GEISINGER-BLOOMSBURG HOSPITAL COMMUNITY HEALTH NEEDS ASSESSMENT

June 2015

GEISINGER

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Introduction

Geisinger-Bloomsburg Hospital, a 72-bed community hospital located in Bloomsburg, PA, in response to its community commitment, contracted with Tripp Umbach to facilitate a comprehensive Community Health Needs Assessment (CHNA). The community health needs assessment was conducted between October 2014 and March 2015. As a partnering hospital of a regional collaborative effort to assess community health needs; Geisinger-Bloomsburg Hospital collaborated with hospitals and outside organizations in the surrounding region (including Columbia, Luzerne and Montour 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:

- Agape
- Bloomsburg Area School District
- Bloomsburg University
- Caring Communities for Aids
- Central Susquehanna Opportunities CMSU
- Columbia County
- Columbia County Volunteers in Medicine
- Columbia Montour Agency on Aging
- Columbia Montour Chamber of Commerce
- Columbia Montour Family Health
- Columbia-Sullivan Head Start
- Central Susquehanna Community Foundation
- Dental Health Clinic
- Department of Health
- Montour County Head Start
- Northern Columbia Community & Cultural Center
- Nurse Family Partnership
- Tapestry of Health
- United Way of Wyoming Valley Women's Center

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-Bloomsburg 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-Bloomsburg Hospital and a project oversight committee to accomplish the assessment.

Community Definition

The community served by the Geisinger-Bloomsburg Hospital (GBH) includes Columbia, Luzerne and Montour Counties. The Geisinger-Bloomsburg Hospital primary service area includes eight 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 Bloomsburg Hospital Community Zip Codes

Table 1

Zip	Post Office	County
17814	Benton	COLUMBIA
17815	Bloomsburg	COLUMBIA
17820	Catawissa	COLUMBIA
17846	Millville	COLUMBIA
17859	Orangeville	COLUMBIA
17603	Berwick	COLUMBIA
17635	Nescopeck	LUZERNE
17821	Danville	MONTOUR

Consultant Qualifications

Geisinger-Bloomsburg 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 books[1] 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_1993.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-Bloomsburg 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 were 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:

- Assuring 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.
- To develop accurate comparisons to the state and national baseline of health measures utilizing most current validated data. (i.e., 2013 Pennsylvania State Health Assessment).
- To utilize 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-Bloomsburg 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-Bloomsburg 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; Geisinger Lewistown Hospital; and Evangelical Community 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 analyses of health status and socio-economic environmental factors related to the health of residents of the Geisinger-Bloomsburg 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-Bloomsburg Hospital contracted with Tripp Umbach to complete a CHNA for the same counties included in the service area (Columbia, Luzerne, and Montour Counties). The data sources used where the same data sources from the 2012 CHNA, which made it possible to review trends and changes across the hospital service area. 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. Additionally, the findings from primary data (i.e., community leaders, stakeholders, and focus groups) are presented when relevant in the executive summary portion. The 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, and residents that are uninsured). Such persons were interviewed as part of the needs assessment planning process. A series of 12 interviews was completed with key stakeholders in the Geisinger-Bloomsburg 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 assure that community members, including under-represented residents, were included in the needs assessment through a survey process. A total of 267 surveys were collected in the Geisinger-Bloomsburg Hospital service area which provides a +/-5.87 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., Central Susquehanna Opportunities, CMSU, Nurse Family Partnership, Montour county Head Start, Columbia-Sullivan Head Start, Agape, Northern Columbia Community & Cultural Center, the Dental Health Clinic, and the United Way of Wyoming Valley) 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), residents with behavioral health needs and residents that are uninsured. 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 10, 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-Bloomsburg 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-Bloomsburg 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-Bloomsburg 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 four community health priorities in the Geisinger-Bloomsburg 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) The impact of socio-economic status on health outcomes; and 4) Health concerns related to lifestyle. Many of the same needs were identified in the 2012 CHNA, with slightly different priorities. A summary of the top four needs in the Geisinger-Bloomsburg 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. Affordable behavioral healthcare options are needed to meet behavioral health needs.
2. Care coordination is needed among behavioral health, substance abuse, and primary care/medical providers.
3. 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.
4. Substance abuse services are necessary due to the prevalence of substance abuse in local communities.
5. 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 they do not have ready access to behavioral health services in many counties served by the hospital.

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
- ✓ More than three quarters of 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; self-reported higher than state and national prevalence rates; and indicated services were not always available when needed.

Findings supported by study data:

Residents need more affordable behavioral healthcare options to meet behavioral health needs:

- Residents are not always able to afford behavioral health care when it is needed due to the lack of insurances and cost of care. This is compounded with the lack of transportation because outpatient treatment options often require regular visits.
- Behavioral health treatments (inpatient, outpatient, medications, etc.) are often expensive and not often covered by insurances leaving many residents of various income levels unable to afford behavioral health services.

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

- 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 a fear of stigmatization, inability to afford treatment options, limited capacity and/or transportation issues.
- Stakeholders explained that it is difficult to secure behavioral health and substance abuse services due to a lack of confidence in behavioral health services being provided in the community, the changing landscape of providers, and location of services.

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 has been discussed in two previous CHNAs (2009 and 2012 CHNA studies).
  - ✓ The most recent 2012 CHNA completed by Tripp Umbach found that community leaders, stakeholders and focus group participants felt that there was a shortage of behavioral health services specifically pediatric mental health services in the areas of psychiatry, therapy and treatment facilities. Additionally stakeholders discussed the resistance of residents to seek behavioral health services due to stigma.
  - ✓ The previous CHNA (completed in 2009) found similar results using a household survey:

    > "Behavioral health was identified as a significant need in every community. The household survey indicated that 5.5% of the residents of the region needed mental health care, but were not able to obtain care and 74% did not obtain this care as the result of not being able to afford the cost of care."[2]

- Behavioral health concerns are growing due to an apparent increase in demand and less available services.
- Depression and the need for mental health treatment are the greatest rates of respondent reported diagnoses when compared to every other area (i.e., diabetes, heart problems, and cancer). Every 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 lowest rate of respondent reported diagnosis in Luzerne County (26.9%) and the highest in Columbia County (50%). Columbia County respondents reported higher rates of depression and need for mental health treatment than any other county surveyed.
  - ✓ 1 in 10 respondents in Columbia (12.1%) and Luzerne Counties (10.2%) indicated that they needed and could not secure counseling services in the past year
  - ✓ 1 in 10 respondents in Montour County (11.2%) indicated that they needed and could not secure services for a mental health condition (i.e., depression, bipolar, etc.) in the past year.
- While there are behavioral health services; there is a shortage of services in relationship to the demand for adults and children alike. The wait times for behavioral health services (psychiatry, therapy, and support services) are reported to be as long as three months in Columbia County which can cause residents to lose motivation to seek treatment.

[2] 2009 CHNA Rural Pennsylvania Counts: A Community Needs Assessment of Five Counties

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

Measure of Mental Health Providers*	PA	Columbia County	Montour County	Luzerne County
Mental health providers (count)	--	34	71	300
Mental health providers (ratio Population to provider)	623:01:00	1,965:1	261:01:00	1,067:1

**County Health Ranking 2014*

- The ratio of population to mental health providers in Columbia and Luzerne counties shows a significantly larger population to provider ratio (1,965 and 1,067 pop. for every 1 mental health provider) than the state (623 pop. per provider). Montour County has more per capita providers available than the state, which is reflected in the better patient to provider ratios.

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

- There are limited services for residents that have been previously incarcerated due to behavioral health and/or substance abuse. Previously incarcerated residents struggle securing employment, housing, and many other necessities. This often leads to homelessness and poor health outcomes.
- Residents with substance abuse history are being returned to areas where they are exposed to the same influences that lead to their initial substance abuse due to a lack of transitional housing and employment opportunities.
- Substance abuse has remained a health concern in the area that depends on engaging hard-to-engage residents in solutions.
- Location makes drug trafficking more prevalent due to Interstate 80 connecting communities to much larger metropolitan areas.
- The most commonly discussed drugs were Methamphetamine, heroin, marijuana, and prescription narcotics.
- Additionally, there is a neonatal cost of substance abuse, meaning babies born exposed to addictive substances often require specialized pediatric care.

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

- While stakeholders recognized substance abuse is a personal choice; they noted that there appears to be a generational influence as well as a higher prevalence among lower-income families.

- Stakeholders discussed the consequences of health needs related to behavioral health and substance abuse services as 1) The criminalization of behavioral health and the increased consumption of health care resources as a result; and 2) Poorer health outcomes related to behavioral health and substance abuse which are often heavily correlated to the duration of disorder/illness.
- All counties with data reported (i.e., Columbia and Luzerne Counties) show higher deaths due to suicide (16.2 and 16.1 per 100,000 pop respectively) than state and national rates (12.5 and 12.3 per 100,000 pop. respectively). Healthy People 2020 goal is set at 10.2 per 100,000 pop.

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: affordability, 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:

- ✓ ***Rotate mental health care professionals through medical care settings:*** Community leaders recommended rotating behavioral health professionals through local primary care settings. Residents would see behavioral health professionals where they receive primary care, which could reduce stigma and increase access to behavioral health care.

- ✓ **Improve access to primary, preventive medical care, dental care, and behavioral health care** by developing satellite sites in multiple communities with one hub provider. Stakeholders also suggested that providers collaborate effectively.

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. Limited access to healthcare as a result of the location of providers coupled with transportation issues
3. Need to increase awareness and care coordination

Increasing access to healthcare is identified as the second community health priority by community leaders. Access to healthcare 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. As ACA has been implemented and the consolidation of health services has taken place across the country; this issues has worsened in many rural areas. However, stakeholders and leaders in the Geisinger-Bloomsburg Hospital area felt that the expansion of Geisinger has improved the quality of services and the number of services (urgent care, specialty care, etc.) in the area. We have seen dramatic improvements in the preventable hospitalizations for the Geisinger-Bloomsburg Hospital services area since the last assessment (decreases in 10 of 14 PQI), which would support the claims of stakeholders and community leaders.

During the 2012 CHNA, community leaders, key stakeholders and focus group participants gave the impression that the limited access some residents have to medical, mental and dental health care may cause: an increase in the utilization of emergency medical care for non-emergent issues; waiting times for healthcare services; an increase in travel distance and time for under/uninsured residents; as well as resistance to seek health services; patients presenting in a worse state of health than they may have with greater access to services and a general decline in the health of residents. Since that time there have been several changes in the healthcare landscape that have improved access to care:

1. Further implementation of the ACA and increased access to care through subsidies and slowed healthcare costs; and

2. Growth of urgent care clinics in the area, which has increased access to afterhours care. There is a question about the lack of care coordination for residents seeking care at urgent care clinics during this assessment though.

- ✓ Secondary data related to provider ratios support the need to increase access to healthcare.
- ✓ While community leaders discussed the potential increase in access to care (i.e., preventive care, primary care, etc.) with the expansion of Medicaid; community leaders focused their discussions primarily on care coordination, number of providers, and limited transportation options.
- ✓ Two-thirds of all stakeholders articulated a lack of availability of health services (medical, dental, and 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, community leaders, key stakeholders and focus group participants believed that there were not enough healthcare providers in the area to meet resident demand for under/uninsured medical care, dental care, and mental health care. While the topic was not as heavily discussed during this needs assessment; 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 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. Primary care physicians are not always taking new patients, particularly for residents with Medicaid. Also, students with health insurances that are not accepted locally (i.e., United Healthcare Insurance) struggle with securing health services outside of student health on college campuses in the area. Columbia County has the fewest primary care providers (60.8 per 100,000 pop) and Luzerne County follows with 71.1. Montour County is very small with a major medical center (Geisinger Medical Center) which drives their provider rates. Survey responses further support the need to address access to health services:
  - ✓ 1 in 10 respondents in Montour County (10.2%) indicated that they needed and could not secure services for a physical health condition (i.e., injury or illness) in the last year.
  - ✓ 1 in 10 females in Luzerne County (13.4%) indicated they needed and could not secure women's health services during the past year.
  - ✓ More than 1 in 10 respondents in Montour County (12.7%) indicated that vision services are not available to them.

- In 2012, the previous CHNA found that community leaders were under the impression that there was a shortage of dentists in the area to provide both routine and specialty dental care. In 2009, dental care was also frequently mentioned – particularly for Medicaid recipients. In fact, the household survey from the 2009 CHNA found that nearly 26,000 individuals in the region are unable to afford recommended dental care

and as many as 10,000 were often or very often unable to afford prescription medication.

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). Columbia County has the fewest dental providers with 44.5 per 100,000 pop. and Luzerne County has rates similar to the state (57.1 per 100,000 pop.); while Montour County shows a rater higher than the state (82 per 100,000 pop.). Additionally, more than 1 in 4 survey respondents in every county indicated that they needed and could not secure dental care in the last year in Columbia (26.4%) and Montour (25%) Counties, with the exception of Luzerne County (15.6%). Additionally, more than 1 in 10 respondents from Columbia (10.6%) and Montour (14.1%) Counties indicated that dental services are not available to them.

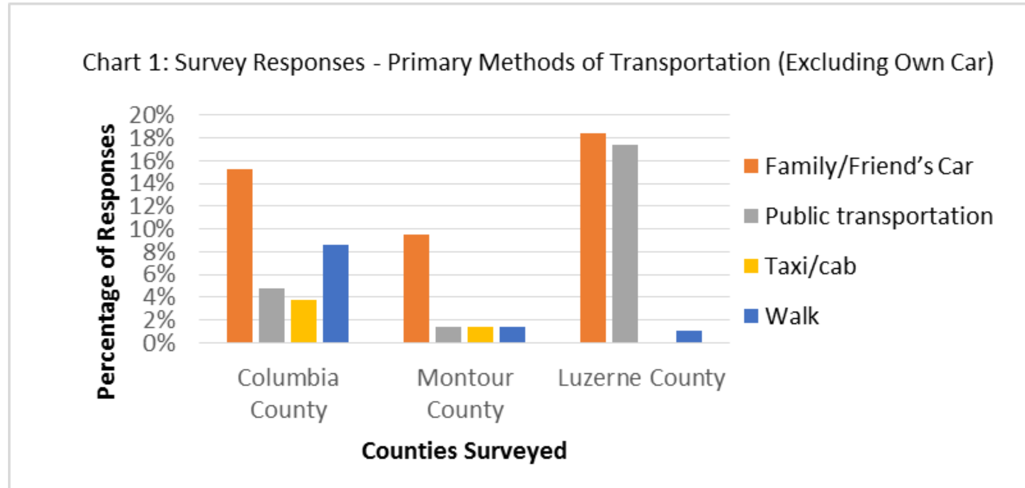
- Available services may be decreasing due to a lack of funding and funding cuts impacting the services available for preventive health services, HIV/AIDS outreach, public education, substance abuse and behavioral health services. Additionally, there are limited services available for homeless individuals (i.e., shelters, health services, behavioral health services, dental care, medication assistance, etc.).

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

- The 2012 CHNA completed by Tripp Umbach found that community leaders, key stakeholders and focus group participants were under the impression that state-funded health insurance was not readily accepted in the area among medical and dental providers at that time, causing residents to travel lengthy distances to receive health services. While community leaders operating in the region during that time acknowledged that leaders believed that there were transportation systems, those systems were described as limited and disjointed.

  Transportation challenges have not seen any major changes since the previous 2012 CHNA. 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. Services tend to be situated in areas with denser populations. With the

challenges related to transportation; many survey respondents indicated that their primary form of transportation is some method other than their own car in Columbia, Montour and Luzerne Counties (32.4%, 13.7%, and 37.2% respectively), which can be a barrier for these residents in accessing health services.



- While the perception is often that seniors have ready access to transportation for medical appointments; many seniors must take an entire day to get to and from a medical appointment using public transportation for medical services.

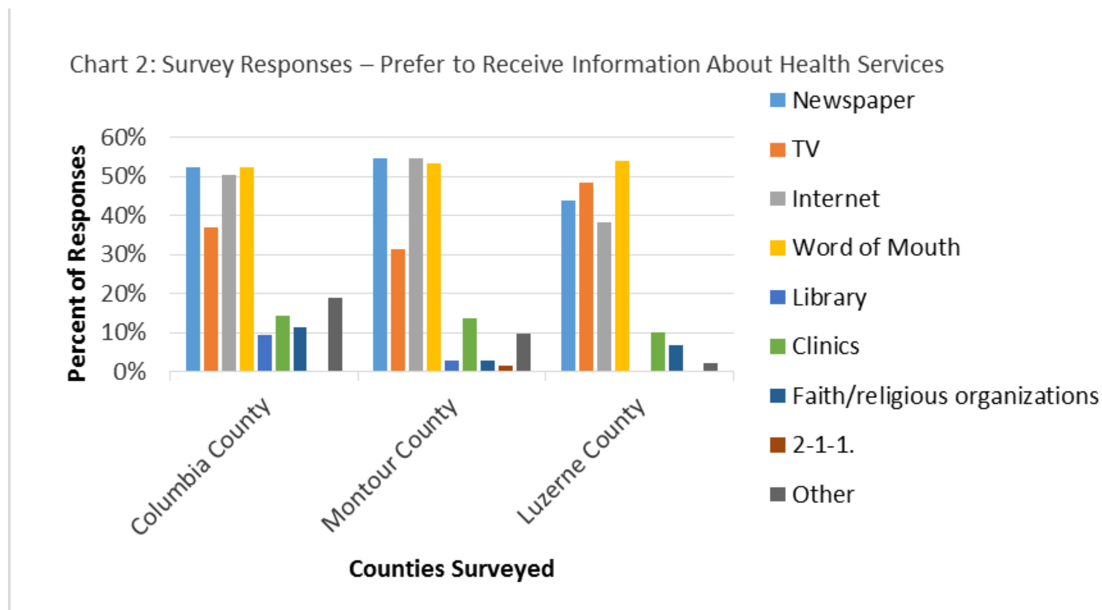
Need to increase awareness and care coordination

- 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 and 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. Additionally, one in four survey respondents in Montour (26.2%) and Luzerne (28.9%) Counties reported not understanding what was taking place during a time when they (or a loved one) received care outside their home, with almost one in five respondents from Columbia County (19.1%) indicating the same.

- Residents may have a difficult time navigating health services that are available due to a lack of awareness about what is available and no efficient way to disseminate information in an effective way. Both previous CHNAs have addressed the awareness of residents as a barrier to accessing healthcare. The 2012 CHNA found that there was a need for increased awareness and education related to healthy behaviors. In 2009, Rural Pennsylvania Counts household survey found that there are significant differences

in sources of health information by education. Individuals at the lowest end of the educational spectrum are less likely to use the internet or print materials from home in comparison to individuals with higher levels of education including some college or bachelor's degree. However, most respondents indicated that they would obtain health information directly from their healthcare provider.

- Similar to the 2009 CHNA, survey respondents indicated they get information about services in their community by word of mouth and newspaper more often than any other option in all counties surveyed.



- Furthermore, 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".

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 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. Primary data collected during this assessment from community leaders and residents offered several recommendations to increase access to healthcare some of which included:

- ***Recruit and retain health service professionals:*** Community leaders indicated that there are not enough healthcare professionals (i.e., medical, behavioral health, and dental). Leaders

recommended that additional health professionals be recruited and efforts be made to retain those professionals.

- ***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)

- ***Collaboration to address transportation issues:*** Community leaders recommended that they develop a collaborative to discuss, plan, and effectively address the issues of transportation in the rural areas.

- ***Increase resident awareness of available services*** by providing a central location for information related to community services.

- ***Improve access to primary, preventive medical care, dental care, and behavioral health care*** by developing satellite sites in multiple communities with one hub provider. Stakeholders also suggested that providers collaborate effectively.

THE IMPACT OF SOCIO-ECONOMIC STATUS ON HEALTH OUTCOMES

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

1. Residents need solutions that reduce the financial burden of health care
2. Poverty increases the barriers to accessing healthcare

Reducing the impact of socio-economic status on health outcomes is identified as the third community health priority by community leaders. 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.

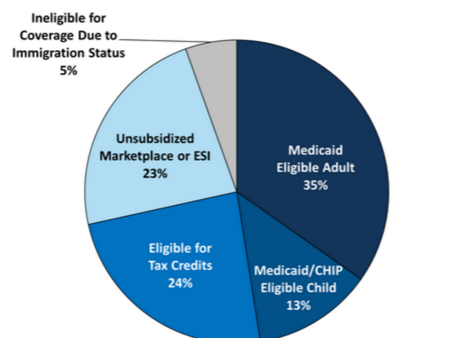
- ✓ Secondary data related to prevalence rates, socio-economic barriers to accessing healthcare (i.e., CNI), and poor health outcomes (e.g., amputations, death rates, etc.) support the need to reduce the impact of socio-economic status on health outcomes.
- ✓ Almost half of the stakeholders interviewed discussed the impact poverty and cost of care on access to care and propensity to seek care and subsequent health outcomes for residents.
- ✓ Survey respondents reported access issues related to their ability to afford health insurance and/or health services.

Findings supported by study data:

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.[3]

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



Total = 1.4 Million Uninsured Nonelderly Pennsylvanians

**Source: Kaiser Family Foundation*

- During the 2012 CHNA study, Community leaders, key stakeholders and focus group participants all discussed the gap between the income qualifications for state-funded health insurance and the ability of residents to afford private-pay health insurance premiums. Since that time, 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

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

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.

The population that is unable to afford healthcare and does not qualify for assistance is more of a moderate income earning family. There are parents 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 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.[4]

- Community based organizations that serve low-income residents served as the most predominant types of survey collection sites. The vast majority of survey respondents reported earning less than $29,999 per year. The most common form of health insurance carried by respondents was Medicare in Luzerne County (30%); Medicaid in Columbia County (37.4%); and Private in Montour (32.5%). The most common reason why individuals indicated that they do not have health insurance is because they can’t afford it in all counties (69.2%, 62.5%, and 44% respectively) with ineligibility being the second most common reason in Luzerne County (24%).
- Columbia County reported the highest uninsured rate across the Geisinger-Bloomsburg Hospital study area with a rate of 23%. This is an increase from 13% uninsured rate in 2011.

Poverty increases the barriers to accessing healthcare:

- Poverty seems to be pervasive in the area. Leaders felt there are “glass ceilings” that do not allow residents in poverty to improve their financial situations. Children living with single parents are likely to be living in poverty in most areas, which may impact health outcomes. 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,

[4] Source: Kaiser Family Foundation analysis based on 2014 Medicaid eligibility levels.

transportation, etc.) and a focus on meeting basic needs, leading to a lower prioritization of health and wellness.

- Youth in the area are not always getting the education they need to be successful in school and life (i.e., employment skills). Limited education can contribute to lower wages, which limits access to health care in a variety of ways.
- Most survey respondents in each of the 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, and 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 with an increase in overall CNI score from the 2012 assessment (2.7 to a 2.9). A closer look at the changes in score shows that all of the increases took place in Columbia County and the CNI score shifts were great (+0.6 for each). This means that there are drivers in Columbia County causing an increase in the barriers to accessing healthcare.
- There is one zip code from Luzerne County included in the hospital service area (18635), which is not a zip code with high barriers to accessing healthcare (2.4). The highest CNI score for the study area is 3.4 in the zip code area of Bloomsburg (17815) in Columbia County. The highest CNI score indicates the most barriers to community health care access. In 2012, the highest CNI score for the service area was 3.2 also in Bloomsburg, which increased (+0.6) since that time. Of the eight zip code areas included in the hospital services area, six zip code areas either remained unchanged or showed large increases in barriers to accessing healthcare(+.06). This finding may be the result of a lag in data collection and reporting coupled with the previous flooding that took place in the area. Meaning, secondary data is collected and tabulated prior to being available to the public. This process often causes a lag between when the data were collected and when they are made available, which can be as much as two to three years.

The impact of socio-economic status on health outcomes is well documented in this assessment, previous assessments for Evangelical Community Hospital; as well as, throughout

the world. It is important to focus resources on the priorities that exsist to improve health outcomes and ultimately reduce the consumption of healthcare resources in the long-run. Primary data collected during this assessment from community leaders and residents offered several recommendations to address the impact of socio-economic status on health outcomes some of which included:

- ***Secure more funding:*** Community leaders discussed at length the need for additional funding dollars to effectively meet community health needs. Leaders felt that federal dollars could be increased in the area through the designation of a rural health county, which may have requirements related to the number of physicians that would have to be met to qualify for such a designation.

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 and final community health priority by community leaders. Data show 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.

The 2012 CHNA completed by Tripp Umbach found that there was a need for increased awareness and education related to healthy behaviors. Community leaders and stakeholders perceived the health status of many residents to be poor due to the perceived prevalence of chronic lifestyle-related illnesses, limited education on how to maintain health, limited awareness about prevention and limited motivation and/or access to healthy options. Additionally, Stakeholders felt that residents make poor lifestyle choices (i.e., smoking, inactivity, substance abuse and poor nutrition), which contribute to their unhealthy status and often lead to chronic health conditions (i.e., diabetes, obesity and respiratory issues). Stakeholders felt that residents have a limited understanding about preventive choices and healthy options due to the limited access to preventive healthcare and a lack of prevention education and outreach in their communities.

Lifestyle related illnesses (i.e., diabetes, heart disease, coronary heart disease, obesity, etc.) and the behaviors that cause them (smoking, substance abuse, limited physical activity, etc.) are prevalent in the Geisinger-Bloomsburg Hospital service area. With behaviors as the primary drivers of health outcomes it will be important to further understand what motivates and incentivizes residents to change their behaviors in the local communities.

- ✓ 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.
- ✓ Over one-half 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 diabetes as one of their top five health concerns and the rates of unhealthy behaviors (smoking, limited physical activity, etc.) are higher than state and national norms where data is available.

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 PA state Health Needs Assessment: A State Health Assessment (2013), lifestyles that impact the health of residents are a concern across the state with 1) an increase in residents that are obese from 2000 to 2011 (21% and 29% respectively); 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 do not always have access to healthy nutrition and may need additional resources (i.e., seniors, homeless, residents in more rural areas, residents earning a low-income and children in homes where substance abuse is an issue).
- Residents may not always have complete control over the conditions which lead to unhealthy behaviors (i.e., limited access to healthy produce in poorer rural areas, a lack of education, fear of crime and a lack of motivation driving obesity rates in the area). For example: lower-income residents may not be able to afford healthier options. This is often the case for several reasons. Foods that are more processed are often cheaper than produce and meats, etc. Also, foods that are more processed tend to be more filling than those that are not because they are higher in carbohydrates. And finally, foods that are more processed tend to have a longer shelf-life than less processed, fresher foods. Unfortunately, foods that are more processed with higher sugars and carbohydrates are also unhealthy to consume in large quantities and can lead to chronic illnesses and obesity.

- Family and culture play roles in the lifestyle choices/preferences of residents (e.g., diet, exercise-levels, etc.).
- Residents are not always making the healthiest choices on their own behalf.
- Rural residents often do not seek health services until health concerns have become emergencies due to culture, finances, transportation, time, etc.; resulting in poorer health outcomes and higher rates of chronic illnesses. For example: stakeholders discussed the link between nutrition and the obesity rates and diabetes rates. Additionally, Respondents in every county 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). Montour shows the lowest percentage of respondents reporting they were ever told by a healthcare professional that they had diabetes (12%) and Luzerne County respondents reported the most (19.4%).

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

Physical Activities	Columbia County	Montour County	Luzerne County	PA*	U.S.*
Yes	69.2%	54.5%	55.4%	73.7%	74.7%
No	30.8%	45.5%	44.6%	26.3%	25.3%

** Source: CDC*

- Respondents in Montour and Luzerne Counties report lower rates of physical activity (54.5% and 55.4% respectively) than those reported for the state and nation (73.7% and 74.7% respectively).
- Columbia and Montour County survey respondents reported higher rates of smoking everyday (20% and 25.3% respectively) than those reported for the state and nation (15.7% and 13.4% respectively). The Healthy People 2020 goal for percentage of population smoking in the U.S. is 12% by the year 2020.[5]

Lifestyle related illness has a negative impact on health outcomes:

- Survey respondents in every county 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

[5] PA State Health Assessment 2013

Weight & BMI	Columbia County	Montour County	Luzerne County	Avg. Female (5'4")*	Avg. Male (5'9")*
Weight	177.33 lbs.	186.71 lbs.	174.89 lbs.	108-144 lbs.	121-163 lbs.
BMI**	29.17	30.17	28.36	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 heart disease, coronary heart disease, and diabetes. Additionally, the preventable hospitalizations linked to lifestyle are prevalent throughout the counties in the service area; two of which (namely uncontrolled diabetes) increased since the 2012 study. Finally, there have been increases in the rates of lifestyle related illnesses across counties in the service area (e.g., obesity, STIs, diabetes, etc.) since the 2012 study.

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 population 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:

- ***Residents could be healthier if there were incentives offered*** as a component of health insurance coverage that encouraged prevention and wellness.

Community Health Needs Identification Forum

The following qualitative data were gathered during a regional community planning forum held on March 10, 2015 in Danville, PA. The community planning forum was facilitated by Tripp Umbach with more than 50 community leaders from a three county region (Columbia, Montour, and Schuylkill Counties) and lasted approximately four hours. Community leaders were identified by the community health needs assessment oversight committee for Geisinger-Bloomsburg Hospital. Geisinger-Bloomsburg Hospital is a 72-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 were 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-Bloomsburg Hospital service area. Below is a brief summary of the recommendations:

- ***Recruit and retain health service professionals:*** Community leaders indicated that there are not enough healthcare professionals (i.e., medical, behavioral health, and dental). Leaders recommended that additional health professionals be recruited and efforts be made to retain those professionals. Leaders also recommended increasing the free clinic services in the area.

- ***Secure more funding:*** Community leaders discussed at length the need for additional funding dollars to effectively meet community health needs. Leaders felt that federal dollars could be increased in the area through the designation of a rural health county. Additionally, leaders felt that there is a need for funding to increase the number of low-income housing units.

- ***Rotate mental health care professionals through medical care settings:*** Community leaders recommended rotating behavioral health professionals through local

primary care settings. Residents would see behavioral health professionals where they receive primary care, which could reduce stigma and increase access to behavioral health care.

- ***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.

- ***Collaboration to address transportation issues:*** Community leaders recommended that community leaders develop a collaborative to discuss and plan to effectively address the issues of transportation in the rural areas. Recommendations included the purchase of vans that would be operated by volunteers.

PROBLEM IDENTIFICATION:

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

1. **Behavioral health and substance abuse**
2. **Access to healthcare**
3. **The impact of socio-economic status on health outcomes**
4. **Health concerns related to lifestyle**

The following summary represents the most important topic areas within the community discussed at the planning retreat in order of priority. Community leaders believe the following concerns are the most pressing problems and are identified as 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 an initial appointment.

- 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.
- Substance abuse has remained a health concern in the area that depends on engaging residents in the resolution.
- Behavioral health concerns are growing due to an apparent increase in demand and less available services.
- Residents are not always able to afford behavioral health care when it is needed due to the lack of insurances and cost of care.
- There are limited services for residents that have been previously incarcerated due to behavioral health and/or substance abuse. Previously incarcerated residents struggle securing employment, housing, and many other necessities. This often leads to homelessness and poor health outcomes.
- Residents with substance abuse history are being returned to areas where they are exposed to the same influences that lead to their initial substance abuse due to a lack of transitional housing and employment opportunities.

ACCESS TO HEALTHCARE:

Community leaders identified access to health care as a top health priority. While community leaders discussed the potential increase in access to care (i.e., preventive care, primary care, etc.) with the expansion of Medicaid; community leaders focused their discussions primarily on care coordination, number of providers, and limited transportation options.

Perceived Contributing Factors:

- 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.
- Primary care physicians are not always taking new patients, particularly for residents with Medicaid.
- Patient-centered care is not as readily available as it once was.
- While residents may have health insurance; they cannot always afford to use their health insurance due to unaffordable deductibles and copays.
- 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.

- Residents do not always have access to 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.
- Residents do not always have the ability to secure preventive care due to affordability, lack of insurance, and transportation issues. This was particularly discussed in relationship to residents in poverty and homeless residents.
- Residents are not always able to afford dental care due to the cost and lack of insurance.

THE IMPACT OF SOCIOECONMIC STATUS ON HEALTH OUTCOMES:

Community leaders discussed the impact of socio-economic status on health outcomes as a top health priority. Community leaders focused their discussions primarily on the struggle inherent in poverty, limited safety net services for residents above the poverty line, and the impact of poverty on children (including educational outcomes).

Perceived Contributing Factors:

- Poverty seems to be pervasive in the area. Leaders felt there are "glass ceilings" that do not allow residents in poverty to improve their financial situations.
- The lack of transportation plays a role in the ability of residents to secure and maintain employment.
- Children living with single parents are likely to be living in poverty in most areas, which may impact health outcomes.
- 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. Many families are not able to afford health insurances and do not qualify for assistance.
- Youth in the area are not always getting the education they need to be successful.
- Limited education can contribute to lower wages and limit access to health care in a variety of ways.
- There are limited services available for homeless individuals (i.e., shelters, health services, behavioral health services, dental care, medication assistance, etc.).

HEALTH CONCERNS RELATED TO LIFESTYLE:

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

Perceived Contributing Factors:

- Residents are not as active as they may need to be to remain healthy contributing to the rates of diabetes, obesity, and poor health outcomes.
- The prevalence of diabetes contributes to poor health outcomes in the area.
- Residents do not always have access to healthy nutrition and may need additional resources.
- Residents are not always receiving education and outreach related to healthy behaviors and preventive practices.
- Residents are not always receiving effective education and outreach related to smoking, obesity, etc.

Secondary Data

Tripp Umbach worked collaboratively with the Geisinger-Bloomsburg 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-Bloomsburg 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-Bloomsburg Hospital study area encompasses Juniata, Lycoming, Northumberland, Snyder and Union counties, and is defined as a zip code geographic area based on 80% of the hospital's inpatient volumes. The Geisinger-Bloomsburg Hospital community consists of eight zip code areas.

Demographic Profile – Key Findings:

- ✓ The Geisinger-Bloomsburg Hospital study area shows a decline in population over the next five years at a rate of -0.3%. This trend differs from that of Pennsylvania as a whole, which is anticipated to have an increase in population at a rate of +0.8%.
- ✓ The Geisinger-Bloomsburg Hospital study area shows higher percentages of women as opposed to men; this is consistent with state data.
- ✓ The Geisinger-Bloomsburg Hospital service 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 five years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.
- ✓ The Geisinger-Bloomsburg Hospital study area has an average annual household income of $60,495. The highest average income is found in Montour County ($76,542) and the lowest is found in Columbia County ($56,202). All of the average household income levels, with the exception of Montour County, for the study area fall below the averages for Pennsylvania and for the United States.

- ✓ The Geisinger-Bloomsburg Hospital study area shows 11.6% of the population have not received a high school diploma. The state rate (11.5%) is slightly lower than the rate for the Geisinger-Bloomsburg Hospital service area while the U.S. rate is higher (14.2%).
- ✓ Approximately 42.9% of the Geisinger-Bloomsburg Hospital study area has received some type of college education or a college degree.
- ✓ As compared with Pennsylvania and the United States, the Geisinger-Bloomsburg Hospital study area has very little diversity. Only 7.2% of the population in the Geisinger-Bloomsburg Hospital study area identify as a race/ethnicity other than White, Non-Hispanic whereas 21.9% in PA and 37.9% in the U.S. identify as a race other than White, Non-Hispanic.

Community Need Index (CNI)

In 2005 Catholic Healthcare West, in partnership with Thomson Reuters, pioneered the nation's first standardized Community Need Index (CNI).[6] 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-Bloomsburg Hospital zip code areas have a CNI score of 2.9, indicating a below 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.

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

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

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
17815	Bloomsburg	Columbia	38.6%	7.4%	11.4%	9.8%	0.7%	8.9%	10.6%	17.5%	48.2%	4.0	3.0	2.0	3.0	5.0	3.4
18603	Berwick	Columbia	31.4%	6.7%	12.0%	7.4%	1.1%	16.5%	15.5%	19.7%	40.9%	3.0	3.0	4.0	2.0	4.0	3.2
17820	Catawissa	Columbia	21.4%	6.1%	8.7%	3.1%	0.3%	10.9%	9.0%	22.0%	63.5%	5.0	2.0	3.0	1.0	3.0	2.8
17846	Millville	Columbia	22.2%	6.5%	10.1%	3.2%	0.2%	14.3%	18.4%	14.9%	32.6%	3.0	3.0	3.0	1.0	3.0	2.6
17821	Danville	Montour	27.0%	5.4%	5.9%	7.5%	1.0%	9.9%	7.6%	10.4%	36.3%	3.0	1.0	2.0	2.0	4.0	2.4
18635	Nescopeck	Luzerne	23.3%	5.9%	7.9%	3.1%	0.1%	12.1%	11.8%	16.4%	32.1%	3.0	2.0	3.0	1.0	3.0	2.4
17814	Benton	Columbia	17.7%	7.1%	7.6%	2.5%	0.1%	12.6%	7.5%	15.6%	27.2%	2.0	2.0	3.0	1.0	2.0	2.0
17859	Orangeville	Columbia	14.5%	6.5%	7.9%	3.0%	0.2%	10.8%	13.1%	11.2%	40.3%	3.0	2.0	3.0	1.0	1.0	2.0
Geisinger-Bloomsburg Hospital Community Summary			**30.2%**	**6.6%**	**9.6%**	**7.2%**	**0.7%**	**11.4%**	**11.1%**	**16.2%**	**42.2%**	**3.4**	**2.4**	**2.7**	**2.1**	**4.0**	**2.9**

✓ Higher CNI scores indicate greater number of socio-economic barriers to community health.

The highest CNI score for the Geisinger-Bloomsburg Hospital study area is 3.4 in the zip code area of Bloomsburg (17815) in Columbia 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:

- ✓ Bloomsburg (17815) has the highest rental (38.6%), uninsured (7.4%), and minority (9.8%) rates for the Geisinger-Bloomsburg Hospital study area.
- ✓ Berwick (18603) has the highest uninsured rate (12.0%), individuals with limited English proficiency (1.1%), and individuals with no high school diploma (16.5%),
- ✓ Catawissa (17820) has the highest percentage of both families with married parents or single parents with children living in poverty (22% and 63.5% respectively).
- ✓ Millville has the highest rate of elderly living in poverty (18.4%).

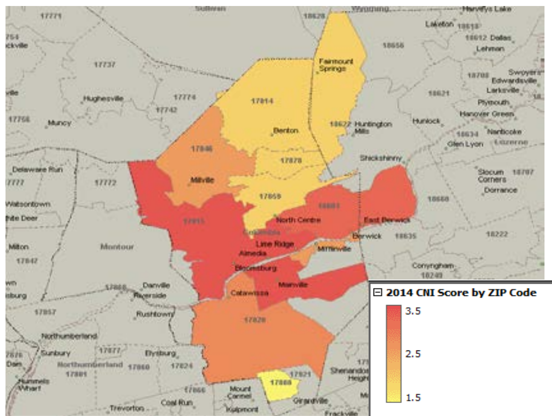
The median for the CNI scale is 3.0 The Geisinger-Bloomsburg Hospital study area has two zip code areas above the median while at the same time has six below the median.

This helps us to see that the Geisinger-Bloomsburg Hospital study area contains more zip code areas with CNI scores below the median indicating fewer barriers to community health care access.

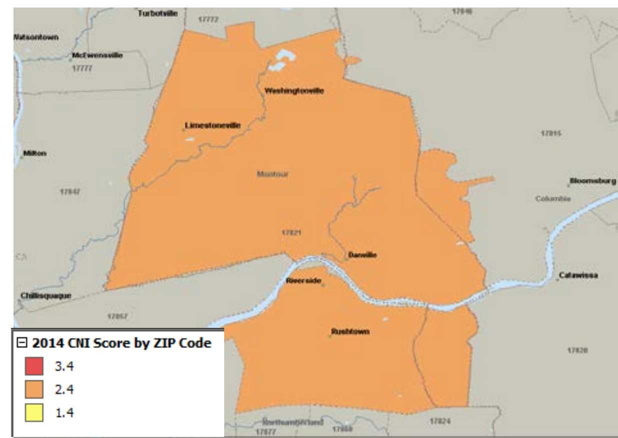
Overall, the Geisinger-Bloomsburg Hospital study area went from a CNI score of 2.7 in 2011 to a CNI score of 2.9 in 2014 (an increase of 0.2). This indicates a rise in the number of barriers to health care for the Geisinger-Bloomsburg Hospital study area population.

Table 6: CNI Score Trending (2011-2014) for the Geisinger-Bloomsburg Hospital Service Area by Zip Code

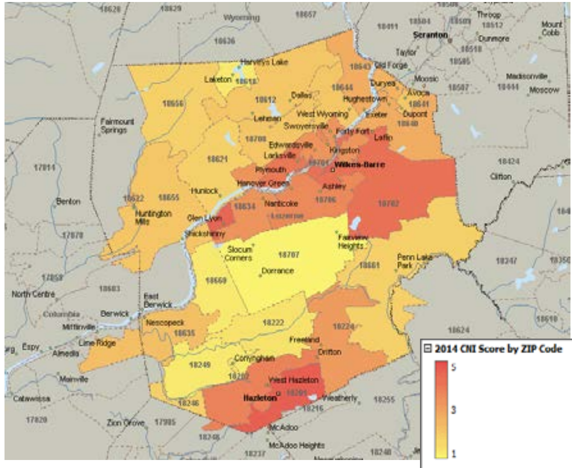
Zip	City	County	2011 CNI Score	2014 CNI Score	2011 – 2014 Change
17815	Bloomsburg	Columbia	2.8	3.4	+0.6
18603	Berwick	Columbia	3.2	3.2	0.0
17820	Catawissa	Columbia	2.2	2.8	+0.6
17846	Millville	Columbia	2.0	2.6	+0.6
17821	Danville	Montour	2.8	2.4	-0.4
18635	Nescopeck	Luzerne	2.4	2.4	0.0
17814	Benton	Columbia	2.2	2.0	-0.2
17859	Orangeville	Columbia	1.4	2.0	+0.6
Geisinger-Bloomsburg Hospital Community Study Area			**2.7**	**2.9**	**+0.2**



Columbia County shows five zip code areas with some of the greatest increases in barriers (+0.6 and +0.1) and only one zip code area with a decrease in barriers (Benton = -0.2). Scores remain average for the scale with the exception of Bloomsburg.



Montour County shows a decrease in already below average barriers (from 2.8 to 2.4).



Luzerne County Nescopeck remained consistent at a below average barrier CNI score (2.4). In fact, while Luzerne County shows several health concerns; the one zip code included in the hospital services area does not appear to include the vulnerable populations of Luzerne County (i.e., Residents with limited English speaking skills, low-income residents, etc.).

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-Bloomsburg Hospital service area level data is available).

- Luzerne County ranks the worst (unhealthiest) of the three counties in: Health Outcomes (57), Health Factors (58), Morbidity – Quality of Life (55), Health Behaviors (47), Social and Economic Factors (63), and Physical Environment (14).
- Luzerne County went from a ranking of 32 for Social and Economic Factors in 2011 to a ranking of 63 in 2014.
- Columbia County ranks poorly (unhealthiest) in Clinical Care (34). The county saw the greatest negative shift from 2011 to 2014 in terms of Mortality, dropping from a rank of 7 to 40.
- Montour County ranks the worst (unhealthiest) in Mortality – Length of Life (62). On the other hand, Montour County ranks very well (healthy) in Morbidity – Quality of Life (2) and Clinical Care (3). These rankings are likely attributed to the hospital presence in Montour County.
- Columbia County reported the highest uninsured rate across the Geisinger-Bloomsburg Hospital study area with a rate of 23%. This is an increase from 13% uninsured rate in 2011.
- Concurrently, Columbia County also reported the lowest PCP rate across the three counties.
- The sexually transmitted infection (chlamydia) rate for Columbia County rose to 282 per 100,000 population from a rate of 152 in 2011.
- Columbia and Luzerne counties report approximately a quarter of their populations smoke (23% and 25% respectively) and roughly a third of their populations are obese (33% and 30% respectively).
- Columbia County reports the highest rate of diabetic screening (83%) and Montour reports the lowest (75%).
- For Montour County, diabetic screening declined from 82% to 75%; concurrently the percentage of the Montour County population that is diabetic rose from 10% in 2011 to 12% in 2014.
- The violent crime rates across the three study area counties varies widely with Columbia County reporting the lowest rate (155 per 100,000 population), Luzerne reporting the

mid-rate (289) and Montour County reporting the highest violent crime rate at 346 per 100,000.

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-Bloomsburg Hospital market 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 were presented as a value per 1,000 population. The AHRQ has revised this and the current data are 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 Congestive Heart Failure and Uncontrolled Diabetes. Columbia and Luzerne Counties show poorer health outcomes when compared to the other county in the service area and the state rate across PQI measures.

Table 7: Prevention Quality Indicators – County-by-County Comparison to Pennsylvania

Prevention Quality Indicators (PQI)	Columbia County	Montour County	Luzerne County	PA
Diabetes Short-Term Complications (PQI1)	96.73	70.09	62.50	115.16
Perforated Appendix (PQI2)	266.67	400.00	548.57	343.91
Diabetes Long-Term Complications (PQI3)	89.69	95.57	111.32	119.79
Chronic Obstructive Pulmonary Disease or Adult Asthma(PQI5)	646.83	346.87	656.93	578.80
Hypertension (PQI7)	47.49	0.00	38.28	53.99
Congestive Heart Failure (PQI8)	457.26	484.23	440.59	418.29
Low Birth Weight (PQI9)	43.33	37.84	29.94	37.50
Dehydration (PQI10)	54.52	63.71	85.15	61.90
Bacterial Pneumonia (PQI11)	365.81	197.52	401.53	326.16
Urinary Tract Infection (PQI12)	204.01	172.03	219.52	197.51
Angina Without Procedure (PQI13)	22.86	12.74	9.37	11.80
Uncontrolled Diabetes (PQI14)	28.14	19.11	16.01	14.20
Asthma in Younger Adults (PQI15)	45.94	42.19	67.73	63.34
Lower Extremity Amputation Among Diabetics (PQI16)	35.17	44.60	25.78	26.40

- **Columbia County** shows the highest rate for Low Birth Weight (PQI9) in the study area 2nd highest across 14 counties). Columbia shows higher hospitalization rates for seven additional PQI measures when compared to the state:
  - ✓ Chronic Obstructive Pulmonary Disease or Adult Asthma(PQI5)
  - ✓ Congestive Heart Failure (PQI8)
  - ✓ Bacterial Pneumonia (PQI11)
  - ✓ Urinary Tract Infection (PQI12)

- ✓ Angina Without Procedure (PQI13)
- ✓ Uncontrolled Diabetes (PQI14)
- ✓ Lower Extremity Amputation Among Diabetics (PQI16)

- **Montour County** shows the highest rate in the hospital study area and a 14 county study area for Lower Extremity Amputation Among Diabetics (PQI16). Montour County also shows higher hospitalization rates than the state for six additional PQI measures:

  - ✓ Perforated Appendix (PQI2)
  - ✓ Congestive Heart Failure (PQI8)
  - ✓ Low Birth Weight (PQI9)
  - ✓ Dehydration (PQI10)
  - ✓ Angina Without Procedure (PQI13)
  - ✓ Uncontrolled Diabetes (PQI 14)

- **Luzerne County** Luzerne shows PQI rates higher than the state for eight measures, though Perforated Appendix (PQI2), Uncontrolled Diabetes (PQI14), and Asthma in Younger Adults (PQI15)* show higher hospitalization rates than the state and all other counties in the study area. The other areas that show higher rates than the state are:

  - ✓ Chronic Obstructive Pulmonary Disease or Adult Asthma(PQI5)
  - ✓ Congestive Heart Failure (PQI8)
  - ✓ Dehydration (PQI10)
  - ✓ Bacterial Pneumonia (PQI11)
  - ✓ Urinary Tract Infection (PQI12)

Table 8: Prevention Quality Indicators – Geisinger-Bloomsburg Hospital Service Area Compared to Pennsylvania with Trending

Prevention Quality Indicators (PQI)	2014 - Geisinger-Bloomsburg Hospital Study Area	PA	Difference	2011 PQI Geisinger-Bloomsburg Hospital	2014 PQI Geisinger-Bloomsburg Hospital	Difference
Diabetes Short-Term Complications (PQI1)	87.75	115.16	- 27.41	71.74	87.75	+ 16.01
Perforated Appendix (PQI2)	268.29	343.91	- 75.62	0.42	268.29	--
Diabetes Long-Term Complications (PQI3)	97.20	119.79	- 22.59	113.94	97.20	- 16.74
Chronic Obstructive Pulmonary	591.60	578.80	+ 12.80	434.64	591.60	--

Prevention Quality Indicators (PQI)	2014 - Geisinger-Bloomsburg Hospital Study Area	PA	Difference	2011 PQI Geisinger-Bloomsburg Hospital	2014 PQI Geisinger-Bloomsburg Hospital	Difference
Disease or Adult Asthma (PQI5)						
Hypertension (PQI7)	36.45	53.99	- 17.54	56.26	36.45	- 19.81
Congestive Heart Failure (PQI8)	465.76	418.29	+ 47.47	586.56	465.76	- 120.80
Low Birth Weight (PQI9)	43.93	37.50	+ 6.43	0.00	43.93	--
Dehydration (PQI10)	60.75	61.90	- 1.15	123.78	60.75	- 63.03
Bacterial Pneumonia (PQI11)	319.95	326.16	- 0.14	402.29	319.95	- 82.34
Urinary Tract Infection (PQI12)	191.70	197.51	- 5.81	203.96	191.70	- 12.26
Angina Without Procedure (PQI13)	20.25	11.80	+ 8.45	29.54	20.25	- 9.29
Uncontrolled Diabetes (PQI14)	25.65	14.20	+ 11.45	29.54	25.65	- 3.89
Asthma in Younger Adults (PQI15)	48.00	63.34	- 15.34	135.03	48.00	--
Lower Extremity Amputation Among Diabetics (PQI16)	39.15	26.40	+ 12.75	44.73	39.15	- 5.58

Source: Calculations by Tripp Umbach

- Geisinger-Bloomsburg Hospital has the highest number of preventable hospital admissions for the Chronic Obstructive Pulmonary Disease or Asthma in Older Adults (PQI5) subgroup.
- The largest difference between Geisinger-Bloomsburg Hospital and Pennsylvania is for PQI 2 Perforated Appendix in which PA shows a rate of preventable hospitalizations due to Perforated Appendices at 343.91 whereas Geisinger-Bloomsburg Hospital shows a rate of 268.29.

In 2014:

- The Geisinger-Bloomsburg Hospital study area has lower preventable hospital admission rates for 9 of the 14 PQI measures than the state of Pennsylvania.
  - ✓ Asthma in Younger Adults,
  - ✓ Diabetes Short-Term Complications,
  - ✓ Diabetes Long-Term Complications,
  - ✓ Hypertension,
  - ✓ Congestive Heart Failure,
  - ✓ Angina Without Procedure,
  - ✓ Dehydration,
  - ✓ Bacterial Pneumonia, and

- ✓ Urinary Tract Infection

Between 2011 and 2014:

- While there are a number of PQI higher than the state; Geisinger-Bloomsburg Hospital has improved in many PQI areas since the last assessment. Geisinger-Bloomsburg Hospital preventable admissions decreased in the following subgroups:
  - ✓ Diabetes Long-Term Complications,
  - ✓ Hypertension,
  - ✓ Congestive Heart Failure,
  - ✓ Dehydration,
  - ✓ Bacterial Pneumonia,
  - ✓ Urinary Tract Infection,
  - ✓ Angina without Procedure,
  - ✓ Uncontrolled Diabetes,
  - ✓ Asthma in Younger Adults, and
  - ✓ Lower Extremity Amputation Among Diabetes.

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 9: 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	Columbia County	Montour County	Luzerne County
2011 Primary care providers (per 100,000)	--	--	92.7	60.8	726.9	71.1
2011 Dentist rate (per 100,000)	--	--	59.1	44.5	82	57.1
2012 Acute Hospital Readmissions (%)*	--	18.6%	18.4%	18.3%	17.1%	18.5%
Births: women under 18 years (%)	--	2.3%	2.3%	2.4%	--	2.8%
Cancer Death Rate (per 100,000 pop.) *	160.6	169.3	178.3	177	149.1	177.2
Breast cancer deaths (per 100,000)*	20.6	21.7	23	20.1	--	20.2
Colorectal cancer deaths (per 100,000)*	14.5	15.3	16.4	12.4	--	19.1
Alzheimer's disease deaths (per 100,000) *	--	24.5	19.3	18.9	46.7	19.3
Chronic lower respiratory disease deaths (per 100,000)*	--	42.1	38.8	37	31.7	39
Coronary heart disease deaths (per 100,000) *	100.8	105.4	112.4	128.4	98.9	146.6
Diabetes deaths (per 100,000) *	--	21.2	21.1	15.6	--	31.5
Drug poisoning deaths (per 100,000) *	--	12.9	17.5	12.6	--	18
Fall deaths (per 100,000) *	--	8.1	8.6	7	--	4.7

CDC National Center for Health Statistics (2010-2012)**	HP 2020	U.S.	PA	Columbia County	Montour County	Luzerne County
Heart disease deaths (per 100,000) *	--	174.4	183.5	218.1	178.8	213
Influenza and pneumonia deaths (per 100,000) *	--	15.1	14.4	14.6	--	11.1
Injury deaths (per 100,000) *	53.3	58.1	63	62.8	40.5	65.1
Kidney diseases deaths (per 100,000) *	--	13.9	16.8	15.7	--	14.8
Lung, trachea, and bronchus cancer deaths (per 100,000) *	--	46.1	47.9	43.3	34.4	46.8
Motor vehicle traffic deaths (per 100,000) *	--	10.8	10.4	16.1	--	11.8
Septicemia deaths (per 100,000) *	--	10.5	13.3	16.4	--	12.7
Stroke deaths (per 100,000) *	33.8	38	38.8	36	30.9	33.9
Suicide deaths (per 100,000) *	10.2	12.3	12.5	16.2	--	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; Montour County consistently shows better health outcomes when compared to the other counties in the hospital service area; whereas, Columbia and Luzerne Counties consistently show the poorest health outcomes.

- ✓ All counties served by the hospital have fewer providers (Primary care and Dental) than is average for PA (Primary Care - 92.7 and Dental – 59.1 per 100,000 pop. respectively) with the exception of Montour County (726.9 per 100,000 pop.).
    - **Primary Care Providers** – Columbia County has the fewest primary care providers (60.8 per 100,000 pop) and Luzerne County follows with 71.1. Montour County is very small with a major medical center (Geisinger Medical Center) which drives their provider rates.
    - **Dental Providers** – Columbia County has the fewest dental providers with 44.5 per 100,000 pop. and Luzerne County has rates similar to the state (57.1 per 100,000 pop.); while Montour County shows a rater higher than the state (82 per 100,000 pop.).
- ✓ The counties in the service area show a percentage of **acute hospital readmissions** (Inpatient readmissions within 30 days of an acute hospital stay) that 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 similar to the state and national average (2.3% each) for each county.

- 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; Columbia and Luzerne Counties show similar death rates to the state which is higher than Montour (where data is available).

- Columbia and Luzerne Counties show fewer **deaths related to Alzheimer's disease** than Montour County and the national rate (18.9, 19.3 and 46.7 per 100,000 pop.), which is higher than the state (19.3 per 100,000 pop.) and national rate (24.5 per 100,000 pop.).

- All counties in the service area show below average or fewer **deaths due to chronic lower respiratory disease** than the state and nation (38.8 and 42.1 per 100,000 pop. respectively), with Luzerne County showing the highest rate in the service area (39 per 100,000 pop.).

- Columbia and Luzerne Counties show the highest **deaths due to coronary heart disease** (128.4 and 146.6 per 100,000 pop. respectively) than Montour County (98.9 per 100,000 pop.), the state, and the nation (112.4 and 105.4 per 100,000 pop. respectively), or the nation. The Healthy People 2020 goal is set at 100.8 per 100,000 pop.

- Luzerne County shows higher **deaths due to diabetes** (31.5 per 100,000 pop) than the state (21.1 per 100,000 pop.), the nation (21.2 per 100,000 pop.), or Columbia County (15.6 per 100,000 pop.).

- Columbia and Luzerne Counties have significantly higher **deaths due to heart disease** than (218.1 and 213 per 100,000 pop. respectively), the state (183.5 per 100,000 pop.) or nation (174.4 per 100,000 pop.).

- **Injury death rates** are similar for Columbia and Luzerne counties (62.8 and 65.1 per 100,000 pop. respectively); whereas Montour County is much lower (40.5 per 100,000 pop) than the state and the national rates (63 and 58.1 per 100,000 pop respectively)in the service area as state and national rates (63 and 58.1 per 100,000 pop. respectively) except Union County, which is much lower (33.6 per 100,000 pop.). The Healthy People 2020 goal is set at 53.3 per 100,000 pop.

- All counties with data reported (i.e., Columbia and Luzerne Counties) show higher **deaths due to motor vehicle traffic** (16.1 and 11.8 per 100,000 pop. respectively) than state and national rates (10.4 and 10.8 per 100,000 pop. respectively).

- Columbia County shows higher **deaths due to septicemia** (16.4 per 100,000 pop.) than the state and national rates (13.3 and 10.5 per 100,000 pop. respectively).

- All counties with data reported (i.e., Columbia and Luzerne Counties) show higher **deaths due to suicide** (16.2 and 16.1 per 100,000 pop) than state and national rates (12.5 and 12.3 per 100,000 pop. respectively). Healthy People 2020 goal is set at 10.2 per 100,000 pop.

Key Stakeholder Interviews

Tripp Umbach conducted interviews with community leaders in the Geisinger-Bloomsburg 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 12 stakeholders of the Geisinger-Bloomsburg Hospital service area as identified by an advisory committee of Geisinger-Bloomsburg Hospital. Geisinger-Bloomsburg Hospital is a 72-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-Bloomsburg Hospital advisory committee. The purpose of these interviews was for stakeholders to identify health issues and concerns affecting residents in the Geisinger-Bloomsburg Hospital service area, as well as ways to address those concerns.

There was a diverse representation of community-based organizations and agencies among the 12 stakeholders interviewed. Those organizations represented included:

- Agape
- Bloomsburg Area School District
- Bloomsburg University
- Caring Communities for Aids
- Columbia County
- Columbia County Volunteers in Medicine
- Columbia Montour Agency on Aging
- Columbia Montour Chamber of Commerce
- Columbia Montour Family Health
- Central Susquehanna Community Foundation
- Department of Health
- Northern Columbia Community & Cultural Center
- Tapestry of Health
- Women's Center

STAKEHOLDER RECOMMENDATIONS:

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

- Stakeholders felt that access to primary, preventive medical care, dental care, and behavioral health care could be increased by developing satellite sites in multiple communities with one hub provider. Stakeholders also suggested that providers collaborate effectively.

- While stakeholders felt that residents need to be accountable for their own lifestyle choices, they also indicated that residents could be healthier if there were incentives offered as a component of health insurance coverage that encouraged prevention and wellness.

- Increase *r*esident awareness of available services by providing a central location for information related to community services.

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.

1. Care coordination – Stakeholders explained that it is difficult to secure behavioral health and substance abuse services due to a lack of confidence in behavioral health services being provided in the community, the changing landscape of providers, and location of services. Additionally, residents with behavioral health diagnoses are often criminalized and sent to inpatient treatment and/or the penal system. When residents are released from incarceration or inpatient treatment, there may be no real resources and/or a lack of follow-up, which recycles residents with behavioral health issues through one system or the other.

2. Shortage of behavioral health services – Stakeholders recognized that while there are behavioral health services; there is a shortage of services in relationship to the demand for adults and children alike. The wait times for behavioral health services (psychiatry, therapy, and support services) are reported to be as long as three months in Columbia County, which can cause residents to lose motivation to seek treatment.
3. 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 a fear of stigmatization, inability to afford treatment options, transportation issues, and/or limited follow through with treatment recommendations.
4. Substance abuse – Stakeholders overwhelmingly 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 generational influence as well as a higher prevalence among lower-income families. Stakeholders felt that the prevalence of substance abuse among residents (including youth) has increased due to drugs being readily accessible with trafficking on the major highways that connect New York with other major metropolitan areas. The most common drugs appear to be Methamphetamine, heroin, marijuana, and prescription narcotics. Meth labs are being identified in the areas, which cause residents to be at risk of being exposed to an explosion. Substance abuse often increases the consumption of health care resources due to poor health outcomes. Additionally, there is a neonatal cost of substance abuse, meaning babies born exposed to addictive substances often require specialized pediatric care.

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

- The increased consumption of resources related to the criminalization of behavioral health and the increased consumption of health care resources.
- Poorer health outcomes related to behavioral health and substance abuse.

AVAILABILITY OF HEALTH SERVICES:

Two-thirds of stakeholders (8) 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.

1. 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 physicians serving low-income populations is compounded by the difficulty in recruiting new physicians to the poorest and most rural areas in Columbia County.
2. Acceptance of insurances - Stakeholders noted that insurance issues have been persistent prior to and throughout the implementation of ACA. There are limited health providers offering care (i.e., dental, routine/preventive 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. Additionally, stakeholders felt that there is confusion among

providers and residents related to the services that are covered by the various types of health insurance options available as a result of the implementation of ACA. However, the removal of exclusions related to pre-existing conditions have given better access to health insurance to residents that can afford the coverage options.

3. Funding – Stakeholders identified a lack of funding and funding cuts as impacting the services available for preventive health services, HIV/AIDS outreach, public education, substance abuse and behavioral health services.
4. Location of providers - Stakeholders noted that there are pockets of poverty in Columbia County where access to primary care physicians taking new patients that are covered by the type of insurances carried by traditionally low-income populations is low. Stakeholders also noted that the issues with transportation in the area further magnify the impact of the location of the provider (i.e., the distance between providers) on the availability of health services has on the health outcomes of the most rural populations served by Geisinger Bloomsburg Hospital due to the distances between providers, which tend to be situated in areas with denser populations.
5. Urgent Care Clinics - 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.

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

- Limited appointment availability related to the number of physicians that are able to see patients and the need to triage patients in scheduling procedures, which causes patient 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.).

LIFESTYLES OF RESIDENTS:

Over one-half 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.

1. Generational/cultural influence - Stakeholders discussed the role that familial influence plays in nutritional preferences, substance abuse, and smoking more than any other health issues. 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. Stakeholders indicated that substance abuse is more prevalent in lower-income families. Also, children often adopt the dietary preferences of their youth. Finally, the propensity of residents to seek health services is often based in cultural values and beliefs.
2. Diet - Stakeholders discussed the limited access that some residents have to healthy nutrition. Specifically, lower-income residents may not be able to afford healthier options. This is often

the case for several reasons. Foods that are more processed are often cheaper than produce and meats, etc. Also, foods that are more processed tend to be more filling than those that are not because they are higher in carbohydrates. And finally, foods that are more processed tend to have a longer shelf-life than less processed, fresher foods. Unfortunately, foods that are more processed with higher sugars and carbohydrates are also unhealthy to consume in large quantities and can lead to chronic illnesses and obesity.

3. Smoking - Stakeholders identified smoking as a prevalent health issue due to a high volume of residents that still smoke in the area. Stakeholders noted an apparent environmental contribution to smoking rates related 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.
4. 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. Nearly 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. Additionally, there are times that residents choose not to follow-up or follow through with medical recommendations which can lead to poorer health outcomes.

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

- It can be difficult to improve population health indicators due to the lifestyles and personal preferences/choices of residents.

Delayed/Resistance Seeking Needed Health Services:

One-third of the stakeholders interviewed articulated that residents were resistant to 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:

1. Cost of care – Uninsured and under-insured residents may resist seeking health services due to the cost of uninsured care, unaffordable copays, and/or high deductibles. While more often than not the population impacted by this issue is a lower-income population; behavioral health services are not covered by many insurances, leaving middle-class families to delay seeking behavioral health services. Additionally, stakeholders felt that there is confusion among residents related to the health insurance options resulting from the implementation of ACA.
2. Stigma – Stakeholders articulated a resistance to seek health services (i.e., behavioral health and HIV/AIDS) due to the stigma associated with a diagnosis and treatment. In many of the small towns served by the hospital, the providers for behavioral health and HIV/AIDS services are located in standalone buildings, and residents can be identified as having one of these diagnoses if they are entering or exiting these locations. Additionally, parents resist taking their children for mental health evaluations and treatment due to a fear of stigma.

3. Awareness –Stakeholders discussed the awareness of residents related to the existence and necessity of health services including routine, preventive, and behavioral health care. The constantly changing provider landscape makes it difficult for residents to know what services are available in their community. Residents also are not always aware of the eligibility requirements for programs in their communities. Additionally, residents may not understand their health status enough to know from what services they could benefit.
4. Transportation – Over one-half of the stakeholders interviewed said that transportation and the location of health services impacts the access that residents have to health services including behavioral health treatment, follow-up, and specialty medical appointments.

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

- Late detection/diagnosis of illness and disease, which often leads to poorer health outcomes due to a reduction in treatment options and success rates.
- Lack of consistency and continuity of care due to limited follow-up, particularly when follow-up is for care coordination purposes with the primary physician.
- 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 (e.g., cancer treatments multiple times a week in a location more than 45 minutes away).

Common Health Issues:

1. Oral Hygiene – 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. Stakeholders also noted a connection between substance abuse and poor dental health. Additionally, stakeholders discussed the role that poor dental health can play in the ability of residents to secure employment.
2. Obesity – more than one-half of the stakeholders discussed the prevalence and cause of obesity among residents served by Geisinger Bloomsburg Hospital. Stakeholders identified that there are several factors that perpetuate obesity in their communities. Namely: diet, exercise, access to resources, and education. Stakeholders discuss the low activity levels among residents in the services 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 families and culture can play in establishing both healthy and unhealthy dietary habits. Stakeholders discussed the prevalence of childhood obesity as well, citing the absence of physical education and the teaching of parents as the primary factors in childhood obesity.
3. Diabetes – More than one-half of stakeholders discussed diabetes. Discussion often included reference to obesity as well. Stakeholders identified weight as an underlying cause of the incidents of diabetes that are the result of a genetic predisposition.

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.

1. Infrastructure/rural area – three-quarters of stakeholders discussed the role that infrastructure (i.e., transportation, economy, and housing) and the rural nature of the service area has in limiting the access that residents have to health services and perpetuating poor health outcomes. More specifically, the lack of affordable public transportation, concentration of low-income employment opportunities, and limited white collar employment opportunities, circumstances in which accessing routine health services that are coordinated and preventive in nature are not among the priorities of residents. Often the priorities of residents are focused on survival and basic necessities. The lack of transportation on the ability of residents to secure health services (medical, dental, and behavioral), employment and healthy nutrition. Stakeholders discussed the challenges of unemployment and rising cost of insurance for local employers leading many employed residents to be uninsured or underinsured 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.
2. Poverty - Nearly one-half of the stakeholders interviewed discussed the impact of poverty on the health of residents. Specifically, stakeholders focused on the impact of stress, limited access to healthy nutrition, and limited access to health services (i.e., medical, dental, and behavioral). Stakeholders articulated the relationship between poverty and behavioral health due to a heightened level of stress and trauma that is often part of the experience of 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 CHNA oversight committee to assure 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 with behavioral health needs and residents that are uninsured.

A total of 267 surveys were collected in the Geisinger-Bloomsburg Hospital service area which provides a +/-5.87 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., Central Susquehanna Opportunities, CMSU, Nurse Family Partnership, Montour county Head Start, Columbia-Sullivan Head Start, Agape, Northern Columbia Community & Cultural Center, the Dental Health Clinic, and the United Way of Wyoming Valley) 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 where they were collected. 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 Columbia, Montour, and Luzerne Counties reported their race as White (90.7% 83.1%, 78.8% respectively), the next largest racial group was Black and African American.
- The household income level with the most responses was less than $29,999 a year for all counties represented.

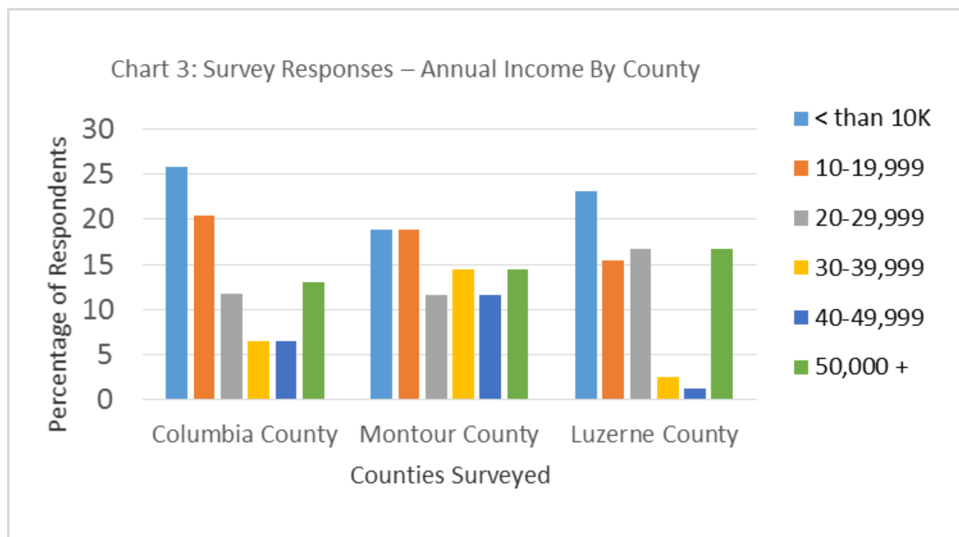


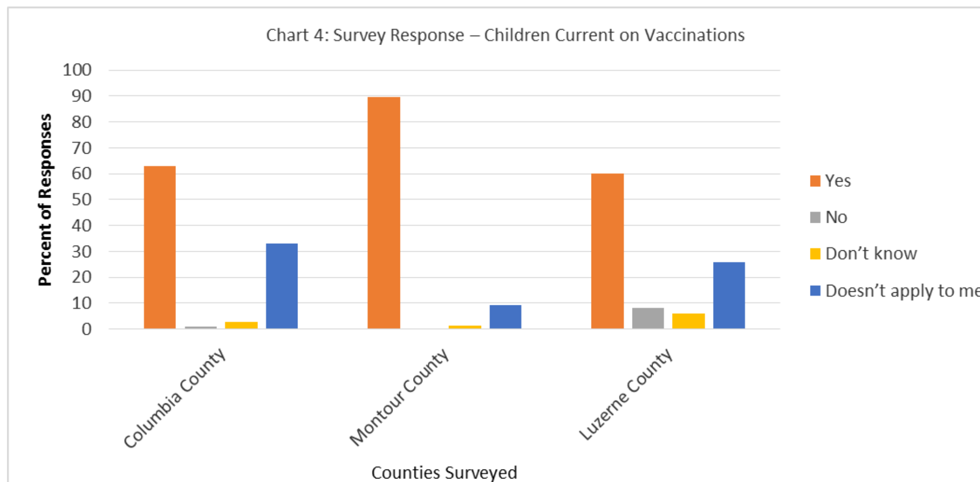
Table 10: Survey Responses – Self-Reported Age of Respondent by County

Age	Columbia County	Montour County	Luzerne County
18-25	26.2%	16%	7.6%
26-35	29%	58.7%	12%
36-45	13.1%	13.3%	16.3%
46-55	12.1%	6.7%	20.7%
56-65	12.1%	2.7%	20.7%
66-75	5.6%	1.3%	6.5%
76-85	1.9%	1.3%	9.8%
86+	26.2%	16%	6.5%

Healthcare:

- The most popular place for residents to seek care is a doctor's office (79.4%, 60.8%, an 70.1% respectively), with the free or reduced cost clinics being popular in Luzerne County (24.1%%) and hospital clinics in Montour (25.7%).

- The most common form of health insurance carried by respondents was Medicare in Luzerne County (30%); Medicaid in Columbia County (37.4%); and Private in Montour (32.5%).
- The most common reason why individuals indicated that they do not have health insurance is because they can't afford it in all counties (69.2%, 62.5%, and 44% respectively) with ineligibility being the second most common reason in Luzerne County (24%).
- Most respondents had been examined by a physician within the last 12 months at least once. However, at least 1 in 10 respondents in Columbia (11.2%), and Montour (20.5%) Counties 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". However; 30.4% of Luzerne County respondents indicated that their health was "fair" or "poor".
- Adult respondents indicated related children were up-to-date on vaccinations, with an average of 87.4% of respondents across all counties surveyed indicating children were either current on vaccinations OR the question did not apply.



- Many respondents indicated that their primary form of transportation is some method other than their own car (32.4%, 13.7%, and 37.2%respectively).

Table 11: Survey Responses Related to HIV/AIDS Testing

Ever Been Tested for HIV	Columbia County	Montour County	Luzerne County	PA	U.S.
Yes	42.5%	43.8%	32.2%	32.2%	35.2%
No	57.5%	56.2%	67.8%	67.8%	64.8%

- Columbia, Montour, and Luzerne County respondents report screening rates (42.5%, 43.8%, and 32.2%) similar to state and national norms.

Health Services:

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

Test Received	Columbia County	Montour County	Luzerne County
Blood test	54.6%	47.4%	73.1%
Check up	58.3%	52.6%	62.4%
Flu shot	46.3%	34.6%	57%
Cholesterol test	25%	21.8%	53.8%
Urinalysis	25.9%	20.5%	36.6%

- Respondents in Luzerne County appear to report receiving more testing than respondents from the other counties.
- More often in all counties, more respondents indicated they get information about services in their community by word of mouth and newspaper Most respondents did not prefer to receive health services in a language other than English in Columbia and Montour Counties. Though in Luzerne County 12.1% of respondents reported a preference for receiving health services in another language other than English.
- 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".
- 1 in 10 respondents in Columbia (12.1%) and Luzerne Counties (10.2%) indicated that they needed and could not secure counseling services in the past year
- 1 in 10 respondents in Montour County (10.2%) indicated that they needed and could not secure services for a physical health condition (i.e., injury or illness) in the last year.
- 1 in 10 respondents in Montour County (11.2%) indicated that they needed and could not secure services for a mental health condition (i.e., depression, bipolar, etc.) in the past year.
- More than 1 in 4 respondents in every county indicated that they needed and could not secure dental care in the last year in Columbia (26.4%), Montour (25%) Counties, with the exception of Luzerne County (15.6%). Additionally, more than 1 in 10 respondents from Columbia (10.6%) and Montour (14.1%) Counties indicated that dental services are not available to them.
- 1 in 10 females in Luzerne County (13.4%) indicated they needed and could not secure women's health services during the past year.

- More than 1 in 10 respondents in Montour County (12.7%) indicated that vision services are not available to them.

Common Health Issues:

Table 13: Survey Responses – Health Issues Respondents Reported Ever Diagnosed with

Ever Diagnosed with	Columbia County	Montour County	Luzerne County	PA*	U.S.*
Depression	50%	43.40%	26.9%	18.3%	18.7%
Needing Mental Health Treatment	43.80%	31.20%	21.7%	--	--
Diabetes	13.20%	12%	19.4%	10.1%	9.7%
Heart Problem	13.20%	6%	23.7%	--	--
Cancer – Types: breast, prostate and skin	8.60%	3.90%	9.7%	--	--

** Source: CDC*

- Respondents in Columbia, Montour, and Luzerne Counties report poorer health outcomes related to depression and diabetes than is average for the state or the nation.
- Depression and the need for mental health treatment are the greatest rates of respondent reported diagnoses when compared to every other area (i.e., diabetes, heart problems, and cancer). Every 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 lowest rate of respondent reported diagnosis in Luzerne County (26.9%) and the highest in Columbia County (50%). Columbia County respondents reported higher rates of depression and need for mental health treatment than any other county surveyed.
- Respondents in every county 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). Montour shows the lowest percentage of respondents reporting they were ever told by a healthcare professional that they had diabetes (12%) and Luzerne County respondents reported the most (19.4%).

Table 14: Survey Responses – Top Health Concerns Reported

Health Concern	Columbia County	Montour County	Luzerne County
Cancer	26.3%	34.3%	55.7%
Drug and Alcohol use	59.6%	47.1%	54.5%
Diabetes	26.3%	35.7%	44.3%
Mental Health	42.4%	31.4%	29.50%

Health Concern	Columbia County	Montour County	Luzerne County
Obesity	37.4%	37.1%	35.20%
Heart Disease	16.20%	20.00%	36.4%
High Blood Pressure	21.20%	18.60%	37.5%

- ✓ When asked to identify five of the top health concerns in their communities; there was a great deal of agreement across 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 15: Survey Responses – Average Weight and Body Mass Index of Survey Respondents

Weight & BMI	Columbia County	Montour County	Luzerne County	Avg. Female (5'4")*	Avg. Male (5'9")*
Weight	177.33 lbs.	186.71 lbs.	174.89 lbs.	108-144 lbs.	121-163 lbs.
BMI**	29.17	30.17	28.36	26.5	26.6

** Source: CDC*

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

- ✓ A resounding majority of individuals report having good access to fresh fruits and vegetables in Columbia County, Montour County, and Luzerne County (93.5%, 98.7%, and 96.7% respectively).
- ✓ Slightly fewer residents report eating fresh fruits and vegetables, but it is still a majority; this is consistent across the counties.
- ✓ Columbia and Montour County respondents reported higher rates of smoking than those reported for the state and nation.

Table 16: Survey Responses – Smoking Rates Reported by Respondents

Smoking	Columbia County	Montour County	Luzerne County	PA*	U.S.*
Everyday	20%	25.3%	16.3%	15.7%	13.4%
Some days	9.5%	5.3%	4.3%	5.3%	5.4%
Not at all	67.6%	68%	78.3%	--	--

- ✓ Columbia and Montour County respondents reported higher rates of smoking everyday (20% and 25.3% respectively) than those reported for the state and nation (15.7% and 13.4% respectively).

Table 17: Survey Responses – Physical Activity Rates Reported by Survey Respondents

Physical Activities	Columbia County	Montour County	Luzerne County	PA*	U.S.*
Yes	69.2%	54.5%	55.4%	73.7%	74.7%
No	30.8%	45.5%	44.6%	26.3%	25.3%

- ✓ Respondents in Montour and Luzerne Counties report lower rates of physical activity (54.5% and 55.4% respectively) than those reported for the state and nation (73.7% and 74.7% respectively).

Conclusions and Recommended Next Steps

The community needs identified through the Geisinger-Bloomsburg 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 the 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-Bloomsburg 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.

There is a wealth of medical resources in the region with multiple clinics that serve under/uninsured residents. However, Columbia county is the most underserved county in the hospital service area. While Luzerne County is an underserved county; the zip code included in the hospital service area is not a particularly underserved population. That having been said, residents of the Geisinger-Bloomsburg 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 Columbia County and address the multiple barriers to healthcare. Additionally the lifestyles of residents in Montour County will be important to consider. It will be necessary to review evidence based practices prior to planning to address the needs identified in this assessment due to the complex interaction of the underlying factors at work driving each 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-Bloomsburg 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 available 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

GEISINGER-BLOOMSBURG HOSPITAL
February 26, 2015

Community:
Geisinger-Bloomsburg Hospital service area

INTRODUCTION:

Tripp Umbach solicited feedback related to the community health needs assessment (CHNA) and action plan completed on behalf of Geisinger-Bloomsburg Hospital. Geisinger-Bloomsburg Hospital is a 72-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 Geisinger-Bloomsburg Hospital.

This report represents a section of the overall community health needs assessment completed for Geisinger-Bloomsburg Hospital.

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 Geisinger-Bloomsburg 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-Bloomsburg 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 commenters reviewed "included input from community members or organizations" seventy-five percent of commenters replied that it did. Twenty-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; it was noted that hospice and homecare populations were not addressed at length. Geisinger-Bloomsburg Hospital's 2013 CHNA included input from 22 stakeholders (one of which over sees hospice services), three focus groups with resident populations, as well as input from more than 60 community leaders during a regional community

health needs identification forum. The assessment was collaborative in nature and included more than 31 organizations and agencies from the hospital service area.

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”; eighty-six percent of commenters did not indicate that there were any needs not represented in the most recent CHNA. Fourteen percent of comments indicated there was a need that was not presented, which was related to the availability of emergency medical transportation. The needs Identified in the 2013 CHNA were related to:

- Improving access to affordable healthcare related to:
    - Shrinking number of healthcare providers (Physicians, pediatricians and mental health providers)
    - Under/unemployment leading to under/uninsured
    - High cost of health insurance
    - Gap between eligibility for state-funded health insurance
    - Limited acceptance of state-funded health insurance
    - Lack of transportation and rural nature of the region requiring residents to travel a great distance for healthcare.
- Improving healthy behaviors related to:
    - Limited access to healthy options (grocery store, clean environment to exercise in, etc.)
    - Limited awareness/health education regarding healthy choices (i.e., smoking cessation, healthy cooking, etc.)
    - Poor lifestyle choices (smoking, substance abuse, etc.),
    - Limited motivation and/or incentives for the practice of healthy behavior.
- Transportation, specifically to health service providers:
    - Impact on access to health care (i.e., lower attendance for scheduled appointments, and the ability to get to and from clinics for uninsured)

All commenters indicated that the Action Plan that resulted from the CHNA was directly related to the needs identified. While one comment indicated that the Action Plans that resulted from the CHNA were not directly related to the needs identified because transportation issues were not directly addressed.

There was no other additional feedback or comments provided by the public related to Geisinger-Bloomsburg Hospital’s CHNA and/or Action Plan.

APPENDIX B

GEISINGER-BLOOMSBURG HOSPITAL

February 2, 2015

GEISINGER BLOOMSBURG HOSPITAL (GBH)

COMMUNITY HEALTH NEEDS ASSESSMENT SECONDARY DATA PROFILE

February 2015

- 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 GBH includes Columbia, Luzerne, and Montour counties. The GBH service area includes eight populated zip code areas (excluding zip codes for P.O. Boxes and offices). The majority of the zip code areas for the GBH service area are within Columbia County; with only one zip code area in Luzerne County and one zip code area in Montour County.

Zip	County	City
17814	COLUMBIA, PA	BENTON
17815	COLUMBIA, PA	BLOOMSBURG
17820	COLUMBIA, PA	CATAWISSA
17846	COLUMBIA, PA	MILLVILLE
17859	COLUMBIA, PA	ORANGEVILLE
18603	COLUMBIA, PA	BERWICK
18635	LUZERNE, PA	NESCOPECK
17821	MONTOUR, PA	DANVILLE

Key Points – Community Needs for GBH

- **The GBH study area shows a decline in population over the next five years at a rate of -0.3%.** This trend differs from that of Pennsylvania as a whole, which is anticipated to have an increase in population at a rate of +0.8%.

- **The GBH service 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 five years.

- **The average annual household income in the GBH study area is $60,495.**
  - All of the average household income levels, with the exception of Montour County, for the study area fall below the averages for Pennsylvania and for the United States.

- **The GBH study area shows 11.6% of the population have not received a high school diploma.** The state rate (11.5%) is slightly lower than the rate for the GBH service area while the U.S. rate is higher (14.2%).

- **Approximately 42.9% of the GBH study area has received some type of college education or a college degree.**

Key Points – Community Needs for GBH

- **To determine the severity of barriers to health care access in a given community, the Community Health Needs Index (CNI) gathers data about the community's socio-economy (i.e. % of the population that is elderly and living in poverty; % uninsured, % 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 Community Health Needs Index was applied to the GBH study area with the following results:**
  - The highest CNI score for GBH service area is Bloomsburg (17815) with a score of 3.4. 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:**
  - Bloomsburg (17815) has the highest rental (38.6%), uninsured (7.4%), and minority (9.8%) rates for the GBH service area.
  - Berwick (18603) has the highest uninsured rate (12.0%), individuals with limited English proficiency (1.1%), no high school diploma (20%), and both families with married parents or single parents with children living in poverty (14% and 83% respectively).
  - Millville has the highest rate of elderly living in poverty (16%).

- **The weighted average CNI score for the entire GBH study area is 2.9.**
  - A CNI score of 2.9 is below the average for the scale (3.0). The GBH service has 2 zip code areas above the median and 6 below the median. GBH study area contains more zip code areas with CNI scores below the median, indicating fewer..

- **The GBH study area rose from a CNI score of 2.7 in 2011 to a 2014 CNI score of 2.9 (an increase of 0.2) – indicating a rise in the number of health barriers.**

Key Points – Community Needs for GBH

- **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.**
  - Montour County ranks the worst of the three counties in the GBH study area for Morbidity with a rank of 62 out of 67. This is a large shift from 2011 (7 out of 67), but can probably be attributed to the hospital presence.
  - At the same time, Montour County ranks the best in Morbidity – Quality of Life (2) and Clinical Care (3). This can also probably be attributed to the hospital presence.
  - Columbia County has the highest uninsured rate at 23%. This is a 10% increase from the county's 2011 uninsured rate (13%).
  - The County Health Rankings show that Luzerne County has poor a ranking for social and economic factors with a ranking of 63 out of 67. This is a significant shift in ranking as Luzerne ranked 32 for social and economic factors in 2011.
  - **<u>In 2014</u>:**
    - Columbia and Luzerne counties report approximately a quarter of their population smoke (23% and 25% respectively) and roughly a third of their populations are obese (33% and 30% respectively).
    - The violent crime rates across the three study area counties varies widely with Columbia County reporting the lowest rate (155 per 100,000 population), Luzerne reporting the mid-rate (289) and Montour County reporting the highest violent crime rate at 346 per 100,000.

Key Points – Community Needs for GBH

- **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.**
  - GBH has the highest number of preventable hospital admissions for the Chronic Obstructive Pulmonary Disease or Asthma in Older Adults (PQI5) subgroup.
  - The largest difference between GBH and Pennsylvania is for PQI 2 Perforated Appendix in which PA shows a rate of preventable hospitalizations due to Perforated Appendices at 343.91 whereas GBH shows a rate of 268.29.

In 2014:

- The GBH study area has lower preventable hospital admission rates for 8 of the 14 PQI measures than the state of Pennsylvania.
  - Asthma in Younger Adults, Diabetes Short-Term Complications, Diabetes Long-Term Complications, Hypertension, Congestive Heart Failure, Angina Without Procedure, Dehydration, Bacterial Pneumonia, Urinary Tract Infection

Between 2011 and 2014:

- GBH preventable admissions decreased in the following subgroups:
  - Diabetes Long-Term Complications, Hypertension, Congestive Heart Failure, Dehydration, Bacterial Pneumonia, Urinary Tract Infection, Angina without Procedure, Uncontrolled Diabetes, Asthma in Younger Adults, and Lower Extremity Amputation Among Diabetes.

Community Demographic Profile

- **The GBH study area shows a decline in population over the next five years at a rate of -0.3%.** This rate differs from the state, which has an increase in population of +0.8% over the next 5 years.
- **The GBH study area shows higher percentages of women as opposed to men;** this is consistent with state data.
- **The GBH 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 five years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.
- **The GBH study area has an average annual household income of $60,495.** The highest average income is found in Montour County ($76,542) and the lowest is found in Columbia County ($56,202).
- **11.6% of the population in the GBH study area have not received a high school diploma.** Columbia County shows even more (12.2%). These rates are higher than the state (11.5%), but lower than the U.S. (14.2%).
- **As compared with Pennsylvania and the United States,** the GBH study area has very little diversity. Only 7.2% of the population in the GBH study area identify as a race/ethnicity other than White, Non-Hispanic whereas 21.9% in PA and 37.9% in the U.S. identify as a race other than White, Non-Hispanic.
- Luzerne County shows the most diversity with 14.3% of the population as a race/ethnicity other than White, Non-Hispanic.

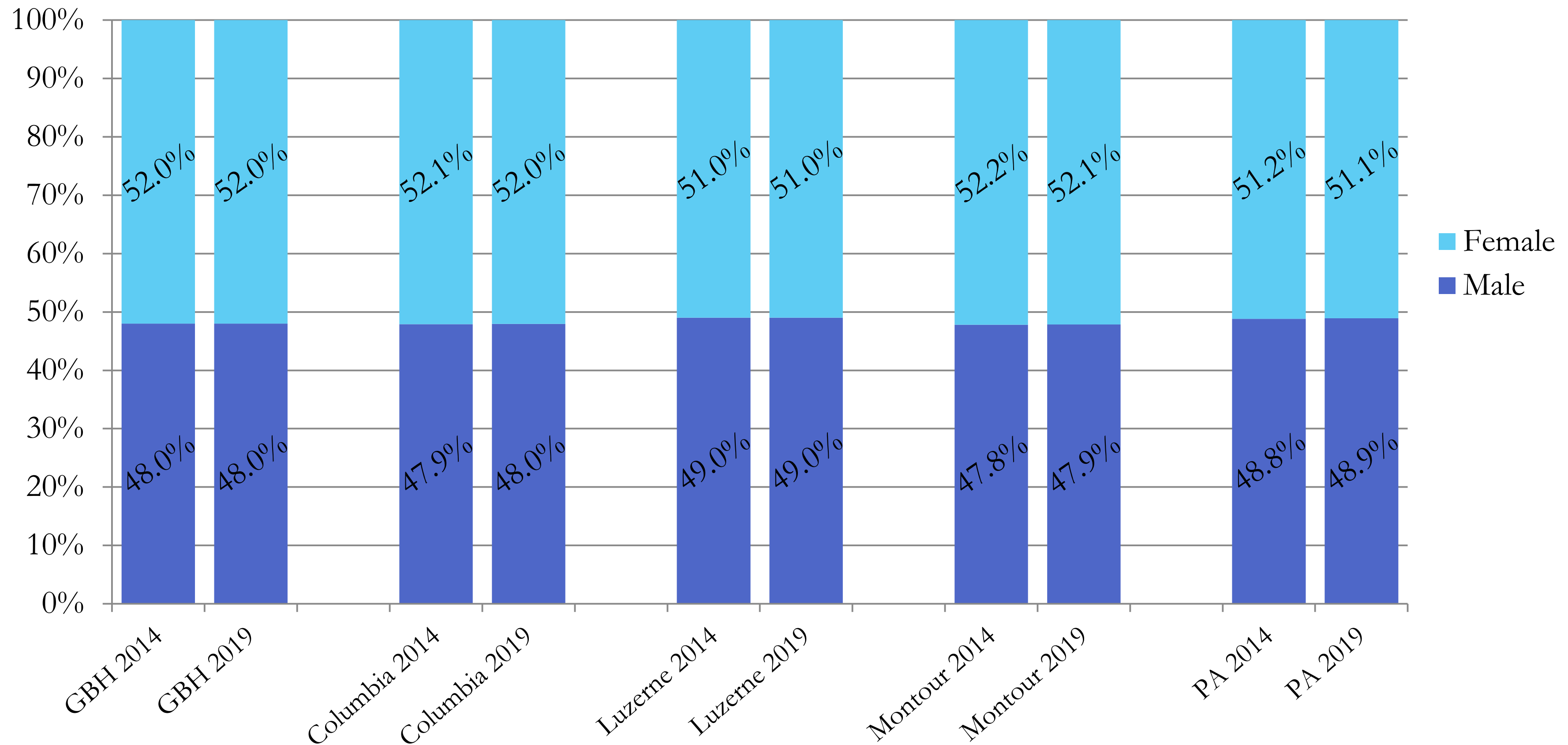
Population Trends

	GBH Study Area	Columbia County	Luzerne County	Montour County	PA
2014 Total Population	91,061	69,451	318,291	19,669	12,791,290
2019 Projected Population	90,823	69,112	318,741	19,780	12,899,019
# Change	-238	-339	+450	+111	+107,729
% Change	-0.3%	-0.5%	+0.1%	+0.6%	+0.8%

- The GBH study area shows a decline in population over the next five years at a rate of -0.3%.
- Columbia County is the only county in the GBH study area with a projected decline in population of 339 individuals.
- The trends seen for the GBH study area and Columbia county differs from that of Pennsylvania as a whole. Pennsylvania is projected to see a +0.8% rise in population between 2014 and 2019. Therefore, people are coming into Pennsylvania but not the GBH study area.

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

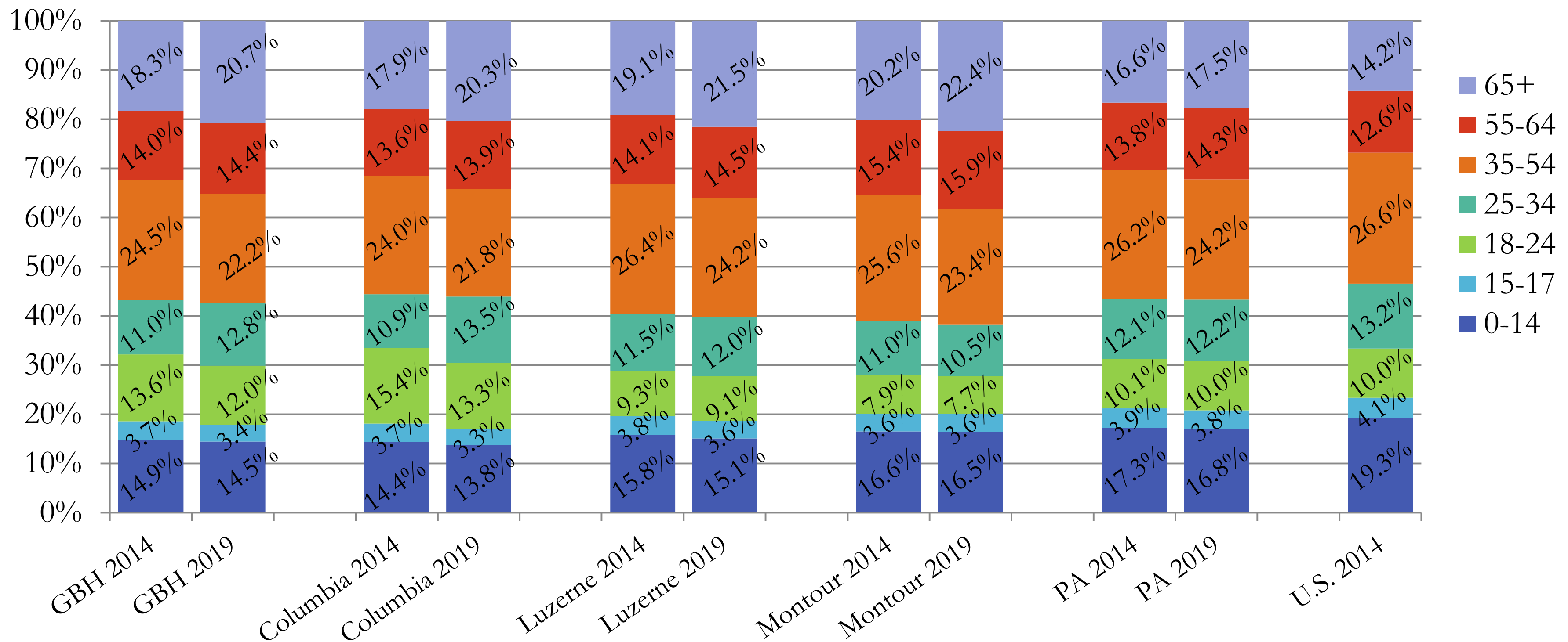
Gender



- The GBH study area, as well as all of the counties in its service area, show higher rates of females as compared to males in their populations.

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

Age

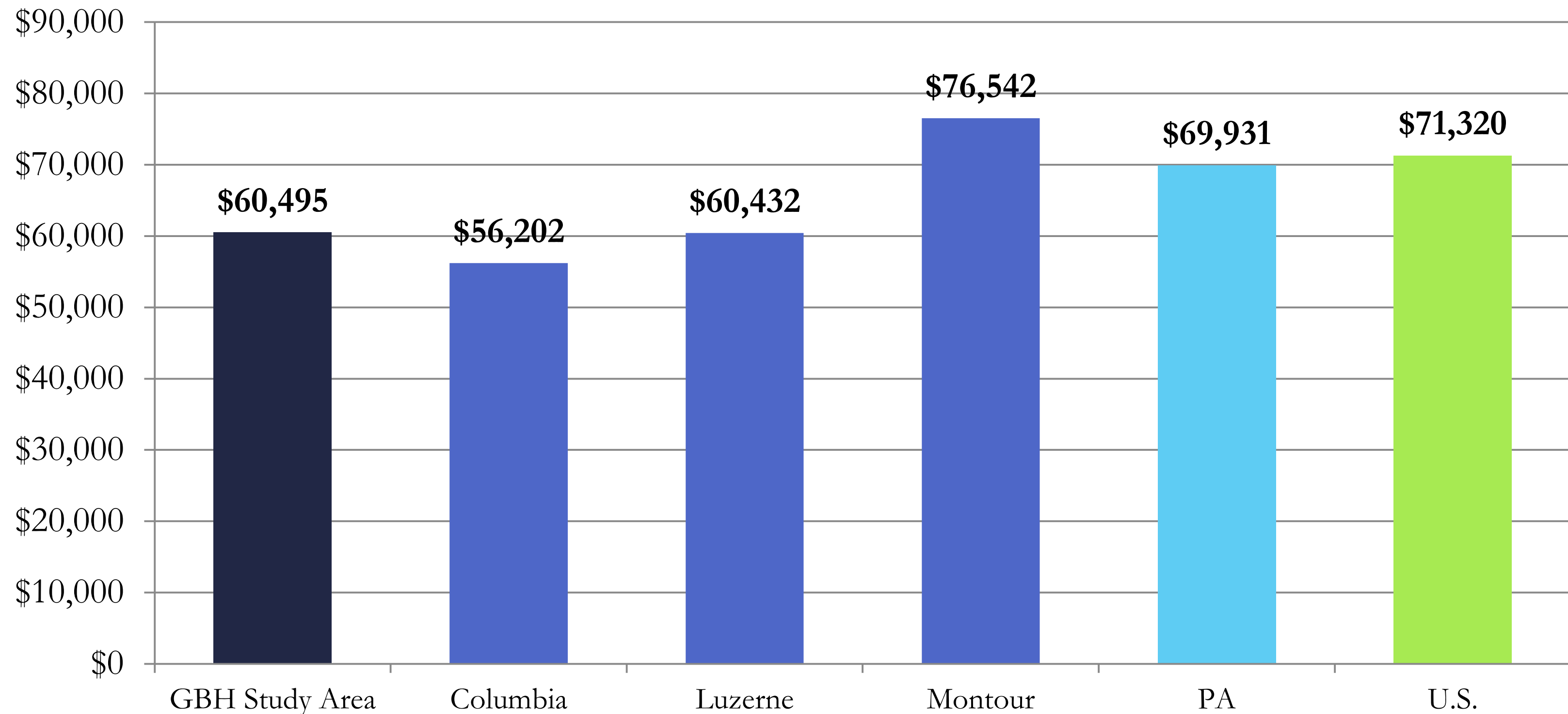


- The GBH study area and the counties of Columbia, Montour and Luzerne show projected declines in the percentage of younger individuals (24 and younger) while at the same time showing projected increases in the percentages of older individuals (55 and older) in the next 5 years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.

- Montour County in the GBH study area shows the largest percentage of individuals aged 65 and older (20.2%); this rate is higher than PA (16.6%) and the U.S. (14.2%).

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

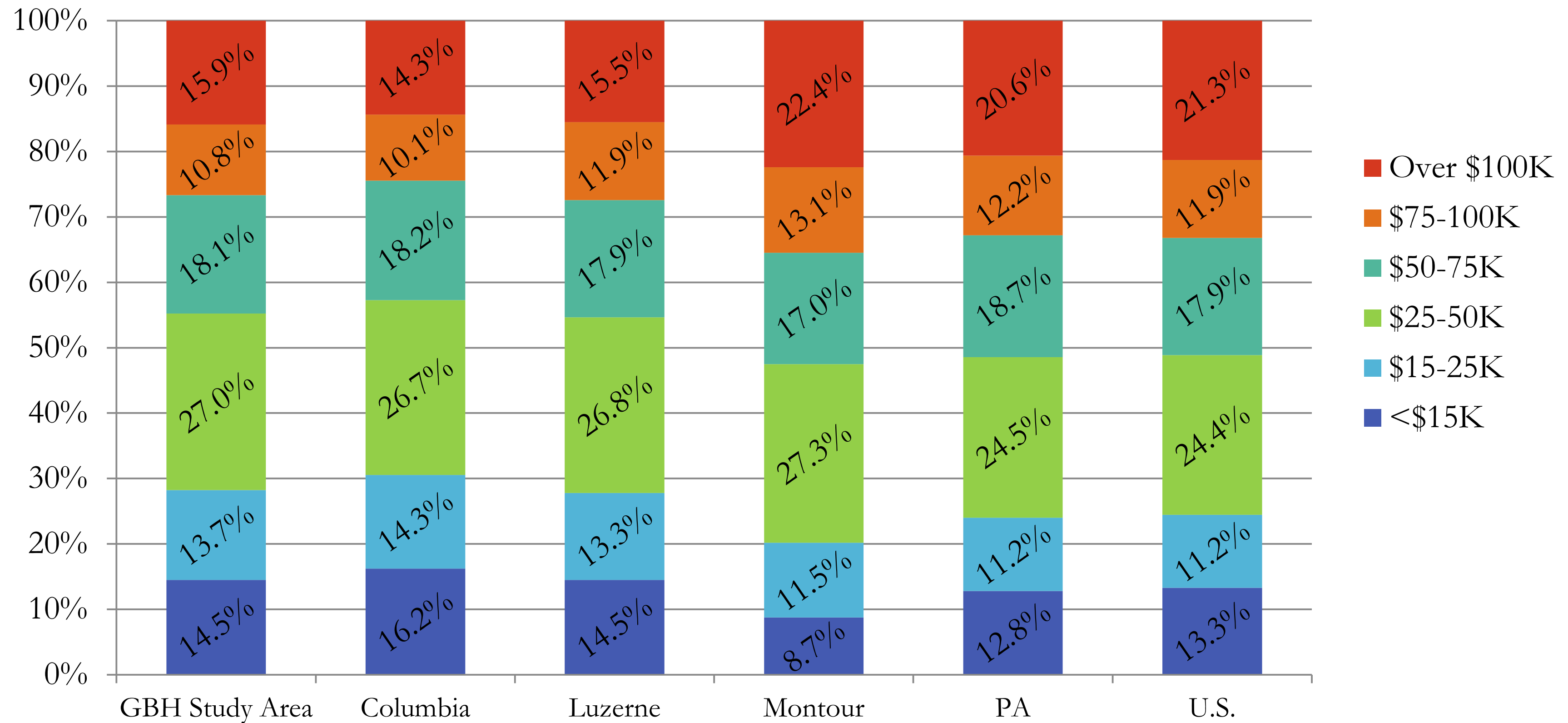
Average Household Income (2014)



- The GBH study area shows an average annual household income of $60,495.
- For the GBH study area, Montour County has the highest average income ($76,542) and Columbia County has the lowest ($56,202).
- Montour County has an average household income that is higher than the averages for Pennsylvania and the U.S.

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

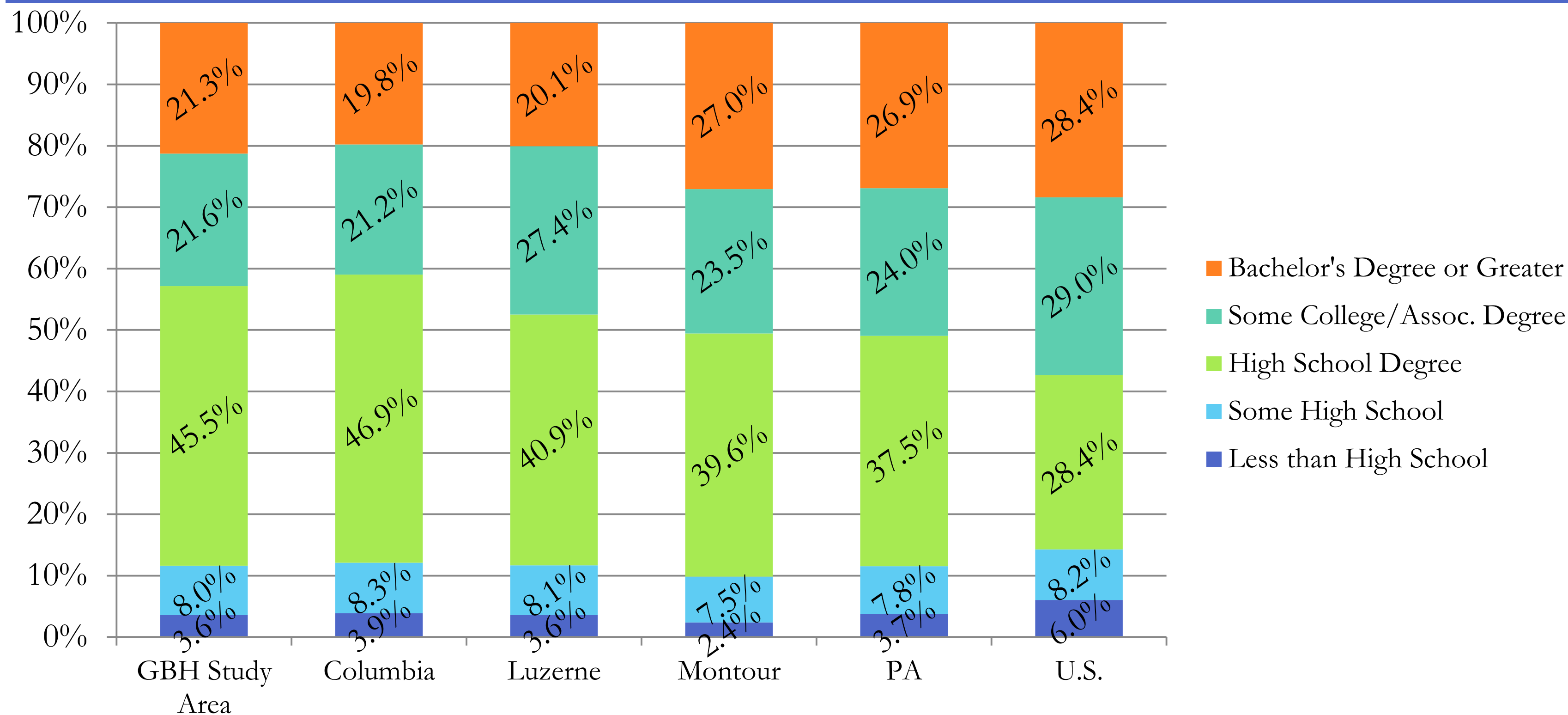
Household Income Detail (2014)



- The GBH study area reports 28.2% of the households earning $25K annually or less. This rate is higher than Luzerne, Montour, PA, and the U.S.
- Columbia County shows the highest rates of low income households with 30.5% of their population earning $25K annually or less.

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

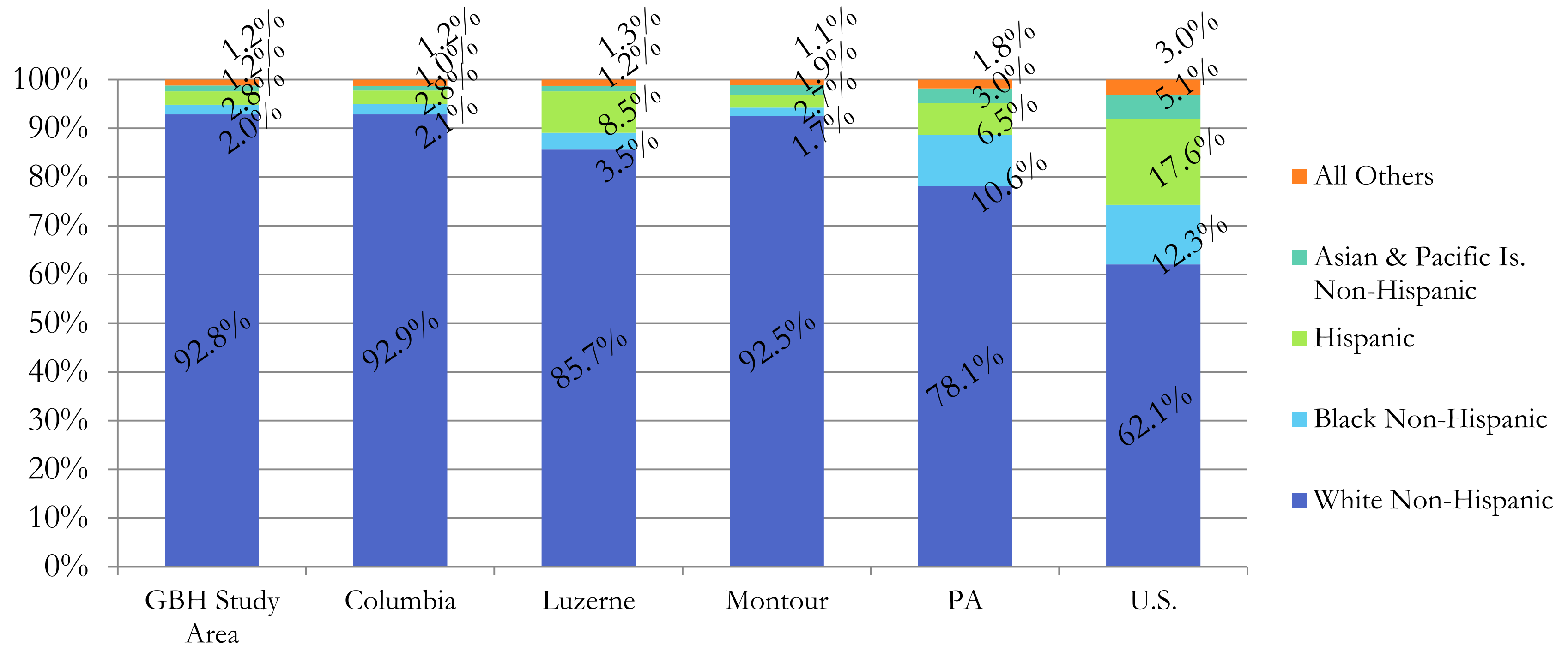
Education Level (2014)



- The GBH study area shows 11.6% of the population have not received a high school diploma. Columbia County shows the highest rate with 12.2% of the population without a high school diploma. The state rate (11.5%) is slightly lower than the rate for the GBH community, while the U.S. rate is somewhat higher (14.2%).
- On the other hand, 42.9% of the GBH study area have received some college education or received a college degree.

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

Race/Ethnicity (2014)



- As compared to Pennsylvania and the U.S., the GBH study area has very little diversity. Only 7.2% of the population in the GBH study area identifies as a race/ethnicity other than White, Non-Hispanic, whereas 21.9% in PA and 37.9% in the U.S. identify as a race other than White, Non-Hispanic.

- Luzerne County shows the most diversity with 14.3% of the population as a race/ethnicity other than White, Non-Hispanic.

Source: 2014 The Nielsen Company, 2014 Truven Health Analytics Inc.

Community Need Index (CNI)

- **The highest CNI score for the GBH study area is 3.4 in the zip code area of Bloomsburg (17815) in Columbia 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:**
  - Bloomsburg (17815) has the highest rental (38.6%), uninsured (7.4%), and minority (9.8%) rates for the GBH study area.
  - Berwick (18603) has the highest uninsured rate (12.0%), individuals with limited English proficiency (1.1%), and individuals with no high school diploma (16.5%),
  - Catawissa (17820) has the highest percentage of both families with married parents or single parents with children living in poverty (22% and 63.5% respectively).
  - Millville has the highest rate of elderly living in poverty (18.4%).
- **The median for the CNI scale is 3.0 The GBH study area has two zip code areas above the median while at the same time has six below the median. This helps us to see that the GBH study area contains more zip code areas with CNI scores below the median indicating fewer barriers to community health care access.**
- **Overall, the GBH study area went from a CNI score of 2.7 in 2011 to a CNI score of 2.9 in 2014 (an increase of 0.2). This indicates a rise in the number of barriers to health care for the GBH study area population.**

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.

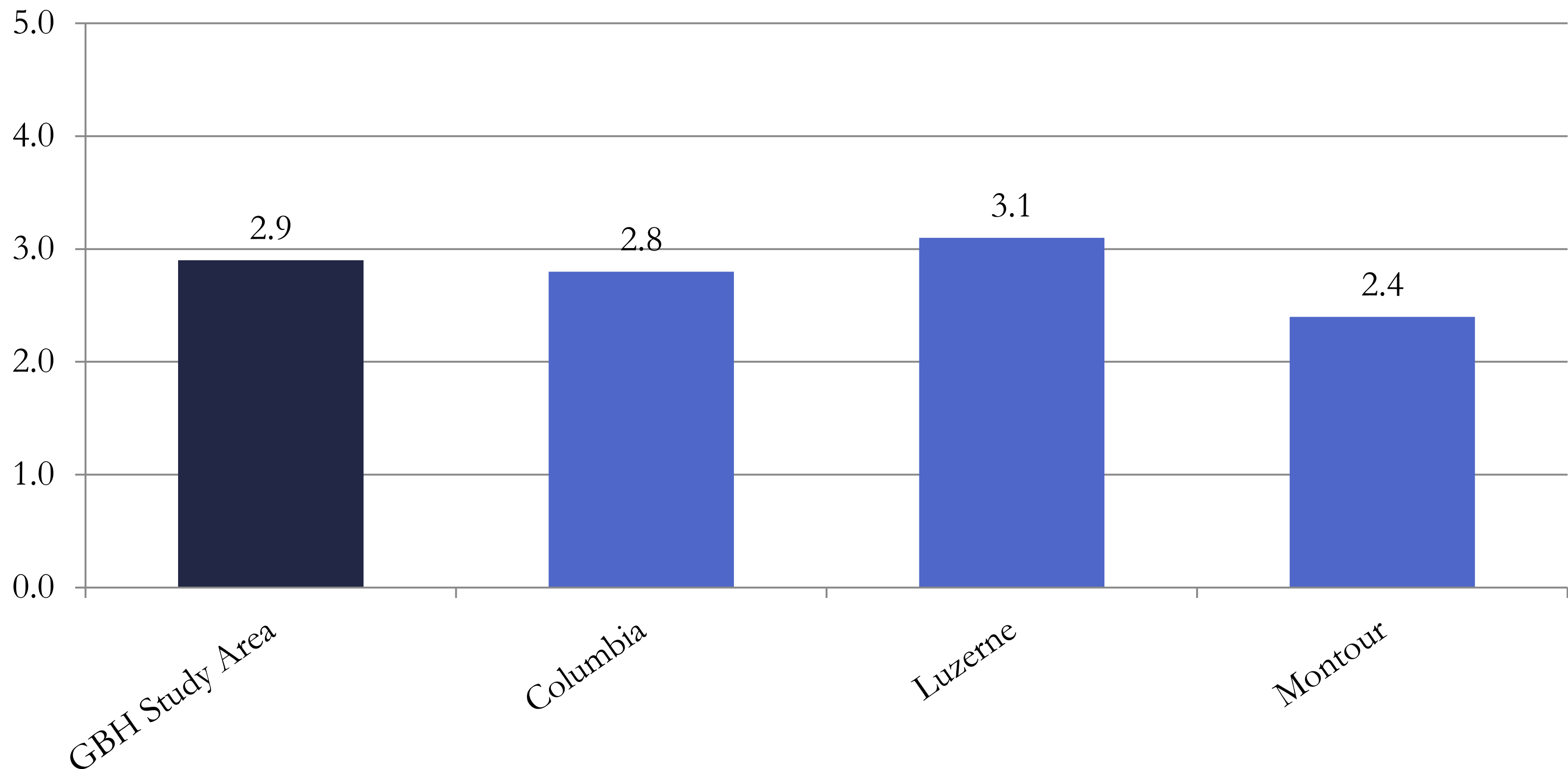
Assigning CNI Scores

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	2014 CNI Score
17815	Bloomsburg	Columbia	30,924	38.6%	7.4%	11.4%	9.8%	0.7%	8.9%	10.6%	17.5%	48.2%	4.0	3.0	2.0	3.0	5.0	3.4
18603	Berwick	Columbia	18,794	31.4%	6.7%	12.0%	7.4%	1.1%	16.5%	15.5%	19.7%	40.9%	3.0	3.0	4.0	2.0	4.0	3.2
17820	Catawissa	Columbia	5,476	21.4%	6.1%	8.7%	3.1%	0.3%	10.9%	9.0%	22.0%	63.5%	5.0	2.0	3.0	1.0	3.0	2.8
17846	Millville	Columbia	3,607	22.2%	6.5%	10.1%	3.2%	0.2%	14.3%	18.4%	14.9%	32.6%	3.0	3.0	3.0	1.0	3.0	2.6
17821	Danville	Montour	19,669	27.0%	5.4%	5.9%	7.5%	1.0%	9.9%	7.6%	10.4%	36.3%	3.0	1.0	2.0	2.0	4.0	2.4
18635	Nescopeck	Luzerne	4,467	23.3%	5.9%	7.9%	3.1%	0.1%	12.1%	11.8%	16.4%	32.1%	3.0	2.0	3.0	1.0	3.0	2.4
17814	Benton	Columbia	5,014	17.7%	7.1%	7.6%	2.5%	0.1%	12.6%	7.5%	15.6%	27.2%	2.0	2.0	3.0	1.0	2.0	2.0
17859	Orangeville	Columbia	3,110	14.5%	6.5%	7.9%	3.0%	0.2%	10.8%	13.1%	11.2%	40.3%	3.0	2.0	3.0	1.0	1.0	2.0
GBH Study Area			**91,061**	**30.2%**	**6.6%**	**9.6%**	**7.2%**	**0.7%**	**11.4%**	**11.1%**	**16.2%**	**42.2%**	**3.4**	**2.4**	**2.7**	**2.1**	**4.0**	**2.9**

- The highest CNI score for the GBH study area is 3.4 for Bloomsburg (17815) in Columbia 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:
  - Bloomsburg (17815) has the highest rental (38.6%), uninsured (7.4%), and minority (9.8%) rates for the GBH service area.
  - For the GBH service area, Berwick (18603) has the highest uninsured rate (12.0%), individuals with limited English proficiency (1.1%), no high school diploma (16.5),
  - Catawissa (17820) has the highest percentage of both families with married parents or single parents with children living in poverty (22% and 63.5% respectively).
  - Millville (17846) has the highest rate of elderly living in poverty (18.4%).
- The median for the CNI scale is 3.0 The GBH study area shows 2 zip code areas above the median while at the same time shows 6 below the median. This helps us to see that the GBH study area contains more zip code areas with CNI scores below the median indicating fewer barriers to community health care access.

Source: Thomson Reuters

Community Need Index (2014)



- The GBH study area reports an overall CNI score of 2.9 in 2014; this score is higher than both Columbia and Montour county overall CNI scores but lower than the Luzerne County CNI score of 3.1 (the highest for the GBH service area).
- The CNI scale ranges from 1 to 5, with a median score of 3.0. Luzerne County is the only CNI score that falls above the CNI median for the GBH service area.

Source: Thomson Reuters

Community Need Index

Zip	City	County	2010 CNI Score	2014 CNI Score	2010 – 2014 Change
17815	Bloomsburg	Columbia	2.8	3.4	+0.6
18603	Berwick	Columbia	3.2	3.2	0.0
17820	Catawissa	Columbia	2.2	2.8	+0.6
17846	Millville	Columbia	2.0	2.6	+0.6
17821	Danville	Montour	2.8	2.4	-0.4
18635	Nescopeck	Luzerne	2.4	2.4	0.0
17814	Benton	Columbia	2.2	2.0	-0.2
17859	Orangeville	Columbia	1.4	2.0	+0.6
GBH Study Area			**2.7**	**2.9**	**+0.2**

- Of the current eight zip code areas in the GBH study area, four of the eight saw increases in overall CNI score (rises in number of barriers to health care) – all of which rose in score by 0.6 on the 1 – 5 CNI scale.

- Overall, the GBH study area rose from a 2011 CNI score of 2.7 to a CNI score of 2.9 in 2014 (an increase of 0.2). This indicates a rise in the number of barriers to health care for the GBH service area population.

Source: Thomson Reuters

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.

Source: 2014 County Health Rankings
A collaboration of the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute

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

Source: 2014 County Health Rankings
A collaboration of the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute

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)

Source: 2014 County Health Rankings
A collaboration of the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute

County Health Rankings Data

- 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 GBH level data are available).

- Luzerne County ranks the worst (unhealthiest) of the three counties in:
  - Health Outcomes (57), Health Factors (58), Morbidity – Quality of Life (55), Health Behaviors (47), Social and Economic Factors (63), and Physical Environment (14).
  - Luzerne County went from a ranking of 32 for Social and Economic Factors in 2011 to a ranking of 63 in 2014.

- Columbia County ranks poorly (unhealthiest) in Clinical Care (34). The county saw the greatest negative shift from 2011 to 2014 in terms of Mortality, dropping from a rank of 7 to 40.

- Montour County ranks the worst (unhealthiest) in Mortality – Length of Life (62). On the other hand, Montour County ranks very well (healthy) in Morbidity – Quality of Life (2) and Clinical Care (3). These rankings are likely attributed to the hospital presence in Montour County.

County Health Rankings Data

- Columbia County reported the highest uninsured rate across the GBH study area with a rate of 23%. This is an increase from 13% uninsured rate in 2011.
- Concurrently, Columbia County also reported the lowest PCP rate across the three counties.
- The sexually transmitted infection (chlamydia) rate for Columbia County rose to 282 per 100,000 population from a rate of 152 in 2011.
- Columbia and Luzerne counties report approximately a quarter of their populations smoke (23% and 25% respectively) and roughly a third of their populations are obese (33% and 30% respectively).
- Columbia County reports the highest rate of diabetic screening (83%) and Montour reports the lowest (75%).
- For Montour County, diabetic screening declined from 82% to 75%; concurrently the percentage of the Montour County population that is diabetic rose from 10% in 2011 to 12% in 2014.
- The violent crime rates across the three study area counties varies widely with Columbia County reporting the lowest rate (155 per 100,000 population), Luzerne reporting the mid-rate (289) and Montour County reporting the highest violent crime rate at 346 per 100,000.

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
Columbia	42 (16)	28 (26)	40 (7)	47 (38)	40 (54)	34 (36)	22 (21)	8 (3)
Luzerne	57 (59)	58 (30)	55 (63)	55 (50)	47 (44)	28 (28)	63 (32)	14 (10)
Montour	28 (47)	7 (3)	62 (65)	2 (5)	6 (6)	3 (1)	8 (13)	10 (1)

In 2014:

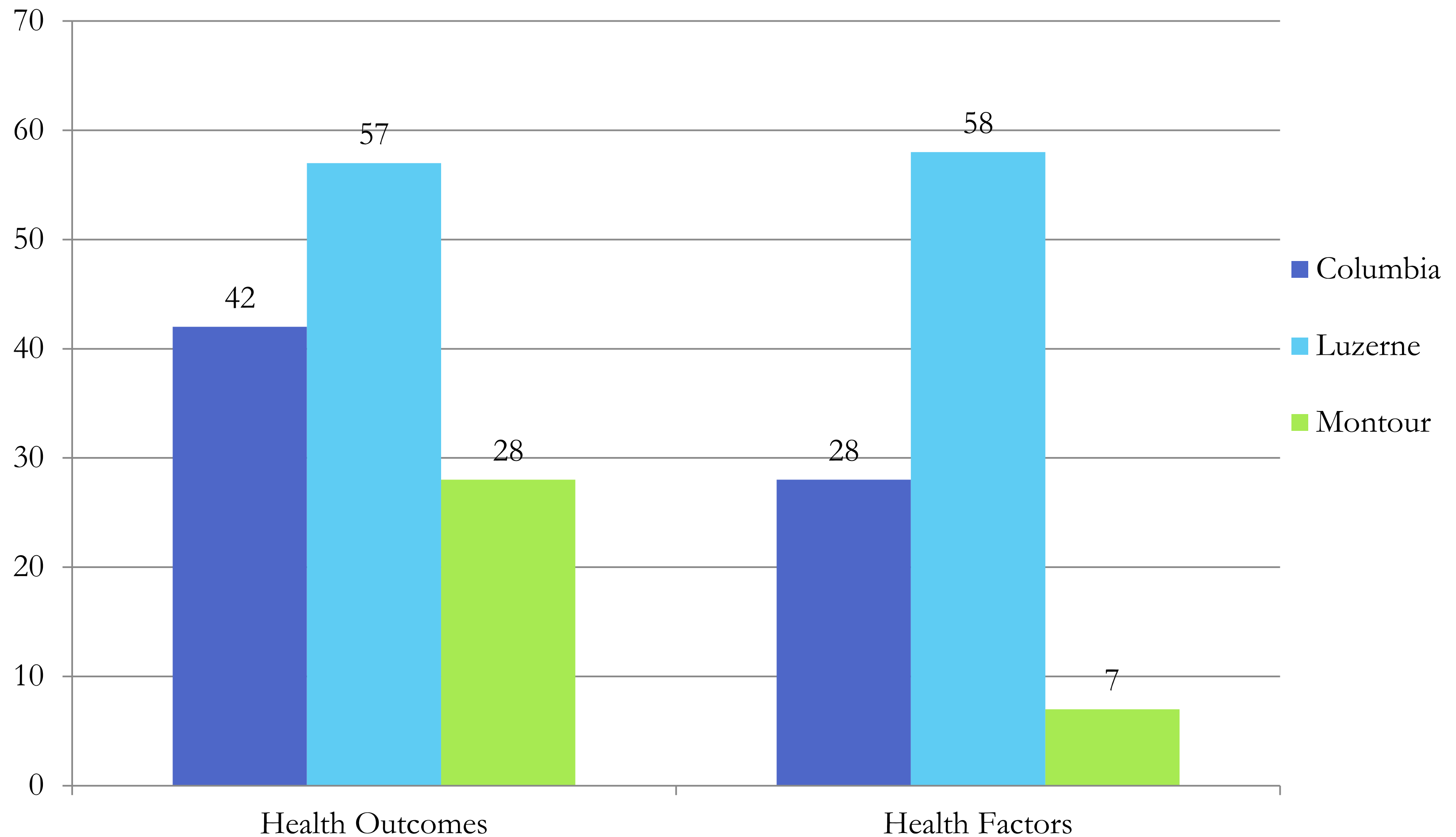
- Montour County ranks the worst in the GBH study area for Mortality with a ranking of 62 out of 67 with 67 being the worst in the state (this can be assumed that it is related to the hospital presence). At the same time, Montour County is ranked second in the state for Morbidity or Quality of Life and third in the state for Clinical Care.
- Luzerne County ranks poorly for social and economic factors with a score of 63 out of the worst possible 67 for Pennsylvania.

Between 2011 and 2014:

- Luzerne County went from a rank of 63 in 2011 to 55 in 2014 for Mortality. But at the same time Luzerne County also saw a rise in social and economic factor barriers shifting from a rank of 32 in 2011 to 63 in 2014.
- The largest negative shift in county health rankings for the GBH service area was for Mortality in Columbia County; going from a ranking of 7 in 2011 to 40 in 2014.

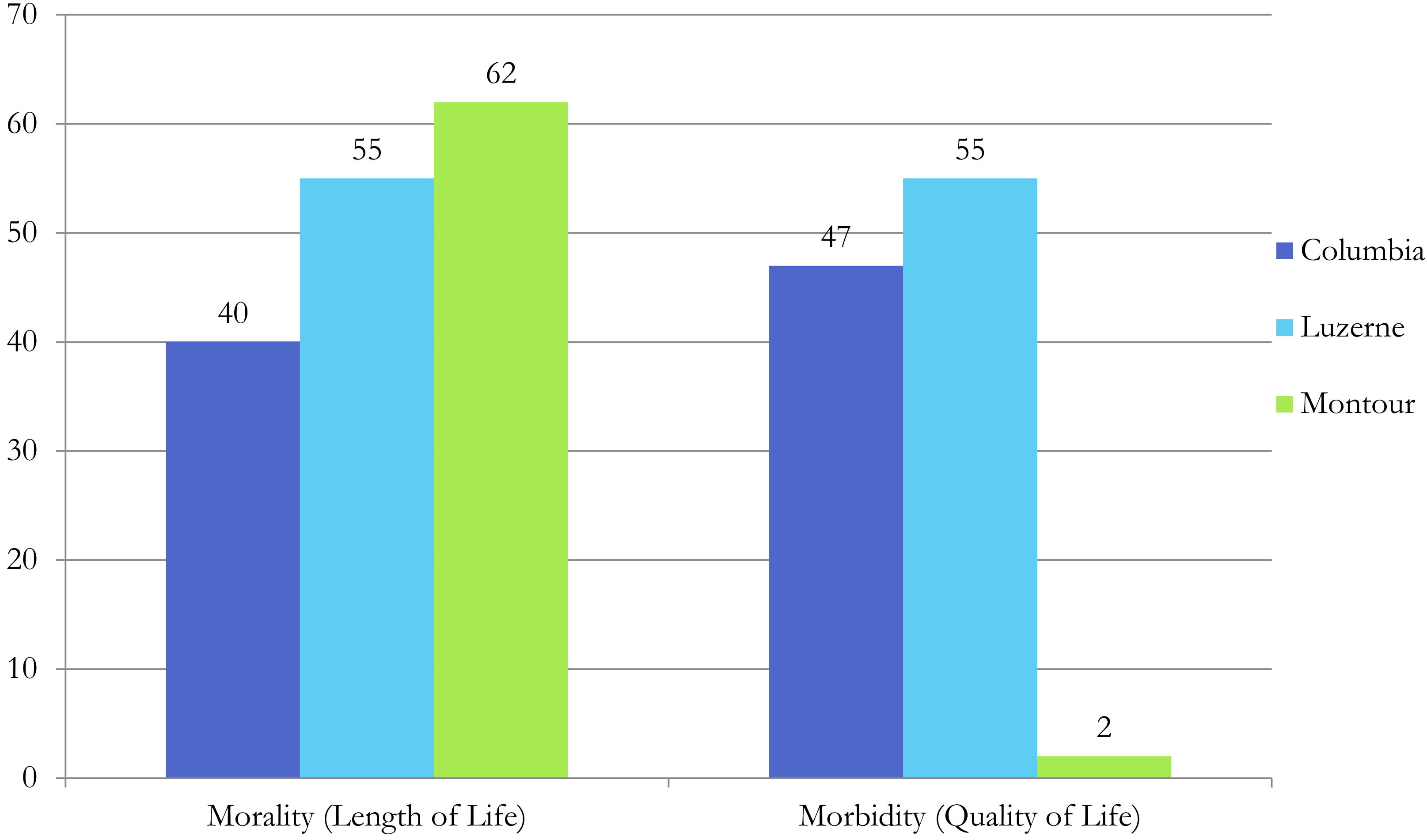
Source: 2014 County Health Rankings; **Green = top 5 (good ranking). Red = bottom 5 (poor ranking).**

County Health Rankings Data (2014)



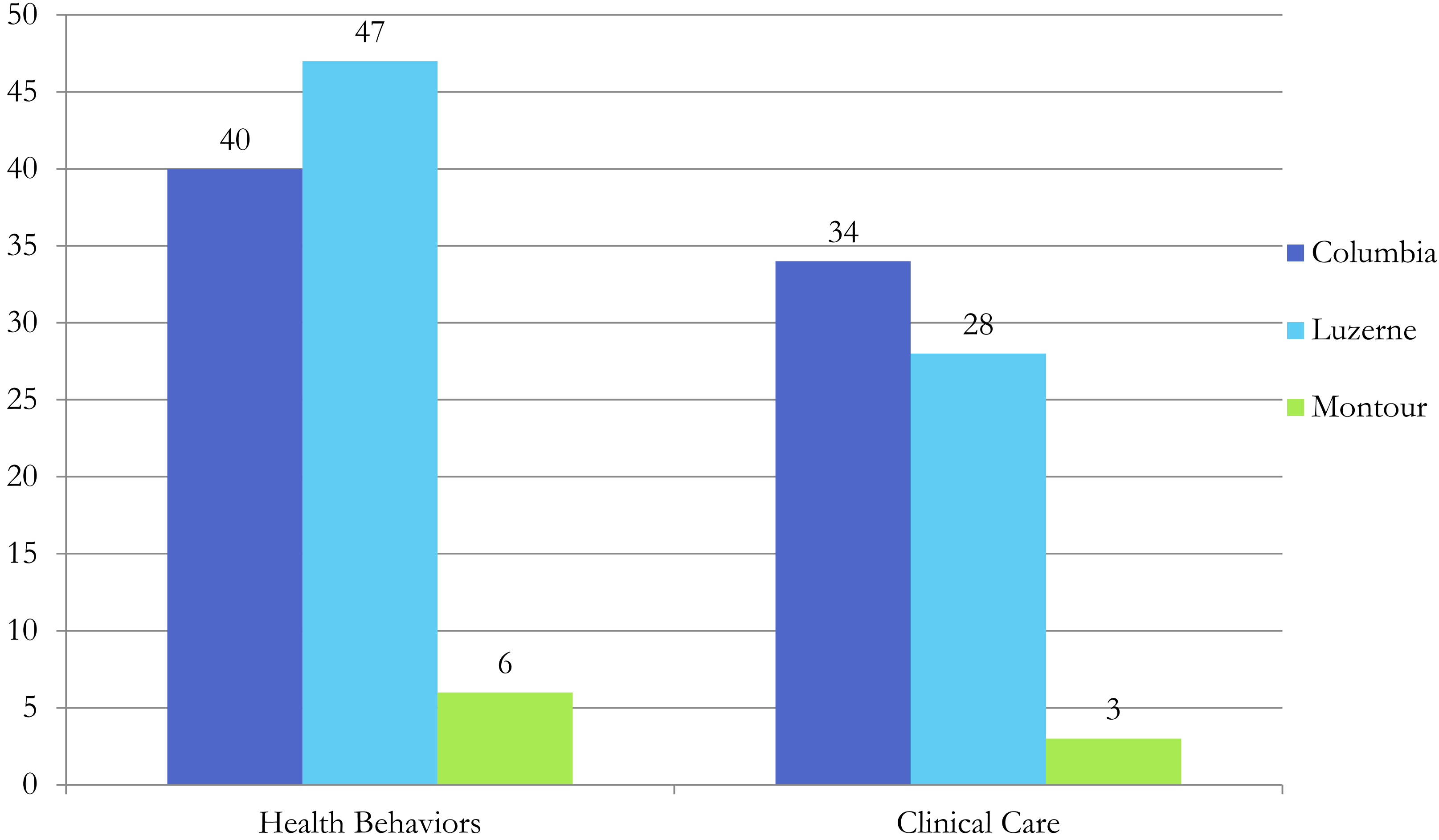
Source: 2014 County Health Rankings

County Health Rankings Data (2014)



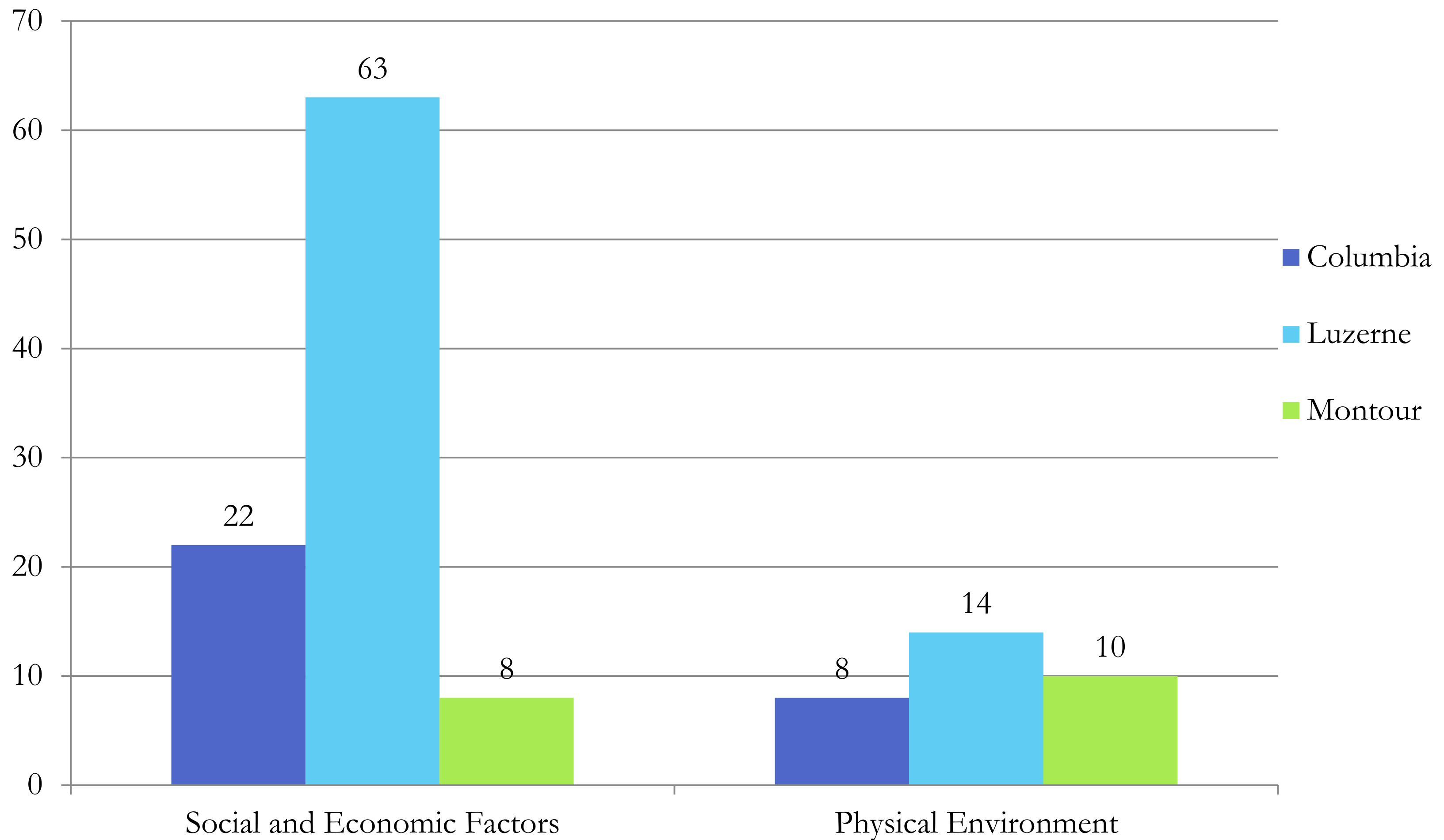
Source: 2014 County Health Rankings

County Health Rankings Data (2014)



Source: 2014 County Health Rankings

County Health Rankings Data (2014)



Source: 2014 County Health Rankings

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.)
Columbia	23 (25)	33 (32)	17 (18)	282 (152)	12 (13)	68 (66)
Luzerne	25 (27)	30 (28)	20 (20)	234 (214)	12 (11)	80 (70)
Montour	14 (14)	30 (28)	11 (11)	164 (119)	11 (10)	508 (599)
Pennsylvania	20 (22)	29 (28)	17 (18)	415 (340)	12 (13)	80 (94)

In 2014:

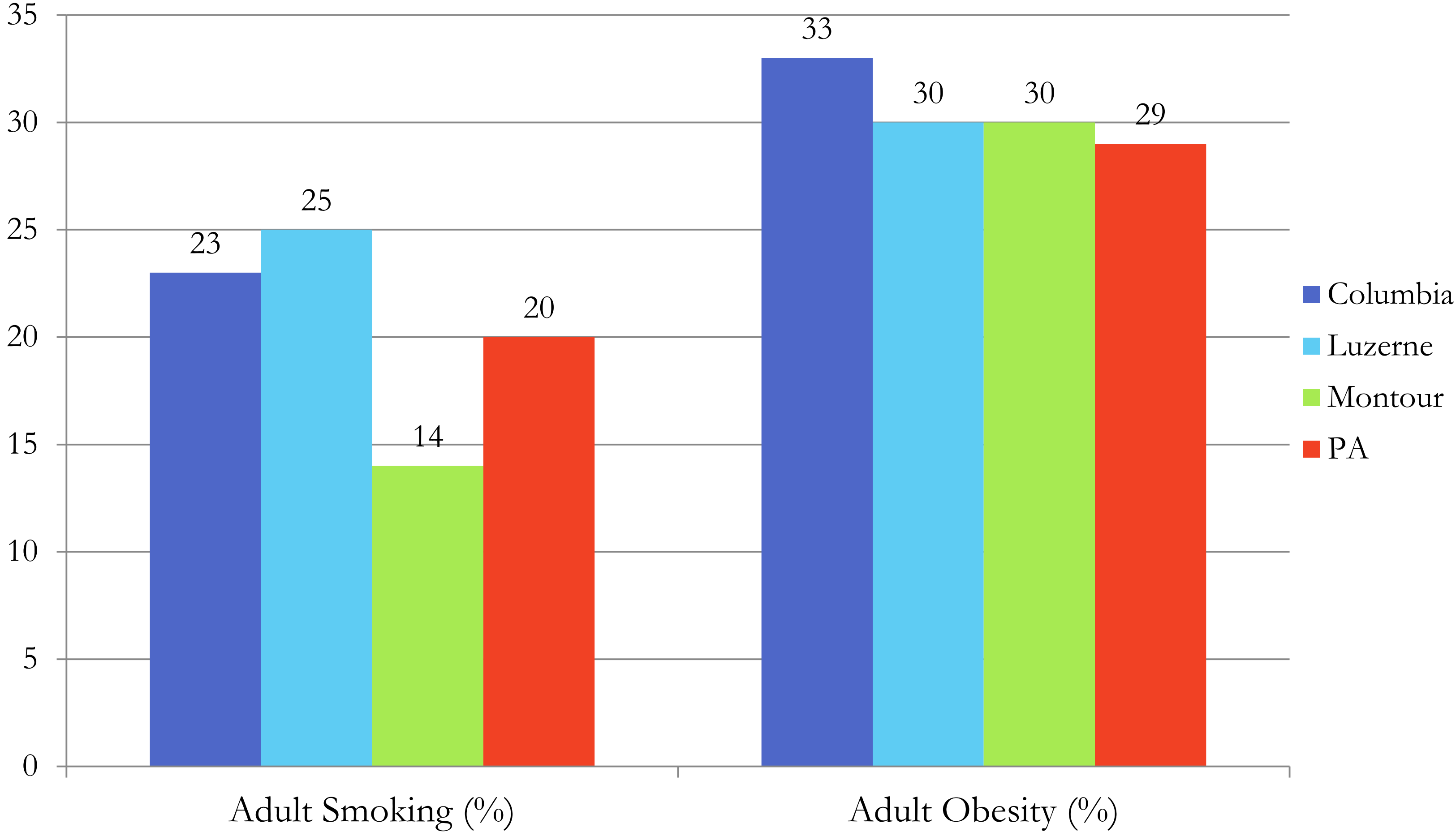
- Columbia County reported the highest uninsured rate across the GBH service area counties with a rate of 23%. Concurrently, Columbia County also reported the lowest PCP rate across the three counties with 68 PCPs.
- Columbia and Luzerne counties report approximately a quarter of their population that smoke (23% and 25% respectively) and roughly a third of their populations that are obese (33% and 30% respectively).

Between 2011 and 2014:

- The uninsured rate in Columbia county went from 13% to 23%.
- The PCP rate in Montour county fell to 508 from 599.
- The sexually transmitted infection (chlamydia) rate for Columbia County rose to 282 per 100,000 population from a rate of 152 in 2011.

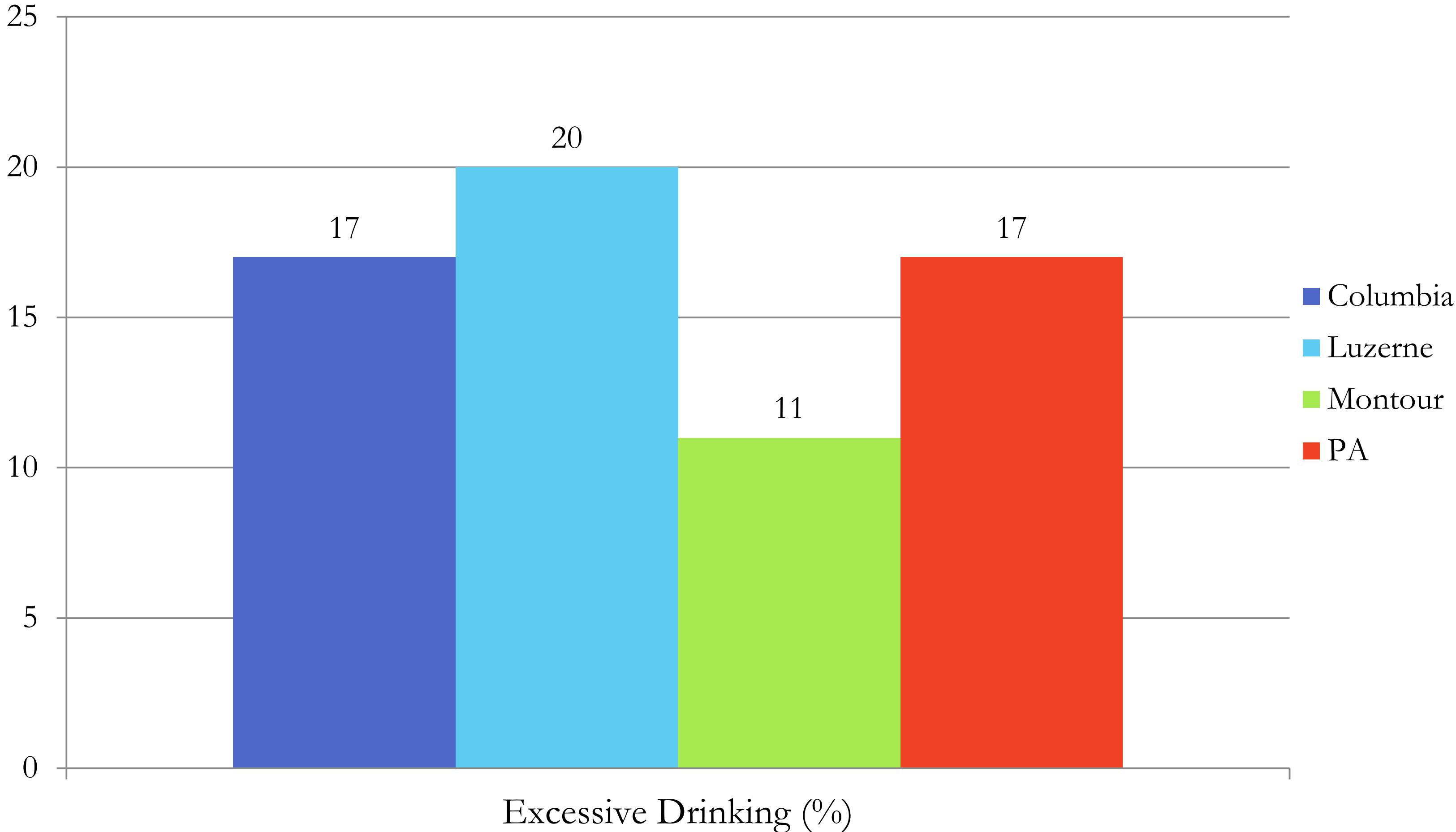
Source: 2014 County Health Rankings

County Health Rankings Data (2014)



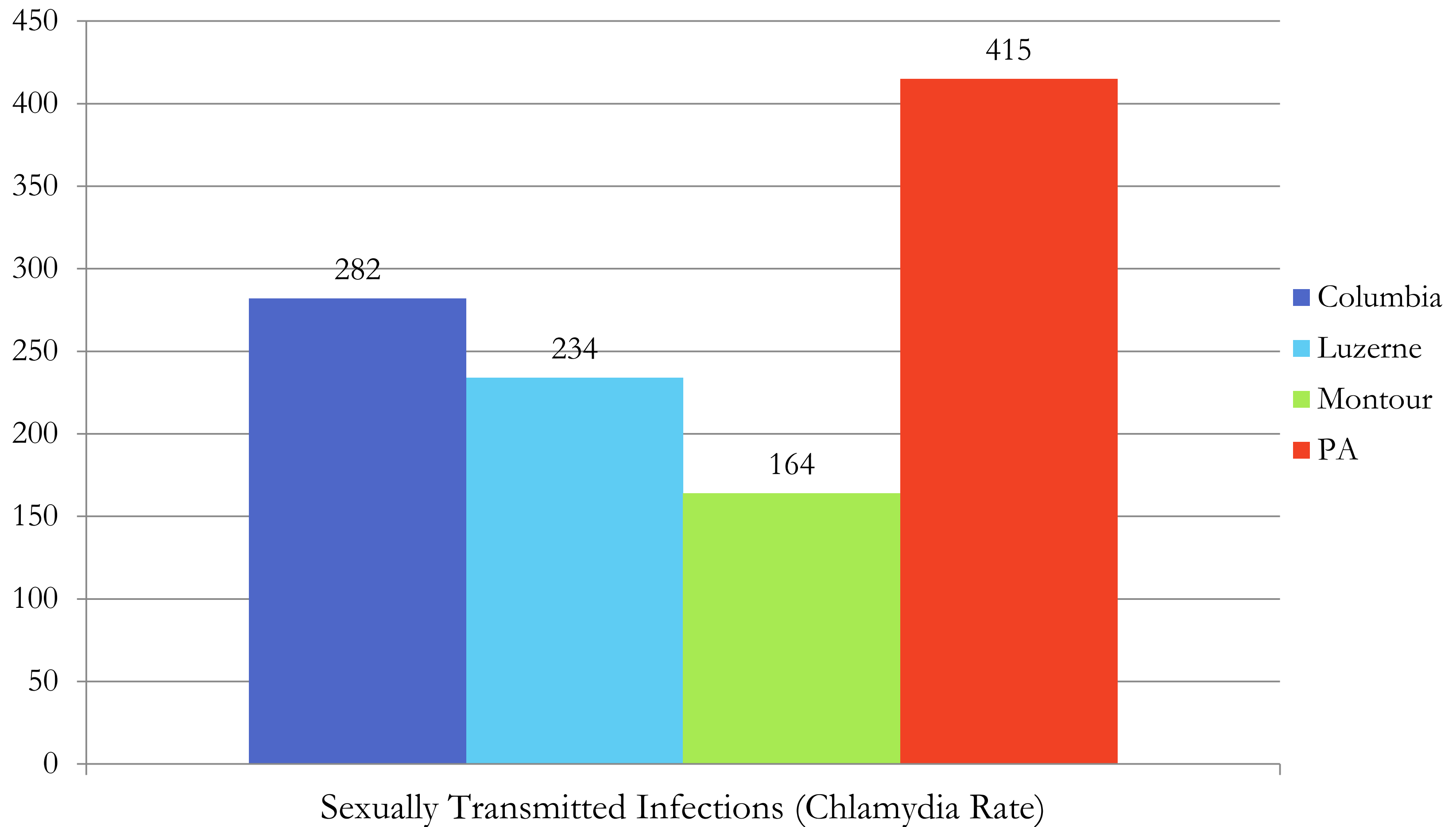
Source: 2014 County Health Rankings

County Health Rankings Data (2014)



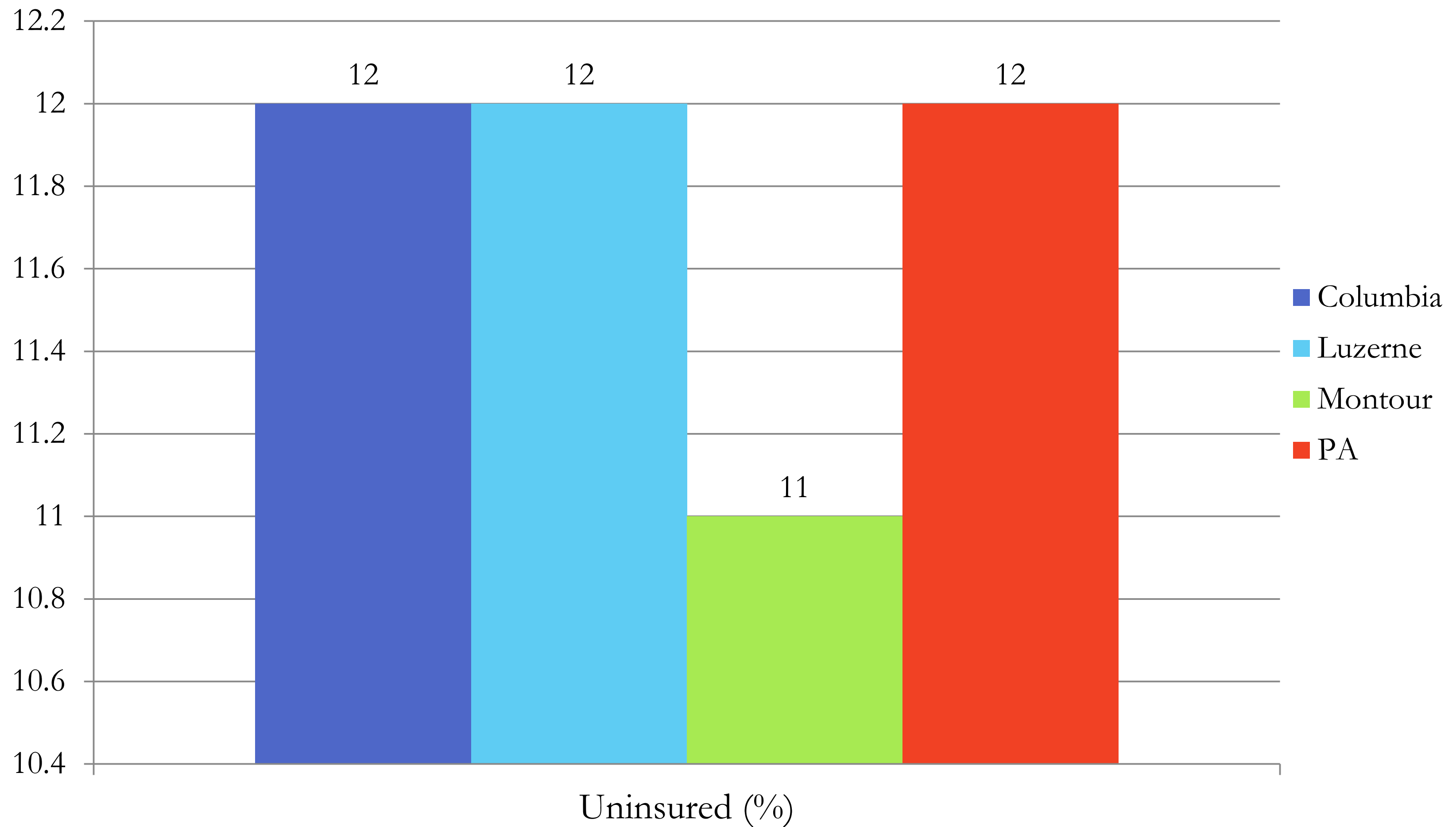
Source: 2014 County Health Rankings

County Health Rankings Data (2014)



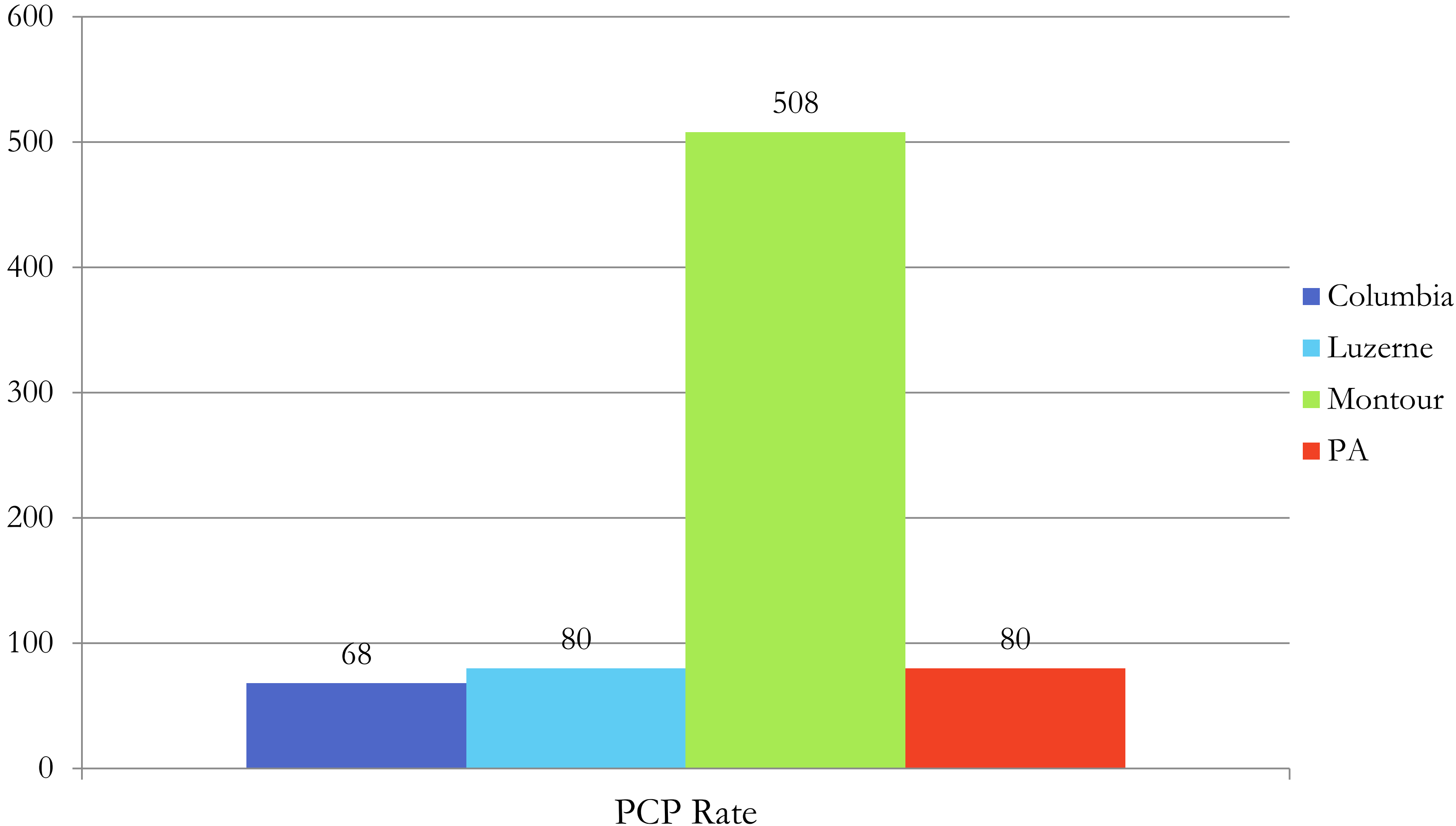
Source: 2014 County Health Rankings

County Health Rankings Data (2014)



Source: 2014 County Health Rankings

County Health Rankings Data (2014)



Source: 2014 County Health Rankings

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
Columbia	83 (84)	11 (9)	66.0 (63.2)	8.1 (8.6)	15 (15)	155 (123)
Luzerne	81 (79)	11 (10)	61.6 (58.6)	9.7 (9.1)	22 (22)	289 (317)
Montour	75 (82)	12 (10)	66.1 (77.6)	6.0 (6.6)		346 (380)
Pennsylvania	84 (84)	10 (9)	63.0 (64.5)	7.9 (8.1)	21 (21)	367 (419)

In 2014:

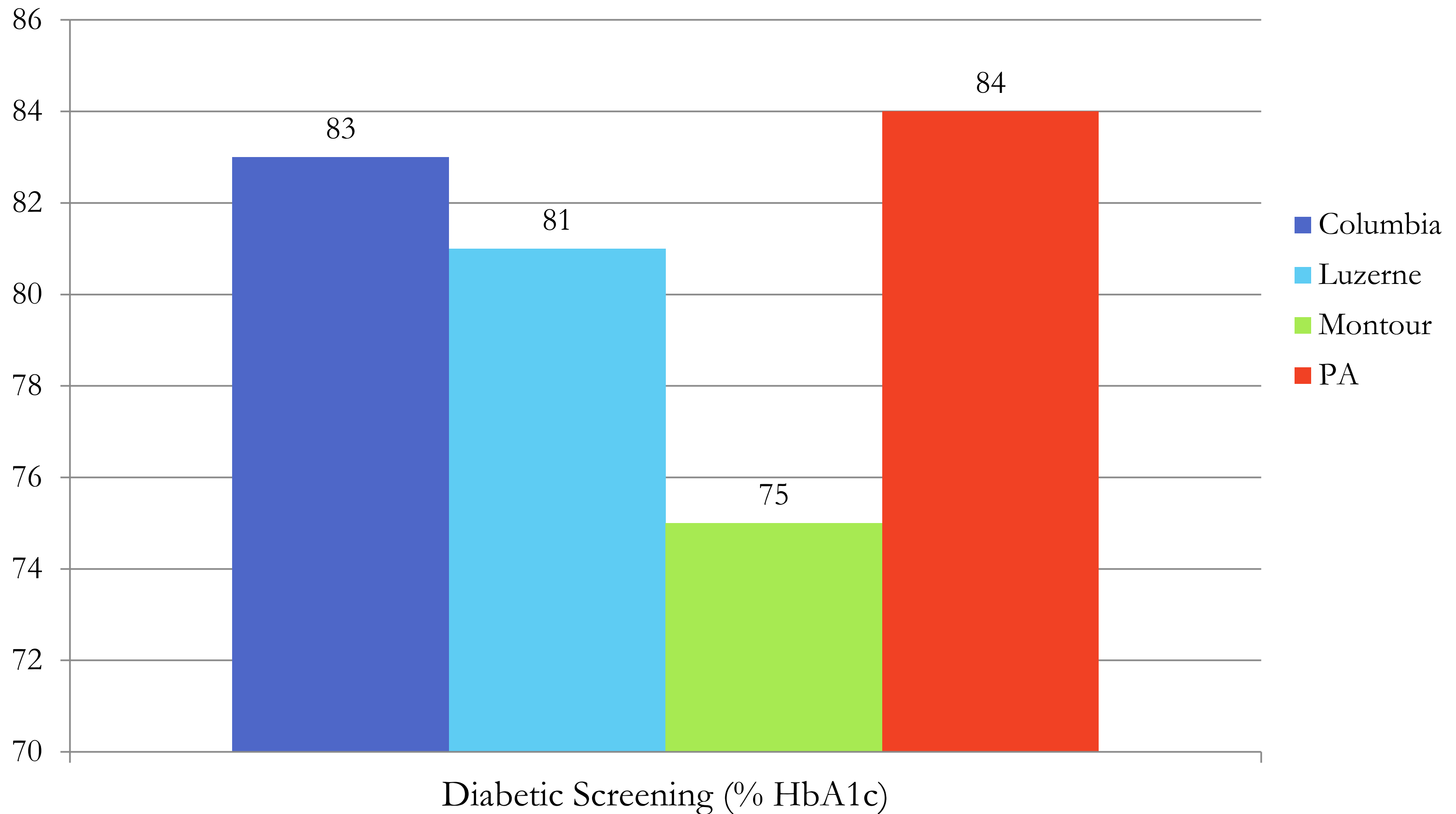
- Columbia County reports the highest rate of diabetic screening (83%) and Montour reports the lowest (75%).
- The violent crime rates across the three study area counties varies widely with Columbia County reporting the lowest rate (155 per 100,000 population), Luzerne reporting the mid-rate (289) and Montour County reporting the highest violent crime rate at 346 per 100,000.

Between 2011 and 2014:

- For Montour County, diabetic screening declined from 82% to 75%; concurrently the percentage of the Montour County population that is diabetic rose from 10% in 2011 to 12% in 2014.
- Columbia and Luzerne counties increased their mammography screening, but Montour County reported a decline in mammography screening from 77.6% to 66.1%.

Source: 2014 County Health Rankings

County Health Rankings Data (2014)



Source: 2014 County Health Rankings

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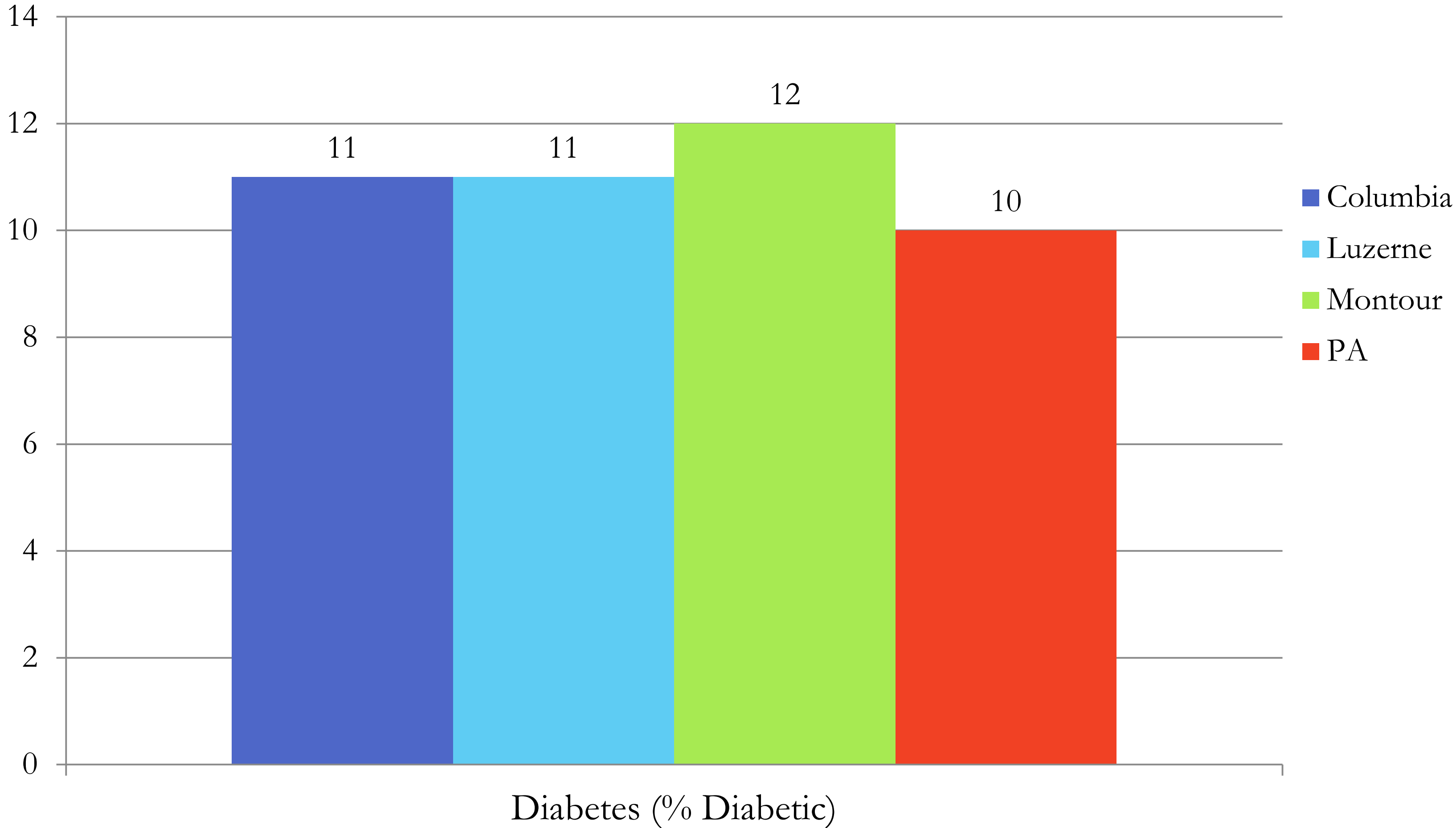

Source: 2014 County Health Rankings

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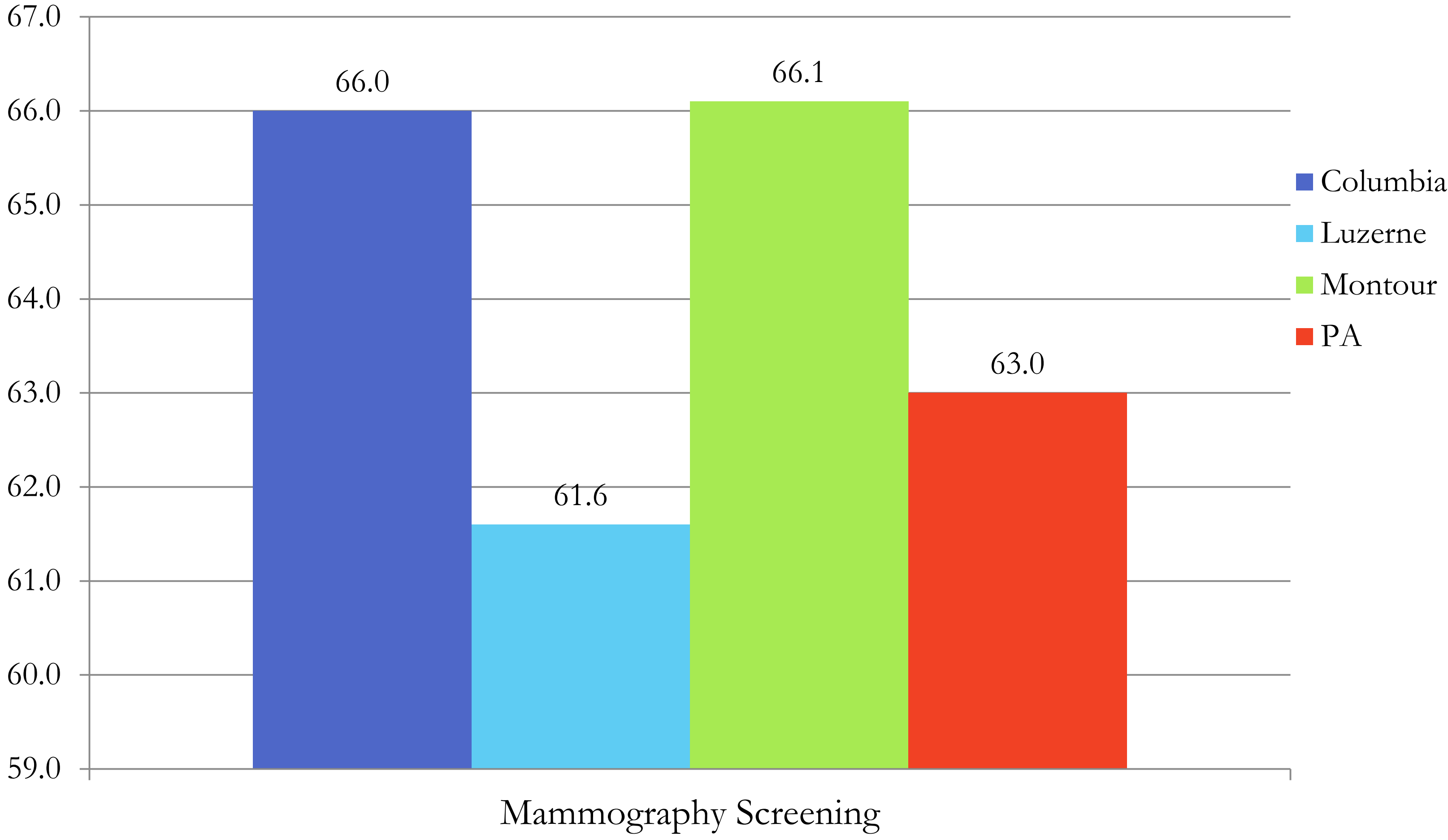

Source: 2014 County Health Rankings

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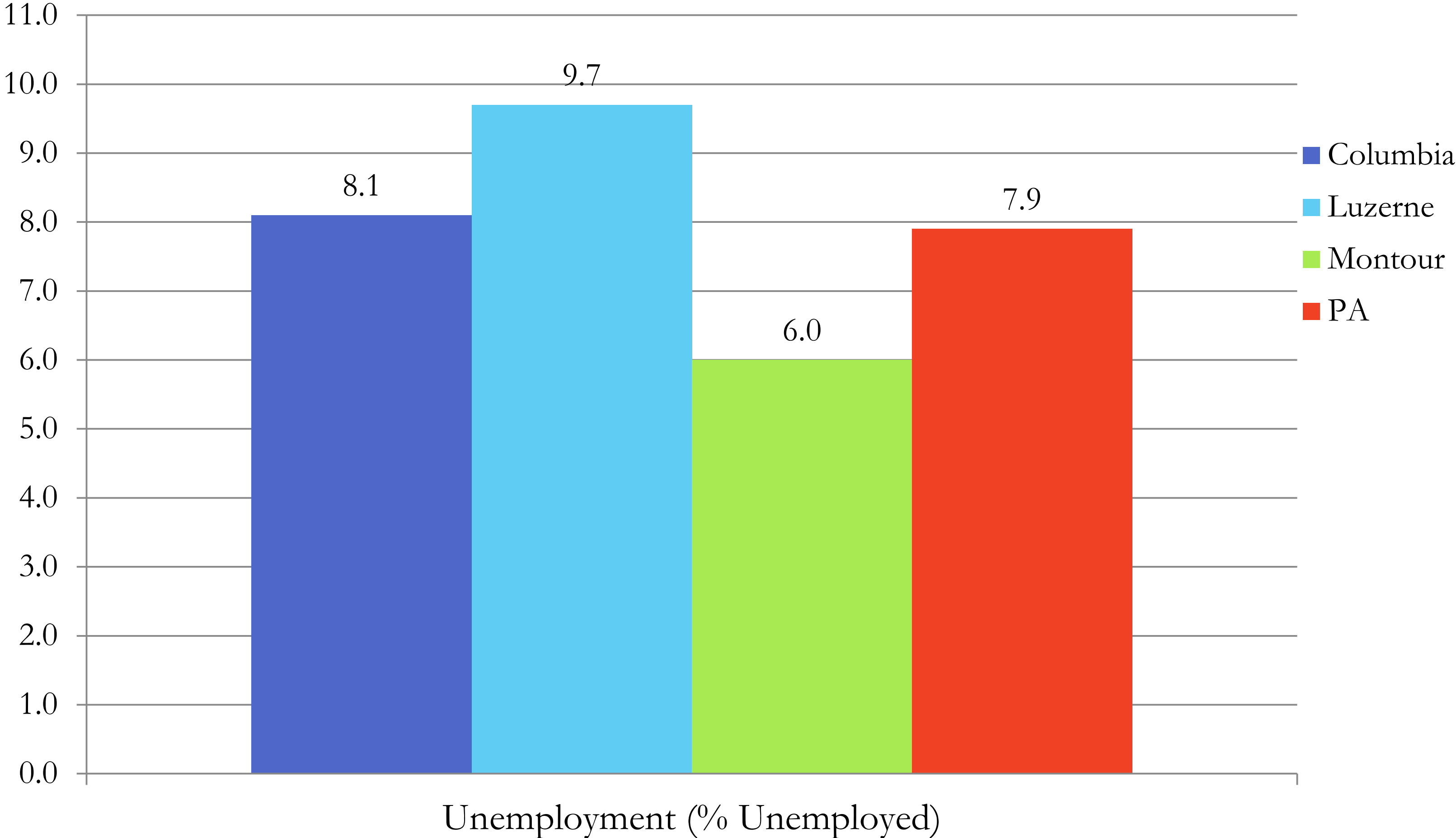

Source: 2014 County Health Rankings

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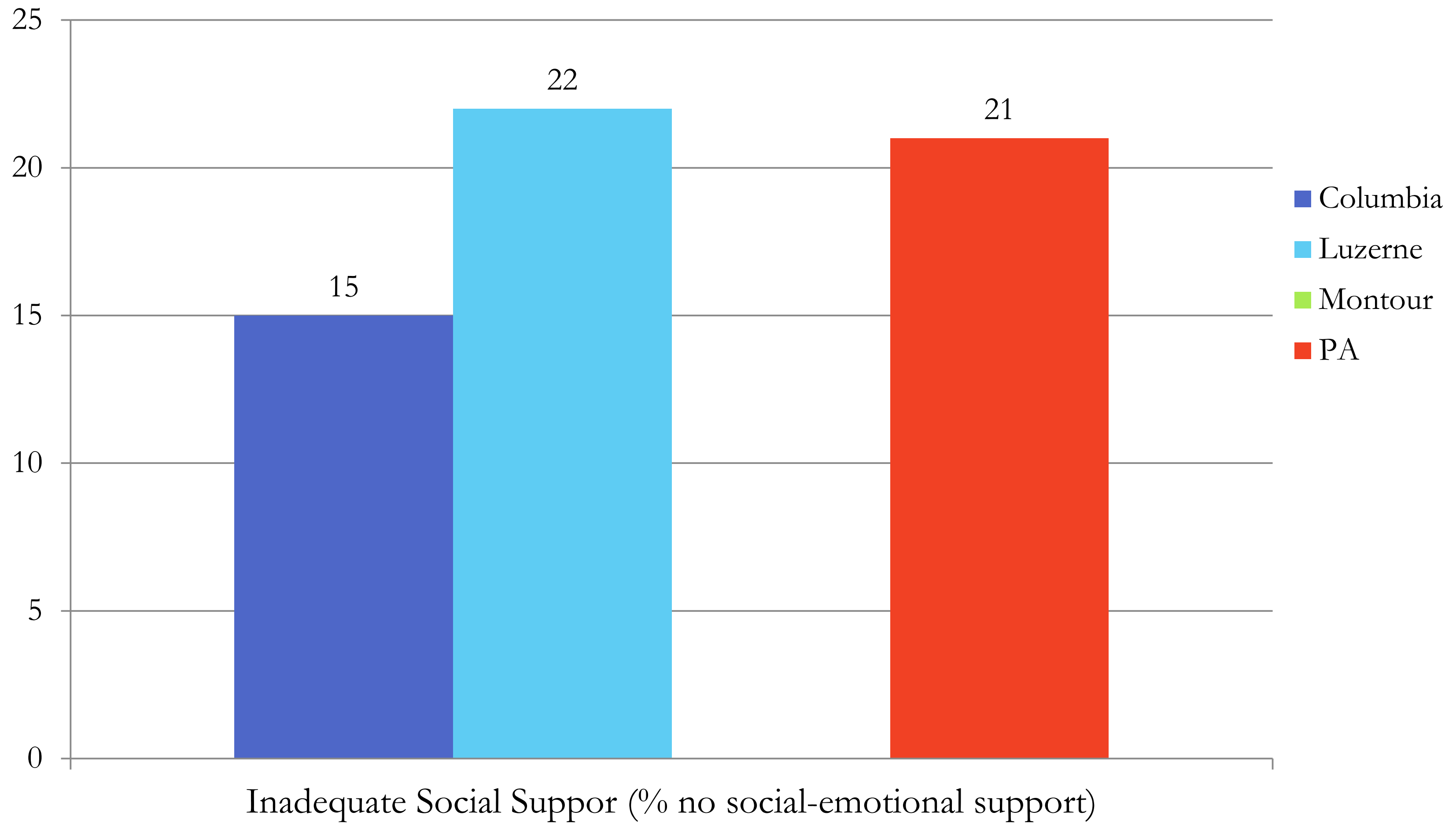

Source: 2014 County Health Rankings

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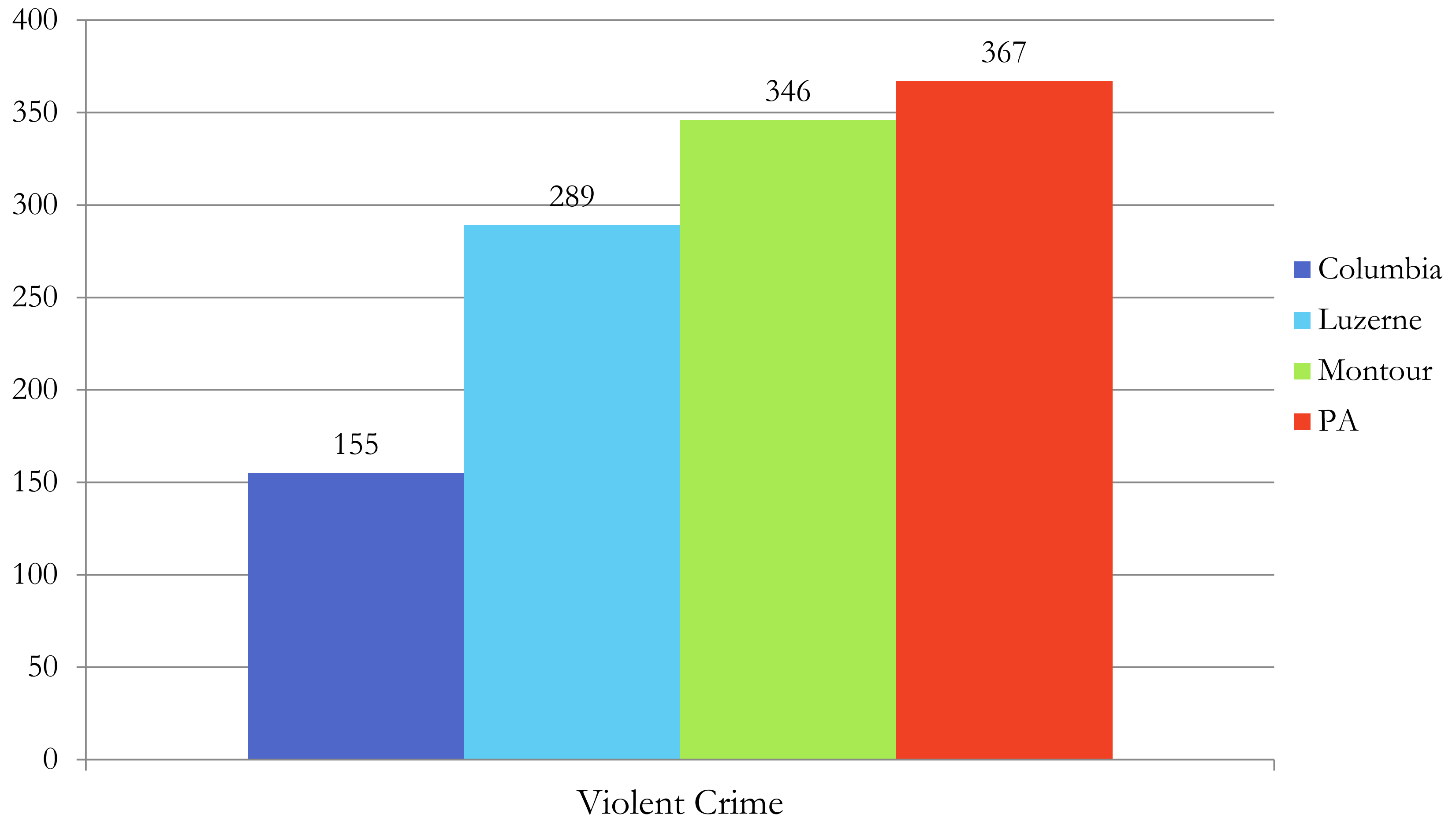


Source: 2014 County Health Rankings

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.**

Source: AHRQ

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.

Source: AHRQ

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

Source: AHRQ

Prevention Quality Indicator’s Index (PQI)

- The GBH study area has the highest number of preventable hospital admissions for the Chronic Obstructive Pulmonary Disease or Asthma in Older Adults (PQI5) subgroup.

- The largest difference between GBH and Pennsylvania is for PQI 2 Perforated Appendix in which PA shows a rate of preventable hospitalizations due to Perforated Appendices at 343.91 whereas GBH shows a rate of 268.29.

In 2014:

- The GBH study area has lower preventable hospital admission rates for 8 of the 14 PQI measures than the state of Pennsylvania – indicating lower preventable hospital admission rates.
  - Asthma in Younger Adults, Diabetes Short-Term Complications, Diabetes Long-Term Complications, Hypertension, Congestive Heart Failure, Angina Without Procedure, Dehydration, Bacterial Pneumonia, Urinary Tract Infection

Between 2011 and 2014:

- GBH preventable admissions decreased in the following subgroups:
  - Diabetes Long-Term Complications, Hypertension, Congestive Heart Failure, Dehydration, Bacterial Pneumonia, Urinary Tract Infection, Angina without Procedure, Uncontrolled Diabetes, Asthma in Younger Adults, and Lower Extremity Amputation Among Diabetes.
  - The largest change in PQI score was in PQI 8 Congestive Heart Failure, which decreased from 586.56 in 2011 to 465.76 in 2014.

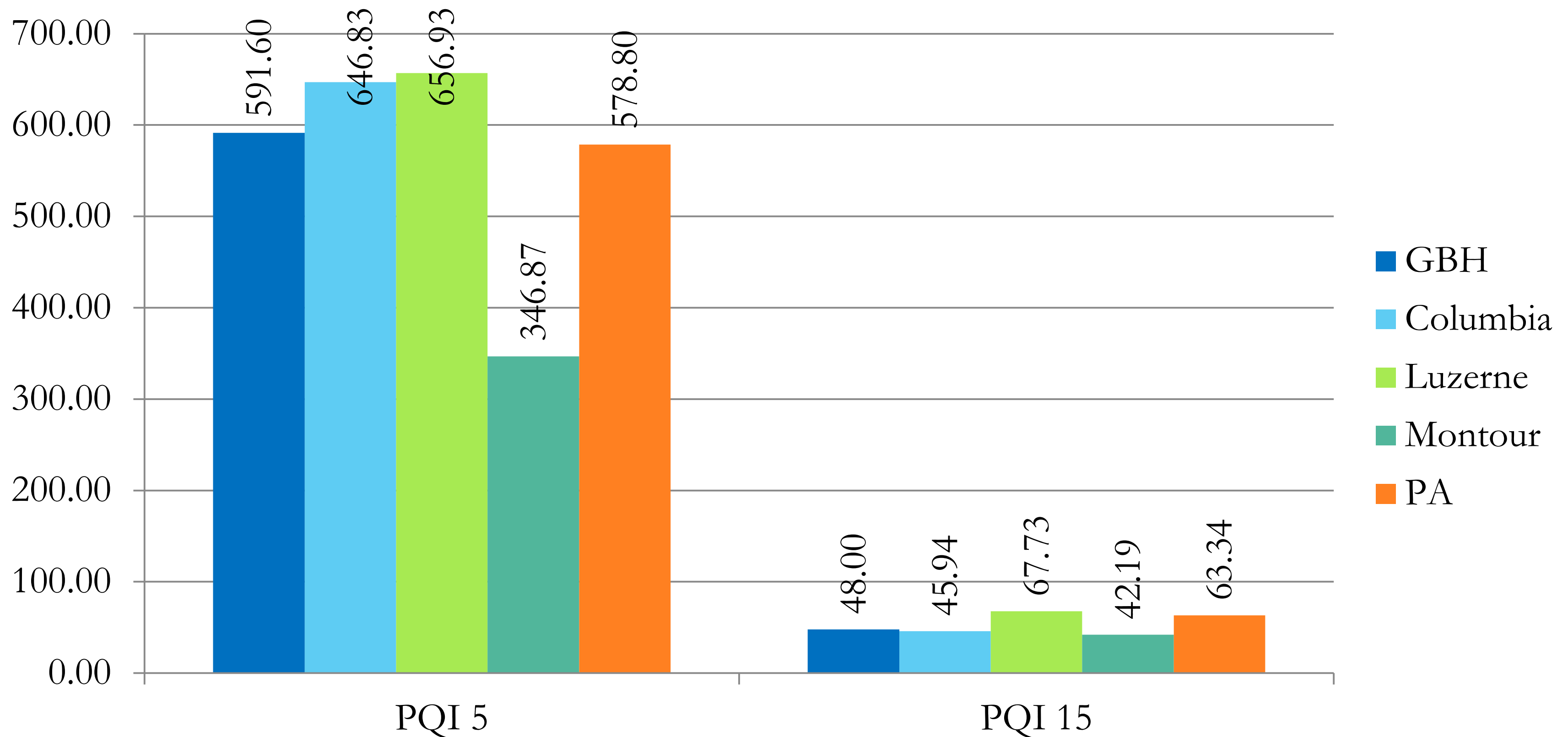
Prevention Quality Indicators Index (PQI)

Prevention Quality Indicators (PQI)	GBH Study Area	PA	Difference	2011 PQI GBH	2014 PQI GBH	Difference
Diabetes Short-Term Complications (PQI1)	87.75	115.16	- 27.41	71.74	87.75	+ 16.01
Perforated Appendix (PQI2)	268.29	343.91	- 75.62	0.42	268.29	--
Diabetes Long-Term Complications (PQI3)	97.20	119.79	- 22.59	113.94	97.20	- 16.74
Chronic Obstructive Pulmonary Disease or Asthma in Older Adults (PQI5)	591.60	578.80	+ 12.80	434.64	591.60	--
Hypertension (PQI7)	36.45	53.99	- 17.54	56.26	36.45	- 19.81
Congestive Heart Failure (PQI8)	465.76	418.29	+ 47.47	586.56	465.76	- 120.80
Low Birth Weight (PQI9)	43.93	37.50	+ 6.43	0.00	43.93	--
Dehydration (PQI10)	60.75	61.90	- 1.15	123.78	60.75	- 63.03
Bacterial Pneumonia (PQI11)	319.95	326.16	- 0.14	402.29	319.95	- 82.34
Urinary Tract Infection (PQI12)	191.70	197.51	- 5.81	203.96	191.70	- 12.26
Angina Without Procedure (PQI13)	20.25	11.80	+ 8.45	29.54	20.25	- 9.29
Uncontrolled Diabetes (PQI14)	25.65	14.20	+ 11.45	29.54	25.65	- 3.89
Asthma in younger Adults(PQI15)	48.00	63.34	- 15.34	135.03	48.00	--
Lower Extremity Amputation Among Diabetics (PQI16)	39.15	26.40	+ 12.75	44.73	39.15	- 5.58

*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.

Source: AHRQ

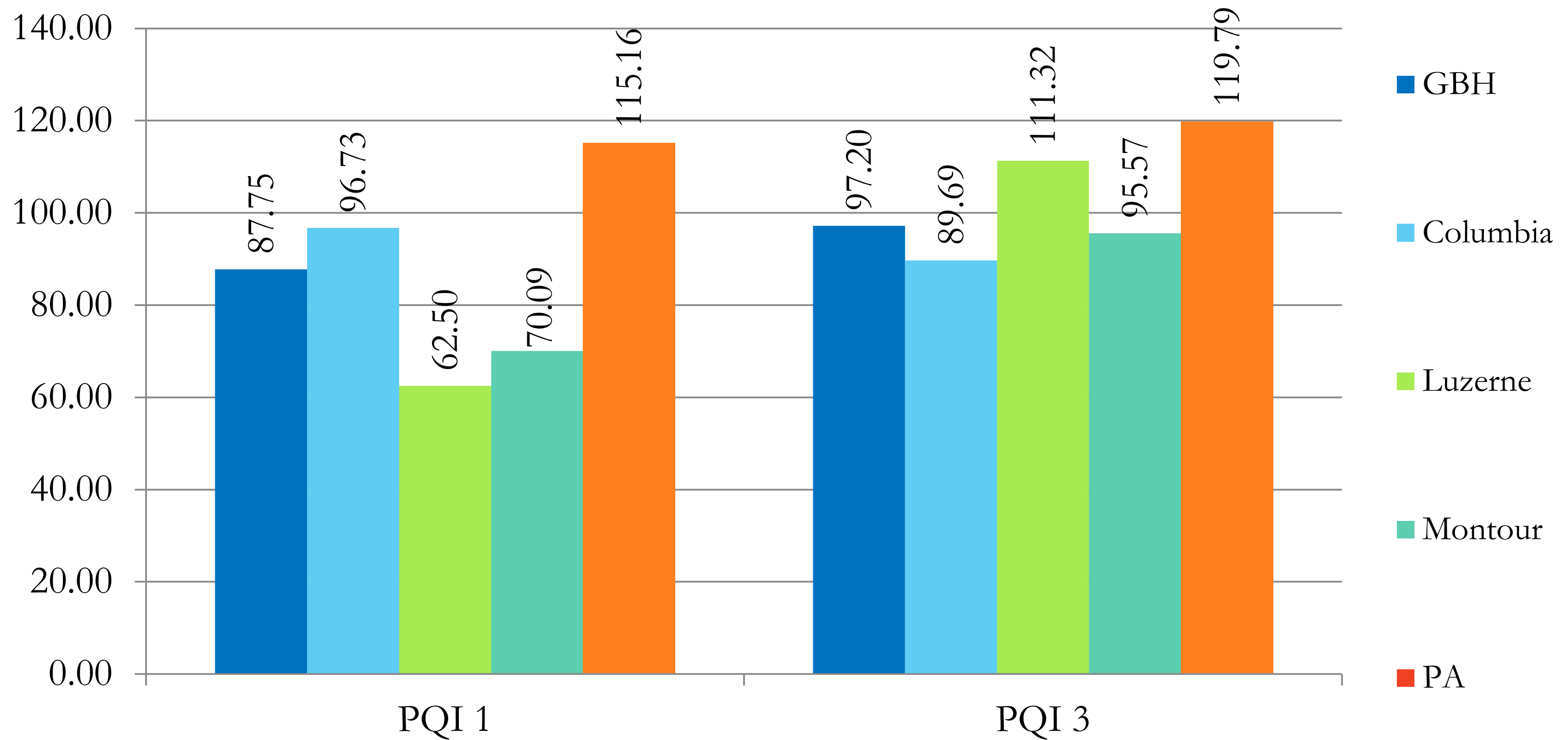
Chronic Lung Conditions



PQI 5 Chronic Obstructive Pulmonary Disease or Asthma in Older Adults Admission Rate
PQI 15 Asthma in Younger Adults Admission Rate

Source: AHRQ

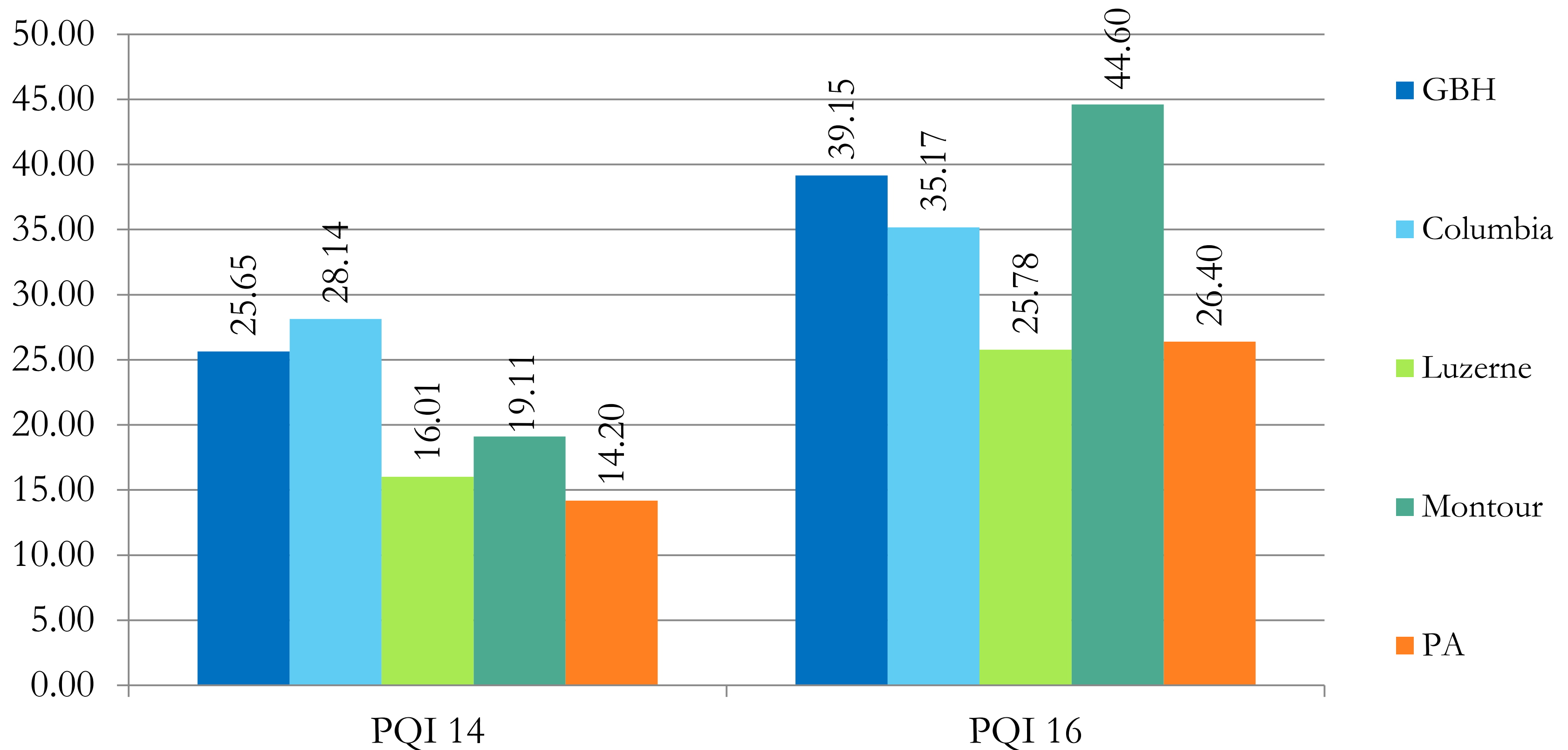
Diabetes



PQI 1 Diabetes Short-Term Complications Admission Rate
PQI 3 Diabetes Long-Term Complications Admission Rate

Source: AHRQ

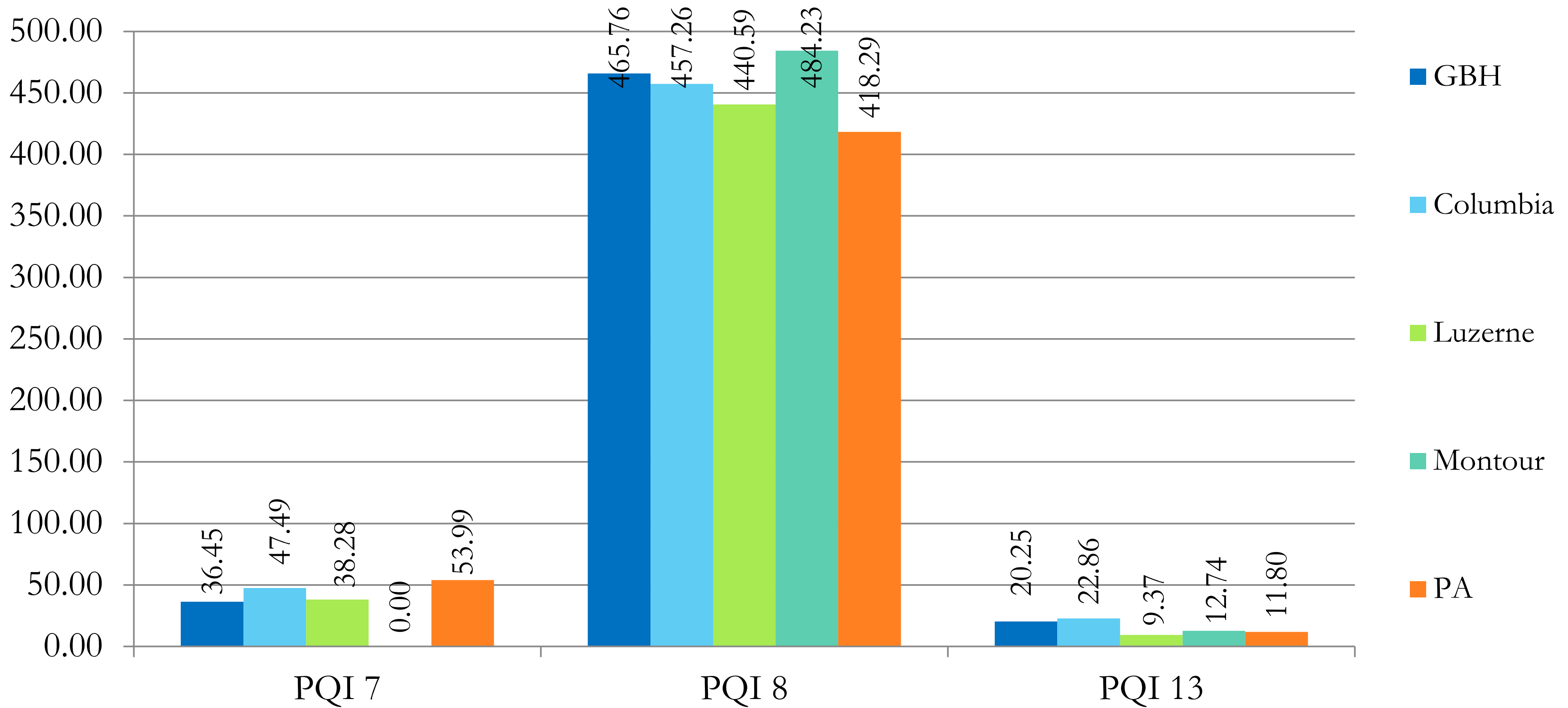
Diabetes (cont'd)



PQI 14 Uncontrolled Diabetes Admission Rate
PQI 16 Lower Extremity Amputation Rate Among Diabetic Patients

Source: AHRQ

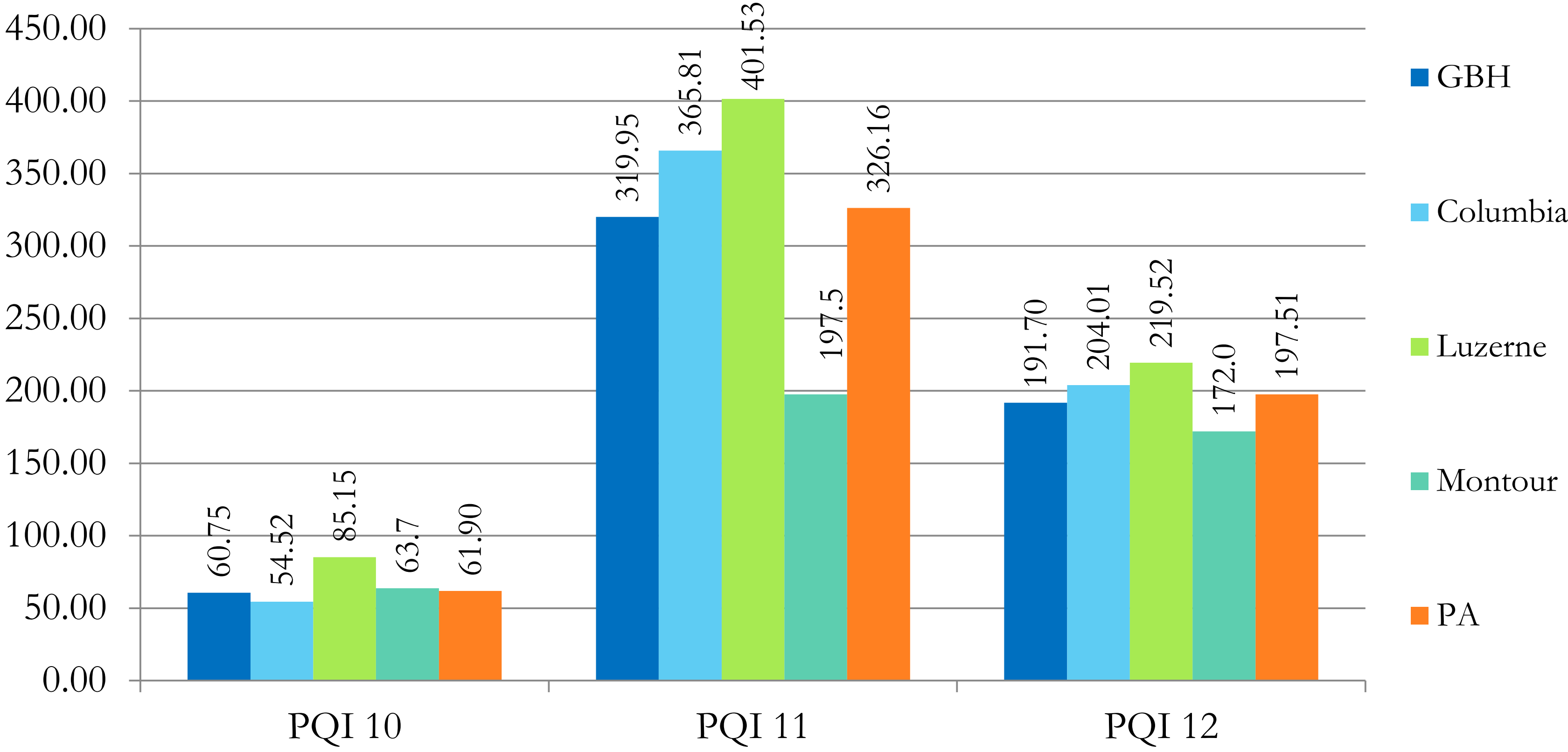
Heart Conditions



PQI 7 Hypertension Admission Rate
PQI 8 Congestive Heart Failure Admission Rate
PQI 13 Angina Without Procedure Admission Rate

Source: AHRQ

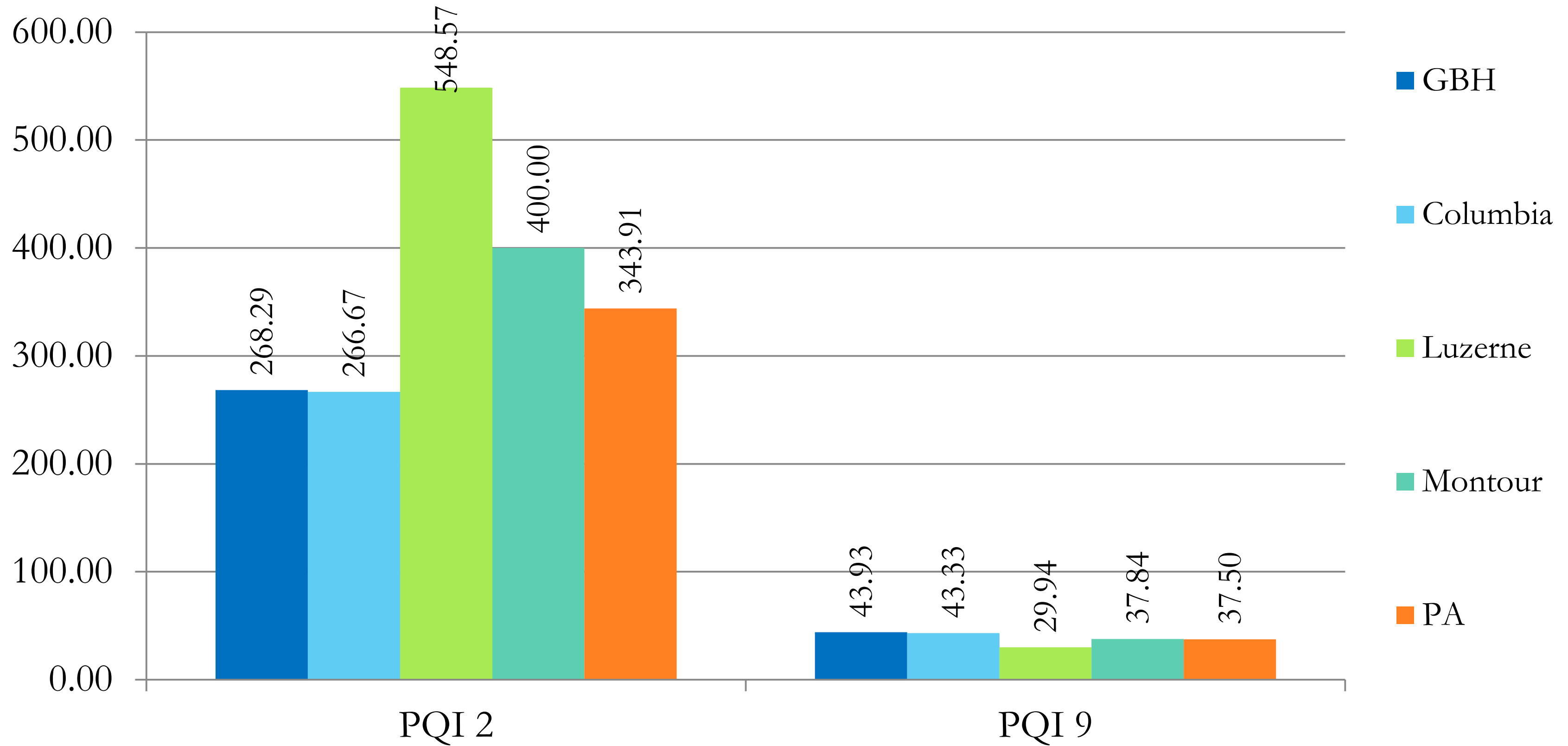
Other Conditions



PQI 10 Dehydration Admission Rate
PQI 11 Bacterial Pneumonia Admission Rate
PQI 12 Urinary Tract Infection Admission Rate

Source: AHRQ

Other Conditions



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

Source: AHRQ

GBH– Initial Reactions to Secondary Data

- The consultant team has identified the following data trends and their potential impact:
  - The GBH 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 five years. This is important to note when assessing morbidity and mortality data as the different age groups encounter different health care needs.
  - The highest CNI score for the GBH study area is for the town of Bloomsburg (17815) with a score of 3.4. The highest CNI score indicates the most barriers to community health care access.
  - The weighted average CNI score for the entire GBH study area is 2.9. A CNI score of 2.9 is below the average for the scale (3.0) - indicating slightly fewer barriers to community health care access.
  - Overall, the GBH study area saw an increase in its CNI score from a 2011 CNI score of 2.7 to a 2014 CNI score of 2.9 (an increase of 0.2). This indicates a rise in the number of barriers to health care for the GBH service area population.
  - The County Health Rankings show that Luzerne County has a poor (unhealthy) ranking for social and economic factors of 63 out of 67. This is a significant shift in ranking as Luzerne ranked 32 for social and economic factors in 2011. Luzerne County also performs poorly for a number of health outcomes, as well as having the highest smoking, obesity and drinking rates in the GBH Service Area.
  - Columbia county ranks poorly (unhealthiest) in Clinical Care (34). The county saw the greatest negative shift from 2011 to 2014 in terms of Mortality – Length of Life, dropping from a rank of 7 to 40.
  - The GBH study area has lower preventable hospital admission rates for 8 of the 14 PQI measures than the state of Pennsylvania (Asthma in Younger Adults, Diabetes Short-Term Complications, Diabetes Long-Term Complications, Hypertension, Congestive Heart Failure, Angina Without Procedure, Dehydration, Bacterial Pneumonia, Urinary Tract Infection).
  - Between 2011 and 2014, GBH preventable admissions decreased in 10 of the 14 subgroups. This demonstrates that GBH has lowered its preventable hospital admission rates in a number of categories in the last few years.