

ACMH COMMUNITY HEALTH NEEDS ASSESSMENT 2018



Adopted by the ACMH Board of Directors on June 26, 2018

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Executive Summary

The purpose of a community health assessment (CHNA) is to collect information about a community's current health status and needs. Hospitals use this information to develop health improvement plans and determine how and where resources should be allocated to best meet those needs. Through this assessment, ACMH hopes to increase its knowledge about the health of Armstrong County residents, better understand the relationships between behaviors and disease, identify the strengths and weaknesses of the resources within the community, plan for future human and other resource needs, collect benchmarks for health improvement activities, and strengthen partnerships with other community agencies.

This report

- defines the population that is the subject of this study
- explains the process and methods used to conduct this assessment including how input from persons who represent the broad interests of the community was considered,
- describes the findings,
- documents resources available in the community to address needs, and
- outlines the process and criteria used to prioritize the needs that will be addressed during the next three years.

The Affordable Care Act enacted in 2010 added Section 501(r) to the Internal Revenue Code defining additional requirements for charitable hospitals. One of those requirements is to conduct a CHNA and adopt an implementation strategy at least every three years. This is the third such needs assessment conducted by ACMH Hospital. All needs assessments are made available for public review and comment on the ACMH web page www.acmh.org.

The most recent previous CHNA conducted by ACMH, in 2015, prioritized nine areas of need:

1. Community education in disease management and emergency medical conditions
2. Help for substance abuse and addiction
3. Programs to reverse trends in weight gain and obesity
4. The management of diabetes
5. Cancer detection and treatment
6. Chronic disease identification and management
7. Resources for un- and under-insured community members
8. Transportation for medical/wellness visits
9. Physician recruitment

Many of these same needs are pervasive throughout the nation. Despite the commonality of needs ACMH continued to search for best-practice resolutions applicable to Armstrong County. The full report of those activities and accomplishments undertaken in the period 2015 through 2017 at the following link. [2015 - 2017 CHNA Accomplishments](#)

Definition and description of the population served

Regulations require CHNAs to define the community served by the hospital facility and describe how the community definition was determined. ACMH has defined its core community be all of Armstrong County for

- children, adolescents and adults presenting for routine outpatient wellness and disease management services,
- adults, presenting for acute, psychiatric, skilled nursing, and acute rehabilitation inpatient services.
- adults presenting for inpatient and outpatient surgical services (excluding high-risk tertiary surgeries),
- pregnant adult and adolescent women, and
- adults presenting for cancer diagnosis and treatment.

To define this population, ACMH took into consideration geographic factors, demographic characteristics, and the availability of clinical resources necessary to meet those needs. This report provides the detailed analysis leading to that definition.

The processes and methods used to conduct this CHNA

ACMH conducted a thorough analysis of mortality rates and the prevalence of disease in Armstrong County and compared those rates to benchmarks. ACMH reviewed behavioral and environmental factors to identify risks that could impact future health care needs. Input was solicited, and considered, from persons who represent the broad interests of the community, especially from those with special knowledge of public health. Finally, ACMH sought input from healthcare consumers through an email survey.

Statistics collected by government organizations were used to identify leading causes of death, the prevalence of disease in Armstrong County, and behavioral and environmental risk factors. ACMH found this information on state and federal agency web sites. From this information, ACMH was able to define the leading causes of death and the most prevalent chronic health conditions for the population. To fully interpret these statistics ACMH compared Armstrong County rates to the average rates in the Commonwealth and goals set by the Health Resources and Services Administration (HRSA) Healthy People 2020 program [Healthy People 2020](#). In addition, rankings produced by the Robert Wood Johnson Foundation in their County Health Rankings and Roadmaps – 2018 report were reviewed.

ACMH considered changes in the demographic characteristics of Armstrong County focusing on needs for new services, trends in chronic disease rates, and socio-economic characteristics that might identify barriers to care. ACMH found that the population has been steadily declining over the past two decades leaving a higher percentage of the population over the age of 65, many of whom are living with multiple chronic conditions, pain, and disability. The unemployment rate in Armstrong County is higher than the Pennsylvania state rate therefore resulting in higher numbers of uninsured and increased

poverty. While Armstrong County's poverty rate is comparable to the state average, the analysis of the dramatic disparities in individual and family income unmask the true level of poverty within Armstrong County--- a population of "working poor."

Analysis determined that Armstrong County is more rural than the average Pennsylvania County with inadequate public transportation systems to healthcare, recreational and wellness facilities, and access to healthy foods. In addition shortages of primary care physicians, specialists, dentists, and mental health professionals, contribute to healthcare barriers.

Summary of findings

ACMH identified the nine leading causes of death (age-adjusted) of Armstrong County residents:

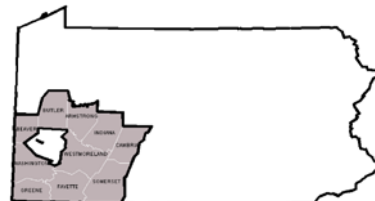
1. Cardiovascular disease – the rates compare favorably to the average in Pennsylvania and meet Healthy People 2020 (HP2020) goals
2. Cancer – the rates compare favorably to the average in Pennsylvania but do not meet HP2020 goals
3. External causes, unintentional injury and accident (mostly drug-induced deaths) *
4. Chronic lower respiratory disease *
5. Cerebrovascular disease (stroke) *
6. Nephritis, nephrotic syndrome and nephrosis (chronic kidney disease) *
7. Influenza and pneumonia *
8. Suicide *
9. Chronic liver disease and cirrhosis *

* These causes of death rates compare unfavorably to Pennsylvania state rates and do not meet HP2020 goals (where those goals exist.)

Statistics for the prevalence of chronic disease, apart from cancer, are not compiled county by county, the information is instead compiled by region within the state. Armstrong County demographics are best matched by a region of counties in southwest Pennsylvania (omitting Allegheny County)

The leading chronic diseases in the region include:

- Heart disease
- Cancer
- Stroke
- Chronic lower respiratory disease
- Diabetes
- Arthritis
- Mental disorders (mostly depression)
- Obesity
- Asthma
- Pre-diabetes



- Kidney disease
- Hypertension

These diseases were found to be consistent with the Commonwealth rates and stable, except for obesity and asthma which are rising.

The incidence rates for all types of cancer were reviewed. Most are comparable to the Pennsylvania averages. The exceptions are

- breast cancer – slightly higher but stable,
- uterine, prostate and bladder cancer - lower and stable, and
- cancer of the oral cavity and pharynx - higher with a rising trend.

ACMH studied the behaviors and behavioral trends of adults in the southwest region and observed positive improvement in some areas. Rates of chronic drinking and cigarette smoking have declined. The percentage of diabetics who receive recommended glucose testing and the rate of women who have regular mammograms have risen. However, some negative indicators were revealed. Rates of residents who do not engage in any leisure time physical/recreational activities are higher than state levels and are rising. The percentage of population who get adequate sleep (minimum of six hours per night) is only slightly over 50%. The percentage of the population who do not identify a primary care physician is higher than the state average.

ACMH solicited input from healthcare consumers through an email survey. A collaboration was formed with the Richard G. Snyder YMCA, ARC Manor, Lutheran SeniorLife, and VNA, Western Pennsylvania to develop a respective multi-use survey. Surveys were sent to more than 7000 adults who live in Armstrong County. More than 1,500 recipients completed the survey--a significant response rate of over 22%. The survey queried the respondents about their health care concerns, barriers to care, and what they considered to be the top priorities to make Armstrong County a healthier place to live, work, and play. The leading healthcare concerns consumers reported were being overweight, heart disease, depression/anxiety, chronic pain, cancer, diabetes, and inadequate sleep. The primary barrier to care was the high cost of insurance premiums, copays and deductibles. The top priorities to make Armstrong County healthier were free/more affordable health screenings, less costly exercise/recreation facilities, improved availability/cost of healthy foods, improved availability/cost of dental services, and more employment opportunities. A comprehensive report of the survey findings is available at the following link. [Consumer Email Survey Report](#)

Prioritization

The executive team prioritized the community needs by considering the following factors:

- the frequency of premature death,
- the prevalence of chronic disease conditions,

- recent trends in mortality and chronic disease rates,
- the comparison of Armstrong County health indicators to benchmarks
- comments received from community members and individuals with special knowledge of public health, and
- the ability of ACMH to impact outcomes.

Root cause analysis of the premature death and chronic disease rates and trends revealed a common denominator—lifestyle choices; including: poor nutrition/lack of knowledge regarding healthy eating leading to obesity, lack of regular physical exercise, smoking, excessive alcohol consumption, and inadequate sleep. This acknowledgment focused the team to prioritize needs, which will help lead to healthier lifestyle behaviors. The public email survey and discussions with key community members supported these priorities. This report will explain how ACMH came to this conclusion.

Current Healthcare Resources in Armstrong County

This report identifies the current resources in Armstrong County. From this list of resources gaps and constraints were identified. To address these issues, ACMH will partner with other organizations within the county. Partnerships can better address those needs that currently fall outside the hospital mission or capabilities such as outpatient behavioral health issues, inadequate transportation systems and recreational facilities.

These demographic and resource availability and limitations provide a framework that aids in understanding the underlying disease influences and actions as well as potential partnerships needed to help address health and wellness in Armstrong County.

Introduction and Background

Armstrong Center for Medicine and Health (ACMH) is a non-profit, 501(c)3 organization consisting of ACMH Hospital in central Armstrong County, Pennsylvania and a network of physician offices many of which are in remote and rural areas of the county. Governed by a non-paid board of directors from the community served, ACMH has served the community for 120 years providing compassionate care close to home.

ACMH Hospital is recognized as a provider of superior quality care with excellent patient outcomes having received repetitive awards acknowledging the hospital for quality and safety. ACMH has been awarded the Healthgrades National Patient Safety Award for years 2017 and 2018. This award places ACMH at the top 10% of hospitals nationwide in regard to patient safety excellence. In addition, the hospital received the Healthgrades 2016 Coronary Interventional Excellence award and received 5 of 5 stars in both Hysterectomy and Vaginal Delivery Procedures in 2016 and 2017.

Mission

ACMH Hospital is committed to improving the emotional and physical health of its patients through superior clinical care and the compassionate management of illness and disability

Vision

- We will be a leader in promoting responsible and healthy behavior in our community.
- We will provide compassionate and exemplary inpatient and outpatient services for our patients.
- We will be an employer of choice by encouraging personal growth and recognizing both individual and team accomplishments.
- We will provide value to our medical community by providing innovative, cost-effective and high-quality services for our medical providers and their patients.
- We will invest or partner in new products and services that will enhance accessibility to services and improve healthcare outcomes.
- We will provide a safe and secure environment for staff, patients, and visitors alike.

Author Credentials

ACMH Hospital engaged the consulting services of Dianne Emminger to lead this assessment and prepare this report. Ms. Emminger holds a Master's in Business Administration from the University of Pittsburgh, Katz Graduate School of Business and a Bachelor of Science degree in Computer Science from Point Park University in Pittsburgh, PA. Ms. Emminger formerly served as the ACMH Vice President of Information Services for over 20 years where she wrote grants, lead strategic planning activities and conducted the CHNAs of 2012 and 2015.

Prior to that, Ms. Emminger served as Director of Information Services for Pennsylvania Engineering Corporation and the E.G. Smith Division of Cyclops Corporation. Her

programming, analytic and quantitative methods education and background make her well versed in the compilation and interpretation of statistics.

Ms. Emminger lives in Armstrong County and has worked with and/or is known by members of nearly all health and human service organizations in Armstrong County. She has studied Armstrong County population statistics in many previous assignments. She is familiar with members of the medical community and hospital employees and, as such, is an excellent and reliable source of information critical to this assessment.

Summary of activities from 2015 to 2017 to address needs identified in the most recent previous CHNA

ACMH addressed the needs identified in the CHNA of 2015 in three primary ways:

1. public education,
2. acquisition of equipment for the detection and treatment of cancer, and
3. collaboration with other community organizations, especially to address addiction, obesity, prediabetes and problems of transportation for care.

Education: ACMH conducted robust campaigns to educate the public about breast cancer, colon cancer, and the importance of screening for early detection. ACMH has maintained status as a certified stroke center since 2013. Hospital staff have educated the public regarding the importance of early intervention for the treatment of stroke and heart attack through public speaking presentation to community groups, the creation of educational billboards and information posted throughout the hospital and doctors' offices. ACMH employs a certified diabetes educator (CDE) to provide diabetic patients with current education and disease management strategies in both the hospital and in rural health centers. The CDE is an asset for those who need to learn the tools and skills necessary to control their blood sugar and avoid long-term complications caused by high blood sugar levels.

Equipment for the detection and treatment of cancer: ACMH increased its investment in imaging technology to detect and assess breast and lung cancer. 3D Mammography™, breast ultrasound and MRI, sentinel node imaging for breast cancer, and low-dose CT screening for lung cancer all help identify cancer tumors at the earliest possible stage. In 2018, ACMH replaced its linear accelerator, which is used to provide precise, targeted radiation therapy to cancer patients. This equipment pinpoints tumor treatment and minimizes damage to surrounding tissues. The new accelerator has a bariatric table so that obese patients can avoid long travel to out-of-area facilities for treatment. Finally, the new equipment delivers the radiation faster which means less time on the table—less time that the patient must lie still.

Collaboration with other community organizations: ACMH continued its partnership in the HEALTHY Armstrong program to address trends in childhood obesity. ACMH expanded upon its partnership with ARC Manor and Armstrong County to address substance abuse through support of the Drugs Kill Dreams™ program and the Drugs Kill Dreams Jail Experience. ACMH has developed new partnerships. A collaboration with the Richard

G. Snyder YMCA has resulted in a pre-diabetes wellness program, a Parkinson's disease support group and a support group for families dealing with addiction. An alliance with the Armstrong, Indiana and Clarion Drug and Alcohol Commission has yielded funds for building a 4-bed detoxification unit targeted to open in Summer of 2018 at the Hospital and has facilitated participation in the addiction recovery mobile outreach program (ARMOT) to screen patients for substance abuse and provide early intervention during their hospital stay. Finally, ACMH is participating in a newly formed community transportation solution work group to tackle barriers to care caused by an inadequate rural transportation infrastructure.

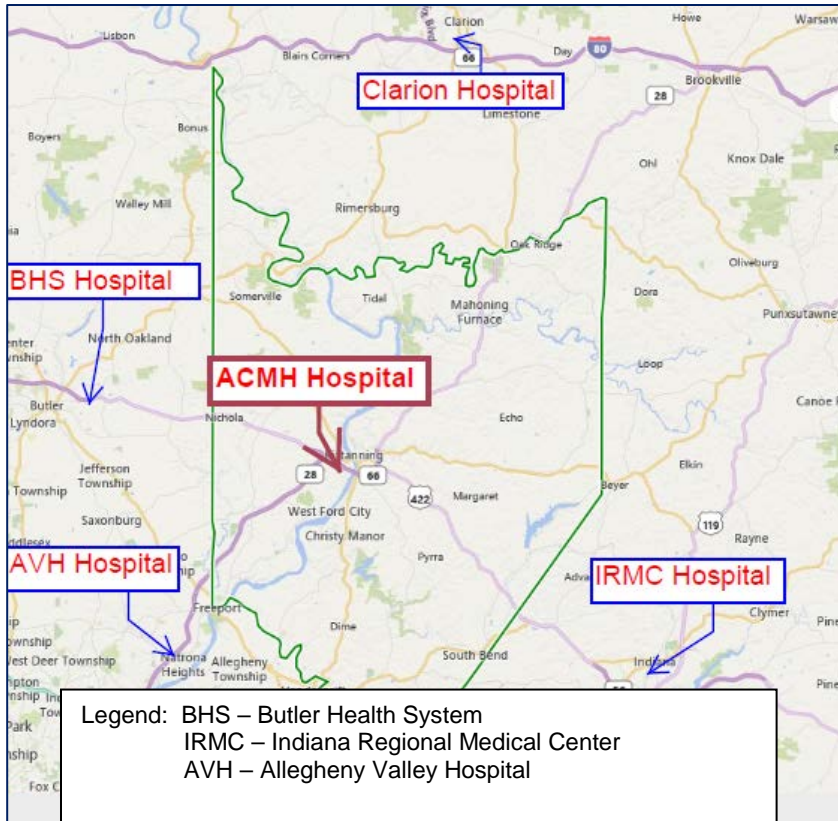
A complete report describing the activities that were conducted between 2015 and 2017 is available at the following link. [2015 - 2017 CHNA Accomplishments](#)

Definition of Community Served

Regulations require CHNAs to define the community served by the hospital facility and describe how the community definition was determined. ACMH has defined its community be all of Armstrong County for

- children, adolescents and adults presenting for routine outpatient wellness and disease management services,
- adults, presenting for acute, psychiatric, skilled nursing, and acute rehabilitation inpatient services.
- adults presenting for inpatient and outpatient surgical services (excluding high-risk tertiary surgeries),
- pregnant adults and adolescents, and
- adults presenting for cancer diagnosis and treatment.

Armstrong County is in the rural Appalachian region of Southwest Pennsylvania. Armstrong County comprises 45 minor civil divisions, most of which are designated as medically underserved areas, health professional shortage areas, or both by the HRSA. Most municipalities within the county are sparsely populated with the exception being those in the central portion, within a 10-mile radius. ACMH Hospital is the only hospital in Armstrong County.



The map to the left shows the location of ACMH Hospital and the nearest hospitals in surrounding counties. Hospital records show that more than 80% of patients live within a 15-mile radius of the hospital. ACMH has determined that it has more than 75% of the market share within a ten-mile radius of the hospital. From a geographic perspective, ACMH has defined its service area to be all of Armstrong County.

Within the Pittsburgh Metropolitan Area, the University of Pittsburgh Medical Center (UPMC) Children’s Hospital provides the full spectrum of services for pediatric patients and a

comprehensive assembly of pediatric specialists. It is the practice of pediatricians in Armstrong County to refer their patients to Children’s Hospital. As such, ACMH has further defined its community served to be patients over age 18 with the exception of adolescent pregnancies.

ACMH has established itself as a regional center for primary stroke care, which draws patients from outside of Armstrong County due to the need for immediate stroke intervention.

Armstrong County Health Factors and Demographic Characteristics

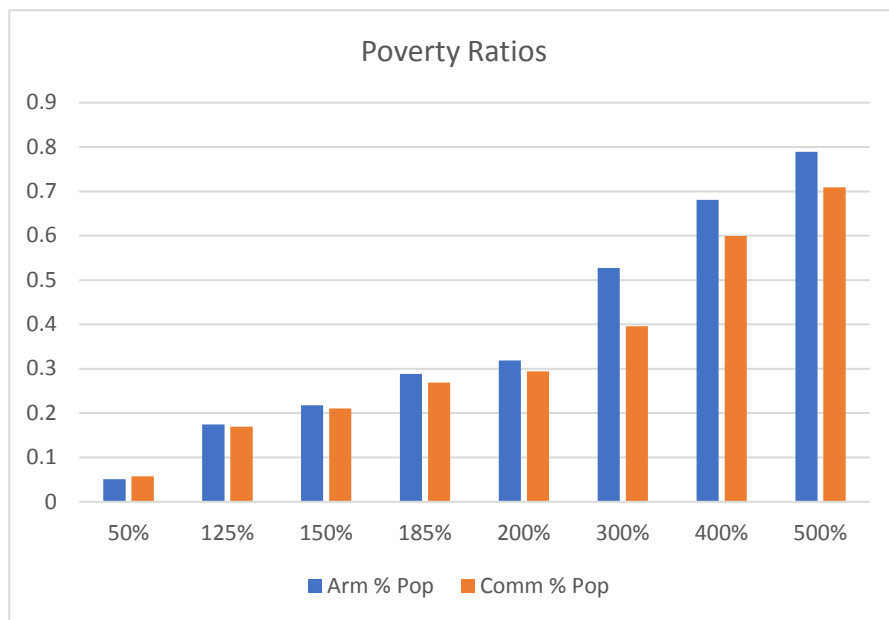
A focus on Armstrong County demographic features reveals evolving gaps and changes that help identify new service needs, the prevalence of disease, and barriers to care. The population in Armstrong County has been steadily declining over the past two decades with a shift to an older population—a population living with multiple chronic conditions, disability, and pain. Unemployment in the area is higher than Pennsylvania and U.S. averages causing higher rates of uninsured people, higher poverty rates, below average per-capita income, and below average median family income. These statistics reveal a community of working poor—those who don’t qualify for public benefits but may not have the financial resources to pay for the health and wellness services they need. Armstrong County is more rural than average Pennsylvania counties with a lack of adequate transportation systems. These demographic factors create barriers to care and wellness services. (Source: U.S. Census Bureau. American Factfinder, 2018)

The U.S. census is only conducted every 10 years, so ACMH must rely on estimates between the decade markers. The bureau of census publishes estimates based upon a respondent-based survey—The American Community Survey. These estimates show that the population of Armstrong County is decreasing at a rate of approximately 1.7% per year. For 2017, the population of Armstrong County is estimated to be 67,512; 97.9% of the population is white, 50.4% female, and 20.2% aged 65 and older. The median age is 45.2. (*Source: United States Census Bureau; Population Division, 2012-2016 American Community Survey; 5-year estimates*)

Old age dependency ratio: From these estimates, ACMH can calculate an old-age dependency ratio against which Armstrong County can be compared to other counties. This ratio is intended to measure a community's economic burden in caring for the elderly, a dependent population not typically in the workforce. ACMH divided the population age 65 and older by the population between the ages of 16 and 64, the age of population typically in the workforce, and multiplied that number by 100. The higher the ratio, the higher the economic burden of an aging population. Between the years 2000 and 2010, the overall U.S. old-age dependency ratio increased from 20.1 to 20.7. In Pennsylvania, the ratio decreased during that same period -- from 25.8 down to 24.6. (*Source: U.S. Census Bureau, Table GCT-T8-R, "Old-age Dependency of the Total Population": May 2011.*) Armstrong County's ratio (2010) at 28.4 is higher than both the U.S. rate and the Pennsylvania rate, indicating a higher economic burden to care for the elderly and increased stress on the healthcare industry to provide the necessary services. A higher ratio indicates a greater need for primary care practitioners, nurses, pharmacists, rehabilitation therapists, personal care assistants, and long-term and day care facilities. A limitation to using this ratio is that it fails to consider the portion of the population over age 64 that continues to work.

Rurality: According to the Center for Rural Pennsylvania, the population density per square mile of land area in Armstrong County is 105.5. Population density is a measure of the rurality of a community. The lower the ratio, the more rural a community. The population density average for all Pennsylvania counties is 283.9. A low rurality ratio points to potential barriers to care such as lack of transportation to and from medical appointments, increased distance from healthcare services and wellness facilities, and even inadequate access to sources of healthy foods.

Poverty: The percentage of population with income below the poverty level in Armstrong County is 13.2%. This ratio compares favorably to the 13.3% rate for the Commonwealth as a whole. A closer look at poverty ratios, however, reveals that the poverty rate for children under the age of 18 (20.5%) and especially for children under the age of five (24.2%) compares unfavorably to the Commonwealth rates of 19.1% and 21.6% respectively. The rate of children living in poverty in Armstrong and surrounding counties is higher than the poverty rate for the total population of the county. Furthermore, Armstrong County's child poverty rate is rising at a steeper rate than the overall rise in poverty rates. (See Appendix A.)



A limitation of using the poverty rate is that it fails to identify the percentage of population who are barely above the poverty rate, sometimes called the “working poor.” The chart at the left, comparing the population of Armstrong County to the overall population of the Commonwealth, shows this income gap. (Source: U.S. Census Bureau, American Factfinder 2018)

Other statistics that reveal the “working poor” status of Armstrong County residents are per-capita personal income and median household income. The annual per-capita income for Armstrong County residents at \$24,634 compares unfavorably to the per-capita income of the average Commonwealth resident at \$29,829. The median family income at \$45,879 compares unfavorably to the Commonwealth median income of \$55,322. (Source: U.S. Census Bureau, American Factfinder, 2018)

Unemployment: Armstrong County has a higher unemployment rate 7.7%, than the Commonwealth at 4.5%. The largest portion of those who are unemployed come from the population just beginning to enter the workforce, between the ages of 16 and 19. Additionally, individuals with disabilities have an unemployment rate of 15.3%. (Source: U.S. Census Bureau, American Factfinder, 2018)

Income and poverty status is important when conducting a community health needs assessment. Not only are lower-income individuals and families more likely to find medical expenses to be a barrier to care, they may be more likely to avoid the higher cost of recommended fresh produce and lean sources of protein. They will have less disposable income to spend on healthy recreational activities.

Healthcare Resources in Armstrong County

Most municipalities in Armstrong County are classified as healthcare provider shortage areas (HPSAs.) Recognizing that provider shortages create barriers to care, HRSA maintains records of the numbers of healthcare professionals and their service locations and provides economic resources to help alleviate shortages. These resources may be in the form of higher payments to providers, student loan forgiveness to medical professionals and visa waiver programs to help recruit physician specialists from other

countries. Records from 2015 showed the ratio of population to primary care physicians in Armstrong County to be 2240:1. This compares unfavorably to the Commonwealth ratio of 1230:1. Primary care physicians include practicing physicians (M.D.'s and D.O.'s) under the age of 75 who specialize in the general practice of medicine, family medicine, internal medicine, and pediatrics.

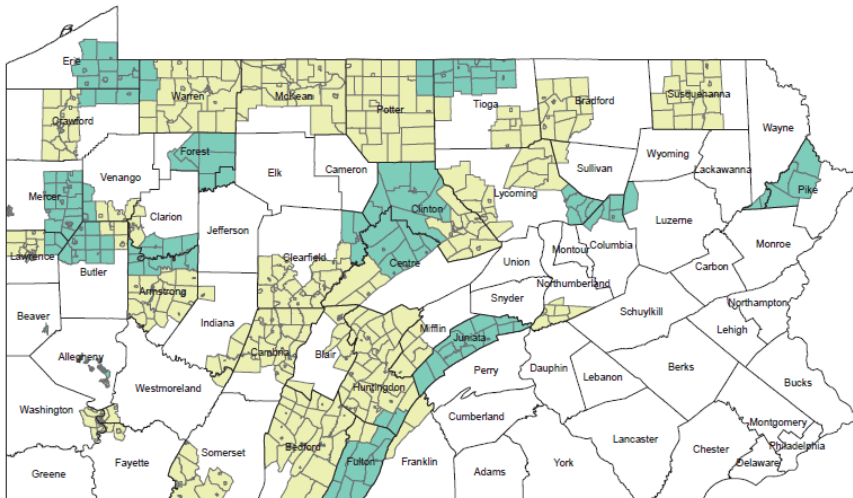
Records from 2015 also reveal other provider shortages. The ratio of population to dentists in Armstrong County is 3020:1, compared to the commonwealth ratio of 1480:1. The ratio of population to mental health specialists in Armstrong County is 1060:1, compared to the Commonwealth ratio of 560:1. Mental health specialists include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol dependency and/or substance abuse, and advanced practice nurses specializing in mental health. The conclusion that Armstrong County is a provider shortage area is derived from these statistics.

A health professional shortage area can be a specific geographic area, such as a county or municipality, based on the ratio of population to providers in that area, the percentage of the population at or under 100% of the poverty level, and the travel time to the nearest source of care outside of the HPSA region (geographic HPSA). A health professional shortage area can also be a population HPSA qualified by the previous three HPSA criteria and which also has a special-needs population, such as a high percentage of un- or under-insured people. HRSA can also designate areas as medically underserved areas or populations (MUA and MUP). These are areas that have been identified as having a shortage of health care services (MUA) or a shortage of services to special populations who face economic, linguistic, and/or cultural barriers to health care (MUP.) MUA's and MUP's are designated based on the above criteria and have high percentages of the population over age 65 and/or high infant mortality rates.

The maps on the following page show HPSA and MUA/MUP areas by Pennsylvania county. ([Source: HRSA](#))

As these maps show, Armstrong County is a physician shortage area by all measures. The trend toward use of advanced practice nurses and physician assistants fails to alleviate these shortages as the non-physician primary care ratio of 1583:1 in Armstrong County compares unfavorably with the Commonwealth average of 1027:1.

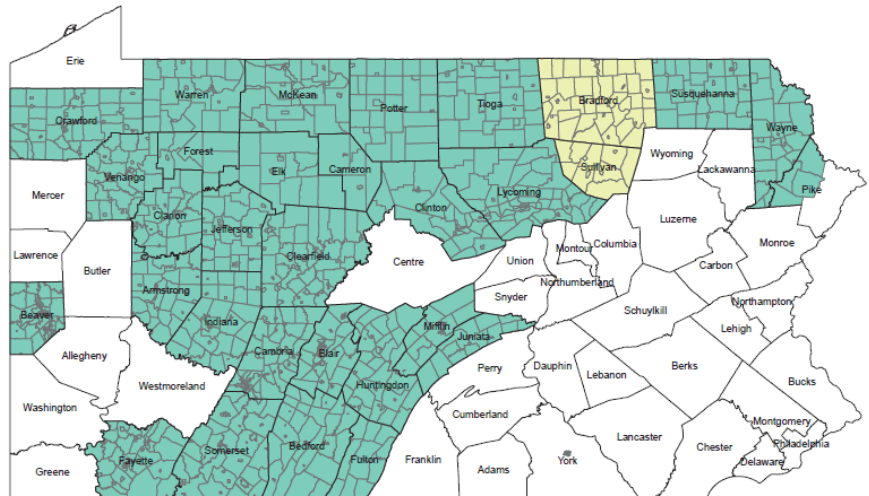
Pennsylvania's Currently Designated Primary Care Health Professional Shortage Areas (HPSAs)



Primary Care HPSA Types



Pennsylvania's Currently Designated Mental Health Professional Shortage Areas (HPSAs)

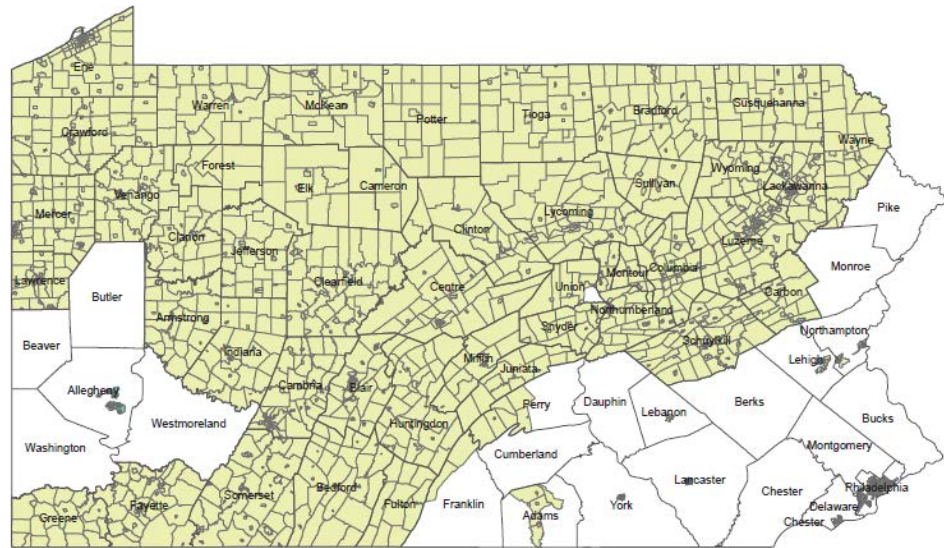


Mental Health HPSA Types



Source: March 2017

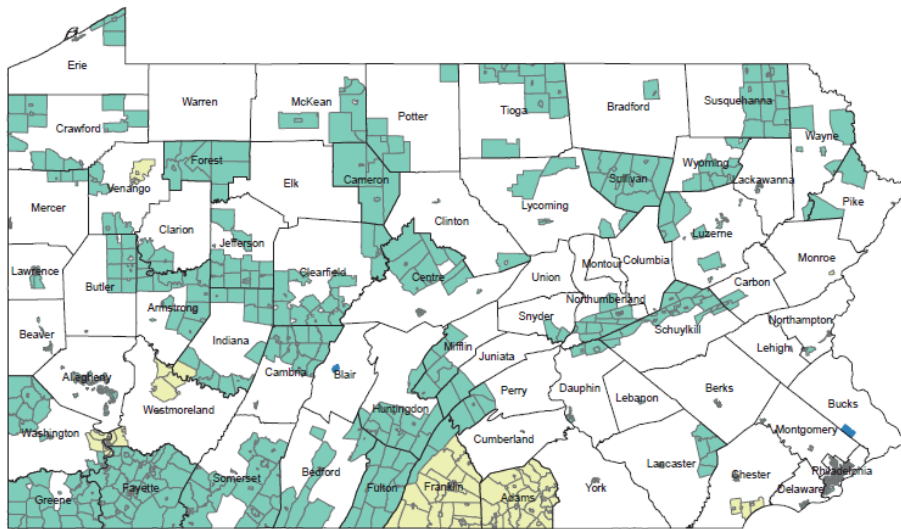
Pennsylvania's Currently Designated Dental Health Professional Shortage Areas (HPSA)



Dental HPSA Types ■ Geographic County Boundaries
 Population

Pennsylvania's Currently Designated Medically Underserved Areas/Populations (MUA/MUP)

Current as of March 31, 2015



MUA/P Types ■ MUA County Boundaries
 MUP
 Governor's

Current as of March 31, 2015

During 2015, the most recent year for which data is available, ACMH found the following statistics on the numbers of certain physicians, nurse practitioners, and dentists practicing in Armstrong County ([Source: American Medical Association Masterfile and CMS NPI file](#)):

- Physicians specializing in family practice - 16
- Physicians specializing in internal medicine - 6

Nurse practitioners - 30
Pediatricians – 9
Physicians specializing in obstetrics/gynecology – 3
General surgeons – 3
Dentists - 21

When identifying community resources, it is important to acknowledge the many health and human service organizations who also play active roles in the physical, mental and behavioral health needs of Armstrong County residents.

- ARC Manor (Addiction Recovery Center) provides inpatient and outpatient addiction recovery treatment, outreach services to families and other agencies, and 24 x 7 intervention services
- HAVIN (Helping All Victims in Need) provides food, shelter, and protection for victims of domestic violence. This agency works closely with law enforcement and Commonwealth legislators to help identify needs for changes to the Pennsylvania Code of Regulations.
- Armstrong County Community Action Agency operates the Head Start program, delivers home meals to over 1500 residents per month, assists with finding shelter, provides employment application training services, such as training for interviews and resume preparation, and operates the Town and Country transit system.
- The Area Agency on Aging provides services to residents 60 years old and over, helping them remain active and independent in the community
- Armstrong Children, Youth and Family mitigates the problems of child abuse and neglect that can occur when parents are not able to properly care for their children
- The Armstrong, Indiana, and Clarion, Drug and Alcohol Commission has provided funding for inpatient detoxification services, programs for rehabilitation, and miscellaneous other programs. The Commission brings a mobile unit into its counties twice a month to provide medication assisted treatments using Vivitrol and Suboxone. They work closely with medical staff who provide care to incarcerated individuals, beginning treatment protocols before prisoners are released, in the hopes of reducing the risk of recidivism or accidental overdose. The commission distributes Narcan, a drug utilized to counter-act the effects of drug overdose and provides training regarding the use and administration of this drug throughout the community. The Commission is in the process of funding a recovery center which is a day-center for those recovering from substance abuse—a place removed from previous risks that might cause relapse. The recovery center will also offer training to help recovering addicts find meaningful employment.

Through the Drug Free Community program, the commission works with area schools to provide substance abuse education and identify at-risk students. They recruit youth leadership through groups such as Students Against Drunk Driving (SADD.) They work with state legislators to address gaps in the legal system. For example, Senator Don White's office was instrumental in passing recent legislation giving grandparents the right to petition custody of their grandchildren, a right that

is particularly important for helping children of addicted parents. The Drug Free Community program also finds ways to assist older residents, such as those over 60, who are addicted to either opioids or alcohol and who are experiencing health problems from lifetime use.

- The Addiction Recovery Mobile Outreach Team (ARMOT), funded by the HRSA Federal Office of Rural Health Policy, partners with ACMH Hospital emergency department medical staff to identify patients who may have substance abuse problems and attempt to transfer them into treatment as quickly as possible. ARMOT personnel describe their services as providing a “tour-guide to the continuum of recovery services.” Certified recovery specialists, each of whom has experienced long-term recovery, help recovering addicts in all recovery needs, such as finding employment and housing, and finding the best-suited 12-step or faith-based programs and sponsors. Additionally, intent on eliminating the stigma associated with addiction, they provide counseling to medical and law enforcement personnel, helping them become non-judgmental, especially when dealing with repeat offenders.
- Adagio Health provides pre- and post-natal care for low-income pregnant women, infants and children. Additionally, they provide transportation vouchers for medical visits and participate in opioid outreach programs with both Allegheny Health Network and UPMC Magee Women’s Hospital. They administer the WIC (Women Infants and Children) program to provide nutritional resources and educational programs.
- The United Way of Armstrong County administers the 2-1-1 program, a directory through which residents can call, and/or go online to find community services that are available near their homes.
- The Richard G. Snyder YMCA is a provider of exercise, recreational, and family services that has begun to partner with healthcare providers and behavioral health organizations to implement wellness programs for the community.

An understanding of the demographic characteristics of Armstrong County, coupled with knowledge of community resources, provides background to better appreciate the causes and contributing factors for sickness and disease and assess the ability of ACMH to have meaningful impact. Poverty and unemployment rates are not causes of illness, but a poor economy often prevents people from seeking and receiving the medical care they need. A significantly rural region coupled with a shortage of healthcare providers create barriers to care. In this CHNA, ACMH attempts to identify the root cause of illness, and determine its ability to achieve the outcomes it desires.

Mortality and morbidity

Two important measures of population health are mortality and morbidity. A mortality rate represents the percentage of population dying during a certain time interval. A morbidity rate represents the portion of a population with disease or chronic medical conditions during that time interval. Morbidity is a measure of sickness and quality of life.

Sources of information and limitations

Mortality and morbidity statistics are readily available on multiple government web sites. The Pennsylvania Department of Vital Statistics regularly collects and summarizes causes of death from death certificates and reproductive outcomes from birth certificates. The Center for Disease Control and Prevention (CDC) collects cancer information from tumor registries across the nation along with other reportable diseases such as sexually transmitted diseases (STDs) and other contagious diseases. The Pennsylvania Health Care Cost Containment Council (PHC4) collects data from the hospital bills submitted to insurance companies for hospital in- and same-day surgical patients. The billing codes identify the diagnoses of and services provided to patients.

Because many health conditions no longer require hospitalization, much of the chronic health (morbidity) information ACMH reviewed came from response-based surveys of the population. The largest such survey is the Behavioral Risk Factor Surveillance System (BRFSS.) This survey is operated by the CDC and administered by each state's department of health. This telephone survey collects adult respondents' answers to questions about their health conditions and behaviors that may contribute to sickness, such as the use of alcohol and tobacco. The BRFSS is the largest such survey in the world and, as such, provides information about population health that is statistically reliable.

These sources of data are limited by their retrospective nature as many months are needed to collect data and provide aggregate reports. However, population health changes do not normally take place from one year to the next but, rather, over decades. Therefore, the ACMH executive team believes the data to be timely enough for the identification and prioritization of healthcare needs.

Comparison Benchmarks

Because one of the purposes of gathering this data is to prioritize the needs of our community, benchmarks are needed against which statistical data can be measured. This study aims to identify how Armstrong County rates compare to the rates of other regions, to goals set by public health organizations, and reveal trends over time.

The Pennsylvania Department of Health, Health Informatics Division, collects these statistics and provides access to the public through a conveniently designed portal. Their Enterprise Data Dissemination Information Exchange (EDDIE) system allows de-identified data to be summarized using parameters of choice. ACMH has used the EDDIE system to compare Armstrong County statistics to those of other populations in Pennsylvania.

Another source of benchmarks used in this assessment comes from the HRSA Healthy People 2020 initiative (HP2020). Healthy People 2020 defines a set of goals and objectives with 10-year targets designed to guide national health promotion and disease prevention efforts. See [Healthy People 2020](#) A third source of benchmarks is the County

Health Rankings and Roadmaps report, (see Appendix B.) The result of a collaboration between the Robert Wood Johnson Organization and the University of Wisconsin Public Health Institute this program ranks counties within states based upon a defined set of health conditions and behaviors. See [County Health Rankings and Roadmaps](#) The they use to prioritize conditions and calculate the rankings is found later in this document. Through these benchmark tools, ACMH can compare Armstrong County’s mortality rates, chronic disease rates and risk factors to the populations of its choosing.

Where available, ACMH uses age-adjusted rates in comparisons. Age adjusting is a complex mathematical process that takes into consideration the fact that older individuals are expected to be sicker and have a higher mortality rate than younger individuals.

The Department of Health, Health Informatics Division, requires the following disclaimer when publishing data from their portal: "These data were provided by the Division of Health Informatics, Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions." This disclaimer applies to any data provided in this report for which the Department is listed as the source.

Mortality Rates

The leading causes of death in Pennsylvania, accounting for more than 70% of all deaths, are heart disease, cancer, stroke, chronic lower respiratory disease, and unintentional injury. These statistics are the same for Armstrong County in rank and rate, except for unintentional injury, where the rate in Armstrong County is higher, with statistical significance. This means that the variance is not likely caused by chance.

The leading causes of death in Armstrong County, using age-adjusted mortality rates (average of the 3-year period 2014-2016) per 100,000 are shown in the following table.

Underlying Cause of Death	Number of Deaths	Age-Adjusted Mortality Rate
Cardiovascular disease	770	176.9
Cancer	505	159.2
External cause of death, injury & accident	201	93.9
Chronic lower respiratory disease	136	41.6
Cerebrovascular diseases	129	39.1
Nephritis, nephrotic syndrome and nephrosis	74	22.6
Influenza and pneumonia	70	20.3
Suicide	32	14.6
Chronic liver disease and cirrhosis	35	12

Source: "These data were provided by the Division of Health Informatics, Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions."

Cancer Death Rates - (age-adjusted rate per 100,000)									
	Armstrong County								
Cancer Death Rates	2008 - 2012	2009 - 2013	2010 - 2014	2011 - 2015	2012 - 2016	Armstrong County Trend	Average of Pennsylvania Counties	Healthy People 2020 Goal	
Lung Cancer	49.6	47.0	43.7	40.2	39.1		48.7	45.5	
Breast Cancer	22.3	22.0	19.9	19.3	20.4		23.3	20.7	
Colorectal Cancer	18.0	15.5	16.5	16.1	15.1		16.9	14.5	
Prostate Cancer	17.0	14.9	13.2	14.9	14.7		21.2	21.8	
Cervical Cancer	Insufficient Data								
Melanoma of the Skin	Insufficient Data								
<i>"These data were provided by the Division of Health Informatics, Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions."</i>									

The following chart explains the unintentional injury causes of death:

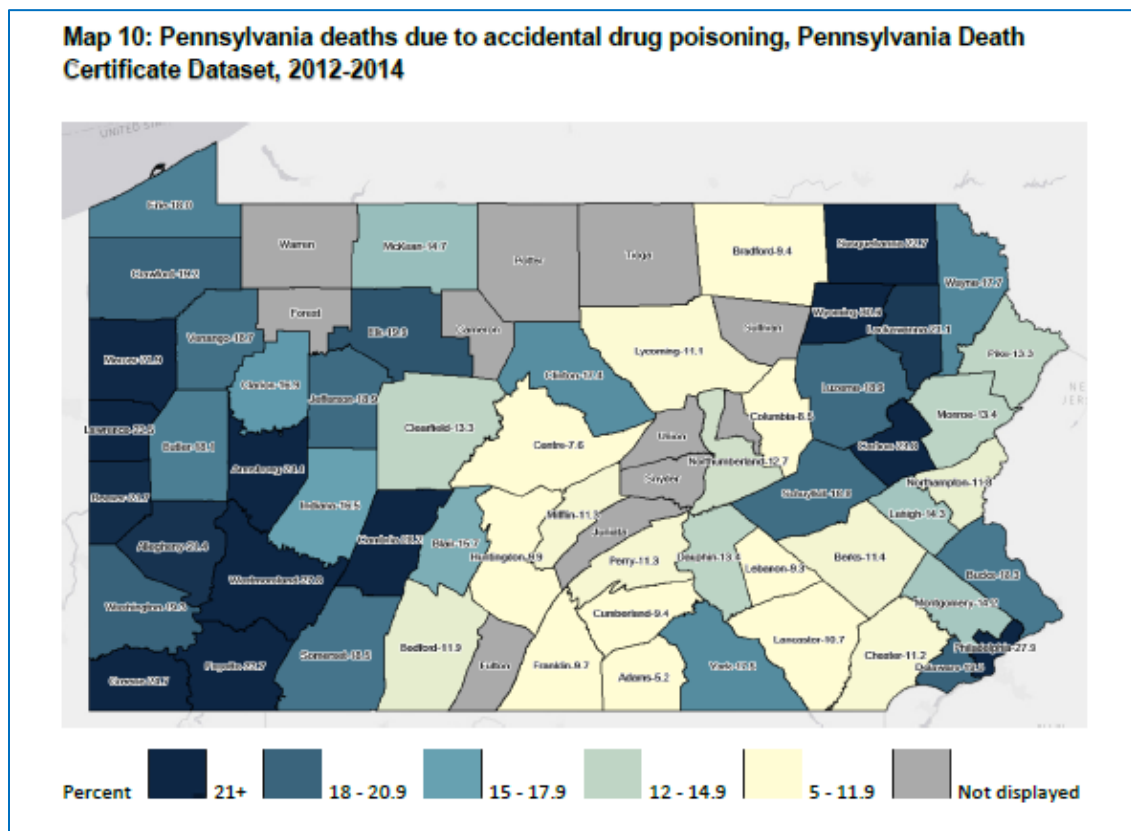
Unintentional Injury Causes of Death - (age-adjusted rate per 100,000)									
	Armstrong County								
Cause of Death	2008 - 2012	2009 - 2013	2010 - 2014	2011 - 2015	Armstrong County 2012-2016	Armstrong County Trend	2010 - 2014 Average of Pennsylvania Counties	Healthy People 2020 Goal	
Falls	6.7	5.4	6.6	7.1	7.6		10.6	7.0	
Poisoning	19.7	21.4	24.3	27.9	38.3		17.7	13.1	
<i>"These data were provided by the Division of Health Informatics, Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions."</i>									

Poisoning, for the most part refers to accidental drug poisoning, which includes deaths caused by overdose, drug-drug interactions, drug allergies, and drug adverse effects.

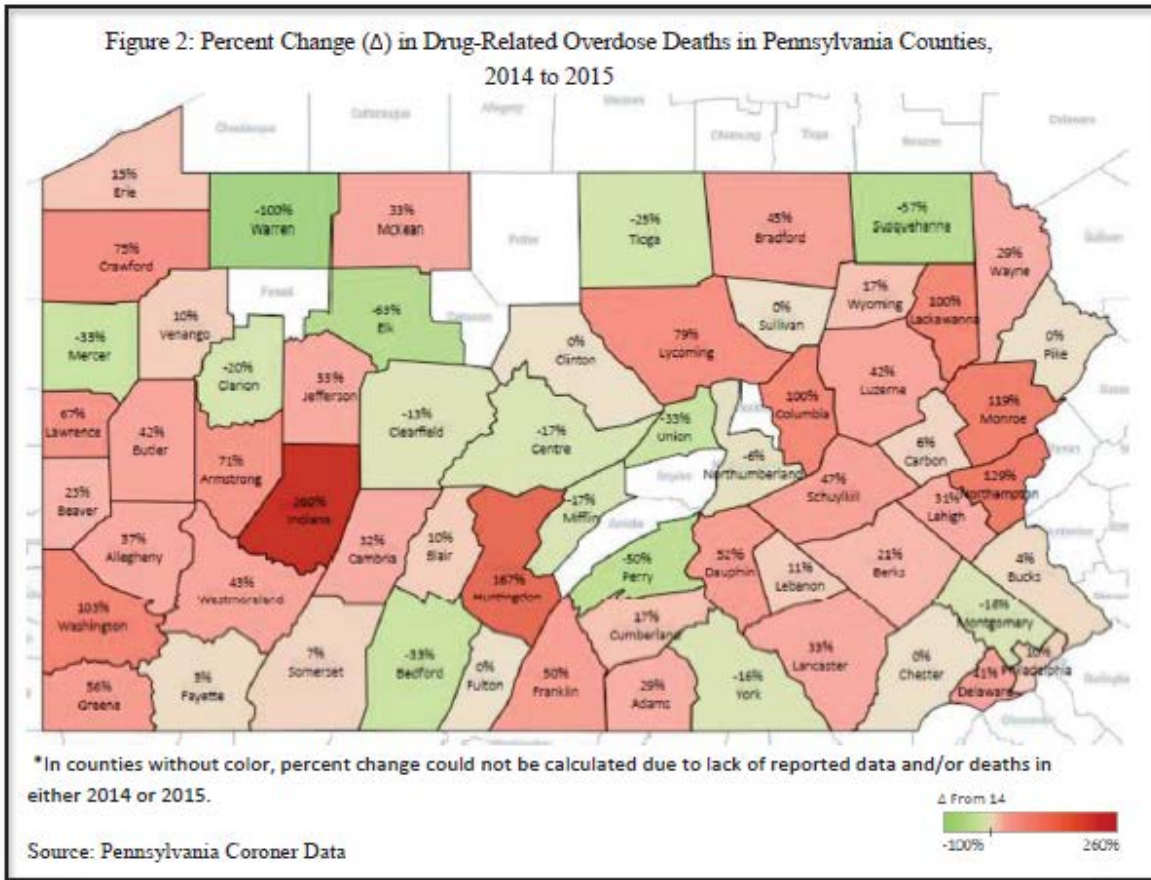
Death rates from heart disease have been steadily declining over the past four decades (due to advances in technology and treatment standards) but continue to be the leading cause of death in the United States and in Armstrong County. Cancer death rates have declined due to widespread use of screenings for early detection and improvements in technology and treatment standards. Stroke death rates have decreased due to education about stroke symptoms, the need to call 911 promptly, and the use of

advanced care protocols such as the administration of tissue plasminogen activator (tPA) which helps break down blood clots.

Drug poisoning death rates have been increasing, most likely related to opioid abuse and the introduction of fentanyl into street drugs. On the national level, death rates involving opioid analgesics increased from 5.1 to 7.0 deaths per 100,000 population between 2012 and 2015. The age-adjusted drug poisoning death rate involving heroin increased from 1.4 to 4.1 deaths per 100,000 between 2011 and 2015. (*Source: CDC*). In Pennsylvania, the increase in deaths from drug poisoning exceeded 50% between 2010 and 2014. *Source: Pennsylvania Vital Statistics (Pennsylvania Death Certificate Dataset, 2010 - 2014)* Information gleaned from death certificates shows that Armstrong County has one of the highest death rates from drug poisoning for the period 2012 - 2014. The following map shows comparisons of Pennsylvania counties.



Perspective is gained from the following chart compiled by the Drug Enforcement Agency showing the rate of change between 2014 and 2015. The percent change in drug induced deaths in Armstrong County was 71%.

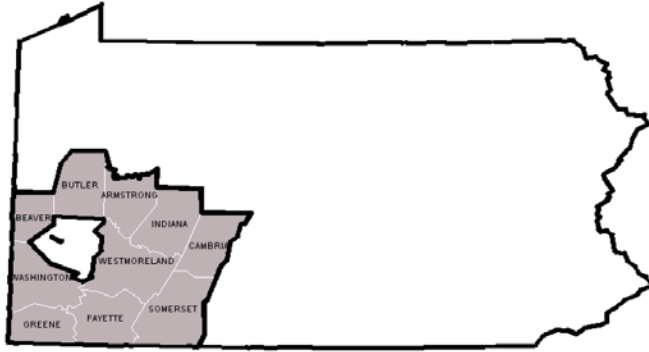


Chronic Disease Prevalence

The Center for Disease Control and Prevention (CDC) defines chronic disease as illnesses that are prolonged, do not resolve spontaneously, and are rarely cured. The most common chronic diseases are heart disease, cancer, stroke, chronic lower respiratory disease, diabetes, arthritis, and mental disorders. As people age, chronic disease causes loss of work productivity, a decrease in quality of life, and an increase in disability. At least 80% of adults age 65 and older suffer from at least one chronic disease. Chronic disease accounts for 85% of healthcare costs. *Source:* [Pennsylvania Department of Health, Bureau of Health Promotion and Risk Reduction, Chronic Disease in Pennsylvania \(2011\)](#).

The resource for most information about chronic disease (other than cancer incidence rates) is CDC Behavioral Risk Factor Surveillance System (BRFSS). This system provides a respondent-based telephone survey conducted by each state's health department. It is the world's largest such survey and has been replicated in many other countries. The survey consists of a core set of questions, but individual states can add their own questions to the survey. Respondents answer questions such as: "Have you ever been told that you had a heart attack?" and "Have you ever been told that you have high blood pressure?"

Statistics from the BRFSS are made available by region, rather than by county. The region we believe best represents Armstrong County is the region of southwest Pennsylvania with the exclusion of Allegheny County. Here is a visual depiction of this region:



ACMH identified the survey questions which are related to chronic disease and compared the response percentages of this region to those of Pennsylvania as a whole. That comparison is shown on the table on the next page.

Pennsylvania Behavioral Risk Factor Surveillance System - 2015

Southwest Region (Excluding Allegheny County) Compared to Pennsylvania

Subject of Question	Armstrong	Pennsylvania
	County Percent	Percent
Ever told have high blood pressure.	33%	33%
Currently taking meds for high blood pressure	79%	81%
Ever had cholesterol checked	83%	82%
Had cholesterol checked in past five years	80%	79%
Told have high cholesterol	34%	36%
Told had a heart attack (age \geq 35)	8%	7%
Told had angina or heart disease (age \geq 35)	6%	6%
Told had stroke (age \geq 35)	3%	5%
Ever told has asthma	12%	15%
Currently have asthma	6%	10%
Told has skin cancer	6%	6%
Told has any other cancer	9%	8%
Told has COPD, emphysema or chronic bronchitis	8%	7%
Told has arthritis, gout, lupus or fibromyalgia	33%	29%
Activity is limited due to arthritis or joint symptoms	4%	43%
Arthritis affects work	35%	30%
Arthritis affects social activities	40%	41%
Told has depressive disorder	18%	18%
Told has kidney disease	3%	3%
Told has diabetes	10%	10%
Checks blood sugar daily	39%	61%
Now taking insulin	41%	34%
Overweight (BMI 25-29)	37%	36%
Obese (BMI \geq 30)	33%	30%
Limited in activities due to physical, mental or emotions	20%	20%
Have health problems that require special equipment	8%	9%
Are blind or have serious difficulty seeing even with glasses	3%	3%
Have difficulty concentrating, remembering or making decisions	10%	10%
Have difficulty walking or climbing stairs	14%	14%
Have difficulty dressing or bathing	2%	3%
Have difficulty doing errands alone	5%	6%

The following table presents the percentage of respondents in the region reporting certain chronic conditions we have selected for review. Each column contains the percentage for the year in the heading; the trend is displayed as a line graph; the rightmost column shows the average rate for all Pennsylvania regions. The rates used in the table are crude rates (not age-adjusted or standardized in any way).

Population Reporting the Presense of Chronic Disease

Southwest Region of Western Pennsylvania with the Exclusion of Allegheny County

	2012	2013	2014	2015	2016		2016
Obesity	31%	34%	34%	33%	34%		PA Avg 30%
Cardiovascular disease	14%	14%	15%	13%	16%		PA Avg 13%
Asthma	12%	13%	14%	15%	16%		
Chronic obstructive pulmonary disease	8%	9%	8%	8%	8%		PA Avg 7%
Kidney disease	2%	3%	3%	3%	3%		PA Ave 2%
Depressive disorder	18%	17%	18%	18%	18%		PA Avg 19%
	2011	2012	2013	2014	2015		2015
Diabetes	12%	13%	13%	10%	13%		PA Avg 11%
		2011	2012	2013	2014		2014
Pre-diabetes		8%	7%	7%	7%		PA Avg 8%
	2011	2012	2013	2013			
High Blood Pressure	33%	63%	33%		PA Avg 33%		

Source: "These data were provided by the Division of Health Informatics, Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions."

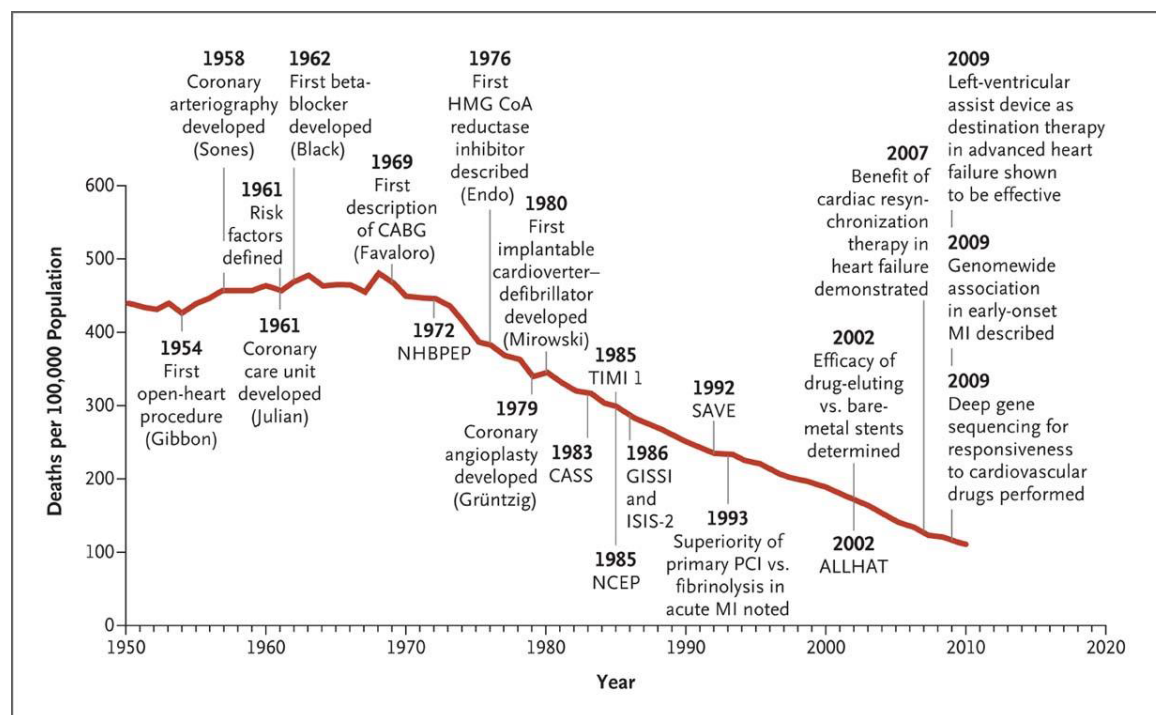
The rate of adult obesity in the region is higher than the average for Pennsylvania and is increasing. The incidence of cardiovascular disease spiked in 2016 although a trend is difficult to determine. Asthma appears to be increasing steadily. Chronic Obstructive Pulmonary Disease (COPD) spiked in 2013 but immediately dropped back down to a rate that is lower than the average in Pennsylvania. A low percentage of respondents (2%) reported kidney disease in 2012 but that percentage increased to 3% and stayed at that level for the next four years. This rate is higher than the average rate in Pennsylvania. Diabetes has been reported at a higher rate than the state for four of the five years with no discernable trend. Pre-diabetes is slightly lower than the state average.

ACMH was able to identify areas where mitigation strategies would likely make a difference by viewing trends in these charts. However, it should be noted that none of the variances from the Commonwealth averages are statistically significant. That means they could have been caused by chance. The executive team acknowledged that a more detailed analysis would be required to set priorities.

A description of the chronic diseases that were reviewed

Heart Disease: Heart disease is a broad term used to describe a wide range of diseases that affect the heart that can be fatal but also can be treated. Heart disease includes the following more detailed disease descriptions: coronary heart disease, coronary artery disease, cardiomyopathy, heart failures, hypertensive heart disease inflammatory heart disease, pulmonary heart disease, cardiac dysrhythmias and valve heart disease. As can be seen in the exhibit below, great strides have been made to reduce death rates, mostly through improved technology and treatment protocols. Nevertheless, heart disease is the leading cause of death in Armstrong County, in Pennsylvania, and in the nation.

Decline in Deaths from Cardiovascular Disease in Relation to Scientific Advances



Source: Joon Sup Lee, M.D., UPMC Heart and Vascular Institute, Presentation to UPMC Conclave, April 26, 2018: from Nable EG, Braunwald E. *New England Journal of Medicine* 2012; 366:51-63

Chronic Lower Respiratory Disease (CLRD): In past years, CLRD, was called chronic obstructive pulmonary disease (COPD) and consisted of emphysema and chronic bronchitis. The condition has been revised, under CLRD, to include asthma. It is a condition characterized by obstruction of the airflow due to lung damage. With CLRD, the lung damage is not fully reversible. The disease results in chronic cough, shortness of breath upon exertion, wheezing, excessive sputum, and is a major cause of morbidity and mortality. Eighty to 90% of those with CLRD have a history of smoking. Other

environmental factors associated with CLRD are dust, fumes, etc. There is no significant difference between the Armstrong County rates and the average rates in Pennsylvania.

Asthma: A subset of CLRD, asthma is usually discussed distinctly because the condition can be reversed. Asthma is a lung disease manifested by inflamed and narrow airways. Asthma sufferers experience recurring periods of wheezing, shortness of breath, tightness of the chest, and coughing. Most often, asthma starts in childhood and seems to correlate with allergies. There is no significant difference between Armstrong County rates of asthma to the average rates in Pennsylvania.

Cerebrovascular Disease: Often called stroke, cerebrovascular disease comprises a group of dysfunctions related to diseases of the blood vessels to the brain. This disease mostly affects older individuals and persons with a history of diabetes, smoking, and ischemic heart disease. Hypertension is the most important cause of cerebrovascular disease because it damages blood vessel linings. There is no significant difference between Armstrong County rates of cerebrovascular disease to the average rates in Pennsylvania.

Diabetes Mellitus: Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from insulin deficiencies or other insulin problems. Diabetes is generally classified as Type 1, Type 2, and Gestational. In Type 1 diabetes, the body's immune system destroys pancreatic beta cells that make insulin. Type 2 diabetes is characterized by insulin resistance. Gestational diabetes is diabetes diagnosed during pregnancy.

Diabetes is both a chronic disease and a risk factor for other chronic diseases. Persons with diabetes have a 2 to 4 times greater risk of heart disease, death, and stroke. Diabetes is the leading cause of blindness in adults aged 20-74. Itself, diabetes is the 7th leading cause of death in the U.S. Armstrong County is not significantly different in diabetes incidence rates than the average of all Pennsylvania counties. ([Source: NIH: National Institute of Diabetes and Digestive and Kidney Diseases](#))

Prediabetes: Prediabetes is the precursor stage before diabetes mellitus when not all the symptoms required to diagnose diabetes are present, but blood glucose levels are abnormally high. ([Source: NIH: National Institute of Diabetes and Digestive and Kidney Diseases](#))

Cancer: With cancer, abnormal cells divide without control and can invade other tissues of the body. Cancer can spread through blood and lymph systems. There are more than 100 different cancers, typically named for the organ they affect. There are five major categories of cancer which mostly are defined by the origin of the cancer:

- Carcinoma – cancer that begins in skin or tissues that line or cover internal organs.
- Sarcoma – cancer that begins in the bone, cartilage, fat, muscle, blood vessels or connective tissues.

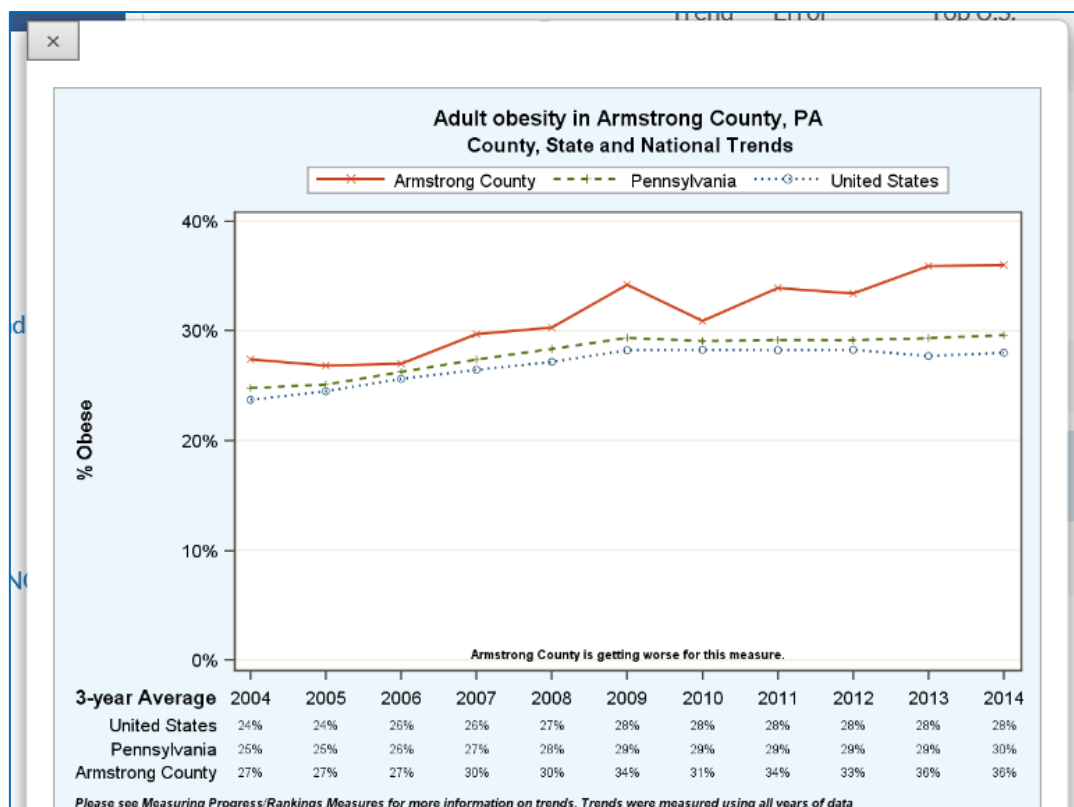
- Leukemia –cancer that begins in blood forming tissue like bone marrow, causing large numbers of abnormal cells to enter the blood stream.
- Lymphoma or myeloma –cancer that begins in the immune system.
- Central nervous system cancer –cancer that begins in the brain or spinal cord.

Incidences of cancer are required to be reported to the CDC through tumor and cancer registry systems to evaluate patient outcomes and quality of life, provide follow-up information, calculate survival rates, analyze referral patterns, and allocate resources at the state or regional level. The following chart compares the age adjusted cancer incidence rates and trends for Armstrong County with those of the Commonwealth.

Age Adjusted Cancer Incidence Rate (per 100,00) - (2010 – 2014)
 Source: U.S. Department of Health and Human Services: National Institute of Health: National Cancer Institute: State Cancer Profiles – crated 2/20/2018

Cancer Type	Armstrong County	Trend	Commonwealth of PA	Trend
All Cancers	465.75	Stable	484.5	falling
Breast (female)	132.1	Stable	129.8	rising
Prostate	103.9	Stable	117.5	falling
Lung & Bronchus	64.2	stable	65.4	falling
Colon & Rectum	47.5	Stable	43.1	falling
Corpus and Uterus	29.1	Stable	32.1	stable
Melanoma of the Skin	23.2	Stable	23	rising
Non-Hodgkin Lymphoma	22.2	Stable	21.5	stable
Thyroid	20.5	Stable	20.5	stable
Bladder	20.5	Stable	25.1	stable
Oral Cavity and Pharynx	14.7	Rising	11.8	stable
Kidney & Renal Pelvis	14.5	Stable	17	stable
Leukemia	12.3	Stable	147	stable
Ovarian	10.5	Stable	12.3	falling

Obesity: Obesity and overweight are defined by the CDC as weight that is higher than what is healthy for a given height. Body Mass Index (BMI) is used as a screening tool for adults. An adult BMI that is greater than 25 and less than 30 is classified as overweight. A BMI of 30 or greater is classified as obese. Body Mass Index is the result of a complex calculation that compares a person’s weight to height and is considered a measure of body fatness. Importantly, BMI can be used as a screening tool and as a tool to summarize population statistics. BMI, however, is not diagnostic of a person’s true level of body fatness and personal health. Nevertheless, the table below shows the percentage of adult obesity in Armstrong County to be well above that of the U.S. and Commonwealth. The percentage also appears to be increasing at a faster rate than that of Pennsylvania and the United States.



Chronic Kidney Disease: Kidneys filter a person’s blood to remove wastes, toxins, and excess fluids. They also help control blood pressure, stimulate production of red blood cells, and regulate important blood chemicals. When the kidneys are damaged and cannot properly filter blood, the result is chronic kidney disease. Because of this, excess fluid and waste from blood remains in the body and can cause other health problems such as heart disease and stroke. Consequences of kidney disease include anemia, frequent infections, depression, and poor quality of life conditions. Kidney disease usually gets worse over time even when treatment slows progression. When left untreated, kidney disease can progress to kidney failure and early cardiovascular disease. Kidney failure requires either dialysis or kidney transplant for survival and is called end-stage renal disease (ESRD). *Source: Center for Disease Control and Prevention:*




Hypertension: Hypertension or high blood pressure is both a chronic condition and a risk factor. Hypertension is called the “silent killer” because it rarely has any symptoms. The only way to know when blood pressure is high is to measure it. Hypertension can lead to hardened arteries, which decrease the flow of blood and oxygen to the heart resulting in heart disease, chest pain, heart attack, and heart failure. High blood pressure can burst and block arteries to the brain resulting in a stroke. Adults with high blood pressure and/or diabetes have a higher risk of developing chronic kidney disease.

Hospitalization for Chronic Disease

The following table shows how the population in southwest Pennsylvania responded to BRFSS questions regarding hospitalization for chronic disease. The rate of hospitalization for asthma is significantly lower than the Pennsylvania average; it is significantly higher for heart attack. Although the rate of hospitalization for COPD declined over the five-year period, on average it was significantly higher than the Pennsylvania range. (The term “significant” means that the variance was most likely not caused by chance or random events.) Physicians who were interviewed for this needs assessment suggested that higher hospitalization rates for chronic disease might be the result of the primary care physician shortages in the region.

Population Reporting Hospitalization for Chronic Health Conditions

Southwest Region of Western Pennsylvania with the Exclusion of Allegheny County

	2010	2011	2012	2013	2014		2014
Hospitalized for asthma	13.0	11.2	9.0	6.2	4.7		PA Avg 13.4%
Hospitalized for heart attack	22.1	23.9	19.1	22.2	18.1		PA Avg 16.5%
Hospitalized for COPD	22.3	20.0	19.3	15.1	13.2		PA Avg 17.9%

Source: Pennsylvania Department of Health, Behavioral Risk Factor Surveillance System

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Health Risk Behaviors

The Behavioral Risk Factor Surveillance System identifies behaviors that create health risks and behaviors that mitigate risks such as compliance with recommendations for wellness screenings, vaccinations and preventive treatments. The following tables show the information that was reviewed.

Population Reporting Behaviors that Negatively Impact Health

Southwest Region of Western Pennsylvania with the Exclusion of Allegheny County

	2012	2013	2014	2015	2016		2016
Alcohol - at risk for heavy drinking	6%	6%	5%	6%	5%		PA Avg 7%
Binge Drink	18%	16%	16%	16%	19%		PA Avg 19%
Chronic Drinking	8%	6%	5%	6%	5%		PA Avg 6%
Current Cigarette Smoker	22%	20%	21%	20%	17%		PA Avg 18%
Chew Tobacco	9%	7%	8%	9%	7%		PA Avg 4%
No Leisure Time Physical Activity in Past Month	26%	25%	29%	30%	34%		PA Avg 23%
		2013	2014	2016			
Sleep < 6 hrs per day	40%	41%	41%				PA Avg 38%
	2012	2013	2014	2015			
Every Day Smoker	17%	17%	15%	13%			
		2016	2016				
Use Vaping Product	7%		PA Avg 6%				

Source: Pennsylvania Department of Health, Behavioral Risk Factor Surveillance System

Population Reporting Healthy Behaviors

Southwest Region of Western Pennsylvania with the Exclusion of Allegheny County

	2011	2012	2013		2013	
Ever had cholesterol checked	83%	82%	83%		PA Avg 82%	
	2011	2012	2013	2015	2015	
Had A1C Checked	22%	24%	31%	28%		PA Avg 29%
	2011	2012	2013	2014	2014	
Was screened for diabetes	56%	50%	59%	53%		PA Avg 58%
Of diabetics, took a diabetes self-management class	57%	48%	47%	62%		PA Avg 49%
	2012	2014	2016		2016	
Had colonoscopy in past 10 years - (Age 50 - 75)	60%	68%	66%		PA Avg 67%	
Had home based stool test for colon cancer- (Age 50 - 75)	11%	9%	10%		PA Avg 8%	
Men (age 50+) who had PSA from those who were recommended	69%	63%	64%		PA Avg 67%	
Women (age 40+) who ever had mammogram	92%	93%	96%		PA Avg 92%	
Women (age 40+) who had PAP test in past 3 years	70%	66%	66%		PA Avg 66%	
Visited dentist in past year	65%	64%	65%		PA Avg 66%	
	2013	2014	2015	2016	2016	
Age > 50 - had flu shot	48%	48%	47%	54%		PA Avg 54%
	2011	2013	2015		2015	
Consume 5 servings fruits and vegeta	15%	15%	15%		PA Avg 15%	

Source: Pennsylvania Department of Health, Behavioral Risk Factor Surveillance System

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Also, the Behavioral Risk Factor Surveillance System identifies barriers to care.

Population Reporting Certain Barriers to Healthcare

Southwest Region of Western Pennsylvania with the Exclusion of Allegheny County

	2012	2013	2014	2015	2016	2016
Don't have PCP	12%	13%	13%	16%	15%	PA Avg 14%
No Insurance	19%	13%	13%	16%	15%	PA Avg 14%

	2012	2016	2016
Couldn't see Doctor Due to Cost	12%	8%	PA Avg 11%

Source: Pennsylvania Department of Health, Behavioral Risk Factor Surveillance System

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New Threats and Concerns

In recent years, new threats that have emerged—communicable diseases such as severe acute respiratory syndrome (SARS), pandemic influenza A(H1N1), Ebola, and the Zika virus. While these diseases have not yet become a significant concern in Armstrong County other health threats have. These include the rise of antibiotic resistance and the increasing overuse of prescription opioid painkillers. (Source: CDC.) As can be seen in the map below, Lyme disease has emerged as a significant risk to health in Armstrong County and surrounding regions. At a rate of 403.1 per 100,000 individuals, Armstrong County's rate is significantly higher than the overall rate in Pennsylvania.



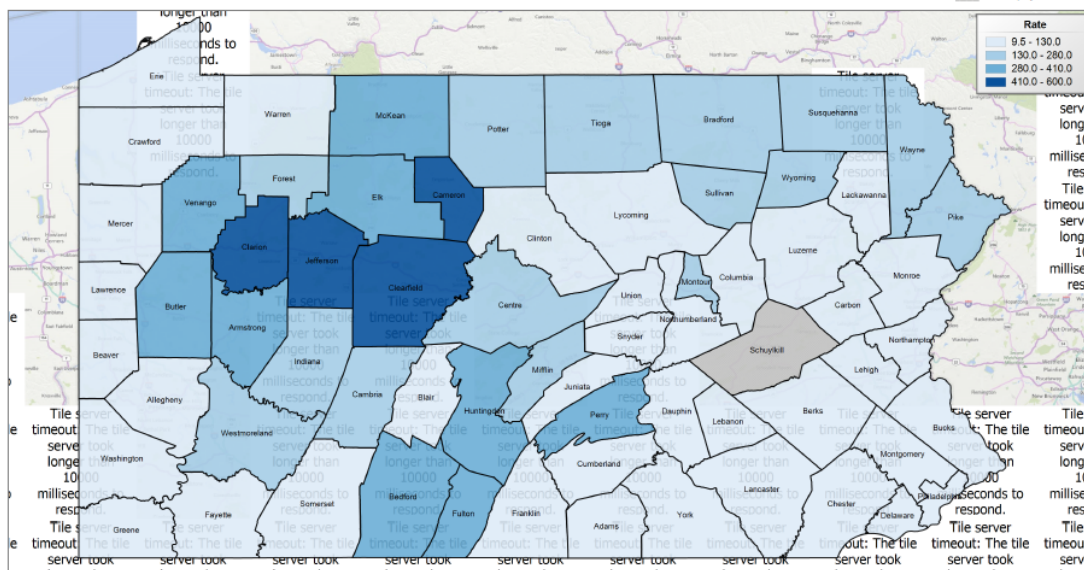
Enterprise Data Dissemination Informatics Exchange



Pennsylvania Communicable Diseases (Other than STDs): Crude/Age-Specific Rates per 100,000

Created: 05/28/2018

Communicable Disease: Lyme Disease Year: 2016 Sex: Total Race/Ethnicity: All Races Age: All Ages Distribution Type: Optimal



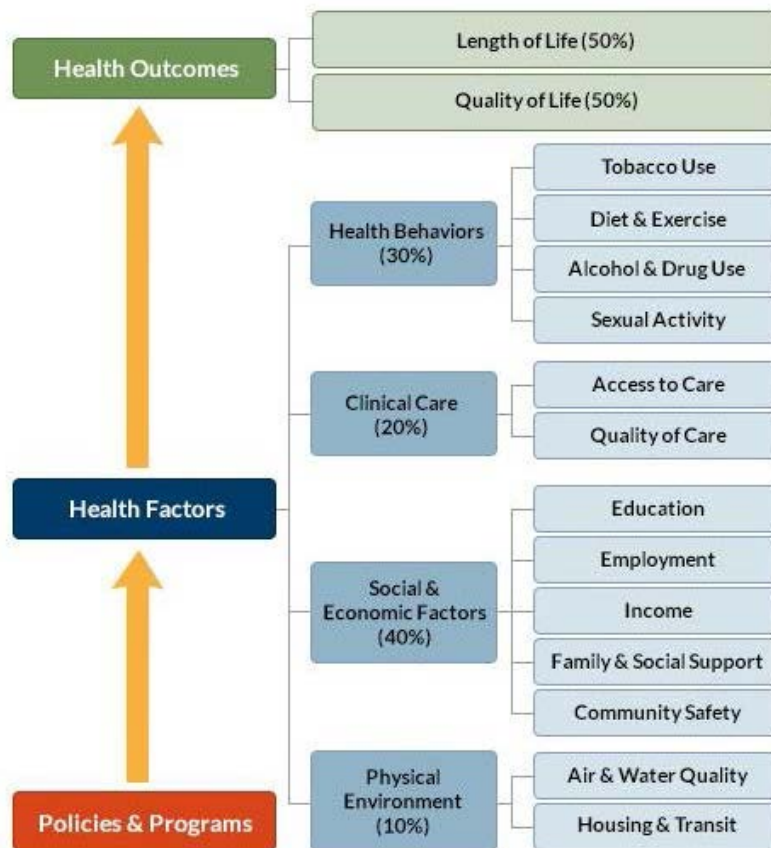
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Comparisons Against Benchmarks

Rankings

The County Health Rankings and Roadmaps program is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. Each year the program measures factors thought to influence health, including high school graduation rates, obesity, smoking, unemployment, access to healthy foods, air and water quality, income inequality, and teen births. From that collection of data and the program's prioritization model, counties are ranked within their state. In 2018, Armstrong County ranked 47 out of 67 counties.

The County Health Rankings program identifies each factor reviewed as either a health outcome or a health factor. Health outcomes are broken out into length of life and quality of life. Length of life looks at the sum of years of life lost for individuals who die at an age younger than 75 (the current life expectancy.) Length of life and quality of life are prioritized equally. The prioritization process map that is used is shown below:



ACMH reviewed the rankings for Armstrong County for the most recent six-year period to identify trends or concerns. This documentation is shown in the following charts. (Note: these are comparative rankings. Improvement in some counties can lower the ranking of other counties that have experienced no change.)

County Health Rankings Trends		2018	2017	2016	2015	2014	2013
Health Outcomes	Ranking	47	50	49	36	36	33
Length of Life	Ranking	58	57	53	49	39	39
Premature Death	Armstrong County	8,100	7,900	7,800	7,500	7,191	7,191
	Pennsylvania	6,900	6,800	6,900	6,926	6,973	6,973
	Top US performers	5,300	5,200	5,200	5,200	5,317	5,317
Quality of Life	Ranking	28	34	35	25	26	27
Poor or fair health**	Armstrong County	14.0%	15.0%	15.0%	16.0%	16.0%	14.0%
	Pennsylvania	15.0%	15.0%	16.0%	14.0%	14.0%	14.0%
	Top US performers	12.0%	12.0%	12.0%	10.0%	10.0%	10.0%
Poor physical health days**	Armstrong County	3.6	3.6	3.8	3.3	3.3	3.2
	Pennsylvania	3.9	3.5	3.8	3.5	3.5	3.5
	Top US performers	3.0	3.0	2.9	2.5	2.5	2.6
Poor mental health days**	Armstrong County	4.1	3.8	3.9	3.7	3.7	3.9
	Pennsylvania	4.3	3.9	4.3	3.6	3.6	3.6
	Top US performers	3.1	3.0	3.9	2.3	2.4	2.3
Low birthweight	Armstrong County	7.0%	8.0%	7.0%	7.4%	7.5%	7.3%
	Pennsylvania	8.0%	8.0%	8.0%	8.3%	8.3%	8.4%
	Top US performers	6.0%	6.0%	6.0%	5.9%	6.0%	6.0%

County Health Rankings Trends		2018	2017	2016	2015	2014	2013
Health Factors	Ranking	52	59	45	48	41	46
Health Behaviors	Ranking	32	57	47	45	38	58
Adult smoking**	Armstrong County	15.0%	18.0%	20.0%	24.0%	24.0%	24.0%
	Pennsylvania	18.0%	18.0%	20.0%	20.0%	20.0%	21.0%
	Top US performers	14.0%	14.0%	20.0%	14.0%	14.0%	13.0%
Adult obesity	Armstrong County	36.0%	36.0%	33.0%	34.0%	31.0%	34.0%
	Pennsylvania	30.0%	29.0%	29.0%	29.0%	29.0%	29.0%
	Top US performers	26.0%	26.0%	25.0%	25.0%	25.0%	25.0%
Food environment index	Armstrong County	8.3	8.2	8.0	8.3	8.6	
	Pennsylvania	8.2	7.8	7.7	7.7	8.0	
	Top US performers	8.6	8.4	8.3	8.4	8.7	
Physical inactivity	Armstrong County	30.0%	30.0%	29.0%	25.0%	25.0%	28.0%
	Pennsylvania	24.0%	23.0%	24.0%	24.0%	26.0%	26.0%
	Top US performers	20.0%	19.0%	20.0%	20.0%	21.0%	21.0%
Access to exercise opportunities	Armstrong County	33.0%	76.0%	76.0%	75.0%	61.0%	
	Pennsylvania	68.0%	85.0%	85.0%	85.0%	80.0%	
	Top US performers	91.0%	91.0%	91.0%	92.0%	85.0%	
Excessive drinking**	Armstrong County	19.0%	18.0%	18.0%	21.0%	21.0%	20.0%
	Pennsylvania	21.0%	18.0%	18.0%	17.0%	17.0%	17.0%
	Top US performers	13.0%	12.0%	12.0%	10.0%	10.0%	7.0%
Alcohol-impaired driving deaths	Armstrong County	30.0%	36.0%	33.0%	35.0%	30.0%	
	Pennsylvania	30.0%	32.0%	33.0%	34.0%	35.0%	
	Top US performers	13.0%	13.0%	14.0%	14.0%	14.0%	
Sexually transmitted infections	Armstrong County	203.6	173.3	213.4	196.0	187.0	141.0
	Pennsylvania	418.1	395.6	407.8	431.0	415.0	374.0
	Top US performers	145.1	145.5	134.1	138.0	123.0	92.0
Teen births	Armstrong County	26	29	29	28	28	28
	Pennsylvania	21	25	27	28	29	29
	Top US performers	15	17	19	20	20	21

** Should not be compared with prior years

County Health Rankings Trends		2018	2017	2016	2015	2014	2013
Clinical Care	Ranking	52	51	55	48	57	51
Uninsured	Armstrong County	7%	10%	12%	11%	12%	12%
	Pennsylvania	8%	10%	12%	12%	12%	12%
	Top US performers	6%	8%	11%	11%	11%	11%
Primary care physicians	Armstrong County	2,240:1	1,990:1	2,060:1	2,073:1	1,853:1	1,914:1
	Pennsylvania	1,230:1	1,230:1	1,220:1	1,249:1	1,244:1	1,273:1
	Top US performers	1,030:1	1,040:1	1,040:1	1,045:1	1,051:1	1,067:1
Dentists	Armstrong County	3,020:1	3,190:1	3,570:1	3,585:1	3,600:1	3,445:1
	Pennsylvania	1,480:1	1,530:1	1,550:1	1,600:1	1,649:1	1,743:1
	Top US performers	1,280:1	1,320:1	1,340:1	1,377:1	1,392:1	1,482:1
Mental health providers	Armstrong County	1,060:1	1,120:1	1,230:1	1,335:1	2,359:1	
	Pennsylvania	560:1	600:1	640:1	682:1	837:1	
	Top US performers	330:1	360:1	390:1	412:1	521:1	
Preventable hospital stays	Armstrong County	64	64	70	71	88	89
	Pennsylvania	52	52	57	63	70	70
	Top US performers	35	36	38	41	46	47
Diabetes monitoring	Armstrong County	82.0%	82.0%	83.0%	83.0%	80.0%	82.0%
	Pennsylvania	86.0%	86.0%	86.0%	86.0%	84.0%	84.0%
	Top US performers	91.0%	91.0%	93.0%	90.0%	90.0%	90.0%
Mammography screening	Armstrong County	62.0%	62.0%	62.0%	57.4%	57.9%	63.0%
	Pennsylvania	65.0%	65.0%	64.0%	63.4%	63.0%	66.8%
	Top US performers	71.0%	71.0%	71.0%	70.7%	70.7%	73.0%

County Health Rankings Trends		2018	2017	2016	2015	2014	2013
Physical Environment	Ranking	46	47	61	57	50	28
Air pollution - particulate matter	Armstrong County	11.2	11	13.8	13.8	13.8	0.143
	Pennsylvania	10.4	10.4	12.9	12.9	12.9	0.132
	Top US performers	6.7	6.7	9.5	9.5	9.5	0.088
Drinking water violations	Armstrong County	Yes	Yes	Yes	0.08	0.02	0.04
	Pennsylvania				0.08	0.09	0.132
	Top US performers				0	0	0
Severe housing problems	Armstrong County	11.0%	11.0%	11.0%	11.0%	10.0%	
	Pennsylvania	15.0%	15.0%	15.0%	15.0%	15.0%	
	Top US performers	9.0%	9.0%	9.0%	9.0%	9.0%	
Driving alone to work	Armstrong County	82.0%	81.0%	82.0%	82.0%	82.0%	
	Pennsylvania	76.0%	72.0%	77.0%	77.0%	76.0%	
	Top US performers	72.0%	77.0%	71.0%	71.0%	71.0%	
Long commute - driving alone	Armstrong County	43.0%	42.0%	42.0%	41.0%	40.0%	
	Pennsylvania	36.0%	35.0%	35.0%	34.0%	34.0%	
	Top US performers	15.0%	15.0%	15.0%	15.0%	15.0%	

County Health Rankings Trends		2018	2017	2016	2015	2014	2013
Social and Economic Factors	Ranking	52	41	31	38	29	27
High school graduation	Armstrong County	89.0%	89.0%	91.0%	85.0%	91.0%	92.0%
	Pennsylvania	85.0%	95.0%	86.0%	85.0%	84.0%	83.0%
	Top US performers	95.0%	85.0%	93.0%	93.0%	93.0%	93.0%
Some college	Armstrong County	55.0%	54.0%	54.0%	52.5%	50.9%	49.5%
	Pennsylvania	64.0%	63.0%	62.0%	61.9%	61.4%	60.5%
	Top US performers	72.0%	72.0%	72.0%	71.0%	70.2%	69.5%
Unemployment	Armstrong County	7.6%	6.4%	640.0%	8.0%	8.5%	8.4%
	Pennsylvania	5.4%	5.1%	580.0%	7.4%	7.9%	7.9%
	Top US performers	3.2%	3.3%	350.0%	4.0%	4.4%	5.0%
Children in poverty	Armstrong County	20.0%	19.0%	21.0%	20.0%	19.0%	19.0%
	Pennsylvania	18.0%	19.0%	19.0%	19.0%	20.0%	19.0%
	Top US performers	20.0%	12.0%	13.0%	13.0%	13.0%	14.0%
Income inequality	Armstrong County	4.4	4.3	4.3	4.3		
	Pennsylvania	4.8	4.8	4.8	4.7		
	Top US performers	3.7	3.7	3.7	3.7		
Children in single-parent households	Armstrong County	31.0%	32.0%	21.0%	32.0%	30.0%	31.0%
	Pennsylvania	34.0%	34.0%	19.0%	33.0%	20.0%	32.0%
	Top US performers	20.0%	31.0%	13.0%	20.0%	33.0%	20.0%
Social associations	Armstrong County	20.9	21.2	22.0	21.8		
	Pennsylvania	12.1	12.2	12.3	12.3		
	Top US performers	22.1	22.1	22.1	22.0		
Violent crime	Armstrong County	99	99	112	112	130	136
	Pennsylvania	333	333	67	357	367	386
	Top US performers	62	62	51	59	64	66
Injury deaths	Armstrong County	99	89	76	73	67	
	Pennsylvania	76	72	67	66	63	
	Top US performers	55	53	51	50	49	

Healthy People 2020 Goals

The following charts show the comparison of disease rates, chronic conditions and behaviors for Armstrong County to Healthy People 2020 goals:

A Look at Armstrong County by way of Healthy People 2020

			Goal	2008-12	2009-13	2010-14
Cancer death rate (per 100,000) (age-adjusted to 2000 std population)	Above benchmark but declining. Below PA county average	Armstrong	180.8	177.9	174.2	168.0
		Avg for all PA counties	180.8	180.3	176.7	173.7
Lung cancer death rate (per 100,000) (age-adjusted to 2000 std population)	Below benchmark with declining trend. Below PA county average	Armstrong	45.6	49.6	47.0	43.7
		Avg for all PA counties	45.6	48.7	47.4	46.2
Female breast cancer death rate (per 100,000 females) (age-adjusted to 2000 std population)	Below benchmark with declining trend. Below PA county average	Armstrong	20.7	22.3	22.0	19.9
		Avg for all PA counties	20.7	23.3	22.8	22.2
Cervical cancer death rate (per 100,000 females) (age-adjusted to 2000 std population)		Armstrong	2.2	DSU	DSU	DSU
Colorectal cancer death rate (per 100,000) (age-adjusted to 2000 std population)	Above benchmark but declining. Above PA county average	Armstrong	14.6	18.0	15.5	16.5
		Avg for all PA counties	14.6	16.9	16.4	15.9
Prostate cancer death rate (per 100,000 males) (age-adjusted to 2000 std population)	Below benchmark with declining trend. Below PA county average	Armstrong	21.8	17.0	14.9	13.2
		Avg for all PA counties	21.8	21.2	20.3	19.7
Pregnancy rate among adolescent females aged 15-17 (per 1,000 females 15-17)	Below benchmark with declining trend. Below PA county average	Armstrong	38.2	14.1	12.6	11.8
		Avg for all PA counties	36.2	20.9	18.9	17.2
Campylobacter species incidence rate (reported cases per 100,000)	Above benchmark but declining. Above PA average.	Armstrong	8.6	15.1	10.7	12.7
		Avg for all PA counties	8.6	12.9	12.5	11.5
Salmonella species incidence rate (reported cases per 100,000)	Below benchmark with declining trend. Below PA county average	Armstrong	11.4	19.9	15.6	8.3
		Avg for all PA counties	11.4	14.3	13.6	12.5
Coronary heart disease death rate (per 100,000) (age-adjusted to 2000 std population)	Above benchmark but declining. On par with PA county average.	Armstrong	103.4	126.0	119.0	116.4
		Avg for all PA counties	103.4	124.8	120.1	116.6

A Look at Armstrong County by way of Healthy People 2020

			Goal	2008-12	2009-13	2010-14
Stroke death rate (per 100,000) (age-adjusted to 2000 std population)	Above benchmark. Above PA county average.	Armstrong	34.8	46.0	45.3	42.3
		Avg for all PA counties	34.8	39.3	38.3	37.6
Poisoning death rate (age-adjusted to 2000 std population) (per 100,000)	Above benchmark and increasing. Above PA county average.	Armstrong	13.1	19.7	21.4	24.3
		Avg for all PA counties	13.1	17.7	18.6	19.9
Unintentional Injury death rate (age-adjusted to 2000 std population) (per 100,000)	Above benchmark and increasing. Above PA county average.	Armstrong	38.0	50.4	54.7	60.9
		Avg for all PA counties	38.0	41.6	42.1	43.5
Motor vehicle crash death rate (age-adjusted to 2000 std population) (per 100,000)	Above benchmark and increasing. Above PA county average.	Armstrong	12.4	14.0	15.7	18.1
		Avg for all PA counties	12.4	10.7	10.2	10.1
Accidental fall death rate (age-adjusted to 2000 std population) (per 100,000)	Below benchmark. Below PA county average.	Armstrong	7.0	6.7	5.4	6.6
		Avg for all PA counties	7.0	8.2	8.4	8.6
Firearm-related death rate (age-adjusted to 2000 std population) (per 100,000)	Above benchmark. Below PA county average.	Armstrong	8.2	11.0	9.9	9.8
		Avg for all PA counties	8.2	10.6	10.7	10.7
Maltreatment of children under 18 (all reported* cases per 1,000 children under 18)	Above benchmark. Above PA county average.	Armstrong	8.6	10.2	9.8	11.2
		Avg for all PA counties	8.6	9.7	9.8	10.8
Fetal mortality rate* (20+ weeks gestation) (per 1,000 live births and non-induced fetal deaths of 20+ weeks gestation)	Below benchmark and declining. Below PA county average.	Armstrong	6.8	6.6	5.5	5.1
		Avg for all PA counties	6.8	6.5	6.4	6.2
Infant mortality rate (under 1 year of age) (per 1,000 live births)	Below benchmark. Below PA county average.	Armstrong	8.0	4.6	5.5	5.4
		Avg for all PA counties	8.0	7.1	6.9	6.7
Neonatal mortality rate (0-27 days of age) (per 1,000 live births)	On par with benchmark. Below PA county average.	Armstrong	4.1	3.5	4.1	4.2
		Avg for all PA counties	4.1	5.0	4.9	4.7

A Look at Armstrong County by way of Healthy People 2020

			Goal	2008-12	2009-13	2010-14
Adolescent death rate for ages 15-19 (per 100,000 ages 15-19)	Above benchmark and increasing. Above PA county average.	Armstrong	64.3	52.0	53.1	64.0
		Avg for all PA counties	64.3	49.1	47.9	46.7
Young adult death rate for ages 20-24 (per 100,000 ages 20-24)	Above benchmark and increasing. Above PA county average.	Armstrong	88.3	131.4	118.1	127.0
		Avg for all PA counties	88.3	94.6	94.6	97.4
% of infants born at low birth weight (LBW) (less than 2500 grams)	On par with benchmark. Below PA county average.	Armstrong	7.8	7.1	7.7	7.8
		Avg for all PA counties	7.8	8.2	8.1	8.2
% of infants born at very low birth weight (VLBW) (less than 1500 grams)	On par with benchmark. Below PA county average.	Armstrong	1.4	1.4	1.3	1.3
		Avg for all PA counties	1.4	1.6	1.5	1.5
% of preterm live births (less than 37 weeks gestation)	Below benchmark. Below PA county average.	Armstrong	11.4	8.4	9.1	8.4
		Avg for all PA counties	11.4	9.6	9.4	9.4
Suicide rate (age-adjusted to 2000 std population) (per 100,000)	Above benchmark. Above PA county average.	Armstrong	18.2	15.4	13.9	13.4
		Avg for all PA counties	18.2	12.1	12.4	12.6
Cirrhosis death rate (age-adjusted to 2000 std population) (per 100,000)	Above benchmark. Above PA county average.	Armstrong	8.2	9.0	9.0	9.1
		Avg for all PA counties	8.2	7.7	7.8	7.9

Healthcare Consumer E-mail Survey

The ACMH Hospital executive team queried healthcare consumers via an email survey. ACMH collaborated with ARC Manor, Lutheran SeniorLife, VNA of Western Pennsylvania, and the Richard G. Snyder YMCA to design the survey and share the results. Surveys were sent to 7,481 adults from Armstrong County. The response rate was 22.5%

Survey recipients were asked about their health concerns, the barriers to care they have experienced, and to prioritize the healthcare needs of Armstrong County. The top five health concerns reported by residents were overweight/obesity, heart disease, depression/anxiety, chronic pain, and cancer. The top five barriers to care were the cost of copays and/or deductibles, the waiting time to schedule certain doctors' appointments, a lack of knowledge as to when medical care is necessary, fear or embarrassment, and

not knowing where to go for care. The top five priorities consumers expressed were free/more affordable health screenings, less costly exercise/recreation facilities, improved availability/cost of healthy foods, improved availability/cost of dental services, and more employment opportunities. A summary overview of the survey results can be found at this link. [Summary of Consumer Survey](#)

Community Members with Special Knowledge of Healthcare Needs

IRS regulations require that the CHNA must describe how the hospital facility considered input received from persons who represent the broad interests of the community it serves. To satisfy this requirement, the CHNA report must summarize, in general terms, any input provided by such persons and how and over what time the input was provided. Additionally, the report must provide the names of any organizations providing input, must summarize nature and extent of the organization's input and must describe the medically underserved, low-income, or minority populations being represented by the organizations or individuals that provided input.

Ms. Emminger conducted telephone and email conversations with managers from key public agencies and shared those discussions with the ACMH executive team. The input and comments obtained have been included as an integral part of this report. Some of the key organizations that have provided information on the medical needs of low-income or underserved members of the community are listed below. Other stakeholders interviewed can be found in the acknowledgements section of this report.

Pennsylvania Department of Health, - In March 2018, Ms. Emminger spoke with Melissa Pruner of the Kittanning office. Ms. Pruner recommended using the EDDIE system on the Department of Health web site which was used extensively in this assessment.

County Assistance Office – In March 2018, Ms. Emminger spoke with Sandra Eppinger, Executive Director, Department of Human Services, Armstrong County Assistance Office. Ms. Eppinger provided input regarding the transportation needs of low-income community members of the community. She also queried workers in her office who added the following needs: free hot meals, help for elderly clients understanding their insurance and healthcare bills, and finding and/or paying for dental care.

Area Agency on Aging – In April 2018, Ms. Emminger spoke with Janet Talerico, Executive Director, and Charlotte Wells, Senior Center Director. They provided input about seniors living longer (many well into their 90s) with mobility problems. Simultaneous use of many prescription medications is difficult to manage. Patients see multiple doctors and use multiple pharmacies. The agency sees cases where individuals are under- or over-medicated. Nutrition and physical activity must be managed at the senior centers.

Armstrong County Community Action Agency – In May 2018, Ms. Emminger spoke with Linda Cornman, and Daniel Dodd who provide leadership in developing the Agency's

strategic plan. They provided a copy of the Agency's most recent assessment and strategic plan for review by ACMH. The Agency's mission is to assist low income and disadvantaged community members. Input from their plan has helped ACMH better define its role in the community.

Armstrong/Indiana/Clarion Drug and Alcohol Commission – In March 2018, Ms. Emminger spoke with Kami Anderson, Executive Director, and Carrie Bence, Deputy Director. They provided input regarding the Commission's current plans for recovery centers, for expansion of the ARMOT program and the need for medication assisted therapy to address drug addiction.

Children, Youth and Family Services – In April 2018, Ms. Emminger spoke with Paula McClure, Executive Director, who expressed concerns for children of parents with drug addiction, who miss doctor's appointments and lack supervision. These children often become truant. Pregnant women with substance abuse problems often delay pre-natal care because of their addiction. Ms. McClure voiced concern about homelessness.

Adagio Health – In May 2018, Ms. Emminger spoke with BJ Leber, President and CEO. Ms. Leber described how Adagio provides pre- and post-natal care for low-income pregnant women, infants and children and manages the WIC program. Adagio fills gaps for patients with Medical Assistance, such as when the insurance plan is not accepted by a physician office.

Analysis and Prioritization of Needs in Armstrong County

The meeting to review and prioritize the community healthcare needs occurred on May 10, 2018. All ACMH executive team members were in attendance.

The team agreed upon a prioritization methodology that considered five primary elements:

- the underlying causes of premature death and the rates of chronic disease,
- recent trends in premature death and chronic disease rates,
- the comparison of health indicators in Armstrong County to benchmarks,
- comments received from community members, especially those with knowledge of public health, and
- the ability of ACMH to affect change

The team reviewed the County Health Rankings and Roadmaps (CHRR) report for 2018. (See Appendix B) Armstrong County is ranked 47 out of 67 counties in Pennsylvania (a lower ranking is better). Note: the ranking is skewed due to the prioritization methodology used by CHRR which gives a significant weight (50%) to premature loss of life. However, during the same ranking period Armstrong County experienced a spike in the death rate of young adults due to drug overdoses a crude rate of 38.3 per 100,000 which is significantly higher than the average in Pennsylvania (17.7 per 100,000). The distribution of Narcan for treatment of active overdose gives reason to think this increased death rate may reverse itself. Therefore, the executive team did not consider the CHRR rank of Armstrong County in the 2018 report to be a reliable measure for setting priorities. The team did, however, consider the following information from the report to be important: physician shortages; tobacco use; obesity rates; food environment index; limited access to exercise opportunities; and physical inactivity.

The comparison of Armstrong County statistics to Healthy People 2020 goals showed improvement in cancer mortality rates--even approximating HP2020 goals. Death rates caused by stroke (42.6 per 100,000) still showed problematic variance from the HP2020 (34.8 per 100,000) goal. Armstrong County heart disease mortality rates compare favorably to the HP2020 goals. But, despite medical, pharmaceutical and technological advances, cardiovascular disease remains the leading cause of death in the county. Noteworthy, one of the physicians interviewed offered the following comment: "The fact that cardiovascular disease remains the number one cause of death means we are not doing enough to manage the underlying associated chronic health conditions—diabetes, hypertension, hypercholesterolemia, obesity." The team noted that trends in those underlying conditions were increasing; perhaps even threatening to reverse the improvements made by technology and pharmaceutical/medical treatment protocols.

A root cause analysis of the underlying chronic conditions of diabetes, hypertension, hypercholesterolemia and obesity demonstrated a correlation with unhealthy behaviors: lack of physical activity; poor nutritional choices; smoking; alcohol abuse; and inadequate sleep. The consumer survey validated and supported the analysis. Respondents

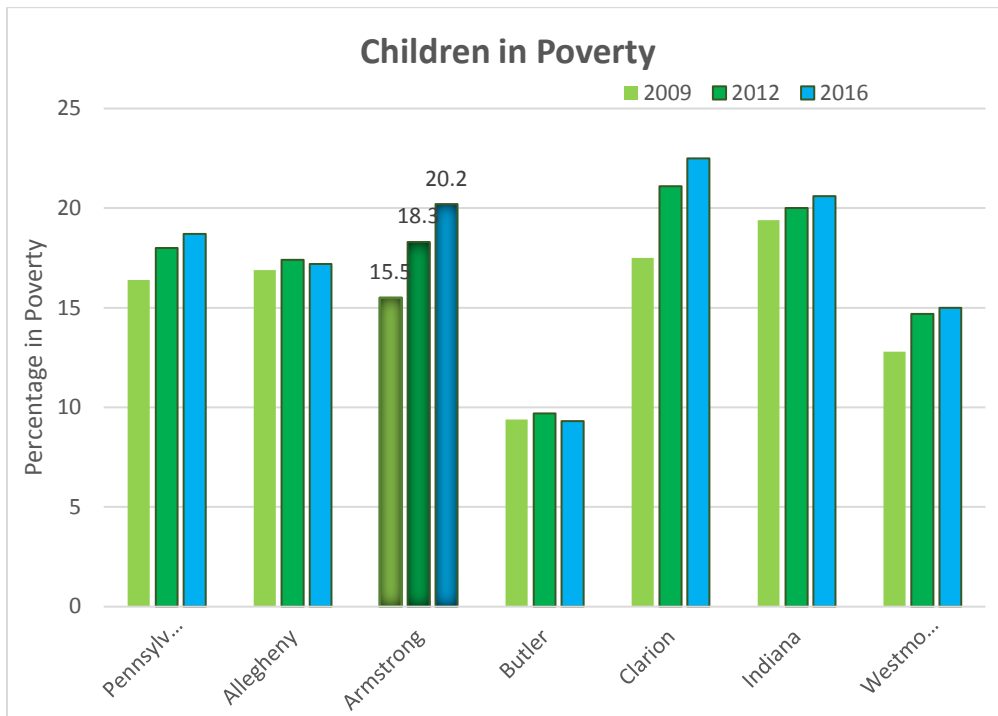
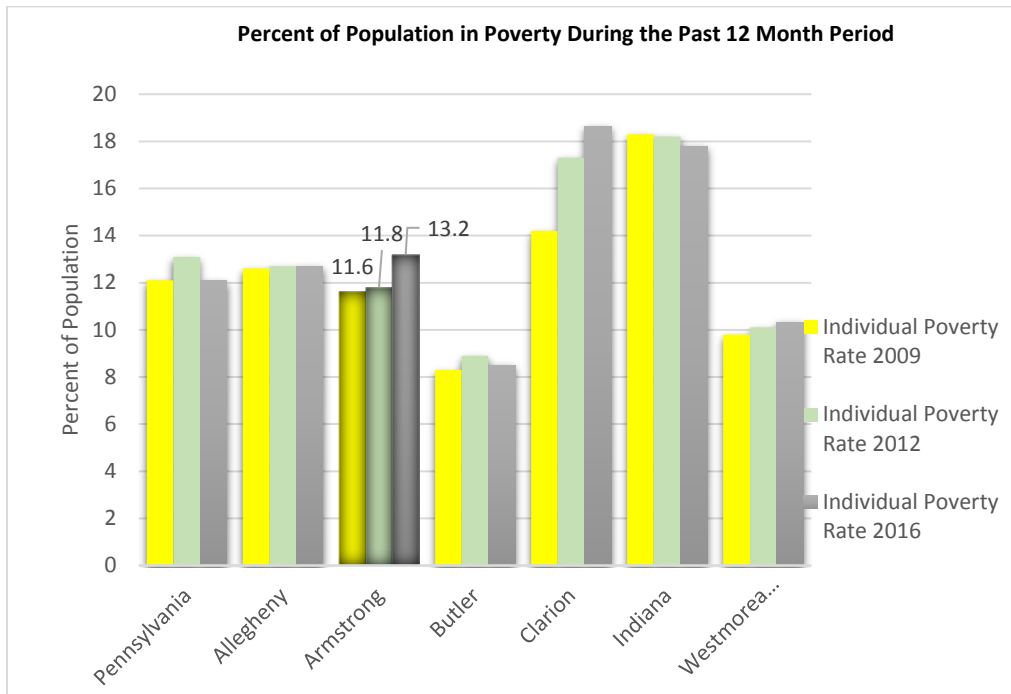
expressed a need for wellness/recreational facilities, and access to reasonably-priced, healthy foods. Cardiovascular disease was one of their top-ranking concerns.

While accidental death rates, especially due to the opioid epidemic, suicide rates, and unhealthy behaviors related to substance use are a significant concern to ACMH, team members believed that improvements in these areas would favor partnerships with the other community organizations.

In conclusion, ACMH prioritized the following actions to be addressed during the next three years:

- medically managed weight loss services
- education regarding the importance of nutrition in improving health
- increase knowledge about the importance of leisure-time physical activity
- education regarding the importance of smoking cessation
- increase knowledge about the importance of adequate sleep

Appendix A - Poverty Rates and Trends



Source: United States Census Bureau: 2012-2016 American Community Survey 5-Year Estimate: Poverty Status in the Past 12 Months.

Appendix B – County Health Rankings and Roadmaps - 2018

County Health Rankings & Roadmaps

Building a Culture of Health, County by County

Armstrong (AR)

County Demographics

	County	State
Population	66,364	12,791,237
% below 18 years of age	19.2%	20.9%
% 65 and older	21.2%	17.1%
% Non-Hispanic African American	0.9%	10.0%
% American Indian and Alaska Native	0.2%	0.4%
% Asian	0.2%	3.2%
% Native Hawaiian/Other Pacific Islander	0.0%	0.1%
% Hispanic	0.6%	7.0%
% Non-Hispanic white	97.2%	77.0%
% not proficient in English	0%	2%
% Female	50.2%	51.0%
% Rural	67.2%	21.2%

	Armstrong County	Error Margin	Top U.S. Performer	Pennsylvania	Rank (of 67)
Health Outcomes					
Length of Life					47
Premature death	6,300	7,300-9,000	5,300	4,900	58
Quality of Life					
Poor or fair health **	14%	13-14%	12%	15%	28
Poor physical health days **	3.6	3.1-3.8	3.0	3.9	
Poor mental health days **	4.1	3.9-4.4	3.1	4.3	
Low birthweight	7%	6-8%	6%	8%	
Additional Health Outcomes (not included in overall ranking)					
Premature age-adjusted mortality	-80	-170-100	-270	-250	
Child mortality	40	40-80	40	50	
Infant mortality	5	3-8	4	7	
Frequent physical diabetes	12%	10-12%	9%	12%	
Frequent mental diabetes	12%	12-12%	10%	12%	
Diabetes prevalence	12%	9-15%	8%	12%	
ITV prevalence	55		49	114	
Health Factors					
Health behaviors					
Adult smoking **	12%	12-16%	14%	10%	33
Adult obesity	36%	30-42%	26%	30%	
Food environment index	8.3		8.6	8.3	
Physical inactivity	20%	24-22%	20%	24%	
Access to exercise opportunities	30%		43%	68%	
Excessive drinking **	19%	10-20%	12%	22%	
Alcohol-impaired driving deaths	20%	20-20%	12%	20%	
Sexually transmitted infections	203.6		145.1	410.1	
Teen births	26	20-29	15	31	
Additional Health Behaviors (not included in overall ranking)					
Food insecurity	12%		10%	12%	
Limited access to healthy foods	2%		2%	2%	
Drug overdose deaths	15	16-56	10	28	
Drug overdose deaths - modeled	22-23.9		8-11.9	17.9	
Motor vehicle crash deaths	17	14-21	9	10	
Insufficient sleep	36%	35-37%	27%	36%	
Clinical Care					
Uninsured	7%	6-8%	6%	8%	53
Primary care physicians	1,240:1		1,000:1	1,290:1	
Dentists	3,020:1		1,280:1	1,480:1	
Mental health providers	1,060:1		330:1	580:1	
Preventable hospital stays	41	33-73	35	53	
Diabetes monitoring	82%	71-92%	92%	66%	

	Armstrong County	Error Margin	Top U.S. Performers	Pennsylvania	Rank (of 67)
Mammography screening	62%	51-70%	72%	65%	
Additional Clinical Care (not included in overall ranking)					
Uninsured adults	8%	7-9%	7%	9%	
Uninsured children	3%	3-6%	3%	4%	
Health care costs	\$30,208			\$30,089	
Other primary care providers	1,562:1		762:1	1,032:1	

	Armstrong County	Error Margin	Top U.S. Performers	Pennsylvania	Rank (of 67)
Social & Economic Factors					
High school graduation	89%		95%	85%	53
Some college	55%	52-59%	72%	64%	
Unemployment	7.6%		3.2%	5.4%	
Children in poverty	20%	15-24%	12%	18%	
% Children in Poverty	20%				
% Children in Poverty (Hispanic)	16%				
% Children in Poverty (White)	21%				
Income inequality	4:1	4.1-4.7	3:1	4:1	
Children in single-parent households	33%	27-34%	20%	24%	
Social associations	20.9		22.1	22.1	
Violent crimes	99		62	92	
Injury deaths	99	80-109	55	76	
Additional Social & Economic Factors (not included in overall ranking)					
Disconnected youth	16%		10%	12%	
Median household income	\$17,000	\$10,500-\$21,500	\$45,100	\$56,900	
Household Income	\$42,000				
Household income (Black)	\$29,900				
Household income (Hispanic)	\$10,900				
Household income (White)	\$46,000				
Children eligible for free or reduced price lunch	19%		12%	18%	
Residential segregation - black/white	68		23	72	
Residential segregation - non-white/white	41		14	41	
Homicides			3	5	
Firearm fatalities	13	10-18	7	11	
Physical Environment					
Air pollution - particulate matter **	11.2		6.7	10.4	46
Drinking water violations	Yes				
Severe housing problems	12%	9-12%	9%	15%	
Driving alone to work	62%	61-64%	72%	76%	
Long commute - driving alone	42%	40-45%	15%	36%	

[Areas to Explore](#) [Areas of Strength](#)

* 10th/90th percentile, i.e., only 10% are better.
 Note: Blank values reflect unavailable or missing data.
 ** Data should not be compared with prior years.

Appendix C - Acknowledgements

The ACMH Hospital Executive Team wishes to thank the following individuals who provided input for this report.

Kami Anderson	Executive Director	Armstrong-Indiana-Clarion Drug and Alcohol Commission
Carrie Bence	Deputy Director	Armstrong-Indiana-Clarion Drug and Alcohol Commission
Cindy McCrea	Executive Director	ARC Manor
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Mike Krafick	Certified Recovery Specialist Supervisor	Addiction Recovery Mobile Outreach Team (ARMOT)
Sandra L. Eppinger	Executive Director	Armstrong County Public Assistance (DPW) Office
Janet D. Talerico	Executive Director	Area Agency on Aging
Charlotte Wells	Senior Center Director	Area Agency on Aging
Melissa Pruner		PA Department of Health – Kittanning Office
Paula M. McClure	Administrator	Children, Youth and Family Services
Linda Cornman	Deputy Director	Armstrong County Community Action Agency
Daniel Dodd	Planner	Armstrong County Community Action Agency
Tiffany Chaffee	Operations Manager	Mid-County Transit Authority, dba Town and Country Transit
BJ Leber	President and CEO	Adagio Health
Joe Pittman	Chief of Staff	Senator Don White
Brian Myers	Coroner	Armstrong County
Jack Clevesy	CEO/Executive Director	Richard G. Snyder YMCA
Bethany Riggle	Director of Marketing	Richard G. Snyder YMCA
Margie Walsh	Executive Director	Lutheran SeniorLife, VNA, Western Pennsylvania
Gwen Breuer, MD	President, Medical Staff	ACMH Hospital
Rod Groomes, MD	Medical Director	ACMH Emergency Department
Thomas Lynch, MD	Pediatrician	Children’s Community Care
Steven Bono, DDS	Dentist	
Frank Eutsey, DDS	Dentist	
Philip A. Gelacek, MD	Family/Internal Medicine	Philip A Gelacek and Associates
Amy Turner DO	Obstetrics/Gynecology	ABC Women’s Care
Elizabeth White	Vice-Chair	ACMH Board of Directors
Diane McMillen, RN	Co-President	PASNAP

Dana Klingensmith	Radiation Therapy Dept	ACMH Hospital
Callie Kariaca	Executive Director Physician Practice Operation	ACMH Hospital
Jason Orton, EMT-P	Prehospital Care Services	Allegheny Health Network
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Cathy King	Financial Analyst	ACMH Hospital
Louis V. Falsetti	Business Owner	Falsetti's Villa Restaurant
Pam Ridinger	Business Owner	Beauty Connection
