

GEISINGER-LEWISTOWN HOSPITAL COMMUNITY HEALTH NEEDS ASSESSMENT

June 2015

GEISINGER



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Introduction

Geisinger-Lewistown Hospital (GLH), a 123-bed community medical center located in Lewistown, PA, in response to its community commitment, contracted with Tripp Umbach to facilitate a comprehensive Community Health Needs Assessment (CHNA). A community health needs assessment was conducted between October 2014 and March 2015 that identifies the needs of the residents served by Geisinger-Lewistown Hospital. As a partnering hospital of a regional collaborative effort to assess community health needs; Geisinger-Lewistown Hospital collaborated with hospitals and outside organizations in the surrounding region (including Juniata and Mifflin Counties) during the community health needs assessment process. The following is a list of organizations that participated in the community health needs assessment process in some way:

- Area Agency on Aging
- Juniata Behavioral & Developmental Services
- Juniata County Commissioners
- JV Tri-County Drug & Alcohol
- Mifflin County Commissioners
- Mifflin County Industrial Development Corporation
- Mifflin-Juniata Special Needs Center
- PA Office of Rural Health
- Sacred Heart Catholic School
- State Health Center
- United Way of Mifflin-Juniata

This report fulfills the requirements of the Internal Revenue Code 501(r)(3); a statute established within the Patient Protection and Affordable Care Act (ACA) requiring that non-profit hospitals conduct community health needs assessments every three years. The community health needs assessment process undertaken by Geisinger-Lewistown Hospital, with project management and consultation by Tripp Umbach, included extensive input from persons who represent the broad interests of the community served by the hospital facility, including those with special knowledge of public health issues, data related to vulnerable populations and representatives of vulnerable populations served by the hospital. Tripp Umbach worked closely with leadership from Geisinger-Lewistown Hospital and a project oversight committee to accomplish the assessment.

Community Definition

The community served by the Geisinger-Lewistown Hospital (GLH) includes Juniata and Mifflin Counties. The Geisinger-Lewistown Hospital primary service area includes nine populated zip code areas (excluding zip codes for P.O. boxes and offices) where 80% of the hospital's inpatient discharges originated (see Table 1)

Geisinger-Lewistown Hospital Community Zip Codes

Table 1

Zip	Post Office	County
17004	BELLEVILLE	MIFFLIN
17044	LEWISTOWN	MIFFLIN
17051	MC VEYTOWN	MIFFLIN
17841	MC CLURE	MIFFLIN
17063	MILROY	MIFFLIN
17084	REEDSVILLE	MIFFLIN
17058	MIFFLIN	JUNIATA
17059	MIFFLINTOWN	JUNIATA
17082	PORT ROYAL	JUNIATA

Consultant Qualifications

Geisinger-Lewistown Hospital contracted with Tripp Umbach, a private healthcare consulting firm headquartered in Pittsburgh, Pennsylvania to complete the community health needs assessment. Tripp Umbach is a recognized national leader in completing community health needs assessments, having conducted more than 250 community health needs assessments over the past 20 years; more than 50 of which were completed within the last three years. Today, more than one in five Americans lives in a community where Tripp Umbach has completed a community health needs assessment.

Paul Umbach, founder and president of Tripp Umbach, is among the most experienced community health planners in the United States, having directed projects in every state and internationally. Tripp Umbach has written two national guide books¹ on the topic of community health and has presented at more than 50 state and national community health conferences. The additional Tripp Umbach CHNA team brought more than 30 years of combined experience to the project.

¹ A Guide for Assessing and Improving Health Status Apple Book:
http://www.haponline.org/downloads/HAP_A_Guide_for_Assessing_and_Improving_Health_Status_Apple_Book_1_993.pdf and

A Guide for Implementing Community Health Improvement Programs:
http://www.haponline.org/downloads/HAP_A_Guide_for_Implementing_Community_Health_Improvement_Programs_Apple_2_Book_1997.pdf

Project Mission & Objectives

The mission of the Geisinger-Lewistown Hospital CHNA is to understand and plan for the current and future health needs of residents in its community. The goal of the process is to identify the health needs of the communities served by the hospital, while developing a deeper understanding of community needs and identifying community health priorities. Important to the success of the community needs assessment process is meaningful engagement and input from a broad cross-section of community-based organizations, who are partners in the community health needs assessment.

The objective of this assessment is to analyze traditional health-related indicators, as well as social, demographic, economic and environmental factors. Although the consulting team brings experience from similar communities, it is clearly understood that each community is unique. This project was developed and implemented to meet the individual project goals as defined by the project sponsors and included:

- ❑ Ensuring that community members, including underrepresented residents and those with a broad-based racial/ethnic/cultural and linguistic background are included in the needs assessment process. In addition, educators, health-related professionals, media representatives, local government, human service organizations, institutes of higher learning, religious institutions and the private sector will be engaged at some level in the process.
- ❑ Obtaining statistically valid information on the health status and socio-economic/environmental factors related to the health of residents in the community and supplement general population survey data that is currently available.
- ❑ Developing accurate comparisons to the state and national baseline of health measures utilizing most current validated data (i.e., 2013 Pennsylvania State Health Assessment).
- ❑ Utilizing data obtained from the assessment to address the identified health needs of the service area.
- ❑ Providing recommendations for strategic decision-making regionally and locally to address the identified health needs within the region to use as a baseline tool for future assessments.
- ❑ Developing a CHNA document as required by the Patient Protection and Affordable Care Act (ACA).

Methodology

Tripp Umbach facilitated and managed a comprehensive community health needs assessment on behalf of Geisinger-Lewistown Hospital — resulting in the identification of community health needs. The assessment process included input from persons who represent the broad interests of the community served by the hospital facility, including those with special knowledge and expertise of public health issues.

Key data sources in the community health needs assessment included:

- ❑ **Community Health Assessment Planning:** A series of meetings was facilitated by the consultants and the CHNA oversight committee consisting of leadership from Geisinger-Lewistown Hospital and other participating hospitals and organizations (i.e., Geisinger Medical Center, HealthSouth/Geisinger Health System LLC; Geisinger Wyoming Valley Medical Center; Geisinger South Wilkes-Barre; Geisinger Community Medical Center; Evangelical Community Hospital; and Geisinger Bloomsburg Hospital). This process lasted from October 2014 until March 2015.
- ❑ **Secondary Data:** The health of a community is largely related to the characteristics of its residents. An individual’s age, race, gender, education and ethnicity often directly or indirectly impact health status and access to care. Tripp Umbach completed comprehensive analysis of health status and socio-economic environmental factors related to the health of residents of the Geisinger-Lewistown Hospital community from existing data sources such as state and county public health agencies, the Centers for Disease Control and Prevention, County Health Rankings, Thompson Reuters, CNI, Healthy People 2020, and other additional data sources. This process lasted from October 2014 until March 2015.
- ❑ **Trending from 2012 CHNA:** In 2012, Geisinger-Lewistown Hospital completed a CHNA for the same counties included in the service area (Juniata and Mifflin Counties). Tripp Umbach did not complete the 2012 CHNA. As a result, the data sources used were not the same data sources from the 2012 CHNA. However, Tripp Umbach provided data for the same years which made it possible to review trends and changes across the hospital service area. When possible, findings from the previous CHNA have been included in the executive summary “Key Community Health Priorities”. There were several data sources with changes in the definition of specific indicators, which restricted the use of trending in several cases. The factors that could not be trended are clearly defined in the secondary data section of this report. The previous 2012 CHNA can be found online at:

<http://www.geisinger.org/sites/chna>

- ❑ **Interviews with Key Community Stakeholders:** Tripp Umbach worked closely with the CHNA oversight committee to identify leaders from organizations that included: 1) Public Health expertise; 2) Professionals with access to community health related data; and 3) Representatives of underserved populations (i.e., seniors, low-income residents, Latino(a) residents, Amish residents, Mennonite residents, and residents that are uninsured). Such persons were interviewed as part of the needs assessment planning process. A series of 20 interviews were completed with key stakeholders in the Geisinger-Lewistown Hospital community. A complete list of organizations represented in the stakeholder interviews can be found in the “Key Stakeholder Interviews” section of this report. This process lasted from November 2014 until December 2014.

- ❑ **Survey of vulnerable populations:** Tripp Umbach worked closely with the CHNA oversight committee to ensure that community members, including under-represented residents, were included in the needs assessment through a survey process. A total of 154 surveys were collected in the Geisinger-Lewistown Hospital service area which provides a +/-8 confidence interval for a 95% confidence level. Tripp Umbach worked with the oversight committee to design a 33 question health status survey. The survey was administered by community based organizations (i.e., Mifflin-Juniata Special Needs Center and Area Agency on Aging) providing services to vulnerable populations in the hospital service area. Community based organizations were trained to administer the survey using hand-distribution. Surveys were administered onsite and securely mailed to Tripp Umbach for tabulation and analysis. Surveys were analyzed using SPSS software. Vulnerable populations were identified by the CHNA oversight committee and through stakeholder interviews. Vulnerable populations targeted by the surveys were seniors, low-income residents (including families), and residents with special needs. This process lasted from November 2014 until January 2015.

- ❑ **Identification of top community health needs:** Top community health needs were identified and prioritized by community leaders during a regional community health needs identification forum held on March 12, 2015. Consultants presented to community leaders the CHNA findings from analyzing secondary data, key stakeholder interviews, and surveys. Community leaders discussed the data presented, shared their visions and plans for community health improvement in

their communities, and identified and prioritized the top community health needs in the Geisinger-Lewistown Hospital community. This event took place in March 2015.

- ❑ **Public comment regarding the 2012 CHNA and implementation plan:** Tripp Umbach solicited public commentary from community leaders and residents. Commenters were asked to review the CHNA and Action Plan adopted by Geisinger-Lewistown Hospital in 2013 and were provided access to each document for review. Commenters were then asked to respond to a questionnaire which provided open and closed response questions. Questionnaires were developed by Tripp Umbach and previously reviewed by the Geisinger-Lewistown Hospital advisory committee. The seven question questionnaire was offered in hard copy at two locations inside the hospital as well as electronically using a web-based platform. The CHNA and Action Plan were provided to commenters for review in the same manner (i.e., hard copy at the hospital and electronically). There were no restrictions or qualifications required of public commenters. Flyers were circulated and electronic requests were made for public comment throughout the collection period which lasted from December 2014 until February 2015.

- ❑ **Final Community Health Needs Assessment Report:** A final report was developed that summarizes key findings from the assessment process including the priorities set by community leaders.

Key Community Health Priorities

Community leaders reviewed and discussed existing data, in-depth interviews with community stakeholders representing a cross-section of agencies, and survey findings presented by Tripp Umbach in a forum setting, which resulted in the identification and prioritization of five community health priorities in the Geisinger-Lewistown Hospital community. Community leaders identified the following top community health needs that are supported by secondary and/or primary data: 1) Behavioral health and substance abuse; 2) Access to healthcare; 3) Resource awareness and health literacy; 4) Health concerns related to lifestyle; and 5) Care coordination. Many of the same needs were identified in the 2012 CHNA, with slightly different priorities. A summary of the top five needs in the Geisinger-Lewistown Hospital community follows:

ADDRESSING NEEDS RELATED TO BEHAVIORAL HEALTH AND SUBSTANCE ABUSE

Underlying factors identified by secondary data and primary input from community leaders, community stakeholders and resident survey respondents:

1. Care coordination is needed among behavioral health, substance abuse, and primary care/medical providers.
2. There are not enough providers to meet the demand and the spectrum of services available in most areas is not comprehensive enough to treat individual needs.
3. Substance abuse services are necessary due to the prevalence of substance abuse in local communities.
4. Residents with a history of behavioral health and/or substance abuse needs often have poor treatment outcomes.

Addressing needs related to behavioral health and substance abuse is identified as the top health priority by community leaders at the community forum. Individuals with behavioral health needs often have poor health outcomes as well. It was also, by far, the most discussed health need among stakeholders during one-on-one interviews and survey respondents indicated that there is a heightened prevalence of depression in both counties.

Community leaders, stakeholders and survey respondents agree that behavioral health and substance abuse is a top health priority:

- Mental Health was identified as the most important health-related issue for the entire community (8 of 9 stakeholder groups identified this as an important issue) during the Northcentral Health District/Danville stakeholder meeting during which the State Health Assessment was presented and discussed.

- Secondary data related to provider ratios and suicide rates clearly support the need to address needs related to behavioral health and substance abuse
- Four out of five stakeholders identified a health need related to behavioral health and/or substance abuse services.
- Survey respondents identified substance abuse and mental health as two of the top five concerns facing their communities.

Findings supported by study data:

Care coordination is needed among behavioral health, substance abuse, and primary care/medical providers.

- Medical health and behavioral health services are fragmented with a heavy reliance on medication treatments and a limited supply of qualified professionals to oversee these types of treatments. Residents with behavioral health needs are often not getting their needs met in medical care settings and vice versa.
- The lack of follow up and failure to comply with treatment regimens are often highest among a population of residents with behavioral health needs due to a resistance to seek treatment because of inability to afford treatment options, transportation issues, and/or limited follow through with treatment recommendations.
- Limited behavioral health services can reportedly lead to an increase in homelessness and substance abuse due to the capacity of residents to function with unmet behavioral health needs and a propensity to self-medicate with illegal substances.

There are not enough providers to meet the demand and the spectrum of services available in most areas is not comprehensive enough to treat individual needs:

- A lack of behavioral health providers had been discussed in the 2012 CHNA study.
 - ✓ This assessment shows the lack of adequate mental health services and calls for a need to expand mental health options and services to improve access to care. The number of mental health providers in both counties falls well below the state average.
- Behavioral health concerns are growing due to an apparent increase in demand and less available services.
- Depression was reported by survey respondents as being the top issue they had ever been told by a healthcare professional they had when compared to every other area (e.g., diabetes, heart problems, and cancer). Each county in the study area reports higher rates of depression diagnosis than is average for the state (18.3%) and nation (18.7%) with the highest rate of respondent reported diagnosis in Juniata County (27.1%).

- While there are services, there are not enough providers to meet the demand among residents. Several specific areas where services are lacking were discussed: treatment for co-occurrence, treatment for low-income populations, geriatric psychiatry, child psychiatry and inpatient treatment. Where there are services, the wait times can be lengthy to secure initial appointments.

Table 2: County Health Rankings –Mental Health Providers (Count/Ratio) by County

Measure of Mental Health Providers*	PA	Juniata County	Mifflin County
Mental health providers (count)	--	3	38
Mental health providers (ratio Population to provider)	623:01:00	8,256:1	1,227:1

*County Health Ranking 2014

- The ratio of population to mental health providers in Juniata and Mifflin Counties shows a significantly larger population to provider ratio (8,256 and 1,227 pop. for every 1 mental health provider) than the state (623 pop. per provider).

Substance abuse services are necessary due to the prevalence of substance abuse in local communities:

- While there are services, there are not enough providers to meet the demand among residents. Several specific areas where services are lacking were discussed: local treatment for co-occurrence, and limited treatment models. There are reportedly, not enough resources to fund treatment for substance abuse at the level it would be necessary in the community.
- The most commonly discussed drugs were heroin and prescription narcotics.

Residents with a history of behavioral health and/or substance abuse needs often have poor treatment outcomes:

- Poorer health outcomes related to behavioral health and substance abuse are often heavily correlated to the duration of disorder/illness.
- All counties with data reported (i.e., Mifflin County) show higher deaths due to suicide (16.1 and per 100,000 pop.) than state and national rates (12.5 and 12.3 per 100,000 pop. respectively).

Behavioral health has remained a top health priority that appears as a theme in each data source included in this assessment. The underlying factors include: care coordination,

workforce supply vs. resident demand, and resident engagement of treatment options. Primary data collected during this assessment from community leaders and residents offered several recommendations to address the need for behavioral health and substance abuse. Some of which included:

- **Increase the use of telemedicine:** particularly to cover the areas of greatest shortage where it can be effectively implemented (i.e., behavioral health).
- **Increase services for residents with behavioral health related issues:** Community leaders indicated that there is a need for supportive services for behavioral health issues as well as positive educational opportunities.

INCREASING ACCESS TO HEALTHCARE

Underlying factors identified by secondary data and primary input from community leaders, community stakeholders and resident survey respondents:

1. Provider to population ratios that are not adequate enough to meet the need.
2. Poverty increases the barriers to accessing healthcare.
3. Residents need solutions that reduce the financial burden of health care. This is particularly an issue for residents that are: Rural low-income and residents in Plain Communities in the Big Valley area.
4. Limited access to healthcare as a result of the location of providers coupled with transportation issues. This is particularly an issue for residents that are: Rural low-income and Latino(a) in Mifflintown.

Increasing access to healthcare is identified as the second community health priority by community leaders. Access to health care is an ongoing health need in rural areas across the U.S. Apart from insurance issues, access to healthcare in the hospital services area is limited by provider to population ratios that cause lengthy wait times to secure appointments, location of providers, transportation issues, limited awareness of residents related to the location and eligibility of health programs as well as ways to be healthier.

Additionally, socio-economic status creates barriers to accessing health care (e.g., lack of health insurance, inability to afford care, transportation challenges, poor housing stock, etc.), which typically have a negative impact on health outcomes. Often, there is a high correlation between poor health outcomes, consumption of healthcare resources, and the geographical areas where socio-economic indicators (i.e., income, insurance, employment, education, etc.) are the poorest.

- Secondary data related to provider ratios, prevalence rates, socio-economic barriers to accessing healthcare (i.e., CNI), and poor health outcomes (e.g., amputations, death rates, etc.) support the need to increase access to healthcare.
- Community leaders focused forum discussions primarily on the limited number of providers, limited transportation options, and limited funding.
- Over one-half of all stakeholders articulated a lack of availability of health services (medical, dental, behavioral) in the hospital service area. The availability of services was related most often to the number of practicing professionals, acceptance of insurances, and location of providers.
- Survey respondents reported not having access to their own car as a primary method of transportation and uncertainty related to the availability of services.

Findings supported by study data:

Provider to population ratios that are not adequate enough to meet the need.

- In 2012, access to health care was a key theme and participants throughout the assessment process noted the following issues related to access: 1) Increase the percentage of insured; 2) Increase resources to pay for healthcare services; 3) Increase the number of healthcare providers to raise the availability of receiving appropriate services (primary care, mental health care, dental care). A common theme in the discussion about the availability of health services (medical, dental and behavioral) remains the limited number of providers. While there are providers in the area, there are not enough providers available to meet current demand. There is a concern about an older physician workforce retiring and not being replaced by younger talent due to the difficulty of recruiting and retaining physicians in the rural service area. The shortage of health professionals (i.e., dentists accepting Medicaid, specialists, and behavioral health professionals) serving low-income populations is compounded by the difficulty in recruiting new professionals to the poorest and most rural areas in the hospital service area. There are specialties that offer office hours in the communities, but appointments are set months out due to limited office hours.
- In 2012, the previous CHNA found that the need for expanding dental care had been discussed throughout the assessment process. A significant shortage of dentists exists in both counties. Besides the lack of dental providers, the lack of dental insurance and the cost of dental care were other deterrents for individuals seeking dental care. It was noted, during the community focus group meeting, that many of the local dentists are over the age of 50, and as they retire over the next several years this will further increase the shortage of dental providers. According to the Pennsylvania Department of

Health, from 1999 to 2001, the number of licensed dentists in the commonwealth has decreased by 700.

- The same is true for dental care today, particularly dental providers that accept Medicaid. Dental providers that will accept medical assistance are often great distances apart and the travel/lack of transportation can make it impossible for residents to secure dental care (adult and pediatric). While there is a dental clinic available for uninsured residents in the area; the waiting list is reportedly six months long.
- It is unclear if residents from Plain Communities have ready access to dental care because there used to be a dentist in the Big Valley that may not be practicing any longer.
- Secondary data suggests that physician to patient population varies across counties but there are more patients for every one physician than is standard for PA (Primary Care - 92.7 and Dental – 59.1 per 100,000 pop.). **Primary Care Providers** – Juniata County has less than one-quarter (20.5 per 100,000 pop.) and Mifflin County has half (47 per 100,000 pop.) the providers than is average for the state. **Dental Providers** – Juniata County has a serious dental provider shortage (8.2 per 100,000 pop.) and Mifflin County has half (29.9 per 100,000 pop.) the providers than is average for the state.
- One in five (21%) survey respondents in Juniata County and 8.9% in Mifflin County indicated they could not secure dental services.
- While not as clear an indication of limited access to healthcare as provider rates; preventable hospitalizations that are higher than expected rates are usually driven by a lack of securing primary care in the community. The end result is hospitalizations for illnesses that could have been resolved prior to becoming emergency situations. In the Geisinger-Lewistown Hospital service area there are higher rates throughout the study area when compared to the state rate across more than half of the PQI measures (i.e., diabetes long-term complications, perforated appendix, COPD or Adult Asthma, congestive heart failure, low birth weight, dehydration, bacterial pneumonia, urinary tract infection, and angina without procedure).

Poverty increases the barriers to accessing healthcare:

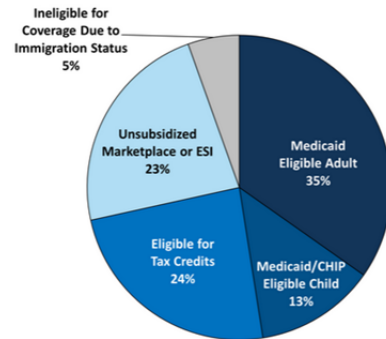
- Poverty seems to be prevalent in the area. Children living with single parents are likely to be living in poverty in most areas, which may impact health outcomes. Uninsured and underinsured residents may resist seeking health services due to the cost of uninsured care, unaffordable copays and/or high deductibles. Stakeholders felt that residents in poverty are less likely to secure health services prior to issues becoming emergent due to a lack of resources (i.e., time, money, transportation, etc.) and a focus on meeting basic needs, leading to a lower prioritization of health and wellness.

- This is, reportedly, true of residents in both Plain Communities where families would qualify for Medicaid if they participated and must often rely on village funds to pay costly uninsured care. As a result these residents may not seek care as often as they otherwise would due to the cost and inability to afford the services.
- The Geisinger-Lewistown Hospital study area has an average annual household income of \$51,442. The average household income in Mifflin and Juniata Counties is \$50,213 and \$56,388, respectively. The study area also shows more households earning <\$25K annually or less as compared with PA and the U.S.; 27.3% for the GLH community, 24.0% for PA and 24.5% for the U.S. Mifflin County has the highest rates of low income households with 28.5% of their population earning \$25K annually or less.
- Most survey respondents in both counties reported never needing health services or needing and having no problem securing those services. However, when respondents reported needing health services and being unable to secure them the most common reasons were “no insurance”, “couldn’t afford”, and “unsure where to go”.
- There are indications in the secondary data that the geographic pockets of poverty align with data showing fewer providers and poor health outcomes in the same areas. For example, residents in zip code areas with higher CNI scores (greater socio-economic barriers to accessing healthcare) tend to experience lower educational attainment, lower household incomes, higher unemployment rates, as well as consistently showing less access to health care due to lack of insurance, lower provider ratios, and consequently poorer health outcomes when compared to other zip code areas with lower CNI scores (fewer socio-economic barriers to accessing healthcare).
- The data suggest that there is an increase in barriers to accessing healthcare for the hospital service area. A closer look at the changes in score shows there were four zip code areas that saw increases in barriers since 2012 and five that remained unchanged or showed improvement. The zip code areas showing reduced barriers to accessing healthcare started out with below average barriers, while those showing an increase showed above average barriers to begin with. Meaning, areas with few barriers to accessing healthcare have seen a decrease in barriers and access to healthcare has worsened in areas where it was already poor.
- The highest CNI score for the Geisinger-Lewistown Hospital study area is 3.6 in the zip code areas of Belleville (17004) and Lewistown (17044) in Mifflin County. The highest CNI score indicates the most barriers to community health care access. These two zip codes will reflect the greatest health issues and poorest health outcomes in the hospital service area.

Residents need solutions that reduce the financial burden of health care:

This assessment is ending at an interesting point in PA history as Medicaid expansion is being implemented. The expansion waiver should give significantly more residents in PA (including the hospital service area) access to health insurance. Kaiser Family Foundation estimates that 72% of uninsured nonelderly PA residents (1.4 million people) will become eligible for some type of assistance. It is important to note that residents with an immigration status currently causing ineligibility for health insurances will remain ineligible for any type of assistance.² Not addressed by the Kaiser Family Foundation in this excerpt is the cost of uninsured care for residents that opt out of participating in the social insurances like Medicaid. Most residents of Plain Communities are uninsured and do not participate in social insurances or formal medical assistance, though many families in these villages would qualify for Medicaid based on family size and income.

Eligibility for Coverage Among Nonelderly Uninsured Pennsylvanians Prior to ACA Coverage Expansions



Total = 1.4 Million Uninsured Nonelderly Pennsylvanians

*Source: Kaiser Family Foundation

Since the 2012 assessment, access to health insurance options seems to have increased; though according to stakeholders the coverage is limited and the copays and/or deductibles are too high for residents to use their benefits.

- Poverty is a barrier to healthcare. There are a limited number of safety net services available for residents earning just above poverty to 250% of poverty. While residents may have health insurance, they cannot always afford to use their health insurance due to unaffordable deductibles and copays. As a result, health services may be becoming unaffordable for families that do not qualify for assistance of any sort. Stakeholders and community leaders discussed the high cost of care, lack of health insurances and unaffordable copays and/or high deductibles as one cause for residents delaying/resisting seeking care. Residents may self-diagnose and attempt to treat their symptoms at home with home remedies and/or old prescriptions, which often leads to worsening symptoms until the issue becomes an emergency and must be treated in an emergency room.
- The population that is unable to afford healthcare and does not qualify for assistance is more of a moderate income earning family. There are residents in the area that earn an income that is high enough to disqualify them from medical assistance and at the same time is inadequate to afford private pay health insurance. According to the Kaiser Family

² Source: Kaiser Family Foundation analysis based on 2014 Medicaid eligibility levels and 2012-2013 Current Population Survey

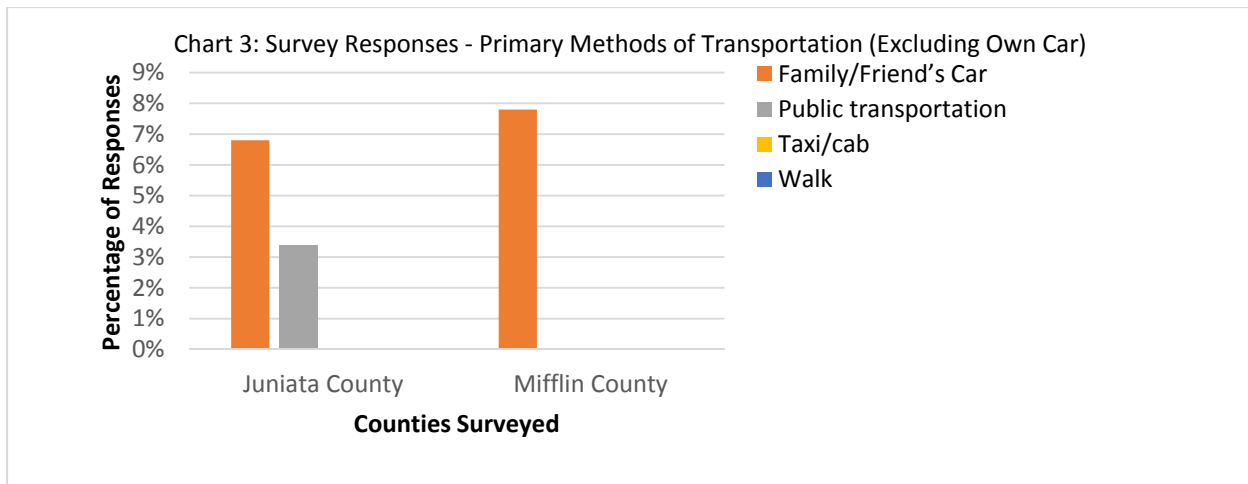
Foundation; all adults with a household income above 138% of the federal poverty level (FPL) (\$32,913 for a family of 4 and \$16,105 for an individual) are not eligible for medical assistance, though eligible for tax assistance up to 400% of FPL (\$95,400 for a family of 4 and \$46,680 for an individual). Residents with access to insurances through employers are not eligible for tax credits.³

- Mifflin and Juniata Counties have similar uninsured rates (14% and 15% respectively).
- Residents from Plain Communities (Belleville and the Big Valley area) and Latino(a) communities (Mifflin and Mifflintown) in the hospital service area both experience barriers to insurance.
 - ✓ Residents in Plain Communities are not permitted to use health insurances and instead raise funds every year through an auction to support medical expenses of the village. Reportedly, Plain Communities are often charged at least 35% more for uninsured care than a resident with medical insurance. The rising cost of healthcare, reportedly, has caused Plain Communities to forgo healthcare in many cases (e.g., birthing services, preventive care, and some medications).
 - ✓ Residents in Latino(a) communities do not have access to insurances unless they are U.S. citizens and employed. It is unclear how many residents may be undocumented in this population. Any resident that is undocumented is ineligible for insurances and often free clinic services due to the documentation required by free clinics and FQHCs.

Limited access to healthcare as a result of the location of providers coupled with transportation issues.

- Residents do not always have access to care (including primary/preventive care and dental care) due to a lack of transportation. This is most often true for more rural residents that do not have a private form of transportation. The distance between providers becomes a barrier to accessing healthcare due to the limited transportation options.
- Most residents used their own car as their primary form of transportation; however, some respondents indicated that their primary form of transportation is some method other than their own car in Juniata (10.2%) and Mifflin (7.8%) Counties, using a family/friend's car (6.8% and 7.8% respectively), public transportation (3.4%, only Juniata) were the most common alternatives.

³ Source: Kaiser Family Foundation analysis based on 2014 Medicaid eligibility levels.



Increasing access to healthcare is an issue that carries forward from previous assessments, though some progress has been made by increasing access to afterhours care through the growth of urgent care and walk in clinics. As access to health services continues to grow from resource development coupled with Medicaid expansion taking place throughout 2015, it will be important to ensure care is effectively coordinated and resources are being used in the most efficient way possible. It will also be very important to further understand the access issues for the Plain Communities as well as the Latino(a) communities in the hospital service area. Primary data collected during this assessment from community leaders and residents offered several recommendations to increase access to healthcare. Some of which included:

- **Enhance collaboration among health providers, community-based organizations, and agencies to help meet the health needs of residents.** For example, one stakeholder recommended that the CARS Senior program could collaborate with the Department of Human Services to ensure that transportation was available to residents that qualified.
- **Increase efforts to recruit and retain primary care practitioners:** Community leaders recommended that local health service providers increase efforts to recruit healthcare professionals while municipal governments work to improve the attractiveness of the towns in order to recruit and retain primary care professionals more successfully.
- **Educate residents about when it is necessary to seek health services:** Community leaders recommended launching an educational campaign to provide information about when and where it is appropriate to seek health care in order to reduce preventable hospitalizations. Leaders felt that education is necessary for STI screening, diabetes, and healthy nutrition also.
- **Increase the use of telemedicine:** particularly to cover the areas of greatest shortage where it can be effectively implemented (i.e., behavioral health).

- **Increase the access that residents from Plain Communities have to affordable healthcare options:** There has been industry precedence set for healthcare pricing packages and agreements between Plain Communities and hospital providers, which is most often based on an outright cost of Medicaid + 5% for all health services.
- **Increase collaboration between lay midwives** that provide birthing services to Plain Communities and hospital programs.
- **Increase the use of community health workers:** Community leaders recommended increasing the use of community health workers to alleviate some of the access issues related to navigation, transportation, and care coordination.

“Community health workers (CHWs) are frontline public health workers who have a close understanding of the community they serve. This trusting relationship enables them to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery. Community health workers also build individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support and advocacy.”
(American Public Health Association, 2008)

RESOURCE AWARENESS AND HEALTH LITERACY

Underlying factors identified by secondary data and primary input from community leaders, community stakeholders and resident survey respondents:

1. Presence of barriers related to language.
 - ✓ System navigation.
 - ✓ Need to increase culturally sensitive educational outreach to vulnerable populations.

Improving resource awareness and health literacy is identified as the third health priority for the Geisinger-Lewistown Hospital service area. There is a more diverse population in the hospital service area than is average for the state making cultural competence important to address. Additionally, there are limited English speaking skills making health literacy and system navigation a health concern. There is agreement across data sources in support of improving resource awareness, health literacy of residents and cultural sensitivity of providers in the hospital service area.

- Community leaders focused discussions around issues with special populations, language barriers, and cultural barriers to accessing health care.

- One-half of the stakeholders interviewed discussed the need for increasing awareness of residents about the health resources available in the hospital service area.
- Survey respondents indicated preferences related to how they prefer to receive information about health services that supports the need to improve resource awareness.

Findings supported by study data:

Language barriers related to accessing care and understanding care provided.

- The hospital service area is fairly homogeneous with only a few exceptions. There is a concentration of Latino(a) residents from El Salvador and Honduras in Mifflin, Reedsville, and Mifflintown, PA. Additionally, there is a large Plain Community in Big Valley around Belleville, PA. When we look at the CNI data, we see higher percentages of the population that 1) Have limited English skills and 2) Are minority in these areas.
- There are pockets of residents with limited English skills (i.e., Latino(a) residents in Juniata and Mifflin Counties, and Plain People (Amish and Mennonite residents) in Mifflin County). Limited English skills can restrict access to health services due to language barriers, documentation/citizenship issues, and insurance eligibility/desirability.
- Language barriers are an issue for Latino(a) residents in Mifflin and Juniata Counties seeking healthcare and social services due to limited bilingual staffing and a lack of translation resources. Additionally, there is a Latina provider in Mifflintown that is leaving the practice, which may cause additional barriers in this area.
- Participants agreed that there is a lack of communication, and that this results in not knowing about services offered. While there are educational programs provided in the community, they do not offer the sensitivity related to literacy, language, lack of documentation, limited financial resources, competence related to Plain culture, and the overall understanding of culture that is necessary to be effective. Different approaches are necessary to target vulnerable populations to effectively share information about health conditions and healthy living.

Health literacy can impact the level of engagement with health providers at every level; limiting preventive care, emergent care, and ongoing care for chronic health issues, leading to health disparities among populations with limited English skills and limited literacy skills. Primary data collected during this assessment from community leaders and residents offered several recommendations to improving resource awareness and health literacy. Some of which include:

- **Increase outreach and education** related to health lifestyles in places where residents go (i.e., schools, churches, grocery stores, partner agencies, employers, etc.).

REDUCING THE IMPACT OF HEALTH CONCERNS RELATED TO LIFESTYLE

Underlying factors identified by secondary data and primary input from community leaders, community stakeholders and resident survey respondents:

1. Residents need to increase the access and use of healthy options.
2. Lifestyle has a negative impact on health outcomes.

Reducing the impact of health concerns related to lifestyle is identified as the fourth community health priority by community leaders. Data shows that there are high-risk behaviors (e.g., smoking, substance abuse, etc.) which contribute to the prevalence of lifestyle related diseases in the area and negatively impact health outcomes. This was also reflected by community leaders, stakeholders and survey respondents.

- Secondary data related to prevalence rates and death rates of lifestyle related illnesses clearly support the need to reduce the impact of health concerns related to lifestyle.
- Community leaders identified lifestyle related health concerns as the fourth community health priority.
- Almost three-quarters of the stakeholders interviewed discussed the impact and primary drivers of lifestyle choices that impact the health status and subsequent health outcomes for residents.
- Survey respondents identified substance abuse and mental health as two of the top five concerns facing their communities.

Findings supported by study data:

There is a presence of conditions that contribute to lifestyle related illness (e.g., inactivity, poor nutrition, smoking, etc.):

- According to the A State Health Assessment (2013), lifestyles that impact the health of residents is a concern across the state with 1) an increase in residents that are obese from 2000 (21%) to 2011 (29%); 2) the percentage of adults who smoked cigarettes in the past 30 days is declining but, still high at 22.4%; and 3) residents are not always receiving education and outreach related to healthy behaviors and preventive practices.
- Residents are not always aware of available services in the community related to diabetes as well as how to effectively manage chronic health issues. Respondents in both counties in the study area report higher diagnosis rates for diabetes than is average for the state and the nation (10.1% and 9.7% respectively). With both Juniata

and Mifflin County respondents reporting more than double the state and national rates (20% and 21.1% respectively).

- There are several factors that perpetuate obesity in the community. Namely diet, exercise, access to resources, and education. Stakeholders discussed the low activity levels among residents (including children) in the service area. When low activity levels are coupled with poor nutrition, there is a greater risk of obesity. Limited access to healthy produce in poorer rural areas, a lack of education, and a lack of motivation among residents are all factors that drive obesity rates in the area. Stakeholders also noted the role that families and culture can play in establishing both healthy and unhealthy dietary habits. Obesity will have an impact on health outcomes for residents.

Table 2: Survey Responses – Smoking Rates Reported by Respondents

Smoking	Juniata County	Mifflin County	PA*	U.S.*
Everyday	5.1%	7.8%	15.7%	13.4%
Some days	--	6.7%	5.3%	5.4%
Not at all	93.2%	83.3%	--	--

*Behavioral Risk Factor Surveillance System

- ✓ Self-reported smoking rates are lower in the counties studied than is average for the state or the nation.
- ✓ 16% of the population in Juniata and Mifflin Counties smoke and approximately one-third of the population for Juniata and Mifflin Counties are obese (31% and 30% respectively).

Table 3: Survey Responses – Physical Activity Rates Reported by Survey Respondents

Physical Activities	Juniata County	Mifflin County	PA*	U.S.*
Yes	54.5%	53.3%	73.7%	74.7%
No	45.5%	46.7%	26.3%	25.3%

* Source: CDC

- Respondents in Juniata and Mifflin Counties report lower rates of physical activity than those reported for the state and nation.

Lifestyle related illness has a negative impact on health outcomes:

- Juniata and Mifflin Counties show higher deaths due to diabetes (33.4 and 22.2 per 100,000 pop. respectively) than the state (21.1 per 100,000 pop.) and the nation (21.2 per 100,000 pop.).
- Survey respondents in both counties in the study area reported that diabetes, obesity and cancer are among the top five health concerns in their community. All of these health concerns have some connection to lifestyle.

Table 4: Survey Responses – Average Weight and Body Mass Index of Survey Respondents

Weight & BMI	Juniata County	Mifflin County	Avg. Female (5'4")*	Avg. Male (5'9")*
Weight	176.45 lbs.	171.39 lbs.	108-144 lbs.	121-163 lbs.
BMI**	28.49	28.53	26.5	26.6

* Source: CDC

** Survey Respondents were asked to report their weight and height, from which the BMI calculation was possible.

- ✓ Respondents show higher weight and BMI than national and state averages regardless of gender.
- ✓ There are higher death rates in the hospital services area for diseases that are typically linked to lifestyle like coronary heart disease and diabetes. Additionally, the preventable hospitalizations linked to lifestyle are prevalent throughout both counties in the service area; two of which (namely COPD and diabetes) increased since 2012. Finally, there have been increases in the rates of lifestyle related illnesses across both counties in the service area (e.g., obesity, STIs, diabetes, etc.) since 2012.

Lifestyle related health concerns are another need that carries forward from the previous assessment. The lifestyles of residents will always drive health outcomes. While lifestyle can be a matter of choice, it is not always; particularly for the more vulnerable populations in the service area. Primary data collected during this assessment from community leaders and residents offered several recommendations to address lifestyle related health concerns. Some of which included:

- **Increase resources for diabetic residents:** Community Leaders recommended that there be additional resources for diabetic residents (i.e., medical supplies, prescriptions, and support groups) to increase successful chronic disease management.

- **Provide incentives to change behaviors:** Community leaders recommended providing residents with incentives to practice healthier behaviors and improve health status (i.e., smoking cessations, physical activity, etc.).

CARE COORDINATION

Underlying factors identified by secondary data and primary input from community leaders, community stakeholders and resident survey respondents:

1. Need for care coordination among vulnerable populations.

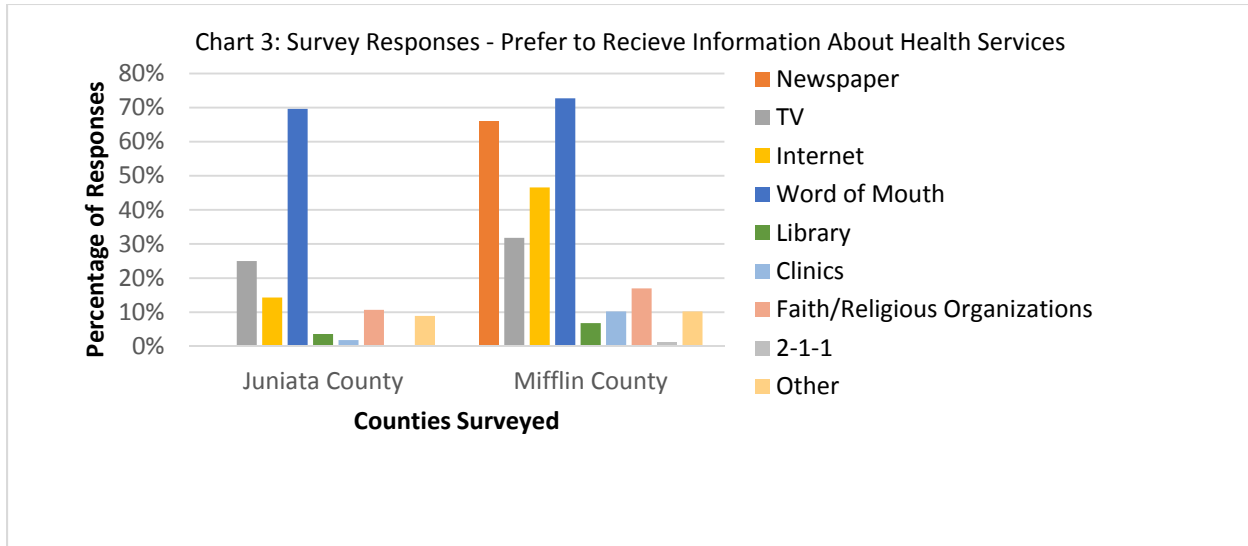
Community leaders identified care coordination as the fifth and final community health priority. Multiple factors have presented in the data that suggest care coordination is a need:

Findings supported by study data:

Need to increase awareness and care coordination.

- As rates of insured residents increase, residents will need assistance navigating the health services that exist because there will be some residents that have no experience with the health system. Often times, services are available, but they are fragmented and many residents may not be aware of what is available. Specific populations impacted by the lack of care coordination are reportedly Latino(a) residents, Plain Residents, and low income residents.
- Residents are not always aware of how to navigate the health system, which can be compounded by language, literacy, and cultural challenges in the Geisinger-Lewistown Hospital area.
- Care coordination and transitional care are not always available due to lack of funding for these activities, though it is a need among vulnerable residents. While the increase in urgent care clinics/walk-in clinics has provided greater access to health services for insured residents; they have reduced care coordination, medication management (services not practiced by most walk-in clinics), limiting the continuity of care residents are receiving, and leading to poorer health outcomes for some residents. Survey respondents echoed the need for care coordination with approximately one in four respondents in Juniata County (7.8% in Mifflin) indicated that they did not understand what was happening during a time when they (or a loved one) had to transition from one form of care to another. The most common recommendations related to care transitions were better explanation of the process (23.8%), and better explanation of care options (23.8%).

- Seniors often need assistance transitioning from one care setting to another in order to understand treatment options and effectively implement treatment regimens.
- More respondents indicated they get information about services in their community by word of mouth in both Juniata (69.6%) and Mifflin (72.7%) Counties with the newspaper a close second.



Care coordination is an activity that can improve health outcomes and reduce the consumption of healthcare resources in the hospital service area. Several recommendations made during the CHNA process include:

- **Educate residents about when it is necessary to seek health services:** Community leaders recommended launching an educational campaign to provide information about when and where it is appropriate to seek health care in order to reduce preventable hospitalizations. Leaders felt that education is necessary for STI screening, diabetes, and healthy nutrition also.
- **Increase appropriate referrals to in-home services:** Community leaders recommended increasing referrals for in-home care when it is appropriate in an effort to address transportation, care coordination, and independence for seniors.
- **Increase the presents of nurse navigators:** Community leaders recommended that health providers increase the use of care coordination services like nurse navigators and chronic disease management services.

Community Health Needs Identification Forum

The following qualitative data were gathered during a regional community planning forum held on March 12, 2015 in Lewistown, PA. The community planning forum was facilitated by Tripp Umbach with more than 40 community leaders from a three county region (Juniata and Mifflin Counties) and lasted approximately four hours. Community leaders were identified by the community health needs assessment oversight committee for Geisinger-Lewistown Hospital. Geisinger-Lewistown Hospital is a 123-bed community hospital.

Tripp Umbach presented the results from the secondary data analysis, community leader interviews, and community surveys. These findings were used to engage community leaders in a group discussion. Community leaders were asked to share their vision for the community, discuss a plan for health improvement in their community, and prioritize their concerns. Breakout groups were formed to pinpoint and identify issues/problems that are most prevalent and widespread in their community. Most importantly, the breakout groups needed to identify ways to resolve the identified problems through innovative solutions in order to bring about a healthier community.

GROUP RECOMMENDATIONS:

The group provided many recommendations to address community health needs and concerns for residents in the Geisinger-Lewistown Hospital service area. Below is a brief summary of the recommendations:

- ***Increase services for residents with behavioral health related issues:*** Community leaders indicated that there is a need for supportive services for behavioral health issues as well as positive educational opportunities.
- ***Increase efforts to recruit and retain primary care practitioners:*** Community leaders recommended that local health service providers increase efforts to recruit healthcare professionals while municipal governments work to improve the attractiveness of the towns in order to recruit and retain primary care professionals more successfully.
- ***Increase appropriate referrals to in-home services:*** Community leaders recommended increasing referrals for in-home care when it is appropriate in an effort to address transportation, care coordination, and independence for seniors.

- **Educate residents about when it is necessary to seek health services:** Community leaders recommended launching an educational campaign to provide information about when and where it is appropriate to seek health care in order to reduce preventable hospitalizations. Leaders felt that education is necessary for STI screening, diabetes, and healthy nutrition also.
- **Increase resources for diabetic residents:** Community Leaders recommended that there be additional resources for diabetic residents (i.e., medical supplies, prescriptions, and support groups) to increase successful chronic disease management.
- **Provide incentives to change behaviors:** Community leaders recommended providing residents with incentives to practice healthier behaviors and improve health status (i.e., smoking cessations, physical activity, etc.).
- **Increase the presence of nurse navigators:** Community leaders recommended that health providers increase the use of care coordination services like nurse navigators and chronic disease management services.

PROBLEM IDENTIFICATION:

During the community planning forum process, community leaders discussed regional health needs that centered around five themes. These were:

1. **Behavioral health and substance abuse**
2. **Access to healthcare**
3. **Resource awareness and health literacy**
4. **Health concerns related to lifestyle**
5. **Care coordination**

The following summary represents the most important topic areas within the community that were discussed at the planning retreat in order of priority. Community leaders believe the following concerns are the most pressing problems, and also the most manageable to address and resolve.

BEHAVIORAL HEALTH AND SUBSTANCE ABUSE:

Behavioral health and substance abuse services were discussed at the community forum. Community leaders focused their discussions primarily on the limited number of providers, need for care coordination, and affordability of care.

Perceived Contributing Factors:

There are not enough providers to meet the demand **among** residents. Where there are services, the wait times can be lengthy to secure initial **appointments** for behavioral health and substance abuse services.

- Residents that are diagnosed with behavioral health issues do not always have access to healthy options (i.e., positive educational experiences).
- There are gaps in the available services for adults and children related to behavioral health and substance abuse diagnosis and treatment.
- Care coordination is needed among behavioral health and substance abuse providers.
- There are few substance abuse treatment models being practiced among local providers due to a lack of resources.

ACCESS TO HEALTHCARE:

Community leaders identified access to health care as a health priority. Community leaders focused their discussions primarily on the limited number of providers, limited transportation options, and limited funding.

Perceived Contributing Factors:

- There is limited funding for health services.
- Health services (i.e., primary care, dental care, etc.) are not always readily available due to a shortage of providers, which can cause lengthy wait times to secure appointments.
- Residents do not always have access to care due to a lack of transportation. This is most often true for more rural residents and Plain People that do not have a private form of transportation.
- Residents are not always able to afford dental care due to the cost and lack of insurance.
- The lack of dental providers leads to poorer oral health outcomes and medical health outcomes (e.g., heart disease).
- Residents do not always have the ability to secure preventive care due to affordability, lack of insurance, and transportation issues.

RESOURCE AWARENESS AND HEALTH LITERACY:

Community leaders identified awareness of resources as a health priority. Leaders focused discussions around issues with special populations, language barriers, and cultural barriers to accessing health care.

Perceived Contributing Factors:

- There are pockets of residents with limited English skills i.e., Latino(a) residents in Juniata and Mifflin Counties and Plain People (Amish and Mennonite residents) in Mifflin County). Limited English skills can restrict access to health services due to language barriers, documentation/citizenship issues, and insurance eligibility issues.
- Language barriers are an issue for Latino(a) residents seeking healthcare and social services due to limited bilingual staffing and a lack of translation resources. Additionally, there is a Latina provider in Mifflintown that is leaving the practice, which may cause additional barriers in this area. There are churches in Juniata that offer services in Spanish and English as a Second Language (ESL) classes.
- There is a disconnect between the health priorities of Plain People and the healthcare industry. Local Plain People host an annual auction in Millroy, PA during the month of August to raise funds which allows each villager to pay cash for healthcare services throughout the year. There is very little preventive care being provided to Plain People by local health service providers. There is a preference for natural remedies offered by local chiropractors and mid-wives. It is believed that Plain People populations are not always aware of what services are available and/or how to navigate the health services that exist.
- Residents are not always seeking care at appropriate times in appropriate venues (i.e., primary care, urgent care, and emergency care) due to values related to a “walk it off” culture.
- Grandparents raising grandchildren may need information about relevant positive practices and preventive care.
- Education related to prevention is necessary for residents however, most non-profits are not receiving funding for these services.

HEALTH CONCERNS RELATED TO LIFESTYLE:

Community leaders identified lifestyle related health concerns as a health priority. Leaders focused discussions around the access and awareness residents have related to healthy options as well as the impact to health outcomes.

Perceived Contributing Factors:

- Residents do not always have healthy priorities related to nutrition.
- Residents are not always aware of what is available diabetic services in the community as well as how to effectively manage chronic health issues.
- There is little focus on community based promotion of overall wellness.

CARE COORDINATION:

Community leaders identified care coordination as a health priority. Leaders focused discussions around the need for care coordination in general.

Perceived Contributing Factors:

- There is a need for care coordination for residents.
- Care coordination and transitional care is not readily available due to a lack of funding and/or payment source for care coordination activities.
- Seniors often need assistance transitioning from one care setting to another in order to understand treatment options and effective.

Secondary Data

Tripp Umbach worked collaboratively with the Geisinger-Lewistown Hospital community health needs assessment oversight committee to develop a secondary data process focused on three phases: collection, analysis and evaluation. Tripp Umbach obtained information on the demographics, health status and socio-economic and environmental factors related to the health and needs of residents from the multi-community service area of Geisinger-Lewistown Hospital. The process developed accurate comparisons to the state baseline of health measures utilizing the most current validated data. In addition to demographic data, specific attention was focused on two key community health index factors: Community Need Index (CNI) and Prevention Quality Indicators Index (PQI). Tripp Umbach provided additional comparisons and trend analysis for County Health Rankings, Prevention Quality Indicators and CNI data from 2012 to present.

Demographic Profile

The Geisinger-Lewistown Hospital study area encompasses Juniata and Mifflin counties, and is defined as a zip code geographic area based on 80% of the hospital's inpatient volumes. The Geisinger-Lewistown Hospital community consists of nine zip code areas.

Demographic Profile – Key Findings:

- ✓ The study area is projected to have a population increase over the next five years at a rate of +0.6%. Both Mifflin and Juniata Counties are projected to have a rise in population, with increases of +0.3% and +1.1%, respectively. Population increases are also projected for PA, showing that people are moving both into the state and into the study area.
- ✓ The study area shows declines in the percentages of younger individuals (18 and younger) while at the same time showing projected increases in the percentages of older individuals (55 and older) in the next five years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs. Mifflin County has the largest percentage of individuals aged 65 and older (19.7%) in the study area, which is higher than PA (16.6%) and the U.S. rate (14.2%).
- ✓ The study area has an average annual household income of \$51,442. The average household income in Mifflin County is \$50,213 and \$56,388 in Juniata County. It is interesting to see that all of the average household income levels for the study area fall below the averages for Pennsylvania and for the United States. Generally, rural areas show lower income levels as compared with more urban areas. The study area shows

more households earning <\$25K annually or less as compared with PA and the U.S.; 27.3% for the Geisinger-Lewistown Hospital community, 24.0% for PA and 24.5% for the U.S. Mifflin County has the highest rates of low income households with 28.5% of their population earning \$25K annually or less.

- ✓ 18.8% of the population in the study area has not received a high school diploma. Mifflin County shows the highest rate in the service area (16.8%). These rates are higher than the state (12.6%) and the U.S. (15.1%). Education level is highly related to occupation and therefore income.
- ✓ When compared with PA and the U.S., the study area shows very little diversity. Only 4.6% of the population in the study area identify as a race/ethnicity other than White, Non-Hispanic, whereas 19.6% in PA and 35.8% in the U.S. identify as a race other than White, Non-Hispanic. Mifflin County, within the study area has the least diversity with 3.8% of the population identifying as a race/ethnicity other than White, Non-Hispanic. 5.1% of the Juniata County population identify as a race/ethnicity other than White, Non-Hispanic. When compared to the diversity of PA or the U.S., we can see that the Geisinger-Lewistown Hospital study area is very homogeneous.

Community Need Index (CNI)

In 2005, Catholic Healthcare West, in partnership with Thomson Reuters, pioneered the nation's first standardized Community Need Index (CNI).⁴ CNI was applied to quantify the severity of health disparity for every zip code in Pennsylvania based on specific barriers to healthcare access. Because the CNI considers multiple factors that are known to limit healthcare access, the tool may be more accurate and useful than other existing assessment methods in identifying and addressing the disproportionate unmet health-related needs of neighborhoods.

The five prominent socio-economic barriers to community health quantified in CNI include: Income, Insurance, Education, Culture/Language and Housing. CNI quantifies the five socio-economic barriers to community health utilizing a five-point index scale where a score of 5 indicates the greatest need and 1, the lowest need.

Overall, the Geisinger-Lewistown Hospital zip code areas have a CNI score of 3.2, indicating a higher than average level of community health need in the hospital community. The CNI analysis lets us dig deeper into the traditional socio-economic barriers to community health and identify areas where the need may be greater than the overall service area.

⁴ "Community Need Index." Catholic Healthcare West Home. Web. 16 May 2011.
<http://www.chwhealth.org/Who_We_Are/Community_Health/STGSS044508>.

Table 5: CNI Scores for the Geisinger-Lewistown Hospital Service Area by Zip Code

Zip	City	County	% of Pop. Renting	% of Pop. Unemployed	% of Pop. Uninsured	% of Pop. Minority	% of Pop. Limited English	% of Pop. w/ No Diploma	% of 65+ Pop. in Poverty	% of Adults Married w/ Children in Poverty	% of Adults Single w/ Children in Poverty	Income Rank	Insurance Rank	Education Rank	Culture Rank	Housing Rank	2014 CNI Score
17004	Belleville	Mifflin	25.7%	5.6%	9.4%	3.4%	4.4%	29.7%	7.4%	23.2%	66.0%	5	3	5	1	4	3.6
17044	Lewistown	Mifflin	34.4%	11.5%	11.0%	5.3%	0.1%	17.1%	10.9%	17.9%	40.1%	3	4	4	2	5	3.6
17059	Mifflintown	Juniata	27.7%	5.6%	6.5%	7.5%	1.4%	17.4%	9.0%	15.7%	49.2%	4	2	4	2	4	3.2
17084	Reedsville	Mifflin	20.1%	4.7%	10.2%	1.9%	3.9%	21.3%	7.3%	36.4%	50.0%	4	3	5	1	3	3.2
17058	Mifflin	Juniata	29.0%	9.7%	7.4%	7.3%	2.1%	16.2%	2.8%	15.9%	23.7%	2	3	4	2	4	3.0
17051	Mc Veytown	Mifflin	17.2%	8.3%	8.7%	2.8%	0.2%	19.7%	9.0%	16.9%	36.5%	3	3	4	1	2	2.6
17063	Milroy	Mifflin	20.2%	8.8%	7.7%	1.6%	1.2%	19.5%	9.1%	17.2%	44.3%	3	2	4	1	3	2.6
17082	Port Royal	Juniata	23.3%	9.6%	6.6%	5.4%	0.5%	13.4%	8.8%	12.5%	33.3%	2	2	3	2	3	2.4
17841	Mc Clure	Mifflin	19.8%	6.1%	7.2%	3.0%	0.6%	20.4%	5.9%	20.5%	44.3%	3	2	4	1	2	2.4
Geisinger-Lewistown Hospital Community Summary			27.2%	8.6%	9.1%	4.6%	1.2%	18.9%	9.0%	19.2%	43.6%	3.3	3.0	4.1	1.6	3.8	3.2

- ✓ Higher CNI scores indicate a greater number of socio-economic barriers to community health.
- ✓ The highest CNI score for the GLH study area is 3.6 in the zip code areas of Belleville (17004) and Lewistown (17044) in Mifflin County. The highest CNI score indicates the most barriers to community health care access.
- ✓ From the data, we can see that various zip code areas have the highest rates of the measures used to calculate the CNI.
- ✓ Lewistown (17044) has the highest rental rate (34.4%), unemployment rate (11.5%), uninsured rate (11.0%) and elderly living in poverty (10.9%).
- ✓ Belleville (17004) has the rate of limited English speakers (4.4%), individuals with no high school diploma (29.7%), and single parents with children living in poverty (66.0%).
- ✓ Reedsville (17084) has the highest rate of married parents with children living in poverty (36.4%).
- ✓ Mifflintown (17059) in Juniata County has the highest minority rate (7.5%).

- ✓ The median CNI score is 3.0. The CNI score for the Geisinger-Lewistown Hospital study area is 3.2, indicating the study area has slightly more than the average amount of barriers to healthcare access.
- ✓ The study area has four zip code areas that are above the median, four below the median, and one zip code with a CNI score of 3.0.

Table 6: CNI Scores for the Geisinger-Lewistown Hospital Service Area by County

County	2014 Tot. Pop.	% of Pop. Renting	% of Pop. Unemployed	% of Pop. Uninsured	% of Pop. Minority	% of Pop. Limited English	% of Pop. w/ No Diploma	% of 65+ Pop. in Poverty	% of Adults Married w/ Children in Poverty	% of Adults Single w/ Children in Poverty	2014 CNI Score
Juniata County Summary	24,353	24.3%	7.3%	6.7%	5.2%	0.8%	18.0%	8.3%	14.3%	49.3%	2.9
Mifflin County Summary	47,892	27.2%	9.1%	9.6%	3.9%	1.1%	19.6%	9.4%	20.1%	42.9%	3.2

- ✓ The average CNI scores for the study area and Mifflin County are above the median for the scale (3.0). The CNI score for the study area is 3.2; indicating there are slightly more than average barriers to community health care access in the study area.

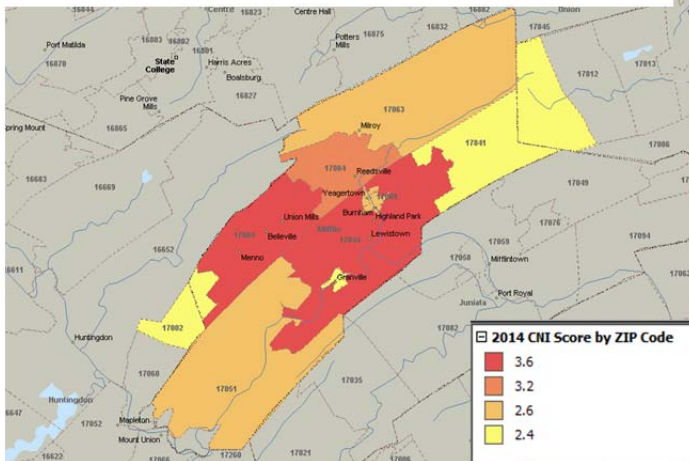
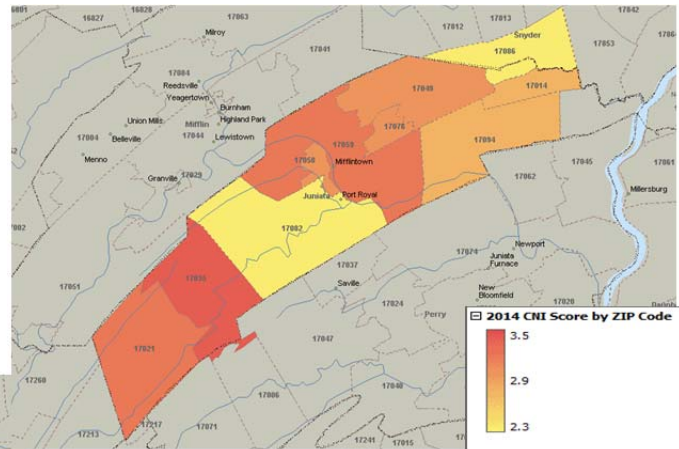
Table 7: CNI Score Trending (2011-2014) for the Geisinger-Lewistown Hospital Service Area by Zip Code

Zip	City	County	2011 CNI Score	2014 CNI Score	2011 – 2014 Change
17044	Lewistown	Mifflin	3.6	3.6	0.0
17004	Belleville	Mifflin	3.4	3.6	+ 0.2
17059	Mifflintown	Juniata	2.8	3.2	+ 0.4
17084	Reedsville	Mifflin	2.6	3.2	+ 0.6
17058	Mifflin	Juniata	3.4	3.0	-0.4
17051	McVeytown	Mifflin	2.4	2.6	+ 0.2
17063	Milroy	Mifflin	2.8	2.6	- 0.2
17841	McClure	Mifflin	2.4	2.4	0.0
17082	Port Royal	Juniata	2.8	2.4	-0.4
Geisinger-Lewistown Hospital Community Study Area			2.9	3.2	

- ✓ The median CNI score is 3.0. The study area has five zip code areas that are above the median, six below the median, and two zip codes with a CNI score of 3.0.

- ✓ There was an increase in barriers in four of the nine zip code areas served by Geisinger-Lewistown Hospital and a decrease in three.

Juniata County shows a decrease in the CNI scores for two zip code areas and an increase in barriers for one zip code area included in this study.



Mifflin County shows an increase in barriers in three of the six zip code areas – Reedsville (from 2.6 to 3.2); McVeytown (from 2.4 to 2.6); and Belleview (from 3.4 to 3.6). Lewistown (3.6) and McClure (2.4) remained unchanged.

County Health Rankings

The County Health Rankings show that where we live impacts our health status. The health of a community depends on many different factors – from individual health behaviors, education and jobs, to quality of healthcare, and the environment. The rankings help community leaders see that where we live, learn, work and play influences how healthy we are and how long we live.

The County Health Rankings are a key component of the Mobilizing Action Toward Community Health (MATCH) project. MATCH is the collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The rankings identify the multiple health factors that determine a county's health status. Each county receives a summary rank for its health outcomes and health factors – the four different types of health factors include: health behaviors, clinical care, social and economic factors, and the physical environment. The Rankings are a real “Call-to-Action” for state and local health departments to develop broad-based solutions with others in their community so all residents can be healthy. But efforts will also be made to mobilize community leaders outside the public health sector to take action and invest in programs and policy changes that address barriers to good health and help residents lead healthier lives. Other community leaders may include: educators; elected and appointed officials, including mayors, governors, health commissioners, city/county councils, legislators, and staff; business owners; and the healthcare sector.

Counties in each of the 50 states are ranked according to summaries of the 37 health measures. Those having good rankings (e.g., 1 or 2) are considered to be the “healthiest.” Counties are ranked relative to the health of other counties in the same state on the following summary measures:

- Health Outcomes — Two types of health outcomes are measured to represent the health of each county: how long people live (mortality) and how healthy people feel (morbidity). These outcomes are the result of a collection of health factors and are influenced by existing programs and policies at the local, state and federal levels.
- Health Factors — A number of different health factors shape a community's health outcomes. The County Health Rankings are based on weighted scores of four types of factors: Health behaviors (six measures), Clinical care (five measures), Social and economic (seven measures), Physical environment (four measures).

Pennsylvania has 67 counties; therefore, the rank scale for Pennsylvania is one to 67 (one being the healthiest county and 67 being the most unhealthy). The median rank is 34.

Data for the County Health Rankings is only defined as far as the county level, zip code level data is not available. Therefore, the county level data has been presented here (no Geisinger-Lewistown Hospital service area level data is available).

- Juniata County ranks the best in the study area and in the state of PA with a ranking of 1 out of 67 in Morbidity (Quality of Life). Juniata County also ranks well in Physical Environment with a ranking of 2 and Health Outcomes with a ranking of 7.
- Mifflin County ranks worse than Juniata County in almost every category - Health Outcomes, Health Factors, Clinical Care, Mortality (Length of Life), Morbidity (Quality of Life), Clinical Care, Social and Economic Factors and Physical Environment.
- Mifflin County has a higher unemployment rate of the two counties with 8.3% unemployment. Mifflin also has a higher violent crime rate of 125 per 100,000 pop.
- Both Juniata and Mifflin Counties have a diabetic population of 11%. Juniata County has diabetic screening percentage of 89% and Mifflin County has a diabetic screening rate of 86%.
- 16% of the population in Juniata and Mifflin Counties smoke and approximately one-third of the population for Juniata and Mifflin Counties are obese (31% and 30% respectively).
- Mifflin and Juniata Counties have similar uninsured rates (14% and 15% respectively). Juniata County has a PCP rate of 25 and Mifflin County has a PCP rate of 45.

From 2011 to 2014, the counties that saw the largest shifts in county health rankings or data were:

- The most significant negative shift in the Geisinger-Lewistown Hospital study area between 2011 and 2014 is the number of Sexually Transmitted Infections (Chlamydia Rate) in Juniata County. The County went from 52 cases per 100,000 population in 2011 to 209 cases in 2014. There was also a significant increase in Sexually Transmitted Infections in Mifflin County from 106 per 100,000 population in 2011 to 297 in 2014.
- The PCP rate in Juniata County fell from 30 to 25 between 2011 and 2014. The PCP rate also fell in Mifflin County from 2011 to 2014 from 50 to 45.
- Juniata County went from a rank of 31 in 2011 to 2 in 2014 for Physical Environment, the largest shift in county health rankings for the study area.

- The Mifflin County health rankings remained relatively stable between 2011 and 2014, with the exception of Health Behaviors, which had a positive ranking shift from 40 in 2011 to 16 in 2014.
- There was a large decrease between 2011 and 2014 in the violent crime rate of Mifflin County going from 205 per 100,000 in 2011 down to 125 per 100,000.
- Both Mifflin and Juniata Counties experienced a decrease in unemployment from 2011 to 2014.

Prevention Quality Indicators Index (PQI)

The Prevention Quality Indicators index (PQI) was developed by the Agency for Healthcare Research and Quality (AHRQ). The AHRQ model was applied to quantify the PQI within the Geisinger-Lewistown Hospital service area and Pennsylvania. The PQI index identifies potentially avoidable hospitalizations for the benefit of targeting priorities and overall community health.

The quality indicator rates are derived from inpatient discharges by zip code using ICD diagnosis and procedure codes. There are 14 quality indicators. Lower index scores represent fewer admissions for each of the PQIs.

From 2011 to 2014, there were a handful of data methodology changes. For each, Tripp Umbach went to past data and adjusted as necessary to make comparable. They are as follows:

- ❖ In the past, PQI data was presented as a value per 1,000 population. The AHRQ has revised this and the current data is presented as a value per 100,000 population. Tripp Umbach adjusted to match these as needed.
- ❖ PQI 2 changed from Perforated Appendix in Males 18+ for the past study to Perforated Appendix in Total 18+ population as a rate per 1,000 ICD-9 code admissions for appendicitis. This shift has changed the values for this measure drastically and therefore, Tripp Umbach did not adjust.
- ❖ PQI 5 changed from COPD in 18+ population to COPD or Asthma in “Older adults” 40+ population. Tripp Umbach did not adjust.
- ❖ Although not clearly explained by the AHRQ, it would seem that a definition of Newborn population has shifted for PQI 9 because the values are drastically lower in 2014 than in

previous years (2011). This has shifted PQI 9 values drastically. Tripp Umbach did not adjust.

- ❖ PQI 15 changed from Adult Asthma in 18+ population for past study to Asthma in Younger Adults 18-39 population. Tripp Umbach did not adjust.

OVERALL:

There are higher rates throughout the study area for **diabetes short-term complications, perforated appendix, congestive heart failure, low birth weight, dehydration, and bacterial pneumonia**. Juniata and Mifflin Counties both show poorer health outcomes when compared to the state rate across PQI measures.

Table 8: Prevention Quality Indicators – County-by-County Comparison to Pennsylvania

Prevention Quality Indicators (PQI)	Juniata County	Mifflin County	PA
Diabetes Short-Term Complications (PQI1)	679.44	148.43	115.16
Perforated Appendix (PQI2)	818.18	687.50	343.91
Diabetes Long-Term Complications (PQI3)	64.20	156.52	119.79
Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)	357.00	632.10	578.80
Hypertension (PQI7)	37.45	32.38	53.99
Congestive Heart Failure (PQI8)	481.49	534.34	418.29
Low Birth Weight (PQI9)	59.46	40.00	37.50
Dehydration (PQI10)	74.90	110.65	61.90
Bacterial Pneumonia (PQI11)	449.39	477.67	326.16
Urinary Tract Infection (PQI12)	165.85	213.20	197.51
Angina Without Procedure (PQI13)	10.70	35.08	11.80
Uncontrolled Diabetes (PQI14)	16.05	13.49	14.20
Asthma in Younger Adults (PQI15)	49.29	17.50	63.34
Lower Extremity Amputation Among Diabetics (PQI16)	21.40	35.08	26.40

- **Juniata County** shows the highest rate in both counties served by Geisinger-Lewistown Hospital for **Diabetes Short-Term Complications (PQI1); Perforated Appendix (PQI2); Hypertension (PQI7); Low Birth Weight (PQI9); Uncontrolled Diabetes (PQI14); and Asthma in Younger Adults (PQI15)**. Juniata County shows higher hospitalization rates than the state for four additional PQI measures:
 - Congestive Heart Failure (PQI8)
 - Dehydration (PQI10)
 - Bacterial Pneumonia (PQI11)
 - Uncontrolled Diabetes (PQI 14)

- **Mifflin County** shows the highest rate in both counties served by Geisinger-Lewistown Hospital for **Diabetes Long-Term Complications (PQI3); Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5); Congestive Heart Failure (PQI8); Dehydration (PQI10); Bacterial Pneumonia (PQI11); Urinary Tract Infection (PQI12); Angina Without Procedure (PQI13); and Lower Extremity Amputation Among Diabetics (PQI 16)**.. Mifflin County shows higher than state hospitalization rates for six additional measures:
 - Diabetes Short-Term Complications (PQI1)
 - Perforated Appendix (PQI2)
 - Chronic Obstructive Pulmonary Disease or Adult Asthma(PQI5)
 - Low Birth Weight (PQI9)
 - Urinary Tract Infection (PQI12)
 - Lower Extremity Amputation Among Diabetics (PQI16)

Table 9: Prevention Quality Indicators – Geisinger-Lewistown Hospital Service Area Compared to Pennsylvania with Trending

Prevention Quality Indicators (PQI)	2014 - Geisinger-Lewistown Hospital Study Area			2011 PQI Geisinger-Lewistown Hospital		
	PA	Difference		Geisinger-Lewistown Hospital	Geisinger-Lewistown Hospital	Difference
Diabetes Short-Term Complications (PQI1)	111.89	115.16	-3.27	54.67	111.89	+57.22
Perforated Appendix (PQI2)	695.65	343.91	+351.74	.39	695	--
Diabetes Long-Term Complications (PQI3)	130.16	119.79	+10.37	106.97	130.16	+23.19
Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)	613.86	578.80	+35.06	323.29	613.86	--
Hypertension (PQI7)	31.97	53.99	-22.02	35.66	31.97	-3.69
Congestive Heart Failure (PQI8)	525.21	418.29	+106.92	584.78	525.21	-59.57
Low Birth Weight (PQI9)	45.10	37.50	+7.60	1.43	45.10	--
Dehydration (PQI10)	114.18	61.90	+52.28	133.12	114.18	-18.94
Bacterial Pneumonia (PQI11)	477.26	326.16	+151.10	461.17	477.26	+16.09
Urinary Tract Infection (PQI12)	205.52	197.51	+8.01	221.08	205.52	-15.56
Angina Without Procedure (PQI13)	29.69	11.80	+17.89	9.51	29.69	+20.18

Uncontrolled Diabetes (PQI14)	11.42	14.20	-2.78	21.39	11.42	-9.97
Asthma in Younger Adults (PQI15)	14.82	63.34	-48.52	140.25	14.82	--
Lower Extremity Amputation Among Diabetics (PQI16)	31.97	26.40	+5.57	37.08	31.97	-5.11

Source: Calculations by Tripp Umbach

- We see the largest negative PQI difference between the Geisinger-Lewistown Hospital study area and PA in Perforated Appendix (PQI2) admissions where the study area reports a higher PQI of 695.6 preventable hospitalizations per 100,000 population versus PA which shows a rate of 343.91 per 100,000 population.
- We see the largest positive difference between the Geisinger-Lewistown Hospital study area and PA in Asthma in Younger Adults (PQI15) admissions where the study area reports a lower PQI of 14.82 preventable hospitalizations per 100,000 population versus PA which shows 63.34 per 100,000 population.

From 2011 to 2014, four of the PQI measures definitions changed drastically and, therefore, cannot be accurately compared (PQI 2, PQI 5, PQI 9 & PQI 15).

- Of the 10 remaining PQI measures, six of the 10 Geisinger-Lewistown Hospital study area values saw **reductions in PQI rates** from 2011 to 2014. This means that while preventable hospitalizations are high in the area they are beginning to decrease.
- Four PQI values for the Geisinger-Lewistown Hospital study area saw a **rise in preventable hospitalizations** from 2011 to 2014, these were for:
 - ✓ Diabetes Short-term Complications (going from 54.67 per 100,000 pop. to 111.89 per 100,000 pop.).
 - ✓ Diabetes Long-term Complications (going from 106.97 per 100,000 pop. to 130.16 per 100,000 pop.).
 - ✓ Bacterial Pneumonia (going from 461.17 per 100,000 pop. to 477.26 per 100,000 pop.).
 - ✓ Angina Without Procedure (going from 9.51 per 100,000 pop. to 29.69 per 100,000 pop.).

CDC National Center for Health Statistics:

Centers for Disease Control and Prevention National Center for Health Statistics includes indicators from: County Health Rankings (CHR); Community Health Status Indicators (CHSI); Healthy People 2020; Centers for Medicare & Medicaid Services (CMS) indicators (a set of community-level, Medicare utilization, socio-demographic, patient safety and quality indicators); Health, United States; and Additional indicators as determined by the HHS Interagency Governance Group.

Table 10: Health Indicators Warehouse – County-Level Indicators Compared to State and National Benchmarks

CDC National Center for Health Statistics (2010-2012)**	HP 2020	U.S.	PA	Juniata County	Mifflin County
2011 Primary care providers (per 100,000)	--	--	92.7	20.5	47
2011 Dentist rate (per 100,000)	--	--	59.1	8.2	29.9
2012 Acute Hospital Readmissions (%)*	--	18.6%	18.4%	15.4%	17.6%
Births: women under 18 years (%)	--	2.3%	2.3%	--	1.7%
Cancer Death Rate (per 100,000 pop.) *	160.6	169.3	178.3	167.3	175.3
Breast cancer deaths (per 100,000)*	20.6	21.7	23	--	19.2
Colorectal cancer deaths (per 100,000)*	14.5	15.3	16.4	--	17.7
Alzheimer's disease deaths (per 100,000) *	--	24.5	19.3	21.3	22.3
Chronic lower respiratory disease deaths (per 100,000)*	--	42.1	38.8	56.2	45.8
Coronary heart disease deaths (per 100,000) *	100.8	105.4	112.4	87.2	111.1
Diabetes deaths (per 100,000) *	--	21.2	21.1	33.4	22.2
Drug poisoning deaths (per 100,000) *	--	12.9	17.5	--	DSU
Fall deaths (per 100,000) *	--	8.1	8.6	--	10.6
Heart disease deaths (per 100,000) *	--	174.4	183.5	167	169
Influenza and pneumonia deaths (per 100,000) *	--	15.1	14.4	--	13.3
Injury deaths (per 100,000) *	53.3	58.1	63	56.7	61.9
Kidney diseases deaths (per 100,000) *	--	13.9	16.8	--	12.1
Lung, trachea, and bronchus cancer deaths (per 100,000) *	--	46.1	47.9	50	52.1
Motor vehicle traffic deaths (per 100,000) *	--	10.8	10.4	--	16.9
Septicemia deaths (per 100,000) *	--	10.5	13.3	--	15
Stroke deaths (per 100,000) *	33.8	38	38.8	36.9	32.3
Suicide deaths (per 100,000) *	10.2	12.3	12.5	--	16.1

** Source: Centers for Disease Control and Prevention. National Center for Health Statistics. Health Indicators Warehouse. www.healthindicators.gov.

*Rates are age adjusted to 2000 std. pop.

-- meaning: data not available

There is a similar trend in the CDC National Center for Health Statistics data that presents in the majority of all other secondary data sources; Mifflin County consistently shows the poorest health outcomes when compared to Juniata County, the state, and the nation.

- ✓ All counties served by the hospital have significantly fewer providers (Primary care and Dental) than is average for PA (Primary Care – 92.7 and Dental – 59.1 per 100,000 pop.).
 - **Primary Care Providers** – Juniata County has less than one-quarter (20.5 per 100,000 pop.) and Mifflin County has half (47 per 100,000 pop.) the providers that is average for the state.
 - **Dental Providers** – Juniata County has a serious dental provider shortage (8.2 per 100,000 pop.) and Mifflin County has half (29.9 per 100,000 pop.) the providers that is average for the state.
- ✓ Most counties in the service area show a lower percentage of **acute hospital readmissions** (Inpatient readmissions within 30 days of an acute hospital stay) than is average for the nation and the state (18.6% and 18.4% respectively).
- ✓ The percentage of **live births to women that are below 18 years of age** is below or similar to the state and national average (2.3% each).
- ✓ The **deaths due to cancer** are higher in PA than the national average for every type of cancer observed in this study (i.e., overall, breast, and colorectal). Where there is data available; Mifflin County shows death rates that are higher than the state for overall deaths due to cancer (175.3 per 100,000 pop.) and Colorectal cancer (17.7 per 100,000 pop.) The state rates are (178.3 and 16.4 per 100,000 pop. respectively).
- ✓ Juniata and Mifflin Counties show fewer **deaths related to Alzheimer’s disease** than the nation (21.3 and 22.3 per 100,000 pop.), which is higher than the state (19.3 per 100,000 pop.).
- ✓ Juniata and Mifflin Counties have higher **deaths due to chronic lower respiratory disease** (56.2 and 45.8 per 100,000 pop.) than the state and nation (38.8 and 42.1 per 100,000 pop. respectively).
- ✓ Mifflin County shows the highest **deaths due to coronary heart disease** (111.1 per 100,000 pop.). The healthy People 2020 goal is 100.8.
- ✓ Juniata and Mifflin Counties show higher **deaths due to diabetes** (33.4 and 22.2 per 100,000 pop. respectively) than the state (21.1 per 100,000 pop.), and the nation (21.2 per 100,000 pop.).
- ✓ Mifflin County has higher **deaths due to falls** (10.6 per 100,000 pop.) than state and national rates (8.6 and 8.1 per 100,000 pop. respectively). No data was available for Juniata County.

- ✓ Juniata and Mifflin Counties show fewer **deaths due to heart disease** than the state (183.5 per 100,000 pop.) or nation (174.4 per 100,000 pop.).
- ✓ **Injury death rates** are similar for both counties in the service area as state and national rates (63 and 58.1 per 100,000 pop. respectively).
- ✓ Mifflin County shows higher **deaths due to motor vehicle traffic** (16.9 per 100,000 pop) than state and national rates (10.4 and 10.8 per 100,000 pop. respectively).
- ✓ Mifflin County shows higher **deaths due to septicemia** (15 per 100,000 pop.) than the state and national rates (13.3 and 10.5 per 100,000 pop. respectively).
- ✓ Mifflin County shows higher **deaths due to suicide** (16.1 and per 100,000 pop) than state and national rates (12.5 and 12.3 per 100,000 pop. respectively). Data was not available for Juniata County

Key Stakeholder Interviews

Tripp Umbach conducted interviews with community leaders in the Geisinger-Lewistown Hospital service area. Leaders who were targeted for interviews encompassed a wide variety of professional backgrounds including 1) Public Health expertise; 2) Professionals with access to community health related data; and 3) Representatives of underserved populations (See Appendix 1 for a list of participating organizations). The interviews offered community leaders an opportunity to provide feedback on the needs of the community, secondary data resources, and other information relevant to the study.

This report represents one component of the overall community health needs assessment project completed by Tripp Umbach.

DATA COLLECTION:

The following qualitative data were gathered during individual interviews with 10 stakeholders of the Geisinger-Lewistown Hospital service area, as identified by an advisory committee of Geisinger-Lewistown Hospital. Geisinger-Lewistown Hospital is a 123-bed community hospital. Each interview was conducted by a Tripp Umbach consultant and lasted approximately 60 minutes. All respondents were asked the same set of questions developed by Tripp Umbach and previously reviewed by the Geisinger-Lewistown Hospital advisory committee. The purpose of these interviews was for stakeholders to identify health issues and concerns affecting residents in the Geisinger-Lewistown Hospital service area, as well as ways to address those concerns.

There was a diverse representation of community-based organizations and agencies among the 10 stakeholders interviewed. Those organizations represented included:

- Area Agency on Aging
- Juniata Behavioral & Developmental Services
- Juniata County Commissioners
- JV Tri-County Drug & Alcohol
- Mifflin County Commissioners
- Mifflin County Industrial Development Corporation
- Mifflin-Juniata Special Needs Center
- PA Office of Rural Health
- Sacred Heart Catholic School
- State Health Center
- United Way of Mifflin-Juniata

STAKEHOLDER RECOMMENDATIONS:

The stakeholders provided many recommendations to address health issues and concerns for residents living in the Geisinger-Lewistown Hospital service area. Below is a brief summary of the recommendations:

- ✓ Stakeholders felt that enhanced collaboration could help health providers, community-based organizations, and agencies meet the health needs of residents. For example, one stakeholder recommended that the CARS Senior Program could collaborate with the Department of Human Services to ensure that transportation was available to residents that qualified.
- ✓ Stakeholders felt that beautification and economic development of the community might help recruit physicians to the area.
- ✓ Increase the use of telemedicine, particularly to cover the areas of greatest shortage where it can be effectively implemented (i.e., behavioral health).
- ✓ Increase outreach and education related to health lifestyles in places where residents go (i.e., schools, churches, grocery stores, partner agencies, employers, etc.).

PROBLEM IDENTIFICATION:

During the interview process, the stakeholders stated six overall health needs and concerns in their community. In order of most discussed to least discussed topics, these were:

1. Behavioral health, including substance abuse
2. Availability of health services
3. Lifestyle of residents
4. Delay/resistance in seeking health services
5. Common health issues
6. Environmental influence

NEED FOR BEHAVIORAL HEALTH INCLUDING SUBSTANCE ABUSE SERVICES:

Behavioral health services and issues were discussed separate from medical or dental health services with four out of five stakeholders; with more than three-quarters of stakeholders identifying a health need related to behavioral health and/or substance abuse services.

- Care coordination – Stakeholders felt that behavioral health services rely on medication and there are limited professionals to oversee this type of treatment in their communities.
- Shortage of behavioral health services – Stakeholders recognized that while there are behavioral health services; there is a shortage of services (geriatric services and psychiatry) in relationship to the demand. There are high turnover rates among behavioral health professionals.
- Poor treatment outcomes – Stakeholders recognized that residents with substance abuse and/or behavioral health issues often have poor treatment outcomes due to a resistance to seek treatment because of inability to afford treatment options, transportation issues, and/or limited follow through with treatment recommendations.
- Substance abuse – One-half of stakeholders interviewed identified substance abuse as a health need in their communities. Discussions focused on the high rate of addiction, availability of drugs, and lack of local treatment options. While stakeholders recognized substance abuse is a personal choice, they noted that there appears to be a link between behavioral health and substance abuse. The most common drugs appear to be heroin and prescription narcotics.

Stakeholders discussed the following consequences of health needs related to behavioral health and substance abuse services:

- ✓ Poorer health outcomes and the increased consumption of health care resources related to behavioral health and substance abuse.
- ✓ Homelessness and substance abuse related to a lack of behavioral health services.

LIFESTYLES OF RESIDENTS:

Almost three-quarters of the stakeholders interviewed discussed the impact and primary drivers of lifestyle choices that impact the health status and subsequent health outcomes for residents. Stakeholders noted that there are factors related to environment and personal choice that influence the role that lifestyle plays in the health outcomes for residents.

- Generational/cultural influence – Stakeholders discussed the role that familial influence plays in nutritional preferences and smoking. Stakeholders indicated that often residents are exposed to tobacco products at a young age, which makes their use acceptable (even desirable), as well as accessible. Finally, the propensity of residents in a rural area to seek health services is often based in cultural values and beliefs, which may lead to a population of residents with poorer health outcomes due to a belief that “family takes care of its own”.
- Diet – Stakeholders discussed the limited access that some residents have to healthy nutrition. Specifically, lower-income residents may not have access to and/or be able to

afford healthier options for various reasons. Such as, residents do not always have access to a grocery store that offers healthy options because it is too far away or fresh foods are more expensive. Also, foods that are more processed are often easier to prepare than fresh foods.

- Smoking – Stakeholders identified smoking as a prevalent health issue due to a large number of residents that still smoke in the area. Stakeholders noted an apparent environmental contribution to smoking rates related to the exposure of youth to smokers/smoking (i.e., family and friends, etc.), which contributes to an acceptance of (even desire to) smoke coupled with ease of access to tobacco products. Additionally, the health of children in homes where parents smoke is often worse than children not exposed to smoking.
- Exercise – Stakeholders indicated that residents may not always exercise to a level that is healthy due to a lack of personal motivation.
- Personal choice – While stakeholders recognize the impact that circumstance can have on the decisions of residents to engage in healthy behaviors; they also indicated that personal choice is a significant driver in the health outcomes of residents. One-half of stakeholders recognized the impact of personal choice on the health outcomes of residents. Stakeholders cited the need for residents to engage in behavioral changes that positively impact their health status. Residents must want to change their health status before they will be motivated to do so.
- Confidence in health services available locally – Stakeholders indicated that residents do not have confidence in the quality of physicians practicing in their communities; however, this may change as a result of new systems moving into the area (i.e., Geisinger and Mt. Nittany).

Stakeholders discussed the following consequences of the lifestyle of residents on health outcomes of populations served by Geisinger-Lewistown Hospital.

- ✓ It can be difficult to improve population health indicators due to the lifestyles and personal preferences/choices of residents.
- ✓ Stakeholders felt that rural residents seek health services much later and have higher chronic illness as a result.

AVAILABILITY OF HEALTH SERVICES:

Over one-half of stakeholders articulated a lack of availability of health services (medical, dental, behavioral) in the hospital service area. The availability of services was related most often to the number of practicing professionals, acceptance of insurances, and location of providers.

- Number of practicing professionals serving vulnerable populations – Physicians are retiring and/or migrating out of the area reducing the number of available primary care physicians. The shortage of health professionals (i.e., dentists accepting Medicaid) serving low-income populations is compounded by the difficulty in recruiting new professionals to the poorest and most rural areas in the hospital service area. There is a lack of dementia services, general psychiatry, pediatric care, geriatric care, dental care, specialty care, and preventive care in the area as well. While there is a dental clinic available for uninsured residents in the area; the waiting list is reportedly six months long.
- Acceptance of insurances – There are limited health providers offering care (i.e., dental and behavioral) to residents that are uninsured or insured with certain types of insurance (medical access, Medicaid, etc.); leading existing services to be inaccessible to under/uninsured residents. While the FQHC is available for the uninsured; many residents who were previously under-insured (with coverage that was inadequate to meet their needs) are still unable to secure health services due to limited coverage and unaffordable cost.
- Funding – Stakeholders felt that available resources are stretched trying to address multiple health issues (i.e., obesity, mental health, and smoking) causing no issue to be fully addressed.
- Location of providers – Stakeholders noted that there are pockets of poverty among families and seniors where health services are available, but not accessible. Also, stakeholders articulated that there are a lack of providers (i.e., specialists, dentists, etc.) taking new patients that are covered by the type of insurances traditionally carried by low-income populations (i.e., Medicaid). Stakeholders noted that there are areas with limited access to specialty care. Stakeholders also noted that the issues with transportation in the area further magnify the impact provider location (i.e., the distance between providers) has on the availability of health services and the health outcomes of the most rural populations served by Geisinger-Lewistown Hospital. The distance between providers is greater in rural areas as most providers tend to be situated in areas with denser populations. There are specialties that offer hours in the communities, but appointments are set months out due to limited office hours.
- Care coordination – Stakeholders indicated that turnover is high among physicians in the community, making care coordination important for all residents to maintain continuity of care. Additionally, seniors are a growing population that will require additional support (i.e., medication management, nutrition, and health care/insurance decisions) in care coordination as the outmigration of young professionals continue and seniors are left without family supports at home. Stakeholders felt that collaborations to ensure health needs of seniors are being met are important.

When services are not available, stakeholders noted that the consequences are often:

- ✓ Limited appointment availability related to the number of physicians able to see patients and the need to triage patients in scheduling procedures, causing patients to wait for long periods of time to secure appointments for primary care, specialty care, and dental care.
- ✓ Health disparities related to income and insurance status due to providers refusing to accept insurances typically held by lower-income residents (i.e., medical access, catastrophic insurance, etc.).
- ✓ Seniors with dementia are at risk without the services they need.

DELAYED/RESISTANCE SEEKING NEEDED HEALTH SERVICES:

One-half of the stakeholders interviewed articulated that residents either delayed or resisted seeking health services (including medical, mental, and dental) such as preventive care, specialty care, intensive treatment, and follow-up care for a variety of reasons. Specifically, stakeholders indicated that the following were factors in the decisions of residents to delay/resist seeking medical care:

- Cost of care – Stakeholders articulated that uninsured and underinsured residents may resist seeking health services due to the cost of uninsured care, unaffordable copays and/or high deductibles. Stakeholders identified the cost of prescription medication as unaffordable for some residents. While, more often than not, the population impacted by this issue is a lower-income population; health services may be becoming unaffordable for families that do not qualify for assistance of any sort due to higher copays and deductibles.
- Awareness – Stakeholders discussed the lack of awareness of residents related to the existence and necessity of health services including routine, preventive, and behavioral health care; which can cause residents not to access services they need. The ever-changing provider landscape makes it difficult for residents to know what services are available in their community (i.e., smoking cessation classes).
- Transportation – Stakeholders interviewed said that transportation and the location of health services impacts the access that residents have to health services including behavioral health treatment and specialty medical appointments.

Stakeholders discussed the following consequences of the local residents that delay/resistance to seeking health services:

- ✓ Late detection/diagnosis of illness and disease reduces treatment options and success rates, which often leads to poorer health outcomes.
- ✓ Lack of consistency and continuity of care due to physician turnover.
- ✓ Limited follow through with intensive treatment regimens (i.e., chronic illness) due to unaffordable ongoing costs related to medications (e.g., insulin for diabetics) and/or transportation

COMMON HEALTH ISSUES:

- Oral Hygiene – With a dental clinic available to treat uninsured residents, stakeholders discussed the impact of transportation issues, limitation of insurance, and the lack of focus on oral hygiene among residents as the greatest factors in poor health outcomes related to dental health.
- Obesity – One-half of the stakeholders discussed the prevalence and cause of obesity among residents served by Geisinger Lewistown Hospital. Stakeholders identified that there are several factors that perpetuate obesity in their communities. Namely diet, exercise, access to resources, and education. Stakeholders discussed the low activity levels among residents (including children) in the service area. When low activity levels are coupled with poor nutrition, there is a greater risk of obesity. Stakeholders cited limited access to healthy produce in poorer rural areas, a lack of education, and a lack of motivation among residents as the factors that drive obesity rates in the area. Stakeholders also noted the role that familial and cultural influences can play in establishing both healthy and unhealthy dietary habits. Perpetual obesity will have an impact on health outcomes for residents.
- Diabetes – Four stakeholders discussed diabetes as a common health issue among residents. Discussion often included reference to obesity as well. Stakeholders identified weight and lifestyle choices as an underlying cause of the incidences of diabetes that are not the result of a genetic predisposition.
- Heart disease – Two stakeholders discussed the prevalence of heart disease and its connection to the senior population.
- Cancer – One stakeholder, from the Department of Public Health, felt that the rates of cancer were rising.
- Senior Health – Stakeholders felt that seniors were at greater risk for certain health issues (i.e., dementia, heart disease, diabetes, and pulmonary issues) due to aging.
- Autism – One stakeholder felt that autism is “prolific”.

The impact of common health issues can be poor health outcomes of a population and greater consumption of health care resources.

ENVIRONMENTAL INFLUENCES:

Stakeholders articulated several environmental factors which impact the health of residents including infrastructure, the rural nature of the area, and poverty.

- Infrastructure/rural area – Stakeholders discussed the role that infrastructure (i.e., transportation, economy, and housing) and the rural nature of the service area has in

limiting access that residents have to health services and perpetuating poor health outcomes. More specifically, the lack of affordable public transportation, unemployment, decline in textile and steel mill industries, and limited white collar employment opportunities often requires that the priorities of residents are focused on survival and basic necessities. There is a large population of low-income wage earners. There is limited housing for low-income residents and residents with mental illness.

- Educational outcomes in the area are poor according to stakeholders, which leads to low-income wages.
- The lack of transportation has an impact on the ability of residents to secure health services (medical, dental, and behavioral), employment, and healthy nutrition. Challenges of limited transportation options are magnified when residents have a disability that limits their ability to operate a car.
- Stakeholders discussed the challenges of unemployment and inability to afford to engage in healthy behaviors for themselves or their families. The rising cost of insurance for local employers is leading many employed residents to be uninsured or under-insured because employers cannot afford to offer insurances and/or employees are hired at part-time hours to avoid the required cost health insurance benefits for full-time employees.
- Poverty – Over one-half of the stakeholders interviewed discussed the impact of poverty on the health of residents. Stakeholders also recognized the impact of limited access to healthy nutrition and limited access to health services (i.e., medical, dental, and behavioral) experienced by residents in poverty. Stakeholders connect poverty and the inability of residents to secure healthy produce and make healthy decisions related to nutrition due to limitations related to transportation, finances, and education. Additionally, residents in poverty are less likely to secure health services prior to issues becoming emergent due to a lack of resources (i.e., time, money, transportation, etc.) and a focus on meeting basic needs; leading to a lower prioritization of health and wellness.

Environmental factors can impact the health status of individuals and the community at large due to the negative health outcomes that result. No matter the level of health services available to the population, if residents do not choose to be healthier, the health outcomes will remain unchanged.

Survey of Vulnerable Populations

Tripp Umbach worked closely with the Community Health Needs Assessment (CHNA) oversight committee to ensure that community members, including under-represented residents, were included in the needs assessment through a survey process.

DATA COLLECTION:

Vulnerable populations were identified by the CHNA oversight committee and through stakeholder interviews. Vulnerable populations targeted by the surveys were seniors, low-income residents (including families), residents that are uninsured, and residents with special needs.

A total of 154 surveys were collected in the Geisinger-Lewistown Hospital service area which provides a +/- 8 confidence interval for a 95% confidence level. Tripp Umbach worked with the oversight committee to design a 33 question health status survey. The survey was administered by community based organizations (i.e., Mifflin-Juniata Special Needs Center and Area Agency on Aging) providing services to vulnerable populations in the hospital service area.

- Community based organizations were trained to administer the survey using hand-distribution.
- Surveys were administered onsite and securely mailed to Tripp Umbach for tabulation and analysis.
- Surveys were analyzed using SPSS software.

Limitations of Survey Collection:

There are several inherent limitations to using a hand-distribution methodology when collecting surveys. The demographics of the population are not intended to match the general population of the counties surveyed. Often, the demographic characteristics of populations that are considered vulnerable populations are not the same as the demographic characteristics of a general population. For example, vulnerable populations by nature may have significantly less income than a general population. For this reason the findings of this survey are not relevant to the general populations of the counties they were collected in. Additionally, hand-distribution is limited by the locations where surveys are administered. In this case Tripp Umbach asked CBOs to self-select into the study and as a result there are several populations that have greater representation in raw data (i.e., seniors, low-income, etc.).

Demographics:

Survey respondents were asked to provide basic anonymous demographic data.

- ✓ The majority of the survey respondents for Juniata and Mifflin Counties reported their race as White (91.1% and 95.3% respectively).
- ✓ While the majority of respondents did not provide an income level; the household income level with the most responses was \$20,000-\$29,999 for Juniata County (21.3%) and \$10,000 - \$19,999 for Mifflin County (17.9%).

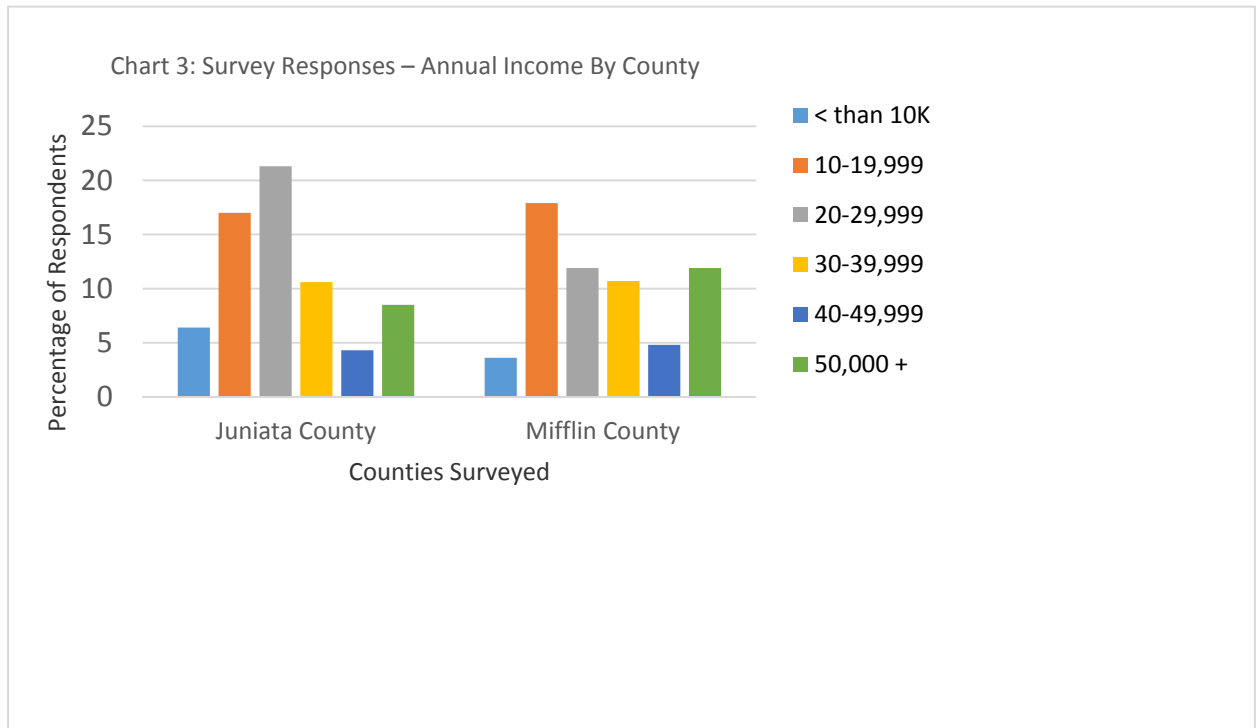
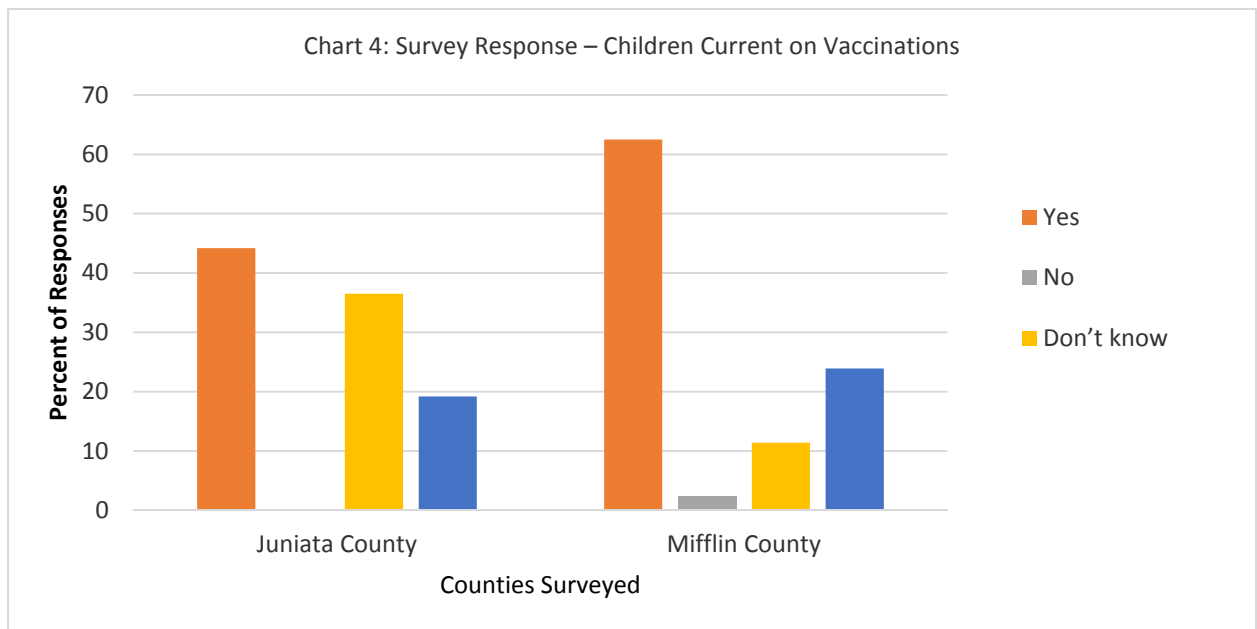


Table 11: Survey Responses – Self-Reported Age of Respondent by County

Age	Juniata County	Mifflin County
18-25	1.7%	8.9%
26-35	--	14.4%
36-45	1.7%	10%
46-55	--	14.4%
56-65	15.5%	21.1%
66-75	39.7%	8.9%
76-85	32.8%	14.4%
86+	8.6%	7.8%

Healthcare:

- ✓ The most popular place for respondents from Juniata and Mifflin Counties to seek care is a doctor's office (95% and 94.4% respectively).
- ✓ The most common form of health insurance carried by respondents was Medicare (55.9%) in Juniata and Private/commercial in Mifflin County (61.5%).
- ✓ Most respondents from Mifflin and Juniata Counties had been examined by a physician within the last 12 months at least once (91.9% and 95.6%); however, 8.1% of respondents in Juniata County and 4.3% of respondents in Mifflin County had not.
- ✓ The most common responses to "how is your health?" were "Good" (42.3%) and "Very Good" (27.6%) and, this is consistent across the counties with approximately 20% of respondents in each county indicating their health was "fair" or "poor".
- ✓ Adult respondents from Juniata and Mifflin Counties indicated related children were up-to-date on vaccinations (63.4% and 86.4% respectively).



- ✓ Most residents used their own car as the primary form of transportation; however, there were respondents that indicated their primary form of transportation is some method other than their own car in Juniata (10.2%) and Mifflin (7.8%) Counties, using a family/friend's car (6.8% and 7.8% respectively), public transportation (3.4%, Juniata only) were the most common alternatives.

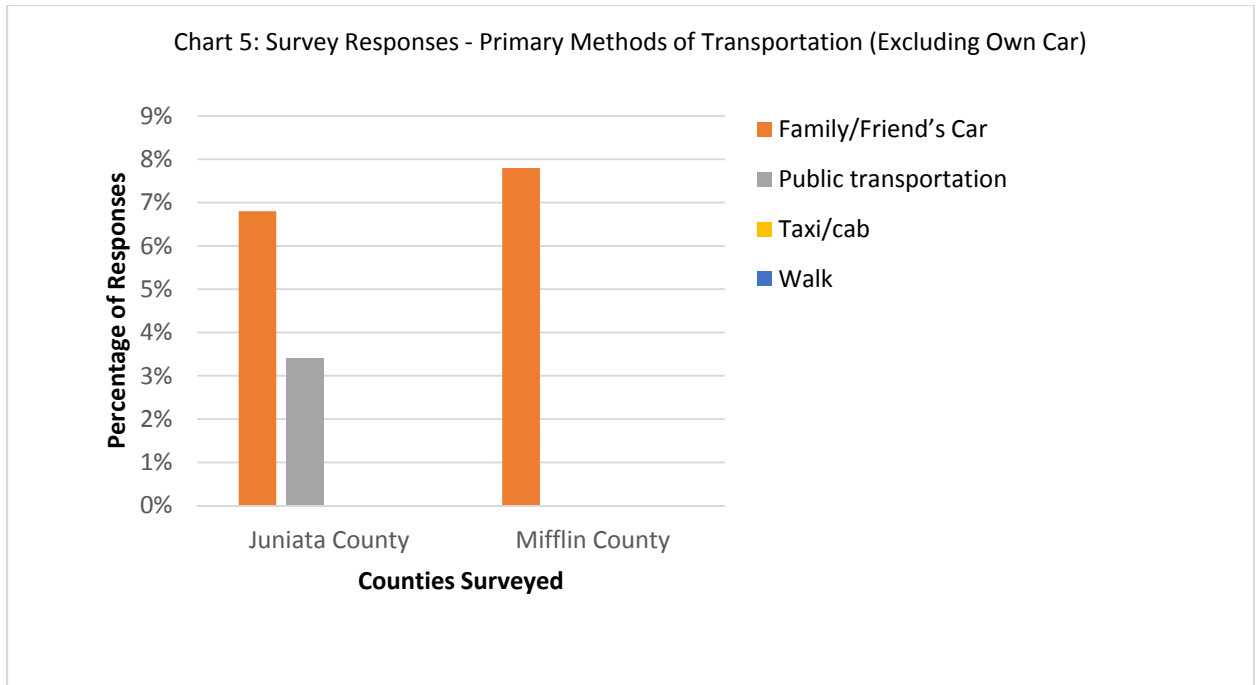


Table 12: Survey Responses Related to HIV/AIDS Testing

Ever Been Tested for HIV	Mifflin County	Juniaata County	PA	U.S.
Yes	20.7%	19.3%	32.2%	35.2%
No	79.3%	80.7%	67.8%	64.8%

- ✓ Juniaata and Mifflin County respondents report much lower HIV screening rates (19.3% and 20.7% respectively) when compared to PA (32.2%) or the U.S. (35.2%). **Health Services:**

Table 13: Survey Responses – Health Services Received During the Previous 12 Month Period

Test Received	Mifflin County	Juniaata County
Blood test	75%	80.6%
Check up	69.6%	58.1%
Flu shot	58.7%	69.4%
Cholesterol test	45.7%	69.4%
URINALYSIS	75%	30.6%

- ✓ Respondents from Juniaata County seemed to have received more testing in general than those in Mifflin County.

- ✓ More respondents indicated they get information about services in their community by word of mouth in both Juniata (69.6%) and Mifflin (72.7%) Counties with the newspaper a close second.
- ✓ Most respondents did not prefer to receive health services in a language other than English (93.2% and 96.7% respectively); 3.4% and 3.3% of respondents reported this preference in Juniata County and Mifflin County respectively.
- ✓ Most respondents in each of the counties reported either never needing health services or needing and having no problem securing those services. However; when respondents reported needing health services and being unable to secure them the most common reasons were “no insurance”, “couldn’t afford”, and “unsure where to go”.
- ✓ One in five (21%) respondents in Juniata County and 8.9% in Mifflin County indicated they could not secure dental services.
- ✓ Approximately one in four respondents in Juniata County (7.8% in Mifflin) indicated that they did not understand what was happening during a time when they (or a loved one) had to transition from one form of care to another. The most common recommendations related to care transitions were better explanation of the process (23.8%), and better explanation of care options (23.8%).

Common Health Issues:

Table14: Survey Responses – Health Issues Respondents Reported Ever Diagnosed with

Ever Diagnosed with	Juniata County	Mifflin County	PA*	U.S.*
Depression	27.1%	25.6%	18.3%	18.7%
Needing Mental Health Treatment	18.6%	16.9%	--	--
Diabetes	20%	21.1%	10.1%	9.7%
Heart Problem	33.3%	24.7%	--	--
Cancer – Types: breast, prostate and skin	22%	13.5%	--	--

* Source: CDC

- ✓ Respondents in Juniata and Mifflin Counties report poorer health outcomes related to depression and diabetes than is average for the state or the nation.
- ✓ Depression is the greatest rate of respondent reported diagnosis when compared to every other area (i.e., need for mental health treatment, diabetes, heart problems, and cancer). Both counties in the study area reports higher rates of depression diagnosis than is average for the state (18.3%) and nation (18.7%) with the highest rate of respondent reported diagnosis in Juniata County (27.1%).
- ✓ Respondents in both counties in the study area report higher diagnosis rates for diabetes than is average for the state and the nation (10.1% and 9.7% respectively).

With both Juniata and Mifflin County respondents reporting more than double the state and national rates (20% and 21.1% respectively).

Table 15: Survey Responses – Top Health Concerns Reported

Health Concern	Juniata County	Mifflin County
Cancer	66.7%	45%
Drug and Alcohol use	50%	63.7%
Diabetes	63%	35%
Heart Disease	30.2%	36.4%
High Blood Pressure	61.1%	33.8%
Mental Health	25.9%	46.3%
Obesity	50%	41.3%

- ✓ When asked to identify five of the top health concerns in their communities; there was a great deal of agreement between the two counties. The additional choices that were not as popular were: adolescent health, asthma, family planning / birth control, flood related health concerns (like mold), hepatitis infections, HIV, maternal and child health, pollution (e.g., air quality, garbage), sexually transmitted diseases, stroke, teen pregnancy, tobacco use, violence or injury, other, and don't know.

Lifestyle:

Table 16: Survey Responses – Average Weight and Body Mass Index of Survey Respondents

Weight & BMI	Juniata County	Mifflin County	Avg. Female (5'4")*	Avg. Male (5'9")*
Weight	176.45 lbs.	171.39 lbs.	108-144 lbs.	121-163 lbs.
BMI**	28.49	28.53	26.5	26.6

* Source: CDC

** Survey Respondents were asked to report their weight and height, from which the BMI calculation was possible.

- ✓ Respondents in both counties show higher weight and BMI than national and state averages regardless of gender.
- ✓ Most respondents reported having access to fresh fruits and vegetables (98.3% and 96.7% respectively).
- ✓ 10.2% of respondents in Juniata County and 7% of respondents in Mifflin County indicated that they do not eat fresh fruits and vegetables.

Table 17: Survey Responses – Smoking Rates Reported by Respondents

Smoking	Juniata County	Mifflin County	PA*	U.S.*
Everyday	5.1%	7.8%	15.7%	13.4%
Some days	--	6.7%	5.3%	5.4%
Not at all	93.2%	83.3%	--	--

*Behavioral Risk Factor Surveillance System

- ✓ Self-reported smoking rates are lower in the counties studied than is average for the state or the nation.

Table 18: Survey Responses – Physical Activity Rates Reported by Survey Respondents

Physical Activities	Juniata County	Mifflin County	PA*	U.S.*
Yes	54.5%	53.3%	73.7%	74.7%
No	45.5%	46.7%	26.3%	25.3%

*Behavioral Risk Factor Surveillance System

Respondents in Juniata and Mifflin Counties report lower rates of physical activity than those reported for the state and nation.

Conclusions and Recommended Next Steps

The community needs identified through the Geisinger-Lewistown Hospital community health needs assessment process are not all related to the provision of traditional medical services provided by medical centers. However, the top needs identified in this assessment do “translate” into a wide variety of health-related issues that may ultimately require hospital services. Each health need identified has an impact on population health outcomes and ultimately to cost of healthcare in the region. For example: unmet behavioral health and substance abuse needs lead to increased use of emergency health services, increased death rates due to suicide, and higher consumption of other human service resources (e.g., the penal system).

Geisinger-Lewistown Hospital, working closely with community partners, understands that the community health needs assessment document is only a first step in an ongoing process. It is vital that ongoing communication and a strategic process follow the assessment process – with a clear focus on addressing health priorities for the most vulnerable residents in the hospital service area.

Both Juniata and Mifflin Counties have underserved populations; such as Amish and Latino(a) residents, residents in poverty, and underinsured. The special populations (i.e., low-income, Latino(a), and Amish residents) will require additional engagement. Leaders felt that health literacy was an issue among residents and cultural sensitivity was an issue among medical professionals at Geisinger Lewistown. Additionally, uninsured residents, often, do not have the funds to secure medically necessary treatments (including Amish residents). That having been said, residents of the Geisinger-Lewistown Hospital service area may not have as much access to the healthcare resources in the region due to the need for an increase in providers, limited awareness and transportation to healthcare facilities. Collaboration and partnership are strong in the community. It is important to expand existing partnerships and build additional partnerships with multiple community organizations when developing strategies to address the top identified needs. Implementation strategies will need to consider the higher need areas in both counties and address the multiple barriers to healthcare. It will be necessary to review evidence based practices prior to planning to address any of the needs identified in this assessment due to the complex interaction of the underlying factors at work driving this need in local communities.

Tripp Umbach recommends the following actions be taken by the hospital sponsors in close partnership with community organizations over the next six to nine months.

Recommended Action Steps:

- ❑ Widely communicate the results of the community health needs assessment document to Geisinger-Lewistown Hospital staff, providers, leadership and boards.
- ❑ Conduct an open community forum where the community health needs assessment results are presented widely to community residents, as well as through multiple outlets such as: local media, neighborhood associations, community-based organizations, faith-based organizations, schools, libraries and employers.
- ❑ Take an inventory of resources in the community that are available to address the top community health needs identified by the community health needs assessment.
- ❑ Review relevant evidence-based practices that the community has the capacity to implement.
- ❑ Implement a comprehensive “grass roots” community engagement strategy to build upon the resources that already exist in the community and the energy of and commitment of community leaders that have been engaged in the community health needs assessment process.
- ❑ Develop “Working Groups” to focus on specific strategies to address the top needs identified in the community health needs assessment. The working groups should meet for a period of four to six months to review evidence-based practices and develop action plans for each health priority which should include the following:
 - ✓ Objectives
 - ✓ Anticipated impact
 - ✓ Planned action steps
 - ✓ Planned resource commitment
 - ✓ Collaborating organizations
 - ✓ Evaluation methods
 - ✓ Annual progress

APPENDIX A



Public Commentary Results

GEISINGER-LEWISTOWN HOSPITAL
February 26, 2015

Community:

Geisinger Lewistown Hospital service area

INTRODUCTION:

Tripp Umbach solicited feedback related to the Community Health Needs Assessment (CHNA) and Action Plan completed on behalf of Geisinger Lewistown Hospital (GLH). GLH is a 123-bed community hospital. Feedback was requested in a variety of locations (i.e., on-site at the hospital, electronic mail, and at local community-based organizations) using a variety of methods (i.e., electronic and hard copy). Requests for community comment offered residents and community leaders the opportunity to react to the methods, findings, and subsequent actions taken as a result of the last CHNA and planning process. What follows is a summary of the community response regarding the 2013 CHNA Action Plan for GLH.

This report represents a section of the overall community health needs assessment completed for GLH.

DATA COLLECTION:

The following qualitative data were gathered during a period of public comment during which Tripp Umbach solicited public commentary from community leaders and residents. Commenters were asked to review the CHNA and Action Plan adopted by GLH in 2013 and were provided access to each document for review. Commenters were then asked to respond to a questionnaire which provided open and closed response questions. Questionnaires were developed by Tripp Umbach and previously reviewed by the Geisinger Lewistown Hospital advisory committee. The seven-question questionnaire was offered in hard copy at two locations inside the hospital as well as electronically using a web-based platform. The CHNA and Action Plan were provided to commenters for review in the same manner (i.e., hard copy at the hospital and electronically). There were no restrictions or qualifications required of public commenters. Flyers were circulated and electronic requests were made for public comment throughout the collection period which lasted from December 2014 until February 2015.

PUBLIC COMMENTS:

When asked if the CHNA “included input from community members or organizations” 95 percent of commenters replied that it did. Five percent of commenters indicated that the assessment they reviewed did not include input from community members and organizations. When asked if there were community members or organizations that should have been included; commenters indicated that input from the Amish community was not represented in the assessment. GLH’s 2013 CHNA included input from human services providers, residents, and community leaders. GLH used survey methodology to gather input from human services providers and residents, a forum to secure input from community leaders, and focus groups to secure additional input from residents.

In response to the question “Are there needs in the community related to health (e.g., physical health, mental health, medical services, dental services, etc.) that were not presented in the CHNA”; 95 percent of commenters did not indicate that there were any needs not represented in the most recent CHNA. Five percent of commenters indicated there was a need that was not presented, which was related to higher deductibles causing residents to delay seeking health services. The needs identified in the 2013 CHNA were related to:

- Access to health care including primary care, specialty care, cancer care, dental care, and mental health care.
- Need to improve care for chronic diseases including heart disease, cancer, and stroke.
- Reducing lifestyle diseases and behavioral risk factors (diabetes, obesity, and smoking).
- Maternal and child health issues including the higher than average teen birth rates and low participation rates for prenatal care.
- Need to decrease the use of tobacco, alcohol, and illegal drugs.
- Impact of domestic violence on the health of residents.
- Need to improve the quality of health care in the service area including: cost, affordability, access to services, wait times, and satisfaction.
- Providing low-cost alternatives to the uninsured and underinsured.
- Increasing access to all health care services and expanding the number of physicians serving the area.
- Expanding dental care and mental health care services.
- Improving emergency care services.
- Increasing health education and improving preventive health care opportunities.

All commenters indicated that the Action Plan that resulted from the CHNA was directly related to the needs identified. Furthermore, commenters indicated that the CHNA and Action Plan implemented by GLH benefit the community in the following ways:

- Improved access and services to the lower income and no income populations through FQHC.
- Highlighted and clearly identified the needs. Also clearly identified this community position compared to national.
- Informed and educated residents to take control of their health care. Many of the issues can be controlled by behavior.
- Allowed for implementation of actions most closely needed and the formation of health action groups
- Highlighted areas for improvement such as obesity and management of chronic disease.

There were three additional comments provided. These included:

1. Mental health issues remain at the forefront of my concern. There isn't enough being done to help keep those suffering from mental illness out of the hospitals and jails. The closure of the state hospitals some years ago left many without safe places and have increased homelessness.

2. Being familiar with these projects in the past, I naturally was looking for more detail than was included in the action plan. But I do understand that there will be much more effort placed around the actions as listed and more detail in the future.
3. The assessment could have provided more information on the disabled population within our community – those with physical and mental limitations and the services available to that population.

There was no other additional feedback or comments provided by the public related to GLH's CHNA and/or Action Plan.

APPENDIX B



Secondary Data Profile

GEISINGER-LEWISTOWN HOSPITAL
March 10, 2015

GEISINGER LEWISTOWN HOSPITAL (GLH)

COMMUNITY HEALTH NEEDS ASSESSMENT SECONDARY DATA PROFILE

February 2015



Overview



- ❑ **Primary Service Area - Populated Zip Code Areas**
- ❑ **Key Points**
- ❑ **Demographic Trends**
- ❑ **Community Need Index (CNI)**
- ❑ **County Health Rankings**
- ❑ **Prevention Quality Indicators Index (PQI)**

Primary Service Area - Populated Zip Code Areas

The community served by the GLH study area includes Juniata and Mifflin counties. The GLH study area includes nine populated zip code areas (excluding zip codes for P.O. Boxes and offices). The majority of the zip code areas for the GLH study area are within Mifflin County; three zip codes are within Juniata County.

Zip	County	City
17004	MIFFLIN	BELLEVILLE
17044	MIFFLIN	LEWISTOWN
17051	MIFFLIN	MCVEYTOWN
17841	MIFFLIN	MCCLURE
17063	MIFFLIN	MILROY
17084	MIFFLIN	REEDSVILLE
17058	JUNIATA	MIFFLIN
17059	JUNIATA	MIFFLINTOWN
17082	JUNIATA	PORT ROYAL

Key Points – Community Needs for GLH

- ❑ **The GLH study area is projected to have a population increase over the next 5 years at a rate of +0.6%.** Both Mifflin and Juniata counties are projected to have a rise in population, with increases of +0.3% and +1.1%, respectively. Population increases are also projected for PA, showing that people are moving both into the state and into the GLH study area.
- ❑ **The GLH study area shows declines in the percentages of younger individuals (18 and younger)** while at the same time showing projected increases in the percentages of older individuals (55 and older) in the next 5 years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.
- ❑ **The GLH study area has an average annual household income of \$51,442.** The average household income in Mifflin County is \$50,213 and \$56,388 in Juniata County. It is interesting to see that all of the average household income levels for the study area fall below the averages for Pennsylvania and for the United States. Generally, rural areas show lower income levels as compared with more urban areas.
- ❑ **18.8% of the population in the GLH study area have not received a high school diploma.** Mifflin County shows the highest rate in the service area (16.8%). These rates are higher than the state (12.6%) and the U.S. (15.1%). Education level is highly related to occupation and therefore income.

Key Points – Community Needs for GLH

- ❑ **The Community Need Index (CNI) is a measure of the number and strength of barriers to health care access that a specific region (in this case zip code areas) has in the community. Measures include minority population, unemployment, single parents living in poverty with their children or 65 and older residents living in poverty. The scale ranges from 1.0 to 5.0; 1.0 indicating very few barriers to health care access, 5.0 indicating many barriers to health care access).**
- ❑ **The highest CNI score for the GLH study area is 3.6 in the zip code areas of Belleville (17004) and Lewistown (17044) in Mifflin County.** The highest CNI score indicates the most barriers to community health care access.
- ❑ **The Lewistown (17044) zip code holds the highest measure for the study area for:**
 - ❑ Rental rate (34.4%), unemployment rate (11.5%), uninsured rate (11.0%) and elderly living in poverty (10.9%).
- ❑ **The Belleville (17004) zip code holds the highest measure for the study area for:**
 - ❑ Limited English speakers (4.4%), individuals with no high school diploma (29.7%), and single parents with children living in poverty (66.0%).
- ❑ **Other zip codes with the highest measures are:**
 - ❑ Reedsville (17084) with the highest rate of married parents with children living in poverty (36.4%).
 - ❑ Mifflintown (17059) in Juniata County with the highest minority rate (7.5%).
- ❑ **The weighted average CNI score for the entire GLH study area is 3.2.**
 - ❑ A CNI score of 3.2 is above the average for the scale (3.0). This indicates the GLH study area has a slightly higher number of barriers to accessing healthcare..

Key Points – Community Needs for GLH

- **Counties in each of the 50 states are ranked according to summaries of more than 30 health measures. Those having good rankings, such as 1 or 2, are considered to be the “healthiest.” Counties are ranked relative to the health of other counties in the same state**

- **In 2014:**
 - **Juniata County ranks the best in the GLH study area and in the state of PA in Morbidity (Quality of Life) with a ranking of 1 out of 67.** Juniata County also ranks well in Physical Environment with a ranking of 2 and Health Outcomes with a ranking of 7.
 - **For the GLH study area, Mifflin County ranks worse overall in a majority of categories in comparison to Juniata County:**
 - Health Outcomes, Health Factors, Clinical Care, Mortality (Length of Life), Morbidity (Quality of Life), Clinical Care, Social and Economic Factors and Physical Environment.

- **Between 2011 and 2014**
 - Juniata County went from a rank of 31 in 2011 to 2 in 2014 for Physical Environment, the largest shift in county health rankings for the GLH study area.
 - **The GLH study area had a major shift in the number of Sexually Transmitted Infections (Chlamydia) Rate.** In Juniata County, the number of cases rose from 52 per 100,000 population in 2011 to 209 cases in 2014. There was also a significant increase in Sexually Transmitted Infections in Mifflin County from 106 per 100,000 population in 2011 to 297 in 2014.
 - **There was also a shift in the violent crime rate in Mifflin County.** In 2011, the crime rate was 205 per 100,000 in Mifflin County. In 2014, the violent crime rate decreased to 125 per 100,000.

Key Points – Community Needs for GLH

- ❑ **The PQI index identifies potentially avoidable hospitalizations for the benefit of targeting priorities and overall community health. Lower index scores represent less admissions for each of the PQIs. There are 14 quality indicators.**
 - ❑ **The GLH study area shows much higher rates of Perforated Appendix preventable hospital admission than Pennsylvania in 2014.** The number of Perforated Appendix preventable admissions in the GLH community is 695.6. The number of Perforated Appendix preventable admissions in PA is 343.9.
- ❑ **In 2014:**
 - ❑ **The GLH study area has higher preventable hospital admission rates for 8 of the 14 PQI measures than the state of Pennsylvania** – indicating that GLH overall has higher preventable admission rates than PA.
 - ❑ Perforated Appendix, Diabetes Long-Term Complications, COPD and Asthma in 40+ population, Low Birth Weight, Dehydration, Urinary Tract Infection, Angina Without Procedure, Lower Extremity Amputation Rate Among Diabetic Patients
- ❑ **Between 2011 and 2014:**
 - ❑ **GLH study area preventable admissions decreased in 7 out of 14 subgroups for the following subgroups:**
 - ❑ Asthma in Younger Adults, Diabetes Short-Term Complications, Uncontrolled Diabetes, Lower Extremity Amputation Rate Among Diabetic Patients, Hypertension Congestive Heart Failure, Dehydration Bacterial Pneumonia , and Urinary Tract Infection.

Community Demographic Profile



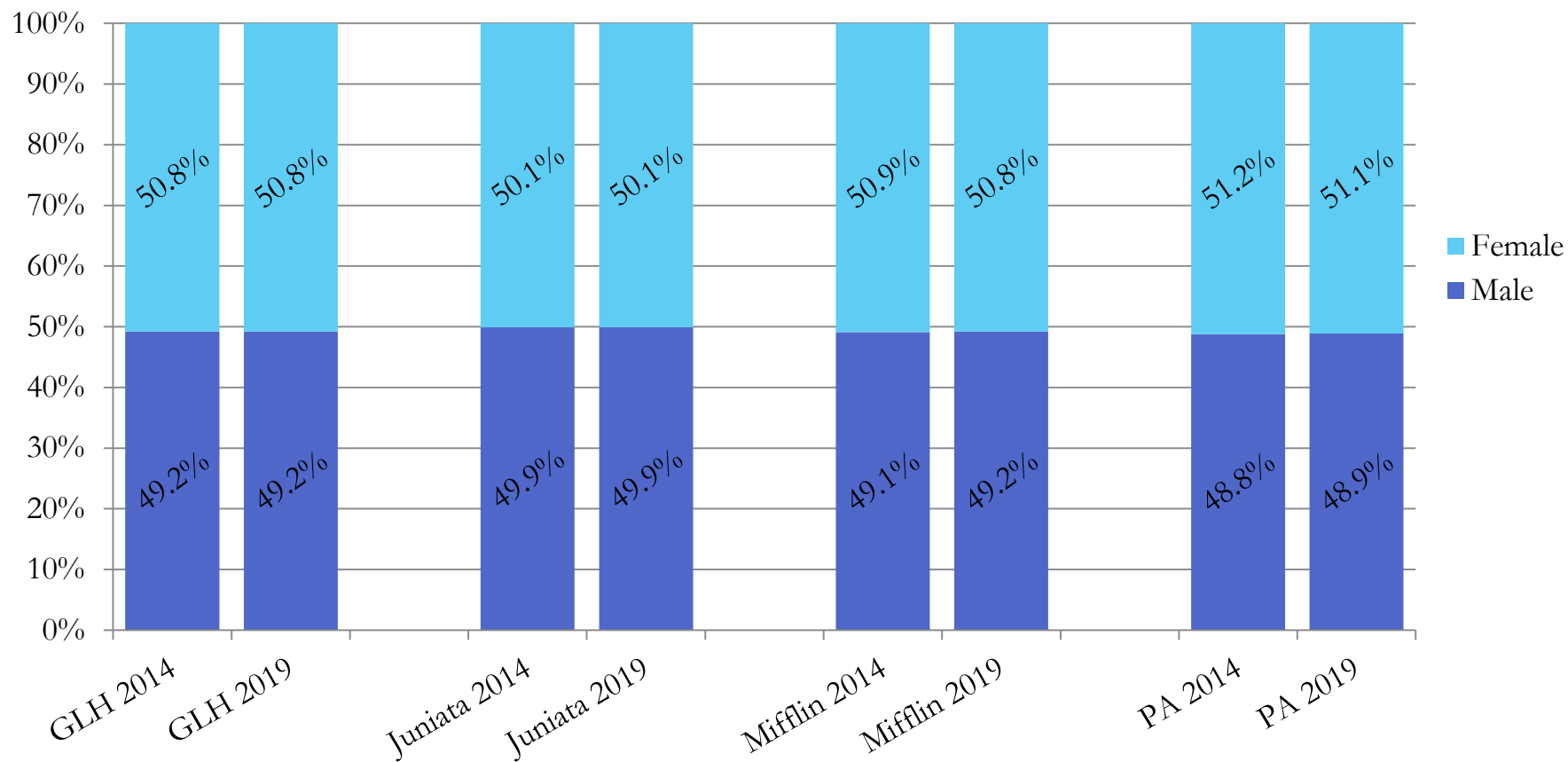
- **The GLH study area shows an increase in population over the next 5 years at a rate of +0.6%.** Both Mifflin and Juniata are projected to have a rise in population, with increase of +0.3% and +1.1%, respectively. Population increases are also projected for PA, showing that people are moving both into the state and into the GLH community.
- **The GLH study area has projected declines in the percentages of younger individuals (18 and younger) while at the same time showing projected increases in the percentages of older individuals (55 and older) in the next 5 years.** This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.
- **The GLH study area has an average annual household income of \$51,442.** The average household income in Mifflin County is \$50,213 and \$56,388 in Juniata County. The GLH community shows more households earning <\$25K annually or less as compared with PA and the U.S.; 27.3% for the GLH study area, 24.0% for PA and 24.5% for the U.S.
- **18.8% of the GLH study area has not received a high school diploma.** Mifflin County shows the highest rate in the service area (16.8%). These rates are higher than the state (12.6%) and the U.S. (15.1%).
- **As compared with PA and the U.S., the GLH study area shows very little diversity.** Only 4.6% of the population in the Bloomsburg Hospital community identify as a race/ethnicity other than White, Non-Hispanic whereas 19.6% in PA and 35.8% in the U.S. identify as a race other than White, Non-Hispanic.

Population Trends

	GLH Service Area	Juniata County	Mifflin County	PA
2014 Total Population	56,631	24,353	47,892	12,791,290
2019 Projected Population	56,966	24,621	48,035	12,899,019
# Change	+335	+268	+143	+107,729
% Change	+0.6%	+1.1%	+0.3%	+0.8%

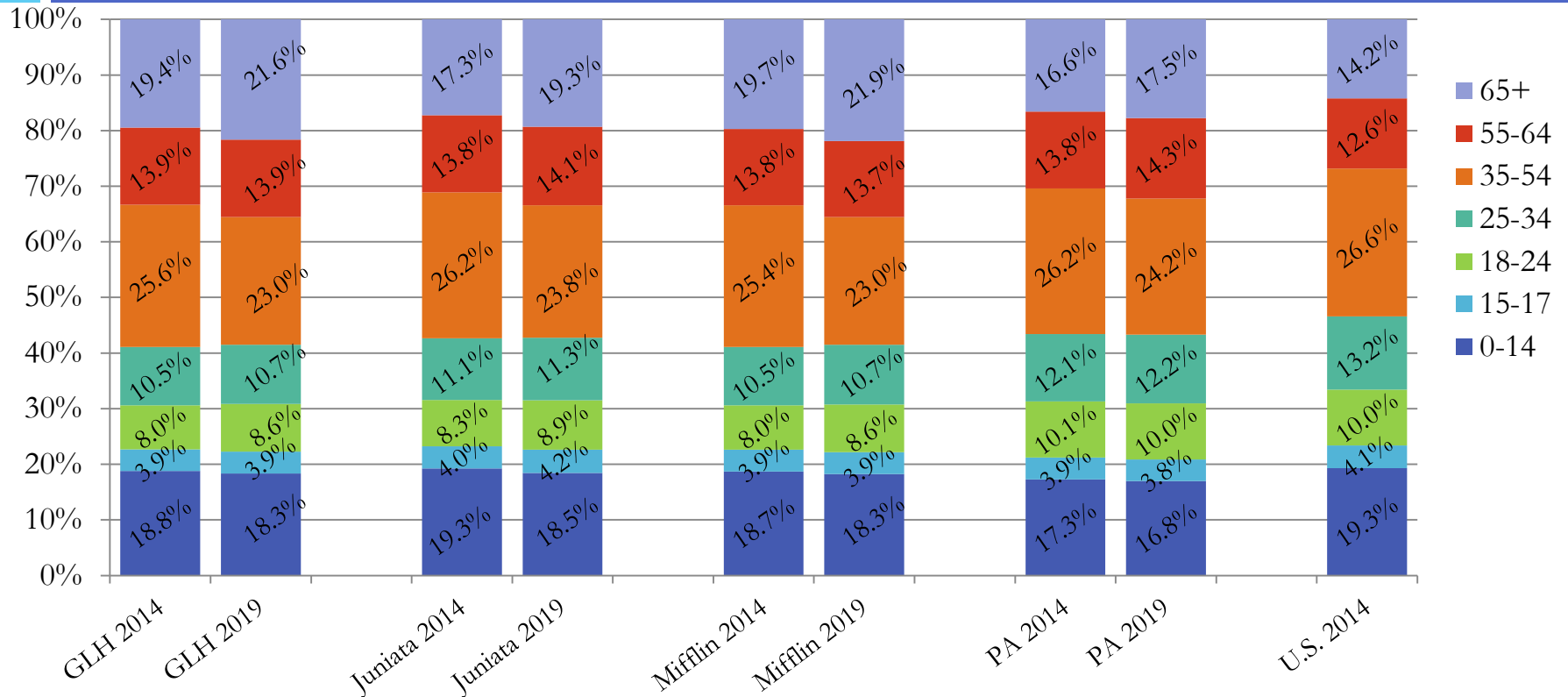
- The GLH study area shows an increase in population over the next 5 years at a rate of +0.6%.
- Both Juniata and Mifflin counties have a projected increase in population of +1.1% and +0.3%, respectively.
- The trends seen for the GLH community and both Juniata and Mifflin counties relate to the population trends in PA as a whole. PA is projected to see a +0.8% rise in population between 2014 and 2019. Therefore, people are coming into the state, the GLH study area, and the counties of Juniata and Mifflin.

Gender



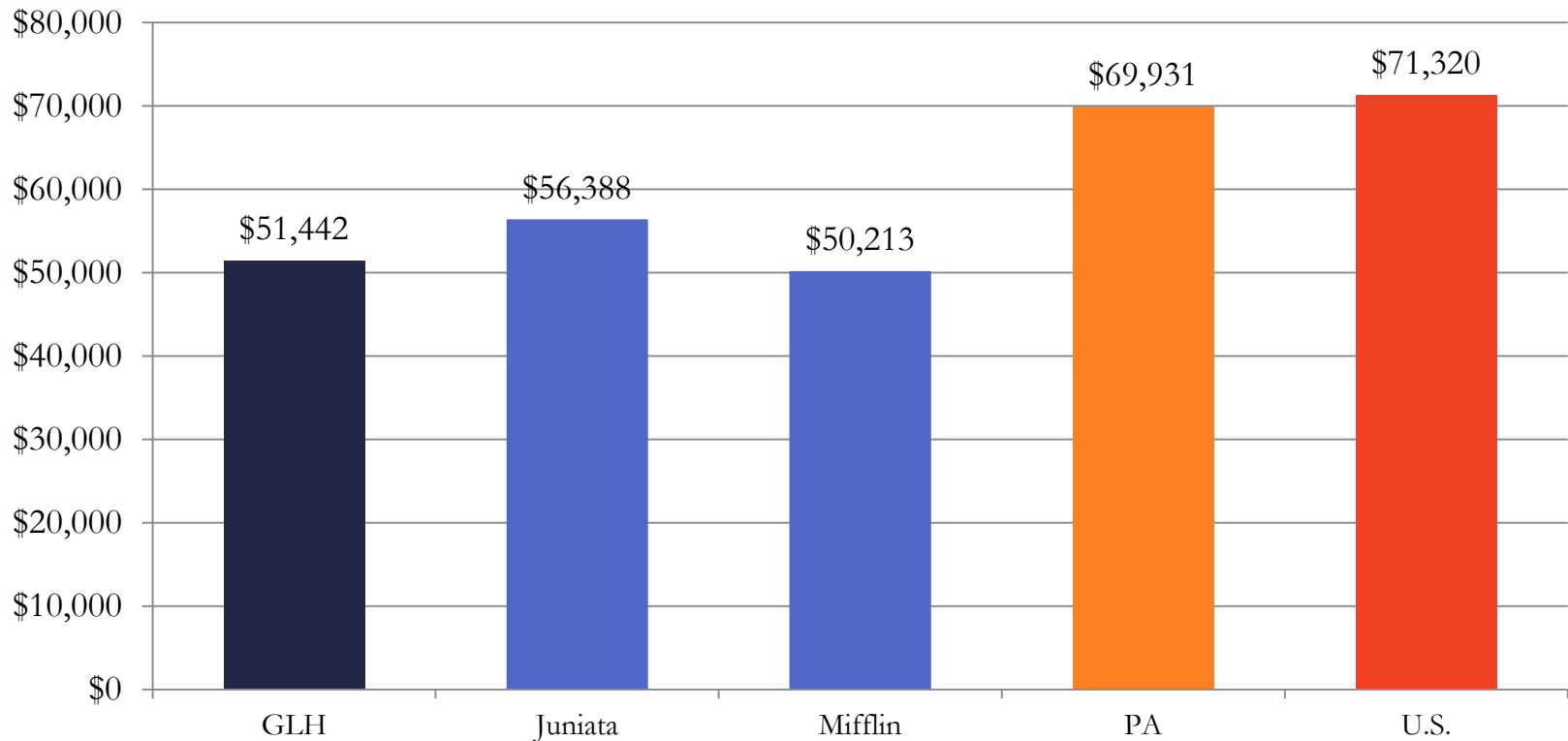
- The GLH study area shows slightly higher percentages of women as opposed to men; this is consistent with state data.

Age



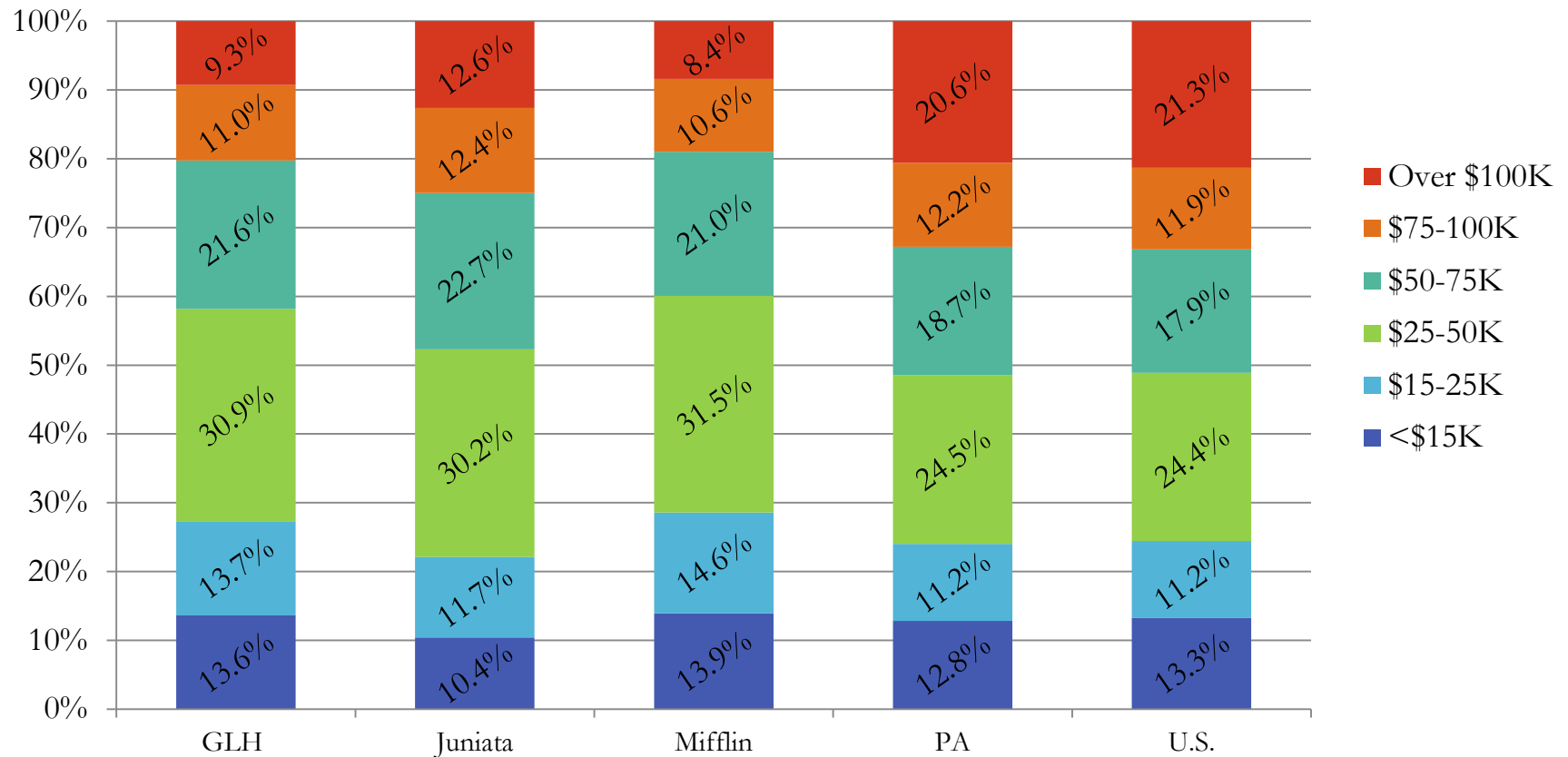
- The GLH study area and the counties of Juniata and Mifflin show projected declines in the percentages of younger individuals (24 and younger) while at the same time showing projected increases in the percentages of older individuals (55 and older) in the next 5 years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.
- Mifflin County in the GLH study area has the largest percentage of individuals aged 65 and older (19.7%) this rate is higher than PA (16.6%) and the U.S. rate (14.2%).

Average Household Income (2014)



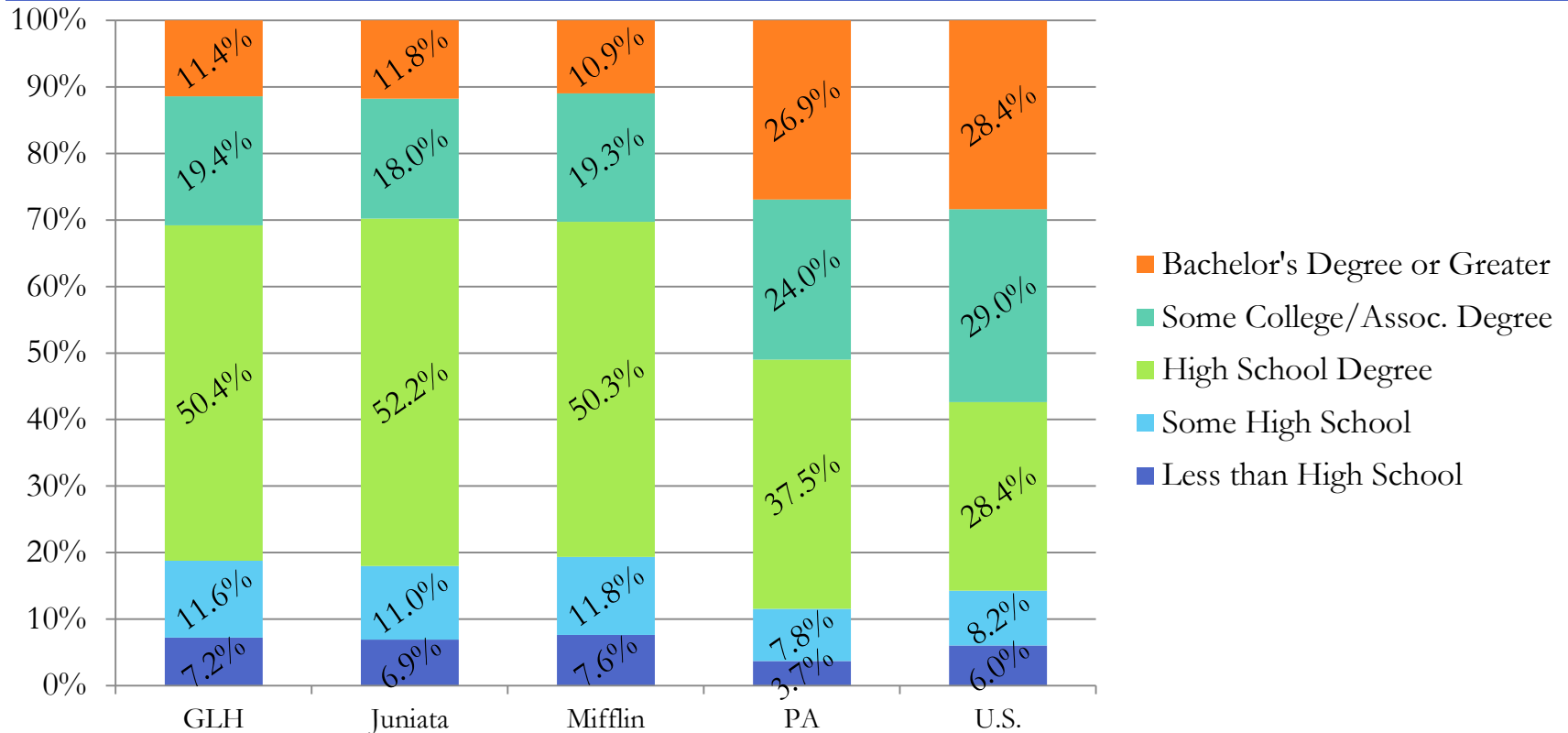
- The GLH study area shows an average annual household income of \$51,442.
- The highest average income is found in Juniata County (\$56,388). Mifflin County has an average household income of \$50,213.
- The average household income for the GLH study area and counties of Juniata and Mifflin are all much lower than the average for PA and the U.S.

Household Income Detail (2014)



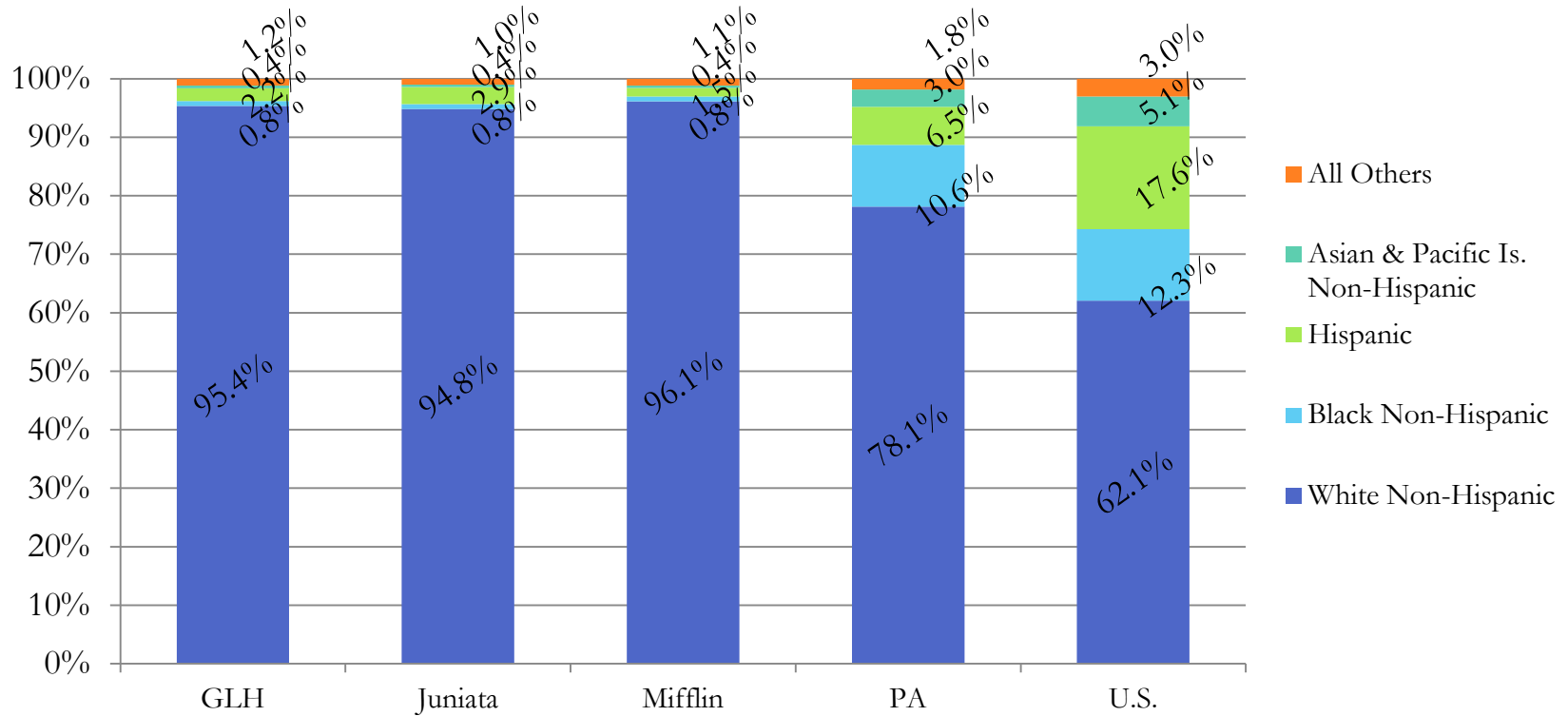
- The GLH study area shows more households earning <\$25K annually or less as compared with PA and the U.S.; 27.3% for the GLH community, 24.0% for PA and 24.5% for the U.S.
- Mifflin County has the highest rates of low income households with 28.5% of their population earning \$25K annually or less.

Education Level (2014)



- The GLH study area shows 18.8% of the population who have not received a high school diploma. Mifflin County shows the highest rate with 19.4% of the population without a high school diploma. The state rate (11.5%) and U.S. rate (14.2%) are lower than the rate for the GLH study area. Educational level is highly related to occupation and therefore income.
- 30.8% of the GLH study area have received some college education or received a college degree. This is lower than both the state (50.9%) and U.S. (57.4%) levels.

Race/Ethnicity (2014)



- The GLH study area shows very little diversity, as compared to the state and U.S. Only 4.6% of the population in the GLH study area identify as a race/ethnicity other than White, Non-Hispanic whereas 19.6% in PA and 35.8% in the U.S. identify as a race other than White, Non-Hispanic.
- Mifflin County in the GLH study area has the least diversity with 3.8% of the population as a race/ethnicity other than White, Non-Hispanic. 5.1% of the Juniata County population identify as a race/ethnicity other than White, Non-Hispanic. When compared to the diversity of PA or the U.S., we can see that the GLH study area is very homogeneous.

Community Need Index

Five prominent socio-economic barriers to community health are quantified in the CNI

- ❑ **Income Barriers** –
Percentage of elderly, children, and single parents living in poverty

- ❑ **Cultural/Language Barriers** –
Percentage Caucasian/non-Caucasian and percentage of adults over the age of 25 with limited English proficiency

- ❑ **Educational Barriers** –
Percentage without high school diploma

- ❑ **Insurance Barriers** –
Percentage uninsured and percentage unemployed

- ❑ **Housing Barriers** –
Percentage renting houses

Assigning CNI Scores

- ❑ To determine the severity of barriers to health care access in a given community, the CNI gathers data about the community's socio-economy. For example, what percentage of the population is elderly and living in poverty; what percentage of the population is uninsured; what percentage of the population is unemployed, etc.
- ❑ Using this data we assign a score to each barrier condition. A score of 1.0 indicates a zip code area with the lowest socio-economic barriers (low need), while a score of 5.0 represents a zip code area with the most socio-economic barriers (high need). The scores are then aggregated and averaged for a final CNI score (each barrier receives equal weight in the average).
- ❑ A CNI score above 3.0 will typically indicate a specific socio-economic factor impacting the community's access to care. At the same time, a CNI score of 1.0 does not indicate the community requires no attention at all, which is why a larger community such as the study area community presents a unique challenge to hospital leadership.

Community Need Index (CNI)



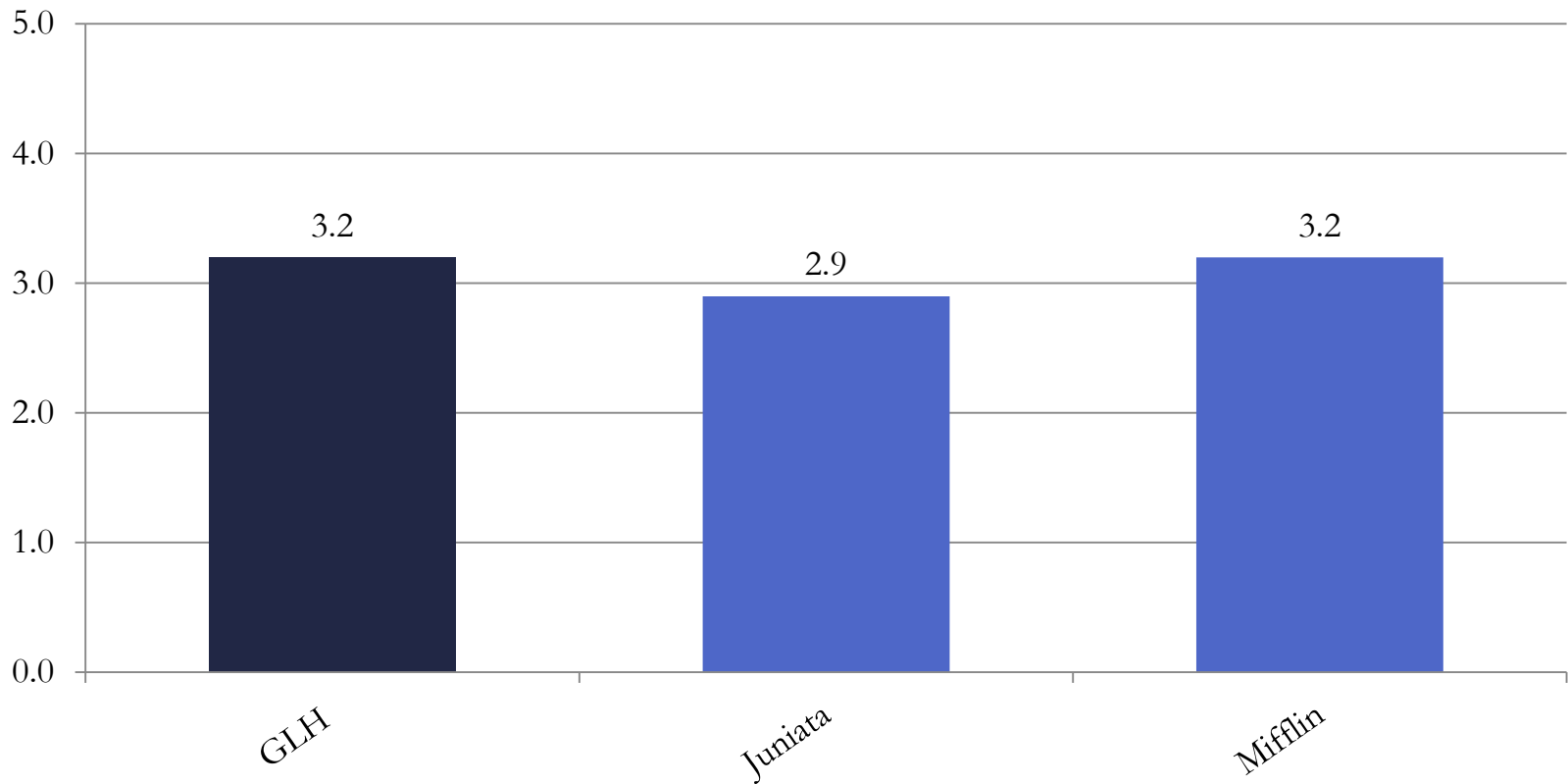
- ❑ **The highest CNI score for the GLH study area is 3.2 in the zip code areas of Belleville (17004) and Lewistown (17044) in Mifflin County. The highest CNI score indicates the most barriers to community health care access.**
- ❑ **From the data, we can see that various zip code areas have the highest rates of the measures used to calculate the CNI:**
 - ❑ Lewistown (17044) has the highest rental rate (34.4%), unemployment rate (11.5%), uninsured rate (11.0%) and elderly living in poverty (10.9%).
 - ❑ Belleville (17004) has the rate of limited English speakers (4.4%), individuals with no high school diploma (29.7%), and single parents with children living in poverty (66.0%).
 - ❑ Reedsville (17084) has the highest rate of married parents with children living in poverty (36.4%).
 - ❑ Mifflintown (17059) in Juniata County has the highest minority rate (7.5%).
- ❑ **The median CNI score is 3.0. The CNI score for the GLH study area is 3.2, indicating the GLH community has slightly more than the average amount of barriers to healthcare access.**
- ❑ **The GLH study area has four zip code areas that are above the median, four below the median, and one zip code with a CNI score of 3.0.**

Assigning CNI Scores (2014)

Zip	City	County	2014 Tot. Pop.	Rental %	Unemp %	Uninsu %	Minor %	Lim Eng	No HS Dip	65+ Pov	M w/ Chil Pov	Sin w/ Chil Pov	Inc Rank	Insur Rank	Educ Rank	Cult Rank	Hous Rank	CNI Score
17059	Mifflintown	Juniata	7,360	27.7%	5.6%	6.5%	7.5%	1.4%	17.4%	9.0%	15.7%	49.2%	4	2	4	2	4	3.2
17058	Mifflin	Juniata	1,939	29.0%	9.7%	7.4%	7.3%	2.1%	16.2%	2.8%	15.9%	23.7%	2	3	4	2	4	3.0
17082	Port Royal	Juniata	3,975	23.3%	9.6%	6.6%	5.4%	0.5%	13.4%	8.8%	12.5%	33.3%	2	2	3	2	3	2.4
17004	Belleville	Mifflin	5,043	25.7%	5.6%	9.4%	3.4%	4.4%	29.7%	7.4%	23.2%	66.0%	5	3	5	1	4	3.6
17044	Lewistown	Mifflin	21,293	34.4%	11.5%	11.0%	5.3%	0.1%	17.1%	10.9%	17.9%	40.1%	3	4	4	2	5	3.6
17084	Reedsville	Mifflin	4,437	20.1%	4.7%	10.2%	1.9%	3.9%	21.3%	7.3%	36.4%	50.0%	4	3	5	1	3	3.2
17051	Mc Veytown	Mifflin	4,840	17.2%	8.3%	8.7%	2.8%	0.2%	19.7%	9.0%	16.9%	36.5%	3	3	4	1	2	2.6
17063	Milroy	Mifflin	3,224	20.2%	8.8%	7.7%	1.6%	1.2%	19.5%	9.1%	17.2%	44.3%	3	2	4	1	3	2.6
17841	Mc Clure	Mifflin	4,520	19.8%	6.1%	7.2%	3.0%	0.6%	20.4%	5.9%	20.5%	44.3%	3	2	4	1	2	2.4
GLH Study Area			56,631	27.2%	8.6%	9.1%	4.6%	1.2%	18.9%	9.0%	19.2%	43.6%	3.3	3.0	4.1	1.6	3.8	3.2

- The highest CNI score GLH study area is 3.6 for Belleville (17004) and Lewistown (17044) in Mifflin County. The highest CNI score indicates the most barriers to community health care access.
- From the data, we can see that various zip code areas have the highest rates of the measures used to calculate the CNI:
 - Lewistown (17044) the highest rental rate (34.4%), unemployment rate (11.5%), uninsured rate (11.0%) and elderly living in poverty (10.9%).
 - Belleville (17004) has the rate of limited English speakers (4.4%), individuals with no high school diploma (29.7%), and single parents with children living in poverty (66.0%).
 - Reedsville (17084) has the highest rate of married parents with children living in poverty (36.4%).
 - Mifflintown (17059) in Juniata County has the highest minority rate (7.5%).

Community Need Index (2014)



- The average CNI scores for the GLH study area and Mifflin County are above the median for the scale (3.0).
- The CNI score for the GLH study area is 3.2; indicating there are slightly more than average barriers to community health care access in the GLH study area.

Community Need Index

Zip	City	County	2011 CNI Score	2014 CNI Score	2011-2014 Change
17059	Mifflintown	Juniata	N/A	3.2	N/A
17058	Mifflin	Juniata	N/A	3.0	N/A
17082	Port Royal	Juniata	N/A	2.4	N/A
17004	Belleville	Mifflin	N/A	3.6	N/A
17044	Lewistown	Mifflin	N/A	3.6	N/A
17084	Reedsville	Mifflin	N/A	3.2	N/A
17051	Mc Veytown	Mifflin	N/A	2.6	N/A
17063	Milroy	Mifflin	N/A	2.6	N/A
17841	Mc Clure	Mifflin	2.4	2.4	0.0
GLH Study Area			N/A	3.2	N/A

- The median CNI scores is 3.0. The GLH study area has four zip code areas that are above the median, four below the median, and one zip code with a CNI score of 3.0.
- The GLH study area was not included in the previous Community Health Needs Assessment conducted in 2011. Therefore, 2011 CNI scores are only available for McClure (17841) in Mifflin County. There has been no change between the 2011 and 2014 CNI score for McClure.

County Health Rankings Data

- The County Health Rankings show that where we live impacts our health status. The health of a community depends on many different factors – from individual health behaviors, education and jobs, to quality of healthcare and the environment. The rankings help community leaders see that where we live, learn, work, and play influences how healthy we are and how long we live.
- The County Health Rankings are a key component of the Mobilizing Action Toward Community Health (MATCH) project. MATCH is the collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The rankings identify the multiple health factors that determine a county's health status. Each county receives a summary rank for its health outcomes and health factors - the four different types of health factors include: health behaviors, clinical care, social and economic factors, and the physical environment. The Rankings are a real “Call to Action” for state and local health departments to develop broad-based solutions with others in their community so all residents can be healthy. But efforts will also be made to mobilize community leaders outside the public health sector to take action and invest in programs and policy changes that address barriers to good health and help residents lead healthier lives. Other community leaders may include: educators; elected and appointed officials, including mayors, governors, health commissioners, city/county councils, legislators, and staff; business owners; and the healthcare sector.

County Health Rankings Data

- Data across 34 various health measures are used to calculate the Health Ranking.
 - The measures include:
 - Mortality – Length of Life
 - Morbidity – Quality of Life
 - Tobacco Use
 - Diet and Exercise
 - Alcohol Use
 - Sexual Behavior
 - Access to care
 - Quality of care
 - Education
 - Employment
 - Income
 - Family and Social support
 - Community Safety
 - Air and Water quality
 - Housing and Transit
 - Premature death
 - Poor or fair health
 - Poor physical health days
 - Poor mental health days
 - Low birth weight
 - Adult smoking
 - Adult obesity
 - Food environment index
 - Physical inactivity
 - Access to exercise opportunities
 - Excessive drinking
 - Alcohol-impaired driving deaths
 - Sexually transmitted diseases
 - Teen births
 - Uninsured
 - Primary care physicians
 - Dentists
 - Mental health providers
 - Preventable hospital stays
 - Diabetic screening
 - Mammography screening
 - High school graduation
 - Some college
 - Unemployment
 - Children in poverty
 - Inadequate social support
 - Children in single-parent households
 - Violent crime
 - Injury deaths
 - Air pollution – particulate matter
 - Drinking water violations
 - Severe housing problems
 - Driving alone to work
 - Long commute – driving alone

County Health Rankings Data

- Counties in each of the 50 states are ranked according to summaries of more than 30 health measures. Those having good rankings, such as 1 or 2, are considered to be the “healthiest.” Counties are ranked relative to the health of other counties in the same state (Pennsylvania having 67 counties) on the following summary measures:
 - Health Outcomes--We measure two types of health outcomes to represent the health of each county: how long people live (mortality) and how healthy people feel (morbidity). These outcomes are the result of a collection of health factors and are influenced by existing programs and policies at the local, state, and federal levels.
 - Health Factors--A number of different health factors shape a community’s health outcomes. The County Health Rankings are based on weighted scores of four types of factors:
 - Health behaviors (9 measures)
 - Clinical care (7 measures)
 - Social and economic (8 measures)
 - Physical environment (5 measures)

County Health Rankings



- ❑ Pennsylvania has 67 counties; therefore, the rank scale for Pennsylvania is 1 to 67 (1 being the healthiest county and 67 being the most unhealthy). The median rank is 34.
- ❑ Data for the County Health Rankings is only defined as far as the county level, zip code level data is not available. Therefore, the county level data has been presented here (no GLH level data are available).

In 2014:

- ❑ Juniata County ranks the best in the GLH study area and in the state of PA with a ranking of 1 out of 67 in Morbidity (Quality of Life). Juniata County also ranks well in Physical Environment with a ranking of 2 and Health Outcomes with a ranking of 7.
- ❑ Mifflin County ranks worse than Juniata County in almost every category - Health Outcomes, Health Factors, Clinical Care, Mortality (Length of Life), Morbidity (Quality of Life), Clinical Care, Social and Economic Factors and Physical Environment.

Between 2011 and 2014:

- ❑ Juniata County went from a rank of 31 in 2011 to 2 in 2014 for Physical Environment, the largest shift in county health rankings for the GLH study area.
- ❑ The Mifflin County health rankings remained relatively stable between 2011 and 2014, with the exception of Health Behaviors, which had a positive ranking shift from 40 in 2011 to 16 in 2014.

County Health Rankings Data



- ❑ 16% of the population in Juniata and Mifflin counties smoke and approximately one-third of the population for Juniata and Mifflin counties are obese (31% and 30% respectively).
- ❑ Mifflin and Juniata counties have similar uninsured rates (14% and 15% respectively). Juniata County has a PCP rate of 25 and Mifflin County has a PCP rate of 45. The PCP rate in Juniata County fell from 30 to 25 between 2011 and 2014. The PCP rate also fell in Mifflin county from 2011 to 2014 from 50 to 45.
- ❑ Both Juniata and Mifflin counties have a diabetic population of 11%. Juniata County has diabetic screening percentage of 89% and Mifflin County has a diabetic screening rate of 86%.
- ❑ The most significant negative shift in the GLH study area between 2011 and 2014 is the number of Sexually Transmitted Infections (Chlamydia Rate) in Juniata County. The county went from 52 cases per 100,000 population in 2011 to 209 cases in 2014. There was also a significant increase in Sexually Transmitted Infections in Mifflin County from 106 per 100,000 population in 2011 to 297 in 2014.
- ❑ Mifflin County has a higher unemployment rate of the two counties with 8.3% unemployment. Mifflin also has a higher violent crime rate of 125 per 100,000.
- ❑ There was a large change, though, between 2011 and 2014 in the violent crime rate of Mifflin County. In 2011, the crime rate was 205 per 100,000 in Mifflin County. In 2014, the violent crime rate decreased to 125 per 100,000.
- ❑ Both Mifflin and Juniata counties experienced a decrease in unemployment from 2011 to 2014.

County Health Rankings Data

2014 ranking on top; 2011 ranking on bottom

County	Health Outcomes	Health Factors	Mortality (Length of Life)	Morbidity (Quality of Life)	Health Behaviors	Clinical Care	Social and Economic Factors	Physical Environment
Juniata	7 (9)	19 (25)	31 (20)	1 (4)	24 (30)	42 (39)	16 (20)	2 (31)
Mifflin	39 (34)	46 (50)	49 (41)	25 (22)	16 (40)	59 (42)	61 (56)	16 (14)

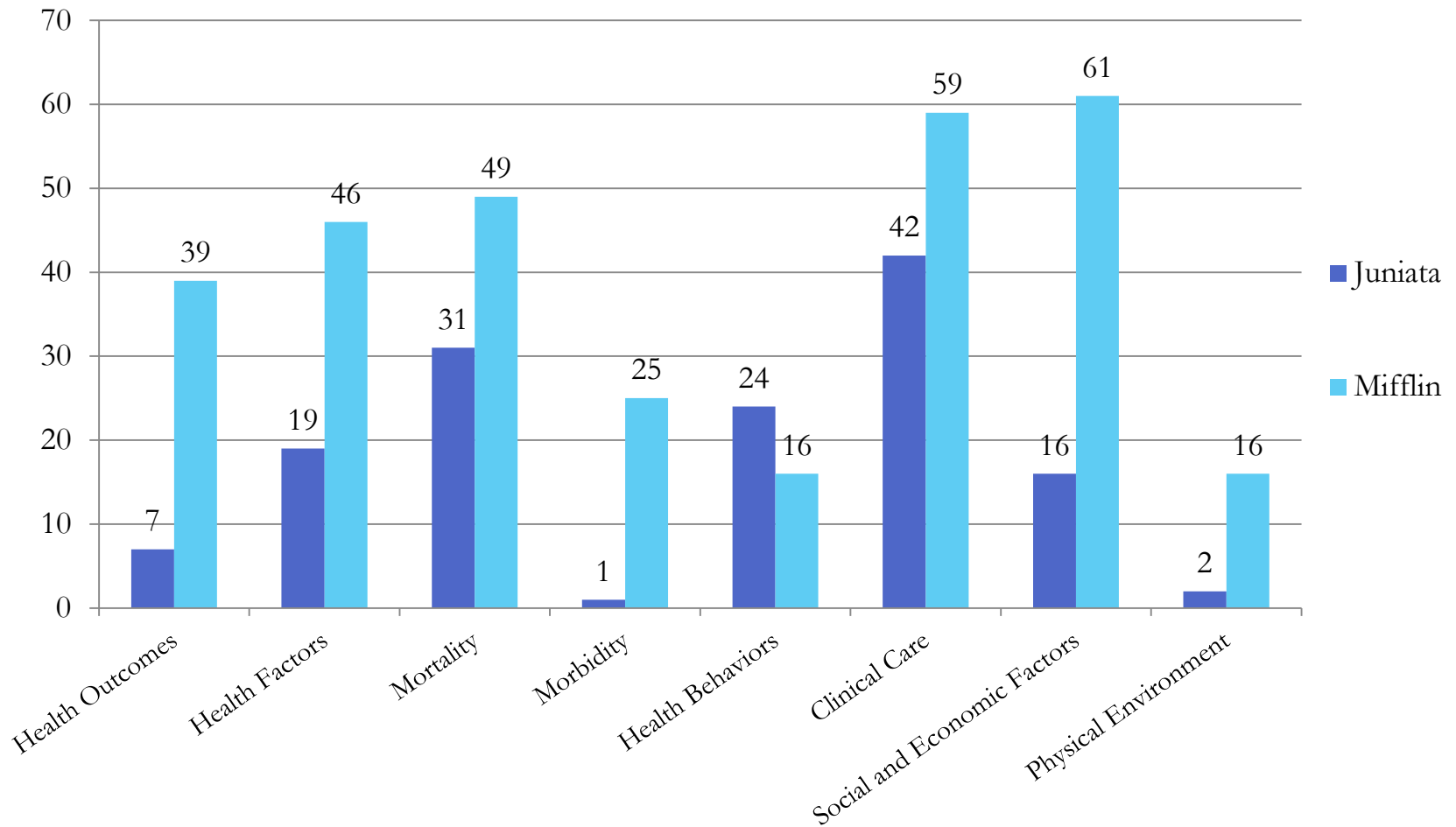
In 2014:

- Juniata County ranks the best in the GLH service area and in the state of PA with a ranking of 1 out of 67. Juniata County also ranks well in Physical Environment with a ranking of 2 and Health Outcomes with a ranking of 7.
- For the GLH study area, Mifflin County ranks poorly overall on more categories than Juniata County.

Between the years 2011 and 2014:

- Juniata County went from a rank of 31 in 2011 to 2 in 2014 for Physical Environment, the largest shift in county health rankings for the GLH service area.
- The Mifflin County health rankings remained relatively stable between 2011 and 2014, with the exception of Health Behaviors, which had a positive ranking shift from 40 in 2011 to 16 in 2014.

County Health Rankings Data



County Health Rankings Data

2014 data on top; 2011 data on bottom

County	Adult Smoking (%)	Adult Obesity (%)	Excessive Drinking (%)	Sexually Transmitted Infections (Chlamydia Rate)	Uninsured (%)	PCP Rate (per 100,000 pop.)
Juniata	16 (19)	31 (31)		209 (52)	14 (17)	25 (30)
Mifflin	16 (23)	30 (31)	11 (12)	297 (106)	15 (14)	45 (50)
Pennsylvania	20 (22)	29 (28)	17 (18)	415 (340)	12 (13)	80 (94)

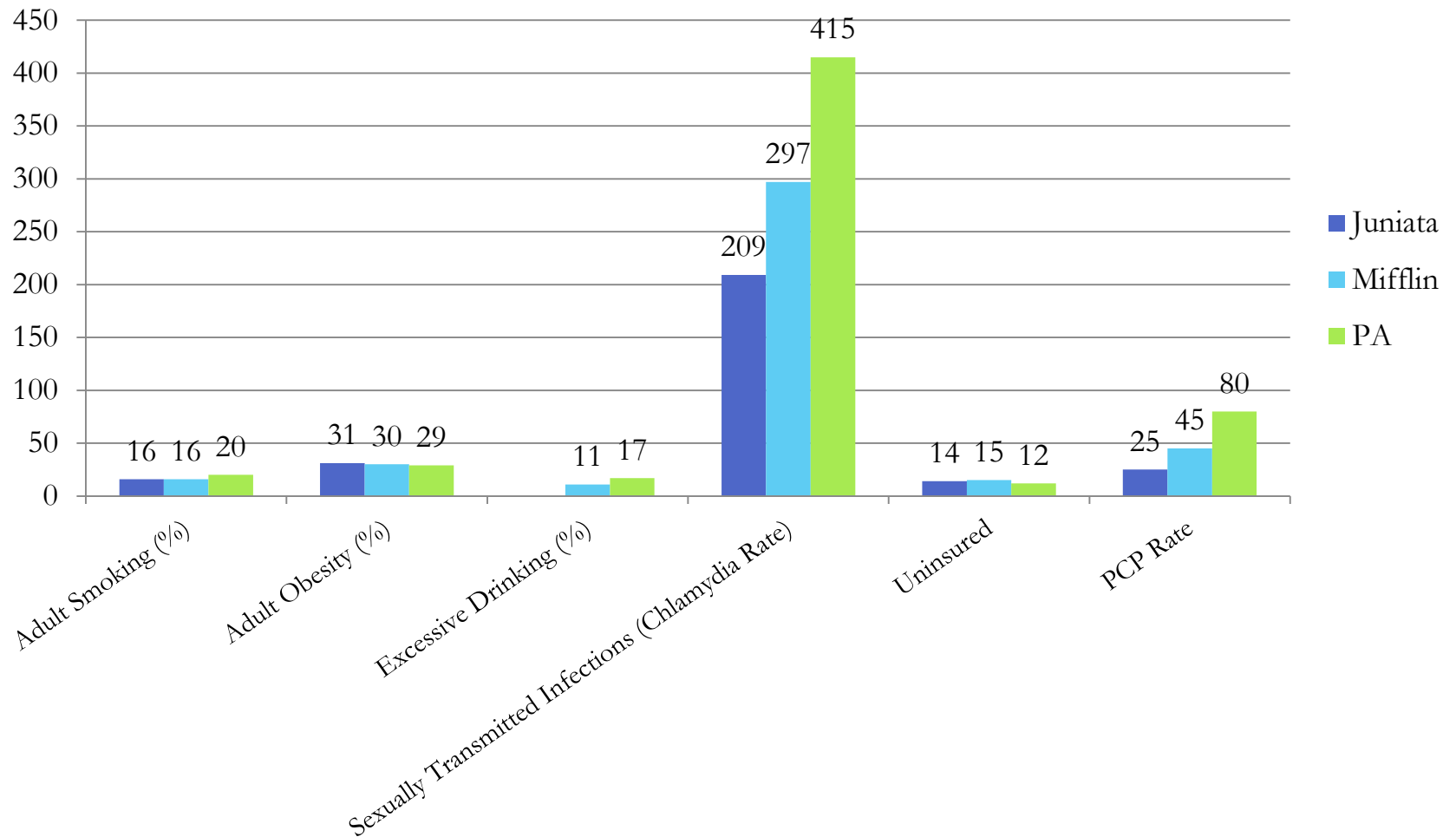
In 2014:

- 16% of the population in Juniata and Mifflin counties smoke and approximately one-third of the population for Juniata and Mifflin counties are obese (31% and 30% respectively).
- Mifflin and Juniata counties have similar uninsured rates (14% and 15% respectively). Juniata County has a PCP rate of 25 and Mifflin County has a PCP rate of 45.

Between the years 2011 and 2014:

- The most significant negative shift in the GLH study area between 2011 and 2014 is the number of Sexually Transmitted Infections (Chlamydia Rate) in Juniata County. The county went from 52 cases per 100,000 population in 2011 to 209 cases in 2014. There was also a significant increase in Sexually Transmitted Infections in Mifflin County from 106 per 100,000 population in 2011 to 297 in 2014.
- The PCP rate in Juniata County fell from 30 to 25 between 2011 and 2014. The PCP rate also fell in Mifflin County from 2011 to 2014 from 50 to 45.

County Health Rankings Data



County Health Rankings Data

2014 data on top; 2011 data on bottom

County	Diabetic Screening (% HbA1c)	Diabetes (% Diabetic)	Mammography Screening	Unemployment (% unemployed)	Inadequate Social Support (% no social- emotional support)	Violent Crime Rate
Juniata	89 (88)	11 (10)	73.2 (76.0)	7.3 (8.0)	15 (14)	96 (89)
Mifflin	86 (85)	11 (9)	74.4 (74.1)	8.3 (10.0)		125 (205)
Pennsylvania	84 (84)	10 (9)	63.0 (64.5)	7.9 (8.1)	21 (21)	367 (419)

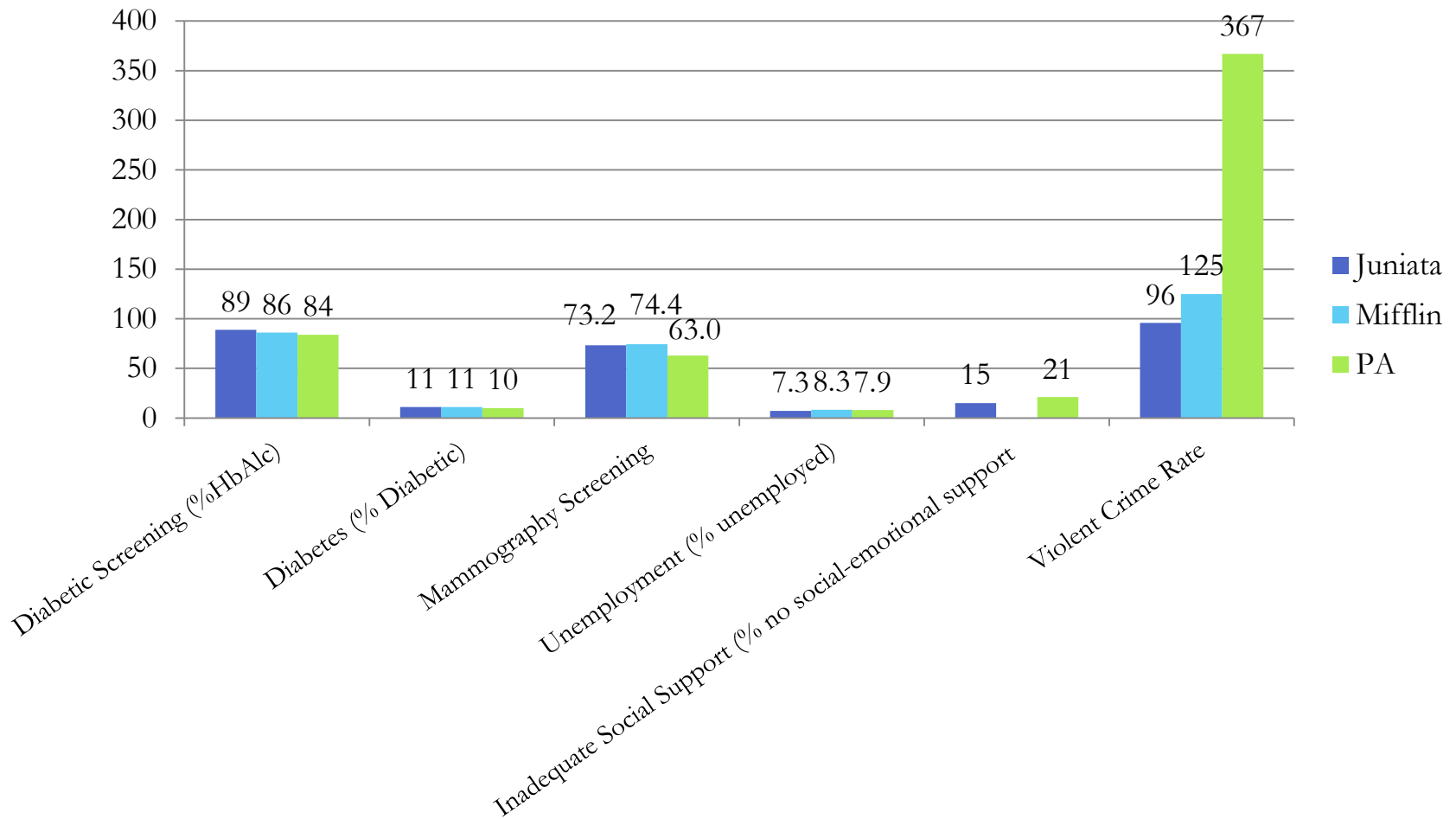
In 2014:

- Both Juniata and Mifflin counties have a diabetic population of 11%. Juniata County has diabetic screening percentage of 89% and Mifflin County has a diabetic screening rate of 86%.
- Mifflin County has a higher unemployment rate of the two counties with 8.3% unemployment. Mifflin also has a higher violent crime rate of 125 per 100,000.

Between the years 2011 and 2014:

- There was a large change between 2011 and 2014 in the violent crime rate of Mifflin County. In 2011, the crime rate was 205 per 100,000 in Mifflin County. In 2014, the violent crime rate decreased to 125 per 100,000.
- Both Mifflin and Juniata counties experienced decreased in unemployment from 2011 to 2014.

County Health Rankings Data



Prevention Quality Indicators Index (PQI)

- ❖ The **Prevention Quality Indicators index (PQI)** was developed by the **Agency for Healthcare Research and Quality (AHRQ)**. PQI is similarly referred to as Ambulatory Care Sensitive Hospitalizations. The quality indicator rates are derived from inpatient discharges by zip code using ICD diagnosis and procedure codes. There are 14 quality indicators.
- ❖ The PQI index identifies potentially avoidable hospitalizations for the benefit of targeting priorities and overall community health. **Lower index scores represent less admissions for each of the PQIs.**

Prevention Quality Indicators Index (PQI)

- ❖ From 2011 to 2014, there were a handful of data methodology changes. For each, Tripp Umbach went to past data and adjusted as necessary to make comparable. They are as follows:
 - ❖ In the past, PQI data was presented as a value per 1,000 population. The AHRQ has revised this and the current data is presented as a value per 100,000 population. Tripp Umbach adjusted to match these as needed.
 - ❖ PQI 2 changed from Perforated Appendix in Males 18+ for the past study to Perforated Appendix in Total 18+ population as a rate per 1,000 ICD-9 code admissions for appendicitis. This shift has changed the values for this measure drastically and therefore, Tripp Umbach did not adjust.
 - ❖ PQI 5 changed from COPD in 18+ population to COPD or Asthma in “Older adults” 40+ population. Tripp Umbach did not adjust.
 - ❖ Although not clearly explained by the AHRQ, it would seem that a definition of Newborn population has shifted for PQI 9 because the values are drastically lower in 2014 than in previous years (2011). This has shifted PQI 9 values drastically. Tripp Umbach did not adjust.
 - ❖ PQI 15 changed from Adult Asthma in 18+ population for past study to Asthma in Younger Adults 18-39 population. Tripp Umbach did not adjust.

Prevention Quality Indicators Index (PQI)

PQI Subgroups

- Chronic Lung Conditions
 - PQI 5 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults (40+) Admission Rate*
* PQI 5 for past study was COPD in 18+ population; PQI 5 for current study is now restricted to COPD and Asthma in 40+ population
 - PQI 15 Asthma in Younger Adults Admission Rate*
* PQI 15 for past study was Adult Asthma in 18+ population; PQI 15 for current study is now restricted to Asthma in 18-39 population (“Younger”).
- Diabetes
 - PQI 1 Diabetes Short-Term Complications Admission Rate
 - PQI 3 Diabetes Long-Term Complications Admission Rate
 - PQI 14 Uncontrolled Diabetes Admission Rate
 - PQI 16 Lower Extremity Amputation Rate Among Diabetic Patients
- Heart Conditions
 - PQI 7 Hypertension Admission Rate
 - PQI 8 Congestive Heart Failure Admission Rate
 - PQI 13 Angina Without Procedure Admission Rate
- Other Conditions
 - PQI 2 Perforated Appendix Admission Rate
 - PQI 9 Low Birth Weight Rate
 - PQI 10 Dehydration Admission Rate
 - PQI 11 Bacterial Pneumonia Admission Rate
 - PQI 12 Urinary Tract Infection Admission Rate

Prevention Quality Indicators Index (PQI)



- GLH has the highest number of preventable hospital admissions for PQI 2 – Perforated Appendix with a score of 695.6. The PQI 2 – Perforated Appendix score for the state of PA is 343.9. This shows us that GLH has a much higher number of preventable hospital admissions for this subgroup than PA.

In 2014:

- The GLH study has higher preventable hospital admission rates for 8 of the 14 PQI measures than the state of Pennsylvania – indicating that GLH overall has higher preventable admission rates than PA.
 - Perforated Appendix, Diabetes Long-Term Complications, COPD and Asthma in 40+ population, Low Birth Weight, Dehydration, Urinary Tract Infection, Angina Without Procedure, Lower Extremity Amputation Rate Among Diabetic Patients

Between 2011 and 2014:

- GLH preventable admissions decreased in 7 out of 14 subgroups for the following subgroups:
 - Asthma in Younger Adults, Diabetes Short-Term Complications, Uncontrolled Diabetes, Lower Extremity Amputation Rate Among Diabetic Patients, Hypertension Congestive Heart Failure, Dehydration Bacterial Pneumonia , and Urinary Tract Infection

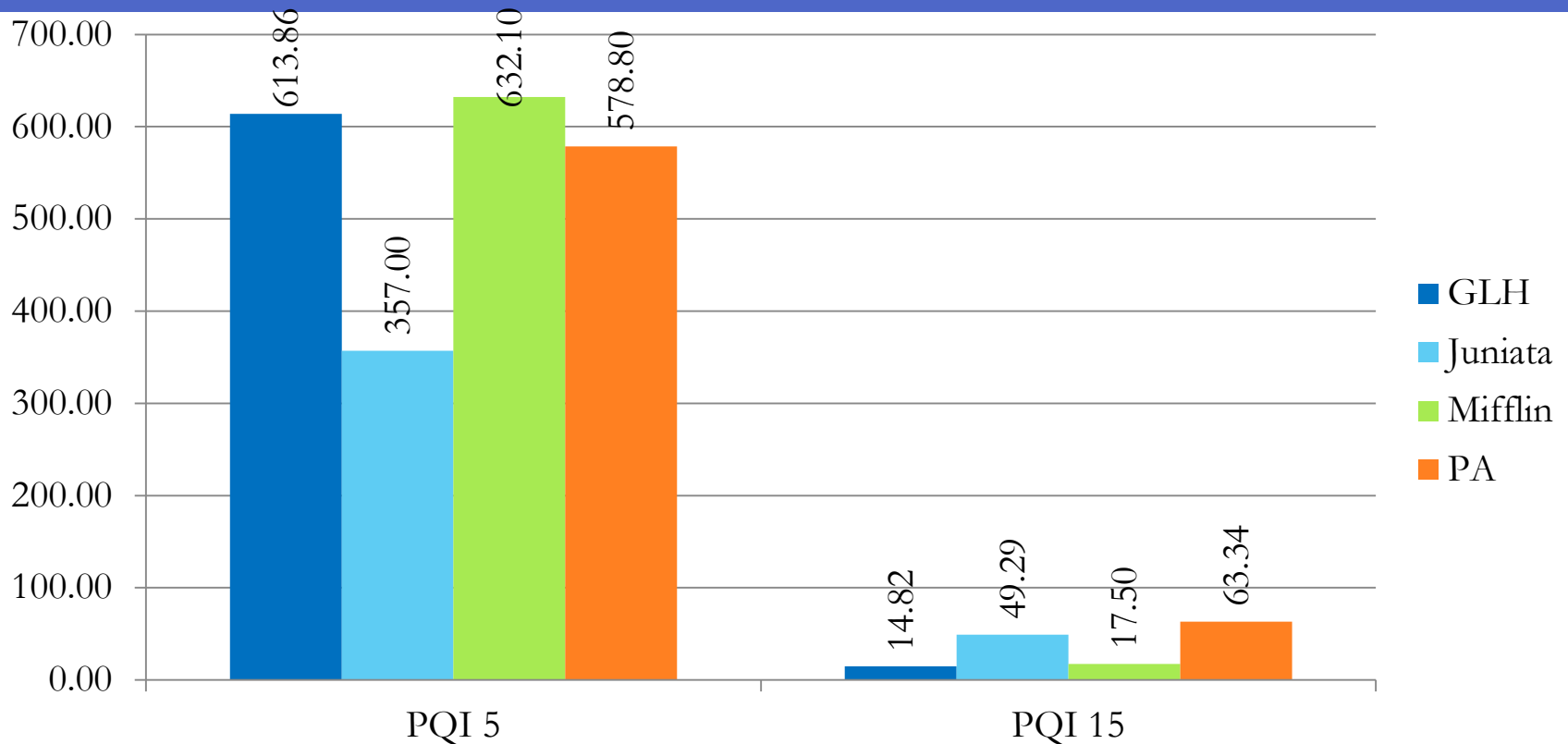
Prevention Quality Indicators Index (PQI)

Prevention Quality Indicators (PQI)	GLH Study Area	PA	Difference	2011 PQI GLH	2014 PQI GLH	Difference
Diabetes Short-Term Complications (PQI1)	111.89	115.16	- 3.27	54.67	111.89	+ 57.22
Perforated Appendix (PQI2)	695.65	343.91	+ 351.74	0.39	695.65	--
Diabetes Long-Term Complications (PQI3)	130.16	119.79	+ 10.37	106.97	130.16	+ 23.19
Chronic Obstructive Pulmonary Disease or Asthma in Older Adults (PQI5)	613.86	578.80	+ 35.06	323.29	613.86	--
Hypertension (PQI7)	31.97	53.99	- 22.02	35.66	31.97	- 3.69
Congestive Heart Failure (PQI8)	525.21	418.29	+ 106.92	584.78	525.21	- 59.57
Low Birth Weight (PQI9)	45.10	37.50	+ 7.60	1.43	45.10	--
Dehydration (PQI10)	114.18	61.90	+ 52.28	133.12	114.18	- 18.94
Bacterial Pneumonia (PQI11)	477.26	326.16	+ 151.10	461.17	477.26	+ 16.09
Urinary Tract Infection (PQI12)	205.52	197.51	+ 8.01	221.08	205.52	- 15.56
Angina Without Procedure (PQI13)	29.69	11.80	+ 17.89	9.51	29.69	+ 20.18
Uncontrolled Diabetes (PQI14)	11.42	14.20	- 2.78	21.39	11.42	- 9.97
Asthma in Younger Adults(PQI15)	14.82	63.34	- 48.52	140.25	14.82	--
Lower Extremity Amputation Among Diabetics (PQI16)	31.97	26.40	+ 5.57	37.08	31.97	- 5.11

*Red values indicate a PQI value for the specific study area that is higher than the PQI for PA or the previous study year.

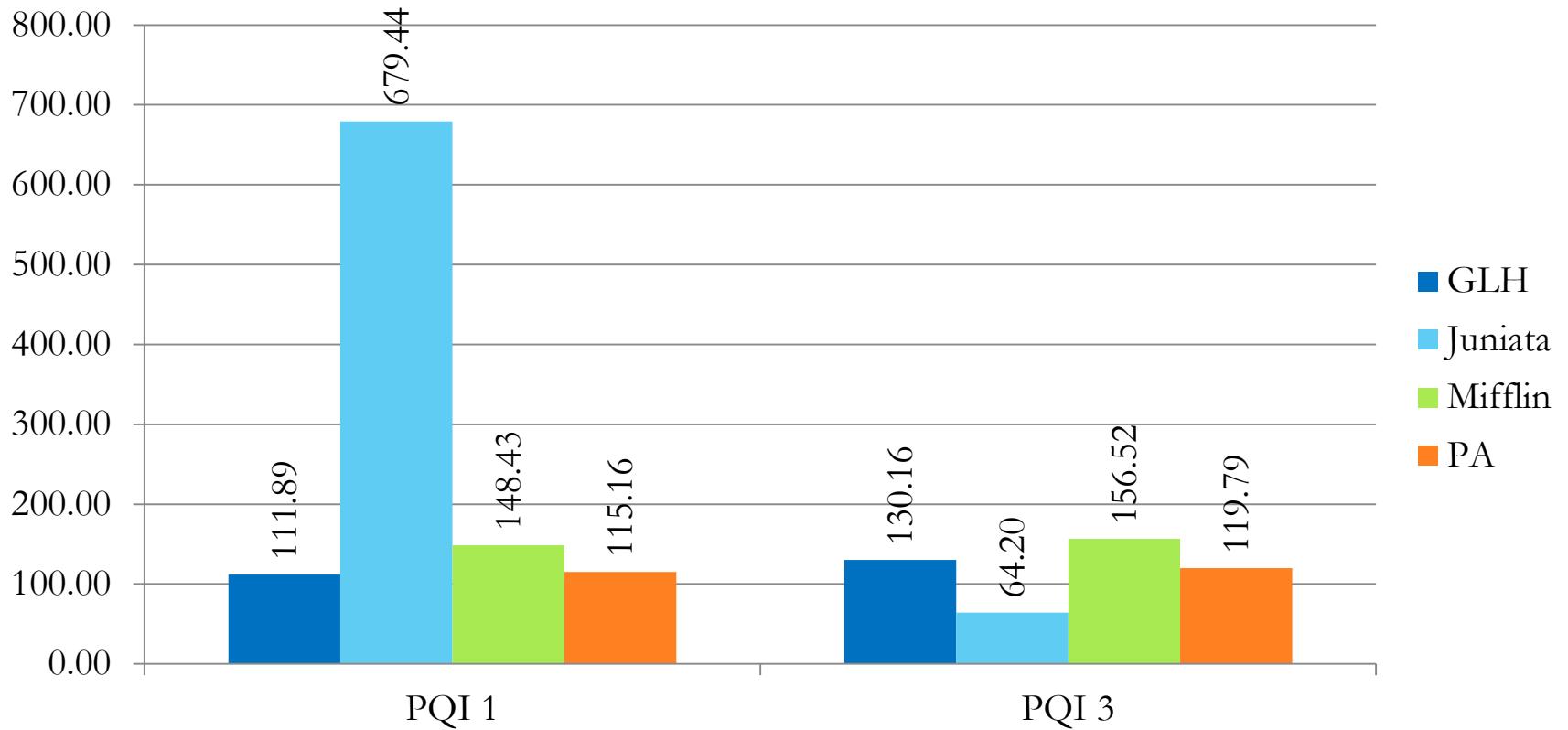
*Green values indicate a PQI value for the specific study area that is lower than the PQI for PA or the previous study year.

Chronic Lung Conditions



PQI 5 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults (40+) Admission Rate
PQI 15 Asthma in Younger Adult Admission Rate

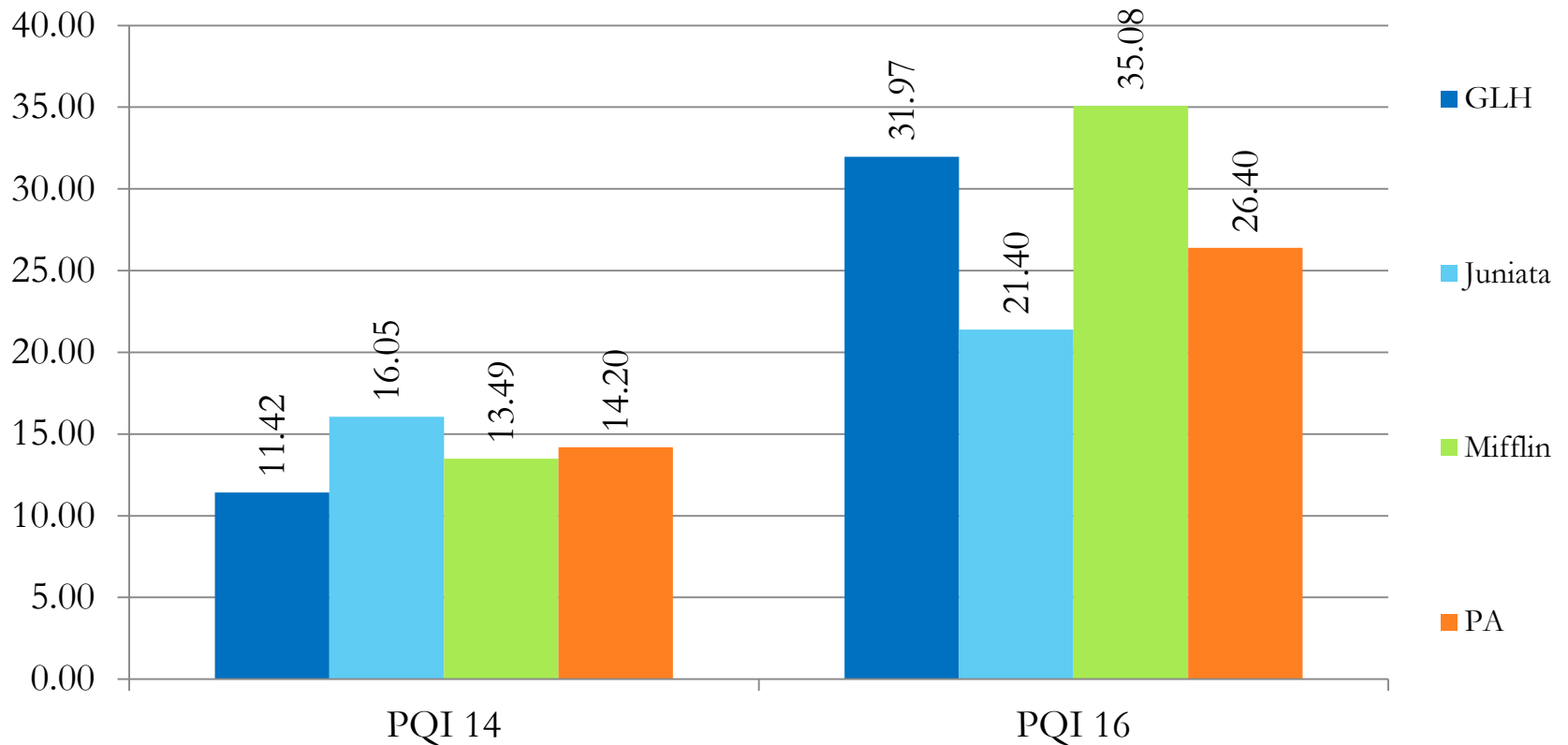
Diabetes



PQI 1 Diabetes Short-Term Complications Admission Rate

PQI 3 Diabetes Long-Term Complications Admission Rate

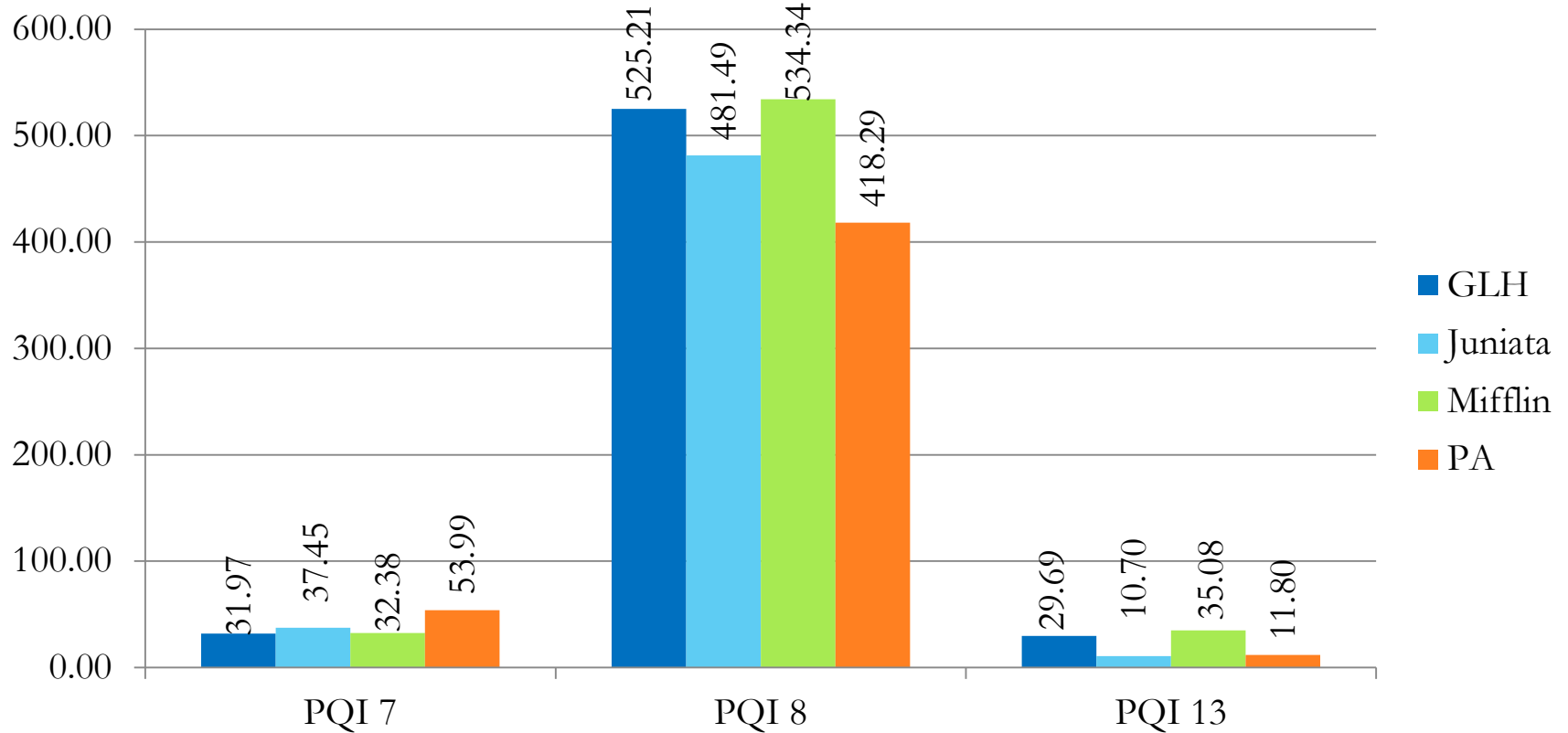
Diabetes (cont'd)



PQI 14 Uncontrolled Diabetes Admission Rate

PQI 16 Lower Extremity Amputation Rate Among Diabetic Patients

Heart Conditions

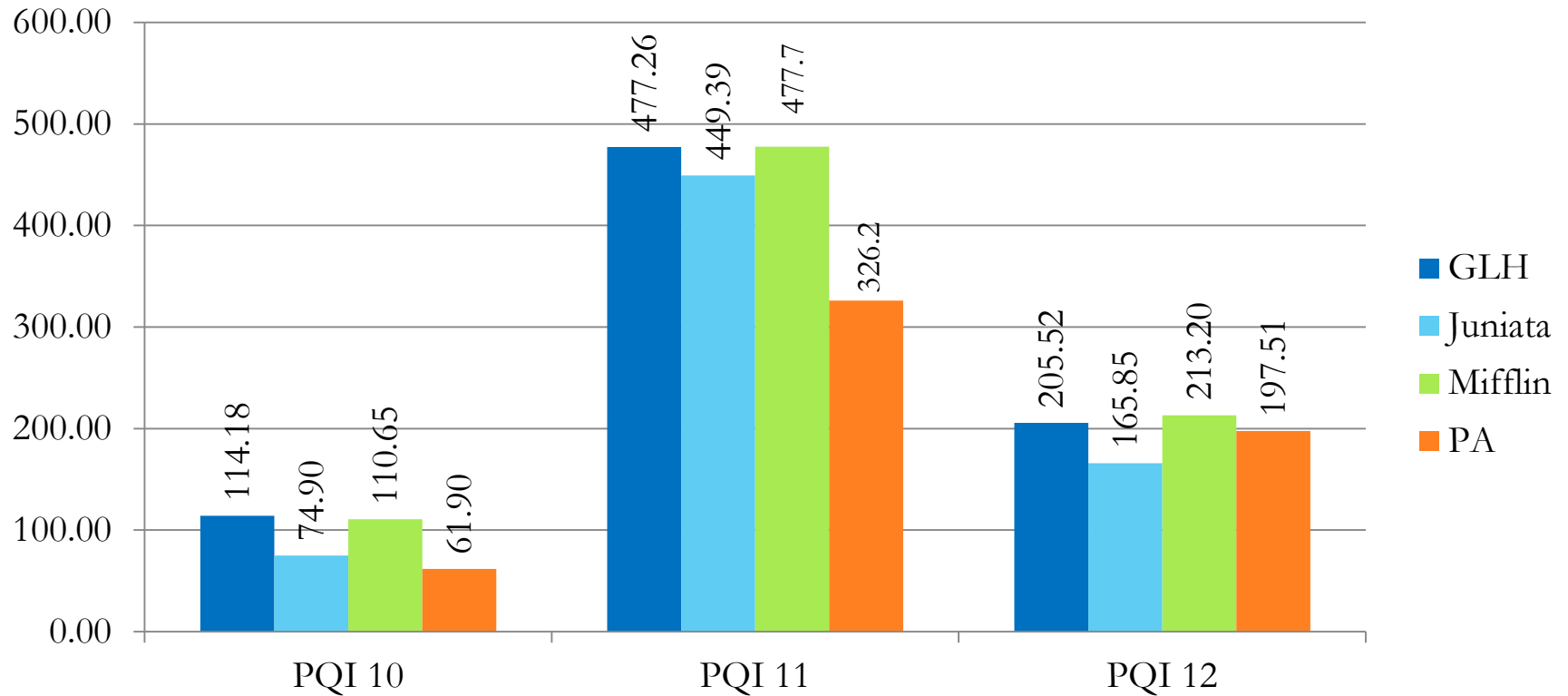


PQI 7 Hypertension Admission Rate

PQI 8 Congestive Heart Failure Admission Rate

PQI 13 Angina Without Procedure Admission Rate

Other Conditions

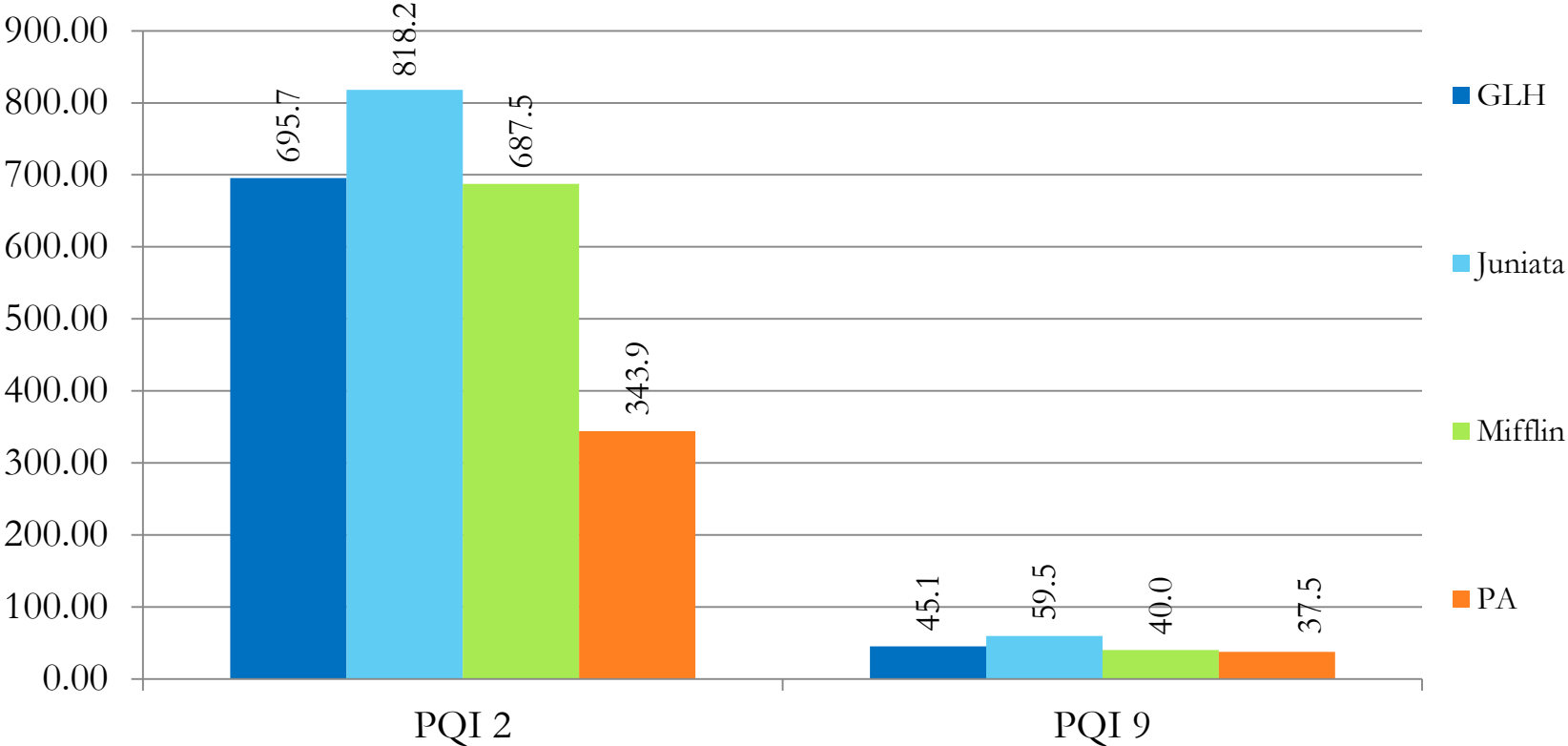


PQI 10 Dehydration Admission Rate

PQI 11 Bacterial Pneumonia Admission Rate

PQI 12 Urinary Tract Infection Admission Rate

Other Conditions



PQI 2 Perforated Appendix Admission Rate
 PQI 9 Low Birth Weight Rate

GLH– Initial Reactions to Secondary Data

The consultant team has identified the following data trends and their potential impact:

- ❑ The GLH study area is projected to have a population increase over the next 5 years at a rate of +0.6%. Both Mifflin and Juniata are projected to have a rise in population, with increases of +0.3% and +1.1%, respectively.
- ❑ The GLH study area shows 18.8% of the population have not received a high school diploma. Mifflin County shows the highest rate with 19.4% of the population without a high school diploma. The state rate (11.5%) and U.S. rate (14.2%) are lower than the rate for the GLH community. 30.8% of the GLH service area have received some college education or received a college degree. This is lower than both the state (50.9%) and U.S. (57.4%) levels. Educational level is highly related to occupation and therefore income.
- ❑ The highest CNI score for the GLH study area is 3.6 in the zip code areas of Belleville (17004) and Lewistown (17044) in Mifflin County. The highest CNI score indicates the most barriers to community health care access.
- ❑ The weighted average CNI score for the entire GLH study area is 3.2. A CNI score of 3.2 is above the average for the scale (3.0). This indicates the GLH community has a slightly higher number of barriers to accessing healthcare in the community.
- ❑ For the GLH study area, Mifflin County ranks worse overall in a majority of categories in comparison to Juniata County.
- ❑ Both Mifflin and Juniata counties had a major shift in the number of sexually transmitted infections (chlamydia rate) between 2011 and 2014, with Mifflin County increasing from 52 per 100,000 population in 2011 to 209 cases, and Juniata County rising from 106 per 100,000 in 2011 to 297 in 2014.
- ❑ The GLH study area has higher preventable hospital admission rates for 8 of the 14 PQI measures than the state of Pennsylvania in 2014. This tells us that the GLH community has a large number of preventable admissions; this allows us to identify health care access with the most need.
- ❑ The GLH study area did, however, have a decrease in preventable admissions in 7 out of 14 subgroups between 2011 and 2014.