ALLIED SERVICES
REHABILITATION HOSPITAL
AND JOHN HEINZ
REHABILITATION HOSPITAL
COMMUNITY HEALTH
NEEDS ASSESSMENT
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Introduction

Allied Services Integrated Health System (ASIHS) engaged Tripp Umbach to facilitate, design and manage a comprehensive Community Health Needs Assessment (CHNA) on behalf of Allied Services Rehabilitation Hospital (Scranton, Pennsylvania) and John Heinz Rehabilitation Hospital (Wilkes-Barre Township, Pennsylvania). In keeping with Allied Services Integrated Health System’s commitment to advance the health, life quality and independence of northeastern Pennsylvanians, the CHNA was designed to develop information and insights concerning regional health and welfare. The CHNA process conforms to I.R.S. 501(r)(3), which requires that nonprofit hospitals conduct a community health needs assessment at least once every three years, as set forth in the Patient Protection & Affordable Care Act.

A community health needs assessment was conducted between October, 2014 and March, 2015. As partnering hospitals in a regional collaborative effort to assess community health needs, Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital also consulted with hospitals and outside community-based organizations in the surrounding region (including Lackawanna, Luzerne, and Wayne Counties) during the CHNA. The following is a list of organizations that contributed to the CHNA process in some way:

- Advocacy Alliance
- Alzheimer's Association - NE Region/Greater Pa Chapter
- ARC of Lackawanna County
- Area Agency on Aging of Lackawanna County
- Catholic Social Services
- GHS Family
- Healthy Northeast Pennsylvania Initiative
- Individual Abilities In Motion
- Lackawanna County Department of Human Services
- Lackawanna County Medical Society
- Luzerne County Medical Society
- Luzerne Foundation / Healthcare Fund
- NHS Human Services
- Northeast Regional Cancer Institute
- Northeastern Pennsylvania Healthcare Foundation
- Office of Vocational Rehabilitation
- PA Department of Health
- Panuska College for Professional Studies-The University of Scranton
- Pennsylvania Department of Health, Northeast District
- Rehabilitation Community Providers Association (RCPA)
- Scranton Chamber of Commerce
- Scranton Counseling Center
- Scranton Primary Health Care Center
- Scranton School District
- The Commonwealth Medical College
- The Edward R. Leahy Jr. Center Clinic for the Uninsured
- The Wright Center
- United Neighborhood Centers
- United Way of Lackawanna & Wayne Counties
- United Way of Wyoming Valley
- Volunteers in Medicine Free Clinic
- Wilkes-Barre City Health Department
The community health needs assessment process undertaken by Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 rehabilitation hospital facilities, including those with special knowledge of public health issues, data related to vulnerable populations and representatives of vulnerable populations served by the hospitals. Tripp Umbach worked closely with leadership from Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital and a project oversight committee to accomplish the assessment.
Community Definition

The community served by the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital includes Lackawanna, Luzerne, and Wayne Counties. The hospitals’ primary service areas include 43 populated zip code areas where 80% of the hospitals’ inpatient discharges originated (see Table 1). Zip code areas that define P.O. boxes and corporate offices are excluded due to the absence of data associated with these areas. In addition to the geographic parameters used to define the communities served by Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital, additional attention was paid to data related to persons with disabilities, serious injuries or chronic illnesses due to the specific populations served by both rehab hospitals.

### Allied Services Rehabilitation Hospital & John Heinz Rehabilitation Hospital Zip Codes

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Consultant Qualifications

Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 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:

A Guide for Implementing Community Health Improvement Programs:
Project Mission & Objectives

The mission of the CHNA completed for both Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital is to understand and plan for the current and future health needs of residents in their community. The goal of the process is to identify the health needs of the communities served by the hospitals, 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 that were partners in the community health needs assessment.

The objective of this assessment is to analyze health-related indicators related to the specific populations served by rehabilitation hospitals (i.e., persons with disabilities, serious injuries and chronic illnesses), 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 persons with disabilities, serious injury and/or chronic illness, underrepresented racial/ethnic/cultural and linguistic backgrounds were 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 were 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 supplementing 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.

- Developing a CHNA document as required by the Patient Protection and Affordable Care Act (ACA).
Tripp Umbach facilitated and managed a comprehensive community health needs assessment on behalf of Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital, which resulted 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 facilities, 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 Services Rehabilitation Hospital and Rehabilitation Hospital and other participating hospitals and organizations (i.e., Geisinger Community Medical Center, Geisinger Wyoming Valley Medical Center). 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 a comprehensive analysis of health status and socio-economic environmental factors related to the health of residents of the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 data sources. This process lasted from October 2014 until March 2015.

- **Trending from 2012 CHNA:** In 2012, Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital collaborated with the health provider partners of the Healthy Northeast Pennsylvania Initiative to complete a CHNA for the same counties included in the service area (Lackawanna and Luzerne Counties). The data sources used were not the same data sources from the current CHNA. However, Tripp Umbach used data for the same years which made it possible to review trends and changes across the hospitals’ service area. When possible, findings from the previous CHNA have been included in the executive summary “Key Community Health Priorities”. There were several data sources with changes in the definition of specific indicators, which restricted the use of trending in several cases. The factors which could not be
trended are clearly defined in the secondary data section of this report.

- **Interviews with Key Community Stakeholders:** Tripp Umbach worked closely with the CHNA oversight committee to identify leaders from organizations with 1) Public Health expertise; 2) Professionals with access to community health related data; and 3) Representatives of underserved populations (i.e., children, seniors, low-income residents, homeless individuals, persons with disabilities, Latino(a) residents and residents that are uninsured). These community leaders were interviewed as part of the needs assessment planning process. A series of 24 interviews was completed with key stakeholders in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 266 surveys were collected in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospitals’ service area which provides a +/- 6.01 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., The Volunteers in Medicine Free Clinic, the United Way of Wyoming Valley, Wayne County CareerLink, NHS Human Services, The Edward R. Leahy Jr. Center Clinic for the Uninsured, Trehab, The Wright Center, Abington Senior Center/Telespond Senior Services, Kingston Active Adult Center/Luzerne County Area Agency on Aging, Allied Services In-Home Services and Allied Services Waiver Program) providing services to vulnerable populations in the hospitals’ 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), persons with disabilities, and residents that were under/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 5, 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital community.

Public comment regarding the 2012 CHNA and implementation plan: Tripp Umbach solicited public comment from community leaders and residents. Commenters were asked to review the CHNA and Action Plan adopted by Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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. The seven question questionnaire was offered in hard copy at two locations inside the hospitals 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 each 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. Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital did not receive any feedback related to the previous CHNA or implementation plan during the collection period.

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 six community health priorities in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital community. Community leaders identified the following top community health needs that are supported by secondary and/or primary data: 1) Senior health; 2) Healthcare for persons with disabilities; 3) Behavioral health and substance abuse; 4) Affordability of care; 5) Resource awareness and health literacy; and 6) Oral health for adults and children. A summary of the top needs in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital community follows:

SENIOR HEALTH

**Underlying factors** identified by secondary data and primary input from community leaders, and community stakeholders:

1. Affordable evidence-based health services are needed to facilitate senior wellness and independence

2. Senior poverty is pervasive in the area, causing limited access to medications, transportation and health services.

3. Some consumers may view chronic health problems and impairments as an inevitable part of the aging process. Consequently, they may postpone seeking care or following through on physician’s recommendations.

Senior health is the top health priority in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital communities due to the many age-related illnesses seen in inpatients served by the hospitals.

Community leaders, stakeholders and survey respondents agree that senior health is a top health priority:

- Secondary data related to prevalence and death rates clearly support the need to address senior health.
- Community leaders addressed senior health issues related to care coordination, supportive services, and the impact of poverty among seniors.
- More than one-half of all stakeholders discussed the health needs of seniors in the hospitals’ service area.
Findings supported by study data:

Affordable evidence-based health services are needed to facilitate senior wellness and independence

• Community leaders and stakeholders discussed the need for additional services to meet senior health needs due to a growing senior population in the service area causing a greater demand than current services can meet. Specifically, there is a reported need for adult day care, in home respite care, long-term care, geriatrics, community-based care coordination, quality home care, orthopedics, cardiovascular services, and treatment for cognitive disorders (i.e., Alzheimer’s disease, dementia, etc.). Community leaders and stakeholders felt that supportive services could allow seniors to remain independent in their own homes and support families caring for senior relatives, reducing the number of seniors in institutional settings.

• Evidence-based treatment is not always available and/or affordable for vulnerable populations of seniors (i.e., in-home care, length of hospital stay, etc.) due to insurance status, financial status, availability, etc. For example, insurance may not reimburse providers for an evidence based level of treatment necessary to ensure positive health outcomes and low-income residents may not be able to afford the additional charges. A lack of access to evidence based treatment can lead to poorer health for seniors.

• According to Hospital Discharge Data from the Pennsylvania Health Care Cost Containment Council (PHC4), fall injuries accounted for 52.6% of all hospitalizations in Lackawanna County, and 50.9% of all Luzerne County hospitalizations in 2013. Statewide, this percentage was only 45%. Hospitalizations related to falls (see above) account for a greater percentage of all injury related hospitalizations the next greatest rate is represented by “Unspecified/Cause Unknown” at 12.3% and 12.6% respectively. The median cost for hospitalizations related to falls was $31,200 in Lackawanna County and $42,672 in Luzerne County.

• People 65 or older accounted for 55.8% of Lackawanna and 57.4% of all Luzerne County injury hospitalizations. Persons age 45 – 64 account for 23.6% and 21%, respectively, in these counties.

Senior poverty is pervasive in the area causing limited access to medications, transportation and health services.
Community leaders and stakeholders discussed the higher rates of poverty among seniors in the service area, which reportedly leads to difficulty accessing care and effective treatments. In addition, prescription medication can be expensive causing seniors to delay medical treatment or not follow treatment recommendations.

According to the Census Borough, the 2013 percentage of Seniors 65+ living in poverty in PA was 8%. Most of the zip code areas in the service area show at least 1 in 10 seniors 65+ living in poverty according to CNI data, with only 12 of the 43 zip codes in the service area showing at or below 8% of seniors living in poverty. The highest rates of senior poverty can be found in Scranton where 1 in 4 seniors are living in poverty. Additional areas where senior poverty rates are high are Archbald (16.6%), Olyphant (16.2%), and Hazleton (14.7%).

Stakeholders and community leaders believed that transportation is not always readily available to seniors, which can lead to limited access to health services as well as isolation for seniors in the most rural areas of the service area.

Poor follow-up and delayed care-seeking may stem from a belief that failing health and disability are inevitable consequences of aging.

Community leaders and stakeholders indicated that seniors and service providers alike may view chronic health problems and impairments as an inevitable part of the aging process (i.e., memory loss, hearing loss, vision loss, loss of balance, etc.).

Additionally, a decrease in physical activity for seniors can contribute to poor health and secondary illness.

HEALTHCARE FOR PERSONS WITH DISABILITIES

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

1. Care coordination and supportive services are needed to improve the health of persons with disabilities.

2. The infrastructure and lack of transportation for persons with disabilities may reduce access to health services.

Data, community leaders, and stakeholders agree that healthcare for persons with disabilities is a top health priority:

- Secondary data related to prevalence rates clearly support the need to address healthcare for persons with disabilities.
Community leaders focused their discussions primarily on supportive services, available resources, the impact of living in a rural area, care coordination, and the sensitivity of health services to the needs of residents with disabilities.

Stakeholders expressed the view that a shortage of transportation and transportation infrastructure create barriers to healthcare for people with disabilities.

Findings supported by study data:

Care coordination and supportive services are needed to ensure positive health outcomes.

- According to data provided by the U.S. Census Bureau, American Community Survey, the 2013 Estimated Population with Disability by Age and Disability Type for Lackawanna and Luzerne Counties is slightly higher in every age group than the state average.
  - Lackawanna and Luzerne Counties both show higher rates of residents with a cognitive difficulty between the ages of 5 and 64; whereas 65+ rates are on par with State rates. Conversely, both counties show higher rates of disabilities related to an ambulatory difficulty for all age groups with the exception of Lackawanna County residents 5 to 17 years old when compared to state rates.
  - Residents 18 to 64 years old in both Lackawanna and Luzerne Counties show higher rates of disabilities related to a cognitive difficulty, an ambulatory difficulty, a self-care difficulty and an independent living difficulty when compared to state rates.
  - Residents with independent living difficulty show the greatest departure from state rates; particularly among residents 18-64 (Lackawanna- 5.5%, Luzerne-4.6%, and PA- 3.9%) and 65 and over (Lackawanna- 18.5% and PA- 14.7%).

Table 2: 2013 Estimated Population with a Disability, By Age and Disability Type – Luzerne & Lackawanna Counties

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<td>% of Age Group</td>
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<td>% of Age Group</td>
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<td>with a Disability</td>
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<td>Total civilian non-institutionalized pop.</td>
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Reportedly, residents with disabilities in rural areas do not always have access to support systems like family, friends or home care options, which can leave them isolated and unable to meet healthcare and basic needs. Community leaders and stakeholders discussed the need for additional supportive service including care coordination and transitional services for residents with disabilities who lack adequate family supports.

There are reports of shortcomings in the health service delivery system:

- Residents that have cognitive/neurological disabilities co-occurring with psychological issues are not always receiving the appropriate psychological diagnosis due to symptoms being overlooked and/or misdiagnosed.
- The region has relatively few dental care providers who accept patients with serious intellectual/developmental disabilities. Provider acceptance of Medicaid may be a contributing factor.

The infrastructure and lack of transportation for persons with disabilities may limit access to health services.

- There is a lack of transportation options for residents with disabilities to get to and from employment and or errands (e.g., grocery shopping, etc.) Residents with disabilities who do not have extensive family support and/or access to adequate in-home services can become isolated and unable to meet their basic needs in the most rural areas.
- There are limited employment options for residents with disabilities, which leaves them without the resources needed for basic necessities, transportation and/or accessible healthcare services.

**ADDRESSING NEEDS RELATED TO BEHAVIORAL HEALTH AND SUBSTANCE ABUSE**

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

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

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

3. The availability of substance abuse services (i.e., rehab, education, etc.) seems insufficient to meet the need in many communities.
4. Residents with a history of behavioral health and/or substance abuse issues 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 as well. Behavioral health and substance abuse were also, by far, the most discussed health needs among stakeholders during one-on-one interviews and survey respondents indicated that they do not have ready access to behavioral health services. Additionally behavioral health was identified as a common health issue during the 2012 CHNA that was completed in the hospitals’ service area:

“Mental health issues were stated to be a significant problem affecting the region. Bipolar disorder, depression and anxiety are said to be particularly high among young women. Interviewees indicated that the need for mental health services is on the rise, however, the availability of these services currently cannot support demand.”

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

- Secondary data related to provider ratios and suicide rates clearly support the need to address needs related to behavioral health and substance abuse
- Every stakeholder interviewed 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 and indicated services were not always available when needed.

Findings supported by study data:

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

- Persons with behavioral health problems may be reluctant to pursue recommended medical, psychological or dental care. Their reasons include financial and transportation barriers and fear of stigmatization.

\(^2 \text{Source: Community Health Needs Assessment: Healthy Northeast Pennsylvania Initiative} \)
• Behavioral health services can be fragmented, particularly at the intersection of behavioral health and medical health services. Stakeholders noted that primary care physicians may neglect to refer their patients for behavioral health evaluations.
• The limited integration between behavioral health, medical health and substance abuse providers presents challenges in the referral and follow up process for residents and providers alike, which make it difficult to treat co-occurring disorders.

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

• The 2012 CHNA completed in the hospitals’ service area found that:
  ✓ Despite differences in the types of stakeholders interviewed, there was consistency when it came to identifying common illnesses. Many agreed that the prevalence of mental illness surpasses physical illnesses. Specifically, there is more depression, anxiety, and bipolar disorder - which is appearing in children
• Psychiatric acute care beds have declined to the extent that residents must be placed outside the service area in many cases, which makes it more difficult to reintegrate into the community upon discharge from inpatient treatment.
• A lack of behavioral health providers has been discussed in the previous CHNA completed in the hospitals’ service area during 2012.
  ✓ One participant voiced that there should be more inpatient mental health and drug and alcohol treatment. Participants said that psychiatric inpatient treatment is no longer as readily available as it once was. Participants also said that the region’s mental health population has increased over the years and resources are insufficient to accommodate it. In addition, participants said funding cuts have handicapped and reduced the number of mental health programs, that the length of treatment at state hospitals is not adequate to deal with mental health needs, and there is a need for more outreach to local residents to promote the region’s mental health awareness and drug and alcohol 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). Lackawanna and Luzerne County survey respondents report higher rates of depression diagnosis (32.4% and 26.9% respectively) than is average for the state (18.3%) and nation (18.7%).
  ✓ 1 in 10 survey respondents from Luzerne County and Lackawanna County indicated that they needed and could not secure counseling services in the past year (10.2% and 11.1% respectively).
While there are behavioral health services, there is a shortage of services in relationship to the demand for adults and children alike. Long wait times for behavioral health services (i.e., free or reduced-cost clinics, psychiatry in general, inpatient and outpatient treatment), can cause care-seekers to drop out.

Table 3: County Health Rankings –Mental Health Providers (Count/Ratio) by County

<table>
<thead>
<tr>
<th>Measure of Mental Health Providers*</th>
<th>PA</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental health providers (count)</td>
<td>--</td>
<td>265</td>
<td>300</td>
</tr>
<tr>
<td>Mental health providers (ratio Population to provider)</td>
<td>623:01:00</td>
<td>807:01:00</td>
<td>1,067:1</td>
</tr>
</tbody>
</table>

*County Health Ranking 2014

Lackawanna, Luzerne, and Wayne Counties show a far greater ratio of population-to-provider (807, 1,067, and 2,062 population for every 1 mental health provider) than the state (623 population per provider).

The availability of substance abuse services (i.e., rehab, education, etc.) seems insufficient to meet the need in many communities:

- Lackawanna, Luzerne, and Wayne Counties show higher rates of death from drug poisoning (21.9, 18, and 18 per 100,000 population respectively) than the state (17.5 per 100,000 population), the nation (12.9 per 100,000 population).
- Approximately 1 in 3 (39.7%) in Lackawanna County and more than half (55.7%) of the Luzerne County survey respondents identified mental health when asked to select the top five concerns facing their community.
- Treatment for substance abuse is not readily available and there are lengthy waiting lists for inpatient treatment. Additionally, if an individual is known as a “repeat consumer” he or she may have a more difficult time securing inpatient treatment locally.
- Substance abuse treatment options are often unaffordable for residents with substance abuse issues due to limited income and a lack of insurance coverage.
- The most frequently abused substances appear to be methamphetamines, heroin, alcohol, marijuana, and tobacco.
- The 2012 CHNA completed in the hospitals’ service area found that:
  - Focus groups felt that much of the region’s substance abuse is “generational.” They agreed that parents who engage in substance abuse often transfer those habits to their children, and that treatment should also include parenting skills. The group also agreed that one of the region’s biggest problems is that, while
programs to address these issues are offered, they are not attracting those who would benefit from them the most.

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

- Lackawanna, Luzerne, and Wayne Counties show higher deaths due to suicide (14.5, 16.1, and 22.6 per 100,000 pop.) than state and national rates (12.5 and 12.3 per 100,000 population respectively). Wayne County’s suicide rate is much higher. Healthy People 2020 goal is set at 10.2 per 100,000 population.
- Lackawanna, Luzerne, and Wayne Counties show higher deaths due to drug poisoning (21.9, 18, and 18 per 100,000 population respectively) than the state (17.5 per 100,000 population), the nation (12.9 per 100,000 population).
- While stakeholders recognized substance abuse is a personal choice, they noted that it seems to be more prevalent among low-income individuals and is frequently a behavior “learned” from parents and/or older family members.
- There are limited services for residents that have been previously incarcerated for offenses related to addiction or mental illness. Previously incarcerated residents struggle securing employment, housing, and many other necessities. This often leads to homelessness, poor health and recidivism.
- Unmet needs for mental health/addiction recovery services result in: 1) The criminalization of behavioral illness and the increased consumption of health care resources as a result; and 2) Chronic mental illness and long-term addiction, both of which are associated with poor physical health.
- Often services are underfunded (i.e., behavioral health and substance abuse). Stakeholders indicated that there is a disconnect between funding and service providers to the extent that programs are not being fully funded to allow residents to receive evidence-based care to effectively treat common health issues (i.e., smoking, behavioral health, substance abuse, etc.). The frequency and/or duration of therapy may be insufficient to fully resolve behavioral health issues (i.e., inpatient treatments). Stakeholders questioned whether adequate resources exist to meet health needs in their communities.
- The 2012 CHNA completed in the hospitals’ service area found that:
  - When asked about access to health care in the region, participants said that the area includes many free health clinics. They also said that insurance doesn’t necessarily cover an adequate amount of time for individuals to be treated thoroughly, and that some problems, like mental issues, cannot be appropriately treated in a matter of days.
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, availability of qualified clinicians and caregivers vs. resident demand, and reluctance to seek treatment. 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:

- **Preventive screening:** Healthcare providers might incorporate questions on mental health status and drug/alcohol use in routine screenings, to encourage patient self-identification and treatment referrals similar to the tobacco screenings and referral processes in the ER. Providers have to increase their capacity and partnerships to be able to provide care when screenings turn up issues for patients.

- **Integration of service lines including behavioral health** has great potential for improving population health. Change the culture of health care delivery to a team-based delivery system which maximizes patient engagement and independence with integration of service lines including behavioral health.

**AFFORDABILITY OF CARE**

**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
3. Provider to population ratios that are not adequate to meet the need
4. Limited access to transportation is a barrier to care.

The need to increase access to affordable care options is identified as the second 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. Often, there is a high correlation between poor health, consumption of healthcare resources, and the
geographic areas where socio-economic indicators (i.e., income, insurance, employment, education, etc.) are the poorest.

During the 2012 CHNA completed in the hospitals’ service area the study found that: “When asked whether or not they perceived access to health care as problematic, inadequate transportation outside cities, high costs, and availability of health care professionals were cited among interviewees as significant barriers to receiving quality care.”

- Secondary data related to provider ratios, disease prevalence rates, socio-economic barriers to accessing healthcare (i.e., CNI), and poor health (e.g., amputations, death rates, etc.) support the need to increase access to affordable care options for residents.
- Community leaders focused discussions about affordability around Medicaid access issues, issues for undocumented residents, health insurance, and care coordination.
- Two-thirds of the stakeholders interviewed discussed a lack of availability of affordable health services (medical, dental, behavioral) in the hospitals’ service area.
- 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 hospitals’ 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 whose immigration status makes them ineligible for health insurance will remain ineligible for any type of assistance.3

- Adults and children who are not U.S. citizens may lack the documentation needed to apply for health insurance and, consequently, may be ineligible for the services of FQHCs and free clinics., which is also required by many free clinics and FQHCs to qualify

3 Source: Kaiser Family Foundation analysis based on 2014 Medicaid eligibility levels and 2012-2013 Current Population Survey
for services. The un-insured homeless also face significant challenges in securing appropriate medical, dental and vision care, medication and medical supplies.

- Children in the mid-income bracket may be uninsured for primary and preventive care. Residents may not qualify for CHIPS and children are left uninsured. There are some clinics that provide care to this population, but if families are not able to access these clinics, then these children don’t receive preventive care, routine care, or any type of care coordination. There is a shortage of providers that offer care to residents with Medicaid insurance.

- Stakeholders articulated that uninsured and under-insured residents may resist seeking health services (including medication, preventive, and/or routine care, etc.) due to the cost of care, unaffordable copays, and/or high deductibles. Health services may be unaffordable for families that do not qualify for assistance. 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 ineligible 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 insurance through employers are not eligible for tax credits.\(^4\)

- Of the survey respondents from Lackawanna and Luzerne Counties that indicated they had no health insurance (26.1% and 22.2% respectively), the most common reason is because they can’t afford it (47.2% in Lackawanna and 44% in Luzerne, respectively) with ineligibility being the second most common reason (30.6% and 24% respectively).

- Most respondents in both counties reported either never needing health services or needing and having no problem securing those services. Similar results were reported during the 2012 CHNA completed in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital area:
  - About 15 percent indicated that they did not get treatment when they needed it, while 25 percent said that cost and not knowing where to go were the primary factors that prevented them from getting treatment

Provider to population ratios were inadequate to meet the need

- Lackawanna, Luzerne, and Wayne Counties all have fewer Primary care providers than is average for PA (92.7 per 100,000 population).
  - Lackawanna County shows 85.9 per 100,000 population primary care providers
  - Luzerne County shows 71.1 per 100,000 population primary care providers

\(^4\) Source: Kaiser Family Foundation analysis based on 2014 Medicaid eligibility levels.
Wayne County shows 41.5 per 100,000 population primary care providers

- Reportedly, the shortage of health professionals (i.e., primary care physicians, some specialists, general psychiatrists, qualified nurses, aides, qualified direct care workers, geriatricians, orthodontists, neurologists, child psychiatrists, pediatric dentists, and dentists accepting Medicaid) is compounded by the difficulty in recruiting new professionals to the poorest and most rural areas in the hospitals’ service area. There is a lack of general psychiatry, dental care, preventive care, and psychiatric inpatient/outpatient care in the area.

Poverty increases the barriers to accessing healthcare:
- The Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital service areas show an average annual household income of $63,966\(^5\). Generally, rural areas show lower income levels as compared with more urban areas.
- Higher CNI scores indicate a greater number of socio-economic barriers to community health. The overall CNI score for the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area is 2.9. The average CNI score for the scale is 3.0 (range 1.0 to 5.0).
- The zip code areas that showed higher CNI scores have worsened since 2011, while those zip code areas with lower CNI scores improved. There were 9 zip code areas that saw an increase in the barriers to accessing healthcare (+0.2 to +0.6); whereas 14 zip code areas that saw a decrease or no change at all (0.0 to -0.4). There are several areas within the study area that show much greater barriers to accessing healthcare: Scranton (18503, 18508, 18505, and 18510); Hazleton (18201 and 18202); Glen Lyon (18617); and Wilkes-Barre (18701 and 18702). These are the areas where poverty rates are the highest, educational attainment is the lowest, unemployment rates are high and the rates of residents with limited English speaking skills are the highest. The highest uninsured rates in the service area are found in these zip codes and highest prevalence of poor health can be found where the greatest consumption of healthcare resources takes place.
- Poverty can be connected to 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. Additionally, homeless residents do not have access to a refrigerator or stove, which makes it difficult to eat healthy. It can be difficult

for many homeless diabetics to proactively manage their chronic illness since many shelters do not offer diabetic-friendly options. Nutritional options are further restricted for homeless persons with dental issues.

- There are pockets of poverty where health services are available but not accessible. There is reportedly a lack of providers (i.e., specialists, dentists, etc.) taking new patients that are covered by Medicaid. Additionally, the issues with transportation in the area further magnify the barriers to care in the service area.

- The previous CHNA completed in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area found in a focus group setting that:
  - All participants agreed that physically or mentally challenged residents need better access to quality health insurance. One woman noted that she could not find a specialist who was covered [sic.] by her insurance, and said that many physicians “don’t accept Medicaid and Medicare because the state requires too much paperwork.”
  - All respondents said that they are forced to spend a great deal of time on the phone calling providers to see if they accept their insurance. Many also felt prescription medications are too expensive, and have arrived at pharmacies only to find out that their prescriptions are not covered by their health insurance.

Limited access to transportation is a barrier to care.

- Many respondents indicated that their primary form of transportation is some method other than their own car in Lackawanna (45.3%) and Luzerne (37.2%) Counties, using a family/friend’s car (26.2% and 18.5% respectively), public transportation (11.3% and 17.4 respectively), and walking (7.8% and 1.1% respectively) as an alternative. 

6 The findings of survey responses may not represent the general population due to survey methods which targeted vulnerable populations (i.e., seniors). As a result, this distribution may not be representative of transportation patterns for the general population.
Residents may not be able to follow through with more intensive treatment regimens (i.e., chemo or dialysis) due to the location of services and lack of transportation. Increasing access to affordable 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, including:

- While community-based organizations, agencies, and health providers collaborate effectively now, *insurance companies could incentivize* more formal collaborations with an aim of improving population health.
- **Implementing evidence-based medicine to treat health issues** and address health needs, which will take continued collaboration among community organizations and a commitment to evidence-based practices.
- **Increase homecare** and additional support to maintain residents in home settings.
- **There is a need for education about effective health care** and focus on patient engagement and promoting healthy lifestyles. Patients crave involvement in developing plans of care for their medical problems.
- **Employee health programs and school-based health programs** are multipliers of the benefits of population health practices, and there is little evidence of such practices in the service area.
RESOURCE AWARENESS AND HEALTH LITERACY

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

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

2. Need to increase awareness and care coordination

Improving resource awareness and health literacy is identified as the third health priority for Allied Services Rehabilitation Hospital/John Heinz Rehabilitation Hospital. There is a more diverse population in the hospitals’ service area than is average for the state making cultural competence important to address. Additionally, there are limited English speaking skills making health literacy and system navigation a health concern; 9.4% of the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area population identifies as Hispanic, compared to only 6.5% of the Pennsylvania population. There is agreement across data sources in support of improving resource awareness and health literacy of residents in the hospitals’ service area.

- Secondary data related to prevalence rates and mortality from lifestyle-related conditions and illnesses clearly support the need to reduce the impact of health concerns related to lifestyle.
- Community leaders focused their discussions primarily on language barriers, system navigation issues, the education of vulnerable populations, and the cultural sensitivity of written information distributed to patients and consumers.
- Two-thirds of the stakeholders interviewed discussed the need for increasing awareness and care coordination as well as the impact of language barriers on health literacy.
- Survey respondents indicated preferences related to receiving information (i.e., dissemination methods and language preferences) which supports the need to improve resource awareness and health literacy.
Findings supported by study data:

Language barriers related to accessing care and understanding care provided:

- The Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area report higher rates of Hispanic minorities as compared with the state average; 9.4% of the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area population identifies as Hispanic, 8.5% of the Luzerne County population, and only 6.5% of the Pennsylvania population identifies as Hispanic. The areas with the greatest concentration of residents with limited English speaking skills are Hazleton 18201-10.3% and 18202 – 7.1% of the population report limited English speaking skills. Wilkes-Barre also shows higher percentages of residents reporting limited English skills than is average for the hospitals’ service area. Lackawanna County does not show the same percentage of limited English speaking skills as Luzerne County.

- Socio-economic status may pose additional challenges to residents navigating available resources. For example, there are specific physicians that accept Medicaid insurance, however, many health care professionals do not accept new patients with Medicaid coverage.

- Language barriers cause challenges to the efforts of providers to improve health literacy and awareness of health services and resources. While most respondents did not prefer to receive health services in a language other than English (89.6% and 84.6% respectively), 8.9% of respondents reported this preference in Lackawanna County and slightly more (12.1%) in Luzerne County.

- The previous CHNA completed in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area found in a focus group setting that:
  - The language barrier among this population is also an issue. There are very few or no providers speaking Spanish or any Indian dialects and none able to work with the region’s growing Russian and Bhutanese populations. Most state and local government paperwork is in English only. Further, individuals in social services, mental and behavioral, child protective services, and law enforcement have little or no foreign language skills.

- The previous CHNA completed in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area found in a focus group including four members of Scranton’s Hispanic/Latino community:
  - Participants agreed that there is a lack of communication, and that this results in not knowing about services offered

Need to increase awareness and care coordination:
• As rates of insured residents increase, residents will need assistance navigating the health services that exist because some have no experience with the health system. Often services are available, but they are fragmented and many residents may not be aware of what is available. Specific populations impacted by the lack of care coordination are persons with disabilities, seniors, residents with limited English speaking skills, residents with a history of behavioral health needs, homeless individuals, and persons with a new diagnosis. Residents are not always aware of how to navigate the health system, which can be compounded by language, literacy, and cultural challenges. Additionally, residents are not always being assessed to determine their level of understanding and health literacy.

• Care coordination and transitional care\(^7\) are not always available due to lack of funding for these activities, though they are needed by vulnerable residents. While the increase in urgent care clinics/walk-in clinics has provided greater access to health services for insured residents, they have reduced care coordination, medication management (services not practiced by most walk-in clinics), limiting the continuity of care residents are receiving, and leading to poorer health for some residents. Survey respondents echoed the need for care coordination with approximately 1 in 4 respondents reporting that they did not understand what was happening during a time when they (or a loved one) had to transition from one form of care to another. The most common recommendations related to care transitions was better explanation of the process (34%), and additional instructions (50%). Most respondents indicated they get information about services in their community by word of mouth in both Lackawanna (63%) and Luzerne (53.9%) Counties.

\(^7\) Transitional care refers to the coordination and continuity of health care during a movement from one healthcare setting to either another or to home, called care transition, between health care practitioners and settings as their condition and care needs change during the course of a chronic or acute illness.
Health literacy can impact the level of engagement with health providers at every level limiting preventive care, emergent care, and ongoing care for chronic health issues. Primary data collected during this assessment from community leaders and residents offered several recommendations to improving resource awareness and health literacy some of which include:

- **Increase outreach education.** They recommended professionals that are culturally competent to conduct health education outreach in a culturally sensitive way.
- **Begin using AHEC groups** to get people to go into health care professions to represent a cultural competence in order to ensure that minorities are represented in the professions that are providing services to residents.

**ORAL HEALTH**

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

1. Presence of barriers related to language
2. Need to increase awareness of the importance of good oral hygiene, availability of services and care coordination

While there were multiple health concerns presented in the data, leaders identified improving oral health as the fourth and final health priority for Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital. Leaders felt that the need is great for oral health and the lack of services impacts everything from substance abuse to chronic health issues that result from a lack of access to routine dental treatment. These data sources identified a need for improved access to dental services:

- Community leaders focused their discussions primarily on the need for additional pediatric and adult dental providers.
- 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 dental health. The lack of fluoride in the water impacts the dental health of residents.
- Survey respondents reported issues accessing care.

**Need to increase access to oral health services for low-income residents**

- While medical insurance coverage rates are expected to increase during 2015, the same cannot be said for dental insurance rates. The greatest issue related to dental care is the number of providers caring for pediatric patients and residents insured with Medicaid.

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8 Leaders identified an underlying factor driving the rates of substance abuse among residents as the initial need for prescription pain medication to manage dental pain.
While Lackawanna County and Luzerne County both have similar rates of dental providers when compared to the state (67.2 and 57.1 per 100,000 population respectively), there is no measure of dental providers that accept Medicaid. Furthermore, while there are a few dental providers accepting Medicaid, reportedly they are not accepting new patients. Also, there is a dental clinic in the service area; however, it is small and patients may wait up to three months for an appointment. Several free clinics have been expanded in the service area (i.e., The Wright Center, The Leahy Center, etc.) giving hope that dental care is forthcoming for low-income residents.

Dental insurance is not often provided by employers leaving many residents uninsured, which was reflected in survey findings with 15.5% of respondents in Lackawanna County and 10.4% in Luzerne County indicating they did not secure dental services due to a lack of insurance and 12% of respondents in Lackawanna County indicating dental services are not available to them.

The CHNA completed in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital service areas in 2012 found that:

- Medicare and Medicaid patients have experienced difficulties in finding health care providers that treat patients covered under these programs – particularly among dentists, orthodontists and oral surgeons. Further, for Medicaid patients, there are only a few locations in Pittston, Wilkes-Barre and Mountain Top that will provide care.

Access to dental health services is an identified need due to the limited number of providers accepting Medicaid patients, lack of pediatric providers and the lack of affordable care options (i.e., dental insurance, uninsured care, etc.). Poor oral health has an impact on physical health and economic health making it an important health priority for community leaders.
Community Health Needs Identification Forum

The following qualitative data was gathered during a regional community planning forum held on March 5, 2015 in Moosic, PA. The community planning forum was conducted with more than 40 community leaders from a three county region (Lackawanna, Luzerne, and Wayne Counties). Community leaders were identified by the community health needs assessment oversight committee for Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital. The community forum was conducted by Tripp Umbach consultants and lasted approximately four hours.

Tripp Umbach presented the results from secondary data analysis, community leader interviews, and community surveys, and used these findings to engage community leaders in a group discussion. Community leaders were asked to share their vision for the community they represent, discuss an action plan for health improvement in their community and prioritize their concerns. Breakout groups were formed to pinpoint, determine, and identify issues/problems that were most prevalent and widespread in their community. Most importantly, the breakout groups were charged to identify ways to resolve their community’s 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital service area. Below is a brief summary of the recommendations: Community leaders recommended

- **Evidence-based, multi-sector programming:** Indicating that there are community-based strategies available, though not in use in their communities, which are evidence-based practices that address some of the health needs discussed (i.e., tobacco use, health literacy, etc.). Leaders further stressed that it will be important to focus planning efforts on evidence based strategies to address the health needs in the area.

- **Additional education and outreach efforts targeting vulnerable populations:** Increasing education and outreach efforts to target vulnerable populations related to common health issues, (i.e., diabetes, COPD, etc.) health services, (i.e., preventive care, screenings, free clinics, etc.), and healthy behaviors (i.e., smoking cessation, nutrition, physical activity, etc.). These programs would be culturally sensitive and
aimed at improving health literacy. Health literacy could be further improved by providers assessing individual patients to ensure adequate understanding.

- **Risk stratification in behavioral health:** Lower risk behavioral health disorders can be managed in a primary care setting, while serious mental illness requires behavioral health professionals to evaluate, manage medications and coordinate care.

- **Increase the collaboration among providers:** Providers collaborate more in order to maximize resources, reduce duplication in an effort to increase sustainability of programs.

- **Increase access to dental health services:** Increasing the awareness of the dental health services and need for regular oral health care that as well as increasing the number of providers.

- **Increase the availability of care coordination:** Care coordination and transitional care services (i.e., in-home support services) be increased in the area in order to insure safe transition from care setting outside the home back to residents’ homes.

**Problem Identification:**

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

1. Behavioral Health and Substance Abuse
2. Access to Care
3. Resource Awareness and Health Literacy
4. Oral Health (Adults and Pediatric)
5. Senior Health
6. Healthcare for Persons with Disabilities

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 tackle.

**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 impact on child development, the limited number of providers, and the need for care coordination.

**Perceived Contributing Factors:**

- Behavioral health and substance abuse diagnosis impacts the ability of parents to provide adequate care for children and child development.
- 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.

**Affordability of Care:**

Community leaders identified affordability of care as a health priority. Leaders focused discussions around Medicaid access issues, issues for undocumented residents, health insurance, and care coordination.

**Perceived Contributing Factors:**

- There are not enough primary care providers accepting new patients with Medicaid.
- There are residents who are not able to afford health insurance.
- There is a population of undocumented residents that do not have access to Medicaid (including children). Many free clinics in the area require specific forms of identification that undocumented residents do not have access to thus causing undocumented residents to have little to no access to affordable healthcare.
- Efforts to address the health needs of working poor residents are not always evidence-based and/or sustainable.
- Care coordination and transitional care are not always available due to lack of funding for these activities, though it is a need among the vulnerable population.

**Resource Awareness and Health Literacy:**

Community leaders discussed resource awareness and health literacy as a top health priority. Community leaders focused their discussions primarily on language barriers, system navigation issues, the education of vulnerable populations, and the cultural sensitivity of current literature in the community.
**Perceived Contributing Factors:**

- Language barriers cause challenges to efforts to improve health literacy and awareness of health services and resources.
- Socio-economic status may pose additional challenges to residents navigating available resources. For example, there are specific physicians that accept Medicaid insurance; however, many health care professionals do not accept new patients with Medicaid coverage.
- While there are educational programs provided in the community, they don’t show sensitivity related to literacy, language, lack of documentation, limited financial resources, and the overall understanding of culture. Different approaches are necessary to target vulnerable populations to effectively share information about health conditions and healthy living.
- Residents are not always being assessed to determine their level of understanding and health literacy.

**Oral Health (Adult and Pediatric):**

Community leaders discussed oral health as a top health priority. Community leaders focused their discussions primarily on the need for additional pediatric and adult dental providers.

**Perceived Contributing Factors:**

- There is a need for pediatric oral healthcare.
- Residents are not always aware of the dental services available in the community.
- There are insufficient low-cost or reduced dental services to meet the oral health needs of residents.

**Senior Health:**

Community leaders identified senior health as a top health priority. Community leaders focused their discussions primarily on care coordination, supportive services, and the impact of poverty among seniors.

**Perceived Contributing Factors:**

- Access to services that allow seniors to remain independent (i.e., in home services) may be limited due to insurance status, financial status, availability, etc.
- Families caring for seniors at home may need additional support (i.e., day programs, respite, etc.).
• Poverty among seniors is high, which often leads to difficulty accessing care and effective treatments.
• Transportation is not always readily available to seniors.
• Evidence-based treatment is not always available and/or affordable for vulnerable populations of seniors (i.e., in home care, length of hospital stay, etc.)
• Prescription medication can be expensive causing seniors to delay medical treatment or not follow treatment recommendations.
• Seniors are not always aware of the existence of different available services and the eligibility requirements. Thus, seniors do not access and utilize what they are qualified for.
• Community-based care coordination is not always available to seniors.
• Decreased levels of physical activity can lead to poor health.
• Seniors may have the perspective that health issues are a part of getting old, which can cause a delay in seeking medical care prior to a health concern becoming emergent.

HEALTHCARE FOR PERSONS WITH DISABILITIES:

Community leaders identified healthcare for disabled residents as a top health priority. They focused their discussions primarily on supportive services, available resources, the impact of living in a rural area, care coordination, and the sensitivity of health services.

Perceived Contributing Factors:

• Access to services that allow seniors to remain independent (e.g., in home services) may be limited due to insurance status, financial status, availability, etc.
• Families caring for seniors at home need additional support (e.g., day programs, respite, etc.).
• Providers, support programs and insurers have differing standards/definitions for “disability.” These differences can cause confusion, frustration and discontinuity in care.
• Care coordination and/or transitional care are limited for residents with disabilities.
• Lack of transportation can make it difficult to access healthcare in rural areas.
• Dental care providers may be ill-equipped to serve persons with intellectual/cognitive disabilities. Unemployment and under-employment are associated with significant barriers to healthcare (e.g., lack of insurance, insufficient income, poor nutrition).
• For individuals who have cognitive/intellectual disabilities along with symptoms of mental illness, accurate diagnosis and appropriate care may be lacking.
• Community leaders expressed the view that institutional care for individuals with extreme intellectual as well as physical disabilities residents is lacking, which may cause isolation and inadequate supportive services.
Secondary Data

Tripp Umbach worked collaboratively with the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area encompasses Lackawanna and Luzerne Counties, and is defined as a zip code geographic area based on 80% of the hospitals’ inpatient volumes. The Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital community consists of 43 zip code areas.

Demographic Profile – Key Findings:

Lackawanna County is projected to experience almost no change in population over the five years 2014-2019, at a rate of 0.1% (approximately 118 additional residents). Luzerne County, on the other hand, is projected to experience a slight rise in population over the next five years at a rate of 0.1%, approximately 450 new residents.

Both Lackawanna and Luzerne counties report higher rates of elderly residents (18.9% and 19.1% respectively) as compared with state and national norms (16.6% and 14.2% respectively). And this population is projected to increase in the next five years.

Both Lackawanna and Luzerne counties report higher rates of residents under the age of 65 with a disability (9.8% and 10.6% respectively) as compared with the state and nation (9.2% and 8.4% respectively).

Lackawanna and Luzerne counties report lower rates of uninsured residents (11.8% and 12.7% respectively) as compared with the country (15.3%), but higher rates as compared with the state (11.5%).
Roughly one in every six residents of Luzerne County reports living in poverty (16.1%); this rate is higher than the rates seen for Luzerne County (14.6%), the state (13.7%) or the nation (14.5%).

Both Lackawanna and Luzerne counties show lower average annual household income levels as compared with the state ($69,931) and nation ($71,320).

Luzerne County reports the lower average annual household income level ($60,432) compared to Lackawanna County ($63,150).

Lackawanna and Luzerne counties report higher rates of households that earn less than $25K per year than the state and national norms (26.4% for Lackawanna County, 27.8% for Luzerne County, 24% for PA, and 24.5% for U.S.).

Luzerne County reports the highest rate of diversity with 14.3% of the population self-reporting as a race other than “White, Non-Hispanic”; 8.5% of whom identify as Hispanic (higher rate than the state at 6.5%). Some 12.1% of the Lackawanna County population identifies as a race other than “White, Non-Hispanic”; with 5.9% of this population identifying as Hispanic.

**Pennsylvania Behavioral Risk Factor Surveillance System**

By the early 1980s, scientific research clearly showed that personal health behaviors played a major role in morbidity and premature mortality. Although national estimates of health risk behaviors among U.S. adult populations had been periodically obtained through surveys conducted by the National Center for Health Statistics (NCHS), these data were not available on a state-specific basis. This deficiency was viewed as a critical obstacle to state health agencies trying to target resources to reduce behavioral risks and their consequent illnesses. National data may not be applicable to the conditions found in any given state; however, achieving national health goals required state and local agency participation.

As a result, surveys were developed and conducted to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. The basic philosophy was to collect data on actual behaviors, rather than on attitudes or knowledge, that would be especially useful for planning, initiating, supporting, and evaluating health promotion and disease prevention programs.

BRFSS marked its 30th year in 2013 and remains the gold standard of behavioral surveillance. Currently data are collected monthly in all 50 states, the District of Columbia, American Samoa, Palau, Puerto Rico, the U.S. Virgin Islands, and Guam. CDC will continue to work closely with state and territorial partners to ensure that the BRFSS continues to provide data that are useful for public health research and practice and for state and local health policy decisions.
The BRFSS gathers data at the national and state levels consistently.

More specific data, at the county or MSA level is gathered by states when possible.

Pennsylvania gathers BRFSS data for MSAs and certain counties.

The Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area encompasses Lackawanna and Luzerne counties.

The corresponding BRFSS region for the study area is Lackawanna/Luzerne/Wyoming.

This BRFSS region was compared to state benchmarks.

Data provided here is for the 2011-2013 timeframe.

The PA BRFSS gathers data in regions. The Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area includes Lackawanna and Luzerne counties; the corresponding BRFSS region therefore is the Lackawanna/Luzerne/Wyoming region. Data for this region was compared against state levels.

- The Lackawanna/Luzerne/Wyoming region reports higher rates as compared with the state for all of the BRFSS measures included for this report.
- 5% of the residents of Lackawanna/Luzerne/Wyoming report having had a stroke. This is higher than the state which reports a rate of 4% having had a stroke.
- More than a third (35%) of the Lackawanna/Luzerne/Wyoming populations report having arthritis. This is statistically significantly higher than the state rate at 29%.
- 11% of the population of Lackawanna/Luzerne/Wyoming counties report having health problems that require them to use special equipment. This is higher than the state norm of 9%.
Community Need Index (CNI)

In 2005 Catholic Healthcare West, in partnership with Thomson Reuters, pioneered the nation’s first standardized Community Need Index (CNI).9 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital zip code areas have a CNI score of 3.2, indicating an above-average level of community health need in the hospitals’ 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.

The highest CNI score for the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital study area is 4.8 in the zip code area of 18503-Scranton in Lackawanna County. The highest CNI score indicates the most barriers to community health care access. This zip code area holds the highest measures for the study area for:

- Rental activity at 93.8% (colleges/universities)
- Uninsured residents at 19.7%
- Residents without a high school diploma (28.4%)
- Residents aged 65 and older living in poverty (25.4% of those aged 65 and older)

Zip code area 18709-Luzerne in Luzerne County reports the highest rates of both married parents as well as single parents who live with their children in poverty (40.5% and 84.4% respectively) across all of the zips in hospitals’ service area.

Luzerne County reports an overall CNI score of 3.1, indicating slightly more barriers to healthcare access than average. Lackawanna County reports a CNI score of 3.0, equivalent to the scale average, indicating an average number of barriers to health care.

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<http://www.chwhealth.org/Who_We_Are/Community_Health/STGSS044508>.
## Table 4: CNI Scores for the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital service area by Zip Code

<table>
<thead>
<tr>
<th>Zip</th>
<th>City</th>
<th>County</th>
<th>% of Pop. Renting</th>
<th>% of Pop. Unemployed</th>
<th>% ofPop. Uninsured</th>
<th>% of Pop. Minority</th>
<th>% of Pop. Limited English</th>
<th>% of Pop. w/ No Diploma</th>
<th>% of Pop. w/ No Poverty</th>
<th>% of Adults Married w/ Children in Poverty</th>
<th>% of Adults Single w/ Children in Poverty</th>
<th>Income Rank</th>
<th>Insurance Rank</th>
<th>Education Rank</th>
<th>Culture Rank</th>
<th>Housing Rank</th>
<th>2014 CNI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zip</td>
<td>City</td>
<td>County</td>
<td>% of Pop. Renting</td>
<td>% of Pop. Unemployed</td>
<td>% of Pop. Uninsured</td>
<td>% of Pop. Minority</td>
<td>% of Pop. Limited English</td>
<td>% of Pop. w/ No Diploma</td>
<td>% of Pop. w/ Children in Poverty</td>
<td>% of Adults Married w/ Children in Poverty</td>
<td>% of Adults Single w/ Children in Poverty</td>
<td>Income Rank</td>
<td>Insurance Rank</td>
<td>Education Rank</td>
<td>Culture Rank</td>
<td>Housing Rank</td>
<td>2014 CNI Score</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------</td>
<td>--------</td>
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<td>---------------------</td>
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</tr>
<tr>
<td>18411</td>
<td>Clarks Summit</td>
<td>Lackawanna</td>
<td>20.2%</td>
<td>4.3%</td>
<td>4.4%</td>
<td>6.0%</td>
<td>0.5%</td>
<td>5.1%</td>
<td>3.5%</td>
<td>5.0%</td>
<td>20.4%</td>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>18444</td>
<td>Moscow</td>
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<td>15.1%</td>
<td>6.3%</td>
<td>5.7%</td>
<td>3.6%</td>
<td>0.5%</td>
<td>8.7%</td>
<td>6.8%</td>
<td>6.6%</td>
<td>40.8%</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1.6</td>
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<tr>
<td>18414</td>
<td>Dalton</td>
<td>Lackawanna</td>
<td>17.2%</td>
<td>4.2%</td>
<td>5.8%</td>
<td>4.0%</td>
<td>0.3%</td>
<td>6.8%</td>
<td>4.6%</td>
<td>11.2%</td>
<td>25.0%</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>18707</td>
<td>Mountain Top</td>
<td>Luzerne</td>
<td>11.0%</td>
<td>7.2%</td>
<td>4.5%</td>
<td>7.0%</td>
<td>0.3%</td>
<td>5.1%</td>
<td>3.0%</td>
<td>2.7%</td>
<td>8.5%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital

**Community Summary**

| 33.7% | 8.0% | 8.9% | 13.5% | 1.6% | 11.7% | 10.8% | 19.1% | 43.8% | 3.5% | 2.7% | 2.6% | 2.7% | 4.0% | 3.1% |

- The overall CNI scores are around average for the scale (3.0). There are several areas within the study area that show much greater barriers to accessing healthcare related to language, poverty, education and insurance status; namely:
  - Scranton (18503, 18508, 18505, and 18510)
  - Hazleton (18201 and 18202)
  - Glen Lyon (18617)
  - Wilkes-Barre (18701 and 18702)

*Note these zip codes will be the areas with the greater health issues and poorest health due to the barriers to healthcare.*

- The highest CNI score for the three county study area is 4.8 in the zip code area of 18503-Scranton in Lackawanna County.
- Zip code area 18201-Hazleton, in Luzerne County shows the highest rates of language barriers, with 18503-Scranton also showing language barriers.
- Zip code area 18701-Wilkes-Barre shows the highest rates of unemployment and uninsured.
- Zip code areas 18503, 18201, 18617, 18701, and 18508 show some of the greatest barriers to accessing care related to seniors in poverty, education and insurance status.
- While child poverty is prevalent in a number of zip code areas, it is highest in 18617-Glen Lyon and 18505-South Scranton. There are also high rates of child poverty in the...
zip code areas showing CNI scores between 3.4 and 4.0 for this study area. And there are still higher unemployment rates for CNI scores in this range as well with unemployment for PA at 11.5%.

- Language barriers are more prevalent in the study area than is typical for most PA areas in zip code areas with CNI scores above 3.5.

Table 5: CNI Score Trending (2011-2014) for the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital service area by Zip Code

<table>
<thead>
<tr>
<th>Zip</th>
<th>City</th>
<th>County</th>
<th>2011 CNI Score</th>
<th>2014 CNI Score</th>
<th>2011 – 2014 Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>18508</td>
<td>Scranton</td>
<td>Lackawanna</td>
<td>3.8</td>
<td>4.2</td>
<td>+ .4</td>
</tr>
<tr>
<td>18505</td>
<td>Scranton</td>
<td>Lackawanna</td>
<td>3.6</td>
<td>4.0</td>
<td>+ .4</td>
</tr>
<tr>
<td>18510</td>
<td>Scranton</td>
<td>Lackawanna</td>
<td>4.0</td>
<td>4.0</td>
<td>--</td>
</tr>
<tr>
<td>18504</td>
<td>Scranton</td>
<td>Lackawanna</td>
<td>3.8</td>
<td>3.6</td>
<td>- .2</td>
</tr>
<tr>
<td>18407</td>
<td>Carbondale</td>
<td>Lackawanna</td>
<td>3.4</td>
<td>3.4</td>
<td>--</td>
</tr>
<tr>
<td>18472</td>
<td>Waymart</td>
<td>Wayne</td>
<td>3.2</td>
<td>3.4</td>
<td>+ .2</td>
</tr>
<tr>
<td>18509</td>
<td>Scranton</td>
<td>Lackawanna</td>
<td>3.4</td>
<td>3.4</td>
<td>--</td>
</tr>
<tr>
<td>18431</td>
<td>Honesdale</td>
<td>Wayne</td>
<td>2.8</td>
<td>3.0</td>
<td>+ .2</td>
</tr>
<tr>
<td>18452</td>
<td>Peckville</td>
<td>Lackawanna</td>
<td>2.8</td>
<td>3.0</td>
<td>+ .2</td>
</tr>
<tr>
<td>18507</td>
<td>Moosic</td>
<td>Lackawanna</td>
<td>2.8</td>
<td>3.0</td>
<td>+ .2</td>
</tr>
<tr>
<td>18519</td>
<td>Scranton</td>
<td>Lackawanna</td>
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<td>3.0</td>
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<tr>
<td>18403</td>
<td>Archbald</td>
<td>Lackawanna</td>
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<td>2.8</td>
<td>+ .6</td>
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<tr>
<td>18512</td>
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<td>Lackawanna</td>
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<td>2.8</td>
<td>- .4</td>
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<tr>
<td>18518</td>
<td>Old Forge</td>
<td>Lackawanna</td>
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<td>2.8</td>
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<tr>
<td>18434</td>
<td>Jessup</td>
<td>Lackawanna</td>
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<td>2.6</td>
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<tr>
<td>18447</td>
<td>Olyphant</td>
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<td>2.6</td>
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</tr>
<tr>
<td>18517</td>
<td>Taylor</td>
<td>Lackawanna</td>
<td>3.2</td>
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<td>+ .6</td>
</tr>
<tr>
<td>18433</td>
<td>Jermyn</td>
<td>Lackawanna</td>
<td>2.4</td>
<td>2.2</td>
<td>- .2</td>
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<tr>
<td>18424</td>
<td>Gouldsboro</td>
<td>Lackawanna</td>
<td>2.2</td>
<td>2.0</td>
<td>- .2</td>
</tr>
<tr>
<td>18436</td>
<td>Lake Ariel</td>
<td>Wayne</td>
<td>2.0</td>
<td>1.8</td>
<td>- .2</td>
</tr>
<tr>
<td>18411</td>
<td>Clarks Summit</td>
<td>Lackawanna</td>
<td>1.6</td>
<td>1.6</td>
<td>--</td>
</tr>
<tr>
<td>18444</td>
<td>Moscow</td>
<td>Lackawanna</td>
<td>1.6</td>
<td>1.6</td>
<td>--</td>
</tr>
<tr>
<td>18414</td>
<td>Dalton</td>
<td>Lackawanna</td>
<td>1.8</td>
<td>1.4</td>
<td>- .4</td>
</tr>
</tbody>
</table>

Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital Community Study Area 2.9

- There are 30 zip code areas that are at or below the scale median. This does not mean that there are no barriers to accessing health care in these zip codes.

- Overall there are 35 zip code areas in the study area that maintained or increased the level of barriers to healthcare since the last assessment.
Lackawanna County: Six zip code areas have increased healthcare barrier levels: Archbald (from 2.2 to 2.8); Scranton (from 3.6 to 4); Scranton (from 3.8 to 4.2); Old Forge (from 2.6 to 2.8); Moosic (from 2.8 to 3); and Peckville (from 2.8 to 3). There are seven zip code areas in Lackawanna County showing above average CNI scores; four of which remained unchanged-Scranton (4.8); Scranton (4); Carbondale (3.4); and Scranton (3.4).

Luverne County: Areas that in 2011 exhibited relatively high levels of healthcare barriers have, in the interim, reached even higher (worse) levels. There were 12 zip code areas that saw an increase in the barriers to accessing healthcare (+0.2 to +0.8); whereas 13 zip code areas saw a decrease or no change at all (0.0 to -0.6). CNI data demonstrate that pockets of populations have experienced limited access to health services, and these limitations are becoming more pronounced and problematic.

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.

- Luzerne County shows five of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (57), Health Factors (58), Morbidity (55), and Social and Economic Factors (63).

- Lackawanna County shows two of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (56) and Mortality (58).

- Lackawanna and Luzerne counties report higher rates than the state for adult smoking, adult obesity, residents with diabetes, excessive drinking, and unemployment.
Luzerne County reports a higher specific measure rate than the state for Adult Smoking - Luzerne County = 25%, PA = 20%;

- Adult Obesity – Luzerne County = 30%, PA = 29%; Excessive Drinking - Luzerne County = 20%, PA = 17%; Diabetes – Luzerne = 11%, PA = 10%; and Unemployment - Luzerne County = 9.7%, PA = 7.9%.

Lackawanna County reports a higher specific measure rate than the state for; Adult Smoking - Lackawanna County = 23%, PA = 20%; Excessive Drinking - Lackawanna County = 24%, PA = 17%, Diabetes – Lackawanna = 11%, PA = 10%; and Unemployment - Lackawanna County = 9.0%, PA = 7.9%.

From 2011 to 2014:

- Lackawanna saw rises in the county health rankings indicating poorer county health for Health Outcomes, Health Factors, Mortality, Morbidity, Health Behaviors, and Social and Economic Factors (six of the eight rankings).

- Luzerne County also saw many health rankings rising – getting “unhealthier”: Luzerne County got “unhealthier” in the Social and Economic Factors ranking – going from 32 to 63.

- At the same time, Luzerne County’s mortality ranking improved, going from 63 to 55.

- Both Lackawanna and Luzerne counties show declines in adult smoking rates (27% to 23% for Lackawanna County, 27% to 25% for Luzerne County).

- Luzerne County experienced a rise in the adult obesity rate from 28% to 30%.

- Both Lackawanna and Luzerne counties reported rises in STD rates; Lackawanna County from 155 cases/100,000 population to 190 and Luzerne County from 214 cases/100,000 population to 234.

- Both Lackawanna and Luzerne counties reported rises in uninsured rates (10% to 12% for Lackawanna County, 11% to 12% for Luzerne). This is inconsistent with the state that saw a slight decline in the uninsured rate, going from 13% to 12%.

- Both Lackawanna and Luzerne counties report rises in the rates of diabetic and mammography screenings

- Diabetic screening rates increased from 80% to 81% for Lackawanna County and 79% to 81% for Luzerne County.
• Mammography screening going from 61.3% to 67.1% for Lackawanna County and 58.6% to 61.6% for Luzerne County

**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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 was presented as a value per 1,000 population. The AHRQ has revised this and the current data is presented as a value per 100,000 population. Tripp Umbach adjusted to match these as needed.

- PQI 2 changed from Perforated Appendix in Males 18+ for the past study to Perforated Appendix in Total 18+ population as a rate per 1,000 ICD-9 code admissions for appendicitis. This shift has changed the values for this measure drastically and therefore, Tripp Umbach did not adjust.

- PQI 5 changed from COPD in 18+ population to COPD or Asthma in “Older adults” 40+ population. Tripp Umbach did not adjust.

- Although not clearly explained by the AHRQ, it would seem that a definition of Newborn population has shifted for PQI 9 because the values are drastically lower in 2014 than in previous years (2011). This has shifted PQI 9 values drastically. Tripp Umbach did not adjust.

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

**OVERALL:**

There is significant overlap between the counties in areas of higher-than-state PQI rates with six PQI measures showing higher rates.
Table 3: Prevention Quality Indicators – County-by-County Comparison to Pennsylvania

<table>
<thead>
<tr>
<th>Prevention Quality Indicators (PQI)</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes Short-Term Complications (PQI1)</td>
<td>49.49</td>
<td>62.50</td>
<td>115.16</td>
</tr>
<tr>
<td>Perforated Appendix (PQI2)</td>
<td>200.00</td>
<td>548.57</td>
<td>343.91</td>
</tr>
<tr>
<td>Diabetes Long-Term Complications (PQI3)</td>
<td>116.07</td>
<td>111.32</td>
<td>119.79</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)</td>
<td>677.59</td>
<td>656.93</td>
<td>578.80</td>
</tr>
<tr>
<td>Hypertension (PQI7)</td>
<td>33.58</td>
<td>38.28</td>
<td>53.99</td>
</tr>
<tr>
<td>Congestive Heart Failure (PQI8)</td>
<td>484.91</td>
<td>440.59</td>
<td>418.29</td>
</tr>
<tr>
<td>Low Birth Weight (PQI9)</td>
<td>39.70</td>
<td>29.94</td>
<td>37.50</td>
</tr>
<tr>
<td>Dehydration (PQI10)</td>
<td>91.92</td>
<td>85.15</td>
<td>61.90</td>
</tr>
<tr>
<td>Bacterial Pneumonia (PQI11)</td>
<td>455.45</td>
<td>401.53</td>
<td>326.16</td>
</tr>
<tr>
<td>Urinary Tract Infection (PQI12)</td>
<td>283.99</td>
<td>219.52</td>
<td>197.51</td>
</tr>
<tr>
<td>Angina Without Procedure (PQI13)</td>
<td>15.91</td>
<td>9.37</td>
<td>11.80</td>
</tr>
<tr>
<td>Uncontrolled Diabetes (PQI14)</td>
<td>15.32</td>
<td>16.01</td>
<td>14.20</td>
</tr>
<tr>
<td>Asthma in Younger Adults (PQI15)</td>
<td>50.25</td>
<td>67.73</td>
<td>63.34</td>
</tr>
<tr>
<td>Lower Extremity Amputation Among Diabetics (PQI16)</td>
<td>28.87</td>
<td>25.78</td>
<td>26.40</td>
</tr>
</tbody>
</table>

- **Lackawanna County** Lackawanna shows higher-than-state rates for the following nine PQI measures, five of which are the highest rates in the study area.
  - Urinary Tract Infection (PQI12)
  - Uncontrolled Diabetes (PQI14)
  - COPD (PQI15)
  - Congestive Heart Failure (PQI8)
  - Low Birth Weight (PQI9)
  - Dehydration (PQI10)
  - Bacterial Pneumonia (PQI11)
  - Angina Without Procedure (PQI13)
  - Lower Extremity Amputation Among Diabetics (PQI16)

- **Luzerne County** Luzerne shows PQI rates higher than the state for eight measures:
  - Perforated Appendix (PQI12)
  - Uncontrolled Diabetes (PQI14)
  - Asthma in Younger Adults (PQI15)
  - Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)
  - Congestive Heart Failure (PQI8)
  - Dehydration (PQI10)
  - Bacterial Pneumonia (PQI11)
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); and Additional indicators as determined by the HHS Interagency Governance Group.

### Table 4: Health Indicators Warehouse – County-Level Indicators Compared to State and National Benchmarks

<table>
<thead>
<tr>
<th>CDC National Center for Health Statistics (2010-2012)**</th>
<th>HP 2020</th>
<th>U.S.</th>
<th>PA Lackawanna County</th>
<th>Luzerne County</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 Primary care providers (per 100,000)</td>
<td>--</td>
<td>92.7</td>
<td>85.9</td>
<td>71.1</td>
</tr>
<tr>
<td>2011 Dentist rate (per 100,000)</td>
<td>--</td>
<td>59.1</td>
<td>67.2</td>
<td>57.1</td>
</tr>
<tr>
<td>2012 Acute Hospital Readmissions (%)*</td>
<td>--</td>
<td>18.6%</td>
<td>18.4%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Births: women under 18 years (%)</td>
<td>2.3%</td>
<td>2.3%</td>
<td>2.6%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Cancer Death Rate (per 100,000 pop.) *</td>
<td>160.6</td>
<td>169.3</td>
<td>178.3</td>
<td>177.5</td>
</tr>
<tr>
<td>Breast cancer deaths (per 100,000)*</td>
<td>20.6</td>
<td>21.7</td>
<td>23</td>
<td>18.8</td>
</tr>
<tr>
<td>Colorectal cancer deaths (per 100,000)*</td>
<td>14.5</td>
<td>15.3</td>
<td>16.4</td>
<td>15.4</td>
</tr>
<tr>
<td>Alzheimer's disease deaths (per 100,000)*</td>
<td>--</td>
<td>24.5</td>
<td>19.3</td>
<td>21.4</td>
</tr>
<tr>
<td>Chronic lower respiratory disease deaths</td>
<td>--</td>
<td>42.1</td>
<td>38.8</td>
<td>40.1</td>
</tr>
<tr>
<td>Coronary heart disease deaths (per 100,000) *</td>
<td>100.8</td>
<td>105.4</td>
<td>112.4</td>
<td>128.3</td>
</tr>
<tr>
<td>Diabetes deaths (per 100,000) *</td>
<td>--</td>
<td>21.2</td>
<td>21.1</td>
<td>26.4</td>
</tr>
<tr>
<td>Drug poisoning deaths (per 100,000) *</td>
<td>--</td>
<td>12.9</td>
<td>17.5</td>
<td>21.9</td>
</tr>
<tr>
<td>Fall deaths (per 100,000) *</td>
<td>--</td>
<td>8.1</td>
<td>8.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Heart disease deaths (per 100,000) *</td>
<td>--</td>
<td>174.4</td>
<td>183.5</td>
<td>236.8</td>
</tr>
<tr>
<td>Influenza and pneumonia deaths (per 100,000) *</td>
<td>--</td>
<td>15.1</td>
<td>14.4</td>
<td>12.6</td>
</tr>
<tr>
<td>Injury deaths (per 100,000) *</td>
<td>53.3</td>
<td>58.1</td>
<td>63</td>
<td>65.1</td>
</tr>
<tr>
<td>Kidney diseases deaths (per 100,000) *</td>
<td>--</td>
<td>13.9</td>
<td>16.8</td>
<td>20.3</td>
</tr>
</tbody>
</table>
The trend in the CDC National Center for Health Statistics data suggests that Lackawanna County consistently shows poor health outcomes when compared to Luzerne County for lifestyle related death rates (i.e., diabetes, heart disease, etc.); whereas Luzerne County shows higher rates for most everything else when compared to the state and national benchmarks.

- **Primary Care Providers** – Lackawanna and Luzerne Counties have fewer Primary care providers than is average for PA (92.7 per 100,000 population).
  - Lackawanna County shows 85.9 per 100,000 population primary care providers
  - Luzerne County shows 71.1 per 100,000 population primary care providers

- **Dental Providers** – Lackawanna and Luzerne Counties have dental provider rates similar to the state.
  - Lackawanna County shows 67.2 per 100,000 population dental providers
  - Luzerne County shows 57.1 per 100,000 population dental providers

- Lackawanna and Luzerne Counties show percentages of acute hospital readmissions (17.9% and 18.5% respectively) that are comparable to those of the nation and the state (18.6% and 18.4% respectively). Readmission is defined as an admission that occurs within 30 days of a hospital stay.

- For both counties, percentages of live births to women that are below 18 years of age is similar to the state and national average (2.3% each).

- Pennsylvania’s overall cancer death rate, breast and colorectal cancer death rates all exceed national averages. Lackawanna and Luzerne Counties show similar death rates to the state with the exceptions:
  - **Deaths due to colorectal cancer** Luzerne County shows higher rates of death (19.1 per 100,000 population respectively) than the state or the nation (16.4 and 15.3 per 100,000 population respectively). Whereas, Lackawanna County shows...
similar rates to the nation (15.4 per 100,000 population). The Healthy People 2020 goal is set at 14.5 per 100,000 population.

✓ Lackawanna and Luzerne Counties show lower rates of death related to Alzheimer’s disease (21.4 and 19.3 per 100,000 population respectively) when compared to the state (19.3 per 100,000 population) and national rate (24.5 per 100,000 population).

✓ Lackawanna and Luzerne Counties show about average or fewer rates of death due to chronic lower respiratory disease (40.1 and 39 per 100,000 population) than the state and nation (38.8 and 42.1 per 100,000 population respectively).

✓ Luzerne County shows higher rates of death due to coronary heart disease (146.6 per 100,000 population); whereas Lackawanna county shows fewer than Luzerne County (128.3 per 100,000 pop). Both counties remain higher than the state and the nation (112.4 and 105.4 per 100,000 population respectively). The Healthy People 2020 goal is set at 100.8 per 100,000 population

✓ Lackawanna and Luzerne show higher rates of death due to diabetes (26.4 and 31.5 per 100,000 population respectively) than the state (21.1 per 100,000 population), and the nation (21.2 per 100,000 population).

✓ Lackawanna and Luzerne show higher rates of death due to drug poisoning (21.9 and 18 per 100,000 population respectively) than the state (17.5 per 100,000 population), the nation (12.9 per 100,000 population).

✓ Lackawanna and Luzerne Counties have higher rates of death due to heart disease (236.8 and 213, per 100,000 population) than the state (183.5 per 100,000 population) or nation (174.4 per 100,000 population).

✓ Injury death rates for Lackawanna and Luzerne Counties (65.1 and 65.1 per 100,000 population) are comparable to state and the national rates (63 and 58.1 per 100,000 pop respectively). The Healthy People 2020 goal is set at 53.3 per 100,000 population.

✓ Lackawanna County has higher rates of death due to kidney diseases (20.3 per 100,000 population) whereas Luzerne County has a similar rate (14.8 per 100,000 population) to the state and nation (16.8 and 13.9 per 100,000 population).

✓ Lackawanna and Luzerne Counties show slightly higher rates of death due to motor vehicle traffic (10.8 and 11.8 per 100,000 population) than state and national rates (10.4 and 10.8 per 100,000 population respectively).
Lackawanna and Luzerne Counties show higher rates of death due to suicide (14.5 and 16.1 per 100,000 pop) than state and national rates (12.5 and 12.3 per 100,000 population respectively). Healthy People 2020 goal is set at 10.2 per 100,000 population.

Table 5: 2013 Hospitalized Injury Profile, By Age, Most Prevalent Mechanisms – Lackawanna & Luzerne Counties

| All Mechanisms | Falls | Unspecified/ Cause Unknown | Poisoning (*) | MVT, All Types (**) | Other Specified Classifiable(***)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Total Injuries:</td>
<td>141,130</td>
<td>63,477</td>
<td>19,084</td>
<td>15,954</td>
<td>10,410</td>
</tr>
<tr>
<td><strong>Percent of all injuries:</strong></td>
<td>45.0%</td>
<td>13.5%</td>
<td>11.3%</td>
<td>7.4%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Lackawanna County Total Injuries:</td>
<td>2394</td>
<td>1256</td>
<td>295</td>
<td>280</td>
<td>144</td>
</tr>
<tr>
<td><strong>Percent of all injuries:</strong></td>
<td>52.56%</td>
<td>12.3%</td>
<td>11.7%</td>
<td>6.0%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Under 5 years:</td>
<td>18</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>5 to 14 years:</td>
<td>25</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>15 to 24 years:</td>
<td>129</td>
<td>15</td>
<td>7</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td>25 to 44 years:</td>
<td>320</td>
<td>68</td>
<td>30</td>
<td>95</td>
<td>36</td>
</tr>
<tr>
<td>45 to 64 years:</td>
<td>565</td>
<td>220</td>
<td>79</td>
<td>94</td>
<td>48</td>
</tr>
<tr>
<td>65 to 74 years:</td>
<td>364</td>
<td>209</td>
<td>55</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>75 years and over:</td>
<td>973</td>
<td>732</td>
<td>120</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Luzerne County Total Injuries:</td>
<td>3556</td>
<td>1810</td>
<td>449</td>
<td>327</td>
<td>270</td>
</tr>
<tr>
<td><strong>Percent of all injuries:</strong></td>
<td>50.9%</td>
<td>12.6%</td>
<td>9.2%</td>
<td>7.6%</td>
<td>4.02%</td>
</tr>
<tr>
<td>Under 5 years:</td>
<td>34</td>
<td>11</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5 to 14 years:</td>
<td>53</td>
<td>15</td>
<td>4</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>15 to 24 years:</td>
<td>225</td>
<td>11</td>
<td>13</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>25 to 44 years:</td>
<td>455</td>
<td>79</td>
<td>41</td>
<td>112</td>
<td>76</td>
</tr>
<tr>
<td>45 to 64 years:</td>
<td>747</td>
<td>269</td>
<td>88</td>
<td>114</td>
<td>71</td>
</tr>
<tr>
<td>65 to 74 years:</td>
<td>479</td>
<td>268</td>
<td>87</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>75 years and over:</td>
<td>1563</td>
<td>1157</td>
<td>212</td>
<td>16</td>
<td>30</td>
</tr>
</tbody>
</table>

* Poisoning includes harmful effects from drugs, toxins, chemical agents; includes drug overdoses, chemical burns. This category does not include food poisoning, adverse reactions to therapeutic drugs correctly administered.

** Motor Vehicle Traffic: Roadway accidents, including MV occupant, motor cyclist, pedal cyclist, pedestrian, unspecified.

*** Other Specified & Classifiable includes explosions, fireworks, electric current, radiation, or being caught or crushed between objects.
• According to 2013 Hospital Discharge Data from the Pennsylvania Health Care Cost Containment Council (PHC4), the rates of injury related hospitalizations that were due to falls in Lackawanna (52.56%) and Luzerne Counties (50.9%) were greater than average for PA (45%), with more than three out of four of these cases being seniors 65+ (Lackawanna - 75% and Luzerne - 79%). The median cost for hospitalizations related to falls was $31,200 in Lackawanna County and $42,672 in Luzerne County.

• The same data source reported that Seniors 65+ were more frequently hospitalized due to injuries (all causes) than any other age group in Lackawanna and Luzerne Counties (55.8% and 57.4% respectively). Individuals ages 45 to 64 accounted for 23.6% of all Lackawanna and 21% of Luzerne hospitalization injuries.

Table 6: 2013 Estimated Population with a Disability, By Age and Disability Type – Luzerne & Lackawanna Counties

<table>
<thead>
<tr>
<th></th>
<th>Pennsylvania</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of Age Group with a Disability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Persons</td>
<td>13.4%</td>
<td>210,045</td>
<td>32,990</td>
</tr>
<tr>
<td>Estimated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of Age Group with a Disability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Persons</td>
<td>16.0%</td>
<td>212,444</td>
<td>33,394</td>
</tr>
<tr>
<td>With a disability</td>
<td>15.7%</td>
<td>312,260</td>
<td>46,646</td>
</tr>
<tr>
<td>Estimated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of Age Group with a Disability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Persons</td>
<td>14.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of Age Group with a Disability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Persons</td>
<td>13.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With a disability</td>
<td>13.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With a hearing difficulty

|                          |              |                   |               |
| Under 5 years:           |              |                   |               |
| With a hearing difficulty| 0.9%         | 11,357            | 130           |
|                           | 0.5%         | 130               | 130           |
|                           | 0.6%         | 0                 | 0             |
| With a vision difficulty  | 0.8%         | 117               | 117           |
|                           | 0.5%         | 130               | 130           |
|                           | 0.6%         | 0                 | 0             |

5 to 17 years:

|                          |              |                   |               |
| With a hearing difficulty| 6.7%         | 31,465            | 2,267         |
|                           | 0.7%         | 139               | 140           |
|                           | 0.9%         | 202               | 202           |
| With a vision difficulty  | 5.4%         | 1,927             | 6.1%          |
|                           | 0.7%         | 66                | 0.2%          |
|                           | 1.0%         | 109               | 0.3%          |
| With a cognitive difficulty| 1.0%         | 109               | 0.3%          |
|                           | 1.0%         | 109               | 0.3%          |
| With an ambulatory difficulty| 1.0%         | 109               | 0.3%          |
|                           | 1.0%         | 109               | 0.3%          |

18 to 64 years:

|                          |              |                   |               |
| With a hearing difficulty| 10.0%        | 129,675           | 16,866        |
|                           | 2.0%         | 2,115             | 16,866        |
|                           | 1.7%         | 2,089             | 16,866        |
| With a vision difficulty  | 4.9%         | 7,370             | 5.7%          |
|                           | 5.4%         | 8,397             | 6.5%          |
| With a cognitive difficulty| 1.9%         | 2,982             | 2.3%          |
|                           | 1.9%         | 2,982             | 2.3%          |
| With an ambulatory difficulty| 1.9%         | 2,982             | 2.3%          |
|                           | 1.9%         | 2,982             | 2.3%          |
| With a self-care difficulty| 1.9%         | 2,982             | 2.3%          |
|                           | 1.9%         | 2,982             | 2.3%          |
### Estimated % of Age Group with a Disability

<table>
<thead>
<tr>
<th></th>
<th>All Persons</th>
<th>With a disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>With an independent living difficulty</td>
<td>3.9%</td>
<td>7,171</td>
</tr>
<tr>
<td>65 years and over:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With a hearing difficulty</td>
<td>14.2%</td>
<td>4,904</td>
</tr>
<tr>
<td>With a vision difficulty</td>
<td>5.9%</td>
<td>2,095</td>
</tr>
<tr>
<td>With a cognitive difficulty</td>
<td>8.1%</td>
<td>2,821</td>
</tr>
<tr>
<td>With an ambulatory difficulty</td>
<td>21.3%</td>
<td>9,229</td>
</tr>
<tr>
<td>With a self-care difficulty</td>
<td>7.1%</td>
<td>3,234</td>
</tr>
<tr>
<td>With an independent living difficulty</td>
<td>14.7%</td>
<td>6,946</td>
</tr>
</tbody>
</table>

### Population 65 years and over

<table>
<thead>
<tr>
<th></th>
<th>Rate per 1,000 Medicare Beneficiaries</th>
<th>Rate per 1,000 Medicare Beneficiaries</th>
<th>Rate per 1,000 Medicare Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Discharge</td>
<td>Population 65 years and over</td>
<td>Discharged home</td>
<td>Discharged to acute care facility</td>
</tr>
<tr>
<td></td>
<td>12.2</td>
<td>45.4%</td>
<td>19.2%</td>
</tr>
<tr>
<td></td>
<td>11.4</td>
<td>43.1%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Mortality</td>
<td>Stroke Death Rate - All Ages</td>
<td>40.6</td>
<td>39.7</td>
</tr>
<tr>
<td></td>
<td>Stroke Death Rate 35+</td>
<td>78.9</td>
<td>76.6</td>
</tr>
<tr>
<td></td>
<td>Stroke Death Rate 65+</td>
<td>281.8</td>
<td>265.6</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, American Community Survey, 2013. Please see source documents for sampling and reliability detail.
Key Stakeholder Interviews

Tripp Umbach conducted interviews with community leaders in the Allied Services Integrated Health System 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 a section of the overall community health needs assessment project completed by Tripp Umbach.

DATA COLLECTION:

The following qualitative data were gathered during individual interviews with 24 stakeholders of the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation 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 Allied Services Integrated Health System advisory committee. The purpose of these interviews was for stakeholders to identify health issues and concerns affecting residents in the Allied Services Integrated Health System service area, as well as ways to address those concerns.

There was a diverse representation of community-based organizations and agencies among the 24 stakeholders interviewed. Those organizations represented included:

- Advocacy Alliance
- GHS Family
- Allied Services Foundation
- United Way of Wyoming Valley
- Scranton Chamber of Commerce
- Alzheimer’s Association - NE Region/Greater Pa Chapter
- Lackawanna County Medical Society
- Panuska College for Professional Studies/The University of Scranton
- The Wright Center
- Rehabilitation Community Providers Association (RCPA)
- Healthy Northeast Pennsylvania Initiative
- Individual Abilities In Motion
- Pennsylvania Department of Health, Northeast District
- Volunteers in Medicine Free Clinic
- Scranton School District
- PA Office of Rural Health
- United Neighborhood Centers
- Catholic Social Services
- Area Agency on Aging of Lackawanna County
STAKEHOLDER RECOMMENDATIONS:

The stakeholders provided many recommendations to address health issues and concerns for residents living in the Allied Services Integrated Health System service area. Below is a brief summary of the recommendations:

- Preventive screening is happening at a population health level. Integration of addiction services as a normal component of care reduces stigma of the question and the illnesses of behavioral health. Same as tobacco screenings and referral processes in the ER. Providers have to increase their competency and partnerships to be able to provide care when screenings turn up issues for patients.
- Integration of service lines including behavioral health is untapped potential in patient improvement and population health.
- Access to care needs to be improved through provider collaboration and strategic planning in order to take a holistic approach to service provision.
- Implementing evidence-based medicine to treat health issues and address health needs, which will take continued collaboration among community organizations and a commitment to evidence-based practices.
- Stakeholders felt that there is a need to increase outreach education. They recommended professionals that are culturally competent to disseminate health education outreach in a culturally sensitive way in order for it to be effective.
- Increase homecare and additional support to maintain residents in home settings.
- Begin using Area Health Education Center (AHEC) groups to get people to go into health care professions to represent a cultural competence in order to ensure that minorities are represented in the professions that are providing services to residents.
- Change the culture of health care delivery to a team-based delivery system which maximizes patient engagement and minimizes co-dependence with integration of service lines including behavioral health.
- There is a need for education about effective health care and focus on patient engagement and building resiliency. Patients crave development and inclusion in the solution and problem-solving.
• Employee health programs and school-based health programs are multipliers of the benefits of population health practices, and there is not a significant practice of population health among many major employers or public schools.
• States around PA have a tracking system to track prescription drug abusers, which would be useful to implement in PA.
• Improve post discharge care from hospitals to ensure that there is continuity of care before the resident leaves the hospital by ensuring adequate transportation for follow-up appointments, pharmacy trips and other medical instruction.

**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. Delay/resistance in seeking health services
4. Lifestyle of residents
5. Common health issues
6. Special Populations
7. 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 every stakeholder identifying at least one health need related to behavioral health and/or substance abuse services.

• Care coordination – Behavioral health services can be fragmented, particularly at the intersection of behavioral health and medical health services. Additionally, there is a stigma associated with mental illness that may cause residents to resist evaluations and treatments. Stakeholders noted that primary care physicians do not always refer residents for behavioral health evaluations. Stakeholders noted that residents with behavioral health diagnoses experience difficulty accessing medical and dental health services due to transportation, cost, and a perception that they are treated differently due to their behavioral health status. Also, there is reportedly limited integration between behavioral health and substance abuse services, making it difficult to effectively treat co-occurring disorders.
• Shortage of behavioral health services – Stakeholders recognized that while there are behavioral health services, there is a shortage of services (i.e., treatment for low-income populations, psychiatry in general, inpatient and outpatient treatment) in relationship to the demand, causing lengthy wait lists. The area’s inventory of psychiatric acute care beds has declined to the extent that residents must be placed outside the service area in many cases. As a result, families may not be able to participate in visitation and/or treatment opportunities, which may make it difficult for residents to successfully integrate into the community upon discharge. Stakeholders indicated that mental illness is a cause of costly disabilities and premature death (i.e., higher rates of suicide). Additionally, stakeholders noted that behavioral health problems are prevalent among homeless populations and there are not many services for this population. Behavioral health services for dual-diagnosis are lacking in the area and will require co-location/integration of substance abuse providers and behavioral health services. Stakeholders note that suicide rates are high in the area.

• Poor treatment outcomes – Stakeholders drew a connection between substance abuse and poor health (i.e., higher suicide rates, motor vehicle accidents, etc.) due to a resistance to seek treatment, inability to afford treatment options, transportation issues, and/or limited follow through with treatment recommendations.

• Substance abuse – Nine out of 10 stakeholders identified drug/alcohol rehabilitation and recovery services 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. There is easy access to drugs in the area due to trafficking and trade from larger cities taking place along the major highways. Additionally, Methamphetamine laboratories are being identified in rural communities. Stakeholders made a connection between income status and substance abuse, noting that lower-income residents may be self-medicating to help them cope. Common addictions include methamphetamines, heroin, alcohol, marijuana, and tobacco. The cost of treatment may be unaffordable for uninsured, low-income individuals. Also, stakeholders noted that drug/alcohol treatment facilities have lengthy waiting lists. For applicants who have completed a rehab program and subsequently relapsed into addiction, the wait for admission can be especially long. Many residents with a substance abuse history also have criminal records, which are additional barriers to employment and housing. With higher unemployment in the area, residents with a history of substance abuse and a record of incarceration are competing with residents without any record for low-wage employment.
Stakeholders discussed the following consequences of unmet behavioral health and substance abuse needs:

✓ Poorer health secondary to behavioral health problems and substance abuse.
✓ Residents being hospitalized for inpatient behavioral health treatment a great distance from home may make it more difficult to integrate back into the community, which may act as a barrier to ongoing recovery.

Availability of Health Services:

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

- Number of practicing professionals - Physicians are migrating out of the area. The shortage of health professionals (i.e., primary care physicians, some specialists, general psychiatrists, nurses, aides, direct care workers, geriatricians, orthodontists, neurologists, child psychiatrists, pediatric dentists, and dentists accepting Medicaid) is compounded by the difficulty in recruiting new professionals to the poorest and most rural areas in the hospitals’ service area. While there are a few dental providers accepting Medicaid, they are, reportedly, not accepting new patients. There is a dental clinic in the service area; however, new patients may wait up to three months to get an appointment. Several free clinics have been expanded in the service area (e.g., The Wright Center, The Leahy Center, Volunteers in Medicine).
- Acceptance of insurances - There are limited health providers offering care to the uninsured, under-insured and Medicaid insureds. Medicaid does not cover hearing aids and there are very few resources that cover the cost of hearing aids.
- Children of uninsured, middle-income families who do not qualify for CHIPS may not have coverage for primary and preventive care.
- Undocumented immigrants, including children, may be unable to apply for insurance and, so, may be considered ineligible for free/reduced-cost clinics. Homeless residents do not always have access to necessary health services (i.e., diabetic treatment options, healthy foods, behavioral health care, dental care, vision, etc.) due to a lack of insurance.
- Funding – Stakeholders felt that behavioral health and addiction rehab services are underfunded, given the levels of unmet need/demand for care. Stakeholders questioned whether or inadequate resources exist to meet health needs in their communities. One commenter noted that local fundraisers for national cancer prevention/research organizations take the majority of dollars raised out of the area.
• Location of providers - Stakeholders noted that there are pockets of poverty where health services are available but not accessible. Stakeholders also noted that transportation barriers undermine access to healthcare for rural populations.

• According to stakeholders, health services can be difficult to secure for persons with disabilities due to a lack of viable transportation options, physical accessibility issues, the need for intensive accompaniment, communication barriers, a lack of health insurance, and limited finances for copays, prescriptions, transportation, etc.

• Care coordination – Patient-centered care is not always provided to residents. As rates of insured residents increase, newly insured individuals residents will need assistance navigating the health system, which is fragmented and often difficult to understand. Persons with disabilities have a need for services to maximize their independence for example, routine primary care, personal care, prescription assistance/medication management, or medical transportation. There is very little follow-up care available for homeless residents. The shifting landscape of providers poses challenges to care coordination. Additionally, seniors are a growing population that will require additional support (e.g., medication management, nutrition, and health care/insurance counseling). Stakeholders felt that collaborations are important to ensure that the health needs of seniors are being met.

• Language Services – Stakeholders report an influx of non-English-speaking individuals relocating to northeast PA from other countries and U.S. communities. Several stakeholder organizations offer translation services to residents. Stakeholders commented that many healthcare providers do not offer language translation services and/or culturally competent health care.

• 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 and medication management (services not practiced by most walk-in clinics), limiting the continuity of care residents are receiving, and leading to poorer health for some residents. Additionally, urgent care clinics allow patients to shop around for prescription drugs to abuse and/or sell.

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

✓ Limited appointment availability due to a shortage of health professionals, which results in long wait times for primary care, specialty care, psychiatry, and dental care appointments. Professional shortages impact access to care, care quality, patient safety, and rates of readmission.

✓ Health disparities related to income and insurance status due to providers refusing to accept Medicaid.

**DELAYED/RESISTANCE SEEKING NEEDED HEALTH SERVICES:**
Two-thirds of the stakeholders interviewed said that residents either delayed or resisted seeking health services (including medical, behavioral, and dental) such as preventive care, specialty care, intensive treatment, and follow-up care for a variety of reasons. Specifically, stakeholders indicated that the following were factors in the decisions of residents to delay/resist seeking medical care:

- **Cost of care** – Stakeholders articulated that uninsured and under-insured residents may resist seeking health services (including medication, preventive, and/or routine care, etc.) due to the cost of uninsured care, unaffordable copays, and/or high deductibles. Health services may be unaffordable for families that do not qualify for assistance. Additionally, the rising cost of health services undermines the health and well-being of seniors and persons with disabilities. More than one-half of all stakeholders discussed the poor quality and/or total lack of preventive care in their communities.

- **Residents often prioritize daily living expenses (e.g., food, housing, utilities, clothing, etc.), over routine healthcare**, which may ultimately result in medical emergencies and poor health outcomes. This is true of homeless individuals as well. Often low-income residents are working and may be caring for families, and find it difficult to schedule routine/preventive care. Women in the early stages of pregnancy may delay seeking critical prenatal care.

- **While more residents are becoming insured, health insurance rates have increased for residents and employers. With reduced benefits and increased premiums, co-pays, and deductibles, residents may neglect healthcare needs.**

- **Families may resist seeking health services due to their citizenship status and fear of deportation.**

- **Awareness** – According to stakeholders, the population has changed dramatically in the Scranton, PA area during the last five years, with approximately 32 different languages currently spoken in the region. Language, literacy and cultural challenges compound the difficulties of navigating a complex healthcare system. Newly unemployed, disabled or retired individuals may not be familiar with services available to them. Residents that are newly diagnosed with chronic illness may not be aware of what services are available to them and/or how to manage their disease. Additionally, residents may not understand their health status and, so, not understand what services could benefit them.

- **Transportation** – Stakeholders interviewed said that transportation and the location of health services impacts healthcare. Lack of transportation may impede patients’ access to intensive treatment regimens (i.e., chemo or dialysis).

Stakeholders discussed the following consequences of the local delay/resistance to seeking health services:
• Late detection/diagnosis of illness and disease is associated with limited treatment options and poor health outcomes. For example, stakeholders noted that homeless residents are much sicker when they present for care due to a lack of routine medical care.
• Lack of consistency and continuity of care due to limited follow-up.

**LIFESTYLES OF RESIDENTS:**

Over one-half of the stakeholders interviewed discussed the impact of lifestyle choices on population health. Stakeholders noted that environment and personal choice influence health habits and lifestyle.

• Generational/cultural influence – The local culture supports high-risk behaviors (i.e., substance abuse and smoking). There is a lack of focus on preventive and routine care with little incentive for people to participate. Residents that have never visited a physician will not comprehend why it is important to begin now, particularly when there is a cost associated with seeking health services. While there are residents who do not wish to get help, there are residents that would like help and are not aware of how to effect positive changes in lifestyle and health habits. User-friendly information and instructional materials are lacking. Stakeholders mentioned the family’s influence (on nutritional preferences, substance abuse, and smoking) more frequently than any other health issue.

• Diet - Stakeholders discussed the limited access that some residents have to healthy nutrition. Specifically, lower-income residents may not have access to and/or be able to afford healthier options. This is often the case for several reasons. Residents do not always have access to a grocery store that offers healthy options (e.g., some residents do not have cars). Foods that are more processed are often cheaper and easier to prepare than produce, 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. Stakeholders indicated that children in homes where substance abuse is an issue may not be fed regularly or nutritiously. There is a lack of education among residents related to healthy eating and residents may not know how to prepare healthy, fresh foods due to a lack of experience.

• Homeless residents do not have access to a refrigerator or stove, which makes it difficult to eat healthy. This is a special problem for homeless persons with chronic or acute illness, who have unique dietary needs.
- Smoking - Stakeholders identified smoking as a prevalent health issue. High rates of smoking are associated with increased prevalence of COPD and related secondary illness.
- Exercise – Stakeholders indicated that residents may not always exercise to a level that is healthy.
- Personal choice - Stakeholders recognized the impact of personal choice on the health 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.

Stakeholders discussed the following consequence of the lifestyle of residents on health outcomes of populations served by Allied Services Integrated Health System:

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

**COMMON HEALTH ISSUES:**

- 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 dental health. The lack of fluoride in the water is associated with poor dental health.
- Obesity – Over one-half of all stakeholders discussed the prevalence and cause of obesity among the community served by Allied Services Integrated Health System. Stakeholders identified that there are several factors that perpetuate obesity in their communities. Namely, poor diets, lack of exercise, and limited access to resources and education. Stakeholders drew a connection between poverty and the higher rates 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 recognized that chronic obesity will have an impact on health for residents, particularly the health of seniors.
- Diabetes – Six stakeholders discussed diabetes as a common health issue among residents. Discussion often included reference to obesity as well. Stakeholders identified excess body weight as an underlying cause diabetes. There are health disparities related to diabetes with an over-representation of low-income residents being diagnosed.
- Heart disease – Three stakeholders discussed the prevalence of heart disease and its connection with the diet, sedentary lifestyles, and age.
- Cancer - Two stakeholders felt that the rates of cancer were rising due to higher rates of smoking and environmental hazards, such as lead-based paint.
• Autism – There is a large population of youth diagnosed with Autism who are now approaching adulthood, and communities may not be prepared to fully meet their needs (i.e., employment, independent living options, etc.) The programs that do exist have lengthy waiting lists.

• Senior Health – The prevalence of chronic and age-associated illnesses suggests that additional support services are needed to maximize the quality of life in residential settings.

• Untreated dental health issues can cause/contribute to multiple medical conditions and can lead to poor health.

SPECIAL POPULATIONS:

• Seniors – More than one-half of all stakeholders discussed the health needs of seniors in the hospitals’ service area. Stakeholders realized that a growing aging population is placing a strain on the region’s health resources, particularly adult day care, respite care, long-term care, geriatrics, care coordination, home care, orthopedics, cardiovascular, etc. Transportation barriers can lead to isolation and, in turn, problems such as nutrition, depression, and safety risk. Stakeholders noted the limited resources available to treat dementia. Stakeholders also drew a connection between the fixed income of seniors and poor health due to the inability to afford medications, follow up care, etc. Additionally, economic conditions are forcing seniors to continue working past the traditional retirement age. Seniors may at times resist seeking health services out of fear of being stigmatized (in the case of mental health services) or a perspective that symptoms are a part of getting old (sickness, hearing loss, etc.)

• Persons with disabilities – Stakeholders noted that the transportation barriers can have a negative impact on health care, nutrition, socialization, etc., among persons with disabilities. While there are resources to modify personal vehicles for residents with disabilities, it is a lengthy and expensive process. Also, the limited accessibility of public areas (buildings, parks, retail establishments, for example) undermine their health, life quality and independence. Stakeholders also indicated that there are very few accessible job opportunities for residents with disabilities. Employment may also lead to a loss of financial or health benefits. There are very few exercise/fitness opportunities for residents with disabilities.

ENVIRONMENTAL INFLUENCES:

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

Infrastructure/rural area – More than one-half of stakeholders discussed the role that infrastructure (i.e., transportation, economy, and housing) and the rural nature of the
service area play in limiting healthcare access and perpetuating poor health. The lack of affordable public transportation, prevalence of low-wage jobs and unemployment, and the decline of major metro areas (i.e., Scranton and Wilkes-Barre) means that large segments of the area’s population are struggling to meet basic living needs. According to stakeholders, some of the highest unemployment rates in the state can be found in the hospitals’ service area. Youth are graduating high school without the skills to be employable, with the brightest youth leaving the area due to a lack of career opportunity. Similarly, educational outcomes in the area are poor in lower socioeconomic neighborhoods according to stakeholders, which lead to low-income wages for residents in these areas.

- As a result, stakeholders discussed the challenges of unemployment and inability to afford to engage in healthy behaviors for themselves or their families. The rising cost of insurance for local employers is leading many employed residents to be uninsured or under-insured.

- While there is public transportation in the community, it is not practical to rely on. According to stakeholders, one-quarter of residents in the Wilkes-Barre area do not own a car. Lower-income residents cannot always afford transportation (i.e., vehicle, public transportation, private transportation). The three large public housing developments in Scranton, PA area lack public transportation, making it difficult for residents to access groceries, health services, employment, etc.

- Poverty – Over one-half of stakeholders drew a connection between poverty and poorer health related to stress, poor nutrition, and delayed health care. Additionally, stakeholders indicated that there is an influx of economic and political refugees entering the region and struggling with poverty. Stakeholders connect poverty and the inability of residents to secure healthy food and make good health choices

Environmental factors can impact the health status of individuals and the community at large. Additionally, six stakeholders were concerned about the increased crime rates.
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 266 surveys were collected in the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital service area which provides a +/- 6.01 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., The Volunteers in Medicine Free Clinic, the United Way of Wyoming Valley, The Edward R. Leahy Jr. Center Clinic for the Uninsured, The Wright Center, the Clarks Summit Senior Center (Telespond), the Kingston Senior Center, the Allied Services In-Home Services Program and In-Home Services Waiver Program) providing services to vulnerable populations in the hospitals’ 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 Lackawanna and Luzerne Counties reported their race as White (86.5% and 78.8% respectively), the next largest racial group was Black and African American (5.6% and 8.2% respectively) and third largest was Hispanic (4.8% and 8.2% respectively).

- The household income level with the most responses was $10,000-$19,999 for Lackawanna County (26.7%) and < than $10,000 for Luzerne County (23.1%).

Table 8: Survey Responses – Self-Reported Age of Respondent by County

<table>
<thead>
<tr>
<th>Age</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>4.7%</td>
<td>7.6%</td>
</tr>
<tr>
<td>26-35</td>
<td>15.4%</td>
<td>12%</td>
</tr>
<tr>
<td>36-45</td>
<td>16.8%</td>
<td>16.3%</td>
</tr>
<tr>
<td>46-55</td>
<td>11.4%</td>
<td>20.7%</td>
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<tr>
<td>56-65</td>
<td>22.1%</td>
<td>20.7%</td>
</tr>
<tr>
<td>66-75</td>
<td>14.8%</td>
<td>6.5%</td>
</tr>
<tr>
<td>76-85</td>
<td>10.7%</td>
<td>9.8%</td>
</tr>
<tr>
<td>86+</td>
<td>4%</td>
<td>6.5%</td>
</tr>
</tbody>
</table>
Healthcare:

- The most popular place for residents to seek care is a doctor’s office in Lackawanna and Luzerne Counties (70.4% and 70.1% respectively), with the free or reduced cost clinics (14.1% and 24.1%) being popular as well.
- The most common form of health insurance carried by respondents was Medicare in Lackawanna and Luzerne Counties (38.6% and 30% respectively) with “no insurance” the second most common in Lackawanna County (26.1%) and Private/commercial in Luzerne County (28.9%).
- The most common reason why individuals indicated that they do not have health insurance is because they can’t afford it in Lackawanna and Luzerne Counties (47.2% and 44% respectively) with ineligibility being the second most common reason (30.6% and 24% respectively).
- Most respondents had been examined by a physician within the last 12 months at least once in Lackawanna and Luzerne Counties (87% and 91.3%); however, 13% of respondents in Lackawanna County and 8.7% of respondents in Luzerne County had not.
- 33.1% Lackawanna County respondents and 30.4% of Luzerne respondents indicated that their health was “fair” or “poor”.
- Adult respondents indicated related children were up-to-date on vaccinations in Lackawanna and Luzerne Counties (52.3% and 60% respectively).

![Chart 4: Survey Response – Children Current on Vaccinations](chart4.png)

- Many respondents indicated that their primary form of transportation is some method other than their own car in Lackawanna (45.3%) and Luzerne (37.2%) Counties, using a family/friend’s car (26.2% and 18.5% respectively), public transportation (11.3% and 17.4 respectively), and walking (7.8% and 1.1% respectively) as an alternative.
Survey respondents from Lackawanna and Luzerne Counties report screening rates (30.7% and 32.2% respectively) similar to state and national norms.

Health Services:

Respondents from Luzerne County seemed to have received more testing in general than those in Lackawanna County.

More respondents indicated they get information about services in their community by word of mouth in both Lackawanna (63%) and Luzerne (53.9%) Counties.

While most respondents did not prefer to receive health services in a language other than English (89.6% and 84.6% respectively), 8.9% of respondents reported this preference in Lackawanna County and slightly more (12.1%) in Luzerne County.

Most respondents in both 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”.

15.5% of respondents in Lackawanna County and 10.4% in Luzerne County indicated they did not secure dental services due to a lack of insurance, with 12% of respondents in Lackawanna County indicating dental services are not available to them.

12.7% of respondents indicated that vision services are not available to them in Lackawanna County whereas only 6.2% responded the same in Luzerne County. Notably more Luzerne County respondents reported that vision services are available to them (80.2%); only 72.9% of Lackawanna County respondents so indicated.

Approximately 1 in 4 respondents in both counties indicated that they did not understand what was happening during a time when they (or a loved one) had to
transition from one form of care to another. The most common recommendations related to care transitions was better explanation of the process (33.8% and 34% in Lackawanna and Luzerne, respectively), and additional instructions (27.3% and 50% respectively).

**Common Health Issues:**

**Table 11: Survey Responses – Health Issues Respondents Reported Ever Diagnosed with**

<table>
<thead>
<tr>
<th>Ever Diagnosed with</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
<th>PA*</th>
<th>U.S.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>32.4%</td>
<td>26.9%</td>
<td>18.3%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Needing Mental Health Treatment</td>
<td>23.9%</td>
<td>21.7%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Diabetes</td>
<td>22.9%</td>
<td>19.4%</td>
<td>10.1%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Heart Problem</td>
<td>14.9%</td>
<td>23.7%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Cancer – Types: breast, prostate and skin</td>
<td>8.5%</td>
<td>9.7%</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*Source: CDC*

- Respondents in Lackawanna and Luzerne Counties report poorer health than is average for the state or the nation.
- Depression and the need for mental health treatment are the greatest rates of respondent reported diagnosis when compared to every other area (i.e., diabetes, heart problems, and cancer). Higher rates of depression diagnosis were reported than is average for the state (18.3%) and nation (18.7%).
- Lackawanna and Luzerne County survey respondents report higher rates of depression diagnosis (32.4% and 26.9% respectively) than is average for the state (18.3%) and nation (18.7%).
- Respondents in Lackawanna and Luzerne Counties report higher diagnosis rates for diabetes (22.9% and 19.4% respectively) than is average for the state and the nation (10.1% and 9.7% respectively).

**Table 12: Survey Responses – Top Health Concerns Reported**

<table>
<thead>
<tr>
<th>Health Concern</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>43.7%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Drug and Alcohol use</td>
<td>39.7%</td>
<td>54.5%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>34.9%</td>
<td>44.3%</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>30.2%</td>
<td>36.4%</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>29.4%</td>
<td>37.5%</td>
</tr>
</tbody>
</table>
When asked to identify five of top health concerns in their communities, respondents chose Cancer, Drug and Alcohol use, Diabetes, Heart Disease, and High Blood Pressure most often. The additional choices that were not as popular were: adolescent health, asthma, mental health, family planning / birth control, flood related health concerns (like mold), hepatitis infections, HIV, obesity, maternal and child health, pollution (e.g., air quality, garbage), sexually transmitted diseases, stroke, teen pregnancy, tobacco use, violence or injury.

Lifestyle:

Table 13: Survey Responses – Average Weight and Body Mass Index of Survey Respondents

<table>
<thead>
<tr>
<th>Weight &amp; BMI</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
<th>Avg. Female (5’4”)*</th>
<th>Avg. Male (5’9”)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>180.5 lbs.</td>
<td>174.89 lbs.</td>
<td>108-144 lbs.</td>
<td>121-163 lbs.</td>
</tr>
<tr>
<td>BMI**</td>
<td>28.9</td>
<td>28.36</td>
<td>26.5</td>
<td>26.6</td>
</tr>
</tbody>
</table>

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

Respondents show much higher weight and BMI than national and state averages.

While most respondents reported having access to fresh fruits and vegetables (87.2% and 96.7% in Lackawanna and Luzerne, respectively), there were 12.8% of respondents in Lackawanna County and only 3.3% in Luzerne County that indicated they have no access.

1 in 10 respondents in Lackawanna County and 1 in 20 respondents in Luzerne County indicated that they do not eat fresh fruits and vegetables.

Table 14: Survey Responses – Smoking Rates Reported by Respondents

<table>
<thead>
<tr>
<th>Smoking</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
<th>PA*</th>
<th>U.S.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyday</td>
<td>18.7%</td>
<td>16.3%</td>
<td>15.7%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Some days</td>
<td>4.3%</td>
<td>4.3%</td>
<td>5.3%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Not at all</td>
<td>74.8%</td>
<td>78.3%</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Lackawanna and Luzerne County respondents reported higher rates of daily smoking (18.7% and 16.3% respectively) than those reported for the state and nation (15.7% and 13.4% respectively).
<table>
<thead>
<tr>
<th>Physical Activities</th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
<th>PA*</th>
<th>U.S.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>52.3%</td>
<td>55.4%</td>
<td>73.7%</td>
<td>74.7%</td>
</tr>
<tr>
<td>No</td>
<td>47.7%</td>
<td>44.6%</td>
<td>26.3%</td>
<td>25.3%</td>
</tr>
</tbody>
</table>

Respondents in Lackawanna and Luzerne Counties report lower rates of physical activity (52.3% 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital community health needs assessment process are not all related to the provision of traditional medical services. 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 and ultimately the cost of healthcare in the region.

Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital, working closely with community partners, understand 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, with a clear focus on addressing health priorities for the most vulnerable residents in the hospitals’ service area.

There are medical resources in the region with multiple clinics that serve under/uninsured residents. Lackawanna and Luzerne have pockets of disadvantaged residents namely, Scranton (18503, 18508, 18505, and 18510); Hazleton (18201); and Wilkes-Barre (18702) where poverty is high, education is low, and limited English skills are a barrier to accessing care. These areas will be the areas where the greatest improvements to population health can be realized. That having been said, residents of the Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital community may not have as much access to the healthcare resources in the region due to the need for an increase in providers accepting Medicaid patients, limited health literacy, and lack of transportation to healthcare facilities.

When focusing on the needs of special populations served by both hospitals (i.e., persons with disabilities, serious injury and/or chronic illness), it is important to consider findings from both primary and secondary data sources.

The areas where seniors are at greatest risk of being underserved are heavily correlated with areas of poverty, which is pervasive in the study area. This will be important to consider while planning interventions in communities where senior poverty is greatest (i.e., Scranton, Hazleton, Archbald, and Olyphant). However, most of the zip code areas studied showed 1 in 10 seniors in poverty. Interventions related to care coordination and services to maintain independence will be vital for this population which shows great injury rates as well as rates of disability.

Accident victims and residents with disabilities have a unique set of needs that are difficult to quantify with secondary data, such as, transportation, support services and employment. However, we do see that there is a great percentage of the population served by both hospitals
that have some type of disability. We heard about issues related to independence and care coordination from primary data sources. These will be important facts to consider when developing plans related to residents with disabilities.

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 each county and address the multiple barriers to healthcare.

The lifestyles of residents in Lackawanna and Luzerne Counties will be important to consider. While not selected as a top health priority, there are multiple diseases typically associated with poor lifestyle that have higher rates in the service area (i.e., diabetes, obesity, heart disease, etc.). Higher prevalence rates coupled with primary input from surveys and stakeholders regarding poor diets, limited access to healthy nutrition, etc. should be observed and considered during planning discussions.

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 hospitals 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 Allied Services Rehabilitation Hospital and John Heinz Rehabilitation Hospital staff, 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 who 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

Secondary Data Profile

Allied Services Integrated Health System
February 2, 2015
ALLIED SERVICES INSTITUTE OF REHABILITATION MEDICINE
AND JOHN HEINZ INSTITUTE OF REHABILITATION MEDICINE

COMMUNITY HEALTH NEEDS ASSESSMENT
SECONDARY DATA PROFILE

February 2015
Overview

- Primary Service Area - Populated Zip Code Areas
- Key Points
- Demographic Trends
- Behavioral Risk Factor Surveillance System (BRFSS)
- County Health Rankings
- Prevention Quality Indicators Index (PQI)
- Community Need Index (CNI)
The community served by Allied Services Rehabilitation Hospital and Heinz Rehabilitation Hospital (Allied RH / Heinz RH) includes 43 populated zip code areas mostly in Lackawanna and Luzerne counties.

<table>
<thead>
<tr>
<th>Zip</th>
<th>City</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>18201</td>
<td>Hazleton</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18403</td>
<td>Archbald</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18407</td>
<td>Carbondale</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18411</td>
<td>Clarks Summit</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18414</td>
<td>Dalton</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18419</td>
<td>Factoryville</td>
<td>Wyoming/Lackawanna</td>
</tr>
<tr>
<td>18424</td>
<td>Gouldsboro</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18428</td>
<td>Hawley</td>
<td>Pike/Wayne</td>
</tr>
<tr>
<td>18433</td>
<td>Jermyn</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18434</td>
<td>Jessup</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18436</td>
<td>Lake Ariel</td>
<td>Wayne</td>
</tr>
<tr>
<td>18444</td>
<td>Moscow</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18447</td>
<td>Olyphant</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18452</td>
<td>Peckville</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18503</td>
<td>Scranton</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18504</td>
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<td>Lackawanna</td>
</tr>
<tr>
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<td>Lackawanna</td>
</tr>
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<td>Moosic</td>
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</tr>
<tr>
<td>18508</td>
<td>Scranton</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18509</td>
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<td>Lackawanna</td>
</tr>
<tr>
<td>18510</td>
<td>Scranton</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18512</td>
<td>Scranton</td>
<td>Lackawanna</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zip</th>
<th>City</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>18517</td>
<td>Taylor</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18518</td>
<td>Old Forge</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18519</td>
<td>Scranton</td>
<td>Lackawanna</td>
</tr>
<tr>
<td>18612</td>
<td>Dallas</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18621</td>
<td>Hunlock Creek</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18634</td>
<td>Nanticoke</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18640</td>
<td>Pittston</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18641</td>
<td>Pittston</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18642</td>
<td>Duryea</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18643</td>
<td>Pittston</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18644</td>
<td>Wyoming</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18651</td>
<td>Plymouth</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18655</td>
<td>Shickshinny</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18657</td>
<td>Tunkhannock</td>
<td>Wyoming</td>
</tr>
<tr>
<td>18702</td>
<td>Wilkes Barre</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18704</td>
<td>Kingston</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18705</td>
<td>Wilkes Barre</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18706</td>
<td>Wilkes Barre</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18707</td>
<td>Mountain Top</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18708</td>
<td>Shavertown</td>
<td>Luzerne</td>
</tr>
<tr>
<td>18709</td>
<td>Luzerne</td>
<td>Luzerne</td>
</tr>
</tbody>
</table>
Key Points – Community Needs for Allied RH / Heinz RH

- Both Lackawanna and Luzerne counties report higher rates of elderly residents (18.9% and 19.1% respectively) as compared with state and national norms (16.6% and 14.2% respectively). And this population is projected to increase in the next five years.

- Both Lackawanna and Luzerne counties report higher rates of residents under the age of 65 with a disability (9.8% and 10.6% respectively) as compared with the state and nation (9.2% and 8.4% respectively).

- Lackawanna and Luzerne counties report lower rates of residents having no insurance (11.8% and 12.7% respectively) as compared with the country (15.3%), but higher rates as compared with the state (11.5%).

- Roughly one in every six residents of Luzerne County reports living in poverty (16.1%); this rate is higher than the rates seen for Luzerne County (14.6%), the state (13.7%) or the nation (14.5%).
The Behavioral Risk Factor Surveillance System (BRFSS) gathers information at the national, state, and regional levels on residents’ behaviors. Data includes health information, alcohol consumption, insurance coverage, and many more topics.

The PA BRFSS gathers data in regions. The Allied RH / Heinz RH study area includes Lackawanna and Luzerne counties; the corresponding region therefore is the Lackawanna/Luzerne/Wyoming region. Data for this region was compared against state levels.

- The Lackawanna/Luzerne/Wyoming region reports higher rates as compared with the state for all of the BRFSS measures included for this report.

- 5% of the residents of Lackawanna/Luzerne/Wyoming report ever having had a stroke, this is higher than the state which reports a rate of 4% having had a stroke.

- More than a third (35%) of the Lackawanna/Luzerne/Wyoming populations report having arthritis, this is statistically significantly higher than the state rate at 29%.

- 11% of the population of Lackawanna/Luzerne/Wyoming counties report having health problems that require them to use special equipment; this is higher than the state norm of 9%.
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.

Luzerne County shows five of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (57), Health Factors (58), Morbidity (55), and Social and Economic Factors (63 – fifth worst county in the state for this measure).

Lackawanna County shows two of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (56) and Mortality (58).

Lackawanna and Luzerne counties report higher rates than the state for adult smoking, adult obesity, residents with diabetes, excessive drinking, and unemployment.

Luzerne County reports a higher specific measure rate than the state for; Adult Smoking - Luzerne County = 25%, PA = 20%; Adult Obesity – Luzerne County = 30%, PA = 29%; Excessive Drinking - Luzerne County = 20%, PA = 17%; Diabetes – Luzerne = 11%, PA = 10%; and Unemployment - Luzerne County = 9.7%, PA = 7.9%.

Lackawanna County reports a higher specific measure rate than the state for; Adult Smoking - Lackawanna County = 23%, PA = 20%; Excessive Drinking - Lackawanna County = 24%, PA = 17%, Diabetes – Lackawanna = 11%, PA = 10%; and Unemployment - Lackawanna County = 9.0%, PA = 7.9%.

From 2011 to 2014,
- Luzerne County experienced a rise in the adult obesity rate going from 28% to 30%.
- Both Lackawanna and Luzerne counties reported rises in STD rates (going from 155 cases/100,000 pop. to 190 cases/100,000 pop. for Lackawanna; 214/100,000 pop. to 234 for Luzerne).
- Both Lackawanna and Luzerne counties reported rises in uninsured rates (10% to 12% for Lackawanna County, 11% to 12% for Luzerne); this is inconsistent with the state that saw a slight decline in the uninsured rate, going from 13% to 12%.
- Both Lackawanna and Luzerne counties report rises in the rates of diabetic and mammography screenings (Diabetic screening going from 80% to 81% for Lackawanna County and 79% to 81% for Luzerne County) (Mammography screening going from 61.3% to 67.1% for Lackawanna County and 58.6% to 61.6% for Luzerne County).
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.

- In 2014, both Lackawanna and Luzerne counties reported higher PQI rates (preventable hospitalizations) for the following conditions:
  - Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)
  - Congestive Heart Failure (PQI8)
  - Dehydration (PQI10)
  - Bacterial Pneumonia (PQI11)
  - Urinary Tract Infection (PQI12)
  - Uncontrolled Diabetes (PQI14)

- From 2011 to 2014:
  - Lackawanna county experienced declines in PQI rates (reductions in preventable hospitalizations from 2011 to 2014) for all of the comparable PQI measures.
  - Luzerne County experienced declines in PQI rates (reductions in preventable hospitalizations from 2011 to 2014) for 9 of the 10 comparable PQI measures. The one PQI condition in which Luzerne County reports an increase in PQI rates (more preventable hospitalizations from 2011 to 2014) is for Hypertension (2011 = 30.47, 2014 = 38.28).
The Community Need Index (CNI) is a measure of the number and strength of barriers to health care access that a specific region (in this case zip code areas) has in the community. Measures include minority population, unemployment, single parents living in poverty with their children or 65 and older residents living in poverty. The scale ranges from 1.0 to 5.0; 1.0 indicating very few barriers to health care access, 5.0 indicating many barriers to health care access.

Both the Allied RH / Heinz RH study area and Luzerne County report a CNI score of 3.1; indicating slightly more barriers to health care access than average. Lackawanna County reports a CNI score of 3.0, equivalent to the scale average.

Overall, Luzerne County experiences higher CNI specific measure rates as compared with Lackawanna County (for 7 of the 9 measures).

- Luzerne County reports higher CNI specific measures for: unemployed residents, uninsured residents, minority residents, residents with limited English proficiency, residents without a high school diploma, and both married and single parents living in poverty with their children.
- Lackawanna County reports higher CNI specific measures than Luzerne County for: residents who rent and residents aged 65 and older living in poverty.
Community Demographic Profile

- Lackawanna County is projected to experience a slight decline in population over the next five years (2014-2019) at a rate of 0.1% (approximately 118 residents). Luzerne County, on the other hand, is projected to experience a slight rise in population over the next five years at a rate of 0.1%, approximately 450 new residents.

- Both Lackawanna and Luzerne counties report higher rates of elderly residents (18.9% and 19.1% respectively) as compared with state and national norms (16.6% and 14.2% respectively). And this population is projected to increase in the next five years.

- Both Lackawanna and Luzerne counties show lower average annual household income levels as compared with the state ($69,931) and nation ($71,320).
  - Luzerne County reports the lower average annual household income level ($60,432) compared to Lackawanna County ($63,150).

- Lackawanna and Luzerne counties report higher rates of households that earn less than $25K per year than the state and national norms (26.4% for Lackawanna County, 27.8% for Luzerne County, 24% for PA, 24.5% for U.S.).
Community Demographic Profile

- Luzerne County reports the highest rate of diversity with 14.3% of the population self-reporting as a race other than “White, Non-Hispanic”; 8.5% of which report being Hispanic (higher rate than the state at 6.5%). 12.1% of the Lackawanna County population identifies as a race other than “White, Non-Hispanic”; with 5.9% of this population identifying as Hispanic.

- Both Lackawanna and Luzerne counties report higher rates of residents under the age of 65 with a disability (9.8% and 10.6% respectively) as compared with the state and nation (9.2% and 8.4% respectively).

- Lackawanna and Luzerne counties report lower rates of residents having no insurance (11.8% and 12.7% respectively) as compared with the country (15.3%), but higher rates as compared with the state (11.5%).

- Roughly one in every six residents of Luzerne County reports living in poverty (16.1%); this rate is higher than the rates seen for Luzerne County (14.6%), the state (13.7%) or the nation (14.5%).
## Population Trends

<table>
<thead>
<tr>
<th></th>
<th>Lackawanna County</th>
<th>Luzerne County</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2014 Total Population</strong></td>
<td>212,039</td>
<td>318,291</td>
<td>12,791,290</td>
</tr>
<tr>
<td><strong>2019 Projected Population</strong></td>
<td>211,921</td>
<td>318,741</td>
<td>12,899,019</td>
</tr>
<tr>
<td><strong># Change</strong></td>
<td>- 118</td>
<td>+ 450</td>
<td>+ 107,729</td>
</tr>
<tr>
<td><strong>% Change</strong></td>
<td>- 0.1%</td>
<td>+ 0.1%</td>
<td>+ 0.8%</td>
</tr>
</tbody>
</table>

- Lackawanna County is projected to experience a slight decline in population over the next five years (2014-2019) at a rate of 0.1% (approximately 118 residents).
- Luzerne County, on the other hand, is projected to experience a slight rise in population over the next five years at a rate of 0.1%, approximately 450 new residents.
- Pennsylvania, overall, is projected to grow in population at a rate of 0.8% over the next five years.

Lackawanna and Luzerne counties show a majority of the population as female, this is consistent with state norms.

Lackawanna and Luzerne counties report relatively similar rates of younger residents as compared with the state. Both Lackawanna and Luzerne counties report higher rates of elderly residents (18.9% and 19.1% respectively) as compared with state and national norms (16.6% and 14.2% respectively). And this population is projected to increase in the next five years.

Average Household Income (2014)

- Luzerne County reports the lower average annual household income level compared to Lackawanna at $60,432.
- Both Lackawanna and Luzerne counties show lower average annual household income levels as compared with the state ($69,931) and nation ($71,320).

Lackawanna and Luzerne counties report higher rates of households that earn less than $25K per year than the state and national norms (26.4% for Lackawanna County, 27.8% for Luzerne County, 24% for PA, 24.5% for U.S.).

Lackawanna and Luzerne counties report lower rates of residents who have less than a high school degree as compared with the state or U.S. – a large majority of residents in these counties have a high school diploma. Lackawanna county reports more residents with a Bachelor’s degree or higher than Luzerne County.

Luzerne County reports the highest rate of diversity with 14.3% of the population self-reporting as a race other than White, Non-Hispanic; 8.5% of which report being Hispanic (higher rate than the state at 6.5%).

Persons with a Disability (under age 65 years) (2009-2013)

Both Lackawanna and Luzerne counties report higher rates of residents under the age of 65 with a disability (9.8% and 10.6% respectively) as compared with the state and nation (9.2% and 8.4% respectively).

Source: 2014 U.S. Census
Across the U.S., 15.3% of the population under 65 years old report not having health insurance. Lackawanna and Luzerne counties report lower rates of residents having no insurance (11.8% and 12.7% respectively) as compared with the country (15.3%), but higher rates as compared with the state (11.5%).

Source: 2014 U.S. Census
Persons in Poverty

- Roughly one in every six residents of Luzerne County reports living in poverty (16.1%); this rate is higher than the rates seen for Luzerne County (14.6%), the state (13.7%) or the nation (14.5%).

Source: 2014 U.S. Census
By the early 1980s, scientific research clearly showed that personal health behaviors played a major role in premature morbidity and mortality. Although national estimates of health risk behaviors among U.S. adult populations had been periodically obtained through surveys conducted by the National Center for Health Statistics (NCHS), these data were not available on a state-specific basis. This deficiency was viewed as a critical obstacle to state health agencies trying to target resources to reduce behavioral risks and their consequent illnesses. National data may not be applicable to the conditions found in any given state; however, achieving national health goals required state and local agency participation.

As a result, surveys were developed and conducted to monitor state-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. The basic philosophy was to collect data on actual behaviors, rather than on attitudes or knowledge, that would be especially useful for planning, initiating, supporting, and evaluating health promotion and disease prevention programs.

BRFSS marks its 30th year in 2013 and remains the gold standard of behavioral surveillance. Currently data are collected monthly in all 50 states, the District of Columbia, American Samoa, Palau, Puerto Rico, the U.S. Virgin Islands, and Guam. CDC will continue to work closely with state and territorial partners to ensure that the BRFSS continues to provide data that are useful for public health research and practice and for state and local health policy decisions.

Source: EpiQMS, Bureau of Health Statistics, PA Dept. of Health, BRFSS
The BRFSS gathers data at the national and state levels consistently.

More specific data, at the county or MSA level is gathered by states when possible.

Pennsylvania gathers BRFSS data for MSAs and certain counties.

The Allied RH / Heinz RH study area encompasses Lackawanna and Luzerne counties.

The corresponding BRFSS region for the study area is Lackawanna/Luzerne/Wyoming.

This BRFSS region was compared to state benchmarks.

Data provided here is for the 2011-2013 timeframe.
The Lackawanna/Luzerne/Wyoming region reports higher rates as compared with the state for all of the BRFSS measures included for this report.

- 5% of the residents of Lackawanna/Luzerne/Wyoming report ever having had a stroke, this is higher than the state which reports a rate of 4% having had a stroke.

- More than a third (35%) of the Lackawanna/Luzerne/Wyoming populations report having arthritis, this is statistically significantly higher than the state rate at 29%.

- 11% of the population of Lackawanna/Luzerne/Wyoming counties report having health problems that require them to use special equipment; this is higher than the state norm of 9%.

*Source: EpiQMS, Bureau of Health Statistics, PA Dept. of Health, BRFSS*
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.
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
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
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).

- Luzerne County shows five of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (57), Health Factors (58), Morbidity (55), and Social and Economic Factors (63 – fifth worst county in the state for this measure).

- Lackawanna County shows two of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (56) and Mortality (58).

Source: 2014 County Health Rankings
From 2011 to 2014:

- Lackawanna saw rises in the county health rankings indicating poorer county health for Health Outcomes, Health Factors, Mortality, Morbidity, Health Behaviors, and Social and Economic Factors (six of the eight rankings).
- Luzerne County also saw many of it’s health rankings rising – getting “unhealthier”:
  - Luzerne County got “unhealthier” in the Social and Economic Factors ranking – going from 32 to 63.
- At the same time, Luzerne County got “healthier” for the Mortality ranking – going from 63 to 55.
- Both Lackawanna and Luzerne counties show declines in adult smoking rates (27% to 23% for Lackawanna County, 27% to 25% for Luzerne County).
- Luzerne County experienced a rise in the adult obesity rate going from 28% to 30%.
- Both Lackawanna and Luzerne counties reported rises in STD rates; Lackawanna County going from 155 cases/100,000 population to 190 and Luzerne County going from 214 cases/100,000 pop. to 234).
- Both Lackawanna and Luzerne counties reported rises in uninsured rates (10% to 12% for Lackawanna County, 11% to 12% for Luzerne); this is inconsistent with the state that saw a slight decline in the uninsured rate, going from 13% to 12%.
- Both Lackawanna and Luzerne counties report rises in the rates of diabetic and mammography screenings
  (Diabetic screening going from 80% to 81% for Lackawanna County and 79% to 81% for Luzerne County)
  (Mammography screening going from 61.3% to 67.1% for Lackawanna County and 58.6% to 61.6% for Luzerne County).

Source: 2014 County Health Rankings
## County Health Rankings Data
(2014 ranking on top; 2011 ranking in parentheses)

<table>
<thead>
<tr>
<th>County</th>
<th>Health Outcomes</th>
<th>Health Factors</th>
<th>Mortality (Length of Life)</th>
<th>Morbidity (Quality of Life)</th>
<th>Health Behaviors</th>
<th>Clinical Care</th>
<th>Social and Economic Factors</th>
<th>Physical Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lackawanna</td>
<td>56 (49)</td>
<td>29 (19)</td>
<td>58 (48)</td>
<td>48 (46)</td>
<td>30 (26)</td>
<td>27 (29)</td>
<td>43 (23)</td>
<td>4 (17)</td>
</tr>
<tr>
<td>Luzerne</td>
<td>57 (59)</td>
<td>58 (30)</td>
<td>55 (63)</td>
<td>55 (50)</td>
<td>47 (44)</td>
<td>28 (28)</td>
<td>63 (32)</td>
<td>14 (10)</td>
</tr>
</tbody>
</table>

County Health Rankings Data (2014)

Source: 2014 County Health Rankings
### County Health Rankings Data

(2014 data on top; 2011 data in parentheses)

<table>
<thead>
<tr>
<th>County</th>
<th>Adult Smoking (%)</th>
<th>Adult Obesity (%)</th>
<th>Excessive Drinking (%)</th>
<th>Sexually Transmitted Infections / Chlamydia Rate (per 100,000 population)</th>
<th>Uninsured (%)</th>
<th>PCP Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lackawanna</td>
<td>23 (27)</td>
<td>25 (26)</td>
<td>24 (24)</td>
<td>190 (155)</td>
<td>12 (10)</td>
<td>76 (83)</td>
</tr>
<tr>
<td>Luzerne</td>
<td>25 (27)</td>
<td>30 (28)</td>
<td>20 (20)</td>
<td>234 (214)</td>
<td>12 (11)</td>
<td>80 (70)</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>20 (22)</td>
<td>29 (28)</td>
<td>17 (18)</td>
<td>415 (340)</td>
<td>12 (13)</td>
<td>80 (94)</td>
</tr>
</tbody>
</table>

Source: 2014 and 2011 County Health Rankings
County Health Rankings Data

Lackawanna

Luzerne

PA

Source: 2014 County Health Rankings
County Health Rankings Data

Excessive Drinking (%)

- Lackawanna: 24%
- Luzerne: 20%
- PA: 17%

Sexually Transmitted Infections / Chlamydia rate (per 100,000 pop.)

- Lackawanna: 190
- Luzerne: 234
- PA: 415

Source: 2014 County Health Rankings
County Health Rankings Data

Uninsured (%)

PCP Rate (per 100,000 pop.)

Source: 2014 County Health Rankings
## County Health Rankings Data

(2014 data on top; 2011 data in parentheses)

<table>
<thead>
<tr>
<th>County</th>
<th>Diabetic Screening (% HbA1c)</th>
<th>Diabetes (% Diabetic)</th>
<th>Mammography Screening (% screened)</th>
<th>Unemployment (% unemployed)</th>
<th>Inadequate Social Support (% no social-emotional support)</th>
<th>Violent Crime Rate (per 100,000 pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lackawanna</td>
<td>81 (80)</td>
<td>11 (10)</td>
<td>67.1 (61.3)</td>
<td>9.0 (8.3)</td>
<td>22 (21)</td>
<td>232 (228)</td>
</tr>
<tr>
<td>Luzerne</td>
<td>81 (79)</td>
<td>11 (10)</td>
<td>61.6 (58.6)</td>
<td>9.7 (9.1)</td>
<td>22 (22)</td>
<td>289 (317)</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>84 (84)</td>
<td>10 (9)</td>
<td>63.0 (64.5)</td>
<td>7.9 (8.1)</td>
<td>21 (21)</td>
<td>367 (419)</td>
</tr>
</tbody>
</table>
County Health Rankings Data

Diabetic Screening (% HbA1c)
- Lackawanna: 80%
- Luzerne: 79%
- PA: 84%

Diabetes (%)
- Lackawanna: 10%
- Luzerne: 10%
- PA: 10%

Source: 2014 County Health Rankings
**County Health Rankings Data**

**Mammography Screening (%)**
- Lackawanna: 61.3%
- Luzerne: 58.6%
- PA: 63.0%

**Unemployment (%)**
- Lackawanna: 8.3%
- Luzerne: 9.1%
- PA: 7.9%

Source: 2014 County Health Rankings
Inadequate Social Support (% No Support)

Violent Crime Rate (per 100,000 pop.)

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

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

PQI Subgroups

- **Chronic Lung Conditions**
  - PQI 5  Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults (40+)
    Admission Rate*
    * PQI 5 for past study was COPD in 18+ population; PQI 5 for current study is now restricted to COPD and Asthma in 40+ population
  - PQI 15  Asthma in Younger Adults Admission Rate*
    * PQI 15 for past study was Adult Asthma in 18+ population; PQI 15 for current study is now restricted to Asthma in 18-39 population (“Younger”).

- **Diabetes**
  - PQI 1  Diabetes Short-Term Complications Admission Rate
  - PQI 3  Diabetes Long-Term Complications Admission Rate
  - PQI 14  Uncontrolled Diabetes Admission Rate
  - PQI 16  Lower Extremity Amputation Rate Among Diabetic Patients

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

- **Other Conditions**
  - PQI 2  Perforated Appendix Admission Rate
  - PQI 9  Low Birth Weight Rate
  - PQI 10  Dehydration Admission Rate
  - PQI 11  Bacterial Pneumonia Admission Rate
  - PQI 12  Urinary Tract Infection Admission Rate

* Source: AHRQ
In 2014, both Lackawanna and Luzerne counties reported higher PQI rates (preventable hospitalizations) for the following conditions:
- Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)
- Congestive Heart Failure (PQI8)
- Dehydration (PQI10)
- Bacterial Pneumonia (PQI11)
- Urinary Tract Infection (PQI12)
- Uncontrolled Diabetes (PQI14)

The largest PQI difference between Lackawanna County and the state (in which Lackawanna reports the higher PQI than the state) is for Bacterial Pneumonia. Pennsylvania shows a rate of preventable hospitalizations due to bacterial pneumonia at 326.16 per 100,000 population, whereas Lackawanna County shows a rate of 455.45 preventable hospitalizations per 100,000 population (more than 100 more preventable hospitalizations per 100,000 pop.).

The largest PQI difference between Luzerne County and the state (in which Luzerne reports the higher PQI than the state) is for Perforated Appendix. Pennsylvania shows a rate of preventable hospitalizations due to perforated appendix at 343.91 per 100,000 population, whereas Lackawanna County shows a rate of 548.57 preventable hospitalizations per 100,000 population (more than 200 more preventable hospitalizations per 100,000 pop.).

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

Of the remaining 10 PQI measures:
- Lackawanna county experienced declines in PQI rates (reductions in preventable hospitalizations from 2011 to 2014) for all of the 10 PQI measures.

- Luzerne County experienced declines in PQI rates (reductions in preventable hospitalizations from 2011 to 2014) for 9 of the 10 PQI measures. The one PQI condition in which Luzerne County reports an increase in PQI rates (more preventable hospitalizations from 2011 to 2014) is for:
  - Hypertension (2011 = 30.47, 2014 = 38.28)
## Prevention Quality Indicators Index (PQI)

<table>
<thead>
<tr>
<th>Prevention Quality Indicators (PQI)</th>
<th>2014</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lackawanna County</td>
<td>Luzerne County</td>
</tr>
<tr>
<td>Diabetes Short-Term Complications (PQI1)</td>
<td>49.49</td>
<td>62.50</td>
</tr>
<tr>
<td>Perforated Appendix (PQI2)</td>
<td>200.00</td>
<td>548.57</td>
</tr>
<tr>
<td>Diabetes Long-Term Complications (PQI3)</td>
<td>116.07</td>
<td>111.32</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease or Adult Asthma (PQI5)</td>
<td>677.59</td>
<td>656.93</td>
</tr>
<tr>
<td>Hypertension (PQI7)</td>
<td>33.58</td>
<td>38.28</td>
</tr>
<tr>
<td>Congestive Heart Failure (PQI8)</td>
<td>484.91</td>
<td>440.59</td>
</tr>
<tr>
<td>Low Birth Weight (PQI9)</td>
<td>39.70</td>
<td>29.94</td>
</tr>
<tr>
<td>Dehydration (PQI10)</td>
<td>91.92</td>
<td>85.15</td>
</tr>
<tr>
<td>Bacterial Pneumonia (PQI11)</td>
<td>455.45</td>
<td>401.53</td>
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<tr>
<td>Urinary Tract Infection (PQI12)</td>
<td>283.99</td>
<td>219.52</td>
</tr>
<tr>
<td>Angina Without Procedure (PQI13)</td>
<td>15.91</td>
<td>9.37</td>
</tr>
<tr>
<td>Uncontrolled Diabetes (PQI14)</td>
<td>15.32</td>
<td>16.01</td>
</tr>
<tr>
<td>Asthma in Younger Adults (PQI15)</td>
<td>50.25</td>
<td>67.73</td>
</tr>
<tr>
<td>Lower Extremity Amputation Among Diabetics (PQI16)</td>
<td>28.87</td>
<td>25.78</td>
</tr>
</tbody>
</table>

*Red values indicate a PQI value for the specific study area that is higher than the PQI for PA.  
*Green values indicate a PQI value for the specific study area that is lower than the PQI for PA.

Source: AHRQ
Chronic Lung Conditions

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

Source: AHRQ
Chronic Lung Conditions (cont’d)

PQI 15  Asthma in Younger Adults Admission Rate

Source: AHRQ
Diabetes

PQI 1 Diabetes Short-Term Complications Admission Rate

Source: AHRQ
Diabetes (cont’d)

PQI 3 Diabetes Long-Term Complications Admission Rate

Source: AHRQ
Diabetes (cont’d)

Source: AHRQ
Diabetes (cont’d)

PQI 16 Lower Extremity Amputation Rate Among Diabetic Patients

Source: AHRQ
Heart Conditions

PQI 7  Hypertension Admission Rate

Source: AHRQ
Heart Conditions (cont’d)

PQI 8 Congestive Heart Failure Admission Rate

Source: AHRQ
Heart Conditions (cont’d)

PQI 13  Angina Without Procedure Admission Rate

Source: AHRQ
Other Conditions

PQI 10 Dehydration Admission Rate

Source: AHRQ
Other Conditions (cont’d)

PQI 11  Bacterial Pneumonia Admission Rate

Source: AHRQ
Other Conditions (cont’d)

PQI 12  Urinary Tract Infection Admission Rate

Source: AHRQ
Other Conditions (cont’d)

PQI 2 Perforated Appendix Admission Rate

Source: AHRQ
Other Conditions (cont’d)

PQI 9  Low Birth Weight Rate

Source: AHRQ
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.
The highest CNI score for the Allied RH / Heinz RH study area is 4.8 in the zip code area of 18503-Scranton in Lackawanna County. The highest CNI score indicates the most barriers to community health care access. This zip code area holds the highest measures for the study area for:
- Rental activity at 93.8% (colleges/universities)
- Uninsured residents at 19.7%
- Residents without a high school diploma (28.4%)
- Residents aged 65 and older living in poverty (25.4% of those aged 65 and older)

Zip code area 18709-Luzerne in Luzerne county reports the highest rates of both married parents as well as single parents who live with their children in poverty (40.5% and 84.4% respectively) across all of the zips in Allied RH / Heinz RH.

Luzerne County reports an overall CNI score of 3.1; indicating slightly more barriers to health care access than average. Lackawanna County reports a CNI score of 3.0, equivalent to the scale average, indicating an average number of barriers to health care for Lackawanna County.
The highest CNI score for the Allied RH / Heinz RH study area is 4.8 in the zip code area of 18503-Scranton in Lackawanna County. This zip code area holds the highest measures for:

- Rental activity at 93.8% (colleges/universities)
- Uninsured residents at 19.7%
- Residents without a high school diploma (28.4%)
- Residents aged 65 and older living in poverty (25.4% of those aged 65 and older)

The highest CNI score indicates the most barriers to community health care access. This zip code area holds the highest measures for the study area for:

- Rental activity at 93.8% (colleges/universities)
- Uninsured residents at 19.7%
- Residents without a high school diploma (28.4%)
- Residents aged 65 and older living in poverty (25.4% of those aged 65 and older)

Zip code area 18201-Hazleton, in Luzerne County reports the highest rates of the following for the Allied RH / Heinz RH study area:

- Minority residents at 41.8% of the population
- Residents with limited English proficiency (8.4%)

### Allied RH / Heinz RH Community Summary

<table>
<thead>
<tr>
<th>Zip</th>
<th>City</th>
<th>County</th>
<th>2014 Tot. Pop.</th>
<th>Rental %</th>
<th>Unemp %</th>
<th>Uninsu %</th>
<th>Minor %</th>
<th>Lim Eng</th>
<th>No HS Dip</th>
<th>65+ Pov</th>
<th>M w/ Chil Pov</th>
<th>Sin w/ Chil Pov</th>
<th>Inc Rank</th>
<th>Insur Rank</th>
<th>Educ Rank</th>
<th>Cult Rank</th>
<th>Hous Rank</th>
<th>2014 CNI Score</th>
</tr>
</thead>
<tbody>
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**Allied RH / Heinz RH Community Summary**

- Rental activity at 33.7% (colleges/universities)
- Uninsured residents at 8.9%
- Residents without a high school diploma (13.5%)
- Residents aged 65 and older living in poverty (19.1% of those aged 65 and older)

Source: Thomson Reuters
### CNI Scores (Data)

**Zip code area 18709-Luzerne in Luzerne county reports the highest rates of both married parents as well as single parents who live with their children in poverty (40.5% and 84.4% respectively) across all of the zips in Allied RH / Heinz RH.**

- **The overall CNI score for the Allied RH / Heinz RH study area is 3.1. The average CNI score for the scale is 3.0 (range 1.0 to 5.0). Therefore, according to the overall CNI score, the Allied RH / Heinz RH study area experiences slightly more barriers to health care access than average.**

**Source: Thomson Reuters**

<table>
<thead>
<tr>
<th>Zip</th>
<th>City</th>
<th>County</th>
<th>2014 Tot. Pop.</th>
<th>Rental %</th>
<th>Unemp %</th>
<th>Uninsu %</th>
<th>Minor %</th>
<th>Lim Eng</th>
<th>No HS Diploma</th>
<th>65+ Pov</th>
<th>M w/ Chil Pov</th>
<th>Sin w/ Chil Pov</th>
<th>Inc Rank</th>
<th>Insur Rank</th>
<th>Educ Rank</th>
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<th>Hous Rank</th>
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**Allied RH / Heinz RH Community Summary**

| 470,010 | 33.7% | 8.0% | 8.9% | 13.5% | 1.6% | 11.7% | 10.8% | 19.1% | 43.8% | 3.5 | 2.7 | 2.6 | 2.7 | 4.0 | 3.1 |
## CNI Scores (Data)

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<th>City</th>
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<th>2014 Total Pop.</th>
<th>Rental %</th>
<th>Unemp %</th>
<th>Uninsu %</th>
<th>Minor %</th>
<th>Lim Eng</th>
<th>No HS Dip</th>
<th>65+ Pov</th>
<th>M w/ Chil Pov</th>
<th>Sin w/ Chil Pov</th>
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<th>Insur Rank</th>
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<th>Hous Rank</th>
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<td>2.0</td>
</tr>
<tr>
<td>18621</td>
<td>Hunlock Creek</td>
<td>Luzerne</td>
<td>4868</td>
<td>12.3%</td>
<td>5.4%</td>
<td>6.6%</td>
<td>2.8%</td>
<td>0.3%</td>
<td>12.3%</td>
<td>11.3%</td>
<td>15.7%</td>
<td>40.8%</td>
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</tr>
<tr>
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<td>23264</td>
<td>20.2%</td>
<td>4.3%</td>
<td>4.4%</td>
<td>6.0%</td>
<td>0.5%</td>
<td>5.1%</td>
<td>3.5%</td>
<td>5.0%</td>
<td>20.4%</td>
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<td>1</td>
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<td>3</td>
<td>1.6</td>
</tr>
<tr>
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<td>15.1%</td>
<td>6.3%</td>
<td>5.7%</td>
<td>3.6%</td>
<td>0.5%</td>
<td>8.7%</td>
<td>6.8%</td>
<td>6.6%</td>
<td>40.8%</td>
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<td>Dalton</td>
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<td>5.8%</td>
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<td>0.3%</td>
<td>6.8%</td>
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<td>11.2%</td>
<td>25.0%</td>
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<tr>
<td>18707</td>
<td>Mountain Top</td>
<td>Luzerne</td>
<td>16969</td>
<td>11.0%</td>
<td>7.2%</td>
<td>4.5%</td>
<td>7.0%</td>
<td>0.3%</td>
<td>5.1%</td>
<td>3.0%</td>
<td>2.7%</td>
<td>8.5%</td>
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</tr>
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</table>

### Allied RH / Heinz RH Community Summary

| Allied RH / Heinz RH Community Summary | 470,010 | 33.7% | 8.0% | 8.9% | 13.5% | 1.6% | 11.7% | 10.8% | 19.1% | 43.8% | 3.5 | 2.7 | 2.6 | 2.7 | 4.0 | 3.1 |

- Zip code area 18642-Duryea in Luzerne County reports the highest unemployment rate across the 39 zip code areas in the Allied RH / Heinz RH study area at 12.3%.

*Source: Thomson Reuters*
The Allied RH / Heinz RH study area and Luzerne County report a CNI score of 3.1; indicating slightly more barriers to health care access than average.

Lackawanna County reports a CNI score of 3.0, equivalent to the scale average, indicating an average number of health care barriers. While Lackawanna may report the average CNI score, this does not mean that they do not have barriers to health care access; the goal for the CNI measure is to get lower scores, the lowest score being 1.0.

Source: Thompson Reuters
The consultant team has identified the following data trends and their potential impacts:

- Both Lackawanna and Luzerne counties report higher rates of elderly residents (18.9% and 19.1% respectively) as compared with state and national norms (16.6% and 14.2% respectively). And this population is projected to increase in the next five years.
- Both Lackawanna and Luzerne counties report higher rates of residents under the age of 65 with a disability (9.8% and 10.6% respectively) as compared with the state and nation (9.2% and 8.4% respectively).
- Lackawanna and Luzerne counties report lower rates of residents having no insurance (11.8% and 12.7% respectively) as compared with the country (15.3%), but higher rates as compared with the state (11.5%).
- Roughly one in every six residents of Luzerne County reports living in poverty (16.1%); this rate is higher than the rates seen for Luzerne County (14.6%), the state (13.7%) or the nation (14.5%).
- 5% of the residents of Lackawanna/Luzerne/Wyoming report ever having had a stroke, this is higher than the state which reports a rate of 4% having had a stroke.
- More than a third (35%) of the Lackawanna/Luzerne/Wyoming populations report having arthritis, this is statistically significantly higher than the state rate at 29%.
- 11% of the population of Lackawanna/Luzerne/Wyoming counties report having health problems that require them to use special equipment; this is higher than the state norm of 9%.
- Luzerne County shows five of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (57), Health Factors (58), Morbidity (55), and Social and Economic Factors (63 – fifth worst county in the state for this measure). Lackawanna County shows two of the eight county health rankings being above 50 (poor ranking for the state); these include: Health Outcomes (56) and Mortality (58).
- Both Lackawanna and Luzerne counties report higher PQI rates than the state for a number of preventable conditions including COPD, CHF, Dehydration, Bacterial Pneumonia, Urinary Tract Infections, and Uncontrolled Diabetes.
- The highest CNI score for the Allied RH / Heinz RH study area is 4.8 in the zip code area of 18503-Scranton in Lackawanna County. This zip code reports the highest rates for: Rental activity at 93.8% (colleges/universities), Uninsured residents at 19.7%, Residents without a high school diploma (28.4%), and Residents aged 65 and older living in poverty (25.4% of those aged 65 and older).