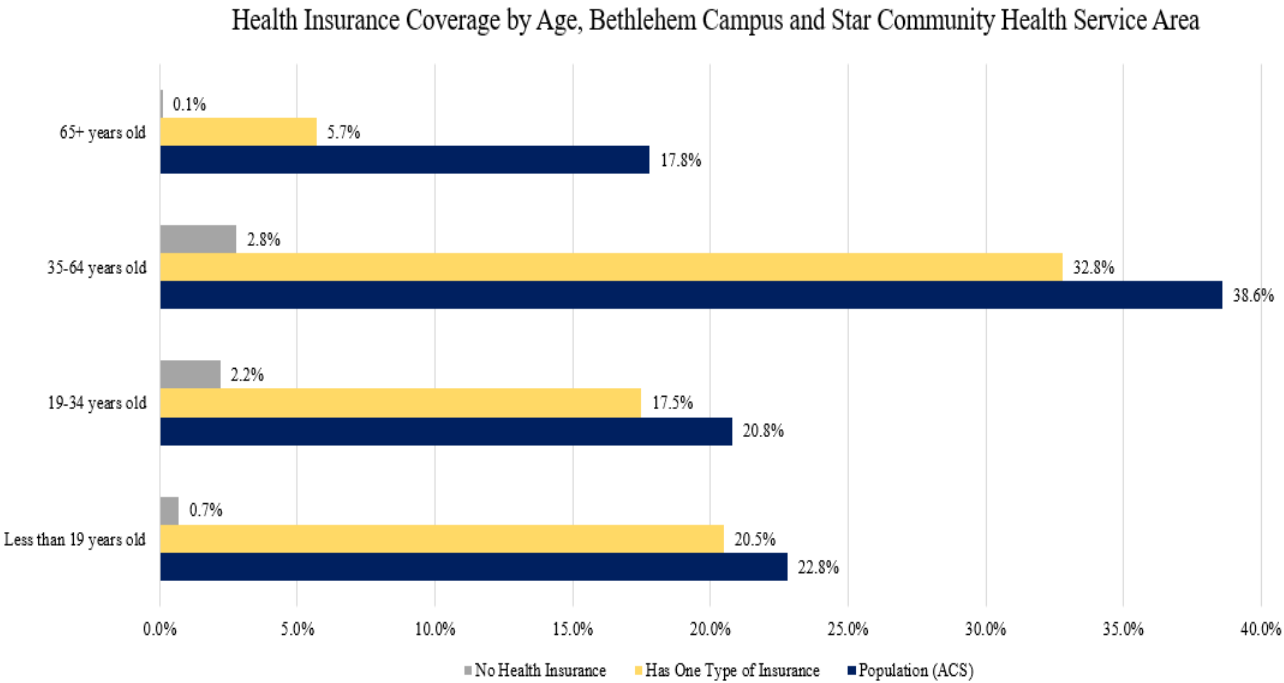
## ..... Uninsured Population .....

Reliable and affordable health insurance plays a vital role in ensuring that individuals and families have access to necessary medical services without overwhelming financial burden. Health insurance often covers the majority of the cost for preventative care, treatment of acute and chronic illness, and other specialty services. Access to health insurance also promotes public health, as insured populations are more likely to receive timely medical attention, vaccinations, and other care services that promote healthier communities and reduce long-term healthcare costs.

Federal programs for uninsured and underinsured individuals are available in the United States. Medicare is a federal healthcare program in the United States available to most of the population ages 65 years and older and helps to nearly eliminate the uninsured population in that age demographic. Children under the age of 18 years old are eligible for the Children's Health Insurance Program (CHIP) as part of a joint state and federal health insurance coverage for children in low-income families that earn above the Medicaid threshold but between 200-400% of the Federal Poverty Level, depending on state guidelines.

In the Bethlehem Campus and Star Community Health service area, 0.7% of children are uninsured. Of individuals 19-64 years old, approximately 5.0% are uninsured. The majority of individuals aged 19-64 years old have employer health insurance, followed by Medicaid and direct purchase insurance. While there are federal and state programs that help to subsidize or provide health insurance to many vulnerable populations, there is still a lack of coverage for many individuals which can lead to serious barriers to access care.

Out of pocket health care expenditures can also be barriers to care and services. In the Bethlehem Campus and Star Community Health service area, average healthcare expenditures were \$4,797 per person annually. These out of pocket expenses can include insurance payments (e.g., copays), vision care, dental care, and more.



## ..... Older Adults .....

The life expectancy of older adults in the United States has rapidly increased in recent decades, requiring a greater need for elder care and older adult services. According to the 2020 U.S. Census, one in six people in the United States were ages 65 years and older (55.8 million individuals), which was a 38.6% increase from the 2010 Census. In the SLUHN service area, there were 186,442 individuals 65 years and older in 2020 (18.8% of the population). The 2024 projected estimates increased to 207,836 (20.5% of the population), and by 2029 estimates are projected to be 234,923 (23.1% of the population).

It is estimated that the 65 years and older population will outnumber children by the year 2034. This is important because as the demographics of the population shift, dependency of younger and older populations on the working-age population create diverse needs and responsibilities. Dependency ratios are calculated based on the number of children (i.e., 0-14 years old) or older adults (i.e., seniors aged 65 years and older) to the working-age population (i.e., 15-64 years old). These ratios help to better understand the economic, social, and other responsibilities placed on the working population to support dependents both young and old. Both child and older adult dependency ratios are calculated by dividing the number of dependents by the number of individuals in the working-age population. In the SLUHN service area, the child dependency ratio is projected to decrease from 34.3 in 2020 to 31.7 in 2029, while the senior dependency ratio is projected to increase from 31.0 in 2020 to 39.5 in 2029. Not only do these dependency ratios impact families and communities in diverse ways (e.g., elder care, child care) but it also impacts the way healthcare systems grow and develop their services to meet the needs of the populations they serve.

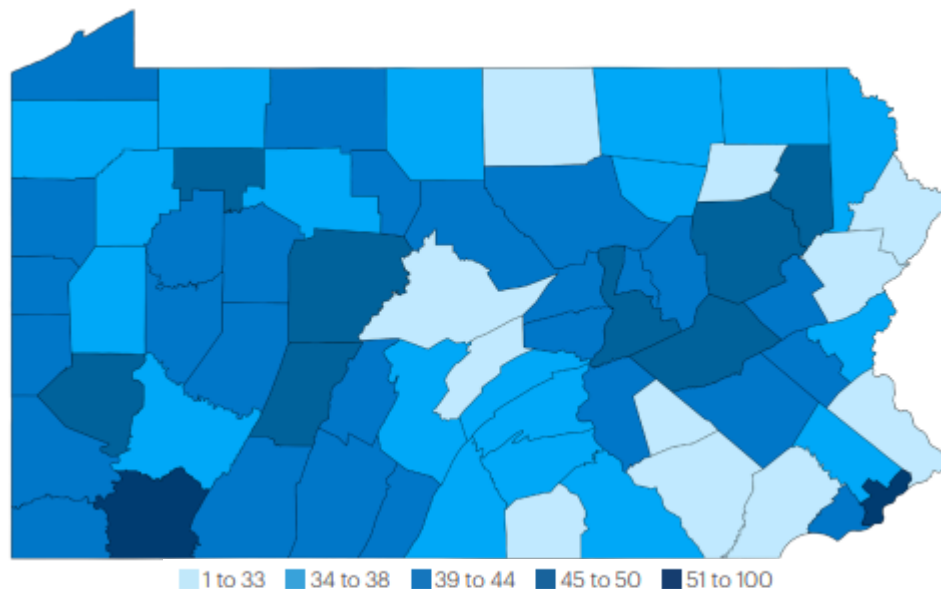
Total Population by Age	Census 2020		2024 Estimates		2029 Estimates	
	Number	Percent	Number	Percent	Number	Percent
65 - 69	60,085	6.0%	65,493	6.5%	67,187	6.6%
70 - 74	48,483	4.9%	52,749	5.2%	60,296	5.9%
75 - 79	32,861	3.3%	39,930	4.0%	46,213	4.5%
80 - 84	21,149	2.1%	24,397	2.4%	32,279	3.2%
85+	23,864	2.4%	25,267	2.5%	28,948	2.8%
Child Dependency Ratio	34.3	-	32.7	-	31.7	-
Senior Dependency Ratio	31.0	-	34.4	-	39.5	-

The United Health Foundation annually publishes Senior Health Rankings indicating 52 measures of health to provide a comprehensive overview of the health and wellbeing of older adults in the United States. Overall, Pennsylvania was ranked 24<sup>th</sup> out of 50 states and New Jersey ranked 21<sup>st</sup>. Metrics that have shown recent improvement have greater availability of geriatric clinicians and home healthcare workers, which increased in both Pennsylvania and New Jersey. However, poverty increased significantly, to a rate of 29% in Pennsylvania and 14% in New Jersey. Pennsylvania also ranked 37<sup>th</sup> out of 50 states in health behaviors (i.e., nutrition and physical activity, sleep health, smoking) and New Jersey ranked 17<sup>th</sup>. For physical environment health (i.e., air and water quality, housing and transit), Pennsylvania ranked 31<sup>st</sup> and New Jersey ranked 37<sup>th</sup>.

Older adult mental health is a growing concern in the United States. In New Jersey, 12.9% of adults 65 years and older experience depression and 10.1% experience frequent mental health distress. In Pennsylvania, 8.5% of older adults experience frequent mental health distress and 17.7% experience depression. Overall, 9.4% of older adults the United States experienced frequent mental distress and 15.5% experience depression. Factors that can contribute to frequent mental distress are the inability to afford healthcare, living alone, and activity limitations due to chronic conditions, physical disabilities, or mental health problems. One reason that the older adult population may not receive adequate mental health care is because symptoms of some mental health issues like depression or lapses in memory often get dismissed as typical aspects of aging.

Social isolation is another significant factor that can negatively impact older adult mental and physical health. Many older adults experience isolation due to multiple factors, such as reduced mobility, loss of friends or family, and geographic distance from social support networks. This isolation can lead to increased feelings of loneliness, which can increase risk of depression, anxiety, and cognitive decline. Additionally, socially isolated older adults may have limited access to healthcare services, impacting their overall well-being and potentially exacerbating existing health conditions. The United Health Foundation Health Rankings indexed social isolation factors to better understand the risk of social isolation for adults 65 years and older. Factors include: living in poverty; living alone; being divorced, separated, widowed; having never married; having a disability; having an independent living difficulty. Values are 1-100, with a higher value indicating greater risk. Pennsylvania ranked 33<sup>rd</sup> out of 50 states in social isolation while New Jersey ranked 26th out of 50 states. In the SLUHN service area, Schuylkill and Luzerne counties ranked the highest for social isolation and Hunterdon (NJ) and Monroe Counties ranked the lowest.

Social Isolation Rates in Pennsylvania



Source: US Census Bureau, ACS 2018-2022, United Health Foundation



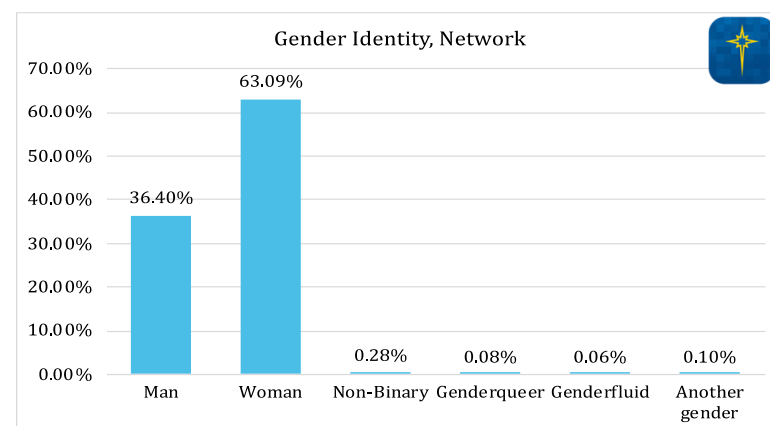
***“Bethlehem has an aging community. There has been focus on the aging in place model. Most seniors would like to remain in their home instead of going elsewhere. COVID-19 shed light on the social isolation piece.”***

## ..... Lesbian, Gay, Bisexual, Transgender, Queer + (LGBTQ+) .....

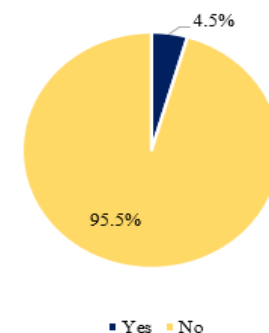
According to the University of California Los Angeles (UCLA) Williams Institute, 4.1% of individuals living in both Pennsylvania and New Jersey identify as Lesbian, Gay, Bisexual, Transgender, Queer+ (LGBTQ+). New Jersey and Pennsylvania are tied at the rank of 24<sup>th</sup> out of the 50 states for total LGBTQ+ population. In Pennsylvania, 56% of the LGBTQ+ population identify as female and 44% male. In New Jersey, 52% of the LGBTQ+ population identifies as female and 48% identify as male. In Pennsylvania, 67% identify as White, 13% Black and 12% Hispanic/Latino(a). In New Jersey, just over half (51%) identify as White, 27% as Hispanic/Latino(a), 13% as Black, 5% as Asian, and 4% as Other Races. The average age of LGBTQ+ individuals in Pennsylvania is 36.8, with 56% of the population between the ages of 18-24. The unemployment rate of Pennsylvania LGBTQ+ individuals is 11% compared to 5% of non-LGBTQ+ individuals, 10% of Pennsylvania LGBTQ+ individuals are uninsured, 26% are food insecure, and 27% have an income less than \$24,000 a year. While 47% of Pennsylvania LGBTQ+ individuals have a high school diploma, only 16% have a bachelor's degree. The average age of LGBTQ+ individuals in New Jersey is 37 years old, with 31% of the population between the ages of 18-24 years old. The unemployment rate of New Jersey LGBTQ+ individuals is 8% compared to 7% of non-LGBTQ+ individuals, 12% of New Jersey LGBTQ+ individuals are uninsured, 22% are food insecure, and 23% have an income less than \$24,000 per year. While 41% of New Jersey LGBTQ+ individuals have a high school diploma, only 19% have a bachelor's degree. New Jersey has implemented universal nondiscrimination laws for sexual orientation and/or gender identity, and conversion therapy is banned across the state.

LGBTQ+ individuals are considered a vulnerable population due to the unique challenges and systemic barriers they face due to discrimination, stigmatization, and a lack of legal protections that often contribute to poor health outcomes. LGBTQ+ individuals face depression, anxiety, and suicidal ideation at higher rates than the majority of the population and may lack social support, which can lead to social isolation and economic instability. Many LGBTQ+ individuals report discrimination and stigma in healthcare settings, which can lead to mistrust of medical professionals and reluctance to seek necessary care. LGBTQ+ populations are at higher risk than the population as a whole for mental health, substance use disorders, sexually transmitted infections, and other health issues. Barriers to accessing appropriate care from healthcare providers trained in LGBTQ+ specific health concerns further exacerbates these issues, resulting in gaps in care.

In 2022, the Bradbury-Sullivan LGBT Community Center in Allentown, Pennsylvania, with funding from the PA Department of Health, conducted a Pennsylvania statewide LGBT Needs Assessment. In total, 4,228 LGBTQ+ individuals responded to the survey. The results identified risk factors related to LGBTQ+ health, including that 27.4% of respondents had not visited the doctor for a routine check-up in a year or longer, 43.0% had not visited the dentist in the past year, and nearly half of respondents feared seeking healthcare services because of past or potential negative reactions from healthcare providers. From the St. Luke's CHNA survey, 4.5% of survey respondents from the Bethlehem Campus and Star Community Health service area identify as LGBTQ+. Additionally, 0.28% of survey respondents across the Network identify as non-binary, 0.08% identify as genderqueer, 0.06% identify as gender fluid, and 0.1% identify as another gender.

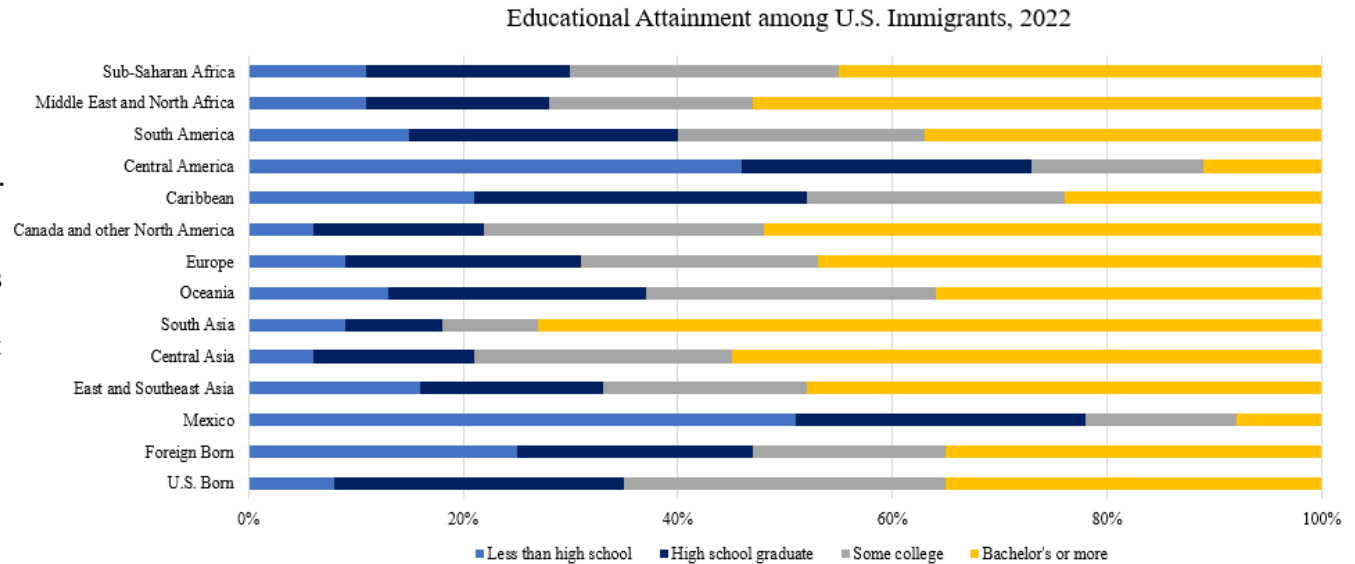


CHNA Survey Respondents  
LGBTQ+ Identification,  
Bethlehem Campus and Star  
Community Health Service Area



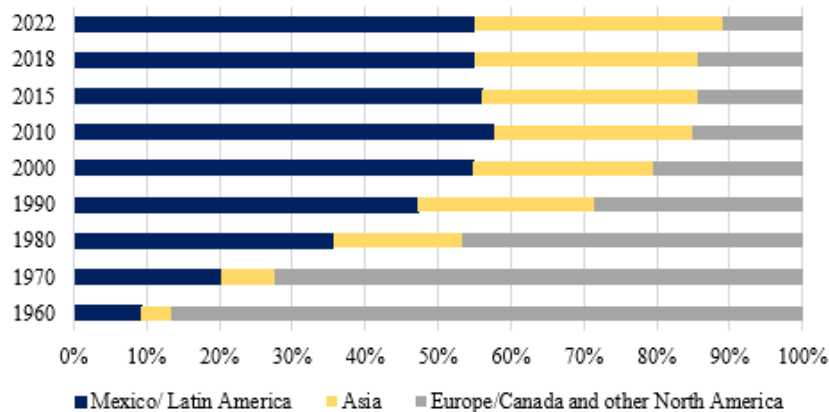
## ..... Foreign-born Populations .....

According to the 2018-2022 ACS estimates, the number of foreign-born people in the United States increased by more than 5 million over 10 years to 45.3 million or 13.7% of the nation's population. According to the US Census Bureau, foreign-born populations consists of anyone living in the United States who was not a U.S. citizen at birth, including naturalized U.S. citizens, lawful permanent residents (i.e., immigrants), temporary migrants such as foreign students, humanitarian migrants such as refugees and asylees, and unauthorized migrants.



Nationally, immigrants made up over one-fifth of the population in four states: California (26.5%), New Jersey (23.2%), New York (22.6%) and Florida (21.1%). In Pennsylvania, the foreign-born population is 7.3%. Almost half (49.1%) of all immigrants in the United States entered the country before 2000, and more than half were naturalized US citizens. Nearly a quarter of the foreign-born population 25 years and older have a bachelor's (18.7%) or graduate or professional degree (14.9%), compared to 21.4% and 13.1% for the native-born population. An estimated 63.5% were employed, with over a third of the civilian employed foreign-born population (16 years and older) in management, business, science and arts occupations.

### Origins of the US Foreign-born Population



Foreign-born populations often face challenges in accessing healthcare due to language barriers, cultural differences, and lack of health literacy and understanding of the healthcare system. Legal and financial obstacles (e.g., lack of health insurance, fear of deportation) further complicate these issues, making it difficult for many foreign-born populations to receive quality care. Language barriers are significant for individuals trying to access care with limited English proficiency.



## ..... Language Diversity .....

English is the language most widely spoken in the Lehigh Valley and surrounding areas of Pennsylvania. However, many people in the SLUHN 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.” Speaking and understanding English is important because most health services are provided in English. Language can also be a large barrier to educational attainment, higher income, employment, and accessing healthcare.

Translators and interpreters are required in locations where either 5% of the community or over 1,000 community members speak a different language. A translator typically only translates the written word while interpreters translate orally. The Bethlehem Campus and Star Community Health service area zip codes that require translator or interpreter services are highlighted in red. Of the Bethlehem Campus and Star Community Health service area, eighteen zip codes require language services for Spanish speakers, nine require services for other Indo-European languages (not including Germanic and Slavic languages, and four zip codes require services for Asian and Pacific Island languages.

Bethlehem Campus and Star Community Health 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
18017	13.7% (5,215 people)	38.7% (2,017 people)	Other Indo-European languages (4.4%- 1,692 people)
18015	20.1% (6,435 people)	47.1% (3,032 people)	Asian and Pacific Island languages (3.2%- 1,019 people)
18018	16.2% (4,864 people)	41.8% (2,031 people)	Other Indo-European languages (3.0%- 892 people)
18064	2.8% (720 people)	48.9% (352 people)	Asian and Pacific Island languages (2.2%- 558 people)
18042	15.7% (6,690 people)	37.7% (2,519 people)	Other Indo-European languages (1.7%- 736 people)
18040	6.5% (1,061 people)	27.1% (288 people)	Asian and Pacific Island languages (4.0%- 652 people)
18020	6.1% (1,210 people)	27.8% (336 people)	Other Indo-European languages (5.5%- 1,104 people)
18045	8.2% (2,307 people)	24.0% (553 people)	Other Indo-European languages (5.7%- 1,609 people)
18103	28.6% (12,884 people)	52.0% (6,700 people)	Asian and Pacific Island languages (2.5%- 1,126 people)
18055	6.0% (670 people)	31.6% (212 people)	Other Indo-European languages (1.8%- 204 people)
18014	3.1% (369 people)	66.7% (246 people)	Other Indo-European languages (1.2%- 138 people)
18102	51.8% (24,753 people)	59.9% (14,838 people)	Other languages (1.5%- 710 people)
18036	2.0% (279 people)	16.8% (47 people)	Other Indo-European languages (1.4%- 199 people)
18067	2.8% (519 people)	34.7% (180 people)	Other Indo-European languages (3.3%- 617 people)
18109	36.9% (6,151 people)	52.4% (3,225 people)	Other languages (5.8%- 962 people)
18104	10.4% (4,523 people)	42.8% (1,918 people)	Asian and Pacific Island languages (4.8%- 2,105 people)
18034	2.3% (204 people)	27.0% (55 people)	Asian and Pacific Island languages (2.8%- 253 people)
18052	9.8% (2,724 people)	48.1% (1,310 people)	Other languages (8.1%- 2,253 people)
18951	8.2% (2,307 people)	45.2% (650 people)	Other Indo-European Languages (2.8%- 984 people)
18013	2.8% (484 people)	46.3% (224 people)	Other Indo-European languages (2.0%- 334 people)
08865	6.5% (1,902 people)	48.7% (926 people)	Other Indo-European languages (3.2%- 933 people)
18360	7.5% (2,115 people)	43.1% (912 people)	Other Indo-European languages (4.9%- 1,366 people)
18062	6.7% (1,723 people)	10.2% (175 people)	Other Indo-European languages (6.3%- 1,610 people)
18049	3.0% (534 people)	29.6% (158 people)	Asian and Pacific Island languages (1.8%- 315 people)
18032	8.5% (747 people)	33.3% (249 people)	Other Indo-European languages (0.8%- 67 people)
18301	10.6% (3,006 people)	34.8% (1,044 people)	Other Indo-European languages (4.5%- 1,273 people)

## ..... Children and Adolescents .....

Children and adolescents in the United States are a diverse and rapidly evolving segment of the population. According to the National Center for Health Statistics at the Centers for Disease Control (CDC), the fertility rate in the United States has decreased by 2% annually since 2014, with an all-time low of 3,591,328 births in 2023. While birth rates are the lowest they have been in the history of the United States, the racial and ethnic diversity of children is increasing. Children and adolescents under 18 years old comprise 22% (72,325,602 individuals) of the population. According to the 2020 US Census, there were 206,357 children and adolescents under 18 years old in the SLUHN service area, which accounted for 20.8% of the population. According to Esri estimates, this number is projected to decrease to 19.6% of the population in 2024 and 18.5% of the population in 2029.

Childhood is a critical time for healthcare prevention and education to promote overall health and wellbeing. Routine preventative care, including vaccinations, annual well visits, and developmental screenings are crucial. Mental health services are in high demand, as many youth face challenges related to stress, anxiety, depression, and other behavioral issues. Access to proper nutrition and physical activity programs supports their physical health, while educational initiatives around health and wellness promote lifelong healthy habits. Health insurance is critical for all children to ensure they receive consistent quality care. The Children's Health Insurance Program (CHIP) provides healthcare coverage to children from low-income families who do not qualify for Medicaid but cannot afford private insurance. CHIP provides comprehensive health benefits such as routine check-ups, immunizations, doctor visits, prescriptions, dental, and vision care. 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 2023 Pennsylvania Youth Survey (PAYS) is run by the Pennsylvania Commission on Crime and Delinquency and asks questions pertaining to drug use, violence, mental health, school safety, and more. PAYS is administered (by paper or online) biennially in odd years to students in grades 6, 8, 10, and 12. The survey highlights critical issues such as substance use, with alcohol and vaping being the most prevalent among students. Mental health concerns are also prominent, with significant reports of depression, anxiety, and suicidal ideation. Additionally, the survey sheds light on school safety, revealing that while many students feel safe, bullying and violence remain concerns. The PAYS data helps schools, community-based organizations, and policymakers understand the root causes of problem behaviors and develop targeted interventions and support systems to address these issues effectively. Details of the findings of the PAYS data as it relates to this CHNA can be found throughout the draft.

County	Number of Children enrolled in CHIP (2024)
Berks	8,348
Bucks	8,871
Carbon	981
Lehigh	7,312
Luzerne	5,294
Monroe	2,724
Montgomery	9,760
Northampton	4,455
Schuylkill	2,046
Warren (NJ)	3,215
Hunterdon (NJ)	4,508
Pennsylvania	167,790
New Jersey	230,000
United States	7,056,520



***“When children had access to phones that were connected to social media platforms, you could be social by not being social anymore. That created internalized isolation, the ability to be on guard all the time, or hypersensitivity to what people were saying to you. That takes a toll on the mental health of adolescence before they have the maturity or the coping skills. This can reinforce anxieties and feelings of isolation that correspond to the challenges that have been present in schools for the last 10 years.”***



# Education Access and Quality

Education access and quality is crucial to improving health outcomes and reducing health disparities. Good quality education provides individuals with the knowledge and skills to foster better community while providing greater opportunity for higher income potential. Education access and quality is a critical component of the social determinants of health, with factors intrinsically linked to health outcomes.

According to Healthy People 2030, the following objectives are related to education access and quality and are measured at the national level. Most Healthy People 2030 objectives are core, or measurable, objectives that are related to targets outlined for the decade (2020-2030). Evidence-based interventions are supported through national, state, and local initiatives. Progress is measured using a variety of data sources (e.g., US Census, ACS estimates, state and county data) and is measured using the following indicators: Baseline only, target met or exceeded, improving, little or no detectable change, getting worse. The objectives outlined have corresponding updates at the national level as of June 2024.



**Baseline Only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.



**Target met or exceeded:** We've achieved the target we set at the beginning of the decade.



**Improving:** We're making progress toward meeting our target.



**Little or no detectable change:** We haven't made progress or lost ground.



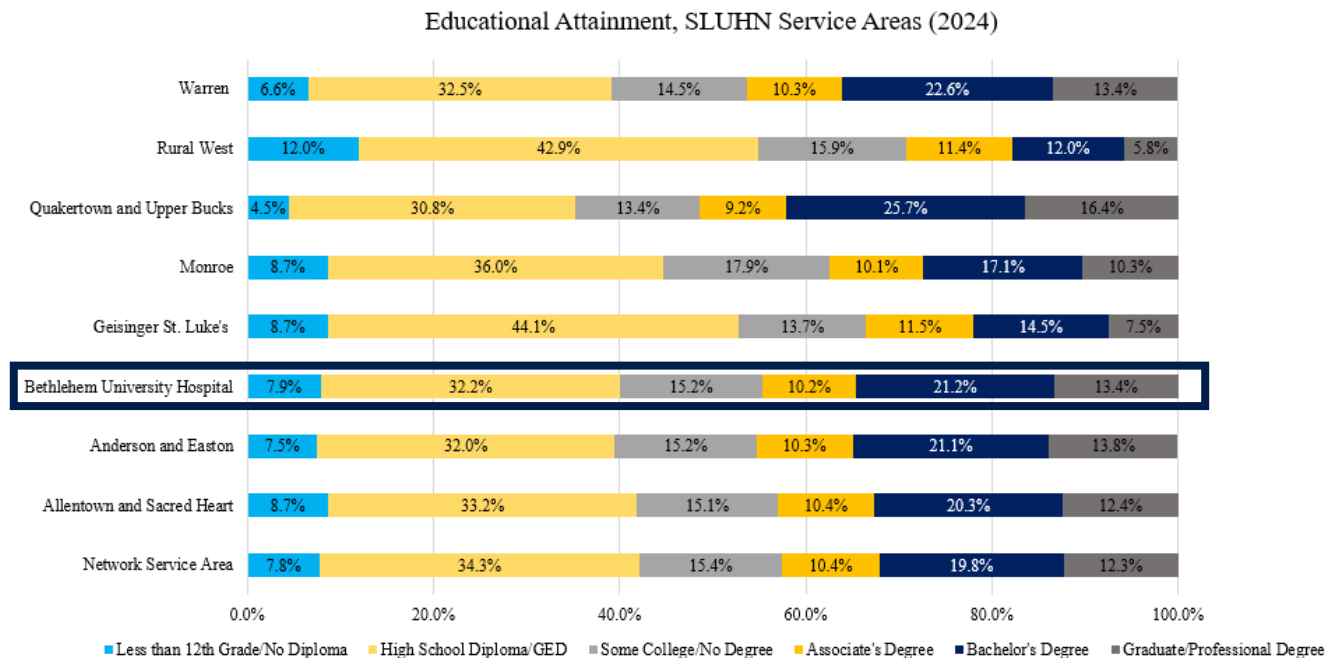
**Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Healthy People 2030 Objectives for Education Access and Quality	Baseline	Target	Most Recent Data	Progress
Increase the proportion of high school students who graduate in four years	84.1% (2015-16)	90.7%	86.6% (2021-22)	Improving
Increase the proportion of high school graduates in college the October after graduating	69.1% (2018)	73.7%	62% (2022)	Getting worse
Increase the proportion of students with disabilities who are usually in regular education programs	63.5% (2017-18)	73.3%	66.9% (2022-23)	Improving
Increase the proportion of 4th-graders with reading skills at or above the proficient level	36.6% (2017)	41.5%	33.3% (2022)	Getting worse
Increase the proportion of 4th-graders with math skills at or above the proficient level	40.2% (2017)	43.1%	36.3% (2022)	Getting worse
Reduce the proportion of adolescents and young adults (16-24 years old) who aren't in school or working	11.5% (2017)	11.2%	10.9% (2022)	Target met or exceeded
Increase the proportion of children whose family read to them at least 4 days per week	58.3% (2016-17)	63.2%	55.1% (2020-21)	Getting worse

## ..... Education .....

Educational attainment is linked to income and employment, laying the building blocks for the next generation to have improved socioeconomic status and correlated positive health outcomes. Healthy People 2030 set a target goal for the percentage of students who graduate high school within four years at 90.7%. In Pennsylvania, 87% of people have a high school diploma or equivalent. In New Jersey, 89% of people have a high school diploma or equivalent.

Of all survey respondents in the Bethlehem Campus and Star Community Health service area, 97.0% have a high school degree or higher, 0.9% have less than a high school degree, and 2.1% have some high school education. When looking at the respondents that reported a high school degree or higher, 19.8% of respondents that reported only a high school degree, 19.5% have some college, 12.4% have an associate's degree, 21.1% have a bachelor's degree, and 24.1% have a post college or graduate degree. Survey results show that respondents have higher rates of higher education than the total population (see table below for total population). Additionally, CHNA survey results have lower percentages of respondents with less than a high school diploma compared to the total population. 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. Healthy People 2030 states that children with less access to quality education are less likely to get safe, high-paying jobs and are more likely to develop 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 to aid in healthy lifestyles and well-being.



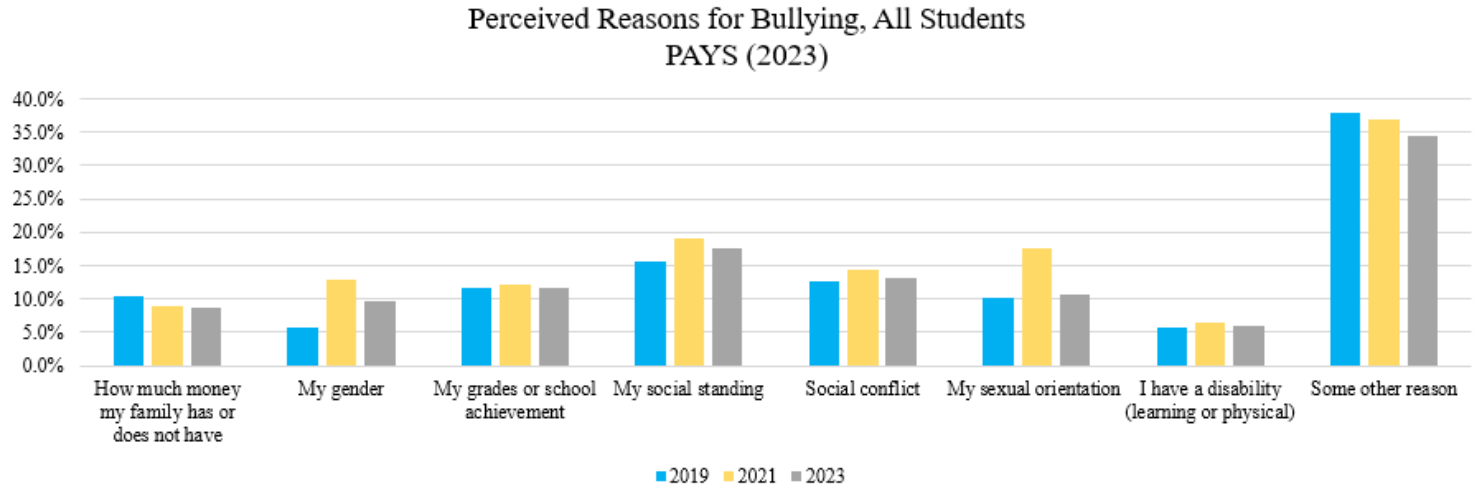
Source: Esri, 2024

The increasing cost of education has become a significant barrier to educational attainment, especially for vulnerable populations. Cost of education exacerbates educational and socioeconomic inequalities. The National Center for Education Statistics reported that average tuition and fees in 2022–23 were \$9,800 for public institutions, \$18,200 for private for-profit institutions, and \$40,700 for private nonprofit institutions.

## ..... School Climate and Safety .....

It is important for all children to feel safe at school in order to learn, socialize, and develop. Perceived lack of school safety and school violence has a negative impact on mental health outcomes and school performance. PAYS 2023 reported on the percentage of students at risk in Pennsylvania. The three overall highest risk scores for students of all grades in Pennsylvania were low commitment towards school (56.6% of students at risk),

parental attitudes favorable towards antisocial behavior (54.7% at risk), and low neighborhood attachment (44.6% at risk). In Lehigh County, 59% of students reported low commitment toward school, 57% reported parental attitudes favorable toward antisocial behavior, and 49% reported low neighborhood attachment. In Northampton County, 60% of students reported low commitment toward school, 61% reported parental attitudes favorable toward antisocial behavior, and 47% reported low neighborhood attachment. Additionally, in Lehigh County, 16.6% of students report having been threatened with violence on school property, 7.5% said they were attacked at school, and 1.4% brought a weapon to school. In Northampton County, 21.9% of students reported being threatened on school property, 8.4% said they were attacked at school, and 1.7% brought a weapon to school.



According to the CDC, those who experience bullying are at increased risk for mental health disorders, suicide, substance use disorder, violence, poor school performance, and other poor health outcomes. In Lehigh County, 21.6% of students report experiencing bullying in the past 12 months and 26.5% of students in Northampton County. Of the students in Lehigh and Northampton County who have been bullied, 10.3% and 7.4% respectively of students experienced bullying via text or social media, 59.3% and 67.8% experienced bullying through emotional abuse like insults or name calling, 21.9% and 20.7% through physical injury, or through threats (26.1% and 27.3%). In the past year, 15.1% of students in Lehigh County seriously considered suicide, 12.3% made a suicide plan, and 5.5% had attempted suicide. Of the students in the Northampton County, 18.1% seriously considered suicide, 14.9% made a suicide plan, and 6.8% had attempted suicide. The use of technology and social media has made bullying more pervasive in the lives of youth in recent years. Bullying continues to be a problem in schools, especially for LGBTQ+ students who often face harassment or discrimination due to their sexual orientation or identity. The National Center for Biotechnology Information found that while bullying victimization rates have improved in general, LGBTQ+ youth still experience bullying at higher rates than their peers.

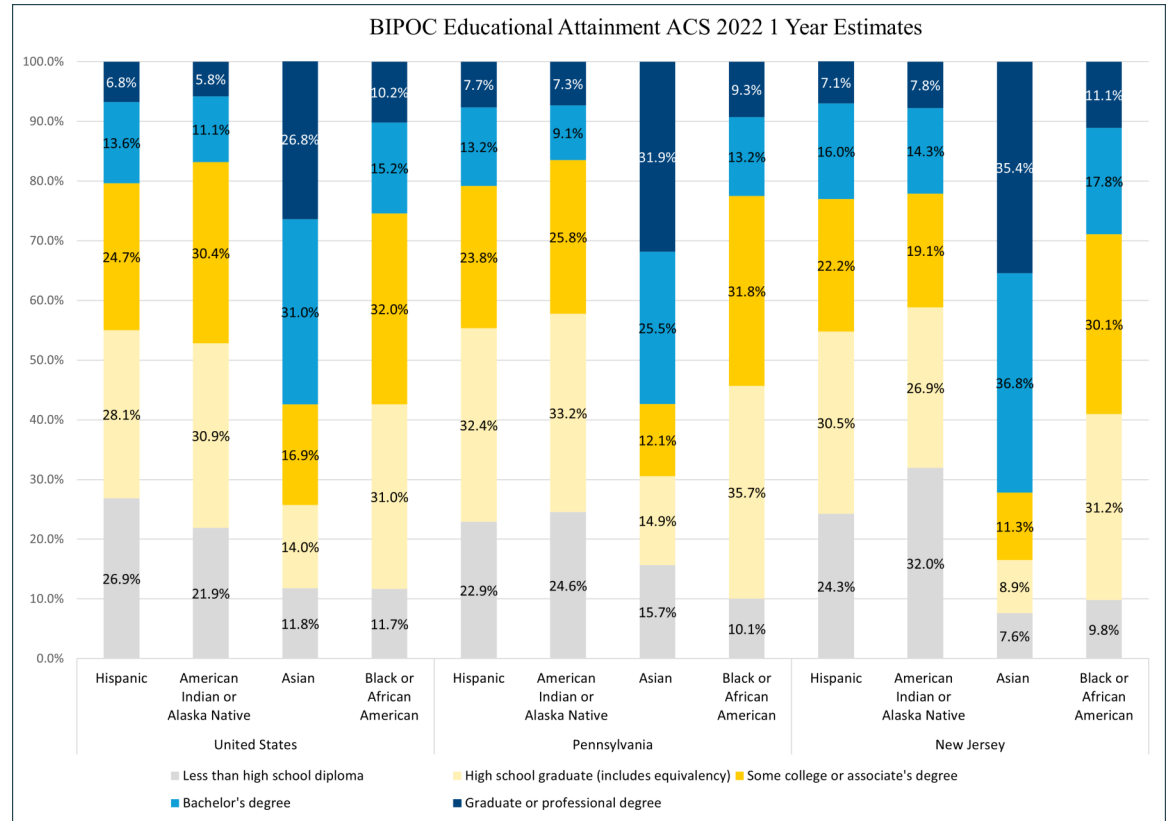


***“Students have had learning loss from the pandemic as far as having their educations interrupted. We have to work to close the gaps on literacy so those don't become permanent challenges to students. That exists not just in the early grades, but also in other grades. The pandemic harmed student attendance.”***

## ..... Vulnerable Populations .....

When looking at BIPOC communities, there are disparities in attaining higher education compared to White communities. According to the National Center for Education Statistics, Hispanic/Latino(a), Black, and American Indian/Alaska Native students have the lowest rates of undergraduate enrollment. According to the US Census 2022 American Community Survey, 79.7% of those who identify as Hispanic have less than a bachelor's degree, 83.2% of those who identify as American Indian or Alaska Native have less than a bachelor's degree, and 74.6% of those who identify as Black have less than a bachelor's degree. The percentage of those without a bachelor's degree is significantly higher for Hispanic/Latino(a), Black, and American Indian/Alaska Native students compared to Asian (42.6%) and White (61%) counterparts.

Foreign-born Population 2022 ACS 1 Year Estimates			
Educational Attainment	United States	Pennsylvania	New Jersey
Less than high school diploma	24.9%	18.0%	18.2%
High school graduate (includes equivalency)	22.1%	23.4%	23.2%
Some college or associate's degree	18.3%	17.4%	17.4%
Bachelor's degree	19.1%	20.2%	22.9%
Graduate or professional degree	15.6%	21.0%	18.4%



Of the foreign-born population in the United States, 65.3% have less than a bachelor's degree according to US Census 2022 American Community Survey. In Pennsylvania, 58.8% of the foreign-born population have less than a bachelor's degree.

A 2021 report by the National Center of Education Statistics found the US average of public school students who were English language learners (ELL) was 10.6%. Pennsylvania has a statewide average of 4.6% of public school students who are ELL. There was a higher percentage of ELL in school districts in more urbanized areas (i.e., cities) and a lower percentage for less urbanized, rural areas. Spanish was the highest reported home language of ELL, representing the home language of 76.4% of all ELL and 8.4% of all public school students. The following eight highest reported home languages by ELL public school students (in order) were Arabic, Chinese, Vietnamese, Portuguese, Russian, Haitian Creole, Hmong, and Urdu.

# Economic Stability

Economic stability is a cornerstone of individual and community health, influencing access to care, education, housing, transportation, and more. Financial insecurity can lead to chronic stress, poor mental health, and limited access to healthcare, which can lead to negative health outcomes. Healthy People 2030 outlines objectives for economic stability related to these issues, including reducing poverty, increasing employment opportunities, reducing food insecurity, and improving access to affordable housing. These objectives are designed to address economic stability as a social determinant of health, recognizing the economic factors are intrinsically linked to health outcomes.

According to Healthy People 2030, the following objectives are related to economic stability and are measured at the national level. Most Healthy People 2030 objectives are core, or measurable, objectives that are related to targets outlined for the decade (2020-2030). Evidence-based interventions are supported through national, state, and local initiatives. Progress is measured using a variety of data sources (e.g., US Census, ACS estimates, state and county data) and is measured using the following indicators: Baseline only, target met or exceeded, improving, little or no detectable change, getting worse. The objectives outlined have corresponding updates at the national level as of June 2024.



**Baseline Only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.



**Target met or exceeded:** We've achieved the target we set at the beginning of the decade.



**Improving:** We're making progress toward meeting our target.



**Little or no detectable change:** We haven't made progress or lost ground.



**Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Healthy People 2030 Objectives for Economic Stability	Baseline	Target	Most Recent Data	Progress
Increase employment in working-age people (16 to 64 years old)	70.6% (2018)	75%	71.3% (2022)	Improving
Increase the proportion of children (17 years and younger) living with at least one parent who works full time	77.9% (2017)	85.1%	79.4% (2022)	Improving
Reduce the proportion of people living in poverty	11.8% (2018)	8.0%	11.5% (2022)	Little or no detectable change
Reduce the proportion of families that spend more than 30 percent of income on housing (i.e., cost-burdened)	34.6% (2017)	25.5%	35.0% (2021)	Little or no detectable change
Reduce household food insecurity and hunger	11.1% (2018)	6.0%	12.8% (2022)	Getting worse
Eliminate very low food security in children under 18 years	0.59% (2018)	0.0%	1.02% (2022)	Getting worse
Increase trips to work made by mass transit	5.0% (2017)	5.3%	5.0%	Little or no detectable change

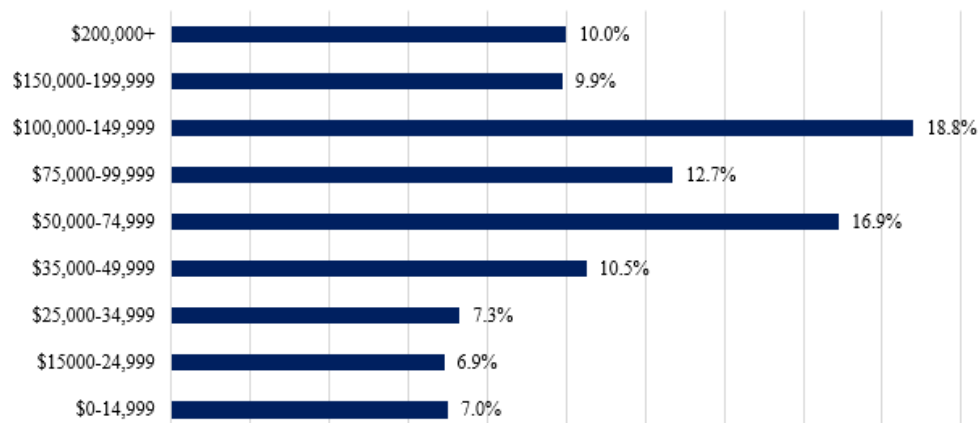
## ..... Household Income and Poverty .....

Household income and poverty are interconnected, with significant implications for both individual and community wellbeing. Household income is defined as the total gross income of all members of a household, including wages, salaries, benefits, and any other earnings within a year. This can be income from employment, investments (e.g., rental properties, stocks, businesses), pensions, and government assistance programs. Household income is a key measure utilized for eligibility for social services, tax brackets, as well as understanding economic disparities within populations.

2022 Estimates	Number in Poverty	Percent in Poverty
United States	40,951,625	12.6
New Jersey	879,100	9.7
Pennsylvania	1,483,039	11.8
Berks County	45,310	10.8
Bucks County	37,561	5.9
Carbon County	6,600	10.2
Lehigh County	41,650	11.3
Luzerne County	47,930	15.2
Monroe County	20,227	12.3
Montgomery County	55,916	6.6
Northampton County	32,077	10.6
Schuylkill County	16,576	12.2
Hunterdon County	5,227	4.1
Warren County	7,628	7

The 2024 Federal Poverty Level (FPL) guideline is measured at \$15,060 per year for one person and \$31,200 for a family of four. If one person is 200% of the Federal Poverty Level, they make \$30,120; if a family of four is 200% of the Federal Poverty Level, they make \$62,400. In Pennsylvania, 11.8% of people live at or below the FPL; 9.7% in New Jersey and 12.6% nationwide. In In Lehigh County, 11.3% of households are living in poverty. In Lehigh County, 11.3% of households are living in poverty and 10.6% in Northampton County. In the Bethlehem Campus and Star Community Health service area, the median household income is \$77,640 and the per capita income is \$41,440.

Household Income, SLUHN Network (2024 Estimates)



Source: Esri 2024 Estimates

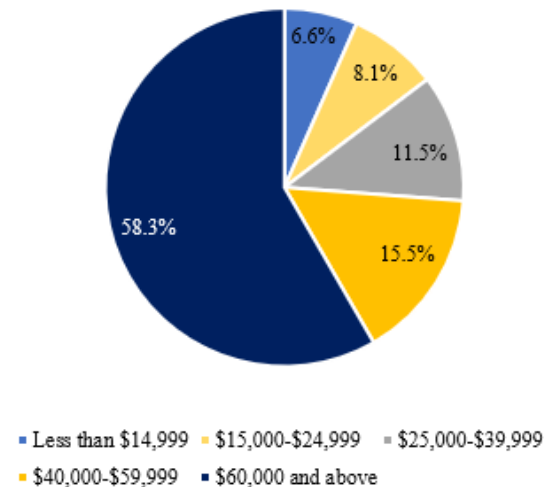


The majority of CHNA survey respondents in the Bethlehem Campus and Star Community Health service area make \$60,000 and above (58.3%), while 14.7% of respondents make \$24,999 or below, and 27.0% make between \$25,000 and \$59,999. When looking at Hispanic survey respondents in the Bethlehem Campus and Star Community Health service area, 27.1% make more than \$60,000 per year compared to 63.1% of non-Hispanic respondents. Additionally, 38.5% of Hispanic survey respondents make less than \$25,000 compared to 11.0% of non-Hispanic survey respondents.



***“Even looking at apartments, what used to cost \$1200 is much higher and people don’t even make that income a month. Now we throw huge increases in the cost of housing. Our homeless population is going up right now.”***

**CHNA Survey Respondent Household Income, Bethlehem Campus and Star Community Health Service Area**



## ..... Vulnerable Populations .....

Household income and poverty impacts vulnerable populations at higher rates than the larger population. The income inequality P90-P10 ratio, which compares the income at the 90th percentile to the income at the 10th percentile, gives an estimate (2024, 2029) of the income distribution within the Bethlehem Campus and Star Community Health service area. A higher P90-P10 rate indicates greater income inequality, while a lower rate indicates more income equality. According to Esri 2024 estimates, the P90-P10 ratio was 11.1, which is estimated to decrease to 9.4, indicating a trend toward more income equality within the Bethlehem Campus and Star Community Health service area. Additionally, households in the Low Income Tier are estimated at 19.8% in 2024, and projected to decrease to 15.9% in 2029. Households in the Middle Income Tier are projected to slightly increase from 65.3% in 2024 to 65.8% in 2029 (Esri estimates, 2029). Households in the Upper Income Tier are projected to have the highest increase, from 14.9% in 2024 to 18.3% in 2029. These changing demographics are, in part, due to a rising cost of living in the area, which makes it more difficult for lower income families to live in the area.

According to the 2022 Survey of Income and Program Participation (SIPP), there were 4.7 million older adults living in poverty in the United States in 2021. 8.3% of older adults struggle to make ends meet, and these rates are higher for adults 75 and older (42.0%) compared to adults 65-69 years old (33.8%) and 70-74 years old (24.2%). While the White population aged 65 years and older is more likely to not live in poverty compared to living in poverty, Black, Asian, and Hispanic populations are more likely to live in poverty than to not live in poverty. Older adult females are also more likely to live in poverty while older adult males are less likely to live in poverty. Many older adults rely on fixed incomes from Social Security, pensions, or retirement savings, which may be insufficient due to rising healthcare costs, living expenses (e.g., rent, food), as well as possible long-term care needs (e.g., assisted living, home healthcare needs).

Esri Estimates, Bethlehem Campus and Star Community Health Service Area

Income Inequality Measures	2024		2029	
	Number	Percent	Number	Percent
Household	275,272	100%	280,313	100%
<\$15,000	20,038	7.3%	16,420	5.9%
\$15,000-\$24,999	18,376	6.7%	14,541	5.2%
\$25,000-\$34,999	20,598	7.5%	17,519	6.2%
\$35,000-\$49,999	27,881	10.1%	24,998	8.9%
\$50,000-\$74,999	46,270	16.8%	44,396	15.8%
\$75,000-\$99,999	33,190	12.1%	32,491	11.6%
\$100,000-\$149,999	50,804	18.5%	56,401	20.1%
\$150,000-\$199,999	27,947	10.2%	36,411	13.0%
\$200,000+	30,168	11.0%	37,136	13.2%
Median Household Income	\$77,640		\$90,711	
Average Household Income	\$107,648		\$124,593	
Per Capita Income	\$41,440		\$48,461	
Households by Income	2024		2029	
	Number	Percent	Number	Percent
P90-P10 Ratio	11.1		9.4	
P90-P50 Ratio	2.6		2.3	
P50-P10 Ratio	4.2		4.0	
80-20 Share Ratio	11.3		11.2	
90-40 Share Ratio	2.8		2.9	
Households in Low Income Tier	54,518	19.8%	44,674	15.9%
Households in Middle Income	179,826	65.3%	184,474	65.8%
Households in Upper Income Tier	40,928	14.9%	51,165	18.3%

Children and adolescents living in poverty often lack access to essential resources including quality healthcare and education, safe and stable housing, and stable food supply which can lead to higher risk of chronic health conditions, malnutrition, and academic underachievement. Additionally, the stress of economic instability on children and adolescents can impact their mental health, resulting in increased rates of anxiety and depression. According to the 2023 PAYS data, 25.7% of students in Lehigh County and 28.1% of students in Northampton County said they were worried they would run out of food at home, 13.0% of students in Lehigh County and 14.3% of students in Northampton County reported skipping a meal because their family didn't have enough money for food, and 21.7% of all students across the Pennsylvania reported at least one of those issues. Nationwide, children are more likely to live in poverty than the population as a whole, and this trend is seen in both Pennsylvania and New Jersey, as well as all of the counties in the SLUHN service area. In Lehigh County, 11.3% of the population lives in poverty and 15.8% of children live in poverty. In Northampton County, 10.6% of the population lives in poverty and 14.3% of children live in poverty.

2022 Estimates	Percent of the Population in	Percent of Children in Poverty
United States	12.6	16.3
New Jersey	9.7	12.7
Pennsylvania	11.8	15.2
Berks County	10.8	14.3
Bucks County	5.9	7.0
Carbon County	10.2	15.5
Lehigh County	11.3	15.8
Luzerne County	15.2	21.4
Monroe County	12.3	16.1
Montgomery County	6.6	7.2
Northampton County	10.6	14.3
Schuylkill County	12.2	16.4
Hunterdon County	4.1	4.3
Warren County	7	9.6



# ..... Employment .....

Stable and meaningful employment not only provides financial resources but also enhances mental and physical wellbeing by providing a sense of purpose, security, and social connection. People who work and have a livable wage are more likely to have positive health outcomes, but many people in the United States have trouble finding and keeping a job that provides them with a stable and secure income. Healthy People 2030 employment objectives include targeted efforts to promote economic stability by increasing employment rates in working-age people, especially those in marginalized and disadvantaged groups. Objectives include promoting job quality and providing safe and healthy working conditions. Quality jobs contribute to better physical and mental health by reducing work-related stress, preventing occupational injuries, and promoting social equity. Additionally, by addressing employment as a social determinant of health, other related issues (e.g., housing instability, food insecurity, lack of access to healthcare) can be mitigated through economic stability.

According to 2024 estimates (Esri), there are a total of 365,809 individuals that are employed in the Bethlehem Campus and Star Community Health service area. The healthcare sector accounts for the largest percentage of workers in the service area (16.7%), followed by manufacturing (13.0%) and retail trade (11.2%), which are all higher than the nationwide percentage.

When analyzed by civilian labor force profiles, white collar work is defined as employment that typically involves performing professional, managerial, or administrative tasks in an office setting. Blue collar work is defined as employment that typically involves manual labor or skilled trades, often performed in industrial, construction, or service environments. Service work is defined as providing assistance, support, or expertise to individuals or organizations rather than producing physical goods. Service work typically produces intangible benefits or outcomes through personal interaction, consultation, or specialized skills. Examples include healthcare roles (e.g., doctors, nurses), education (e.g., teachers), financial services (e.g., bankers) and other professional services (e.g., lawyers). In the Bethlehem Campus and Star Community Health service area, 59.0% of employed individuals are designated white collar, 23.9% blue collar, and 17.1% designated as service employed.

**Workforce Distribution by Industry and Occupation, Bethlehem Campus and Star Community Health Service Area (Esri Estimates, 2024)**

Industry	Employed	Percent	US Percent
Total	365,809	100.0%	100.0%
Agriculture/Forestry/Fishing	1,563	0.4%	1.1%
Mining/Quarrying/Oil & Gas	140	0.0%	0.3%
Construction	19,973	5.5%	6.9%
Manufacturing	47,528	13.0%	10.0%
Wholesale Trade	9,417	2.6%	2.0%
Retail Trade	41,066	11.2%	10.5%
Transportation/Warehousing	26,008	7.1%	5.1%
Utilities	3,684	1.0%	0.9%
Information	5,814	1.6%	2.0%
Finance/Insurance	13,807	3.8%	4.8%
Real Estate/Rental/Leasing	5,154	1.4%	1.8%
Professional/Scientific/Tech	21,118	5.8%	8.3%
Management of Companies	213	0.1%	0.1%
Admin/Support/Waste Management	15,167	4.1%	4.3%
Educational Services	35,264	9.6%	9.1%
Health Care/Social Assistance	61,267	16.7%	14.1%
Arts/Entertainment/Recreation	8,997	2.5%	2.3%
Accommodation/Food Services	21,607	5.9%	6.8%
Other Services (Excluding Public)	17,090	4.7%	4.6%
Public Administration	10,932	3.0%	5.0%

Occupation	Employed	Percent	US Percent
Total	365,809	100.0%	100.0%
White Collar	215,807	59.0%	62.6%
Management	39,522	10.8%	12.1%
Business/Financial	19,841	5.4%	6.3%
Computer/Mathematical	12,342	3.4%	4.1%
Architecture/Engineering	9,404	2.6%	2.4%
Life/Physical/Social Sciences	4,832	1.3%	1.3%
Community/Social Service	6,127	1.7%	1.8%
Legal	2,592	0.7%	1.2%
Education/Training/Library	24,151	6.6%	6.2%
Arts/Design/Entertainment	6,145	1.7%	2.2%
Healthcare Practitioner	24,637	6.7%	6.4%
Sales and Sales Related	30,797	8.4%	8.5%
Office/Administrative Support	35,417	9.7%	10.1%
Blue Collar	87,532	23.9%	21.0%
Farming/Fishing/Forestry	629	0.2%	0.5%
Construction/Extraction	13,988	3.8%	4.9%
Installation/Maintenance/Repair	10,091	2.8%	2.9%
Production	24,492	6.7%	5.3%
Transportation/Material Moving	38,332	10.5%	7.5%
Services	62,470	17.1%	16.4%
Healthcare Support	16,562	4.5%	3.3%
Protective Service	6,075	1.7%	2.1%
Food Preparation/Serving	17,646	4.8%	5.3%
Building Maintenance	11,788	3.2%	3.2%
Personal Care/Service	10,399	2.8%	2.6%

## ..... Vulnerable Populations .....

Employment is also critical to access to care and services for the working population because individuals 18-64 years old are most often not eligible for government healthcare programs (i.e., CHIP, Medicare). While Medicaid is available for individuals 18-64 years old if they qualify, the majority of the population living above the Medicaid threshold has their health insurance through their employer or through state Healthcare Marketplaces (i.e., out-of-pocket expense, self pay). The Medicaid threshold for a single person in Pennsylvania (May, 2024) is \$965.10 per month for Regular Medicaid/Aged Blind/Disabled individuals and \$1,255 per month in New Jersey.

As of June 2024, the unemployment rate was 3.4% in Pennsylvania and 4.6% in New Jersey. In the Bethlehem Campus and Star Community Health service area, the unemployment rate was 3.5%. Unemployment varies by age, race, and ethnicity. In the Bethlehem Campus and Star Community Health service area, the highest unemployment rate is in the 16-24 year old population (6.4%) and the lowest is in the 25-54 year old population (2.7%). The highest unemployment rate by race is in Multiple Race (5.3%) individuals 16 years and older.

The Economic Dependency Ratio is a measure that compares the number of dependents in a population that are typically not in the labor force (e.g., children, older adults) to the number of working age who are economically productive. The higher the dependency ratio, the greater the burden on the working age population to support dependents. In the Bethlehem Campus and Star Community Health service area, the child dependency ratio is 33.8, meaning that for every 100 working age individuals, there are approximately 33.8 child dependents. The senior dependency ratio is 32.3, meaning there are approximately 32.3 seniors (i.e., adults aged 65 and older) for every 100 working age individuals.

According to the UCLA Williams Institute, 9% of the LGBTQ+ population is unemployed compared to 5% of the total population. Unemployment rates for LGBTQ+ populations are higher in both Pennsylvania (11%) and New Jersey (8%) compared to the total population.

Foreign born populations in the United States often face unique challenges in the labor market, which can contribute to higher unemployment rates compared to native-born populations. Factors include language barriers, credentialling (e.g., work visas), and limited social networks. According to the Bureau of Labor Statistics (2023), the unemployment rate in the United States for foreign born populations 16 years and older in the civilian labor force was 3.6%, which was also the unemployment rate for the nation.

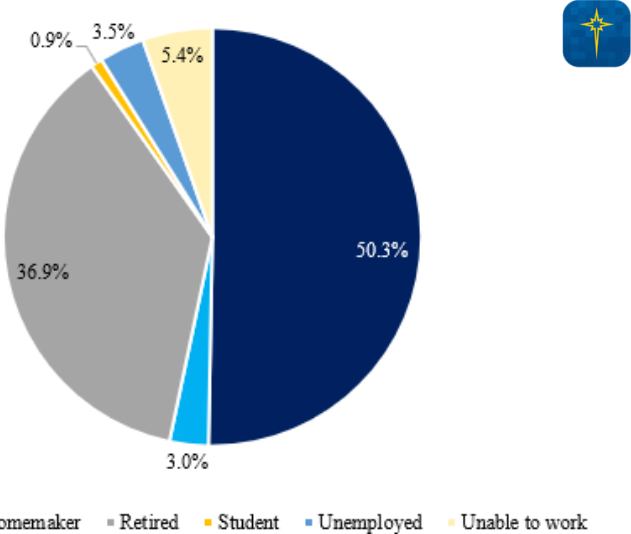
**Labor Force by Age and Race, Bethlehem Campus and Star Community Health Service Area**  
(Esri Estimates, 2024)

Age Group	Population	2024 Labor Force		Unemployment Rate	Labor Force Participation Rate	Employment-Population Ratio
		Employed	Unemployed			
16+	595,265	365,809	13,167	3.5%	63.7%	61.5%
16-24	91,024	53,659	3,655	6.4%	63.0%	59.0%
25-54	263,578	220,312	6,177	2.7%	85.9%	83.6%
55-64	94,756	64,403	2,026	3.0%	70.1%	68.0%
65+	145,907	27,435	1,309	4.6%	19.7%	18.8%
Male Age 16+	290,994	198,216	6,075	3.0%	70.2%	68.1%
Female Age 16+	304,271	167,637	7,111	4.1%	57.4%	55.1%
White Age 16+	413,436	248,770	7,691	3.0%	62.0%	60.2%
Black Age 16+	47,289	31,967	1,511	4.5%	70.8%	67.6%
American Indian Age 16+	2,369	1,494	52	3.4%	65.3%	63.1%
Asian Age 16+	21,740	14,057	525	3.6%	67.1%	64.7%
Pacific Islander Age 16+	269	180	0	0.0%	66.9%	66.9%
Other Race Age 16+	59,222	36,317	1,552	4.1%	63.9%	61.3%
Multiple Races Age 16+	50,940	32,901	1,834	5.3%	68.2%	64.6%
<b>Economic Dependency Ratio</b>						
Total						96.0
Child (<16)						33.8
Working-Age (16-64)						29.9
Senior (65+)						32.3

When broken down by age, younger foreign born populations were more likely to be unemployed compared to older foreign born populations. Race and ethnicity differences showed that Hispanic or Latino foreign born populations had the highest unemployment rate (4.1%) and Asian foreign born populations had the lowest unemployment rate (2.8%).

When asked about employment status, most respondents in the Bethlehem Campus and Star Community Health service area indicated they were employed (50.3%) or retired (36.9%), followed by unable to work (5.4%), and unemployed (3.5%) or homemaker (3.0%). When looking at the Hispanic population that responded to the survey, 55.5% were employed, 11.9% unemployed, 12.7% retired, and 9.7% homemaker/student while 50.0% non-Hispanic respondents were employed, 2.3% unemployed, 40.0% retired, and 3.3% homemaker/student.

CHNA Survey Respondents by Employment Status, Bethlehem Campus and Star Community Health Service Area



*“Although we have a lot of employment and jobs, matching the workforce with the jobs is one of the challenges we have.”*

## Food Security

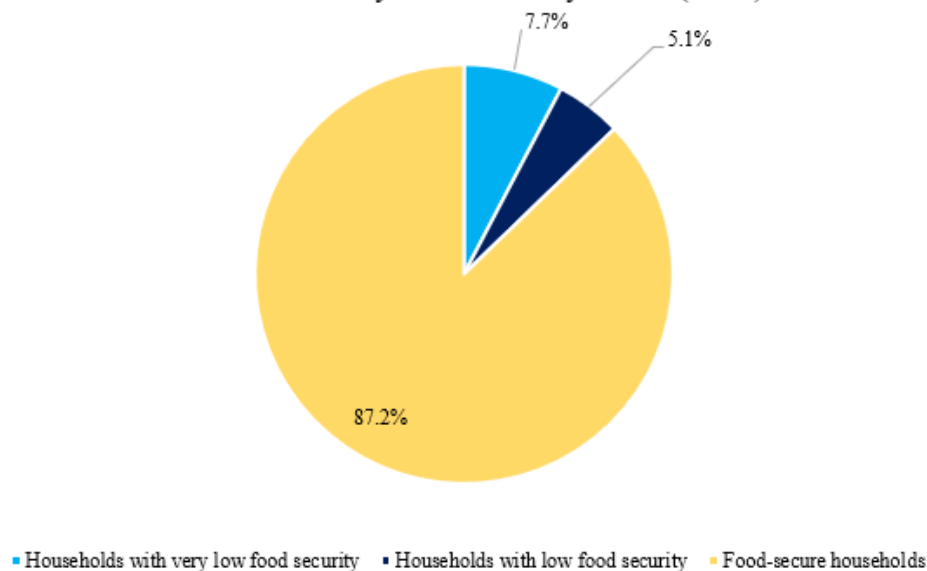
Food security, according to the United States Department of Agriculture (USDA), is the lack of consistent access to a variety of foods for a quality diet. A quality diet is one with access to foods that meet the individual’s taste and nutritional needs. Very low food security (VLFS) is when normal eating patterns are disrupted and households lack money or other resources to obtain food. The USDA’s annual report (2022) found that 12.8% of households nationwide are food insecure, 7.7% of which have low food security and 5.1% have VLFS. Among households with children, 17.3% are food insecure and 1.0% 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. In 2022, 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. The Supplemental Nutrition Assistance Program (SNAP) provides food benefits to low-income families to supplement their food expenses. In the United States (Fiscal Year 2023), an average of 42.2 million people each month were supported with SNAP benefits. Of the 67% of individuals that are both eligible for and participate in SNAP, the majority are children (40%), older adults (18%), adults with a disability (9%), adults without disabilities and children in the household (20%), and adults without disabilities and no children in the household (13%). In Fiscal Year 2021, the average monthly SNAP benefit per household in Pennsylvania was \$418.16.

The National School Lunch Program (NSLP) was established in 1946 and is a federally assisted meal program that supports nutritious low-cost or free lunches to children each school day. To qualify for the NSLP, families must have an income at or below 130% of the poverty level for free lunch and between 131%-185% for reduced lunch. In 2022, the NSLP reached an average of 42,169,000 million children nationwide each day, with a total cost of 113,059 million dollars. During the 2022-2023 school year, 56.6% of students in Pennsylvania were eligible for free or reduced lunch. As of August 2023, Pennsylvania provides free breakfast to all public school students (approximately 1.7 million).

Women, Infants and Children (WIC) is a federal program that supports the nutrition of low-income pregnant and postpartum women, infants, and children younger than 5 years who are at risk for poor nutrition. During Fiscal Year 2023, WIC served approximately 6.6 million qualified individuals each month, including an estimated 39% of all infants in the United States. Services include nutritious foods to supplement a healthy diet, education and information on healthy eating, including breastfeeding promotion and support, and referrals to healthcare and other social services. A total of 391,278 individuals qualified for WIC in Pennsylvania in 2022. Of the individuals that qualified, 40.9% in Pennsylvania participated in the program.

U.S. Households by Food Security Status (2022)



Source: USDA



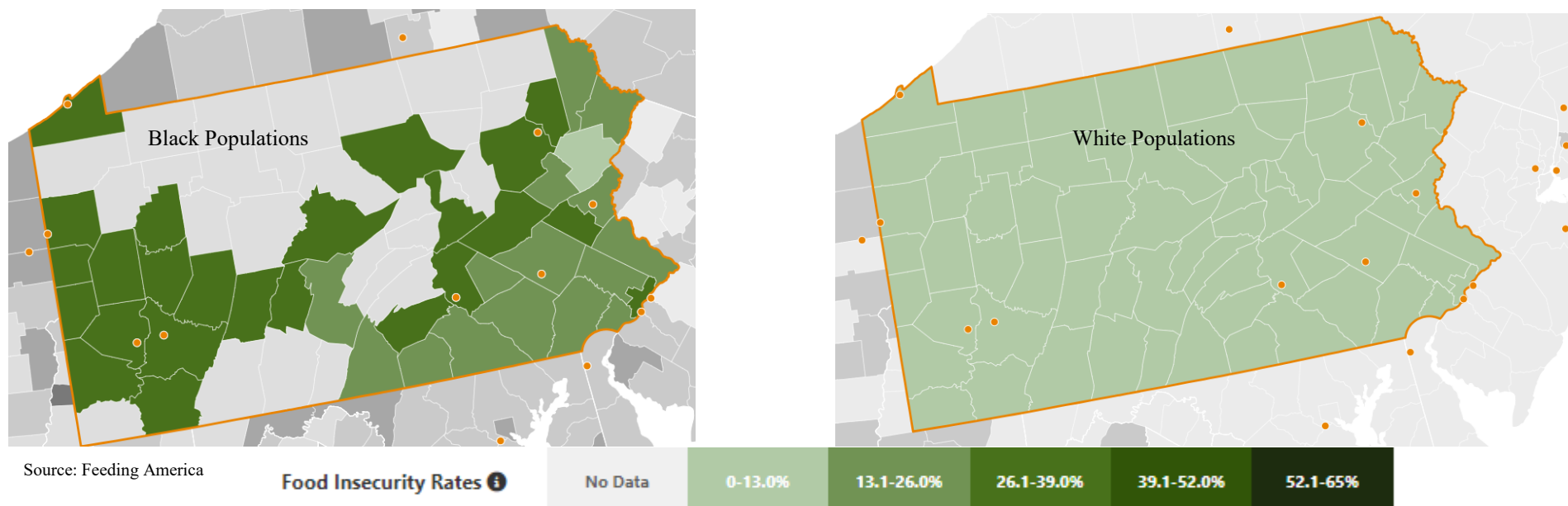
***“Pre-pandemic, we were typically seeing anywhere around 10 to 15 individuals and families coming to our pantry. After the pandemic, there is a line going around the corner and we are open for one hour five days a week.”***

## ..... Vulnerable Populations .....

According to Feeding America (2022), there are more than 1.5 million people in Pennsylvania that are food insecure (11.9%). Among the food insecure population, 49% are above the SNAP threshold, meaning they are ineligible for SNAP benefits. The ALICE population falls into this category, as they make too much to be eligible for services, but not enough to make ends meet. Children and adolescents are impacted by food insecurity at higher rates than any other demographic. Food insecurity for older adults is increasing as well, with 6.6% of the population in Pennsylvania aged 60 years and older food insecure.

In the SLUHN service area counties, Luzerne County is projected to have the highest food insecurity rate (14.1%), and Montgomery County has the lowest (8.6%). In New Jersey 6.8% in Hunterdon County are food insecure and 9.7% in Warren County. It is also important to note that food insecurity affects vulnerable populations in significant ways. When looking at food insecurity by race and ethnicity, 27% of people that identify as Black in Pennsylvania are food insecure compared to 9.0% of White individuals. Of people in Pennsylvania that identify as Hispanic or Latino, 25.0% are food insecure. In Lehigh County, 28.0% of the Black population and 26.0% of the Hispanic population are food insecure, compared to 8.0% of the White, non-Hispanic population. In Northampton County, 23.0% of the Black population and 22.0% of the Hispanic population are food insecure, compared to 8.0% of the White, non-Hispanic population.

Food Insecurity Rates by Race, Pennsylvania (2022)





Research studies have found that stress from inconsistent access to food can play an active role in fat accumulation and chronic disease. In non-senior adults, food insecurity is associated with decreased nutrient intakes, increased rates of mental health problems, hypertension, and poor sleep outcomes. 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. Food deserts also play a role in food insecurity and chronic disease. 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.

Additionally, the percentage of SNAP benefits spent at local farmer's markets was extremely low. Increasing accessibility and educating communities about SNAP use at farmer's markets will help farmers sustain business operations and food insecure families to purchase healthy fruits and vegetables.

The CHR&R reports on each county's food environment index, which assess distance to a grocery store, the amount of healthy food options, and cost barriers to healthy food. The measure is ranked 0 to 10, with 10 as the best. In the United States, the average food environment index is 7.7. Pennsylvania's overall food environment index is 8.5. The highest food environment index of the Pennsylvania service area counties is Montgomery County (9.2) and Luzerne is the lowest (7.9). The food environment index score is 8.4 in Lehigh County and 8.7 in Northampton County.

Feeding American Food Insecurity Projections					
County/State	2022	2021	2020	2019	2022 Child
Berks	12.1%	9.3%	10.2%	9.4%	16.0%
Bucks	8.8%	6.2%	7.3%	7.2%	9.3%
Carbon	13.1%	11.0%	12.0%	11.7%	19.6%
Lehigh	12.1%	9.4%	10.6%	10.0%	17.0%
Luzerne	14.1%	11.7%	12.9%	12.5%	21.5%
Monroe	11.4%	8.6%	10.4%	9.4%	17.8%
Montgomery	8.6%	6.0%	7.0%	6.9%	9.7%
Northampton	10.7%	7.8%	8.9%	8.6%	13.8%
Schuylkill	13.4%	11.0%	12.3%	12.0%	17.8%
PA	11.9%	9.4%	8.9%	10.6%	16.6%
Hunterdon	6.8%	4.6%	5.5%	5.5%	3.3%
Warren	9.7%	7.6%	8.9%	8.6%	10.1%
NJ	10.7%	8.8%	7.4%	8.6%	13.2%

County Health Rankings Food Environment Index			
County	% Limited Access to Healthy Foods	% Food Insecurity	Food Environment Index Score
Berks	3%	9%	8.6
Bucks	4%	6%	9.1
Carbon	2%	11%	8.3
Lehigh	4%	9%	8.4
Luzerne	5%	12%	7.9
Monroe	6%	9%	8.5
Montgomery	4%	6%	9.2
Northampton	5%	8%	8.7
Schuylkill	2%	11%	8.3
Hunterdon	3%	5%	9.6
Warren	8%	8%	8.5



## ..... Cost-Burdened Households .....

According to the department of Housing and Urban Development (HUD), a household is considered cost-burdened if 30% or more of their income goes toward their mortgage or rent. A household is severely cost-burdened if 50% or more of their income goes toward paying a mortgage or rent. Both cost-burdened and severely cost-burdened households face housing instability as well as significant financial strain, limiting their ability to afford other essentials such as food, healthcare, transportation, education, and other expenses. Vulnerable populations (e.g., children, older adults) who face housing instability and move frequently are more likely to face increased impacts to their mental health, physical health, and overall wellbeing.

Healthy People 2030 recognizes housing instability as a social determinant of health, including negative impacts on physical and mental health. Healthy People 2030 objective to “Reduce the Proportion of Families that Spend more than 30 Percent of Income on Housing” has a target of 25.5%, meaning that of the population nationwide, the goal is to reduce the amount of cost-burdened households to 25.5% by 2030. As of 2021, 35% of households nationwide were cost-burdened.

According to the 2024 estimates (Esri), there are a total of 269,313 households and 287,303 housing units, with a 6.6% vacancy rate in the Bethlehem Campus and Star Community Health service area. The majority of both housing and rental units have been occupied prior to 2018, with lower rates of renters occupying the unit for longer than twenty years (0.8%) compared to owner-occupied units (13.4%).

Of the owner-occupied housing units, 53.6% have a single mortgage, 8.1% have multiple mortgages on a single home/unit, and 2.0% have a home equity loan without a mortgage. There are a total of 115,324 rental-occupied housing units in the Bethlehem Campus and Star Community Health service area, with a median gross rent of \$1,268. It is important to note that since the COVID-19 pandemic, housing costs have drastically increased across the nation, and the lack of affordable housing and low housing stock leads to increase rental and housing costs, which in turn increases the cost-burdened population. The Housing Affordability Index (HAI) measures whether a typical family earns enough income to qualify for a mortgage loan on a median-priced home. The baseline index score of 100 means that a family within the median income has enough income to qualify for a mortgage on a median priced home, assuming a standard mortgage and typical interest rates. An index score above 100 indicates greater affordability, meaning that a typical family earns more than what would be necessary to purchase a median-priced home, and a score of less than 100 indicates that a typical family does not earn enough to afford a median-priced home. In the Bethlehem Campus and Star Community Health service area, the HAI is 82, indicating that a typical family has 82% of the income needed to qualify for a mortgage on a median-priced home.

### Occupied Housing Units, Bethlehem Campus and Star Community Health Service Area (Esri Estimates, 2024)

OCCUPIED HOUSING UNITS BY YEAR HOUSEHOLDER MOVED INTO UNIT		
Total	269,313	100.0%
Owner occupied		
Moved in 2021 or later	3,795	1.4%
Moved in 2018 to 2020	20,398	7.6%
Moved in 2010 to 2017	44,181	16.4%
Moved in 2000 to 2009	47,106	17.5%
Moved in 1990 to 1999	28,631	10.6%
Moved in 1989 or earlier	36,201	13.4%
Renter occupied		
Moved in 2021 or later	7,228	2.7%
Moved in 2018 to 2020	29,090	10.8%
Moved in 2010 to 2017	38,277	14.2%
Moved in 2000 to 2009	9,636	3.6%
Moved in 1990 to 1999	2,742	1.0%
Moved in 1989 or earlier	2,026	0.8%
Median Year Householder Moved Into Unit	2011	

Economic stability and livable wages are intrinsically connected to housing instability and cost-burdened households. The National Low Income Housing Coalition (NLIHC) released a report on 2024 housing costs and wage earnings. In the United States, Pennsylvania ranks 27<sup>th</sup> for states with the highest housing wages. In Pennsylvania, the fair market rent for a two-bedroom apartment is \$1,365, meaning that for a household to not be cost-burdened, they must earn \$54,164 annually. This translates into an hourly wage of \$26.26, however, Pennsylvania's state minimum wage is only \$7.25 an hour. Someone living on the state minimum wage would need to work 145 hours per week to afford rent each month. In the Lehigh Valley (Allentown, Bethlehem, Easton), the fair market rent for a two-bedroom apartment is \$1,426, meaning that for a household to not be cost-burdened, they must earn \$57,040 annually. This translates into an hourly wage of \$27.42, and someone making minimum wage would have to work 151 hours per week to afford rent and not be cost-burdened. In Lehigh County, the fair market rent for a two-bedroom apartment is \$1,426, meaning the household would need to earn \$27.42 an hour or \$57,040 annually to afford the apartment and not be cost-burdened. An individual making minimum wage in Lehigh County would have to work 1.4 full time jobs at \$20.20 (i.e., the estimated average hourly wage of renters in Lehigh County) in order to afford rent. In Northampton County, the fair market rent for a two-bedroom apartment is also \$1,426, meaning the household would need to earn \$27.42 an hour or \$57,040 annually to afford the apartment and not be cost-burdened. An individual making minimum wage in Northampton County would have to work 152 hours per week in order to afford rent. Out of the St. Luke's Pennsylvania service areas, Bucks County is the most expensive, with the fair market rent for a two-bedroom apartment at \$1,737, requiring the individual to make \$33.40 an hour. The least expensive county is Schuylkill, with the fair market rent for a two bedroom at \$858 a month, requiring \$16.50 an hour to not be cost-burdened. With 31% of people in Pennsylvania renting, paying employees livable wages and providing a market of affordable housing is important to address.

SLUHN Service Areas Cost-burdened Households for Renters (2022)							
Service Area	Total Households	Median Household Income	Households with Gross Rent 30-34.9% of Household Income (%)	Households with Gross Rent 35-39.9% of Household Income (%)	Households with Gross Rent 40-49.9% of Household Income (%)	Households with Gross Rent 50% + of Household Income (%)	Total% Cost-burdened
Network	380,954	\$75,905	8.8%	6.1%	9.2%	23.7%	47.8%
Allentown and Sacred Heart	160,488	\$70,441	9.5%	6.1%	9.3%	26.2%	51.1%
Anderson and Easton	141,725	\$79,564	9.4%	6.2%	11.1%	21.5%	48.2%
Bethlehem University Hospital	269,313	\$77,015	8.9%	6.3%	9.4%	24.6%	49.2%
Geisinger St. Luke's	42,908	\$63,891	9.1%	4.3%	6.3%	17.4%	37.0%
Monroe	67,410	\$76,766	8.4%	5.5%	9.7%	27.1%	50.7%
Quakertown and Upper Bucks	83,505	\$104,045	7.4%	6.0%	7.7%	19.1%	40.1%
Rural West	59,364	\$60,125	6.9%	4.7%	7.5%	23.4%	42.5%
Warren	64,409	\$86,196	8.2%	6.3%	8.6%	22.3%	45.4%



***“The popularity of Bethlehem as a community has led to a lot of people wanting to live here. That has increased the rate for rentals, rent, and housing prices. It is priced out for a good number of folks of modest income and low income.”***

SLUHN Service Areas Cost-burdened Households (HH) for Homeowners (2022)

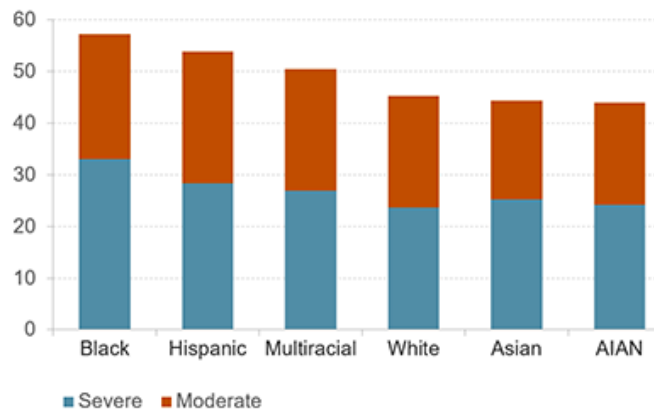
Service Area	2022 Total HH	2022 Median HH Income	HH with Mortgage: Monthly Owner Costs 30-34.9% of HH Income (%)	HH with No Mortgage: Monthly Owner Costs 30-34.9% of HH Income (%)	HH with Mortgage: Monthly Owner Costs 35-39.9% of HH Income (%)	HH with No Mortgage: Monthly Owner Costs 35-39.9% of HH Income (%)	HHs with Mortgage: Monthly Owner Costs 40-49.9% of HH Income (%)	HH with No Mortgage: Monthly Owner Costs 40-49.9% of HH Income (%)	HH with Mortgage: Monthly Owner Costs 50+% of HH Income (%)	HH with No Mortgage: Monthly Owner Costs 50+% of HH Income (%)	Total % Cost-burdened
Network	380,954	\$75,905	4.0%	1.4%	3.0%	1.1%	3.2%	1.2%	5.8%	2.9%	22.7%
Allentown and Sacred Heart	160,488	\$70,441	3.8%	1.4%	3.2%	0.9%	3.2%	1.4%	5.5%	2.5%	21.9%
Anderson and Easton	141,725	\$79,564	4.1%	1.0%	2.5%	1.2%	3.3%	1.2%	5.4%	3.0%	21.7%
Bethlehem University Hospital	269,313	\$77,015	4.0%	1.2%	3.0%	1.0%	3.2%	1.2%	5.7%	2.7%	22.1%
Geisinger St. Luke's	42,908	\$63,891	2.9%	1.9%	2.4%	1.1%	2.1%	1.0%	4.0%	2.9%	18.2%
Monroe	67,410	\$76,766	3.8%	0.9%	2.9%	1.1%	4.2%	1.3%	7.3%	3.8%	25.3%
Quakertown and Upper Bucks	83,505	\$104,045	4.5%	0.9%	3.1%	0.8%	2.7%	1.0%	5.1%	1.9%	19.9%
Rural West	59,364	\$60,125	3.9%	2.1%	2.3%	1.7%	2.7%	1.4%	6.0%	4.0%	24.1%
Warren	64,409	\$86,196	4.2%	1.3%	3.0%	1.0%	3.3%	0.8%	5.9%	2.8%	22.1%

## ..... Vulnerable Populations .....

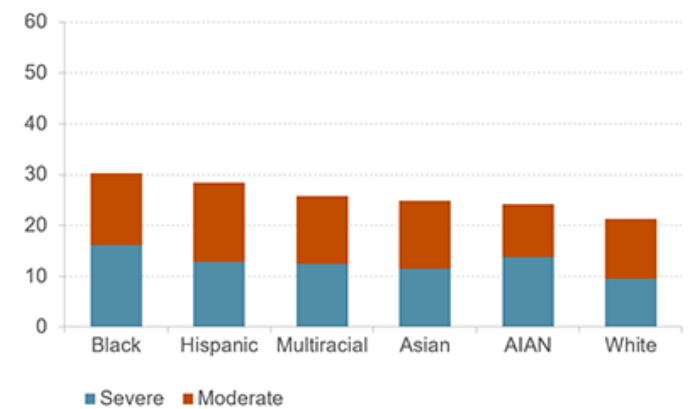
According to the Joint Center for Housing Studies at Harvard University, 42 million households were cost burdened in 2022, an increase of 1.5 million households from 2021 and a 4.9 million increase since 2019, with almost 80% of the increase since 2019 comprised of renters that were severely cost-burdened. Black and Hispanic populations are almost twice as likely to be cost-burdened compared to White households, with more than half of Black and Hispanic renters cost-burdened.

Cost-burdened housing is a large problem in the St. Luke's service area as wages and housing costs are not always aligned. This can be true for older adults with fixed incomes and retirement or pensions that no longer cover increasing rent and/or cost of living expenses (e.g., food, healthcare). According to America's Health Rankings 2024 Senior Report, of households with at least one person aged 65 years and older, 31.5% in Pennsylvania and 40.2% in New Jersey is cost-burdened, compared to 33.1% nationwide. Children and young adults aged 25 years and younger are the most likely to live in a cost-burdened household (50%). These rates remained relatively steady prior to the COVID-19 pandemic, but recent data and projections show drastic increases in cost-burdened households across the nation and within the SLUHN service areas.

Share of Renters with Cost Burdens (Percent)



Share of Homeowners with Cost Burdens (Percent)



Asset Limited, Income Constrained, Employed (ALICE) are individuals and households that earn above the Federal Poverty Level, but less than the basic cost of living. ALICE households do not qualify for federal assistance and they often struggle to afford basic necessities such as healthcare, housing, food, childcare, and transportation. The ALICE Household Survival Budget from the United Way ([www.unitedforalice.org](http://www.unitedforalice.org)) represents the minimum income necessary for a household to afford the basic necessities without any extras or savings. The budget includes essential costs such as housing, childcare, food, transportation, healthcare, and technology (e.g., cellular phone). In 2022, a single adult would need to spend no more than \$543 dollars per month on rent or a mortgage in Pennsylvania and \$982 dollars per month in New Jersey. Rent in the SLUHN service area is currently (2024) more than double those rates. With a lack of affordable housing, more households will become cost-burdened and face economic and housing instability.

ALICE Household Survival Budget, Pennsylvania (2022)								
Monthly Costs and Credits	Single Adult	One Adult, One Child	One Adult, One Child in Child Care	Two Adults	Two Adults, Two Children	Two Adults, Two Children in Child Care	Single Adult 65+ years old	Two Adults 65+ years old
Housing (Rent)	\$543	\$515	\$515	\$515	\$650	\$650	\$543	\$515
Housing (Utilities)	\$163	\$258	\$258	\$258	\$310	\$310	\$163	\$258
Child Care	\$0	\$279	\$745	\$0	\$559	\$1,557	\$0	\$0
Food	\$471	\$198	\$716	\$863	\$1,451	\$1,282	\$434	\$796
Transportation	\$387	\$521	\$517	\$624	\$1,028	\$1,022	\$325	\$500
Health Care	\$191	\$429	\$429	\$429	\$761	\$761	\$545	\$1,090
Technology	\$86	\$86	\$86	\$116	\$116	\$116	\$86	\$116
Miscellaneous	\$184	\$289	\$327	\$281	\$488	\$570	\$210	\$328
Tax Payments	\$318	\$679	\$774	\$430	\$934	\$1,140	\$382	\$676
Tax Credits	\$0	(\$216)	(\$217)	\$0	(\$430)	(\$433)	\$0	\$0
Monthly Total	\$2,343	\$3,638	\$4,150	\$3,516	\$5,867	\$6,975	\$2,688	\$4,279
ANNUAL TOTAL	\$28,116	\$43,656	\$49,800	\$42,192	\$70,404	\$83,700	\$32,256	\$51,348
Hourly Wage	\$14.06	\$21.83	\$24.90	\$21.10	\$35.20	\$41.85	\$16.13	\$25.67



*“When I first started, Southside was seen as the area that had the greatest need. Populations have changed over time. There are pockets of need are spreading in other areas in the city. Some pockets in the Northside area of the city and Westside.”*

# Health Care Access and Quality

Health care access and quality is a key pillar to maintaining and improving individual and community health. Accessible and equitable healthcare ensures populations receive consistent and appropriate medical care leading to early detection and management of health conditions. Healthy People 2030 outlines objectives for education access and quality related to these issues, including high quality healthcare services, preventative health measures and cost of healthcare. These objectives are designed to address health care access and quality as a social determinant of health, recognizing the economic factors are intrinsically linked to health outcomes.

According to Healthy People 2030, the following objectives are related to health care access and quality and are measured at the national level. Most Healthy People 2030 objectives are core, or measurable, objectives that are related to targets outlined for the decade (2020-2030). Evidence-based interventions are supported through national, state, and local initiatives. Progress is measured using a variety of data sources (e.g., US Census, ACS estimates, state and county data) and is measured using the following indicators: Baseline only, target met or exceeded, improving, little or no detectable change, getting worse. The objectives outlined have corresponding updates at the national level as of June 2024.



**Baseline Only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.



**Target met or exceeded:** We've achieved the target we set at the beginning of the decade.



**Improving:** We're making progress toward meeting our target.



**Little or no detectable change:** We haven't made progress or lost ground.



**Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Healthy People 2030 Objectives for Healthcare Access and Quality	Baseline	Target	Most Recent Data	Progress
Increase the proportion of adolescents who had a preventative health care visit in the past year (12-17 years old)	78.7% (2016-17)	82.6%	69.6% (2020-21)	Getting worse
Increase the proportion of adults who get screened for colorectal cancer (aged 45-74 years old)	58.7% (2021)	68.3%	—	Baseline only
Increase the proportion of people with a substance use disorder who got treatment in the past year	11.1% (2018)	14.0%	12.2% (2019)	Little or no detectable change
Increase the use of the oral health care system	43.3% (2016)	45.0%	46.2% (2018)	Target met or exceeded
Reduce the proportion of people who can't get medical care when they need it	8.5% (2019)	5.9%	7.0% (2021)	Improving
Increase the proportion of people with health insurance	88.0% (2019)	92.4%	89.8% (2022)	Improving
Increase the proportion of females who get screened for breast cancer (50-74 years old)	76.2% (2019)	80.3%	75.6% (2021)	Little or no detectable change

## ..... Access to Care .....

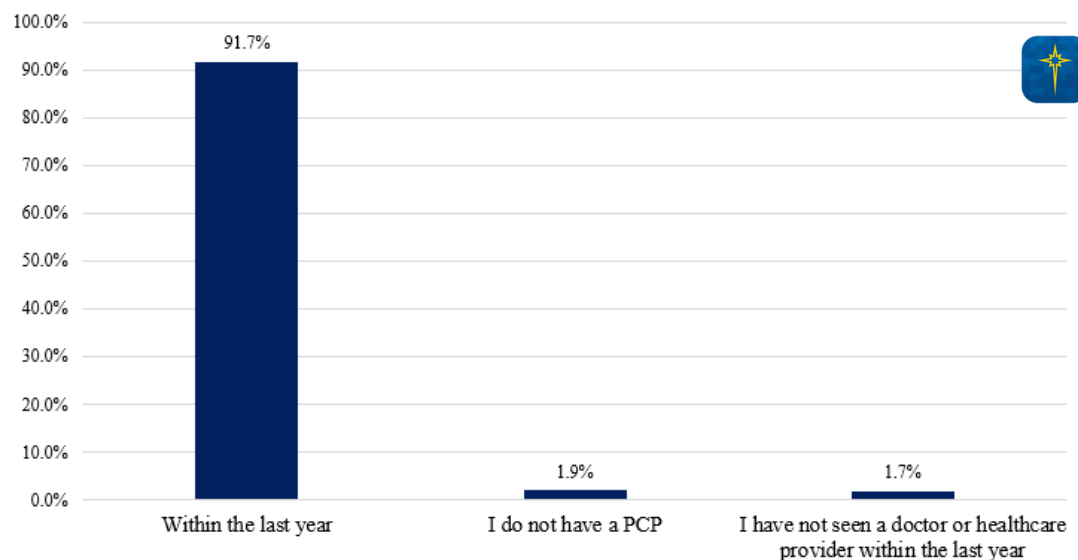
Access to healthcare is fundamental in ensuring equitable and healthy communities. Healthcare encompasses not only the availability of medical services, but also the affordability, quality, and timeliness of care. Without adequate access, individuals are more likely to experience deteriorating health conditions, which may lead to increased morbidity and mortality rates. Equitable access to healthcare services helps to ensure that individuals have the opportunity to receive preventative care, timely diagnosis, and appropriate treatments. Addressing the social determinants of health (SDOH) and promoting education and prevention can help to reduce long-term healthcare costs and promote the well being and productivity of communities.

### ..... 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. The top performing counties in the United States (90<sup>th</sup> percentile) have a primary care indicator of 1,030:1, which denotes the ratio of individuals to PCPs. Pennsylvania has an overall ratio of 1260:1, but primary care accessibility in Pennsylvania varies widely based on location, with a range of 2,970:1 (Luzerne County) to 770:1 (Montgomery County) in SLUHN service area counties. In Lehigh County, the ratio is 1,040:1 PCP and in Northampton County the ratio is 1,240:1.

To assess the frequency of visits, the CHNA survey asked respondents when they last visited their PCP. The majority of respondents in the Bethlehem Campus and Star Community Health service area visited their PCP within the last year (91.7%), while 1.7% of respondents had not seen a healthcare provider in the last year, and 1.9% do not have a PCP.

Last Primary Care Physician Visit, Bethlehem Campus and Star Community Health Service Area

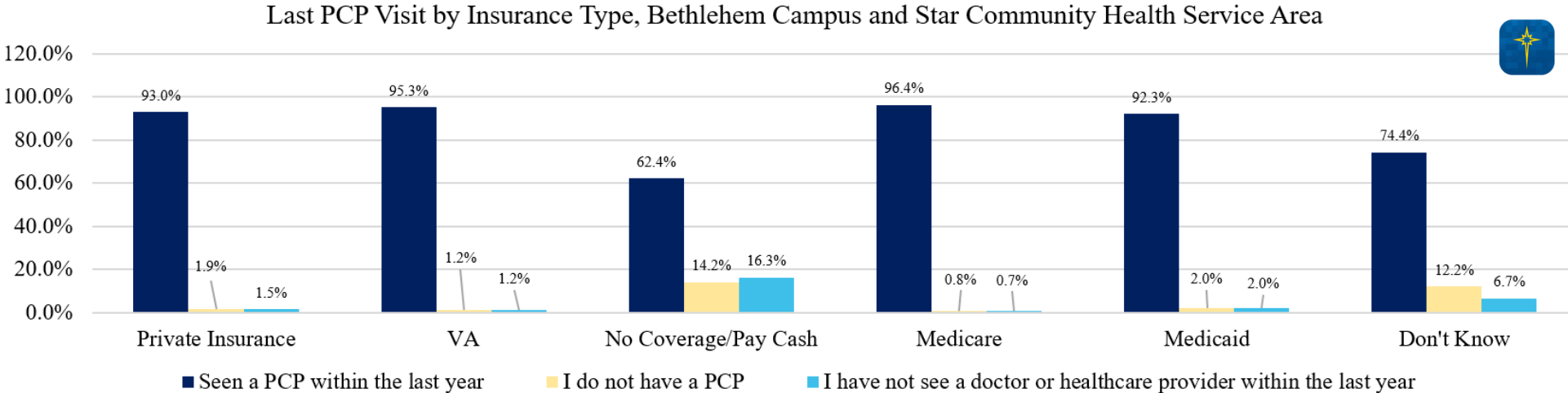


***“We do have great healthcare in Bethlehem. The access to healthcare might be more of a challenge, but that may be more about healthcare systems than it is about our hospitals.”***

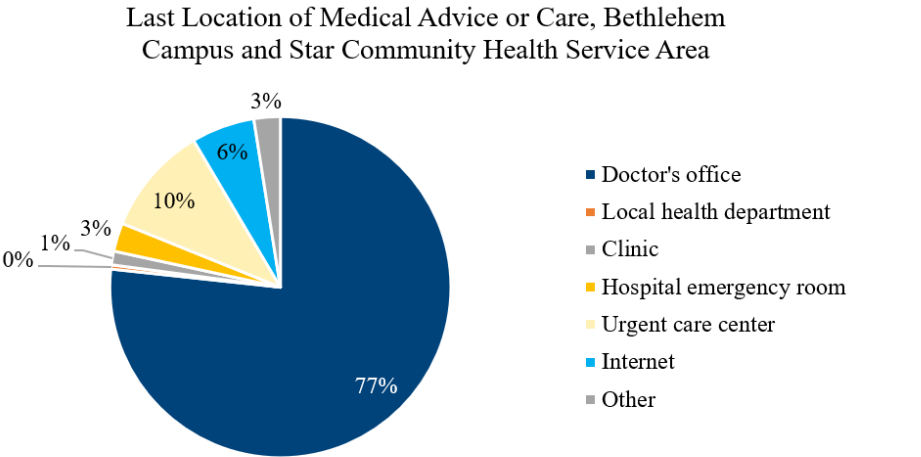




It is important to look at an individual’s last visit to a PCP by their type of insurance. Lack of insurance or high copays may hinder individuals from seeking medical attention, which could result in worsened health conditions. Individuals with no insurance coverage or that paid cash were less likely to have a PCP compared to those with any type of insurance coverage. The CHNA survey results show that only 62.4% of respondents in the Bethlehem Campus and Star Community Health service area who do not have insurance coverage/pay cash saw a PCP in the last year, compared to 93.0% of respondents with private insurance. Additionally, individuals who do not have insurance/pay cash were the most likely to report that they had not seen a healthcare provider in the last year (16.3%). Respondents who did not know the status of their healthcare coverage (12.2%) or had no coverage/pay cash (14.2%) were the most likely to not have a PCP and more likely to have not seen a doctor in the last year compared to individuals with Medicare, Medicaid, and private insurance. These findings reinforce the importance of health insurance coverage to support routine preventative care through a medical home as well as the need for Federally Qualified Health Centers (FQHC) that offer services on a sliding scale, making medical care affordable to all patients.



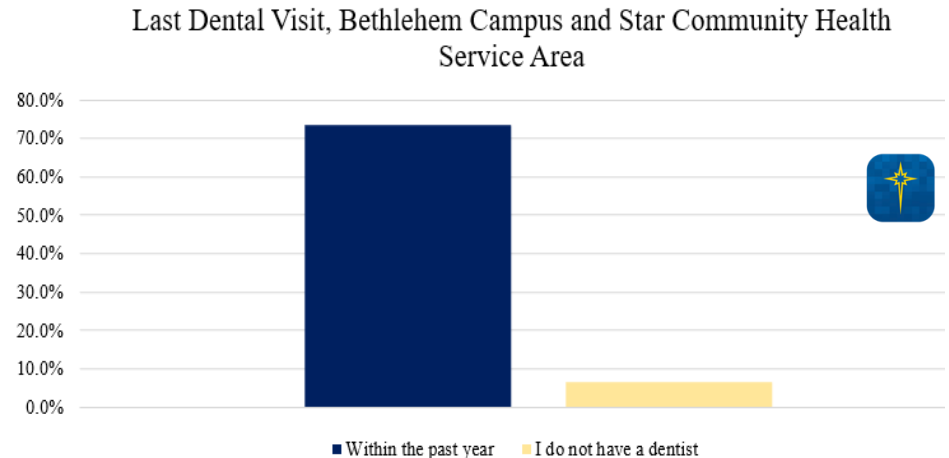
The CHNA survey asks respondents where they go most often when they are sick or in need of medical advice to get an understanding of their use of service providers. The majority of respondents in the Bethlehem Campus and Star Community Health service area go to a doctor’s office (76.7%), followed by an urgent care center (10.4%), using the Internet (6.0%), and other (2.5%). While most respondents use a doctor’s office, access to PCPs with diverse backgrounds, and that many types of insurances will allow more individuals to seek help at a doctor’s office rather than on the Internet or an emergency room.



## ..... Dentists .....

The Mayo Clinic refers to dental health as “a window to your overall health.” Oral pain can be debilitating, and oral health can affect one’s 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, causing respiratory, digestive, and cardiovascular diseases. Counties listed as top performers in the United States have an overall dental health indicator of 1,180:1, which denotes the ratio individuals in the population to dentists. New Jersey has an overall ratio of 1,160:1 with Warren county at 1,400:1 and Hunterdon county at 1,190:1. In comparison, Pennsylvania has fewer overall dentists at a ratio of 1,400:1 and a much larger range of 2,700:1 to 930:1 in SLUHN service area counties. In Lehigh County, the ratio of dentists is 1,140:1 and the ratio in Northampton County is 1,690:1.

In the 2025 CHNA survey, we assessed the last time respondents visited the dentist and the type of dental insurance that respondents use to gauge the limits of dentist availability and insurance coverage. In the Bethlehem Campus and Star Community Health service area, 73.4% of respondents visited a dentist within the past year and 6.6% do not have a dentist. Additionally, 64.2% of respondents use private insurance for dental care, followed by no insurance (22.1%), Medicaid (7.5%), and Veterans Health Administration (VHA) (0.6%).



## ..... Mental Health Providers.....

Mental health has been identified as a significant priority for the communities in the St. Luke’s service area and the COVID-19 pandemic has greatly impacted access to mental health. Access to mental health providers who take multiple kinds of insurance and have availability are needed in our service areas. The ratio of population to mental health providers for the counties listed as top performers in the United States is 270:1. In Pennsylvania the ratio is 450:1. In Lehigh County the ratio is 420:1 and the ratio in Northampton County is 360:1.

Of the CHNA respondents in the Bethlehem Campus and Star Community Health service area, 16.3% reported having been diagnosed with a mental health concern in the past five years and 17.2% responded that they had seen a mental health provider in the last year. More information on mental health can be found in the Health Behaviors section of this document.



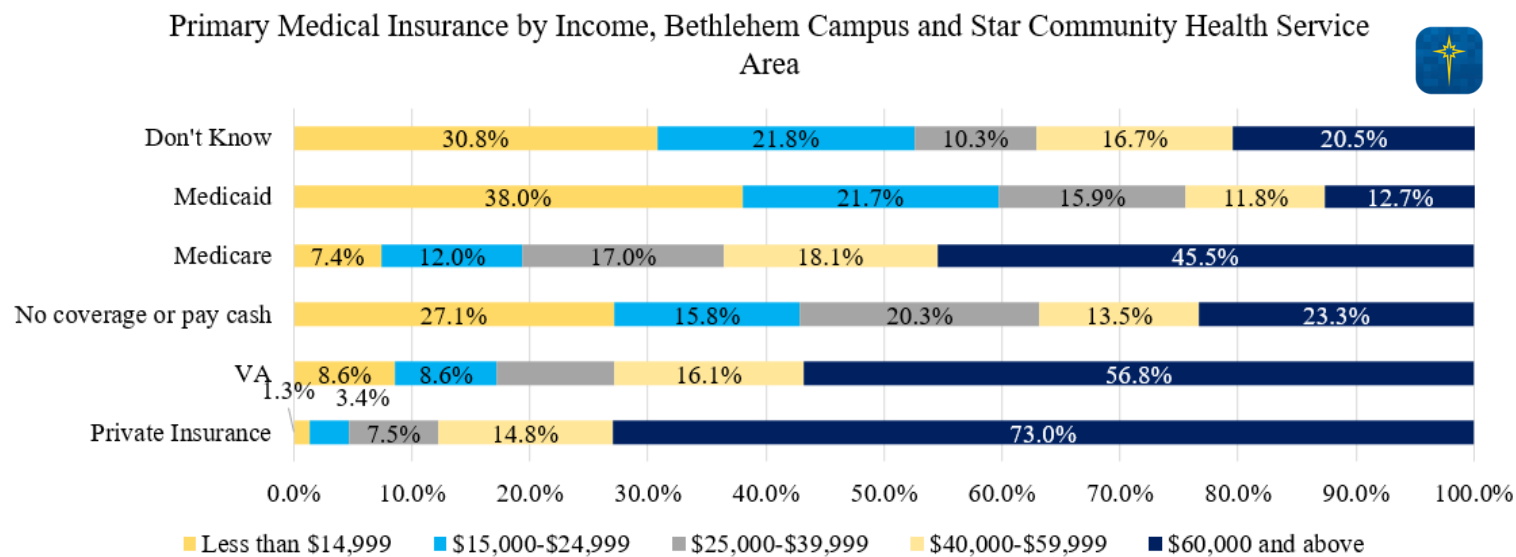
***“There were significant mental health concerns prior to the pandemic but the pandemic has intensified them.”***

## ..... Health Insurance.....

Uninsured rates represent a major barrier in access to care. Often, uninsured patients do not receive preventative care and screenings and get very ill before seeking care, leading to higher medical costs. An issue that is prevalent in many areas is the lack of provider ability to take a range of insurances. Federally Qualified Health Centers (FQHC) and Federally Qualified Health Center– Look Alikes (e.g., Star Community Health) are a crucial component for treating people without insurance or insurance that has minimal coverage. The Health Resources and Services Administration (HRSA) defines a community-based health care provider as one who offers primary care services to underserved areas. FQHCs must provide services on a sliding fee scale based on the patient’s ability to pay. Community Health Workers (CHW) are a crucial next step in bridging the health care 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.” 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.

Pennsylvania has an uninsured rate of 5.7%, outperforming the United States (8.8%). Uninsured rates in the Bethlehem Campus and Star Community Health service area stand at 5% overall. There are almost no individuals 65 years and older that are uninsured (statistic reports at 0.1%), 5.0% of ages 18 to 64 are uninsured, and 0.7% of children under 18 years old are uninsured. According to CHNA survey results, 5.0% of Bethlehem Campus and Star Community Health service area respondents either have no coverage and pay cash or do not know if they have insurance. Please see the Vulnerable Populations section at the beginning of this document and the subsections throughout that explore health insurance related to other social determinants of health (SDOH).

Of the survey respondents in the Bethlehem Campus and Star Community Health service area, those with a household income of less than \$14,999 comprise the largest percent of the respondent population that use Medicaid (38.0%), had no coverage or paid cash (27.1%), or didn’t know their primary insurance (30.8%). Conversely, those with a household income of \$60,000 and above comprised the largest percentage of the population that use private insurance (73.0%), Veterans Administration (56.8%), and Medicare (45.5%).

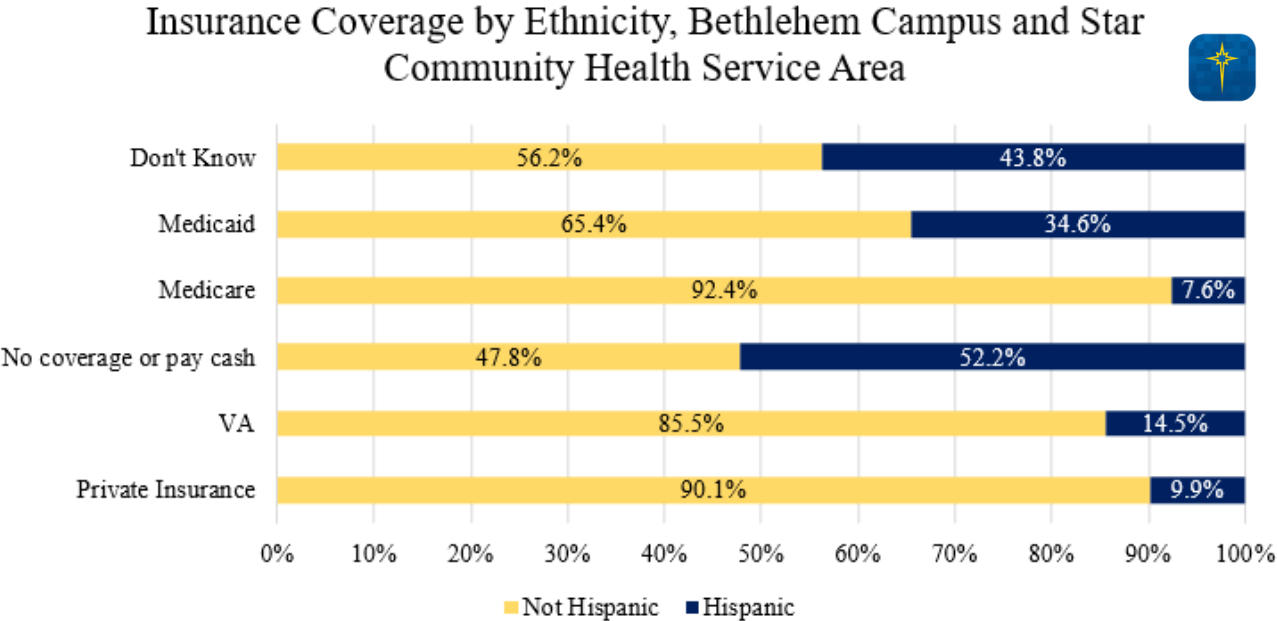


While respondents with a household income of \$60,000 and above comprised 23.3% of the population that responded that they pay cash, the number of respondents was small and may not reflect the no coverage/pay cash population in the Bethlehem Campus and Star Community Health service area and is not consistent with the larger Network outcomes, which shows that 55.6% of the survey respondents across the Network that have no coverage or pay cash have an income less than \$40,000. These findings reinforce the need for FQHCs in St. Luke’s service areas along with doctors who accept Medicaid and uninsured patients.

..... **Vulnerable Populations** .....

Access to primary care providers is pivotal for vulnerable populations. The impact of the social determinants of health (SDOH) on healthcare for vulnerable populations often results in greater health disparities and higher healthcare costs. The Centers for Disease Control (2021) found that mistrust of the health care system emerged as a primary barrier for BIPOC community members seeking care at healthcare systems. Of the survey respondents in the Bethlehem Campus and Star Community Health service area respondents who did not know what kind of insurance they had, 43.8% were Hispanic, 52.2% that had no coverage/pay cash were Hispanic, and 34.6% of respondents that had Medicaid were Hispanic. These rates are significant given that respondents that identified as Hispanic only accounted for 12.6% of the surveyed population, meaning that Hispanic populations disproportionately account for high rates of Medicaid, no coverage/pay cash, or don’t know responses. This may indicate that Hispanic populations have less access to health insurance than the population as a whole.

Financial instability also contributes as a barrier to receiving healthcare. United for ALICE found that ALICE and poverty-level families have more difficulty maintaining health behaviors and preventing illness. When basic needs for health insurance coverage and quality preventative care are not met, recovering from illness or medical emergencies are more challenging.



According to The Federal Reserve Board's Survey of Household Economics and Decision making, 19% of respondents below the ALICE Threshold in Pennsylvania faced an unexpected major medical expense that they had to pay for out of pocket because it was not completely paid for by insurance in 2022, similar to 20% in 2021. The 2024 ALICE report emphasized how medical debt generally reflects poorer health outcomes and lower rates of health coverage. This creates a cyclical effect of financial hardship as lower rates of health care coverage can lead to lower credit scores and additional financial hardships. CHNA survey respondents in the Bethlehem Campus and Star Community Health service area that had a household income between \$25,000-\$60,000 comprised 27.0% of respondents that didn't know what kind of insurance they had, 27.7% of respondents that had Medicaid, 33.8% of respondents that had no coverage/pay cash, and 22.3% of respondents with private insurance.

The United States Department of Health and Human Services reported on how social determinants of health affect older adults. As the population ages, health care needs can change and become more complex. According to The Administration for Community Living, risk for chronic health conditions like dementias, heart disease, type 2 diabetes, and arthritis increases with age. Most older adults have at least one chronic condition, and many have two or more. These conditions can require special care. Although older adults may have more medical needs, many older adults face barriers to getting the care. As an example, older adults living in rural areas will have to travel longer distances to see providers, including specialists. This presents an obstacle if they do not have a means of transportation. The transition from employer-sponsored health insurance plans to Medicare can complicate coverage, potentially requiring a switch in providers. In 2020, adults age 65 years and older spent an average of nearly \$7,000 in out-of-pocket medical costs. Although older adults may have more medical needs, many older adults face barriers to getting the care. As an example, older adults living in rural areas will have to travel longer distances to see providers, including specialists. This presents an obstacle, especially if they have limited access to transportation.

Language is also a barrier for healthcare access and quality. According to the U.S. Census Bureau, Hispanic individuals comprise 19% of the total U.S. population. Of the Hispanic population in the US, nearly 70% speak Spanish at home. However, only 6% of physicians identify as Hispanic and 2% of non-Hispanic physicians are Spanish-speaking. Patients facing a language barrier are more likely to experience miscommunication and less likely to follow post appointments instructions or attend follow up appointments.

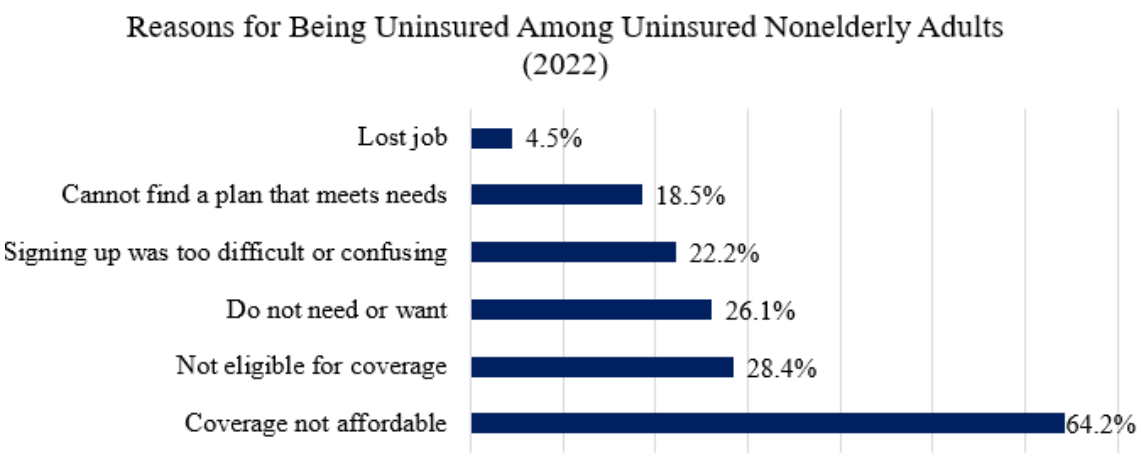
Children and adolescents also face barriers to healthcare. The shortage of pediatric physicians and subspecialty physicians create a challenge to accessing essential healthcare services. The American Academy of Pediatrics found that there has been an increase in the number of pediatric positions offered in the National Resident Matching Program; however, the last four years have seen a significant increase in the number of unfilled pediatric positions. Children with special health care needs require trained doctors. Of children in Pennsylvania, 20.8% have special health care needs, including conditions such as cancer, down syndrome, asthma, and depression. Subspecialty shortages mean longer travel distances for families to get care, weeks or months of waiting times to meet with a subspecialist, and going without care or getting care from providers with less specific training.



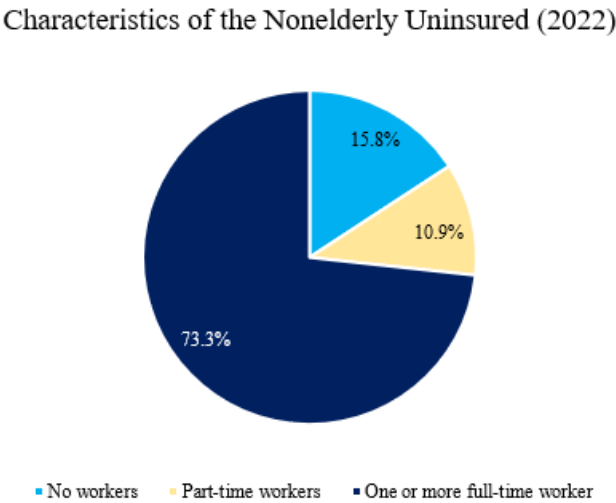
***“You see health disparities in students that largely correspond to their economic standing.”***

Health insurance plays a role in whether and when people get medical care and where they receive their medical care. Individuals without insurance have less access to care compared to those who are insured. Due to their lack of insurance, uninsured groups are more likely to delay or forgo treatment due to cost concerns. This creates a barrier in receiving preventative care or service for serious health conditions and chronic diseases. The cost of healthcare is increasing so when uninsured individuals seek medical care, they can encounter unaffordable medical bills. The Centers for Medicare and Medicaid Services found that nearly one in five Americans has medical debt. Out-of-pocket spending for health care has doubled in the past 20 years, from \$193.5 billion in 2000 to \$388.6 billion in 2020. These rising health care costs disproportionately affect vulnerable populations with less resources as mentioned previously. Of the survey respondents in the Bethlehem Campus and Star Community Health service area 5.8% reported that they missed a doctor's appointment because they did not have health insurance, 13.9% reported that the cost (deductible/co-pay) was too high, and 5.8% reported that the doctor/hospital did not take their insurance.

According to the National Health Interview Survey (2022), 25.6 million nonelderly adults in the United States are uninsured. The majority of nonelderly uninsured individuals (64.2%) remain uninsured due to the high cost of insurance premiums, followed by eligibility (28.4%) or that they do not need or want coverage (26.1%). Another significant issue is the lack of awareness or understanding of how to obtain insurance coverage, including eligibility criteria for public assistance (e.g., Medicaid). The majority of nonelderly uninsured people in the United States live in families with income at or below 400% of the Federal Poverty Level (\$104,800). People of color are also disproportionally uninsured (62.3%) compared to White populations (37.7%). Hispanic populations comprise 40% of the uninsured nonelderly population. Of the families with nonelderly uninsured adults, 73.3% had at least one full-time worker in their household, 10.9% had part-time workers, and 15.8% had no one in their household working.



Source: KFF analysis of National Health Interview Survey, 2022



Source: KFF analysis of National Health Interview Survey, 2022

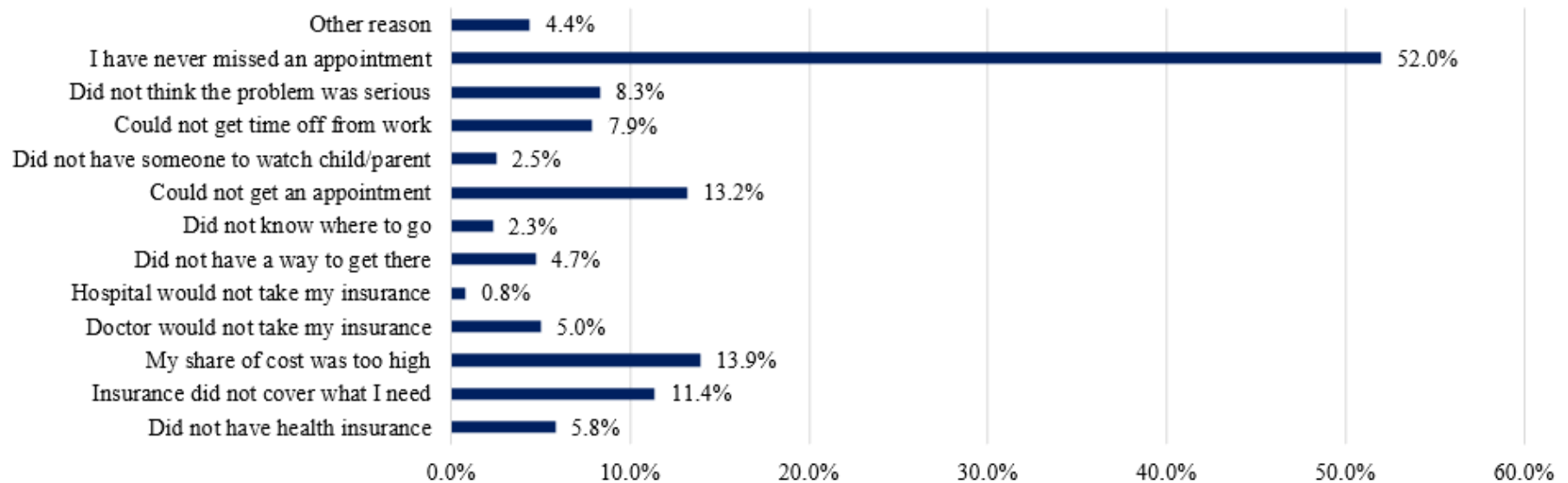


## ..... Hospital Data .....

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 in our service area through partnerships with nonprofits, schools, and businesses. Through these partnerships we implement enhanced care, health initiatives, support, and 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 CHNA survey from the Bethlehem Campus and Star Community Health service area were: share of cost was too high (13.9%), could not get an appointment (13.2%), and insurance did not cover what I need (11.4%). There were 0.8% 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 comprehensive health insurance and facilities that offer assistance or sliding scales to lessen the financial burden of taking care of one's health. In order to better support our service area population, St. Luke's provides charity care to help alleviate some of the financial burden. In FY23, St. Luke's reported \$408 million of IRS defined community benefit spending, approximately 16% of the Network's operating expenditures.

Reason for Missed Medical Appointment, Bethlehem Campus and Star Community Health Service Area



## ..... Top Reasons for Hospitalizations .....

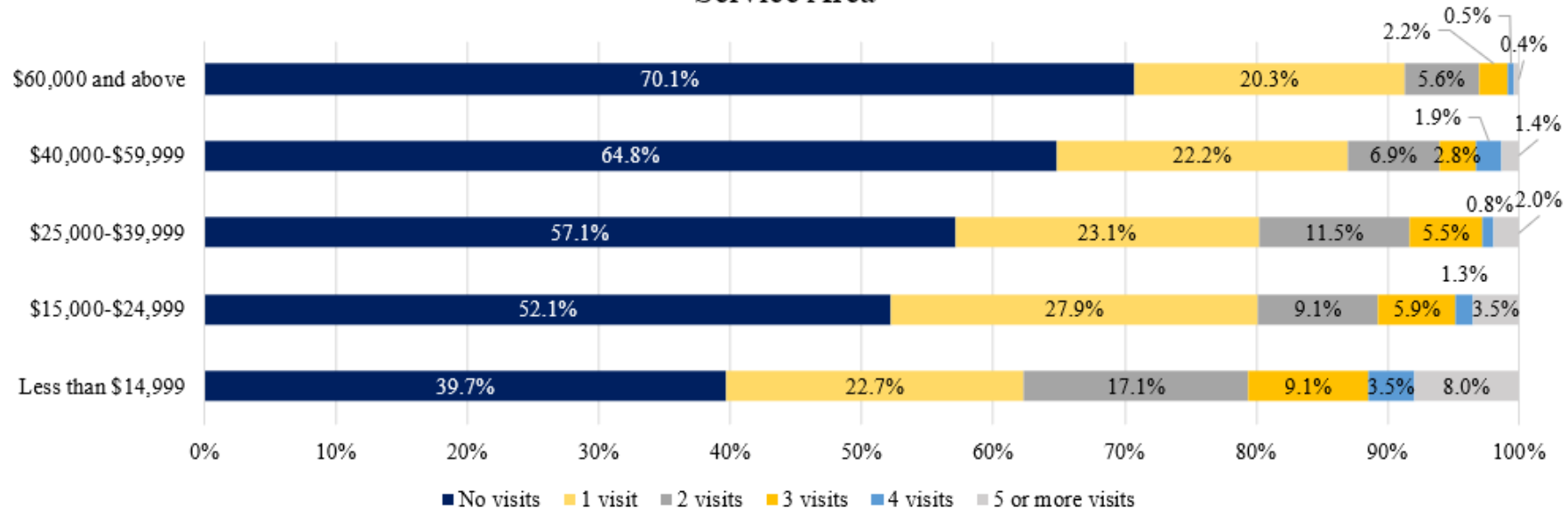
Hospital data helps us to better understand the major health issues in our community. This allows us, from both a treatment and prevention standpoint, to focus efforts on priority areas most affecting the health of our patient population. The top ten reasons for hospitalization in the Bethlehem Campus and Star Community Health service area are listed in the table below. During Fiscal Year 2023, sepsis was the most common diagnosis during an inpatient encounter at St. Luke's Bethlehem University Hospital accounting for 4.1% of patient encounters, followed by hypertensive heart and chronic kidney disease with heart failure and stage 1-4 chronic (or unspecified) kidney disease (2.4%), and acute kidney failure (1.7%).

FY23 SLB Top 10 Inpatient Principal Diagnoses		
Principal Diagnosis	Inpatient Admissions	% of Total SLB Inpatient Admissions
Sepsis, unspecified organism	709	4.1%
Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	406	2.4%
Acute kidney failure, unspecified	288	1.7%
Nonrheumatic aortic (valve) stenosis	269	1.6%
Hypertensive heart disease with heart failure	197	1.1%
Non-ST elevation (NSTEMI) myocardial infarction	192	1.1%
Emergency use of U07.1   COVID-19	188	1.1%
Sick sinus syndrome	150	0.9%
Acute respiratory failure with hypoxia	147	0.9%
Hydronephrosis with renal and ureteral calculous obstruction	131	0.8%
<b>Total</b>	<b>2,677</b>	<b>15.5%</b>

## ..... Emergency Department Encounters .....

In Fiscal Year 2024, the most common type of insurance for Emergency Department (ED) encounters at the Bethlehem University Hospital was Managed Medicaid, followed by Medicare, Medicare Advantage, and private insurance. The most common primary treatment encounters were chest pain, abdominal pain, and falls. ED utilization can be used as an indicator to gauge lack of PCP coverage. When comparing ED visits by household income, 60.3% of survey respondents in the Bethlehem Campus and Star Community Health service area who earn less than \$15,000 visited the ED at least once compared to 29.9% of respondents who earn \$60,000 and above. Additionally, respondents who earn less than \$15,000 were more likely than any other income bracket to visit the ED five or more times in a year (8.0%). Connection to care for low income households, especially connection to a medical home (i.e., primary care physician) is critical in reducing the overutilization of acute care settings like the ED for routine medical care.

## ED Visits by Household Income, Bethlehem Campus and Star Community Health Service Area



### ..... Vulnerable Populations .....

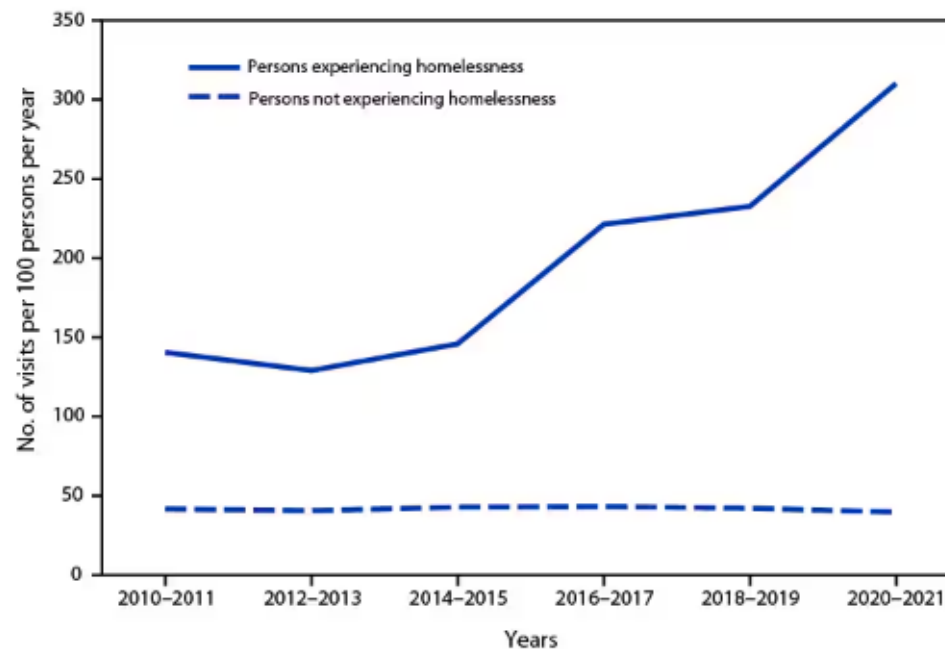
Uninsured populations are especially vulnerable to high rates of hospitalizations and emergency department encounters. Emergency department visits are preventable when patients seek treatment for conditions that could have been managed in non-emergency settings or avoided with consistent and quality preventive care. Factors influencing the rate of these visits include income, education, employment, health insurance coverage, transportation access, and internet access. Utilizing emergency departments for preventable care can lead to excess costs for taxpayers, increase the burden on healthcare providers, and reduce the quality of patient care.



***“We still have too many families reacting to health conditions rather than preventative care and having the knowledge to manage their health as well as they can.”***

Unhoused and homeless populations frequently utilize emergency departments as a primary source of healthcare. This is often due to lack of insurance and/or a medical home (e.g., primary care physician), lack of transportation, and unstable living conditions which can contribute to higher rates of acute and chronic health conditions. According to the Department of Housing and Urban Development (HUD), in 2022 it was estimated that approximately 30% of homeless individuals had at least one emergency department visit. The National Institute of Health reports that homeless individuals are five times more likely to visit the emergency department than housed individuals. According to the CDC, the rate of persons not experiencing homelessness has remained relatively stable at less than 50 visits per 100 persons per year compared to much higher rates in homeless populations, with drastic increases between 2010-2021 (see table below). Of the CHNA respondents that reported being homeless in the Bethlehem Campus and Star Community Health service area, 70.0% reported visiting the emergency department at least once in the past year compared to 30.2% of individuals that own their home.

Rate of Emergency Department Visits, by Homeless Status, United States (2010-2021)



Source: CDC, 2023








***“We see a rise in homelessness within our student population and their families as well. It tends to be underreported. I also know from what I’ve seen just being out and about in our town. Our homeless people on the streets, in bus shelters, in pop-up tents in public areas, or along the trails in the walkways down at Sand Island is increasingly visible.”***

# Neighborhood and Built Environment

Neighborhood and built environment is the foundation for individual and community health, influencing access to resources, social interactions, and overall quality of life. Unsafe environments can lead to chronic stress, poor mental health, and limited access to healthcare, which can lead to negative health outcomes. Healthy People 2030 focuses on improving health and safety in the places where people are born, live, learn, work, play, worship, and age. These objectives are designed to address neighborhood and built environment as a social determinant of health, recognizing the economic and societal factors are intrinsically linked to health outcomes.

According to Healthy People 2030, the following objectives are related to neighborhood and built environment and are measured at the national level. Most Healthy People 2030 objectives are core, or measurable, objectives that are related to targets outlined for the decade (2020-2030). Evidence-based interventions are supported through national, state, and local initiatives. Progress is measured using a variety of data sources (e.g., US Census, ACS estimates, state and county data) and is measured using the following indicators: Baseline only, target met or exceeded, improving, little or no detectable change, getting worse. The objectives outlined have corresponding updates at the national level as of June 2024.

-  **Baseline Only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.
-  **Target met or exceeded:** We've achieved the target we set at the beginning of the decade.
-  **Improving:** We're making progress toward meeting our target.
-  **Little or no detectable change:** We haven't made progress or lost ground.
-  **Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Healthy People 2030 Objectives for Neighborhood and Built Environment	Baseline	Target	Most Recent Data	Progress
Reduce the rate of minors and young adults committing violent crimes (10-24 years old)	249.0 per 100,000	199.2	—	Baseline only
Reduce the proportion of families that spend more than 30 percent of income on housing	34.6% (2017)	25.5%	35.0% (2021)	Little or no detectable change
Increase the proportion of smoke-free homes	86.5% (2014-15)	92.9%	90.0% (2018-19)	Improving
Increase the proportion of people whose water supply meets Safe Drinking Water Act regulations	90.2% (2018)	92.1%	92.2% (2021)	Target met or exceeded
Reduce the number of days people are exposed to unhealthy air (Air Quality Index)	4,295,962,018 (2016-2018)	3,866,365,816	4,534,737,587 (2019-2021)	Little or no detectable change
Reduce asthma attacks	41.5% (2019)	35.1%	42.4% (2023)	Little or no detectable change
Reduce the amount of toxic pollutants released into the environment	1,970,088 tons (2017)	1,862,612 tons	1,690,240 tons (2019)	Target met or exceeded

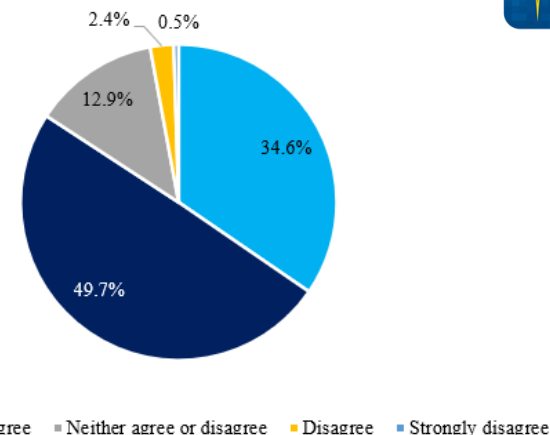
## ..... Safety .....

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", is one measure of safety. According to Federal Bureau of Investigation (2022), the U.S. rate of violent crime offenses is 380.7 per 100,000 population and Pennsylvania has a rate of 279.9 violent crime offenses per 100,000 population.

Most CHNA survey respondents in the Bethlehem Campus and Star Community Health service area agreed that their community was a safe place to live (49.7%), followed by strongly agree (34.6%), neither agree nor disagree (12.9%), disagree (2.4%), and strongly disagree (0.5%).

Safe parks can provide access to recreational opportunities, reduce crime, and provide environmental benefit by reducing air and water pollution. The Centers for Disease Control found that people who have more access to green environments, such as parks, and trails tend to walk and be more physically active compared to those with limited access. The closer people are to parks, the more likely they are to walk or bike there and use it for physical activity. However, location is not the only factor in accessibility to parks. People must also feel safe in their local parks and have safe neighborhoods.

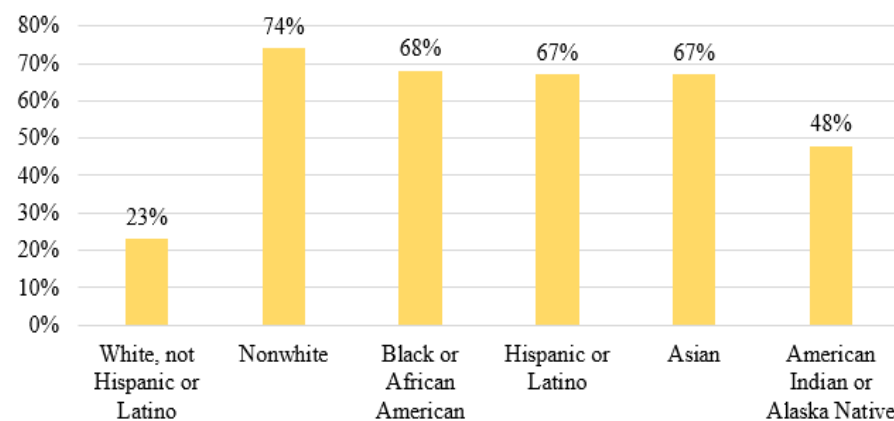
My Community is a Safe Place, Bethlehem Campus and Star Community Health Service Area



## ..... Vulnerable Populations .....

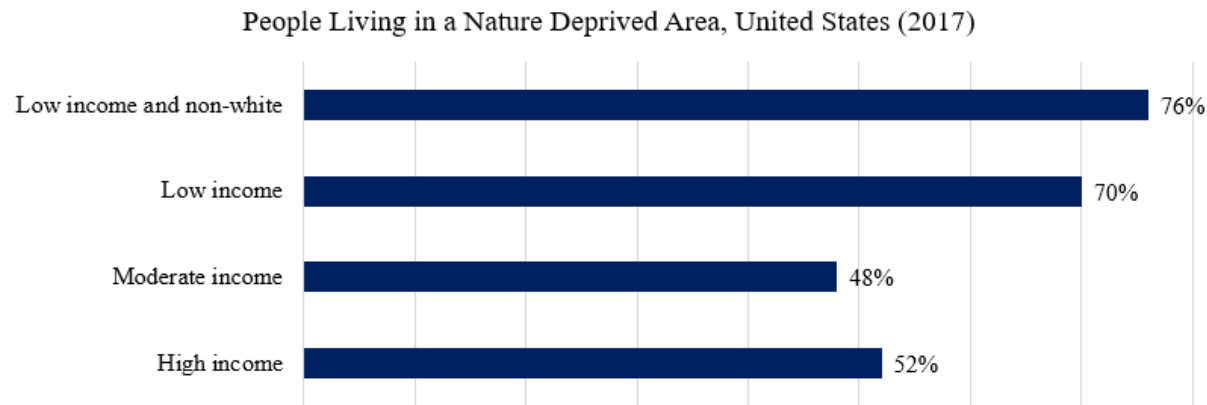
The National Health Foundation reported that lower-income communities and urban areas experience the most limited access to green spaces. Accessibility varies greatly across neighborhoods, income levels, and race. Having unsafe communities or living far distances from local parks pushes people to travel elsewhere for recreational opportunities and environmental benefit. Finding different spaces for these opportunities creates a barrier due to cost of travel and expense of the activity. The U.S. Forest Service, National Park Service, and Fish and Wildlife Service show that although people of color make up nearly 40 percent of the total U.S. population, close to 70 percent of people who visit national forests, national wildlife refuges, and national parks are White. Black individuals remain the most underrepresented group in these spaces. Costs of camping gear, entrance fees, lack of vacation days, unpaid leave are factors that contribute to the difficulty families face to participate in outdoor recreation, especially BIPOC individuals who are more likely to face these economic barriers.

People Living in a Nature Deprived Area by Race/Ethnicity, United States (2017)



Source: National Health Foundation, 2017

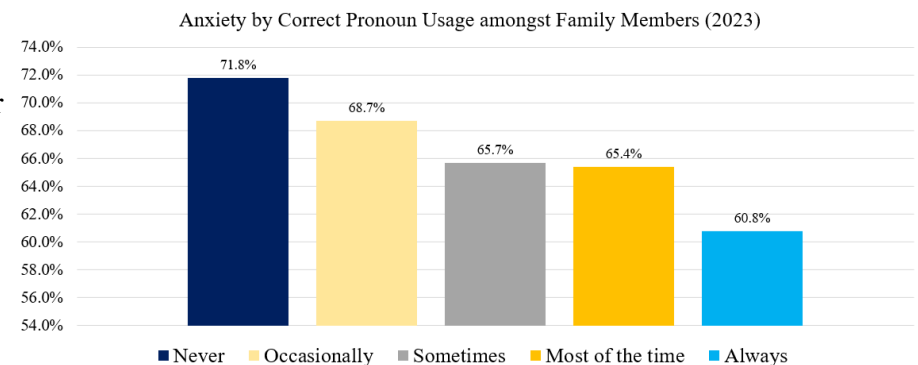
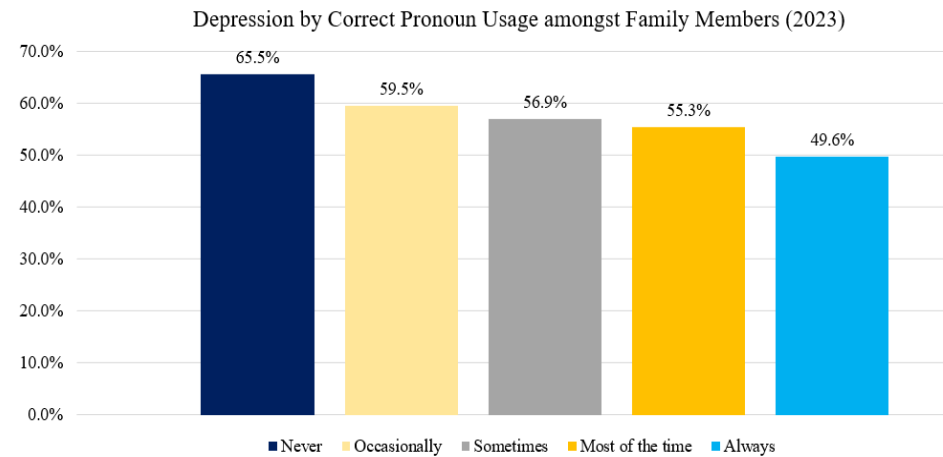




Source: National Health Foundation, 2017

LGBTQ+ individuals can feel unsafe in their neighborhoods and built environment due to discrimination, lack of acceptance, and potential threats of violence or harassment. These circumstances can lead to feelings of isolation and vulnerability. The Human Rights Campaign Foundation (HRCF) conducted a 2023 LGBTQ+ Youth Report partnered with the University of Connecticut to survey LGBTQ+ youth from across the United States. The 2023 HRC report found that 82.7% of youth surveyed have disclosed their LGBTQ+ sexual orientation and/or gender identity (SOGI) to at least one member of their immediate family. Transgender and gender expansive youth surveyed were less likely to be out to their families (67.4%) compared to their LGBTQ+ counterparts (80.1%). Almost two-thirds (63.1%) of LGBTQ+ youth reported at least one positive experience of parental support. Seven in ten (72.1%) transgender and gender-expansive youth who report their families never refer to them with the correct name screened positive for anxiety, compared to six in ten (61.9%) whose families always use the correct name.

The Youth Risk Behavior Surveillance System (YRBSS) by the Centers for Disease Control (CDC) measures health-related behaviors and experiences that can lead to death and disability among youth and adults. The 2021 High School Youth Risk Behavior Survey found that 6.6% of respondents were threatened or injured with a weapon on school property, 18.3% were in a physical fight, 19.9% saw someone get physically attacked, beaten, stabbed, or shot in their neighborhood, and 8.6% did not go to school because they felt unsafe at school or on their way to or from school.

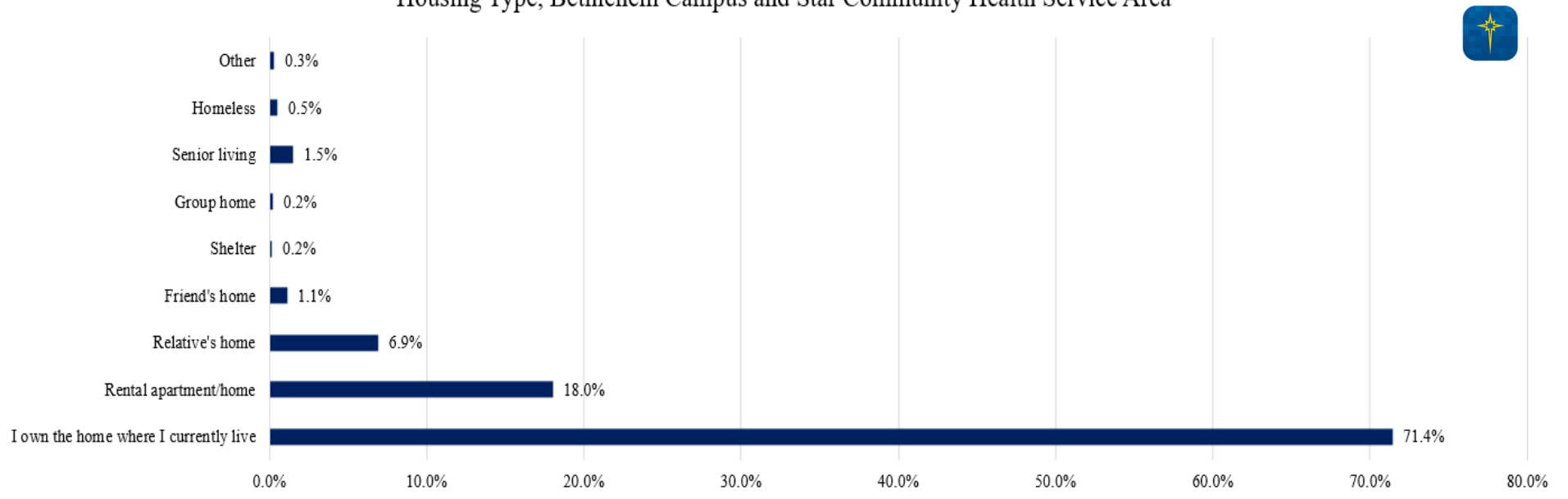


## ..... Housing and Blight .....

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, or one of the “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.” Housing affects other sectors including but not limited to education, health, racial equity, economic stability, homelessness, hunger, crime, the environment, and disability rights. Over time, homeownership can help build wealth and savings, which are important in relation to health; but not everyone has had equal opportunity to own a home. Decades of discriminatory practices has led to a disproportionate homeownership rate between races. 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 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.

To get an understanding of how the Bethlehem Campus and Star Community Health service area population lives, we asked respondents to indicate their housing type. There were a small number of individuals living in a shelter (0.2%), group home (0.2%), senior living (1.5%), homeless (0.5%), or other (0.3%). The majority of respondents own or have a mortgage on their home (71.4%), followed by renting their home (18.0%), living at a relative’s home (6.9%), or living at a friend’s home (1.1%).

Housing Type, Bethlehem Campus and Star Community Health Service Area



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 housing conditions as they are an indicator of living standards and assess the quality of housing facilities. According to the 2021 ACS subject definitions guide, a complete kitchen must possess all the following: a sink with a faucet, a stove or range, and a refrigerator. If a household lacks any one or more of these facilities, the household is considered to lack a complete kitchen. The definitions guide defines a complete plumbing facility to have hot and cold running water and a bathtub or shower. If a household lacks one or both facilities, the house is considered to lack complete plumbing.

County	Network Service Area (ACS 5 Year Estimates, 2022)		
	Total Housing Units	% lacking complete kitchen	% lacking complete plumbing
Berks	171,717	1.1%	1.0%
Bucks	257,272	0.6%	0.3%
Carbon	34,394	1.7%	0.3%
Lehigh	151,300	0.6%	0.3%
Luzerne	151,332	1.1%	0.4%
Monroe	79,663	0.7%	0.4%
Montgomery	350,243	0.4%	0.2%
Northampton	129,621	0.4%	0.0%
Schuylkill	67,300	0.7%	0.2%
Hunterdon	51,952	0.7%	0.5%
Warren	46,786	0.3%	0.3%
Pennsylvania	5,815,191	0.8%	0.3%
New Jersey	3,785,097	0.7%	0.3%
United States	143,772,895	0.8%	0.4%

The CHR&R measures many social determinants of health, including 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. A reported 14% of all households in Pennsylvania are considered to have severe problems. In Lehigh County, 0.6% of homes lack a complete kitchen and 0.4% in Northampton County lack a complete kitchen. Without a complete kitchen, families are unable to cook nutritious meals and may rely more heavily on fast food or take out. For households lacking complete plumbing facilities, families may not be able to bathe regularly leading to poor hygiene. In Lehigh County, 0.3% of homes lack complete plumbing facilities and approximately 45 units in Northampton County lack complete plumbing facilities.

..... **Vulnerable Populations** .....

Homelessness is an important indicator when assessing housing. According to the Pennsylvania Continuums of Care (2024) Point-in-Time Count, there were 2,262 homeless individuals experiencing homelessness in the Eastern Pennsylvania Continuum of Care, with 1,362 in emergency shelters, 408 in transitional shelters, and 492 unsheltered. Of those individuals experiencing homelessness, 191 were chronically homeless, with 130 living in emergency shelters and 61 unsheltered. Of the total homeless population in the Eastern Pennsylvania region, 252 experienced severe mental illness, 65 with chronic substance abuse, 92 are Veterans, and 280 are victims of domestic violence. In the Lehigh Valley, 62 individuals were chronically homeless, with 37 in emergency shelters and 25 unsheltered. There were 55 individuals that were homeless and facing severe mental illness, 14 facing chronic substance abuse, 25 Veterans, and 53 victims of domestic violence.

Black, Indigenous, and People of Color (BIPOC) communities are disproportionately affected by housing instability, neighborhood blight, and homeownership opportunities which exacerbates health and economic disparities. Federal homelessness data shows that BIPOC groups in the United States continue to experience sheltered homelessness. According to the U.S. Department of Housing and Urban Development's 2023 Annual Homelessness Assessment Report, people who identify as Black and African American consistently make up the largest BIPOC group experiencing sheltered homelessness (e.g., emergency shelters, transitional housing, hotels). The Black and African American population represents nearly 14% of the total U.S. population, but represent 38.6% of people experiencing sheltered homelessness. There is also disproportionality among smaller minority groups. Native Hawaiians and Pacific Islanders now represent 0.3% of the U.S. population but 1.8% of the sheltered homeless population. Similarly, American Indian/Alaska Natives represent 1.3% of U.S. population but 3.4% of the sheltered homeless population. Similarly, people identifying as Hispanic or Latino make up 19% of the U.S. population, but 21.3% of the sheltered homeless population and 26% of the unsheltered homeless population. Male populations are more likely to be sheltered homeless (66.8%) and unsheltered homeless (69.8%) compared to female sheltered homeless and unsheltered homeless, 31.8% and 28.4%, respectively. While Transgender populations account for 0.6% of the population in the United States, they account for 0.8% of the sheltered homeless population and 0.9% of the unsheltered homeless population.

LGBTQ+ communities are particularly vulnerable to homelessness, housing instability, and blight. Discrimination, societal stigmas, and lack of support contribute to these circumstances. Research done by the Journal of Adolescent Health has shown that those who identify as lesbian, gay, bisexual, transgender, or questioning (LGBTQ+) have a 120% higher risk of experiencing some form of homelessness. The Williams Institute found that up to 40% of the 4.2 million youth identifying as LGBTQ+ experience homelessness compared to their straight and cisgender peers experiencing homelessness (9.5%). LGBTQ+ individuals are also more likely to experience assault, trauma, depression, and suicide when compared to non-LGBTQ+ populations while also being homeless.

Demographic Characteristics of Individuals Experiencing Homelessness (United States, 2023)						
	All Individuals		Sheltered Individuals		Unsheltered Individuals	
	Total	%	Total	%	Total	%
<b>Age</b>	467,020	100%	227,795	100%	239,225	100%
Under 18	3,430	0.7%	1,854	0.8%	1,576	0.7%
18-64 years old	424,557	90.9%	203,984	89.6%	220,573	92.2%
65+ years old	39,033	8.4%	21,957	9.6%	17,076	7.1%
<b>Gender</b>						
Female	140,331	30.0%	72,506	31.8%	67,825	28.4%
Male	319,276	68.4%	152,273	66.8%	167,003	69.8%
Transgender	3,884	0.8%	1,747	0.8%	2,137	0.9%
A Gender that is not singularly female or male	2,858	0.6%	1,063	0.5%	1,795	0.8%
Questioning	671	0.1%	206	0.1%	465	0.2%
<b>Ethnicity</b>						
Non-Hispanic/Non-Latino	356,244	76.3%	179,289	78.7%	176,955	74.0%
Hispanic/Latino	110,776	23.7%	48,506	21.3%	62,270	26.0%
<b>Race</b>						
American Indian, Alaska Native, or Indigenous	18,351	3.9%	6,654	2.9%	11,697	4.9%
Asian or Asian American	10,064	2.2%	3,129	1.4%	6,935	2.9%
Black, African American, or African	150,589	32.2%	87,909	38.6%	62,680	26.2%
Native Hawaiian or Pacific Islander	7,045	1.5%	1,877	0.8%	5,168	2.2%
White	255,874	54.8%	118,862	52.2%	137,012	57.3%
Multiple Races	25,097	5.4%	9,364	4.1%	15,733	6.6%

Source: HUD Annual Homelessness Assessment Report, 2023

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 12<sup>th</sup> grade. The unique count is based on where the child was identified as homeless and attributed to the local education agency. Of the counties that house St. Luke's hospitals in Pennsylvania, 8,489 students were identified as homeless in the 2021-2022 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). Lehigh County had 1,055 students identified as homeless in the 2021-22 school year and Northampton County had 627.

ALICE individuals face significant challenges related to housing stability, neighborhood blight, and homeownership opportunities, which can contribute to short and long-term financial instability. The 2024 United for Alice Report Update showed an increase in the number of ALICE households in Pennsylvania. Between 2010 and 2022, the total number of households in the state increased by 7%, households in poverty increased by 5%, and the number of ALICE households increased by 19%. In 2022, 12% (658,448) of all households were below the Federal Poverty Line, and 28% (1,493,199) of all households were ALICE. That combines to a total of 41% (2,151,647) of households struggling to make ends meet and that do not qualify for many federal assistance programs.

PA SY 2021-22 Homeless Children Pop Identified by the Education for Children and Youth Experiencing Homelessness Program	
County	# of Students
Berks	2,488
Bucks	834
Carbon	60
Lehigh	1,055
Monroe	431
Montgomery	1,617
Northampton	627
Schuylkill	390
Luzerne	987
PA Network Total	8,489

Older adults are particularly vulnerable to the impacts of housing instability and neighborhood blight. Dealing with these challenges can negatively affect their health mobility and overall wellbeing. In January 2023, the national Point-in-Time Count was conducted. It showed, on a single night, 138,098 homeless adults were 55 years and older. Nearly one in four people experiencing unsheltered homelessness (i.e., living in places not meant for human habitation) were over the age of 55. Prior to 2023, there had not been reported national information on the number of older adults that are experiencing homelessness. Projections done by the University of Pennsylvania's Actionable Intelligence for Social Policy estimated that homelessness among older adults is expected to nearly triple by 2030, and the population of adults aged 65 and older experiencing homelessness is anticipated to grow from 40,000 to 106,000. People experiencing homelessness often live with unmanaged chronic disease and limited access to healthcare and their health profiles are commonly associated with those of older individuals. Research done by the Gerontological Society of America shows that people experiencing homelessness aged 50-59 years old have been found to experience geriatric conditions such as memory loss, falls, and functional impairments at rates that compare to members of the general population aged 70 years and older.

A study done by Joint Center for Housing Studies at Harvard University on immigrant access to homeownership highlighted the barriers faced when attempting to gain home ownership. Homeownership is a way for lower to middle income individuals to build wealth. Home ownership goes beyond solely financial benefits by fostering greater residential stability, civic engagement, and overall well-being. Home ownership is significant to foreign-born populations since owning a home greatly influences their settlement and life in the United States. Research demonstrated great housing disparities among native and foreign-born households. Foreign-born households experience higher housing cost burdens and face persistently lower homeownership rates. Legal status is another major barrier unique to the foreign-born population that affects access to homeownership.

## ..... 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 negative health effects. Air quality is typically assessed by two components: ozone (O<sub>3</sub>) 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, acute breathing problems, long term exposure risks, and potential cardiovascular harm. 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 result in reduced visibility, or haziness in the air. PM<sub>2.5</sub> is the smallest particle and most dangerous size because it can easily pass through lung tissue and into the blood stream. Breathing PM can trigger illness, hospitalization, and premature death along with increasing the severity of asthma attacks in children. Both pollutants are especially dangerous in vulnerable groups like children and teens, anyone over the age of 65 years old, people with pre-existing lung diseases (e.g., asthma, COPD), and people with cardiovascular diseases. Ozone and PM can both lead to premature death, respiratory harm, and cardiovascular harm. Objectives for environmental health determined by Healthy People 2030 are to increase the proportion of people with safe water to drink, to reduce the amount of toxic pollutants in the environment, and to reduce the number of days people are exposed to unhealthy air. Ozone and PM are measured by the Environmental Protection Agency (EPA), the Department of Environmental Protection (DEP), and reported to the American Lung Association. The American Lung Association released a State of the Air (2024) report based on data collected in 2020-2022 depicting overall air quality with red days being unhealthy, purple days being very unhealthy, and orange days being unhealthy for sensitive groups. DNC stands for “Data Not Collected”. Lehigh County reported no high ozone days and Northampton County reported three unhealthy days for sensitive groups. In Lehigh County, there was one high particulate matter day that was unhealthy and Northampton County reported four unhealthy PM days for sensitive groups.

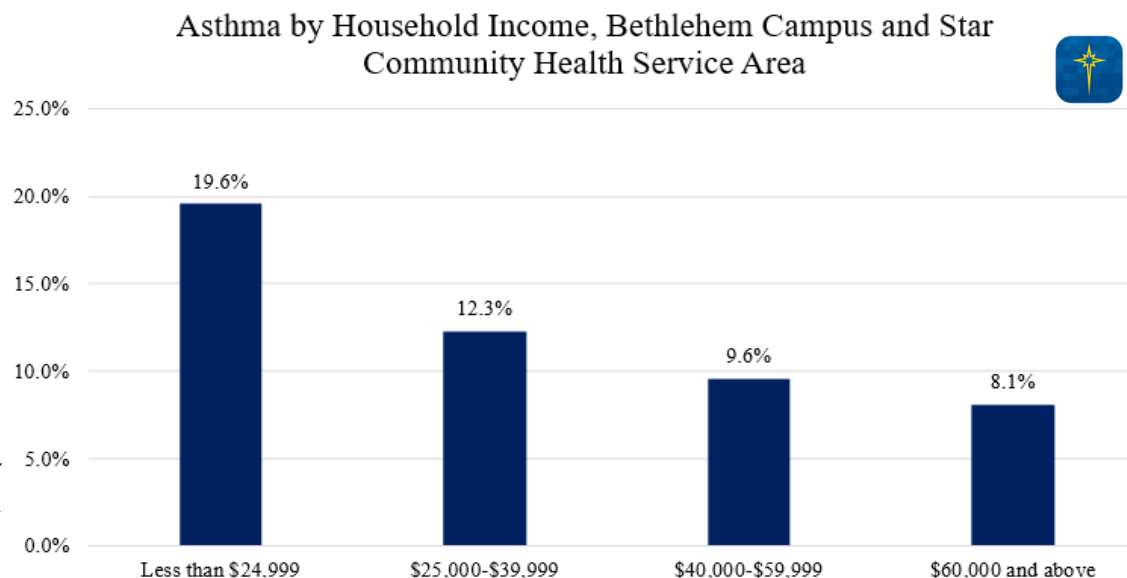
High Ozone Days					High Particulate Matter Days				
	Weight average	Orange days	Red days	Purple Days		Weight average	Orange days	Red days	Purple Days
Berks	1.7	5	0	0	Berks	1.0	3	0	0
Bucks	5.3	16	0	0	Bucks	DNC	DNC	DNC	DNC
Carbon	DNC	DNC	DNC	DNC	Carbon	DNC	DNC	DNC	DNC
Lehigh	0.0	0	0	0	Lehigh	0.5	0	1	0
Monroe	0.0	0	0	0	Monroe	DNC	DNC	DNC	DNC
Montgomery	1.7	5	0	0	Montgomery	0.7	2	0	0
Northampton	1.0	3	0	0	Northampton	1.3	4	0	0
Schuylkill	DNC	DNC	DNC	DNC	Schuylkill	DNC	DNC	DNC	DNC
Luzerne	0.0	0	0	0	Luzerne	DNC	DNC	DNC	DNC
Warren	0.0	0	0	0	Warren	0.3	1	0	0
Hunterdon	0.0	0	0	0	Hunterdon	0.0	0	0	0



Additionally, the community survey asked respondents to indicate if they had ever been diagnosed with asthma. When examined by income, 19.6% of respondents in the Bethlehem Campus and Star Community Health service area who earn less than \$24,999 have asthma. The rates of asthma generally decrease as household income increases, with 12.3% of people earning \$25,000-\$39,999, 9.6% of people earning \$40,000-\$59,999, and 8.1% earning \$60,000 and above. This is an important trend to note as respondents with lower incomes may not have access to air purifiers or live in areas with access to cleaner air.

Water quality is another important aspect of the environment that can impact health. 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 typically unregulated and typically owner-maintained. Pennsylvania's Department of Environmental Protection (2023) water report stated that 12% of Pennsylvanians use individuals wells and 88% use community water systems. 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 as long as 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 free of contaminants. The water report also tracks the Maximum Residual Disinfectant Level (MRDL) which limits the amount of disinfectants allowed in safe drinking water. Some of the typical contaminants tested are chlorine, fluoride, radium, turbidity, organic carbon, lead, and copper. Water contaminants can result in a variety of negative health impacts, like gastrointestinal illness, worsened nervous or reproductive systems, and a variety of diseases (e.g., cancer). The effects can also be short term or long term, while also going unseen, potentially worsening the effects over time.

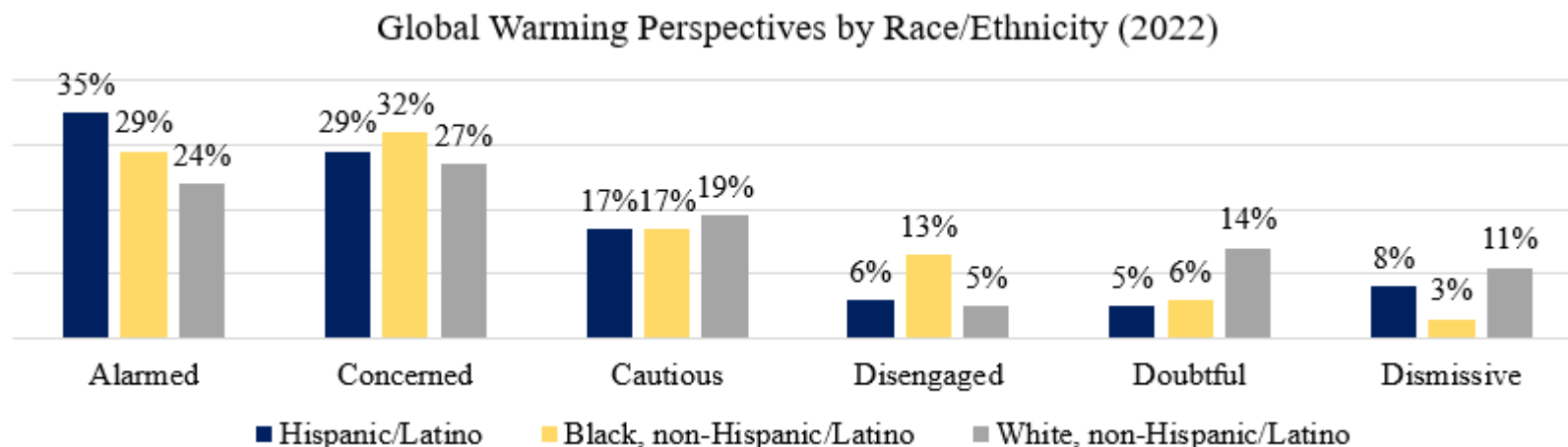
CHR&R indicates that both Lehigh and Northampton counties had a drinking water violation in 2022. Chlorine was the only contaminant that violated the water quality standards. Chlorine is used to kill bacteria and viruses in drinking water and the maximum amount of chlorine allowed is 4 parts per million. In this level, harmful health effects are unlikely to occur. While unlikely, if chlorine levels exceed this level, some effects include coughing, sore throat, airway irritation, and skin irritation. Warren County reported sodium levels exceeding the MCL and reported maximum levels of Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA), which are manmade chemicals that can cause adverse health effects (e.g., cancer, liver damage, thyroid problems, immune effects). 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, which tend to be older.



## ..... Vulnerable Populations .....

BIPOC and low-income communities are disproportionately affected by poor air and water quality. Living in areas with higher pollution levels and limited access to clean resources contributes to environmental inequities. A 2021 analysis by the United States Environmental Protection Agency showed that the most severe harms from climate change fall disproportionately upon underserved communities since they are the least able to prepare and recover from environmental events like heat waves, poor air quality, and flooding. Key findings of the report showed that Black and African American individuals are projected to feel the impacts of climate change stronger than all other demographic groups. Two degrees Celsius is considered a critical threshold above which dangerous and life-threatening effects will occur for humans and the ecosystem. For example, with 2°C (3.6°F) of global warming, Black and African American individuals are 34% more likely to currently live in areas with the highest projected increases in childhood asthma diagnoses and 40% more likely to currently live in areas with the highest projected increases in extreme temperature related deaths. Hispanic and Latino communities have higher participation in industries that are weather-exposed like construction and agriculture causing increased vulnerability to the effects of extreme temperatures. Hispanic and Latino(a) individuals are 43% more likely to currently live in areas with the highest projected reductions in labor hours due to extreme temperatures.

A 2022 research study done by Harvard T.H. Chan School of Public Health in collaboration with the Environmental Systems Research Institute, created a platform that links 17 years' worth of demographic data with data on fine particulate pollution from across the U.S. Using the platform, research was conducted on the disparities of air pollution exposure on racial/ethnic and income groups in the United States. It was found that groups that identify as Black and African American, Asian, Hispanic, and low-income populations are being exposed to higher levels of dangerous fine particulate air pollution (PM 2.5) than other groups. The researchers also found that areas of the U.S. where the White and Native American populations are overrepresented have been consistently exposed to average PM 2.5 levels that are lower than those in areas where Black, Asian, and Hispanic populations are overrepresented. According to the Yale Program on Climate Change Communication (2023), Hispanic and Black adults are alarmed or concerned about global warming at higher rates than White adults.



Source: Yale Program on Climate Change Communication, 2022

## ..... 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 also decreases chronic diseases and obesity rates. A goal of Healthy People 2030 is to increase the amount of people using public transportation to get to work. People who drive to work are less likely to reach the recommended physical activity goal for the day. Driving to work can also have an effect on obesity, diabetes, and heart disease. However, it is not always feasible for someone to walk, bike, or take public transportation to work as many cities lack the proper infrastructure.

The figure below illustrates the modes of transportation taken by the population in the Bethlehem Campus and Star Community Health service area. Lehigh County has 75.4% of people who drive alone to work and Northampton County has 77.4% of people who drive alone to work. Additionally, Lehigh County has 1.6% of people who commute to work via public transportation and Northampton County has 1.3%.

Transportation is also a key factor in access to opportunities. Residents of Lehigh county do have some access to public transportation, specifically Lehigh and Northampton Transportation Authority (LANta). LANta offers 35 different buses that travel on routes throughout the county and Northampton county. LANta also offers the LANta Van service for individuals who are disabled, needing medical assistance, and or 65 years or older. However, routes and frequency of services is limited.

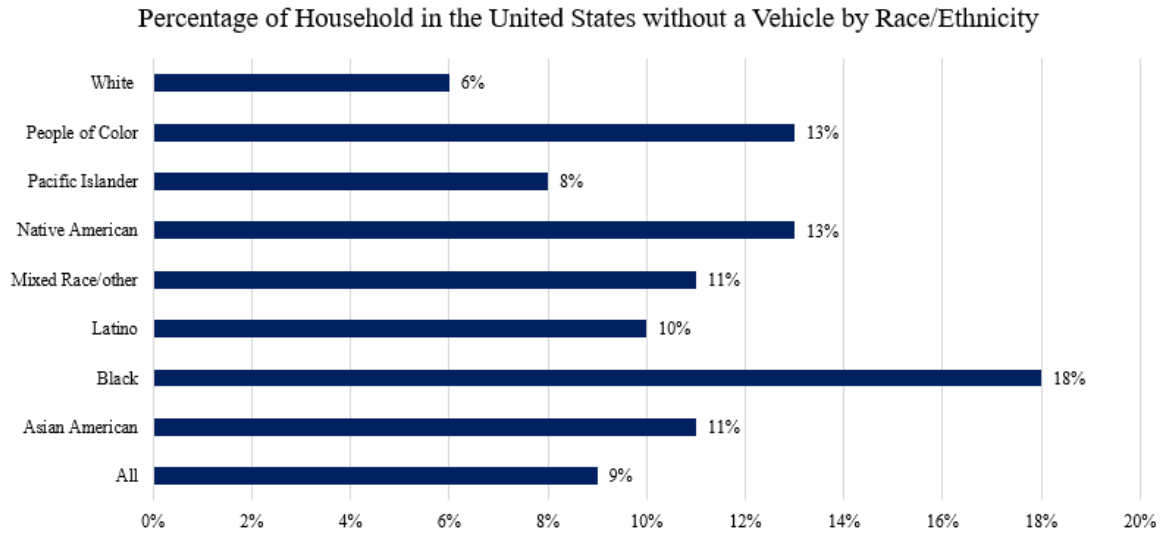
Modes of Transportation to Work 2022 ACS 5 Year Estimates									
Region	Drive Alone	Carpool	Public Transportation	Taxi	Motorcycle	Bike	Walk	Other	Work From Home
Berks County	76.4%	8.0%	1.2%	0.3%	0.1%	0.2%	2.9%	1.8%	9.3%
Bucks County	74.9%	5.8%	2.3%	0.1%	0.1%	0.1%	1.2%	0.7%	14.9%
Carbon County	80.7%	10.1%	0.3%	0.0%	0.0%	0.0%	1.5%	0.6%	6.8%
Lehigh County	75.4%	8.7%	1.6%	0.1%	0.0%	0.1%	2.4%	1.2%	10.5%
Monroe County	73.7%	11.0%	3.5%	0.3%	0.1%	0.0%	1.5%	0.9%	9.0%
Montgomery County	69.4%	6.0%	3.4%	0.1%	0.0%	0.2%	2.1%	0.8%	18.0%
Northampton County	77.4%	6.2%	1.3%	0.1%	0.0%	0.2%	2.2%	1.5%	11.2%
Schuylkill County	80.3%	9.8%	0.4%	0.1%	0.1%	0.1%	3.1%	0.8%	5.3%
Luzerne County	76.6%	10.3%	0.8%	0.1%	0.0%	0.2%	2.5%	1.2%	8.2%
Warren County (NJ)	77.7%	7.0%	1.3%	0.1%	0.0%	0.2%	2.4%	1.3%	9.8%
Hunterdon County (NJ)	72.3%	5.2%	2.1%	0.1%	0.1%	0.1%	1.7%	0.5%	17.9%
Pennsylvania	71.1%	7.7%	4.3%	0.2%	0.1%	0.4%	3.3%	1.0%	11.8%
New Jersey	65.4%	7.6%	9.0%	0.5%	0.0%	0.3%	2.6%	1.5%	13.1%
United States	71.7%	8.5%	3.8%	0.2%	0.1%	0.5%	2.4%	1.1%	11.7%

The World Bank described transportation as fundamental to supporting economic growth, creating jobs and connecting people to essential services like healthcare or education. Expanding sustainable and climate friendly transport options is vital, especially in low-income or vulnerable communities. Transport expansions can strengthen human development and social inclusion. Of survey respondents in the Bethlehem and Star Community Health service area, 4.7% reported missing or postponing medical care because they did not have a way to get there.

..... **Vulnerable Populations** .....

Accessible, affordable, and reliable transportation is essential for everyone, but it is not equally accessible. Transportation plays a direct role in providing access to resources. Having reliable transportation influences being able to gain employment, make health care appointments, and have access to parks or places for physical activity.

Transportation inequality significantly impacts low-income individuals and marginalized racial and ethnic groups. These populations often reside in areas with limited access to reliable and affordable transportation, negatively impacting access to essential services as mentioned above. As reported in the previous “Housing and Blight” section, Black and Hispanic households deal with the greatest affordability challenges making them more likely to live in inadequate housing. When individuals are already struggling with the cost of living, affording transportation is a need that can go unmet. The American Public Health Association released a Transportation Report in 2021 where they found that most people consider reliable transportation as having access to a car. Car ownership can cause a burden to low-income households, as the average annual cost to own a car is \$8,449.49. Without a vehicle as a means of transportation, individuals use options like public transit, walking, or biking. Not all individuals live close to public transit or have safe roadways to access those public transit options. Without reliable methods of transportation, employees face being limited to working certain shifts, not being able to attend work on time, or being unable to show up altogether. People who live in auto-centric communities are more likely to fall into poverty due to transportation-related emergencies. A 2021 report by Smart Growth America showed people ages 50 and older, specifically those 75 and older, are overrepresented in deaths involving pedestrians. This age group is more likely to experience challenges seeing, hearing, or moving which presents hazards when walking as a means of transportation.



Source: Smart Growth America, 2021



***“If somebody doesn't have vehicle access, relying on public transportation is a huge issue. They can spend hours and hours on the bus trying to get to medical appointments, jobs or whatever it may be.”***

# Health Behaviors

Health Behaviors are actions taken by individuals that affect their health. These actions can be positive, negative, or have little impact and can include a wide range of choices and activities such as diet, physical activity, smoking, alcohol consumption, and adherence to medical advice and care plans. In the United States, health behaviors vary across different regions and populations, reflecting the diversity and complex nature of external influences (e.g., culture, access, financial and social context). Despite local, state, and national efforts in health education and promotion, many people living in the United States continue to engage in unhealthy behaviors (e.g., smoking, substance use, poor dietary habits).

According to Healthy People 2030, the following objectives are related to health behaviors and are measured at the national level. Most Healthy People 2030 objectives are core, or measurable, objectives that are related to targets outlined for the decade (2020-2030). Evidence-based interventions are supported through national, state, and local initiatives. Progress is measured using a variety of data sources (e.g., US Census, ACS estimates, state and county data) and is measured using the following indicators: Baseline only, target met or exceeded, improving, little or no detectable change, getting worse. The objectives outlined have corresponding updates at the national level as of June 2024. Selected objectives are included based on their alignment with SLUHN CHNA survey questions and primary data outcomes.



**Baseline Only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.



**Target met or exceeded:** We've achieved the target we set at the beginning of the decade.



**Improving:** We're making progress toward meeting our target.



**Little or no detectable change:** We haven't made progress or lost ground.



**Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Healthy People 2030 Objectives for Health Behaviors	Baseline	Target	Most Recent Data	Progress (June 2024)
Increase fruit consumption by people aged 2 years and over	0.51 cups per 1,000 calories (2013-16)	0.56	0.49 (2017-20)	Little or no detectable change
Increase vegetable consumption by people aged 2 years and over	0.76 cups per 1,000 calories (2013-16)	0.84	0.73 (2017-20)	Little or no detectable change
Reduce the proportion of people living with obesity	38.6% (2013-16)	36.0%	41.8% (2017-20)	Getting worse
Reduce the proportion of people aged 21 years and over who engaged in binge drinking in the past month	26.6% (2018)	25.4%	26.0% (2019)	Little or no detectable change
Reduce the proportion adults who used drugs in the last month	12% (2018)	12%	13.4% (2019)	Getting worse
Reduce drug overdose deaths	20.7 per 100,000 (2018)	20.7 per 100,000	32.6 per 100,000 (2022)	Getting worse
Increase the proportion of adults who get enough sleep	72.3% (2020)	73.3%	69.9% (2022)	Getting worse
Reduce the proportion of adults who do no physical activity in their free time	26.1% (2020)	21.8%	26.3% (2022)	Little or no detectable change

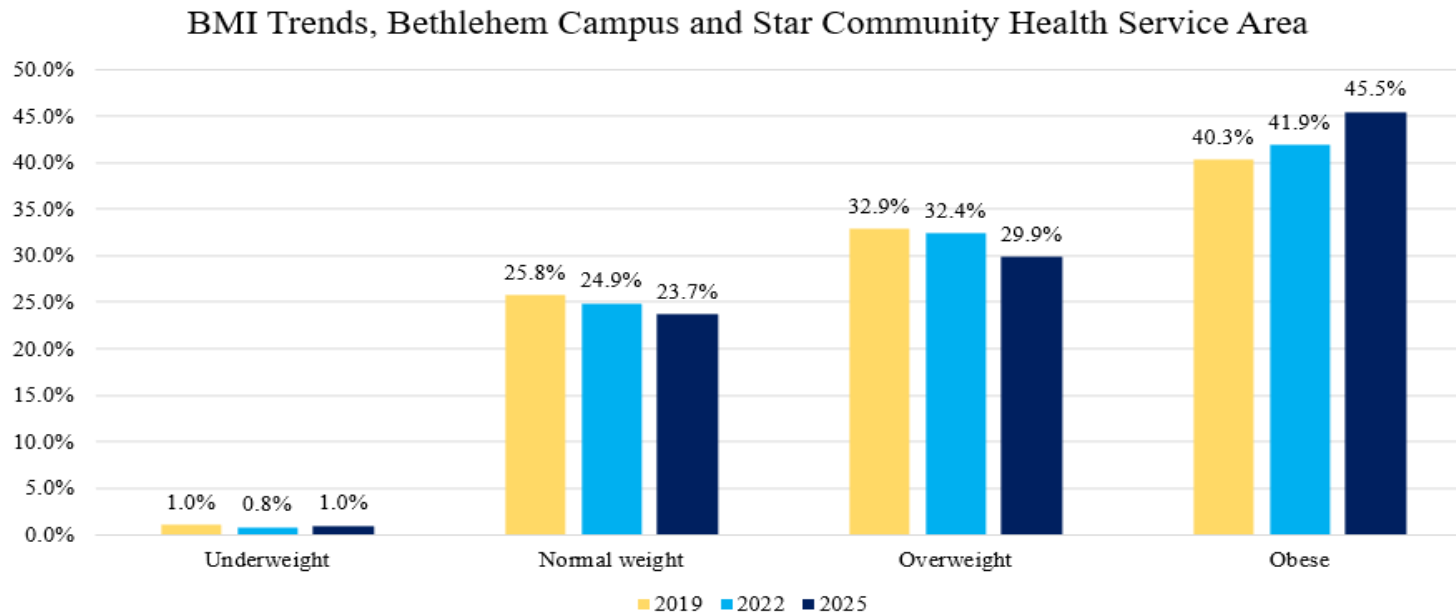
# Obesity

Obesity is a medical condition characterized by an excess accumulation of body fat that can contribute to poor health and increased risk for developing heart disease, type 2 diabetes, cancer, stroke, and more. Obesity is typically measured by Body Mass Index (BMI), which is a ratio of weight to height (i.e., weight in kilograms divided by the square of height in meters). CHR&R 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/m<sup>2</sup>. A BMI under 18.5 is considered underweight, normal is 18.5-24.9, overweight is 25-29.9, obese is 30 and above. According to CHR&R (2024), 33% of adults in Pennsylvania are obese. According to the CDC, in 2019 obesity was estimated to cost the U.S. healthcare system \$173 billion annually.

Obesity-related medical costs are estimated to be \$1,861 higher per person than the medical costs of an individual whose BMI falls into the normal weight category. For adults living with severe obesity (BMI greater than 35), the excess costs were \$3,097 per person. Many factors play a role in the obesity epidemic and its rapid increase over several decades can be attributed to various factors, including: lack of vegetable consumption, lack of physical activity, poor portion control, and poor access to outdoor recreational activities and healthy foods.

Stigma toward people living with obesity is common. This can lead to social and psychological challenges, including bullying, low self-esteem, social isolation, avoidance of healthcare services, decreased physical activity, increased mental health needs, and more. Addressing obesity requires a multifaceted approach that increase health education and promotion and supportive environments that model non-biased behaviors.

Since 2019, the Bethlehem Campus and Star Community Health service area survey results for BMI have stayed approximately the same for underweight respondents (1.0%) while there was a decrease in the normal weight respondents (23.7%) and overweight respondents (29.9%) and an increase in respondents who are obese (45.5%).



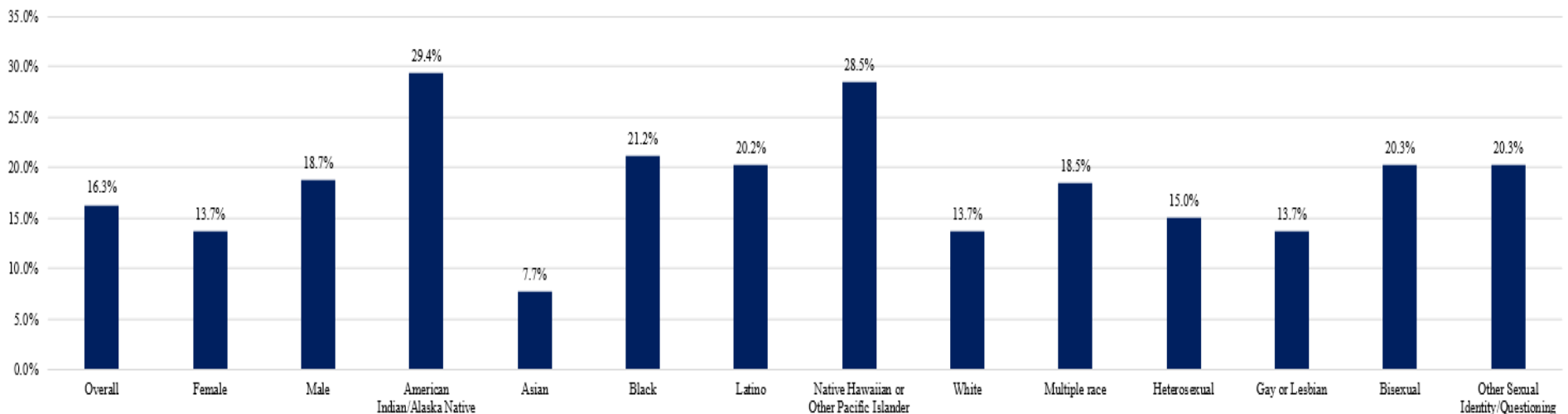


## ..... Vulnerable Populations .....

In 2022, Trust for America's Health (TFAH) reported that, as of 2020, 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 49.9%; that rate is driven in large part by an adult obesity rate among Black women of 57.9%. The TFAH also reported that Pennsylvania ranks 29 out of 51 states (including Washington, DC) for percentage of adults with obesity and ranks 35 for adults who are overweight. Additionally, 42.8% of Black adults, 32.2% of White adults, and 32.7% of Hispanic/Latino adults in Pennsylvania are obese. The age bracket with the highest percentage of adults with obesity in Pennsylvania is 45-64 years old, accounting for 40.4% of adults with obesity.

According to the CDC, one in five children and adolescents are living with obesity. Childhood obesity is more likely to affect children living in low-income households, Hispanic children, non-Hispanic Black children, and adolescents 10-17 years old. A child is considered obese if their BMI is at or above the 95th percentile. The prevalence of childhood obesity has increased dramatically in recent years, with other comorbidities increasing in children living with diabetes (e.g., diabetes, hypertension). According to the most recent TFAH report (2022) the percent of high school students with obesity in the United States varies based on demographic characteristics and sexual orientation. Overall, 16.3% of high school students were obese, with 29.4% of American Indian/Alaska Native students living with obesity while 7.7% of Asian high school student were living with obesity. Bisexual and other sexual identity/Questioning students were more likely to live with obesity (20.3%) compared to heterosexual (15%) and gay or lesbian students (13.7%). The most recent TFAH (2022) report found that 13.8% of children ages 2-4 years old and 15.1% of children ages 10-17 in Pennsylvania are obese.

Percent of High School Students with Obesity by Select Demographics (2021)

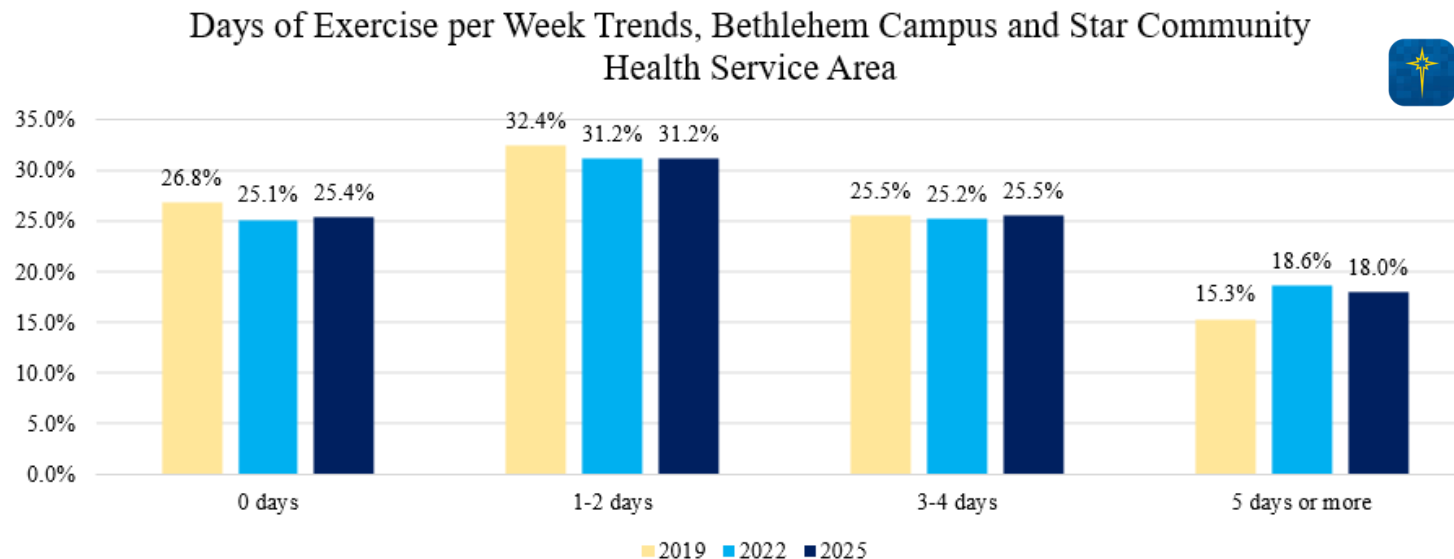


## Physical Activity

According to Healthy People 2030, physical activity and exercise contribute to a healthy lifestyle and can help to prevent disease, disability, injury, and premature death. Physical activity includes any movement that expends energy, including daily tasks, recreational activities, and occupational tasks. Exercise refers to planned, structured, and repetitive movements aimed at improving or maintaining physical fitness. Regular physical activity and exercise can enhance cardiovascular health, strengthen muscles and bones, improve mental health, and help individuals maintain a healthy weight. Healthy People 2030 aims 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 5 or more days a week for 30 minutes each. The target goal by 2030 is 21.8% of adults participating in physical activity, and as of 2022 the nation was at 26.3% of individuals that did not participate in physical activity in their free time. This aligns with the CDC data that shows fewer than 1 in 4 children get enough physical exercise and only 1 in 5 adults meet physical activity guidelines.

The CHR&R measure physical inactivity as the percentage of adults 20 years old and over reporting no leisure-time physical activity. Pennsylvania has 23% of adults who report no leisure-time physical activity, with 26% of Lehigh County and 23% of Northampton County adults reporting no leisure-time. The national average of adults who report no leisure-time physical activity is 23%.

There was a slight decrease in survey respondents in the Bethlehem Campus and Star Community Health service area who reported five or more days of physical activity between 2022 (18.6%) and 2025 (18.0%). This could be due to the fact that when the 2022 CHNA survey was administered, it was during the COVID-19 lockdown, and research indicates a spike in physical activity during that time for people who were required to stay home and work remotely. Physical activity for people indicating one to two days (25.5%), three to four days (25.5%) and no days (25.4%) remained similar to previous CHNA data.

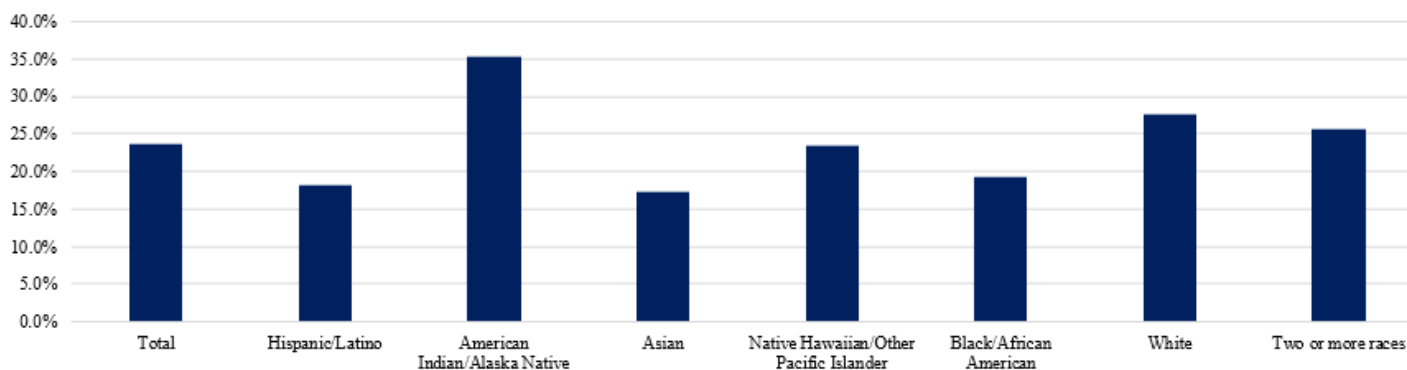


## ..... Vulnerable Populations .....

Physical activity levels vary greatly across different populations based on socio-economic, cultural, and environmental factors (e.g., age, race, ethnicity, socioeconomic status). Minority populations, including Black and African American, Hispanic, and American Indian or Alaska Native populations are the least likely to engage in leisure-time physical activity, while White and Asian populations are the most likely to engage in leisure-time physical activity. According to Americas Health Rankings Senior Report (2024), 29.5% of older adults in fair or good health in New Jersey were physically inactive and 33.1% in Pennsylvania compared to 30.9% nationwide.

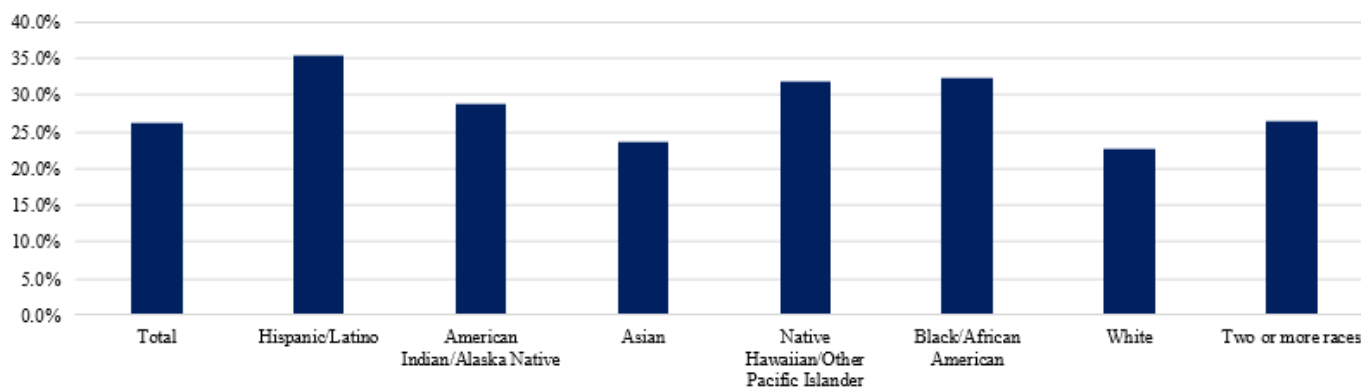
Healthy People 2030 objective to increase the proportion of children who do enough aerobic physical activity has a target goal of 30.4%, meaning that by 2030, 30.4% of children should meet the current aerobic physical guideline of at least 60 minutes of physical activity per day. The most recent data (2021) reports that only 23.6% of children meet that goal, and the trend is decreasing. When broken down by race, American Indian and Alaska Native children were the most likely to meet the goal (35%) and Asian children were the least likely (17.2%).

Children Meeting Aerobic Physical Activity Guidelines by Race/Ethnicity (2020-21)



Source: National Survey of Children's Health, 2021

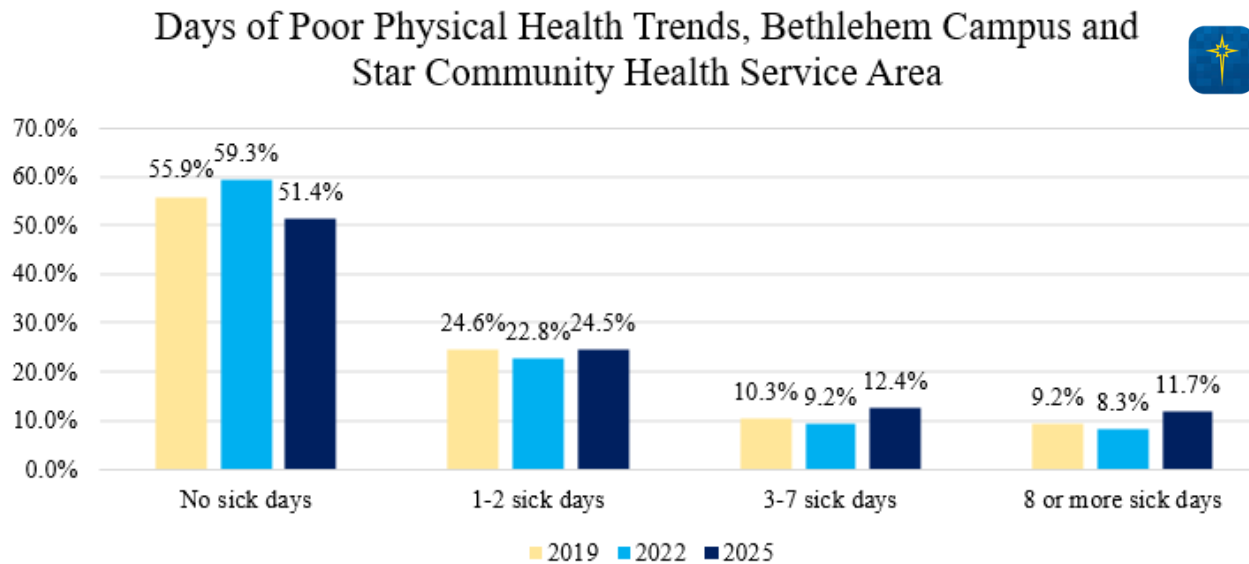
Adults Engaging in no Leisure-time Physical Activity by Race/Ethnicity (2022)



Source: National Interview Health Survey, 2022

## ..... Days of Poor Physical Health .....

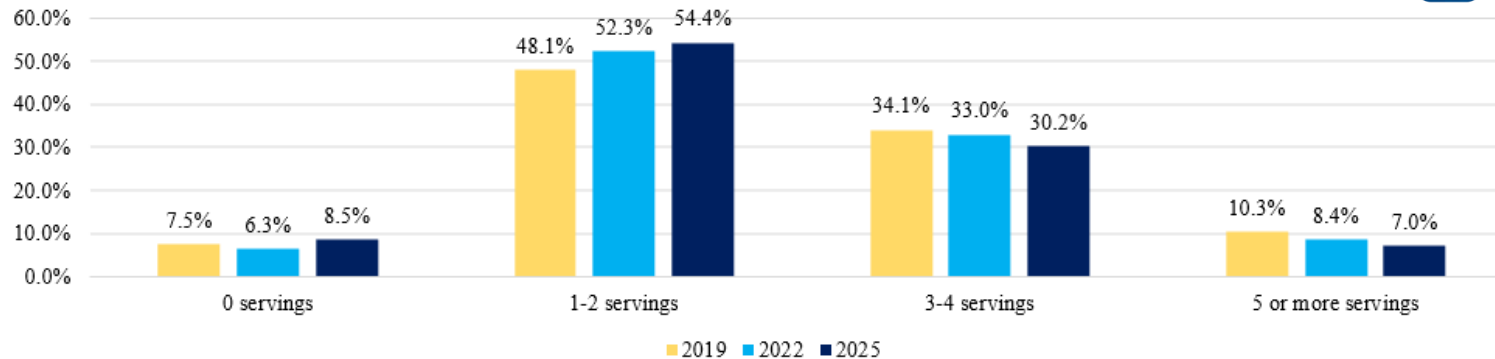
According to Healthy People 2030, daily physical activity can prevent disease, disability, injury, and premature death. Robert Wood Johnson CHR&R assesses the number of poor physical health days people experience since it can be a predictor for negative outcomes associated with health such as unemployment, 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 3.4 unhealthy days, with Lehigh County averaging 3.4 unhealthy days and Northampton County averaging 3.3 unhealthy days. There was a decrease in respondents to the CHNA survey indicating no sick physically unhealthy days in the past 30 days (51.4%) compared to previous CHNA data. There was an increase with sick days in all categories, with 24.5% of respondents that indicated 1-2 sick days, 12.4% indicated 3-7 sick days, and 11.7% indicated eight or more sick days in the past 30 days.



## ..... Diet .....

Diet (e.g., 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, all of which play a role in the top leading causes of death nationally. Released in February 2021, the CDC surveyed adults 20 years and older and found 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 than men. 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). In Pennsylvania, 7.8% of adults consume two or more servings of fruit and three or more servings of vegetables daily along with 7.4% of adults nationwide.

Servings of Fruits and Vegetables per Day Trend, Bethlehem Campus and Star Community Health Service Area



In the Bethlehem Campus and Star Community Health service area, 7.0% of respondents eat the recommended five or more servings of fruits and vegetables a day, a slight decrease from 2022. The majority of respondents eat 1-2 servings a day (54.4%), an increase from 2022. Furthermore, looking at fruits and vegetable consumption by income shows that serving size increases with income. Of respondents who make less than \$15,000, 19.0% do not consume any fruits or vegetables and only 3.3% consume the recommended amount of five or more fruits and vegetables a day. For individuals making more than \$60,000 per year, 6.2% reported no fruits or vegetables, and 8.9% reported consuming five or more servings per day. The majority of respondents in each income bracket consume 1-2 servings of fruits and vegetables a day.

## ..... Vulnerable Populations .....

Healthy People 2030 set two general goals, as well as numerous targeted goals (e.g., reduce iron deficiency in children aged one to two years old) related to nutrition and healthy eating. The two general goals, increase fruit consumption by people aged two and over and increase vegetable consumption by people aged two and over, are used to help understand general eating patterns and behaviors for the population. The goal for fruit consumption is 0.56 cup equivalents per 1,000 calories and vegetables is 0.84 cup equivalents per 1,000 calories. As of 2020, data shows that only 0.49 cup equivalents of fruit per 1,000 calories and 0.73 cup equivalents of total vegetables per 1,000 calories were being consumed, indicating little or no detectable change. In Lehigh County, 4% of the total population has limited access to healthy foods, which is lower than Northampton County (5%), Pennsylvania (5%) and nationwide (6%). According to America's Health Rankings Senior Report, 6.9% of older adults in Pennsylvania have adequate fruit and vegetable consumption, compared to 7.3% nationwide.



***“We have St. Luke’s, but unfortunately people still engage in unhealthy behaviors. You have unhealthy eating and the reliance on medications instead of engaging in physical activity and healthy nutrition.”***

## ..... 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. Healthy People 2030 objectives are to increase knowledge and education of sexual education across adolescents and adults and 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 proportion of adolescents who receive formal sexual education before age 18.

The CHR&R assess two sexual activity measures: STI and teen births. The 2024 rankings use STI data that reflects the number of new chlamydia cases per 100,000 population. These rates are important to assess because chlamydia 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. Chlamydia also disproportionately impacts adolescent women, as 1 in 20 sexually active women ages 14-24 have chlamydia. In Pennsylvania, the rate is 409.8 per 100,000 population. The highest rate by service area county in Pennsylvania is Berks County at 468.4, and the lowest is Carbon County at 192.6. In Lehigh County the rate is 467.3 per 100,000 population and it is 331.6 per 100,000 population in Northampton County.

There are also strong connections between teen birth and poor socioeconomic and/or mental outcomes. CHR&R also found that teenage mothers who give birth are less likely to achieve an education level beyond high school and are more likely to experience psychological distress. The measure is represented by the number of births per 1,000 female population ages 15-19 years. In New Jersey, the rate is 10 teen births per 1,000 population with a rate of seven in Warren County and two in Hunterdon County. In Pennsylvania, the rate is 13 per 1,000 population. The highest rate by service area in Pennsylvania is Schuylkill County (22), and the lowest is Bucks County (5). 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 8% of babies in the United States are born with low birthweight. A low birthweight may have significant complications, including birth defects, infections, trouble eating, and trouble gaining weight. Teen mothers (and mothers over 40) are most likely to have a low birthweight child. Monroe and Schuylkill County has the highest rate of low birthweight (9%) while Bucks and Montgomery County has the lowest (7%).

## ..... Sleep .....

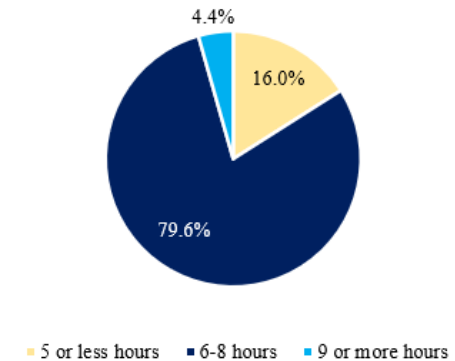
Sleep is an important part of a healthy lifestyle and a lack of sleep can have serious and negative health effects. Healthy People 2030 also reports that approximately one in three adults do not get enough sleep. Ongoing sleep deficiency has been linked to numerous health conditions such as heart disease, stroke, depression, and anxiety. Objectives for Healthy People 2030 include the reduction of motor vehicle crashes due to drowsy driving, to increase the proportion of children who get sufficient sleep, and to increase the proportion of adults who get sufficient sleep. The 2024 CHR&R assessed the percent of adults who report less than an average of 7 hours of sleep per night. In Pennsylvania, 37% of adults report less than an average of seven hours of sleep per night. Lehigh County also has 37% of insufficient sleep reported and Northampton County has 36%, compared to 33% nationwide.



The 2023 PAYS survey asked students to indicate amount of sleep per night, with 35.7% of students in Pennsylvania reporting an average of less than seven hours. Of students in Lehigh County, 33.0% reported an average of seven hours compared to 36.8% in Northampton County. The survey also asked if students “felt tired or sleepy during the day,” “every day,” or “several times” during the past two weeks. Across Pennsylvania, 64.4% of students indicated consistent sleepiness during the past two weeks compared to 62.8% in Lehigh County and 65.8% in Northampton County.

To get an understanding of how many hours of sleep respondents get, the CHNA survey asked respondents to indicate, on average, the number of hours they sleep in a 24-hour period. The majority of respondents in the Bethlehem Campus and Star Community Health service area (79.6%) get between 6-8 hours of sleep a night (recommended), 4.4% of respondents get nine or more hours, and 16.0% of respondents get five hours or less.

Hours of Sleep, Bethlehem Campus and Star Community Health Service Area



## ..... Mental Health .....

Mental health has been an increasing concern over the last decade, with significant increases since 2020, exacerbated in part due to the COVID-19 pandemic. Mental health disorders can affect people of all age and racial groups, but some populations have disproportionately higher rates of diagnosis. Mental health disorders (e.g., anxiety, 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 health disorders. Goals related to improving mental health for Healthy People 2030 are to increase the proportion of people with substance use and mental health disorders who get treatment for both, increase the proportion of children and adolescents with symptoms of trauma who get treatment, reduce the suicide rate, and increase the proportion of public schools with a counselor, social worker, or psychologist. To help reach, educate, and connect people with mental health disorders to care, there are local National Alliance on Mental Illness (NAMI) chapters throughout the nation, including many areas served by SLUHN.

According to the State of Mental Health in America 2024 Report, 23% of adults (60 million people) experienced a mental illness in the past year, compared to 19.86% of adults in 2022. One in four adults with frequent mental distress could not see a doctor due to cost, a 2% increase since 2022 and 5% of adults reported experiencing thoughts of suicide. 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 39-51 (including the District of Columbia) indicate a higher prevalence of mental illness and lower rates of access to care. The report indicated that 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 18<sup>th</sup> with a 19.7% prevalence rate. The access to care ranking indicates how much access to mental healthcare exists within a state (e.g., access to insurance, access to treatment, quality and cost of insurance, access to special education, mental health workforce availability). A lower number for access ranking indicates that a state provides relatively more access to mental healthcare than those ranked 39-51. Pennsylvania is ranked 10<sup>th</sup>.

State of Mental Health in America (2022), State Adult Rankings					
	PA%	PA Rank	NJ%	NJ Rank	United States
Adults with any Mental Illness (AMI)	19.7%	17	16.4%	1	19.9%
Adults with Substance Use Disorder in the past year	7.3%	15	6.7%	6	7.7%
Adults with serious thoughts of suicide	4.8%	28	3.8%	1	4.6%
Adults with AMI who are uninsured	5.9%	10	10.6%	25	11.1%
Adults with AMI who do not receive treatment	51.9%	17	57.1%	38	55.9%
Adults with AMI reporting an unmet need	25.7%	31	21.6%	6	24.7%
Adults with cognitive disability who could not see a doctor due to costs	23.8%	13	25.2%	18	29.7%

## ..... Depression and Anxiety .....

Depression is a significant issue facing the U.S. and the residents of our service area. The National Institute of Mental Health (NIMH) define 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.” Some signs of depression are, but not limited to: persistent sad mood; feelings of hopelessness or pessimism; decreased energy or fatigue; difficulty 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. Some 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 (counseling), or a combination of both.

In Pennsylvania, the state asked about depression on their 2022 Behavioral Health Risk Factor Surveillance System (BRFSS), which included depression, major depression, and minor depression (dysthymia). The survey found that 21.7% of people in Pennsylvania were depressed.

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.” 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. Anxiety disorders can be treated with psychotherapy, medication, or a combination.

Generalized Anxiety Disorder (GAD) displays excessive anxiety or worry, most days for at least 6 months, about a number of things, causing significant problems in areas of life like social interactions, school, and work. In 2022, the Anxiety and Depression Association of America (ADAA) found that GAD affects 3.1% of the U.S. population, however only 43.2% are receiving treatment.

## ..... Suicide .....

Suicide is a serious public health crisis in the United States and affects individuals of all ages, genders, cultures, races, and backgrounds. While some populations are statistically at higher risk than others (e.g., LGBTQ+, veterans, adolescents), there are many factors that contribute or are correlated with suicide, including mental health disorders (e.g., depression, anxiety), substance use, traumatic experiences, and socio-economic stressors.

Suicide involves dynamic interactions between national and community issues, families and relationships, and individual health and/or well-being. According to the CDC (2022), there is one suicide death every eleven minutes in the United States. It has become a growing concern and is now the second leading cause of death for 10-34 year olds and fourth for 35-54 year olds. A CDC Suicide Mortality report in the United States from 1999-2021 was released April 2023, outlining the suicide rate during a 10-year period. The age-adjusted rate in 2021 was 14.1 per 100,000 people, which is slightly lower than the rate in 2020 (13.5). The 2021 crude rate is 24.5 per 100,000 people. In 2021, the National Hospital Ambulatory Medical Care Survey (NHAMCS) reported 660,000 emergency visits for self-harm. Mental Health America data (2023) indicates that Lehigh County has 9.74 number of individuals reporting suicidal ideation per 100,000 and Northampton County has 11.1 individuals per 100,000 reporting suicidal ideation.

Suicidal Ideation, Mental Health America (2024)	
County	Per 100,000
Berks	14.26
Bucks	12.34
Carbon	22.82
Lehigh	9.74
Luzerne	13.61
Monroe	13.67
Montgomery	13.32
Northampton	11.1
Schuylkill	11.48
Hunterdon	9.84
Warren	12.97
Pennsylvania	17.5
New Jersey	16.7
United States	19.4

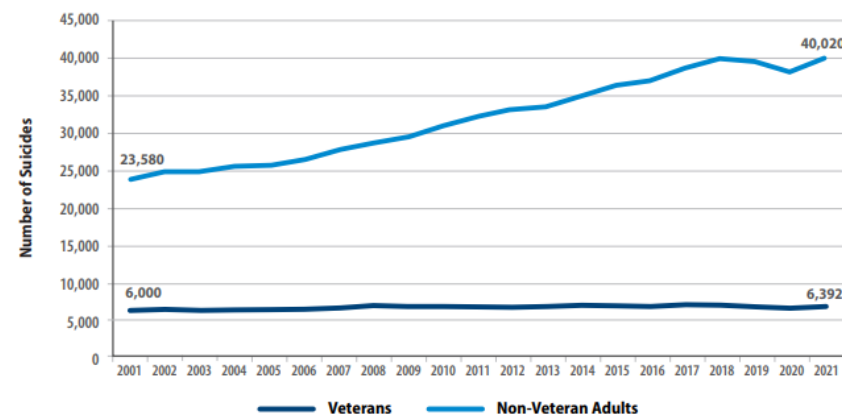
In response to the growing suicide rates, Pennsylvania has made state suicide prevention plans. Pennsylvania's prevention plan was released in September 2020, outlining eight specific prevention goals, including increased suicide prevention awareness efforts that reduce stigma and promote safety, help-seeking, 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. Some populations are more vulnerable than others to mental disorders, substance use, and suicide. A Substance Abuse and Mental Health Services Administration (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. 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 advertising to encourage care-seeking behaviors.



***“One of the biggest frustrations is when you encounter people that are in crisis mental health situations and they are sent to the ER to keep cycling in and out because there is just not an appropriate place to place them.”***

## ..... Vulnerable Populations .....

Veterans are particularly vulnerable to suicide. A 2023 National Veteran Suicide Prevention Report by the U.S. Veterans Affairs found that in 2021, 6,923 veterans died by suicide, an increase of 114 from 2020. When looking at age-adjusted and sex-adjusted suicide rates, veterans suicide rates increased 11.6% between 2020 and 2021, compared to 4.5% for the general population. In 2021, suicide was the 13th leading cause of death for veterans overall, and the second leading cause of death for veterans under 45 years old. The unadjusted suicide rate was 19.7 per 100,000 for veterans with Hispanic ethnicity, compared to 33.4 per 100,000 for other veterans. 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 health disorder diagnosis. These suicide rates tend to be higher in individuals who live in rural areas and individuals who are isolated.



The 2024 State of Mental Health in America Report also ranked states by youth measures, with 20% of youth ages 12-17 reporting they suffered from at least one major depressive episode in the past year, up from 15.08% in 2022. 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.” Additionally, 53.7% of youth in Pennsylvania dealt with a major depressive episode in the last year with an unmet need for treatment, compared to 48.3% nationwide. Of youth nationwide not receiving care, 86.9% reported that they should have been able to handle their mental healthcare on their own.

State of Mental Health in America 2022 State Youth Rankings					
	NJ%	NJ Rank	PA%	PA Rank	US
Youth with at least one Major Depressive Episode (MDE) in the past year	12.71%	3	12.88%	4	15.08%
Youth with Substance Use Disorder in the past year	3.33%	4	3.52%	7	4.08%
Youth with severe MDE	8.4%	9	8.2%	5	10.6%
Youth with MDE who did not receive mental health services	57.1%	38	51.9%	17	55.9%
Youth with severe MDE who received some consistent treatment	28.4%	25	39.9%	7	27.2%

Released in September 2020, the National Vital Statistics Report and CDC published a report of suicide among adolescent and youth ages 10-24 years old between 2000-2018. The average percent increase in suicide deaths among 10-24 years old from 2007-2009 to 2016-2018 went from 47.1% to 53.6% in Pennsylvania. According to researchers at the US National Institutes of Health, suicide rates among 8-12 year olds rose by an average of 8.2% annually from 2008 to 2022, and were disproportionately increasing among girls, making it the 5th leading cause of death in girls aged 8-12 years old. From 2020 to 2021, suicide rates increased significantly for both Black females and White females. Suicide rates also increased significantly for non-Hispanic American Indian or Alaska Native, Black, and White males.

Children are becoming more vulnerable to mental health disorders (e.g., depression), suicidal ideation, and suicide, with 14.8% of Pennsylvania students indicating they used self-harm (e.g., cutting, scraping, burning) in the past 12 months. Within the Bethlehem and Star Community Health service area, 13.9% of students in Lehigh County and 17.3% of students in Northampton County indicated using self-harm. Across the state, 16.1% of students indicated seriously considering suicide, 12.5% planned suicide, 5.2% attempted suicide, and 29.7% needed medical treatment as a result of a suicide attempt. The figure below shows 2023 PAYS responses related to suicide and suicidal ideation in Lehigh and Northampton counties.

In the 2023 PAYS survey, children were asked about prolonged sadness and depression. The most common depressed thought of all children in Pennsylvania (38.6%) was *at times I think I am no good at all*. Additionally, 37.3% of Pennsylvania children reported feeling sad or depressed most days in the past 12 months, a decrease from 40.1% in 2021.

The 2023 PAYS also illustrated some concerning trends in regard to perceived importance of school with only 42.9% of all students across the state feeling that school is going to be important for their future, and 36.0% of students report enjoyment in school, a reduction from 37.6% in 2021. Additionally, 78.4% of students feel safe at school, a 3.6 percentage point decrease from 82.0% in 2021.

Many risk and protective factors come into play when understanding observed rates of substance use and mental health issues addressed in this assessment. 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. Among the highest risk factors across the state were low commitment toward school (57% of students at risk), academic failure (37% at risk), and parental attitudes encouraging antisocial behavior (55% at risk). Among the highest protective factors were family attachment (68% of students with protection), family opportunities for prosocial involvement (64% with protection), and family rewards for prosocial involvement (52% with protection).

In 2023, the National Vital Statistics Report and CDC released a 2022 provisional estimate of suicide by demographic characteristics in the United States. The number of suicides for males increased 2% from 38,358 (2021) to 39,255 (2022). The number of female suicides females increased 4% from 9,825 to 10,194. Of the races presented in the report (Hispanic, Non-Hispanic American Indian and Alaska Native, Asian, Black, and White) the highest rate was amongst American Indian and Alaska Native individuals at 26.7 deaths per 100,000 standard population. All of the female groups increased in suicide rates from 2021-2022, with a significant increase for only White females (0.2% increase from 7.1 to 7.3).

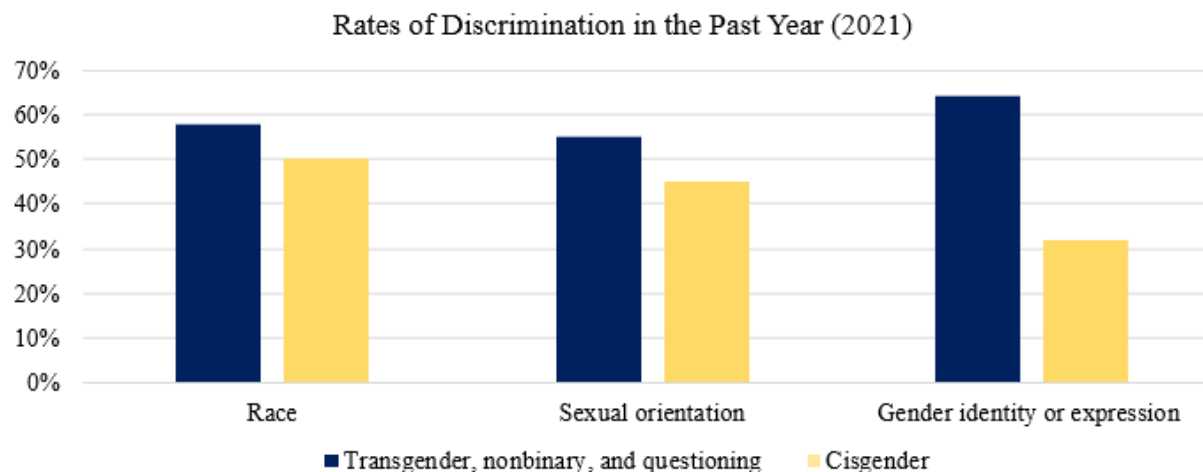
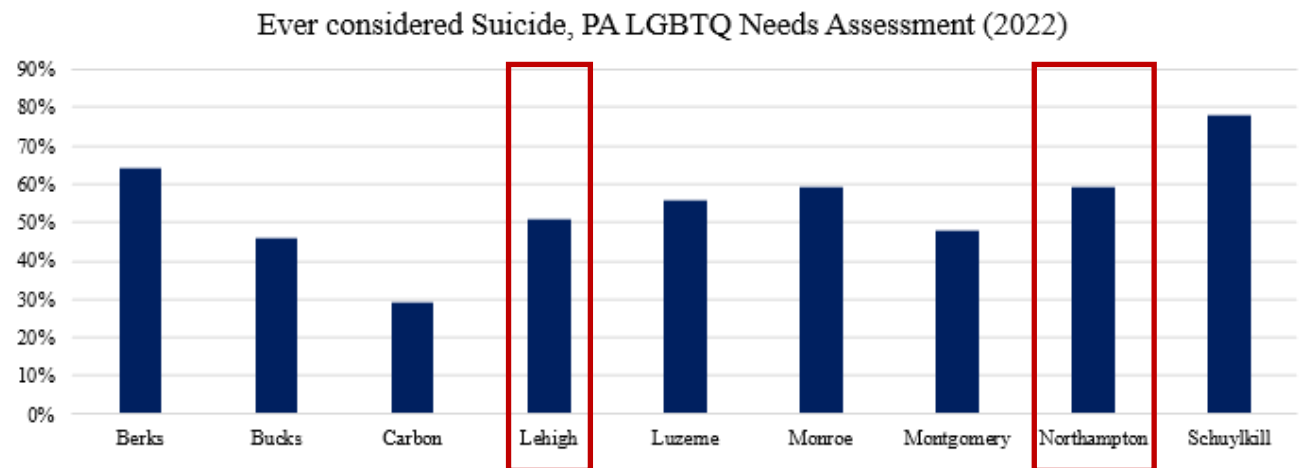
<b>County</b>	<b>Indicated using self-harm (scraping, burning, cutting)</b>	<b>Seriously considered suicide</b>	<b>Planned suicide</b>	<b>Attempted suicide</b>	<b>Needed medical treatment from suicide attempt (out of students reporting suicide attempt)</b>
Berks	15.5%	16.2%	12.5%	5.6%	33.1%
Bucks	13.0%	13.8%	10.9%	4.4%	29.3%
Carbon	16.5%	18.6%	14.6%	6.6%	30.3%
Lehigh	13.9%	15.1%	14.6%	5.5%	30.6%
Luzerne	15.6%	16.9%	13.4%	6.7%	26.7%
Monroe	15.7%	17.8%	14.4%	6.4%	29.5%
Montgomery	13.2%	13.7%	10.3%	4.1%	28.5%
Northampton	17.3%	18.1%	14.9%	6.8%	29.1%
Schuylkill	15.2%	16.4%	13.4%	5.4%	30.0%
Pennsylvania	14.8%	16.1%	12.5%	5.2%	29.7%



There are clear disparities statewide between and within the LGBTQ+ community. The Pennsylvania LGBTQ Health Needs Assessment (2022), conducted by Bradbury-Sullivan Community Center based in Allentown, Pennsylvania, reported that 21.0% of respondents had experienced homelessness at some point in their lifetime. Mental health disorders also pose an immense public health crisis. Respondents indicated that depression was the highest community health priority issue (57.3%), followed by loneliness and isolation (37.4%) and suicide (35.5%). Almost half of respondents (48.0%) reported thoughts of harming themselves at some point in their lifetime, and of those who had thought about harming themselves, 83.3% had thoughts of self-harm as youth (i.e., 19 years old and younger).

The Trevor Project's 2021 National Survey of LGBTQ+ Youth Mental Health revealed that 19.0% of LGBTQ+ youth aged 13–18 and 8.3% of those aged 19–24 reported attempting suicide in the past year. When these rates are applied to the estimated number of LGBTQ+ youth in the U.S., it translates to approximately 503,073 youth aged 13–18 and 209,917 youth aged 19–24, totaling 712,990 LGBTQ+ youth aged 13–24 who attempted suicide in the past year.

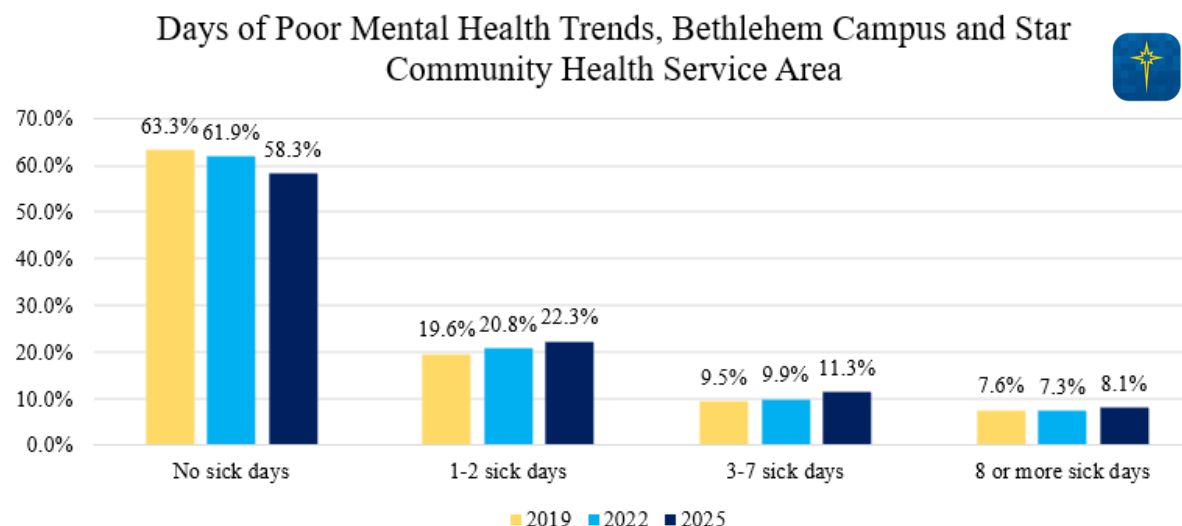
Additionally, more than one in five (21%) Black transgender, nonbinary, or questioning young people reported attempting suicide in the past year. This rate is more than double that of Black cisgender LGBTQ+ young people (8%). More than one-third (32%) of Black cisgender LGBTQ+ young people seriously considered suicide in the past year, compared to just over half (51%) of Black transgender, nonbinary, or questioning young people.





## ..... 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 CHR&R assesses poor mental health days by the average number of mentally unhealthy days in the past 30 days. 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. Lehigh County and Northampton County have an average number of 4.8 mentally unhealthy day. The majority of 2025 CHNA respondents in the Bethlehem Campus and Star Community Health service area indicated no mentally unhealthy days in the past 30 days (58.3%), which was a decrease of 3.6% from 2022. There was an increase in respondents that indicated 1-2 sick days (22.3%), 3-7 sick days (11.3%), and 8 or more sick days (8.1%) in the past 30 days.



## ..... Substance Use .....

According to Healthy People 2030, over 20 million adults and adolescents in the United States experienced a substance use disorder (SUD) in 2023. SUD can involve illicit drugs, prescription medications, or alcohol, with opioid use disorders causing an epidemic across the country. These disorders are associated with numerous health issues (e.g., mental health, cancer, heart attack, stroke), and overdoses often result in emergency department visits and fatalities. Healthy People 2030 aims to prevent drug and alcohol misuse and ensure that individuals with substance use disorders receive the necessary treatment. There are numerous targeted goals (e.g., reduce the proportion of people who used heroin in the past year) and other more general goals. The general goals help to encompass large populations and support preventative measures to reduce SUD. The goal to reduce drug overdose deaths by 2030 is 20.7 per 100,000, meaning that the goal is to reduce drug overdose deaths to 20.7 people per 100,000 by 2030. As of the most recent update (2021), drug overdose deaths were 32.4 per 100,000 with deaths projected to increase. The goal to reduce the proportion of adults who used drugs in the last month has a goal of 12%, meaning that by 2030 the goal would be to have 12% or less of adults 18 years and over who reported use of illicit drugs in the past 30 days. The most recent data (2019), shows that 13.4% of individuals 18 years and over reported use of illicit drugs in the past 30 days, indicating a trend in a negative direction.

SUD affects an individual’s health, relationships, and are complex and highly specific to the individual. Although effective treatments for substance use disorders exist, a significant number of individuals do not receive the care they need. Emphasis should be placed on implementing strategies to prevent substance use, especially among adolescents, and facilitating access to treatment can help reduce drug and alcohol misuse, associated health problems, and deaths. A substance use and suicide study done by Substance Abuse and Mental Health Services Administration (SAMHSA) in 2023 found that 1 in 4 adults in the U.S. used illicit drugs in the past year. Of the 70.5 million people living in America that used illicit drugs in 2023, 61.8 million used marijuana and 8.8 million used other drugs. Approximately 1 in 30 individuals misused central nervous system stimulants (e.g., cocaine, methamphetamines), with 1.4 million individuals misusing prescription CNS stimulants, a decrease from 1.5 million individuals in 2022.

According to the SAMHSA National Substance Use and Mental Health Services Survey (2022), there were 522 facilities in Pennsylvania that supported 62,942 clients. Of the clients supported in Pennsylvania, 84.7% of clients had both alcohol and other substance use disorders compared to 82.6% nationwide. Across Pennsylvania, Fentanyl contributed to 78% of all fatal overdose deaths.

..... **Alcohol** .....

Alcohol misuse refers to drinking alcohol in a situation, amount, or frequency that could cause harm to the person who drinks or to those around them (e.g., binge drinking, heavy drinking, alcohol use disorder). These patterns of drinking can lead to numerous health issues, including liver disease, heart problems, and increased risk of accident and injury.

The National Institute on Alcohol and Alcoholism (2022) reported that 221.3 million people (78.5%) reported that they drank alcohol at some point in their lifetime. Of adults 18 years and older, 84.1% reported drinking alcohol at some point in their lifetime. Men aged 18 years and older are more likely to have consumed alcohol (85.9%) compared to women (82.4%). White adults (89.1%) are the most likely to have consumed alcohol at some point in their lives, compared to Mixed Race populations (84.6%), Hispanic or Latino (79.7%), Black or African American (75.8%), American Indian or Alaska Native (74.2%), and Asian (64.2%).

Alcohol misuse can lead to serious health complications, including Alcohol Use Disorder (AUD), alcohol-related deaths, and alcohol-related emergency department visits. According to the 2022 BRFSS, 51.8% of people in Pennsylvania reported having at least one drink in the past 30 days. The Multiracial, non-Hispanic population was the most likely to have had at least one drink in the past 30 days (56.2%), followed by White, non-Hispanic (54.7%), Black, non-Hispanic (44.8%), Asian, non-Hispanic (42.7%), and Hispanic (38.6%). In New Jersey, 56.6% of respondents reported having at least one drink the past 30 days, with White, non-Hispanic populations the most likely to have a drink in the past 30 days (62.2%), followed by Multiracial, non-Hispanic (59.8%), Hispanic (50.1%), Black, non-Hispanic (49.0%) and Asian, non-Hispanic (47.0%).

Prevalence, Risks, and Consequences of Alcohol Use (2022)		
	Total	Percent of the Population
Past-Year Alcohol Use	174,339,000	62.3%
DSM-5 Alcohol Use Disorder (AUD)	29,544,000	10.6%
Emergency Department Visits (all alcohol-related visits)	4,936,690	1.8%
Alcohol-Related Deaths	140,557	0.1%

Source: National Institute on Alcohol and Alcoholism, 2022

The BRFSS (2022) also surveyed binge drinking and chronic drinking. The CDC reports that binge drinking is the most common, costly, and deadly pattern of excessive alcohol use in the United States. 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 per day, and more than seven (women) and fourteen (men) drinks in a week. The binge drinking percentage in Pennsylvania was 17% of adults, chronic drinking was 6.5% of adults, and at risk for drinking problem was 6.6%.

In 2022, the Census Bureau released a County Business Patterns (CBP) report. One of the businesses assessed were liquor stores. Liquor stores are 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). Lehigh County has 85 liquor stores per 10,000 population, and Northampton County has 47 per 10,000 population.

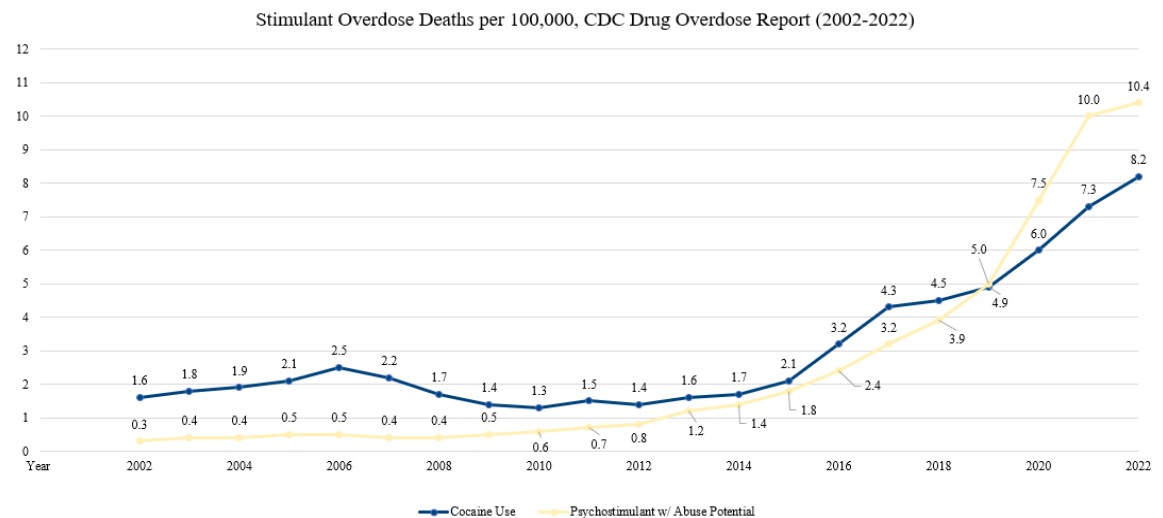
The CHR&R also reports on excessive drinking and alcohol impaired driving deaths. Excessive drinking measures the percentage of the county's adult population that reports binge or heavy drinking in the past 30 days. Both Lehigh and Northampton counties reported 19% of the adult population participated in binge or heavy drinking, which is the same as Pennsylvania (19%) and slightly higher than the United States (18%).

The US Department of Transportation National Highway Traffic Safety released a 2022 report assessing alcohol-impaired driving. Drivers are considered to be alcohol-impaired when their blood alcohol concentrations (BACs) are 0.08 grams per deciliter (g/dL) or higher. Alcohol reduces brain function and impairs thinking, which can hinder driving. Of the total traffic fatalities in Pennsylvania, 29% were alcohol-impaired-driving traffic fatalities. The age group with the highest percent of alcohol-impaired drivers involved in fatal traffic crashes was ages 21-24 (29%).

According to CHNA survey respondents in the Bethlehem Campus and Star Community Health service area, 18.3% reported at least one day of binge or heavy drinking in the past 30 days, with 12.2% reporting 1-2 episodes in the past month and 6.1% had 3 or more episodes.

## ..... Stimulants .....

The CDC Drug Overdose Report (2002-2022) indicates that the age-adjusted rate of drug overdose deaths increased from 8.2 deaths per 100,000 standard population in 2002 to 32.6 in 2022. The age-adjusted rate of drug overdose deaths involving cocaine increased from 1.6 deaths per 100,000 standard population in 2002 to 8.2 in 2022. It is important to note that the rate in 2022 was 12.3% higher than the rate in 2021 (7.3). The age-adjusted rate of drug overdose deaths involving psychostimulants increased more than 34 times from 2002 (0.3) to 2022 (10.4).



Stimulants are dangerous and easily abused because they increase alertness, attention, and energy. An overdose of stimulants can result in symptoms such as rapid breathing, aggression, hallucinations, and overactive reflexes. The SAMHSA (Substance Abuse and Mental Health Services Administration) 2023 National Survey on Drug Use and Health reported that 1.8% of people in the United States 12 years and older used cocaine in the past year. This is highest among 26-29 years (3.7%) and 21-25 years (3.6%). An estimated 7.0% of people 12 years and older reported misuse of prescription stimulants in the past year. This is highest among people 26-29 years (4.2%) and 21-25 years (3.7%).

..... **Tobacco** .....

The Robert Wood Johnson 2024 CHR&R report on adult smoking using data from 2021. Cigarette smoking is an important data point to capture because it has been identified as a cause of various cancers, cardiovascular disease, and other adverse health outcomes. Measuring tobacco use can help St. Luke’s and other health networks 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.

In Pennsylvania, 15% of adults smoke cigarettes. In Lehigh County, 17% of people smoke and 13% in Northampton County, the lowest of SLUHN Pennsylvania service areas. Additionally, secondhand smoke from burning tobacco products causes disease and physical harm for people who do not smoke. Some negative effects of secondhand smoke exposure include acute respiratory effects, coronary heart disease, stroke, lung cancer, and premature death.

In 2023, the CDC reported on youth and tobacco use including data from the 2023 National Youth Tobacco Survey. CDC reports that tobacco use typically starts and is established during adolescence. Nearly 9 out of 10 adults who smoke cigarettes daily try smoking for the first time by age 18. In 2023, about 1 of every 100 middle school students (1.1%) reported that they had smoked cigarettes in the past 30 days and nearly 2 of every 100 high school students (1.9%) reported that they had smoked cigarettes in the past 30 days. For other tobacco products, 1.1% of middle school students reported using cigars, 0.7% reported using smokeless tobacco, 1.0% reported using hookah, 0.8% reported using heated tobacco products, and 0.4% reported using pipe tobacco. Additionally, 1.8% of high school students reported using cigars, 1.5% reported using smokeless tobacco, 1.1% reported using hookah, 1.7% reported using nicotine pouches, 1.0% reported using heated tobacco products, and 0.6% reported using pipe tobacco.

Tobacco Usage by County, County Health Rankings (2024)	
County	Percent
Berks	18%
Bucks	15%
Carbon	20%
Lehigh	17%
Luzerne	20%
Monroe	17%
Montgomery	13%
Northampton	16%
Schuylkill	21%
Hunterdon	11%
Warren	14%
Pennsylvania	15%
New Jersey	11%
United States	15%

When asked if respondents in the Bethlehem Campus and Star Community Health service area smoke, 18.9% of respondents indicated they smoke. Of those who smoke, cigarettes are the most common (5.9%), followed by marijuana (5.1%), vape (3.0%), CBD (2.9%), cigars (1.5%), e-cigarettes (0.7%), and hookahs (0.4%). Less than 0.7% of respondents used chewing tobacco, snuff, snus, or pipes.

## ..... 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. The National Center for Health Statistics (2021) reported that 4.5% of all adults 18 and older currently use e-cigarettes, with men using e-cigarettes more frequently than women. Individuals aged 18-24 are the most frequent adult users of e-cigarettes, with 11.6% of men and 10.3% of women aged 18-24 years using e-cigarettes.

Nicotine is most harmful for children and adolescents because the substance hinders brain development, which continues until approximately 25 years old. Particularly, nicotine impacts attention, learning, mood, and impulse control, all of which are built in and refined through childhood. 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. 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.

The 2023 PAYS data indicated that 19% of students in Pennsylvania used an e-cigarette or vape within the last 30 days. While 81.1% of 6th grade respondents felt that electronic vapor/e-cigarettes are moderately or greatly risky for your health, that percentage decreased to only 76.3% amongst 12th grade students. When asked where they purchased their vaping products, 3.6% bought it from the internet, 17.1% gave someone money to buy it for them, 12.9% took it from someone, and 24.5% reported getting it from somewhere else.

## ..... 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. Marijuana can also have physical effects which result in breathing problems and increased heart rate. The SAMHSA (Substance Abuse and Mental Health Services Administration) 2023 National Survey on Drug Use and Health indicated that 21.8% of people ages 12 and older used marijuana in the past 12 months during 2023. Marijuana use was highest among people ages 21-25 (38.1%) followed by people ages 26-29 (29.6%).

In the Bethlehem Campus and Star Community Health service area, 5.9% indicated use of marijuana, which is a 1.3% increase from respondents to the 2022 CHNA survey. Usage was slightly higher for male (6.7%) compared to female respondents (4.5%), and highest in respondents that reported poor (12.5%) or very poor health (10.8%) compared to excellent (4.4%), very good (3.6%), or good overall health (5.4%).



## ..... Opioids .....

The CDC reports that the opioid epidemic in the United States occurred in three phases. 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 (e.g., 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. Prescription opioids are highly addictive and incredibly difficult to stop using. Common prescription opioids are Methadone, Oxycodone (OxyContin), Hydrocodone (Vicodin), and Benzodiazepines such as alprazolam (Xanax) and diazepam (Valium). According to the Pennsylvania Department of Health (2024), there were 58,065 emergency department visits for opioid overdose from January 2018-January 2024. During that same time frame, 100,128 calls were made to the PA Get Help Now Hotline and there were 9,499 cases of neonatal abstinence syndrome.

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. According to the Pennsylvania Department of Health (2024), of the 4,719 overdose deaths in 2023, 82.9% were opioid-related and 76.4% involved fentanyl.

Heroin is an illegal and highly addictive drug that is typically injected. This increases the risk of serious infections like HIV, Hepatitis C, Hepatitis B, and bacterial infections. According to the National Center for Drug Abuse Statistics, approximately 14,000 people in the United States die from a heroin overdose every year. More than 6.25 million Americans have used heroin in their lifetime, and 902,000 use heroin each year. This is problematic because heroin is typically used with other substances, which can increase the risk of an overdose.

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 2023, there were 21.4 hospital admissions for an opioid overdose per 100,000 people and 281.1 hospital admissions with opioid use disorder per 100,000 people in Pennsylvania. In Lehigh County there were 25.6 hospital admissions for an opioid overdose per 100,000 people and 15.5 hospital admissions for an opioid overdose in Northampton County.

County	Hospitalizations for Opioid Overdose		Hospitalizations with Opioid Use Disorder	
	Number	Rate per 100,000 (15+ years old)	Number	Rate per 100,000 (15+ years old)
Berks	114	32	913	256.2
Bucks	103	18.9	1,532	281.6
Carbon	16	28.8	278	499.6
Lehigh	79	25.6	1,115	360.7
Luzerne	50	18.3	573	210
Monroe	13	9.2	500	354.3
Montgomery	114	15.8	1,442	200.3
Northampton	42	15.5	1,056	390.4
Schuylkill	12	9.9	367	303.9
Pennsylvania	2,312	21.4	30,404	281.1



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. The effects of NAS usually occur within 48-72 hours after birth and newborns can suffer from symptoms including withdrawal, tremors, vomiting, and fever. According to the Pennsylvania Department of Health (2024), there were 9,499 cases of NAS from January 2018-January 2024. According to the PH4C (2023), there were 934 NAS cases across the state of Pennsylvania (8.0 per 1,000). Of the counties in the SLUHN service areas that reported NAS births per 1,000, Berks County has the highest rate (6.9) and Montgomery County has the lowest rate (3.0). In New Jersey (2022), there were 422 NAS cases, a rate of 4.53 per 1,000 births.

In 2021, a large opioid settlement was reached through a series of agreements between major pharmaceutical companies and U.S. state and local governments to resolve lawsuits related to the opioid crisis (nationalopioidsettlement.com). These settlements, involving companies like Johnson & Johnson, McKesson, Cardinal Health, and AmerisourceBergen, totaled billions of dollars. For example, a notable settlement in 2021 saw four companies agree to pay \$26 billion over multiple years. The funds from these settlements are intended to support opioid addiction treatment, prevention programs, and other remediation efforts to address the widespread impact of the opioid epidemic. This historic settlement aims to provide much-needed resources to communities affected by opioid addiction and hold companies accountable for their role in the crisis.

..... **Overdose** .....

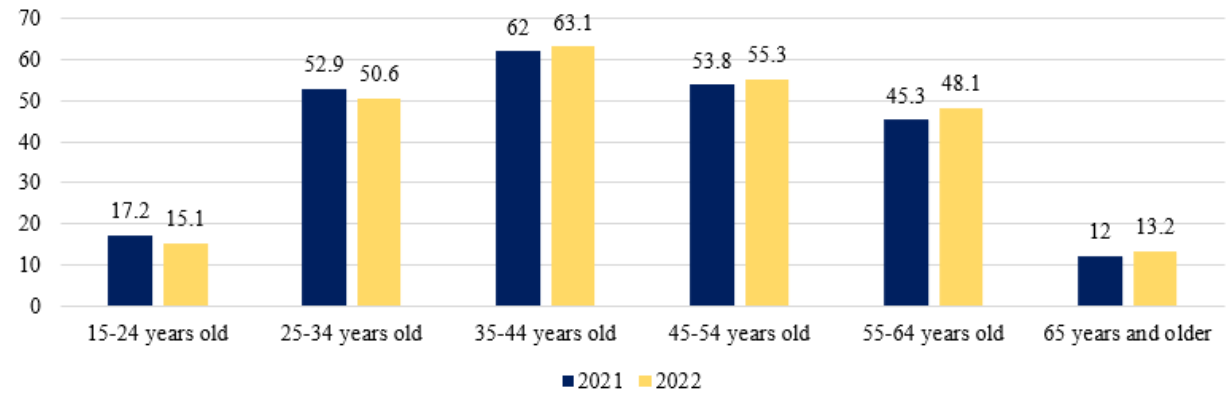
Overdose is inextricably linked to substance use disorders, and is a growing concern with increasing prevalence rates, especially during the pandemic. Drug overdose deaths are a leading contributor to premature death and are largely preventable. According to the CDC, the number of drug overdose deaths has increased from 17,500 per year in 2000 to 70,000 in 2017, which can be largely attributed to opioids. The NORC, National Opinion Research Center, reports on drug overdose deaths in the United States. From 2018-2021, there was a rate of 36.8 drug overdose deaths per 100,000 people in the U.S. aged 15-64 years old. The rate in Pennsylvania is 55.8 (ranking 5th out of 50 states), with Lehigh County at 43.8 per 100,000 people and Northampton County at 47.9 per 100,000 people.

Rate of Drug Overdose Mortality (National Opinion Research Center, 2018-2021) All Drug Overdoses	
Region	Rate (per 100,000)
Berks	43.1
Bucks	52.7
Carbon	84.1
Lehigh	43.8
Luzerne	79.2
Monroe	49.6
Montgomery	38.0
Northampton	47.9
Schuylkill	65.9
Hunterdon	21.2
Warren	44.5
Pennsylvania	55.8
New Jersey	46.9
United States	36.8

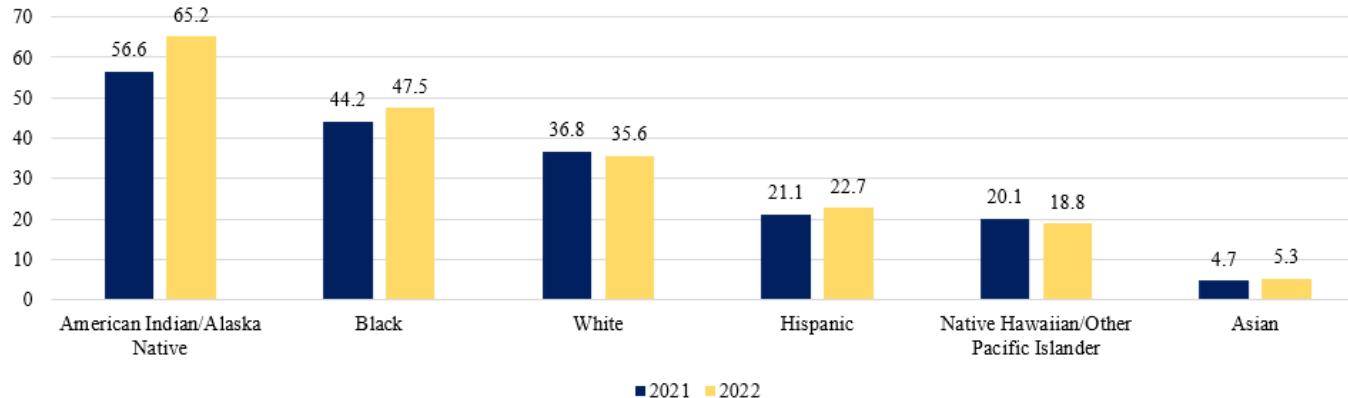
According to the National Center for Health Statistics (2024), the age-adjusted drug overdose deaths increased from 8.2 per 100,000 standard population in 2002 to 32.6 in 2022. The rate decreased between 2021 and 2022 for people ages 15-34 years old and increased for individuals aged 35 and older.

White non-Hispanic and Native Hawaiian or Other Pacific Islander non-Hispanic individuals, age-adjusted rates of drug overdose deaths were lower in 2022 than in 2021, while they increased for American Indian and Alaska Native non-Hispanic, Black non-Hispanic, Hispanic, and Asian non-Hispanic populations.

Rate of Drug Overdose Deaths, by Age Group  
United States (NCHS, 2024)



Rate of Drug Overdose Deaths, by Race and Hispanic Origin  
United States (NCHS, 2024)



## ..... Stigma .....

Stigma is another important component to substance use disorder regarding usage and receiving or accessing help. The Cambridge Dictionary defines stigma as “a strong feeling of disapproval that most people in a society have about something.” Stigma may be a barrier to seeking help for people suffering from substance use disorders due to shame or fear of disapproval from family, friends, or others. Public stigma can lead to self-stigma, where individuals with substance use disorders internalize negative stereotypes from society, making these views part of their self-identity. Those with opioid use disorder often come to believe they are not valued members of society, which can cause feelings of guilt, self-loathing, shame, and despair. This self-stigma can result in various negative mental and physical health outcomes, such as increased anxiety and depression, a lower quality of life, and reluctance to seek social support or substance use treatment.

In Pennsylvania, significant efforts have been made to reduce stigma associated with mental health and substance use disorders. The “Life Unites Us” campaign, in collaboration with the Pennsylvania State Data Center, has been instrumental in helping to understand stigma across the state. The Get Help Now hotline is a toll-free hotline available 24 hours a day, seven days a week, to help individuals suffering from addiction.

## ..... Naloxone .....

Naloxone is a drug that can quickly reduce the effects of an opioid overdose. The National Institute of Drug Abuse define 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 because of overdosing with heroin or prescription opioid pain medications.” Naloxone is safe and can be administered in three ways: injected, auto injected, or as a nasal spray. It is important to train people in numerous contexts (e.g., healthcare workers, community members, first responders, family members) 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 Program (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 people since 2018. Naloxone is available through all SLUHN emergency departments.

The Pennsylvania Department of Health signed a standing order for all residents to get Naloxone from their local pharmacies without a personal prescription. Pennsylvania also has a mail-to-home Naloxone program, allowing individuals to receive medication after a short online training. In Pennsylvania, community organizations and first responders can also request Naloxone at no cost through the Pennsylvania Overdose Prevention Program (POPP).

## ..... Warm Hand Off .....

Warm Hand Off (WHO) is an initiative to support the continuum of care for patients in need of multiple services and providers. It is a transfer of care between providers with the patient (and potentially family) present to ensure clear communication, transparency, and helps to build relationships between patients and providers. St. Luke’s collaborates with local community-based organizations and local county to support WHO efforts. Additionally, a Certified Recovery Specialist (CRS) is employed in both the Allentown and Sacred Heart emergency departments to support WHO. During 2024 at SLUHN Hospitals, a total of 1,776 WHO were conducted for alcohol, cannabis, cocaine, opioids, and other stimulants.

## ..... Vulnerable Populations .....

Substance use in children and adolescents can have a significant impact on their health and well-being. Substance use can affect growth and development, especially brain development, lead to risky behaviors such as unprotected sex and dangerous driving, as well as contribute to health problems in adulthood (e.g., heart disease, sleep disorders).

In 2023, PAYS found that lifetime use of substances among youth across the state was 28.9% for alcohol use, 11.6% for marijuana use, and 3.0% for prescription pain medication. 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 inhalants, heroin, ecstasy, and synthetic drugs. Lehigh County had a 22.5% rate of lifetime alcohol use and 8.4% reported lifetime marijuana use. Northampton County had a 29.8% rate of lifetime alcohol use and 11.9% of students reported lifetime marijuana use.

Lifetime Substance Use by County, PAYS (2023)										
	Berks	Bucks	Carbon	Lehigh	Luzerne	Monroe	Montgomery	Northampton	Schuylkill	Pennsylvania
Alcohol	28.9%	29.0%	33.2%	22.5%	24.6%	27.0%	27.9%	29.8%	31.0%	28.9%
Marijuana	11.6%	11.1%	13.1%	8.4%	9.2%	10.9%	10.2%	11.9%	10.4%	11.6%
Prescription Pain Medication	2.6%	2.5%	2.5%	2.6%	3.0%	4.0%	2.5%	3.2%	2.8%	3.0%
Synthetic drugs	1.2%	1.4%	1.6%	1.1%	0.9%	1.5%	1.4%	1.3%	1.1%	1.4%
Ecstasy or Molly	0.4%	0.4%	0.3%	0.4%	0.4%	0.5%	0.4%	0.6%	0.5%	0.5%
Hallucinogens	1.5%	1.7%	1.9%	1.3%	1.3%	1.6%	1.4%	1.9%	1.7%	1.9%
Inhalants	4.0%	3.6%	4.6%	3.9%	3.7%	4.6%	3.9%	4.7%	4.1%	4.0%



***“There is an increase in people with mental health and substance use issues. This goes with homelessness. You have a lot of people who have underlying mental health and substance use conditions that lead them to the homeless situation.”***

# Social and Community Context

Social and community context is the basis for people’s relationships and interactions with family, friends, co-workers, and community members. Negative social and community context can lead to unsafe neighborhoods, discrimination, chronic stress, poor mental health, and limited access to healthcare, which can lead to negative health outcomes. Healthy People 2030 focuses on improving health and safety in the places where people are born, live, learn, work, play, worship, and age. These objectives are designed to address social and community context as a social determinant of health, recognizing the economic and societal factors are intrinsically linked to health outcomes.

According to Healthy People 2030, the following objectives are social and community context and are measured at the national level. Most Healthy People 2030 objectives are core, or measurable, objectives that are related to targets outlined for the decade (2020-2030). Evidence-based interventions are supported through national, state, and local initiatives. Progress is measured using a variety of data sources (e.g., US Census, ACS estimates, state and county data) and is measured using the following indicators: Baseline only, target met or exceeded, improving, little or no detectable change, getting worse. The objectives outlined have corresponding updates at the national level as of June 2024.



**Baseline Only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.



**Target met or exceeded:** We've achieved the target we set at the beginning of the decade.



**Improving:** We're making progress toward meeting our target.



**Little or no detectable change:** We haven't made progress or lost ground.



**Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Healthy People 2030 Objectives for Social and Community Context	Baseline	Target	Most Recent Data	Progress (June 2024)
Increase the proportion of adults who talk to family or friends about their health	86.9% aged 18+ years (2017)	92.3%	79.6% (2022)	Getting worse
Reduce the proportion of children with a parent or guardian who has served time in jail or prison	7.7% 17 years and younger (2016-17)	5.2%	6.5% (2020-21)	Improving
Increase the proportion of adolescents who have an adult they can talk to about serious problems	79.0% aged 12-17 years (2018)	82.9%	78.3% (2019)	Little or no detectable change
Increase the proportion of people with diabetes who get formal diabetes education	51.7% aged 18+ years (2017)	55.2%	48.0% (2022)	Little or no detectable change
Increase the proportion of children and adolescents who communicate positively with their parents	68.5% aged 6-17 years (2016-17)	73.0%	62.0% (2020-21)	Getting worse
Increase the proportion of adults whose health care provider checked their understanding	26.6% aged 18+ years (2017)	32.2%	26.3% (2021)	Little or no detectable change
Increase the proportion of local jurisdictions that have a health improvement plan	67.2% (2016)	71.8%	65.0% (2022)	Little or no detectable change

## ..... Social Associations .....

Social association is a measure of the emotional and social support available to an individual. Social associations are often an organized group of individuals who come together based on shared interests, goals, or purposes. These groups typically have a structured system with rules, leadership, and membership. They can include professional, cultural, recreational, or political organizations and play a vital role in building community bonds and fostering collective action. Examples from CHR&R include: activity programs for older adults, community arts programs, community centers, cross-age youth mentoring programs, extracurricular activities for social engagement, grocery/housing/utilities cooperatives, intergenerational communities, intergenerational mentoring and activities, land return for tribal restitution, neighborhood associations, and more.

Limited social interactions and minimal community involvement are linked to higher rates of illness and premature death. Studies indicate that the health risks of social isolation are comparable to those of smoking. Additionally, social support networks are strong predictors of health behaviors, with individuals lacking a robust social network being less likely to adopt healthy lifestyle choices. People in areas with high social trust are less likely to report poor health compared to those in areas with low social trust. It is suggested that social trust is bolstered when individuals participate in voluntary groups and organizations, as these memberships foster trust among group members.

The social associations indicator from CHR&R measures the number of membership associations per 10,000 population. According to 2024 CHR&R, U.S. top performers scored 18 for social associations, while Pennsylvania and New Jersey social associations were 11.8 and 8.1, respectively —falling below U.S. performers and bringing to light the need for more social supports and community building in our service areas. Lehigh County has a social association score of 9.9 and Northampton County has a social association score of 9.8.

One-Person Households by Age and Sex		
U.S. Census Current Population Survey (2024)		
Age	Male	Female
15-64 years	30.9%	27.6%
65-74 years	8.6%	12.6%
75+ years	6.1%	14.2%

The U.S. Census Bureau, Current Population Survey, released a 2024 report on America's Families and Living Arrangements from 1970 to 2022. In 2022, men aged 15-64 made up the largest share of one-person households (30.9%) while females were the most likely to be in a one-person household aged 75 years and older. The report also highlighted that the proportion of households consisting of a single person has increased significantly over the decades, with about 28% of all households being one-person households in 2022. Additionally, the data revealed that the number of young adults aged 18-24 living with their parents has risen, with 57% of men and 55% of women in this age group residing in their parental homes. According to the Pew Research Center (2019), economic factors such as rising housing costs and student debt have made it more challenging for young adults to afford independent living. This trend reflects broader changes in economic conditions and social norms over the past few decades, including delayed marriage and extended education becoming more common, leading to more young adults staying in their parental homes longer. While this can lead to positive social associations within multigenerational households, it can also limit social associations for young adults through increased family household connectedness and expectations.



## ..... Social Vulnerability .....

Social vulnerability refers to the demographic and socioeconomic factors that can negatively affect communities. The CDC Social Vulnerability Index (SVI) is a tool designed to help public health officials and emergency response planners identify communities that may need support before, during, or after disasters. By using 16 U.S. Census variables, the SVI assesses the resilience of communities when confronted with external stresses on human health, such as natural disasters or disease outbreaks. The index ranks each community on a scale from 0 to 1, with higher values indicating greater vulnerability. This ranking helps prioritize resources and interventions to the most at-risk populations, ensuring that aid is distributed effectively and equitably.

The SVI is divided into four major themes, each encompassing specific indicators:

**Socioeconomic Status:** This theme includes indicators such as poverty, unemployment, income, and education level. These factors influence a community's ability to prepare for, respond to, and recover from disasters.

**Household Composition and Disability:** This theme considers variables like age (e.g., elderly and children), single-parent households, and disability status. These groups may require additional assistance during emergencies due to physical or logistical challenges.

**Minority Status and Language:** This theme encompasses racial and ethnic minority status and English language proficiency. Language barriers and systemic inequalities can affect access to resources and information during a crisis.

**Housing Type and Transportation:** This theme looks at housing structures (e.g., multi-unit structures, mobile homes), crowding, and access to transportation. These factors can impact evacuation processes and the ability to shelter in place safely or to seek refuge when faced with a natural disaster or other emergency.

Lehigh County has a social vulnerability index of 0.63, the highest of all counties served by SLUHN and Northampton County has a social vulnerability index of 0.29. Understanding SVI is important because it helps to identify demographic groups and geographic locations with higher vulnerability to environmental and public health hazards. Reducing social vulnerability can minimize the impacts of stressors, disasters, and decrease human suffering and economic loss.

Social Vulnerability Index CDC, 2022	
County	SVI
Berks	0.62
Bucks	0.08
Carbon	0.3
Lehigh	0.63
Luzerne	0.61
Monroe	0.31
Montgomery	0.2
Northampton	0.29
Schuylkill	0.45
Hunterdon, NJ	0.03
Warren, NJ	0.22



***“It's the general level of insecurity that people feel, general levels of instability and anxiety. People are worried about where they are going to live, meeting the needs of their family, and their own mental health. Those are the things that are really putting stress upon our families and our community.”***

## ..... Domestic Violence .....

Domestic violence is a pervasive issue in the United States, affecting millions of individuals each year. It encompasses physical, sexual, emotional, economic, and psychological abuse, often used by one partner to exert control over another. The CDC defines domestic violence, or intimate partner violence, as the “physical violence, sexual violence, stalking, and psychological aggression (including coercive acts) by a current or former intimate partner”. Nationally, approximately 1 in 4 women and 1 in 9 men experience severe intimate partner violence. The Pennsylvania Coalition Against Domestic Violence (PCADV) reports that in 2022 alone, 104 victims lost their lives due to domestic violence. Additionally, Pennsylvania’s domestic violence programs serve approximately 90,000 individuals annually, providing crucial support and resources to victims and their children. Despite these efforts, the demand for services often exceeds available resources, highlighting the ongoing need for increased support and funding.

Of Bethlehem Campus and Star Community Health service area CHNA survey respondents, 9.6% reported ever being hit, slapped, kicked, or otherwise physically hurt by their partner or someone important to them. Of those respondents, 14.0% reported that it was their spouse, 33.7% their ex-spouse, 21.0% their partner, 6.3% a stranger, and 36.4% reported being physically hurt by someone else. Of survey respondents that reported ever being emotionally abused by their partner or someone important to them, 21.2% reported that yes, they had been emotionally abused by their partner or someone important to them. These results indicate an important need in the community, and care, both physical and mental support, should be available to support victims of domestic violence.

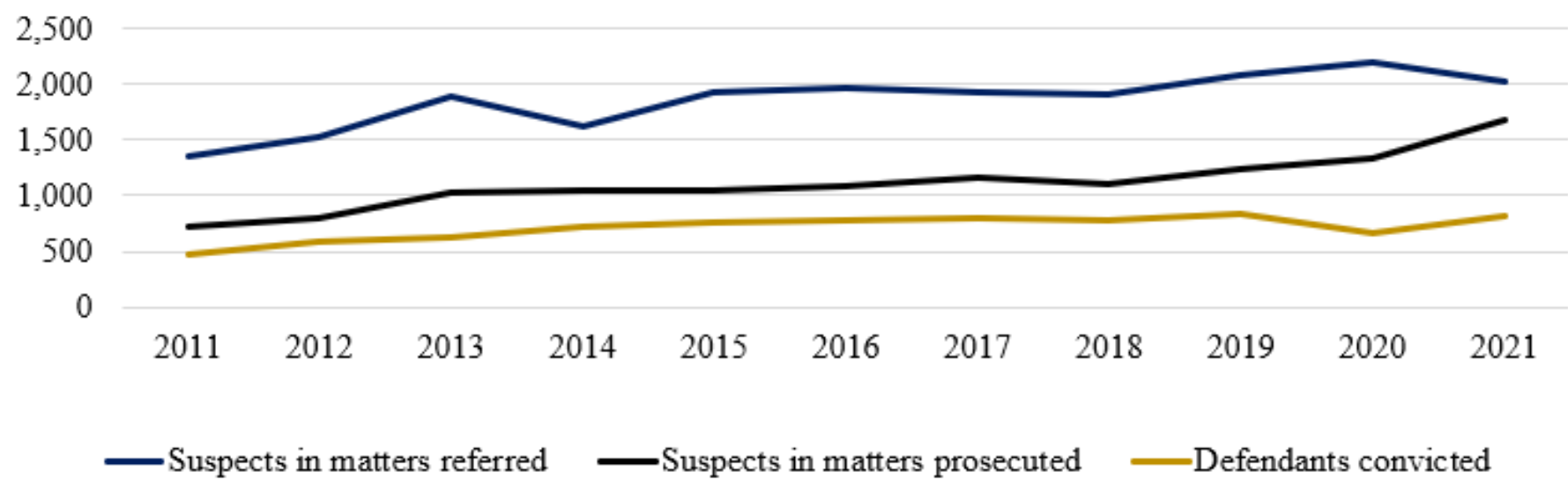
## ..... Human Trafficking .....

Human trafficking is a serious crime and a grave violation of human rights. It involves the recruitment, transportation, transfer, harboring, or receipt of persons through force, fraud, or coercion for the purpose of exploitation. This exploitation can take many forms, including forced labor, sexual exploitation, and involuntary servitude. Victims of human trafficking are often subjected to physical and psychological abuse, and they may be forced to work in inhumane conditions. The crime affects millions of people worldwide, cutting across age, gender, and nationality. Combating human trafficking requires a coordinated effort from governments, organizations, and communities to protect victims and bring perpetrators to justice.

The Trafficking in Persons Report by the US Department of State provides a comprehensive overview of human trafficking globally. According to the Bureau of Justice Statistics, the number of persons prosecuted for human trafficking offenses in the United States more than doubled between 2011 and 2021. In 2021, a total of 2,027 persons were referred to US attorneys for human trafficking offenses, a 49% increase from 1,360 persons in 2011. Of the 1,197 defendants charged in federal court for human trafficking offenses, 92% were male, 60% were white, 20% were Black, 16% were Hispanic, 95% were US citizens, and 68% had no prior convictions. Of the 201 defendants charged with peonage, slavery, forced labor, and sex trafficking, 77% were male and 58% were Black. Of the 582 defendants charged with sexual exploitation and other abuse of children, 92% were male and 72% were White.

According to the 2023 Trafficking In Persons Report, sex trafficking includes activities involved when a trafficker uses force, fraud, or coercion to compel another person to engage in a commercial sex act or causes a child to engage in a commercial sex act. There are three elements that are required to establish a sex trafficking crime: “acts,” “means,” and “purpose”. The “acts” element of sex trafficking is met when a trafficker recruits, harbors, transports, provides, obtains, patronizes, or solicits another person to engage in commercial sex. The “means” element of sex trafficking occurs when a trafficker uses force, fraud, or coercion. The “purpose” element is a commercial sex act. These three elements apply to all sex trafficking crimes except in cases of child sex trafficking where the means are irrelevant. The 2021 Federal Human Trafficking Report for Pennsylvania showed that there were 53 active defendants of human trafficking crimes, 98% were sex trafficking. Of these 53 human trafficking crimes, 44% of the victims are adults, 55% are minors, and 100% are female.

Human Trafficking Suspects Referred to and Prosecuted by US Attorneys and  
Human Trafficking Defendants Convicted, 2011-2021  
Bureau of Justice Statistics (2023)



# Health Outcomes

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

Morbidity, mortality, and life expectancy are key health outcomes that help determine the overall health of the populations we serve. According to the National Vital Statistics System, the average life expectancy in the U.S. is 77.5 years old and the age adjusted death rate in 2022 was 798.8 per 100,000. In Pennsylvania, the life expectancy is 78.4 and 77.7 years old in New Jersey. The range of life expectancy in the counties of Pennsylvania is 74.9-83 and 75.3-83.5 in New Jersey. Pennsylvania Department of Health registered 155,457 total deaths, representing an age adjusted rate of 813.8 per 100,000 population. In 2020, there were 95,990 total deaths registered in the state of New Jersey, representing an age-adjusted death rate of 834.5 per 100,000 population.

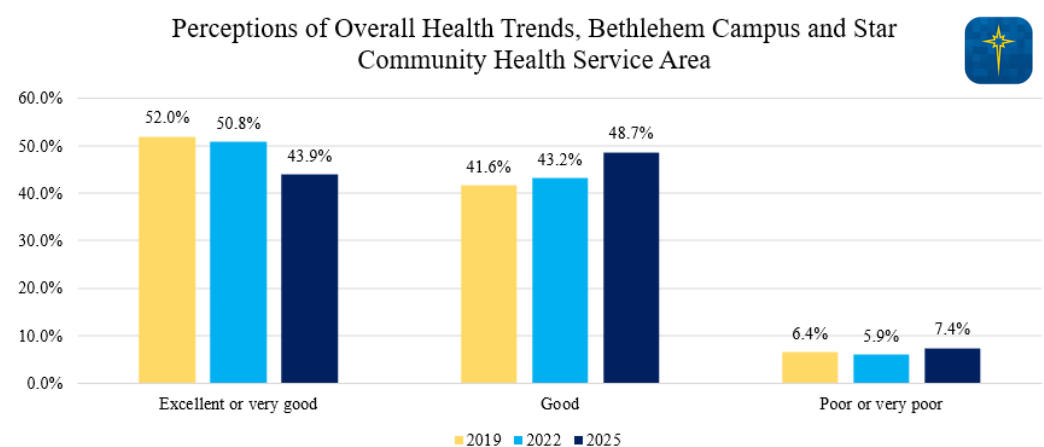
In 2023, the 10 leading causes of death made up 73.8% of all deaths in the U.S. The CDC reported the top 10 leading causes of death (in order): heart disease; cancer; accidents (unintentional injuries); stroke (cerebrovascular diseases); chronic lower respiratory diseases; Alzheimer's disease; diabetes; nephritis, nephrotic syndrome, and nephrosis; chronic liver disease and cirrhosis; COVID-19.

CHR&R data (2021) reports a premature death health outcome, which measures the age-adjusted years of potential life lost before age 75 years old per 100,000 population. Years of potential life lost rate in Pennsylvania was 8,000 deaths per 100,000, 6,500 deaths in New Jersey, and 6,000 deaths for U.S. top performers. Of our service area counties, Montgomery county has the lowest rate with 5,400 deaths per 100,000 and Schuylkill county has the highest rate with 10,200 deaths per 100,000.

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 cardiovascular disease, respiratory conditions, and visual, auditory, intellectual, and developmental impairments. The overall low birthweight percentage is 8% in Pennsylvania. Both Lehigh and Northampton counties have a low birthweight percentage of 8%. The low birthweight percentage for U.S. top performers is 6%.

## ..... 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 CHNA survey, most individuals in the Bethlehem and Star Community Health service area reported good health (48.7%), followed by excellent or very good (43.9%), and poor or very poor (7.4%). There was a shift in responses, with a 6.9% decrease from 2022 in respondents claiming to have excellent or very good health, while there was only a small increase in poor or very poor health (1.5% increase). This indicates the importance of health promotion, education, and prevention to support the overall health needs of the community.



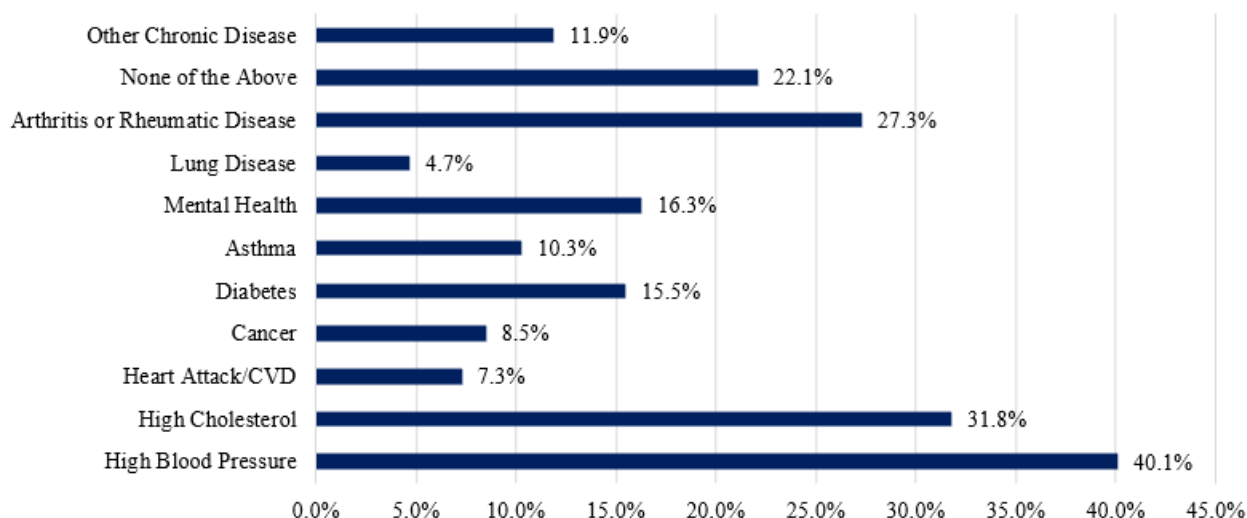
## ..... Chronic Disease .....

According to the CDC, chronic diseases are a significant public health concern in the United States, accounting for 7 out of 10 deaths annually. Conditions such as heart disease, cancer, and diabetes are prevalent, with heart disease accounting for 1 in 3 deaths annually. In Pennsylvania, approximately 30% of adults have been diagnosed with high blood pressure, a major risk factor for heart disease. These statistics highlight the urgent need for targeted public health interventions to manage and prevent chronic diseases at both state and national levels.

A 2024 study analyzing data from the 2022 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. 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 burden on the healthcare system, with 90% of the nation's \$4.5 trillion in health care expenditures annually going toward care of chronic disease and mental health conditions.

The 2025 CHNA survey results indicated that 40.1% of the Bethlehem and Star Community Health service area respondents have high blood pressure, followed by high cholesterol (31.8%), and arthritis or a rheumatic disease (27.3%). Of respondents ages 45 and older, 81.7% have at least one chronic disease.

Chronic Disease, Bethlehem Campus and Star Community Health Service Area



***“The public policy is not there for people to get into preventative care, although I know that is the goal. We still have too many families reacting to health conditions rather than preventative care.”***

## ..... Diabetes .....

According to the 2023 CDC National Diabetes Statistics Report, an estimated 38 million Americans have diabetes, with 90-95% of all diagnoses classified as type 2 diabetes. Approximately 98 million Americans have prediabetes, and more than 8 in 10 adults with prediabetes do not know they have it, which is more than 78 million individuals across the country. Of U.S. adults diagnosed with diabetes, 89.0% were either overweight or obese. The total medical cost, lost work and wages for people with diagnosed diabetes is \$413 billion dollars annually, with medical costs for people with diabetes twice as high as for people without diabetes. Type 2 diabetes, once called adult-onset diabetes, because it was previously a rare diagnosis in youth, has increased significantly in ages 10-19 since 2002. In 2016, diabetes was responsible for 16 million ER visits and 7.8 million hospital discharges nationally. According to the Pennsylvania Vital Statistics report (2021), there were 4,710 diabetes related deaths making it the 6th leading cause of deaths in Pennsylvania.

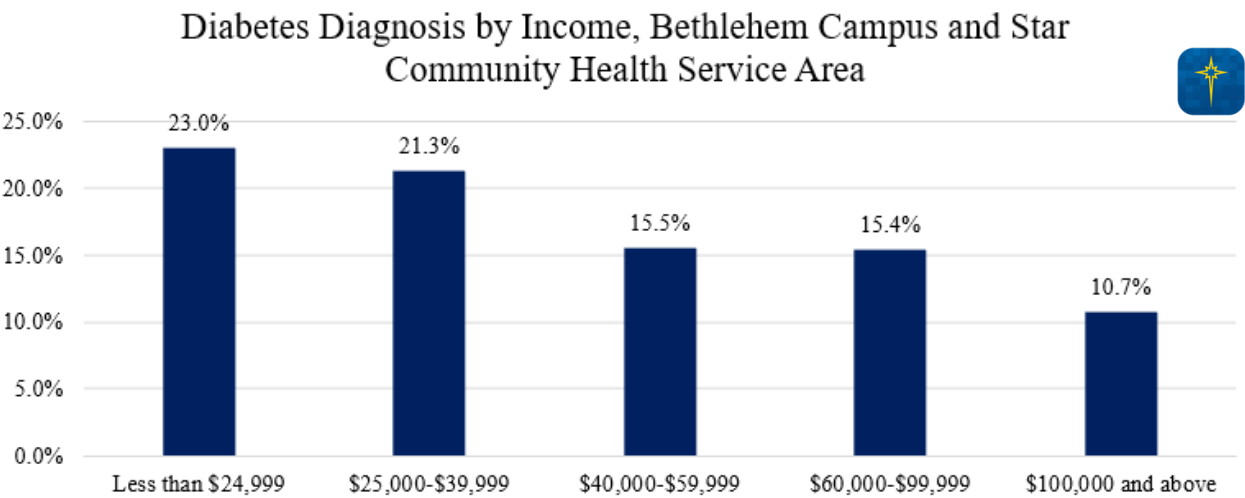
The CDC's National Diabetes Statistics Report (2023) showed disparities in diabetes exist among racial and ethnic groups, with 13.6% of American Indian/ Alaska Natives are diagnosed with diabetes—the highest rate among any racial or ethnic group, followed by 12.5% of non-Hispanics Black adults and 11.3% of adults of Hispanic origin. Asians and White non-Hispanics have the lowest prevalence of diabetes at 7.8% and 6.1% respectively. These disparities also exist on an educational level: those with less than a high school education have a diabetes prevalence of 14.8%, while those with more than high school education have a diabetes prevalence of 6.1%. Bucks, Northampton, and Hunterdon counties have the lowest percentage of adults with diabetes at 7% and Berks, Lehigh, Monroe, and Luzerne counties have the highest percentage of adults with diabetes in the SLUHN service area.

There were 15.5% of CHNA respondents in the Bethlehem and Star Community Health service area that reported having been diagnosed with diabetes. These responses reflect similar trends seen by the CDC at the county level.

Age Adjusted Prevalence of Diagnosed, Undiagnosed, and Total Diabetes Among Adults 18 years and older, United States (CDC) 2019-2021			
Characteristic	Total Percentage	Men Percentage	Women Percentage
<b>Race and Ethnicity</b>			
American Indian or Alaska Native	13.60%	13.40%	13.70%
Asian, non-Hispanic	9.10%	10.60%	7.80%
Black, non-Hispanic	12.10%	11.50%	12.50%
Hispanic	11.70%	12.20%	11.30%
White, non-Hispanic	6.90%	7.70%	6.10%
<b>Education</b>			
Less than high school	13.10%	12.70%	14.80%
High school	9.10%	9.60%	8.70%
More than high school	6.90%	7.90%	6.10%
<b>Family income to poverty ratio</b>			
Less than 100% FPL	13.10%	12.20%	13.60%
100–299% FPL	10.30%	11.00%	6.70%
300–499% FPL	7.70%	8.80%	6.70%
500% FPL or more	5.10%	6.30%	3.90%
<b>Metropolitan residence</b>			
Metropolitan	8.10%	8.70%	7.60%
Nonmetropolitan	9.50%	10.50%	8.60%



From our previous question of chronic disease presence, we know that 15.5% of respondents in the Bethlehem and Star Community Health service area have diabetes. Our survey also looks at the relationship between diabetes and income as it can give more insight into the contributing factors to incidence rates. In the Bethlehem and Star Community Health service area, the less than \$24,999 income bracket had the highest rate of diabetes (23.0%), followed by the \$25,000-\$39,999 income bracket (21.3%), and the \$100,000 and above bracket has the lowest (10.7%).



..... **Hypertension** .....

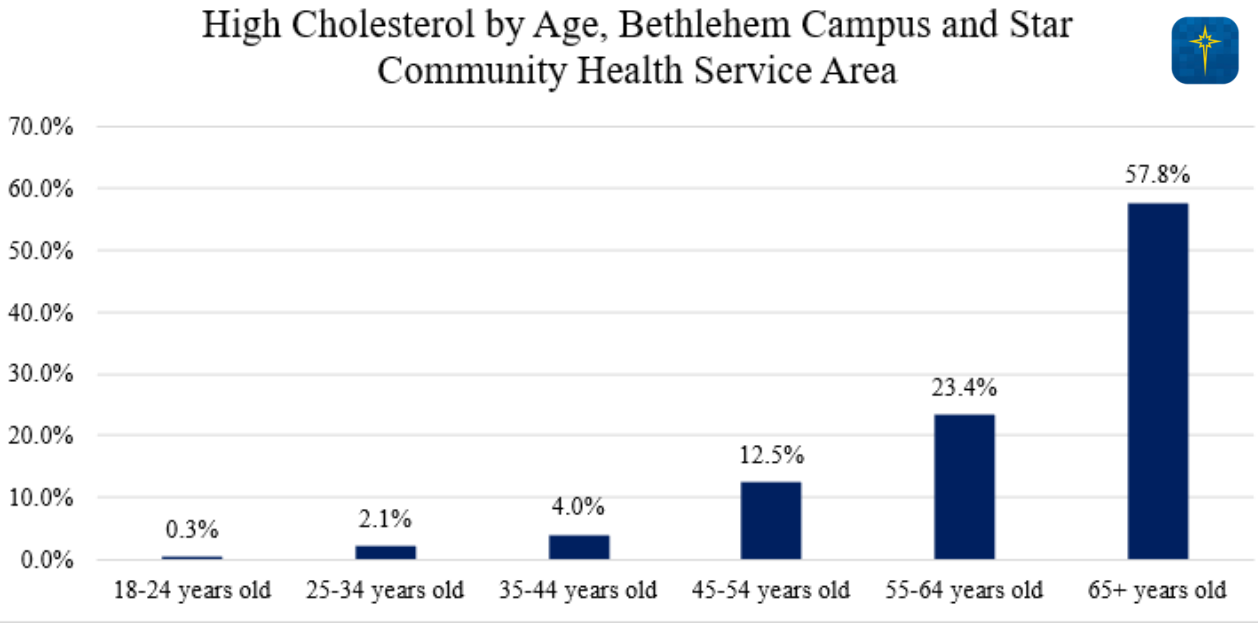
The Center for Disease Control (CDC) defines hypertension as having a blood pressure that is at or above a systolic value of 130 mm Hg, which measures the pressure in your arteries when your heart beats, and a diastolic value of 80 mm Hg, which measures the pressure in your arteries when your heart rests between beats. While your blood pressure changes throughout the day based on your activities, having blood pressure consistently above normal can result in a hypertension diagnosis. 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 (2023), nearly half of adults have high blood pressure with a prevalence of 48.1% (119.9 million). These numbers are even more alarming because they are likely underreported. The CDC estimates that 1 in 5 adults with high blood pressure do not know they have this condition. Poorly controlled hypertension is a serious condition that can affect many bodily systems over time including the heart, kidneys, vision, and blood vessels. According to the American Heart Association, hypertension can increase risk for heart attack, stroke, and kidney failure among other complications. Due to the serious impacts it can have on health, hypertension contributes to an increased burden on our healthcare system, with hypertension accounting for 1.3 million emergency department visits each year in the United States and was a primary or contributing cause to 685,875 deaths in 2022.

The Pennsylvania hypertension rate is 30%. In the Bethlehem and Star Community Health service area, 40.1% of CHNA survey respondents have been diagnosed with high blood pressure. When looking at hypertension by income, 47.3% of people making less than \$25,000 per year reported having hypertension, 45.5% of respondents making \$25,000-\$59,999 reported having hypertension, and 34.7% of respondents with an income of \$60,000 or more. While there are disparities in diagnosis by income, it is important to note that all income categories are high.

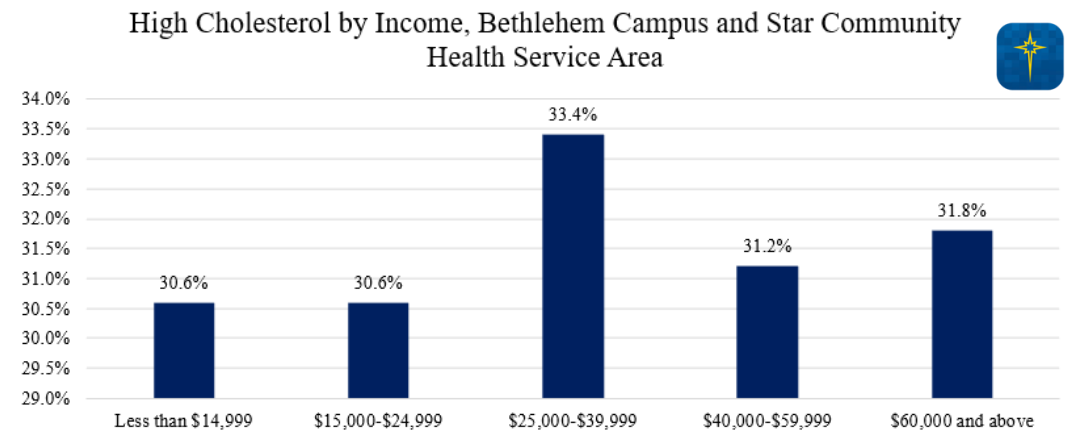
..... **Hyperlipidemia** .....

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 2023 report from the American Heart Association, 1 in 4 (26.7%) U.S. adults aged 20 and over have been diagnosed with hyperlipidemia. This has been steadily increasing in most recent decades, with only 1 in 5 U.S. adults having hyperlipidemia in a 1995 CDC report. High cholesterol can lead to plaque buildup in one’s blood vessels, which can lead to increased risk of carotid artery disease, coronary heart disease, heart attack and stroke among other complications. In addition to adults, 7.4% of all U.S. children and adolescents have high total cholesterol. The risk of high total cholesterol significantly increases with a risk factor of obesity, and 6.3% of children 6-19 years old have high cholesterol at a healthy weight compared to 11.6% at a weight that is considered obese.

The Pennsylvania hyperlipemia rate is 35%, with lower rates in both Lehigh County (32.9%) and Northampton County (34.0%). CHNA data shows strong age-related diagnoses, with the majority of respondents with high cholesterol aged 65 years and older.



When looking at high cholesterol by income, CHNA respondents with a household income of less than \$14,999 reported the same rate (30.6%) of high cholesterol as respondents making \$15,000-\$24,999. There was a slightly higher rate of respondents with high cholesterol that make \$25,000-\$39,999 (33.4%), 31.2% reported high cholesterol with an income of \$40,000-\$59,999, and 31.8% of respondents with an income of \$60,000 and above reported having high cholesterol.



## ..... Cancer .....

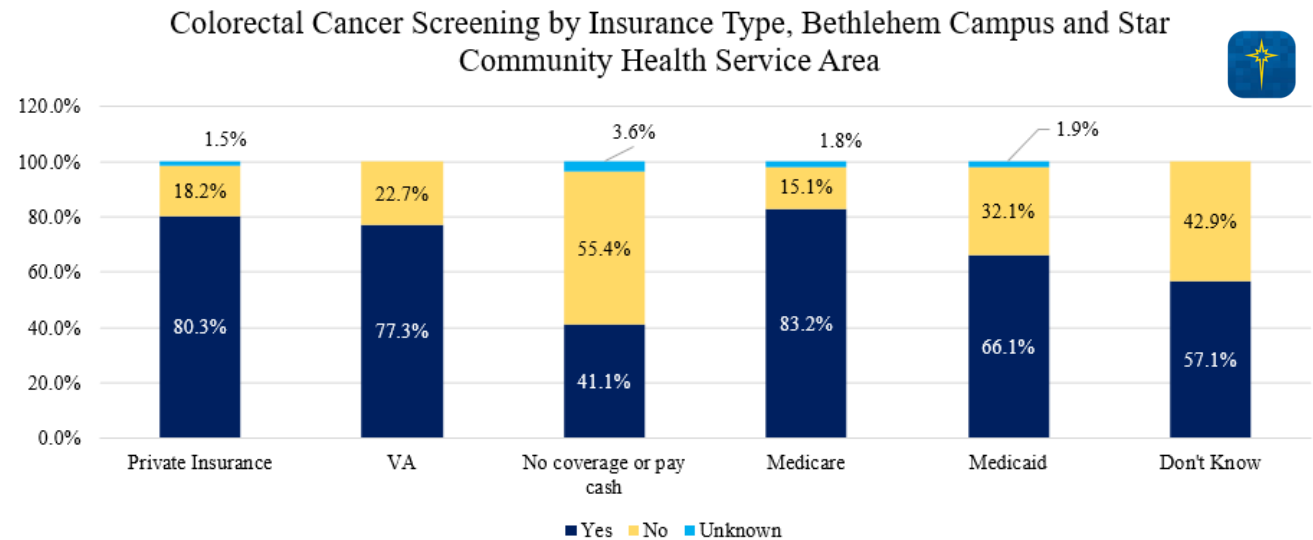
The CDC reported that 1.7 million people in the U.S. are diagnosed with cancer each year and the estimated health care cost of cancer (e.g., diagnosis, care, treatment) is expected to reach more than \$240 billion by 2030. Cancer is the second leading cause of death nationally with over half a million deaths each year. According to the National Cancer Institute, cancer incidence in the U.S. is 458.3 per 100,000. Pennsylvania has a cancer incidence of 415.1 per 100,000. There are certain risk factors that increase the risk of getting cancer, including obesity, smoking, 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.

In addition to certain health behaviors, access to care can play a significant role in cancer screening, diagnosis, and mortality rates. Early versus late-stage detection can impact cancer mortality, and we observe that uninsured patients and Medicaid recipients have a much lower rate of early detection than their privately insured counterparts.

The National Cancer Institute (NCI) showed that, for many cancers, Black men and women have higher mortality rates. For example, the American Cancer Society shows that Black women have a 40% higher chance of mortality from breast cancer than White women despite comparable incidence rates. Black men are twice as likely to die of prostate cancer than White men and continually have the highest prostate cancer mortality rates among US racial and ethnic groups.

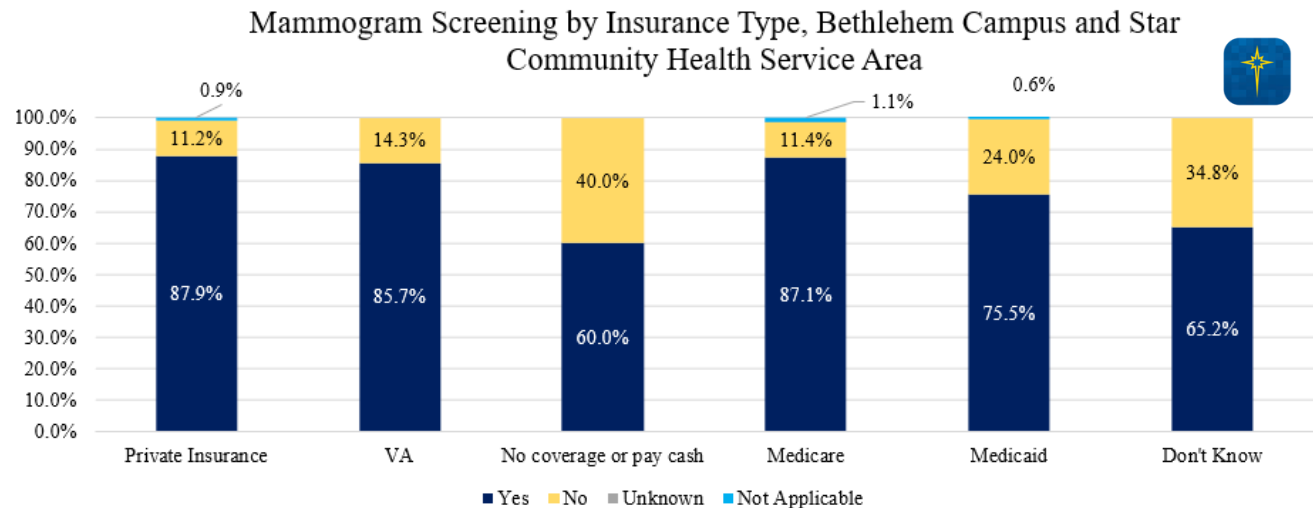
Educational attainment, regardless of race or ethnicity, also appears to play a role in cancer mortality for certain cancers. In order to be considered up to date with screenings for this analysis, respondents must have had a screening date fall in the recommended time frame for their screening type and age. If a respondent was missing an answer to one of the questions, their screening status was marked “Unknown.” The survey asked respondents to indicate their most recent colorectal cancer screening. Of respondents in the Bethlehem and Star Community Health service area, 66.1% have been screened, 32.1% have not been screened, and 1.8% do not know.

The CHNA survey also assesses colorectal cancer screening by insurance type to uncover any disparities and identify if insurance is a barrier to cancer screenings. The majority (55.4%) of respondents in the Bethlehem Campus and Star Community Health service area ages 50-74 years old who do not have insurance have never been screened for colon cancer, 32.1% with Medicaid, and 42.9% who do not know their insurance type. This is different than respondents with private insurance (18.2%) and Medicare (15.1%). Since colon cancer can be prevented or caught early with screenings, this is a large gap in care.



The CHNA survey also asks respondents about breast cancer screening in the last two years (i.e., routine mammogram) and compares breast cancer screenings by insurance. In the Bethlehem Campus and Star Community Health service area, 73.6% of female respondents ages 40-74 years old had a mammogram, 22.1% have not, and 0.5% do not know.

When looking at breast cancer screening by insurance, 87.9% of respondents with private insurance had a mammogram in the last two years, compared to 87.1% of respondents with Medicare, 75.5% with Medicaid, 65.2% of respondents that didn't know their insurance type, and 60.0% of respondents who have no insurance or pay cash.



While a significant portion of respondents aged 40-74 years old have undergone mammograms, the data reveals notable differences based on insurance type. Those with Medicare show the highest screening rates, followed by those with private insurance, and lastly, those with Medicaid. These findings underscore the need for targeted interventions to improve breast cancer screening accessibility and uptake, particularly among Medicaid recipients.

## ..... Unintentional Injury .....

According to the National Vital Statistics System, in 2022, the United States had 68.1 unintentional injury deaths per 100,000 population, which was the third ranked cause of death. In 2021, there were 25.5 million visits to the emergency room for unintentional injuries. 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 14 per 100,000 population unintentional fall deaths, 13.4 per 100,000 population motor vehicle traffic deaths, and 30.9 per 100,000 population unintentional poisoning deaths. In Pennsylvania, there were 77.5 unintentional deaths per 100,000. Lehigh County had 72.47 unintentional deaths per 100,000 and Northampton County had 60.79 unintentional deaths per 100,000. Since unintentional injury deaths are so prominent, Healthy People 2030 has set objectives for injury deaths, some of which are to reduce unintentional injury deaths, reduce deaths involving opioids, reduce emergency department visits for non-fatal injuries and unintentional injuries.

Unintentional Injury Deaths 2022 via CDC Wonder	
Region	Rate per 100,000 population
Berks	64.00
Bucks	57.65
Carbon	139.2
Lehigh	72.47
Monroe	69.83
Montgomery	42.38
Northampton	60.79
Schuylkill	48.65
Luzerne	102.48
Warren (NJ)	59.75
Hunterdon (NJ)	45.6
PA	70.56
NJ	49.67
US	64.03

## 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 (2025-2028) 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: access to care; preventing chronic disease; and improving mental and behavioral health.

To analyze our findings in these areas, SLUHN has adopted the Healthy People 2030 framework, including goals and objectives. 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:

- Access to Care
- Workforce Development
- Food Security
- Obesity Reduction
- Physical Activity Promotion
- Opioids and other Substance Use
- Mental Health
- Housing
- Transportation

### Social Determinants of Health



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 with our community and network partners to create a more equitable society with better health outcomes, especially among our most vulnerable populations.



## 2024 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, Berks, Monroe, Luzerne) and New Jersey (Warren and Hunterdon). 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.

1. Name:
2. Title:
3. Organization:
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?
  1. Health disparities/Access to care (example: access to medical, mental, dental and vision care)
  2. Chronic Disease (example: diabetes, heart disease, physical activity, diet, and cancer)
  3. 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

### **2024 CHNA Community Forum Invited Organizations– Bethlehem Campus and Star Community Health**

- Bethlehem Area School District
- Bethlehem Emergency Shelter
- Bethlehem Health Bureau
- Bethlehem Library
- Bethlehem Police
- Boys and Girls Club
- Cay Galgon Lifehouse
- City of Bethlehem
- Coalition for Appropriate Transportation
- Community Action of the Lehigh Valley
- Hispanic Center (HCLV)
- Just Born
- LANta
- Lehigh University
- Lehigh Valley Community Foundation
- Marvine Elementary School
- Neighborhood Health Centers
- New Bethany Inc.
- Northampton Community College
- Northampton Community College
- Northampton County Department Human Services
- Pinebrook Family Answers
- Second Harvest
- Share Housing and Resource Exchange (SHARE) Program
- South Bethlehem Historical Society
- Star Community Health
- United Way of the Greater Lehigh Valley

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