



**Community Health Needs
Assessment
2016**



Princeton Community Hospital

ABOUT US

Princeton Community Hospital Association, Inc. (PCHA) provides inpatient, outpatient, and emergency care services for residents of Princeton, West Virginia, and the surrounding area in a modern health care facility. PCHA is a not-for-profit corporation organized under the laws of West Virginia and is established as an administrative agency of the City Council of Princeton, West Virginia for the purpose of controlling, acquiring, improving, extending, equipping, operating, maintaining, managing, supervising, and having the custody of a general hospital owned by the City of Princeton, West Virginia. PCHA is considered to be a component unit of the City of Princeton. PCHA is licensed to operate a 267 bed acute-care facility which includes 64 psychiatric inpatient beds. The Behavioral Health Pavilion of the Virginias, located in Bluefield, West Virginia, is an inpatient and outpatient behavioral health facility which has 24 general adult psychiatric beds, 30 geriatric psychiatric beds and 10 psychiatric intensive care beds.

The Mission, Vision, and Values are the building blocks of the hospital's strategic and operational plans, budgets, resource allocation, and policies and procedures. Each manager is responsible for communicating and ensuring that staff understands the hospital Mission and Vision Statement and how their roles integrate to promote the success of the entire organization.

Mission

Princeton Community Hospital Association will lead in building a health care system that provides a broad range of health care services which improve the health status of individuals in defined geographic regions. We will emphasize high quality, low cost and predictable outcomes for all our services.

Vision

Providing the healthcare of the future ... today.

Values: CARING SERVICE

- **C Committed:** We are committed to serving our customers.
 - **A Attitude:** We are responsible for displaying an attitude of professionalism, courtesy, and respect.
 - **R Respectful:** We are responsible for respecting others.
 - **I Integrity:** We are responsible for displaying integrity and honesty at all times.
 - **N No Passing Zone:** We are responsible for responding to the needs and safety of our customers.
 - **G Genuine Care:** We are responsible for listening, anticipating, and responding to customer needs in a timely manner.
-
- **S Satisfaction:** We are responsible for maintaining high levels of satisfaction.
 - **E Encourage Excellence:** We rely on each other to provide patient care. Together, we are responsible for the outcomes of our efforts.
 - **R Responsive:** Our responsiveness will convey our concern and willingness to serve.
 - **V Value:** Our patients, staff, and physicians each play an important role and we value their contribution to our success.
 - **I Image:** We will take pride in our appearance, as well as in the appearance of our hospital.
 - **C Communicate:** We recognize that good communication is essential in understanding the needs of our customers and in helping them appropriately.
 - **E Enjoy:** Enjoy your work and the opportunity to make a difference.

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I. INTRODUCTION

The Community Health Needs Assessment (CHNA) of Princeton Community Hospital (Hospital) was conducted to identify health issues and community needs as well as provide information to key decision makers to make a positive impact on the health of the residents in the hospital's service area. The results of the CHNA will enable the Hospital as well as other community providers to collaborate their efforts to provide the necessary resources for the community.

To assist with the CHNA process and completion, Princeton Community Hospital retained Arnett Carbis Toothman LLP, a regional accounting firm with offices in West Virginia, Ohio, and Pennsylvania. The assessment was designed to ensure compliance with current Internal Revenue Service (IRS) guidelines for charitable 501(c)(3) tax-exempt hospitals which require tax-exempt hospitals to conduct a CHNA every three years to identify the community's health needs and adopt an implementation strategy to meet those needs. In addition, community benefits must be reported on IRS Form 990, Schedule H. As described in the instructions to Schedule H, community benefit activities or programs: "seek to achieve a community benefit objective, including improving access to health service, enhancing public knowledge, and relief of a government burden to improve health".

The study considered services offered by health care providers in the area, population trends, socio-economic demographics and the region's overall sufficiency of health care providers in the community. Data was obtained from numerous health organizations as well as interviews with community leaders and hospital staff. This information was used to determine the Community's future health needs. The study also reviewed the prior implementation plan to assess the progress and community feedback related to the Hospital's plan.

The assessment identified key risk factors based upon the population's medical history. Additionally, the assessment used socio-economic and demographic data to determine whether area health care providers adequately assess the Community's key risk factors. As part of this assessment and as prescribed by IRS section 501(r), this determination will be used in developing a forthcoming strategy to meet the Community's health needs. Furthermore, and as mandated by IRS section 501(r)(3)(B)(ii), the assessment, as well as the Hospital's strategy to meet the Community's health needs, will be made widely available to the public on the Hospital's website.

The significant components of the CHNA include:

- Service Area Definition, Population & Vital Statistics
- Socioeconomic Characteristics of the Service Area
- Health Status Indicators
- Access to Care
- Results of Community Participation

Research Process

- Statistical data profile of Princeton, West Virginia and surrounding areas
- Online survey
- Key Informant interviews with community stakeholders

Key Areas of Opportunity

- Access to Care
- Behavioral Health
- Drug & Alcohol Abuse
- Physical Activity & Nutrition
- Public Health Education

The purpose of the study was to gather current statistics and qualitative feedback on the key health issues facing service area residents. This community health needs assessment (CHNA) included both quantitative and qualitative research components including data profile and stakeholder interviews.

The data collection process utilized the following sources:

- Bureau of Business and Economic Research, College of Business and Economics, West Virginia University
- West Virginia Bureau for Public Health
- West Virginia Department of Health and Human Resources
- US Department of Health and Human Resources
- The Robert Wood Johnson Foundation: County Health Rankings System
- U.S. Census Bureau
- United States Department of Agriculture, Economic Research Service
- Substance Abuse and Mental Health Services Administration (SAMHSA)

Quantitative Data:

- Statistical Data Profile was compiled to depict the population, household, economic, education, income, vital, and other healthcare statistics.
- An online survey was conducted anonymously. The survey collected demographic information and health related information to assess the health status, health care access, and other needs of the community.

Qualitative Data:

- Key Informant Interviews were conducted with community leaders between April and May 2016. Participants represented a variety of sectors including public health and medical providers, children and youth services, community resources, and a religious organization.

Progress Report

ACCOMPLISHMENTS IN QUALITY, SAFETY, CUSTOMER SERVICE AND FINANCE

The Key Issues & Priorities identified in the previous Community Health Needs Assessment prepared for PCHA were:

- Access to care/coverage
- Chronic disease –obesity, heart disease, diabetes
- Substance abuse
- Hepatitis B & C
- Teen pregnancy
- Child abuse/neglect
- Suicide

Each of the above items were prioritized and addressed based upon the severity of the need, the resources available, the potential for success and ability to have an impact. The strategies to address these issues were outlined in a separate document “Princeton Community Hospital – CHNA Implementation Plan”

Since its last Community Health Needs Assessment in 2013 PCHA has had many accomplishments and changes resulting in improved health care for its residents of Princeton and surrounding communities. Below are some of the more significant items impacting Quality, Safety and Customer Service:

- **Quality**

- PCHA continued efforts to achieve Trauma Designation status through the State of West Virginia’s Office of Emergency Medical Services (OEMS). Acquiring this status will greatly benefit the community by offering trauma level services close to home.
- PCHA’s Nursing Staff adopted the “Transforming Care Together” model to continue their focus and commitment to clinical quality, patient safety and satisfaction.
- PCHA’s Cancer Center received a three-year accreditation from the American College of Surgeons. This accreditation recognizes the quality of cancer care available at PCHA and assures patients in our community have access to the full scope of services required to diagnose, treat and support cancer patients and their families.

- PCHA's Laboratory expanded its use of the Sophia Analyzer with the conversion of the rapid Strep test, reducing the turn-around time and eliminating the subjectivity of the test.
- PCHA's Quality & Education Department received a three-year accreditation from the West Virginia Nurses Association and a one-year renewal from the West Virginia RN Board as an approved provider of nursing continuing education.
- PCHA's Medical Imaging staff obtained advanced credentials in mammography, ultrasound, CT and vascular-interventional radiography. The continued education required diligent study and the rigorous examination process demonstrated their commitment to providing quality patient care.
- PCHA achieved Joint Commission accreditation and earned the Gold Seal of Approval, the internationally recognized symbol of health care quality.
- PCHA's Laboratory converted to fourth generation HIV screening tests. These tests are extremely sensitive and specific, allowing for earlier detection of the infection before the patient has developed antibodies.
- PCHA's Emergency Department implemented i-STAT, an advanced handheld blood analysis system that delivers lab-quality results at the patient bedside in minutes. This technology provides emergency physicians with critical information needed to make timely patient care decisions.
- PCHA acquired the Premier Quality Advisor and Physician Focus, a quality improvement system that integrates quality, safety and financial data. Quality Advisor provides the collective information necessary to identify opportunities to improve by benchmarking outcomes with peers, identifying care practice variations and understanding where to focus care management efforts to achieve the best results.
- The Nuance Clinical Documentation Improvement program became fully operational. This program provides clinicians an efficient guide to assist them with preparing complete and compliant clinical documentation. The system is designed to enhance quality and patient safety and address medical necessity.
- PCHA's IT Department and The Women's Center successfully implemented the interfacing of the GE Centricity Perinatal fetal monitoring system with Meditech. This interface allows nursing to remain at the patient's bedside and document electronically on the fetal monitor, tracing and building a constant flow of more accurate and complete information into the patient's electronic health record.

- **Safety**

- PCHA's Pharmacy expanded its use of Medication History Technicians to include the pre-operative and pre-admission processes in Surgical Services. Maintaining patients' medication histories within their electronic health records which enhances patient safety by preventing drug interactions, incorrect dosages and by providing improved coordination of care.
- PCHA's IT Department and the Lab's phlebotomists implemented the Iatric Systems Mobilab, a barcode specimen collection system that utilizes wireless handheld and printer technology. Mobilab eliminates patient and specimen identification errors, improves stat turnaround time and decreases unnecessary venipunctures by using "smart draw" warnings that display previously collected specimens and future orders for the patient.
- PCHA's Clinical Pharmacists began rounding on the ICU/CCU units. The pharmacists are available on the units to assist the nursing staff and physicians with medication dosage and dose delivery decisions, and address questions and concerns related to medications. This initiative extends the clinical work of pharmacists to the patient's bedside.
- PCHA formed an EBOLA Task Force and successfully implemented plans for preparedness in responding to potential cases of EBOLA and other deadly infectious diseases. The IT Department developed an early screening process for Emergency Department patients in the initial triage. The information captured in the patient's electronic health record alerts all staff involved in the care of the patient throughout the patient's stay in the facility.
- PCHA's Patient Care Services, IT Department and the Laboratory's Blood Bank implemented the use of electronic transfusion administration records and electronic cross-matching. Bar codes are used to verify patient identification and scan the specifics related to the blood product into the patient's electronic health record. Electronic storage of transfusion administration records improves patient safety by eliminating missed data entry, the burden of maintaining paper records while allowing for all transfusion information to reside in the patient's electronic health record. Electronic cross-matching reduces the turn-around time for blood products from the time of order to the time of issue which is critical with trauma patients who need blood transfusions.
- PCHA's Patient Care Services and IT Department went live with computerized verbal and telephone orders, with the objective of eliminating paper orders. This method is safer for patients as orders are verified and electronically approved by the physician with medication orders profiled and sent immediately to the pharmacy.

- PCHA's nursing staff used the "Transforming Care Together" model to revise their fall prevention program. By June 2015 falls with injury had declined 57%, while total falls were reduced 32% in 2015.

- **Customer Service**

- PCHA began offering 24/7 advanced orthopedic care in the Emergency Department.
- PCHA expanded its rural imaging services with a new site in Welch, West Virginia. The Medical Imaging Department's Director completed the Certificate of Need process for both mobile MRI services and diagnostic x-ray and ultrasound services. Receiving approval in July 2014, PCHA began serving McDowell County at this site with mobile MRI service in August 2014, followed in September 2014 with the opening of the ambulatory care center for diagnostic x-rays; then added ultrasound services in February 2015.
- PCHA added a Speech Therapy Department employing a full-time Language Pathologist to provide diagnostic, remediation and counseling services.
- PCHA's Pulmonary Rehab Department expanded services to include CHF patients. In addition, the department is working to offer more comprehensive treatment for coal miners in our service area. The department hopes to be included in a study that documents improvements in black lung patients who receive pulmonary rehab services as compared to those patients not receiving the services.
- PCHA partnered with the West Virginia Breast & Cervical Cancer Screening Program to provide mammograms and Pap tests to area women at no cost. One hundred ninety-one women took advantage of the screening.
- PCHA provided approximately 6,000 free flu shots to employees and the community in fiscal 2015.
- The 3-West nursing staff developed an instructional guide for patients having hip and knee surgeries. "Instructions for Total Hip and Knee Surgeries, A Guide for Patients and Families" provides a pre-operative and post-operative guide to help patients achieve the best possible outcomes from their surgeries.
- 3-East nursing developed a pamphlet entitled "Secondhand and Thirdhand Smoke: Is my child in danger?" This community education tool explains the differences between secondhand and third hand smoke, the related health problems, and how to protect our children.

- PCHA's Medical Imaging Department hosted its fourth annual Peripheral Arterial Disease (PAD) screening. Forty patients were screened using the Ankle-brachial (ABI) index which uses a special ultrasound device to evaluate blood pressure and blood flow.
- PCHA offered free men's health screenings for prostate and colon cancer. The screenings were for men 50 years of age and older or for those with a family history of these diseases. One hundred twelve men took advantage of the screening.
- The PCHA Cancer Center Director, VP of Patient Care and Oncologists met with their counterparts from Charleston Area Medical Center to begin collaborative efforts related to clinical trials. Becoming an affiliate of CAMC's clinical trials will enable PCHA to continue certain studies in which our patient volumes do not support independent trials. As an affiliate, PCHA would continue to treat those patients and still meet the regulatory requirements under CAMC's clinical trials umbrella.
- ICU/CCU's Nursing staff developed brochures on Mechanical Ventilation and ICU/CCU Visitation. The brochures provide educational information and enhance communication with patients and their families.
- The IT Department connected more physicians' offices in provider office integration, enabling the electronic transmission of test results from the hospital's information system to the physician's office electronic health record. In addition physicians have a link to the hospital's Picture Archiving and Communications System for viewing their patients' diagnostic images. This integration provides physicians with timely test results, saves time for their staff and assists them with achieving Meaningful Use.
- PCHA's Pharmacy staff expanded their student mentoring program in 2015 by including students from the Mercer County Vocational-Technical Center. The Pharmacy Department mentors pharmacy students from WVU, the University of Charleston and the Appalachian College of Pharmacy as well as pharmacy technician students from National College. These students gain operational and clinic experience during their five to six week rotations in the department.
- PCHA's Quality and Education Department provided training and certification to 2,477 participants in Basic Life Support, Advanced Cardiac Life Support and Pediatric Advanced Life Support during fiscal year 2015.
- PCHA's Health and Fitness Center grew its membership base by 9.2% in 2015, offering new exercise and training classes for all ages. In addition the center continued its community outreach program by offering reduced memberships.

III. SERVICE AREA, POPULATION, AND VITAL STATISTICS

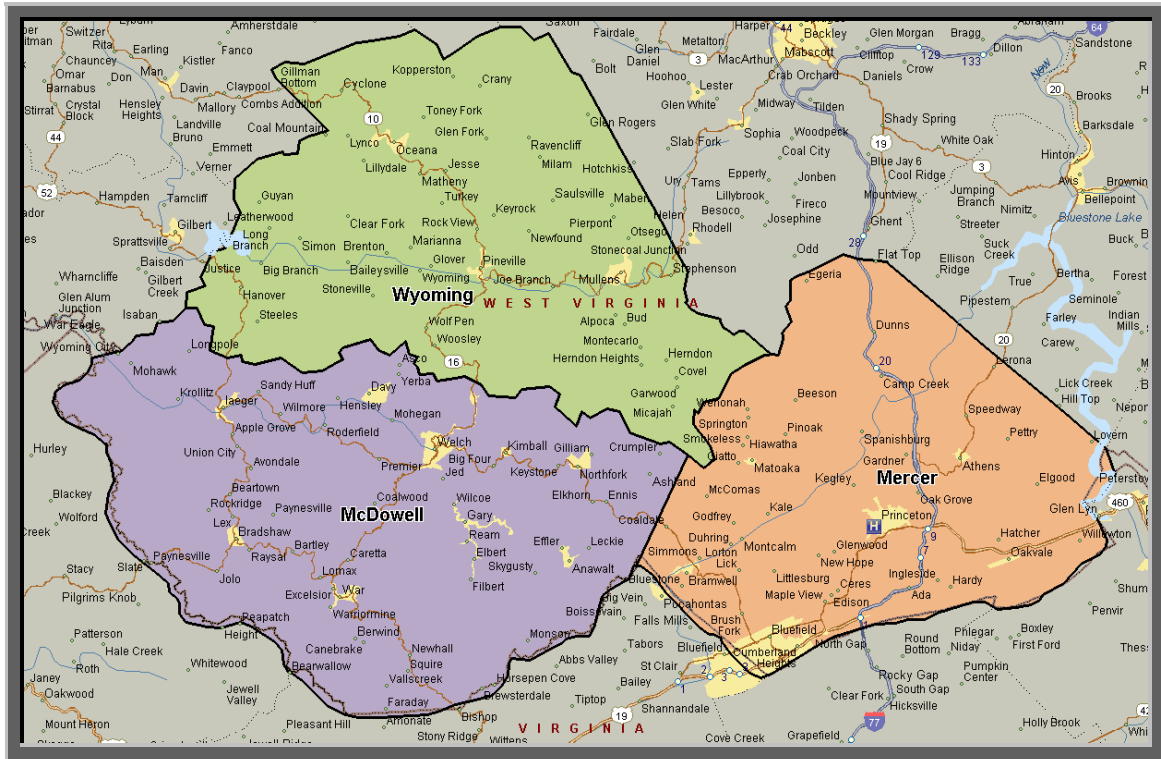
SERVICE AREA

Princeton Community Hospital defined their service area based upon the geographical area in which a majority of their patients reside. As shown in Exhibit 1, 72% of the Hospital's patients reside in Mercer County, the Hospital's location. For purposes of the needs assessment, the Hospital's primary service area included Mercer, McDowell and Wyoming Counties in West Virginia.

Exhibit 1
Service Area
Summary of Patient Volume by County (Descending Order)
7/1/2014 - 6/30/2015

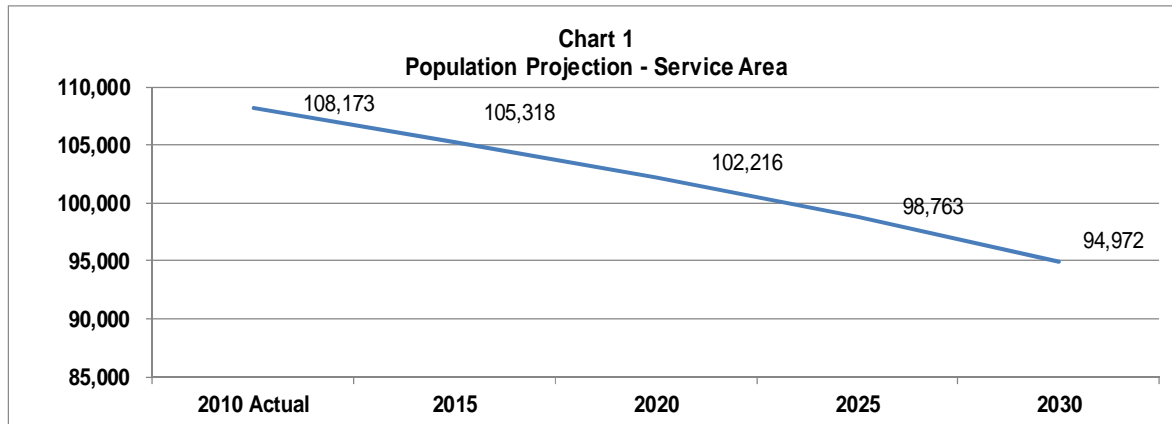
County (State)	Patient Volume	Percent of Total Volume	Cumulative Percent
<i>Mercer (WV)</i>	110,752	72%	72%
<i>McDowell (WV)</i>	8,991	6%	78%
<i>Wyoming (WV)</i>	8,078	5%	83%
Tazewell (VA)	7,182	5%	88%
Monroe (WV)	5,341	3%	91%
Raleigh (WV)	3,200	2%	93%
Summers (WV)	3,128	2%	95%
Bland (VA)	1,401	1%	96%
Giles (VA)	840	1%	97%
All Others	5,320	3%	100%
	154,233	100%	

The following map identifies the geographic location of the service area counties.



POPULATION

As shown in Chart 1 and Table 1, the population of the total service area is projected to steadily decrease through 2030. However, the population for Mercer County will decrease only 3.6 percent over the next 15 years compared to 9.8 percent for the service area counties.



Source: WVU College of Business and Economics – “Population Trends in West Virginia through 2030”, March 2014

Table 1 includes the population detail by each service area county. As shown below, Mercer County has the highest population in the service area.

Table 1: Population Projections

County	2010 Actual	2015	2020	2025	2030
Mercer	62,264	61,665	61,117	60,431	59,454
McDowell	22,113	20,656	19,155	17,561	15,976
Wyoming	23,796	22,997	21,944	20,771	19,542
Total Service Area	108,173	105,318	102,216	98,763	94,972

Source: WVU College of Business and Economics – “Population Trends in West Virginia through 2030”, March 2014

DEMOGRAPHIC PROFILE

Exhibit 2 presents quick facts data for the service area, state of West Virginia and the United States.

Exhibit 2			
Quick Facts	Service Area	West Virginia	United States
Age			
Persons under 5 years, percent, July 1, 2014, (V2014)	6.0	5.5	6.2
Persons under 18 years, percent, July 1, 2014, (V2014)	21.0	20.5	23.1
Persons 65 years and over, percent, July 1, 2014, (V2014)	18.3	17.8	14.5
Race and Hispanic Origin			
White alone, percent July 1, 2014, (V2014) (a)	92.8	93.7	77.4
Black or African American alone, percent, July 1, 2014, (V2014) (a)	5.3	3.6	13.2
American Indian and Alaska Native alone, percent, July 1, 2014, (V2014) (a)	0.2	0.2	1.2
Asian alone, percent, July 1, 2014, (V2014) (a)	0.3	0.8	5.4
Native Hawaiian and Other Pacific Islander alone, percent, July 1, 2014, (V2014) (a)	0.0	0.0	0.2
Two or More Races, percent, July 1, 2014, (V2014)	1.3	1.6	2.5
Hispanic or Latino, percent, July 1, 2014, (V2014) (b)	0.7	1.5	17.4
White alone, not Hispanic or Latino, percent, July 1, 2014, (V2014)	92.2	92.5	62.1
Housing			
Median value of owner-occupied housing units, 2010-2014	60,867	100,200	175,700
Median selected monthly owner costs -with a mortgage, 2010-2014	783	971	1522
Median selected monthly owner costs -without a mortgage, 2010-2014	258	292	457
Median gross rent, 2010-2014	534	630	920
Families and Living Arrangements			
Households, 2010-2014	43,177	742,359	116,211,092
Persons per household, 2010-2014	2.43	2.43	2.63
Living in same house 1 year ago, percent of persons age 1 year+, 2010-2014	92.1	88.3	85.0
Language other than English spoken at home, percent of persons age 5 years+, 2010-2014	1.6	2.4	20.9
Education			
High school graduate or higher, percent of persons age 25 years+, 2010-2014	73.5	84.4	86.3
Bachelor's degree or higher, percent of persons age 25 years+, 2010-2014	11.3	18.7	29.3
Health			
With a disability, under age 65 years, percent, 2010-2014	24.0	14.4	8.5
Persons without health insurance, under age 65 years, percent	12.3	10.4	12.0
Economy			
Total health care and social assistance receipts/revenue, 2012 (\$1,000) (c)	527,543	12,259,395	2,040,441,203
Total retail sales, 2012 (\$1,000) (c)	1,214,658	22,637,923	4,219,821,871
Total retail sales per capita, 2012 (c)	9,215	12,201	13,443
Transportation			
Mean travel time to work (minutes), workers age 16 years+, 2010-2014	26.6	25.6	25.7
Income and Poverty			
Median household income (in 2014 dollars), 2010-2014	31,302	41,576	53,482
Per capita income in past 12 months (in 2014 dollars), 2010-2014	18,125	23,237	28,555
Persons in poverty, percent	26.1	18.3	14.8

This geographic level of poverty and health estimates are not comparable to other geographic levels of these estimates. The vintage year (e.g., V2015) refers to the final year of the series (2010 thru 2015). Different vintage years of estimates are not comparable.

(a) Includes persons reporting only one race

(b) Hispanics may be of any race, so also are included in applicable race categories

(c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

D: Suppressed to avoid disclosure of confidential information

Source: U.S. Census Bureau-QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

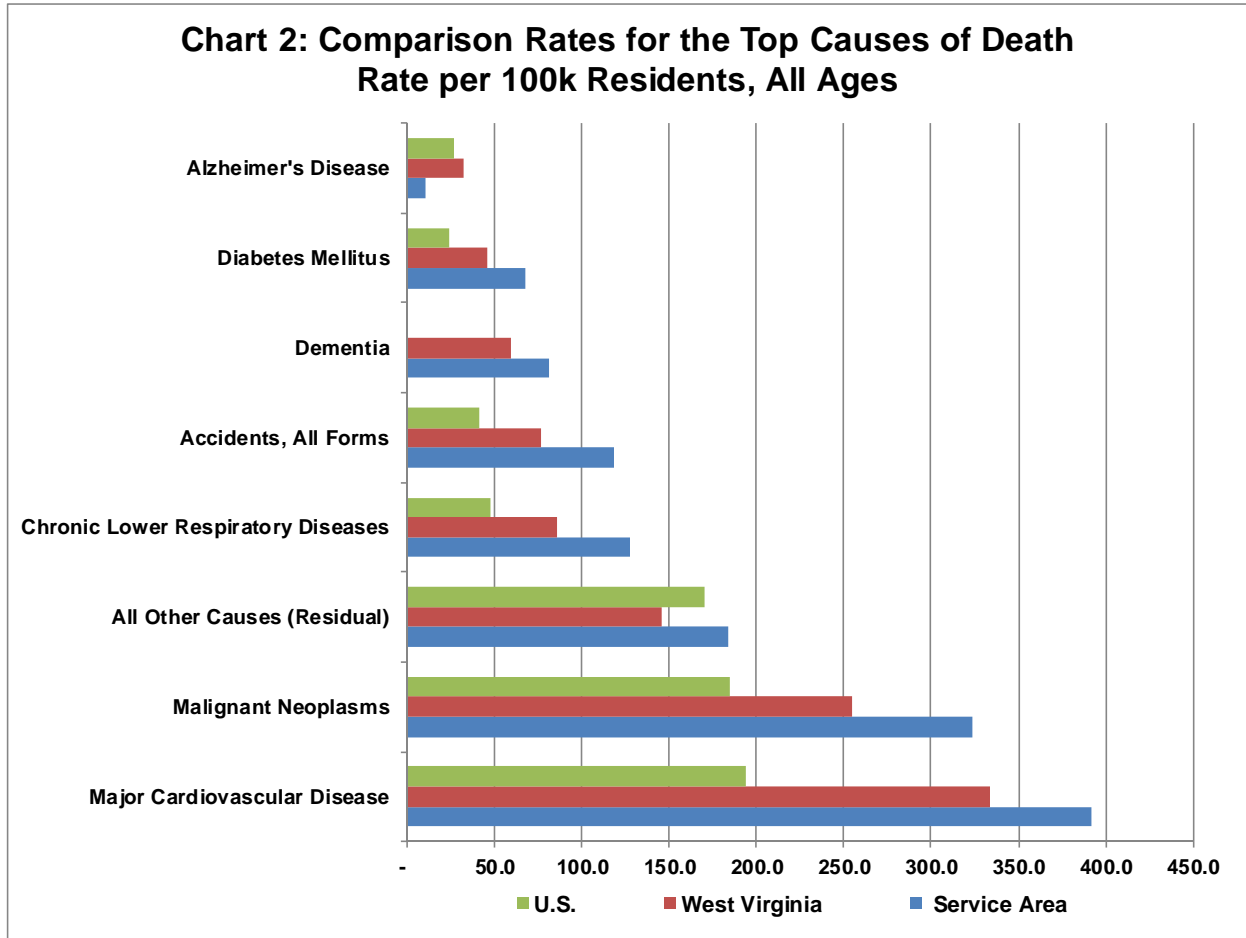
Overview of the Community

- The residents of the Princeton Community Hospital service area are predominately White/Caucasians (92.8%) followed by Black or African American (5.3%).
- English is the primary language, though 1.6% speaks other than English at home.
- The service area has a lower percentage of those with a high school diploma as compared to the state and the U.S.
- 11.3% of those in the service area hold a bachelor's degrees or higher as compared to the state average of 18.7%. However, both are significantly less than the U.S. average of 29.3%.
- Housing is generally stable and comparable between the service area and the state with 92% and 88% living in the same house 1 year and over, respectively.
- The service area and the State of West Virginia have a higher percentage of those below the poverty level than of the United States.

Mercer County, located in the south central portion of West Virginia and bordering Virginia, is the primary service area for Princeton Community Hospital (PCH). County residents account for over 60% of the hospital's volume, with little change over the years. Mercer County was the community assessed in the study. Many of the community representatives interviewed serve individuals beyond Mercer County, and many of the challenges and issues identified are present beyond Mercer County, but the County serves as a good indicator of area needs.

Mercer County has a population of 62,264 (2010 Census). Princeton and Bluefield are the largest towns, making up almost 30% of the County population. As with many rural communities, the younger population is the primary cause for the decline, as they often leave the community for better employment opportunities. As the population declines, it is also aging; the percentage of Mercer County residents over age 65 is equivalent to the state, but considerably higher than the national average and national averages. The aging population is a major contributor to the high demand for healthcare services in Mercer County.

Chart 2 reflects the leading causes of death for residents of the service area, the State of West Virginia and the United States. The leading causes of death are determined by the average rate per thousand residents. Diseases of the heart ranks highest among the causes with Malignant Neoplasms as second highest. Alzheimer's Disease ranks lowest among the selected top causes of death in West Virginia while Major Cardiovascular Disease ranks the highest.



Source: West Virginia Department of Health & Human Resources Bureau for Public Health, "West Virginia Vital Statistics 2013"

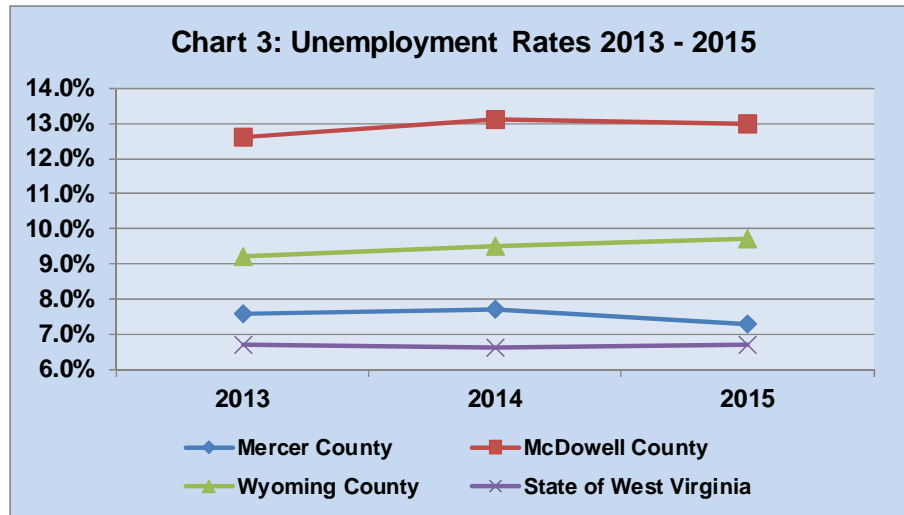
Source: http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_07.pdf, p. 17

*Dementia: N/A for the U.S.

IV. SOCIOECONOMIC CHARACTERISTICS

UNEMPLOYMENT

As shown in Chart 3, the Unemployment rate for West Virginia remained relatively constant during the three year period. All counties in the service area experienced an increase in the unemployment rate from 2013-2014. However, from 2014-2015, Mercer County experienced a slight decrease in the unemployment rate.



WorkForce West Virginia - www.lmi.workforcewv.org

INCOME

Exhibit 3 presents the median household income and median family income for the service area counties, the State of West Virginia and the United States. Mercer County and Wyoming County rank favorably compared to McDowell County.

Exhibit 3
Median Household & Family Income
2010-2014 (5 Year Estimate)

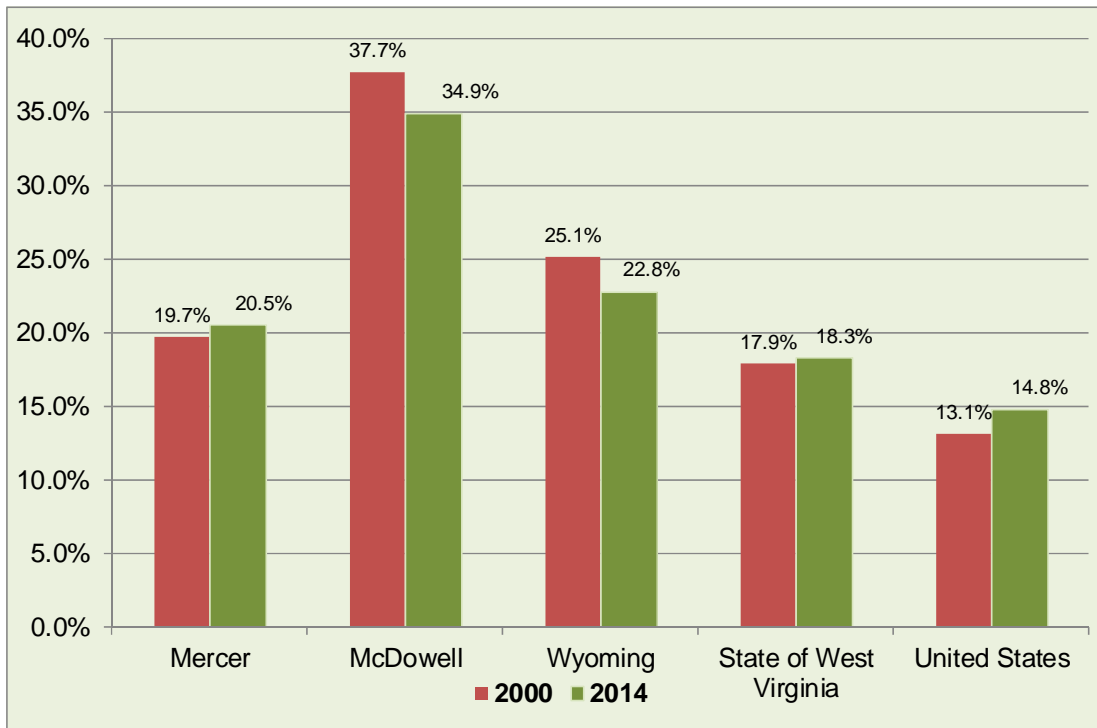
County	State	Median Household Income	Median Family Income
Mercer	WV	\$35,678	\$46,230
McDowell	WV	\$23,607	\$33,084
Wyoming	WV	\$34,620	\$45,939
Total Service Area		\$31,302	\$41,751
State of West Virginia		\$41,576	\$52,875
United States		\$53,482	\$65,443

SOURCE: U.S. Census Bureau American FactFinder, American Community Survey 5-Year Estimates

POVERTY TITLE

Poverty affects many facets of a person’s life, including living conditions, nutrition, and access to health care. Low income children, youth, and their families are inexplicably affected by health challenges which can weaken the ability of children and youth to succeed in school and often puts them at risk of involvement with child welfare and juvenile justice agencies. Chart 4 presents the percentage of adults living in poverty in 2000-2014 for the service area counties, West Virginia, and the United States. As Chart 4 illustrates, two counties experienced a decrease for the fourteen year period. McDowell County had the highest percentage of adults living in poverty in 2014 at 34.9% with Mercer County as the lowest at 20.5%. The service and the state were above the national level of 14.8% for the fourteen year period.

Chart 4
Percent of Population Living in Poverty
2000 – 2014



Source: USDA Economic Research Service

EDUCATION

The education levels of a population have been shown to correlate to its overall health and welfare. Exhibit 4 presents the distribution of education levels for those 25 years and over in the service area, West Virginia and the United States for the years 2009-2014. Although the service area and the state had a higher level of those with a high school diploma only when compared to the United States average, the attainment of a college degree was lower in the service area than the United States average.

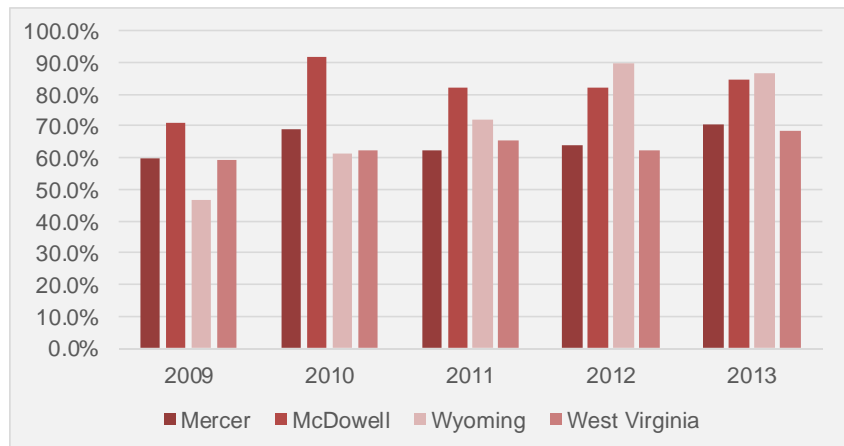
**Exhibit 4
Highest Level of Education Attained
2009-2014**

	Service Area	West Virginia	United States
Less than a high school diploma	23.3%	15.6%	13.7%
High school diploma only	40.4%	40.9%	28.0%
Some college or associate's degree	23.2%	24.8%	29.1%
Bachelor's degree or higher	12.3%	18.7%	29.3%

SOURCE: US Census Bureau / USDA

Access and participation in early education programs is an important determinant in the future success of students for a community. Chart 5 provides the percent of four-year-olds enrolled in a qualified pre-kindergarten program. Wyoming County experienced a steady increase for years 2009-2012, with just a slight decrease in 2013. The highest enrollment of the five-year period was in 2010 for McDowell County.

**Chart 5
Percent of Four-Year-Olds Enrolled in a
Qualified Pre-Kindergarten Program
2009-2013**



Source: <http://datacenter.kidscount.org/>

V. HEALTH STATUS INDICATORS

State of West Virginia Health Rankings

America's Health Rankings Annual Report provides a detailed assessment of the nation's health on a state-by-state basis and compares the information to the national average. The indicators fall into two categories: determinants of health and health outcomes. The determinants of health are further categorized into behaviors including smoking, physical inactivity, education, community and environment. Policy issues are evaluated including lack of health insurance and public funding at a state level. The health outcomes include measures of chronic disease, like diabetes and cardiovascular deaths as well as measures of health status, like income levels and education. Using various scoring measures the State of West Virginia improved to a ranking of 44 from a ranking of 47 in 2012.

A major contributor to West Virginia's poor overall health is obesity. Obesity is a major risk factor for many diseases and chronic conditions including heart disease, cancer, Type 2 diabetes and stroke. In 1990 West Virginia was tied with Mississippi for the highest rate of obesity in the U.S.

Key factors to reducing and preventing obesity and other related chronic conditions is getting regular exercise. Unfortunately, West Virginia ranks low in this important lifestyle behavior. West Virginia also continues to have one of the highest rate of smoking in the country. West Virginia did see improvement in one category, binge drinking, which is one of the few bright spots in the study.

West Virginia has the second highest prevalence of diabetes in the country and also ranks 45th in cardiovascular deaths, 48th in cancer deaths and 49th in premature deaths. Finally, the State ranks at the bottom in drug related deaths.

Although improvement has been made the State of West Virginia still ranks at or near the bottom in many health status indicators.

County Health Rankings

Exhibits 5 through 7 include selected data from the University of Wisconsin Population Health Institute, County Health Rankings 2015 for the service area, State of West Virginia, and U.S. median. Health factors in the County Health Rankings represent what influences the health of a county. Four types of health factors are measured: health behaviors, clinical care, social and economic, and physical environment factors. In turn, each of these factors is based on several measures. Exhibit 5-Health Behaviors, includes unfavorable indicators as the percentage of adults in poor/fair health, who

smoke or are obese, and excessive drinking. As shown in Exhibit 5, all counties within the service were either at or within 13% of the state performance for these negative indicators. Approximately one-fourth of the adults in the service area counties and the state are reportedly in poor/fair health or smoke while one-third are obese.

**Exhibit 5
Health Behaviors
2015**

Health Status Indicator	West			
	Virginia	Mercer	McDowell	Wyoming
Adults in fair / poor health	22%	23%	33%	35%
Adult smoking	26%	28%	35%	35%
Adult obesity	33%	35%	38%	35%
Excessive drinking	10%	6%	10%	6%
Health behaviors county ranking		40	54	50

Source: countyhealthrankings.org

Exhibit 6 Physical Environment includes environmental factors such air pollution, drinking water violations, housing problems and work commute information. The service area and the State compared unfavorably for air pollution and commuting to work, while comparing favorably with regards to housing problems.

**Exhibit 6
Physical Environment**

Environmental Factor	West Virginia	McDowell County	Mercer County	Wyoming County
Air Pollution ¹	13.2	13.0	13.0	13.0
Drinking Water Violations	3%	5%	17%	3%
Severe Housing Problems	11%	11%	13%	8%
Driving Alone to Work	82%	87%	84%	85%
Long Commute - Driving Alone	32%	39%	24%	47%
County ranking		38	51	17

Source: countyhealthrankings.org

¹Average daily density of fine particulate matter in micrograms per cubi meter (PM2.5)

Clinical Care

Exhibit 7 Clinical Care includes measures related to Access to Care and Quality of Care. Access to affordable, quality health care is important to physical, social, and mental health. Health insurance helps individuals and families access needed primary care,

specialists, and emergency care, but does not ensure access on its own. It is also necessary for providers to offer affordable care, be available to treat patients, and be in relatively close proximity to patients. High quality health care is timely, safe, effective, and affordable, the right care for the right person at the right time. High quality care in inpatient and outpatient settings can help protect and improve health and reduce the likelihood of receiving unnecessary or inappropriate care. As shown in Exhibit 7, portions of the service area still have a high rate of uninsured individuals. However, the ACA and Medicaid expansion in West Virginia is having a positive impact on these numbers.

**Exhibit 7
Clinical Care**

Measure	West Virginia	Mercer	McDowell	Wyoming
Uninsured	22%	23%	26%	22%
Preventable Hospital Stays	93.34	92.7	137.69	133.59
Diabetic Screening	13%	16%	17%	15%
Mammography Screening	58%	62%	40%	55%
Ranking for Clinical Care		16	54	46

SOURCE: countyhealthrankings.org

Mental Illness

The Substance Abuse and Mental Health Services Administration (SAMHSA), an operating division within the U.S. Department of Health and Human Services, is charged with reducing the impact of substance abuse and mental illness on America’s communities. Each year, SAMHSA publishes the most recent annual results from the National Survey on Drug Use and Health (NSDUH) which is a primary source of statistical information on the use of illegal drugs, alcohol, and tobacco by the U.S. civilian, noninstitutionalized population aged 12 or older. The NSDUH also collects data on co-occurring substance use, mental disorders, and treatment for substance use and mental health problems. An adult with Any Mental Illness (AMI) was defined as having any mental, behavioral, or emotional disorder in the past year that met DSM-IV criteria (excluding developmental disorders and SUDs). Adults with AMI were defined as having Serious Mental Illness (SMI) if they had any mental, behavioral, or emotional disorder that substantially interfered with or limited one or more major life activities. Exhibit 8 presents statistics of mental illness taken from the NSDUH for those aged 18 or older at a national level and for West Virginia for 2013-2014. West Virginia compared unfavorably to the nation for those with SMI or AMI.

Exhibit 8
State Estimates of Adult Mental Illness among Persons Aged 18 or Older
2013-2014

Location	Serious Mental Illness	Any Mental Illness
	%	%
National Average	4.15	18.29
West Virginia	5.46	21.15

SOURCE: State Estimates of Substance Use and Mental Disorders, 12/16/2015

Pregnancy and Birth Data

The well-being of mothers and babies is a critical component of a community’s overall health. Healthy pregnancies help to provide a better start in life and improve the health of future generations. A review of public health data available included prenatal care, pregnancy risk factors, percentage of low birth-weight births and teen pregnancy. Exhibit 9 illustrates pregnancy and birth data for the service area and West Virginia. The percentage of low birthweight births in the service area was higher than the state percentage. Alcohol use during pregnancy was at the State rate for Mercer county. Tobacco use during pregnancy was at the state rate for Mercer and Wyoming counties but much higher for McDowell county. Serious risks to babies whose mothers smoked during their pregnancy include Sudden Infant Death Syndrome (SIDS), low birth-weight, birth defects, attention deficit/hyperactivity disorder, neurodevelopmental disorders and behavioral/psychiatric disorders.



Exhibit 9
Pregnancy and Birth Data
2013

Selected Factors	Mercer	McDowell	Wyoming	West Virginia
Birth Rate per 1,000 Population	11.9	13	9.4	11.2
Number of Births	737	272	217	20,829
% of Births Delivered in Hospital	99.7%	98.9%	100.0%	99.4%
% of Low Birthweight Births	10.3%	11.8%	12.9%	9.4%
% Births to Mothers Under 18	3.1%	5.1%	3.7%	2.7%
% of Births - Prenatal Care Began in First Trimester	73.3%	72.4%	67.6%	81.5%
% of Births - Prenatal Care Began in Second Trimester	21.7%	20.5%	25.2%	14.9%
% of Births - Prenatal Care Began in Third Trimester	4.4%	7.1%	6.7%	3.0%
% of Births - No Prenatal Care	0.7%	0.0%	0.5%	0.6%
Pregnancy Risk Factor: Alcohol Use	0.4%	0.0%	0.0%	0.4%
Pregnancy Risk Factor: Tobacco Use	25.4%	41.0%	25.5%	25.6%

Sources: West Virginia Vital Statistics

VI. RESULTS OF COMMUNITY PARTICIPATION

Community participation was solicited in two ways to obtain input from a wide variety of individuals. The approaches included:

- **Online Survey**
- **Key Informant Interviews**

ONLINE SURVEY RESULTS

The community health needs assessment includes anonymous survey results using an online survey website, which was disseminated to employees and patients of the hospital as well as patients' family members and the community. Survey responses were collected between March and May 2016.

Respondent Zip Codes

The online survey results were received from residents in the following zip codes representing a wide diversity of respondents:

24315	24712	24740	24868	25801
24366	24714	24747	24870	25813
24382	24715	24808	24874	25825
24605	24731	24813	24918	25922
24651	24733	24818	24951	25971
24701	24739	24836	24963	

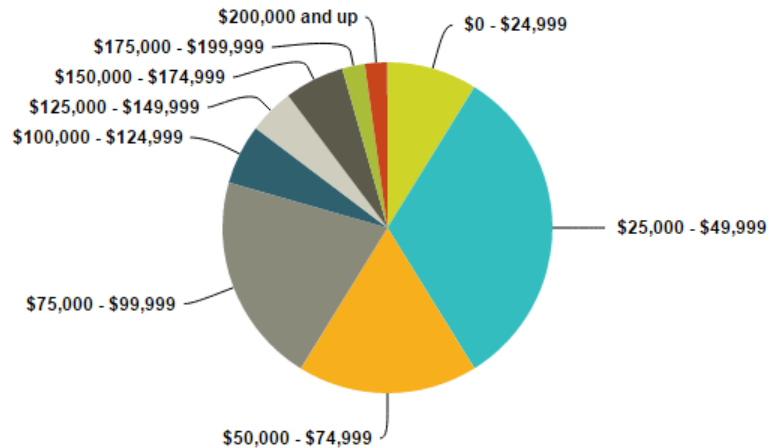
Respondent Age Groups

The survey requested that participants provide various demographic data. The ages of participants who responded were Under 18 (<1%), 18-24 (4.4%), 25-40 (31.6%), 41-64 (58.1%) and 65 or older (5.1%).

Gender, Marital Status and Race

The survey respondents indicated the following information with regards to their gender, marital status and race:

- Gender: 19% were male and 81% were female.
- Marital Status: 14.0%-Single, 71.3%-Married, 11.0%-Divorced, 1.5%-Widowed, and 2.2%-Separated/Civil Union
- Race: 95%-Caucasian, 3%-African American, 2%-Other.



Household

Respondents indicated the following household characteristics:

- 35% have children under the age of 18 in their household
- Number in household ranged from 1 to 5 (2% did not respond):

1: 9% 2: 43% 3: 23% 4: 18% 5: 4% 6: 1%

Income

Household income varied among survey-takers:

\$0-\$24,999: 9%
 \$25,000-\$49,999: 32%
 \$50,000-\$74,999: 18%
 \$75,000-\$99,999: 21%
 \$100,000-\$124,999: 6%
 \$125,000-\$149,999: 4%
 \$150,000-\$174,999: 6%
 \$175,000-\$199,999: 2%
 \$200,000 and up: 2%

Education

Respondents were asked:

“What is the highest level of education you have completed?”



One response answered Middle School, while the remaining respondents indicated an education level of high school graduate or above. Nearly 45% of the participants completed a four year or graduate degree.

Employment

In a separate question, participants were asked to provide their employment status. Approximately 90% of respondents indicated they are working at least part time, with following percentages:

Full time: 83.1%

Part time: 7.4%

The remaining responses included Retired-4.4%, Disabled-3.7%, and Unemployed - not actively searching-1.5%.

Insurance Coverage

Since the Affordable Care Act's (ACA) coverage expansion began, about 16.4 million uninsured people nationwide have gained health insurance coverage. In 2014, the uninsured rate in West Virginia was 10.9%, down from 17.6% in 2013. Due to the new coverage options for young adults, employees may add or keep children on their insurance policy until they turn 26 years old. This has afforded coverage to over 2.3 million young adults nationwide that would otherwise been uninsured. As part of the ACA, states were able to expand Medicaid coverage to individuals with family incomes at or below 133% of the federal poverty level. Due to this expansion, over 170,000 West Virginians and approximately 11.2 million nationwide gained Medicaid or Children's Health Insurance Program (CHIP) coverage.



Participants were asked to list their insurance carrier. 3.7% Medicare, 3.0% indicated Medicaid and less than 1% indicated Uninsured. 64.0% of respondents indicated they are insured by private insurance. The remaining 28.7% selected “Other” but manually entered the following responses: PEIA, Blue Cross Blue Shield, Humana, and VA. 75% of those with Medicaid obtained their coverage through medicaid expansion.

Routine Health Care

Respondents were asked "Do you and/or your family have a primary care physician?" 95% indicated "Yes" while 5% indicated "No". For those having a primary care physician, 93% are able to get an appointment when needed. For those not having a primary care physician, respondents indicated they use a hospital emergency room, an urgent care center, or community health center for routine primary care. 30% of respondents indicated they delayed health care due to lack of money and/or insurance.

Dental Health Care

- 80% of respondents indicated they have a dentist.
- 57% received dental care in the past 12 months.



Health Issues Most Prevalent

Participants were asked to indicate for which conditions have they or someone in their household received treatment. The top three responses were diabetes/high blood pressure followed by high cholesterol and then depression/anxiety disorders. The least selected conditions were cancer, bariatrics / obesity, and substance abuse.

Diabetes/High blood pressure	66.97%
High cholesterol	44.04%
Depression/anxiety disorders	41.28%
Joint, bone or muscle pain	36.70%
Heart disease	19.27%
Sleeping disorders	17.43%
Neurology disorders	14.68%
Behavioral/mental health	11.93%
Tobacco Abuse/Cessation	6.42%
Cancer	5.50%
Bariatrics/obesity	5.50%
Substance abuse	1.83%

Hospital Services/Satisfaction

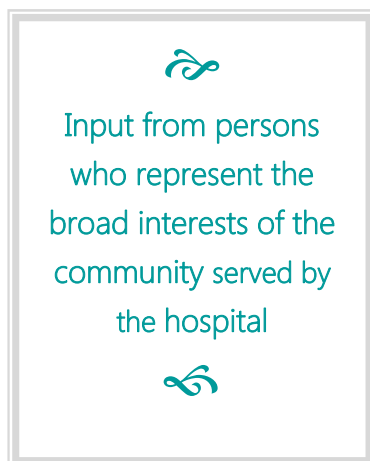
Respondents were asked which services that they have used at Princeton Community Hospital and to rate their level of satisfaction. The top five most utilized services were Laboratory, Medical Imaging/Radiology, Emergency Department, Surgical, and Cardiopulmonary. 80.9% of the respondents indicated they were satisfied with the services they received at Princeton Community Hospital. For those that responded that were either neutral or they were not satisfied, the top reasons for dissatisfaction include long wait times in the Emergency Department and communication concerns. Though no mention of a specific department, a few responses indicated inattentiveness and stated a more positive, friendly staff is needed.

Voice from the Community:

“Emergency department needs expanded.”

COMMUNITY INTERVIEW RESULTS

Input was solicited from those representing the broad interests of the community between April and June 2016. Discussions included the health needs of the community, barriers to healthcare access, opportunities for improvement, perception of Princeton Community Hospital and feedback on PCAH’s initiatives. The following organizations were selected to provide feedback.



Abel Crisis Center

Bluefield Union Mission

Child Protect Services of Mercer County

Mercer County Health Department

Mercer County Prosecuting Attorney

Mercer County Senior Center

Princeton Salvation Army

Southern Highlands Rehab Center

Wade Center

Key informant interviews were conducted face-to-face and by telephone by Arnett Carbis Toothman consultants in April and May 2016. The interviews were designed to obtain input on health issues and needs from persons who represent the broad interest of the community served by PCH, including those with special knowledge of the health care environment including public health.

Interviews were held with 10 individuals with a wide range of background and knowledge. Interviews were conducted using a structured questionnaire. Interviewees were also allowed to discuss any other health care related topic. Informants were asked to discuss community health issues and encouraged to comment on social, behavioral and other factors impacting the health care delivery system. Interviewees were asked to provide their thoughts on:

1. **Health status**
2. **Health care access and services**
3. **Chronic health conditions**
4. **Populations with special needs**
5. **Health disparities**

Below are the specific issues mentioned that were perceived to be of highest importance (severity) and how widespread the issues are, listed in order of importance, based upon the results of the interviews. The issues are listed in order of importance however the differences, in some cases, were minor.

Health Status Issues

1. **Mental and behavioral health:** mental and behavioral health was one of the most frequently mentioned health issues in the area. The feeling is that the community's mental health needs have increased, while the overall capacity to treat these issues has not improved enough.
2. **Drug and substance abuse:** Substance abuse was one of the issues mentioned frequently and was identified as one of the most significant and series issues. It was felt this was a growing problem that must be a priority. Illicit drug use is considered prevalent throughout the community and is having an impact on individuals and their families. Abuse of over-the-counter medications by all ages but especially the youth was identified.

3. **Obesity:** Obesity and overweight was one of the most frequently mentioned health status issues. The problem is more prevalent among the younger populations because of sedentary lifestyles developed but is a serious problem for all age groups.
4. **Diabetes:** Diabetes was identified as a serious chronic health issue in all of the interviews. This issue was related to obesity and overweight problems.
5. **Smoking and tobacco:** Smoking and tobacco use, including smokeless tobacco is considered a significant health issue by most participants. Smoking and tobacco use are considered to be significant issues because of the known health risks it creates and the high usage rate in the service area.
6. **Pregnancy-related health issues:** The participants mentioned pregnancy and related health issues in relation to both perinatal and neonatal health. These issues are more prevalent with teens and the younger populations. The participants acknowledge there is still a lack of adequate prenatal care which contributes to lifelong health issues and deficits in children.

Factors Contributing to Health Status and Access to Care

During the interviews the participants discussed items contributing to or creating the health status issues and health conditions that exist in the community. It was important to the participants to outline what they felt contributed to the poor health status issues identified. The major contributing factors mentioned are as follows:

1. **Low income and poverty:** Issues related to income and financial resources were frequently stated to limit access to care and contribute to poor diet and nutrition, and create stresses that negatively impact health. The negative impact of the economic decline of the mining industry in the region was noted as a significant concern.
2. **Access to health care:** Participants cited a wide range of difficulties with access to care, including availability of providers, cost and affordability of care, significant transportation issues for low-income and elderly populations.
3. **Low education levels and lack of knowledge about health care:** The lack of education and knowledge contributes to an individual's ability to effectively obtain health care and to even identify health care issues before they become chronic.

-
4. **Poor nutrition and diet and unhealthy lifestyles:** The participants felt that the region has a significant population of individuals with poor health habits, including dietary and nutrition and that these habits and lifestyles contribute to obesity, diabetes, heart disease, and related conditions and chronic diseases.

 5. **Preventive health services and preventive health behaviors:** The participants discussed individual responsibility issues related to health care and the failure of many individuals to address prevention of illness and disease. The preventative issues that were felt to be problems include failure to have regular physical exams and health screenings, for a multitude of reasons. The lack of preventive behaviors has contributed to more chronic diseases and illnesses as well as advanced stages of an illness.

VII. CONCLUSION AND HEALTH PRIORITIES

SUMMARY OF FINDINGS

The goal of the needs assessment was to identify health issues and community needs as well as provide information to key decision makers to make a positive impact on the health of the hospital's service area. Statistical data was compiled to depict demographic and economic profiles while the surveys provided additional feedback with regards to community perception of the Hospital, availability of resources and challenges as it relates to their healthcare needs.

- Overall population in the service area will continue to decline with the outmigration of residents. However, the aging population will contribute to the highest growth in the 65 and over age category. An increase in the 65 and older age category contributes to an increase of Medicare beneficiaries with an increased need of services.
 - Diseases of the heart rank and cancer continue to be the leading causes of death in the service area.
 - Unemployment rates in the service area, especially in the secondary service areas, continue to exceed State and U.S. levels
 - The percent of individuals living in poverty in the service area continue to exceed State and U.S. percentages by as much as 20 percent in one of the counties in the service area
 - Pregnancy and birth data continue to illustrate there are serious health issues.
 - The highest percentage of births to mothers under the age of 18 was 5.1% in McDowell County, West Virginia.
 - Cigarette smoking was 28% for Mercer County but McDowell and Wyoming counties were at 35 percent. The state of West Virginia was slightly below 27%.
 - Adult obesity continues to rank high at 35 percent of the population for the service area.
- The results of the community health needs assessment's quantitative and qualitative analysis, along with the input from members of the community, appears to indicate common themes in the health needs of the Princeton area and surrounding communities. These focus areas include the need for the following:
 - Better access and utilization of preventive care services, especially in the secondary service areas;
 - Even with increased coverage from Medicaid expansion there are still many individuals delaying getting health care services because of a lack of money;
 - Substance abuse treatment collaboration needs to continue;
 - Additional community events focusing on health related issues;
 - General health education for the primary service area.

COMMUNITY HEALTH PRIORITIES

The results of the CHNA will enable the Hospital as well as other community providers to collaborate their efforts to provide the necessary resources for the community. After reviewing data sources providing demographic, population, socioeconomic, and health status information in addition to community feedback, health needs of the community were prioritized. The following community health issues were also identified in the prior CHNA of PCH. These issues have been selected again as the priority health issues to be addressed:

- Chronic Disease Management
- Unhealthy Lifestyles
- Drug and Alcohol Abuse

Chronic Disease Management

Priority conditions include obesity and diabetes. Obesity and unhealthy eating and activity habits give individuals a higher risk for liver and gallbladder disease, type 2 diabetes, high blood pressure, high cholesterol and triglycerides, coronary artery disease (CAD), stroke, sleep apnea and respiratory problems, osteoarthritis, and gynecological problems, among other conditions. Children who are obese are at risk for many of the same long-term health problems. If you have healthier habits or lose weight, your risk for these conditions is reduced.

Resources: The Hospital will continue to provide outreach and education to the residents of Princeton and the surrounding communities. PCH will continue to provide diabetic and weight loss education to the community.

Unhealthy Lifestyles

Unhealthy lifestyle choices contribute to other health conditions. Smoking, poor nutrition, and physical inactivity are prevalent among residents in the service area. Tobacco is the leading cause of preventable illness and death in the United States. It causes many different cancers as well as chronic lung diseases, such as emphysema, bronchitis, and heart disease. Community culture, lack of health care coverage, and low income can lead to unhealthy lifestyle choices.

Resources: The Hospital will continue to provide outreach and education for smoking cessation, proper nutrition and the importance of physical activity. The PCH Foundation oversees the Princeton Health and Fitness Center to promote health and wellness in our community. Several times per year free health assessments are offered at the fitness center and at PCH. PCH and the Princeton Health and Fitness Center will continue to assist with health and wellness programs and provide the necessary resources for those seeking a healthy lifestyle through diet and exercise.

Drug and Alcohol Abuse

Abuse of alcohol and illicit drugs is costly to our nation, exacting over \$400 billion annually in costs. The toll that drug and alcohol problems have on individuals is significant, as they are at increased risk for serious health problems, criminal activity, automobile crashes, and lost productivity in the workplace. But individuals with drug and alcohol problems are not the only ones who suffer. The families, friends, and communities also suffer greatly. The abuse of alcohol and drugs leads to multiple acute and chronic adverse health outcomes, as well as a variety of negative consequences within the family unit, poor performance in school, or difficulties at work. Alcohol abuse leads to decreased inhibitions and impaired judgments that influence reckless and sometimes aggressive behavior. It also leads to high rates of motor vehicle accidents and injuries/deaths. On a chronic basis, it can lead to anemia, hepatitis and cirrhosis, pancreatitis, cognitive effects due to brain damage, fetal alcohol syndrome, low birthweight, and other poor health outcomes. Substance abuse problems commonly occur in conjunction with mental health issues.

Illicit drug use was a recurring issue of concern in many of our interviews with community members. The problems of substance abuse involve three levels of intervention: prevention, screening, and detection. These three opportunities require determined, collaborative action involving public health, education, health care, and criminal justice systems at the community level.

Resources: The Hospital will maintain its collaboration and referral network to address patients' needs with regards to addiction and abuse. The Behavioral Health Pavilion of the Virginias will continue to monitor patients' treatments using state of the art therapy procedures including Transcranial Magnetic Stimulation (TMS). TMS is a non-invasive procedure that uses magnetic fields to stimulate nerve cells in the brain to improve symptoms of depression. PCH will continue to provide outreach and education to the residents of Princeton and the surrounding communities.

NEXT STEPS

With the completion of the Health Needs Assessment, Princeton Community Hospital will establish an implementation plan which will use the Hospital's individual strengths and resources to best address their community's health needs and improve the overall health and well-being of residents of its service area.