Geisinger

Community Health Needs Assessment

July 1, 2018 – June 30, 2021

South Central Region
Geisinger Holy Spirit
June 2018

BAKER TILLY

Candor. Insight. Results.

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Our Commitment to Community Health

Our Catholic-sponsored healthcare organization has served the greater Harrisburg area community for more than 55 years, first as Holy Spirit Hospital and now as Geisinger Holy Spirit (GHS), part of the nationally recognized Geisinger system. We are proud of our non-profit mission and work every day to ensure we continue to meet the healthcare needs of the South Central region for years to come.

Since our affiliation with Geisinger in 2014, we have broadened our services to provide patients with greater access to primary, pediatrics, specialty and advanced care close to home. Recently, we added important services such as advanced bariatric surgery, dermatology and Mohs surgery, infectious diseases, neurosurgery, nutrition and weight management, orthopaedics, plastic surgery, pulmonary medicine, pulmonary rehab, and surgical oncology. We've also invested heavily in advanced technology, including Gamma Knife® Icon™ system, state-of-the-art endoscopic ultrasound, nuclear hybrid scanning for heart evaluation and 3D mammography equipment.

We recently completed a $32 million construction project to upgrade our Emergency Department as we prepared to become a trauma center. In September 2017, GHS was accredited as a Pennsylvania Trauma Systems Foundation Level II Trauma Center, providing around-the-clock complex critical care for patients suffering from life-threatening injuries such as those resulting from motor vehicle accidents, falls and acts of violence. Everything we do at Geisinger Holy Spirit is about caring, and this program brings trauma care closer to home for about 500,000 residents of Western Cumberland, Perry, Northern York, Franklin and Adams counties.

As it has from the beginning, GHS continues to be sponsored by the Sisters of Christian Charity and adheres to the Ethical and Religious Directives for Catholic Health Care Services. We provide a comprehensive array of both inpatient and outpatient services across south central Pennsylvania and are focused on improving the health and wellbeing of the communities we serve.

Overview of the FY2019 CHNA

A Collaborative Approach to Community Health Improvement

The FY2019 Geisinger Community Health Needs Assessment (CHNA) was conducted in partnership with Geisinger, Allied Services Integrated Health System, and Evangelical Community Hospital. The study area included 19 counties across Central, Northeastern, and South Central Pennsylvania which represent the collective service areas of the collaborating hospitals. To distinguish unique service areas among hospitals and foster cooperation with local community partners to impact health needs, regional research and local reporting was developed.

The collaborating health systems agreed that by coordinating efforts to identify community health needs across the region, the health systems would conserve community resources while demonstrating leadership in convening local community partners to address common priority needs.

Best practices in community health improvement demonstrate that fostering “collective impact” is among the most successful ways to affect the health of a community. Collective impact is achieved by committing a diverse group of stakeholders toward a common goal or action, particularly to impact deep rooted social or health needs.

By taking a collaborative approach to the CHNA, Geisinger, Allied Services Integrated Health System, and Evangelical Community Hospital are leading the way to improve the health of communities in Central, Northeastern, and South Central Pennsylvania. The following pages describe the process and research methods used in the FY2019 CHNA and the findings that portray the health status of the communities we serve and outline opportunities to work with our community partners to advance health among all residents across our service areas.

CHNA Leadership

The FY2019 CHNA was overseen by a Planning Committee of representatives from each health system, as well as a Regional Advisory Committee of representatives from each hospital. CHNA committee members are listed below.

CHNA Planning Committee

Tracey Wolfe, Vice President, Medicine Institute, Geisinger; Executive Leader
Allison Clark, Community Benefit Coordinator, Community Affairs, Geisinger; Project Manager
Joni Fegan, Strategic Planning Manager, Geisinger Holy Spirit
Gregory Lilly, Administrative Fellow, Geisinger
Barb Norton, Allied Services Integrated Health System
Sheila Packer, Director Community Health and Wellness, Evangelical Community Hospital
Tamara Persing, Vice President Nursing Administration, Evangelical Community Hospital
Phyllis Mitchell, Vice President Corporate Communications, Geisinger

CHNA Regional Advisory Committee

Renee Blakiewicz, Administrative Director, Geisinger Community Medical Center
Julie Bordo, Operations Manager, Geisinger Wyoming Valley Medical Center/Geisinger South Wilkes-Barre
Lorie Dillon, Chief Executive Officer, Geisinger HealthSouth Rehabilitation Hospital
Brian Ebersole, Senior Director of Springboard Health
Olive Herb, RN Care Coordinator, Geisinger Jersey Shore Hospital
Allison Hess, Associate Vice President, Geisinger Health and Wellness
Kristy Hine, Associate Vice President, Geisinger Lewistown Hospital
Leslie Jones, Business Development Director, Geisinger HealthSouth Rehabilitation Hospital
Corinne Klose, Associate Vice President of Operations and Special Projects, Geisinger Shamokin Area Community Hospital
Daniel Landesberg, Administrative Director, Geisinger Wyoming Valley Medical Center/Geisinger South Wilkes-Barre
Lisa Makara, Program & Events Specialist, Geisinger Bloomsburg Hospital
Adam Robinson, Administrative Fellow, Geisinger Medical Center/Geisinger Shamokin Area Community Hospital
Donna Schuck, Associate Vice President/Chief Development Officer, Evangelical Community Hospital
Nadine Srouji, MD, Medical Director, Value-Based Care & Bundling, Geisinger Holy Spirit Medical Group
Kirk Thomas, Chief Administrative Officer, Geisinger Lewistown Hospital
Brock Trunzo, Digital Marketing Producer, Geisinger Jersey Shore Hospital
Skip Wieder, Volunteer, Geisinger, United Way
Barbara Zarambo, Director of Operations, Geisinger Viewmont Imaging
Randy Zickgraf, Director Tax Services, Geisinger

Community Engagement

Community engagement was an integral part of the FY2019 CHNA. Webinars were held in October and November 2017 to announce the onset of the CHNA and encourage broad participation across the region. Throughout October and November 2017, a Key Informant Survey was sent to approximately 1,000 representatives of health and human service organizations, religious institutions, civic associations, businesses, elected officials and other community representatives. Partner Forums were held throughout the region in January 2018 to bring together these partners to review research findings and provide feedback on the most pressing community health needs. In March and April 2018, focus groups with seniors were held to better understand challenges and opportunities to improving health among high risk populations. Community Forums are planned for Fall 2018 to present CHNA findings and Implementation Plans to community residents and provide a forum for dialogue about addressing community health needs.

CHNA Methodology

The FY2019 CHNA was conducted from September 2017 to April 2018 and used both primary and secondary research to illustrate and compare health trends and disparities across the region. Primary research was used to solicit input from key community stakeholders representing the broad interests of the community, including experts in public health and individuals representing medically underserved, low-income and minority populations. Focus groups and interviews were used to collect in-depth insight from health consumers representing medically underserved or high risk populations. Existing data sources, including public health statistics, demographic and social measures, and healthcare utilization, were collected and analyzed to identify health trends across hospital service areas.

Specific research methods included:

- An analysis of statistical health and socioeconomic indicators from across the region
- An analysis and comparison of acute hospital utilization data
- A Key Informant Survey with 113 community leaders and representatives
- Six regional Partner Forums with community based organizations to identify community health priorities and facilitate collaboration toward community health improvement
- Twelve Focus Groups with seniors to examine preferences, challenges, and opportunities to accessing and receiving healthcare
- Prioritization of community health needs to determine the most pressing health issues on which to focus community health improvement efforts

The FY2019 CHNA built upon the hospitals' previous CHNAs and subsequent Implementation Plans. The CHNA was conducted in a timeline to comply with IRS Tax Code 501(r) requirements to conduct a CHNA every three years as set forth by the Affordable Care Act (ACA). The research findings will be used to guide community benefit initiatives for the hospitals and engage local partners to collectively address identified health needs.

Prioritized Community Health Needs

In assessing the health needs of the community, Geisinger and its CHNA partners solicited and received input from persons who represent the broad interests of the communities served by each hospital, including those with expertise in public health, representatives of medically underserved, low income, and minority populations, and other community stakeholders who brought wide perspectives on community health needs, existing community resources to meet those needs, and gaps in the current service delivery system. Through facilitated dialogue and a series of criteria-based voting exercises, the following health issues were prioritized as the most significant health needs across the region on which to focus health improvement efforts over the coming three-year cycle.

- Access to Care
- Behavioral Health (to include substance abuse and mental health strategies)
- Chronic Disease Prevention and Management (with a focus on increasing healthy habits)

To direct community benefit and health improvement activities, Geisinger and its CHNA partners created individual Implementation Plans for each hospital to detail the resources and services that will be used to address these identified health priorities.

Board Approval

The Geisinger FY2019 CHNA final reports were reviewed and approved by the Geisinger Health Affiliate Boards on June 20, 2018 and the Geisinger Health Board of Directors on June 21, 2018. Following the Boards' approval, all CHNA reports were made available to the public via the Geisinger website at https://www.geisinger.org/about-geisinger/in-our-community/chna.

Research Partner

Baker Tilly was engaged as the research partner for the CHNA. Baker Tilly assisted in all phases of the CHNA including project management, quantitative and qualitative data collection, small and large group facilitation and report writing.

The Baker Tilly team has worked with more than 100 hospitals and thousands of their community partners across the nation to assess health needs and develop actionable plans for community health improvement.

Geisinger FY2019 CHNA Research and Planning Team
Julius Green, CPA, JD, Tax Exempt Practice Leader
Colleen Milligan, MBA, CHNA Project Manager
Catherine Birdsey, MPH, Research Manager
Brittany Blau, MPH, Research Consultant
Jessica Losito, BS, Research Consultant
Keith Needham, BS, Research Consultant

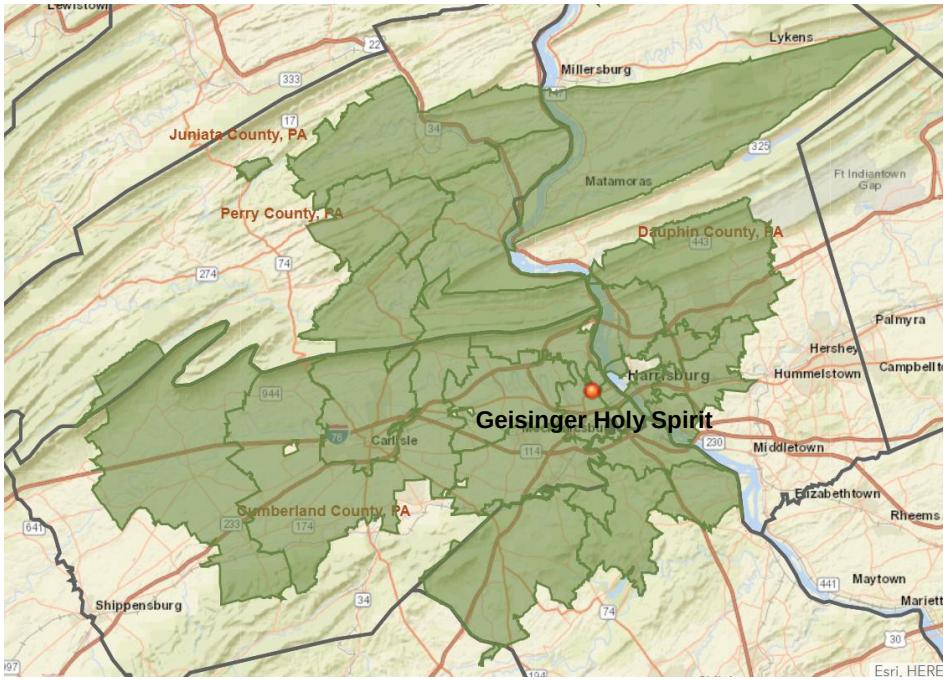
Service Area Description for Geisinger Holy Spirit

Population Overview

Geisinger Holy Spirit primarily serves residents in 25 zip codes spanning Cumberland, Dauphin, Perry, and York Counties in Pennsylvania. The 2017 population of the service area is 454,584 and is projected to increase 3.7% by 2022.

Zip Codes
17011, Cumberland
17013, Cumberland
17015, Cumberland
17019, York
17020, Perry
17025, Cumberland
17032, Dauphin
17043, Cumberland
17050, Cumberland
17053, Perry
17055, Cumberland
17068, Perry
17070, Cumberland
17074, Perry
17090, Perry
17102, Dauphin
17104, Dauphin
17109, Dauphin
17110, Dauphin
17111, Dauphin
17112, Dauphin
17113, Dauphin
17241, Cumberland
17319, York
17339, York

Geisinger Holy Spirit Primary Service Area



Service Area Population Growth

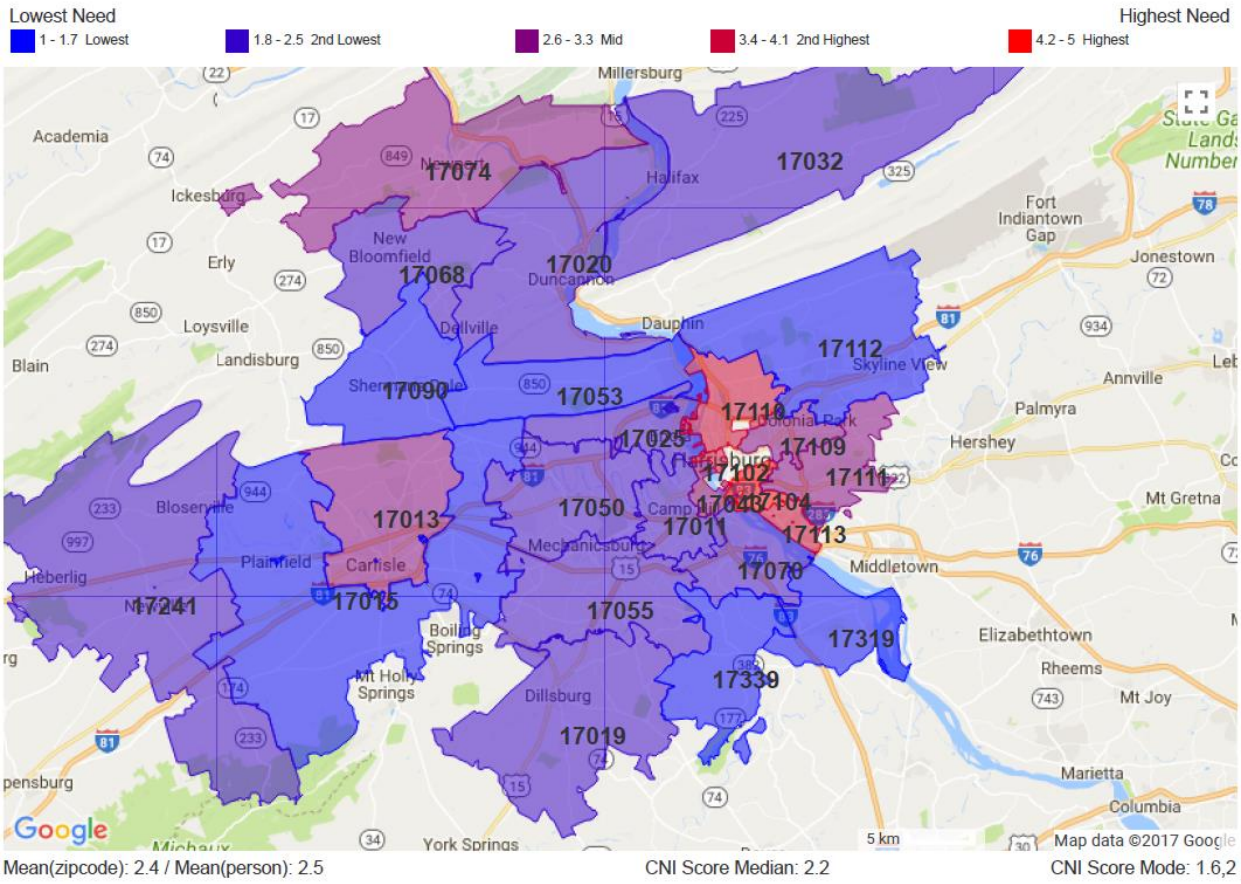
2017 Population	% Growth from 2010	% Growth by 2022
454,584	5.1%	3.7%

Zip code of residence is one of the most important predictors of health disparity; where residents live matters in determining their health. The Community Need Index (CNI) was developed by Dignity Health and Truven Health Analytics to illustrate the potential for health disparity at the zip code level. The CNI scores zip codes on a scale of 1.0 (low need) to 5.0 (high need) based on 2015 data indicators for five socio-economic barriers:

- Income: Poverty among elderly households, families with children, and single female-headed families with children
- Culture/Language: Minority populations and English language barriers
- Education: Population over 25 years without a high school diploma
- Insurance coverage: Unemployment rate among population 16 years or over and population without health insurance
- Housing status: Householders renting their home

The weighted average CNI score for Geisinger Holy Spirit's 25 zip code service area is 2.5, indicating lower overall community need. Several zip codes within Harrisburg have higher CNI scores, including 17102, 17104, 17110, and 17113. Zip code 17104 has the highest score (4.8). A significant portion of Harrisburg City is designated as a Medically Underserved Area.

Community Needs Index for Geisinger Holy Spirit's Service Area



Mean(zipcode): 2.4 / Mean(person): 2.5 CNI Score Median: 2.2 CNI Score Mode: 1.6,2

The following table analyzes social determinants of health contributing to zip code CNI scores. Zip codes are shown in comparison to their respective county and the state, and are presented in descending order by CNI score. Cells highlighted in yellow are more than 2% points *higher* than the county statistic. Exception: English speaking cells are more than 2% points *lower* than the county statistic.

Populations in Harrisburg zip codes 17104 and 17102 have the highest poverty, unemployment, and/or uninsured rates; zip code 17104 also has the lowest educational attainment among residents. Populations in the zip codes are diverse; approximately 38% to 47% of residents identify as Black/African American and 12% to 31% of residents identify as Hispanic/Latino.

Residents in zip code 17043, Lemoyne, also experience poorer social determinants of health. The zip code has the highest poverty and uninsured rates in the Cumberland County service area. Residents are more likely to be Hispanic/Latino and speak a language other than English.

Social Determinants of Health Indicators by Zip Code

	Black/ African American	Hispanic/ Latino	English Speaking (only)	HHs in Poverty	Unempl-oyment	Less than HS Diploma	Without Health Insurance	CNI Score
Cumberland County	**4.0%**	**4.0%**	**91.8%**	**8.4%**	**4.3%**	**7.9%**	**7.0%**	
17013 (Carlisle)	7.9%	5.2%	91.7%	12.5%	3.9%	8.3%	6.3%	3.0
17043 (Lemoyne)	4.1%	7.1%	86.2%	14.9%	5.9%	5.8%	13.9%	2.8
17011 (Camp Hill)	7.4%	5.7%	87.5%	7.1%	4.2%	7.3%	5.5%	2.4
17070 (New Cumberland)	2.5%	6.0%	95.7%	7.0%	2.3%	6.4%	5.6%	2.4
17025 (Enola)	2.9%	3.8%	91.1%	7.7%	4.9%	8.2%	6.3%	2.2
17055 (Mechanicsburg)	3.3%	3.9%	94.9%	5.2%	3.9%	4.9%	5.5%	2.2
17241 (Newville)	0.6%	1.3%	93.8%	8.6%	5.2%	16.0%	12.6%	2.0
17050 (Mechanicsburg)	2.3%	3.1%	90.5%	4.3%	3.5%	4.7%	3.8%	2.0
17015 (Carlisle)	1.6%	2.4%	95.4%	5.3%	3.1%	6.9%	7.1%	1.6
Dauphin County	**17.9%**	**9.4%**	**88.6%**	**12.2%**	**5.3%**	**10.4%**	**9.3%**	
17104 (Harrisburg)	47.2%	30.7%	75.6%	31.5%	12.8%	23.1%	19.0%	4.8
17102 (Harrisburg)	38.4%	11.8%	88.8%	23.3%	8.4%	12.0%	19.5%	3.8
17113 (Harrisburg)	31.0%	17.7%	83.5%	16.5%	5.1%	12.1%	10.7%	3.6
17110 (Harrisburg)	33.9%	8.3%	86.5%	11.7%	7.1%	10.2%	8.4%	3.4
17109 (Harrisburg)	23.7%	10.8%	87.2%	8.6%	5.2%	8.1%	8.3%	3.0
17111 (Harrisburg)	16.4%	8.5%	88.6%	6.8%	4.5%	7.4%	7.4%	2.6
17032 (Halifax)	0.5%	2.0%	98.7%	7.6%	4.8%	11.7%	6.8%	2.0
17112 (Harrisburg)	5.6%	3.9%	93.8%	4.6%	2.8%	5.3%	5.0%	1.6

	Black/ African American	Hispanic/ Latino	English Speaking (only)	HHs in Poverty	Unempl-oyment	Less than HS Diploma	Without Health Insurance	CNI Score
Perry County	**0.9%**	**2.0%**	**95.8%**	**8.6%**	**4.7%**	**10.9%**	**11.2%**	
17074 (Newport)	0.7%	1.8%	98.5%	12.4%	4.6%	9.5%	10.4%	2.6
17020 (Duncannon)	0.8%	2.2%	96.3%	7.8%	4.8%	8.1%	8.8%	2.4
17068 (New Bloomfield)	1.2%	2.0%	97.1%	7.2%	5.0%	11.7%	10.2%	2.0
17053 (Marysville)	1.1%	2.7%	93.5%	7.0%	3.9%	7.8%	5.8%	1.6
17090 (Shermans Dale)	0.4%	2.1%	99.7%	4.9%	8.5%	12.2%	10.8%	1.6
Northern York County	**6.1%**	**7.7%**	**93.0%**	**9.9%**	**5.7%**	**10.9%**	**8.2%**	
17019 (Dillsburg)	0.8%	2.1%	95.8%	6.0%	3.9%	7.8%	6.6%	1.8
17319 (Etters)	1.7%	4.2%	97.7%	5.9%	4.7%	5.4%	5.7%	1.4
17339 (Lewisberry)	0.9%	2.7%	98.1%	4.8%	4.5%	8.3%	4.6%	1.4
Pennsylvania	**11.2%**	**7.4%**	**89.4%**	**12.9%**	**6.2%**	**10.1%**	**8.8%**	

Secondary Data Profile: South Central Region

The South Central region is comprised of four counties and is served by Geisinger Holy Spirit.

South Central Region Service Area Counties

- Cumberland County
- Dauphin County
- Perry County
- Northern York County

Secondary Data Profile Summary

Secondary data, including demographic and public health indicators, were analyzed for the South Central region to better understand community drivers of health status, health and socio-economic trends, and emerging community needs. Data were compared to state and national benchmarks, as available, to identify areas of strength and opportunity for the region.

All reported demographic data were provided by ESRI Business Analyst, 2017 and the US Census Bureau, American Community Survey, unless otherwise noted. Health data were compiled from secondary sources, including the Pennsylvania Department of Health, the Centers for Disease Control and Prevention (CDC), the Behavioral Risk Factor Surveillance System (BRFSS), the University of Wisconsin County Health Rankings & Roadmaps program, among other sources. A comprehensive list of data sources can be found in Appendix A.

Public health data were analyzed for a number of health issues, including access to care, health behaviors and outcomes, chronic disease prevalence and mortality, mental health and substance abuse, and maternal and child health. This section provides a summary of the data findings. Full analysis of the demographic and public health measures follows this summary.

Public health data for the service counties are compared to state and national averages and Healthy People 2020 (HP 2020) goals, where applicable, to provide benchmark comparisons. Healthy People is a U.S. Department of Health and Human Services health promotion and disease prevention initiative. Healthy People provides science-based, 10-year national objectives for improving the health of all Americans.

The South Central region population is primarily White, but diversity is increasing. The White population as a percentage of the total population is declining in all counties, while Black/African American and Hispanic/Latino populations are growing. The demographic shift is a statewide trend; minority populations are the only growing demographic in Pennsylvania. The Hispanic/Latino population is one of the fastest growing demographic groups; Dauphin and York Counties are projected to experience the greatest increase in the population.

Pennsylvania fares better than the nation on most economic indicators. Pennsylvania residents are less likely to live in poverty, have a similar unemployment rate as the nation’s average, and are more likely to have attained at least a high school diploma.

Within the South Central region, residents have a higher median household income than the state and the nation, and residents in all counties except Dauphin have lower poverty rates. Dauphin County poverty rates are similar to state rates. All counties also have a lower percentage of residents with less than a high school education when compared to the nation. Racial and ethnic minority groups like Black/African American or Hispanic/Latino residents are more likely to be impacted by adverse socioeconomic factors, including poverty, unemployment, or education attainment. Poverty is one of the biggest drivers of disparity in the South Central region. Poverty rates among minority populations are double the rates among Whites. Socioeconomic disparity contributes to worse health outcomes. Because population counts for minority residents across the region are low, health disparities are primarily evidenced by state and national trends.

Areas of Strength for the South Central Region:

- Health Insurance Coverage: The percentage of uninsured residents declined for Cumberland, Dauphin, and York Counties. All three counties have a lower uninsured rate when compared to the state and the nation. Perry County has a lower uninsured rate than the nation, but a higher rate than the state; the rate has remained stable.
- Provider Rates: Dental and mental healthcare provider rates per 100,000 population increased for all counties from the FY2016 CHNA. The primary care provider rate also increased for Dauphin County. Cumberland and Dauphin Counties have higher provider rates than the state and/or the nation for primary, dental, and mental healthcare.
- Health Outcomes: The health outcomes ranking for all counties either improved or remained favorable from the FY2016 CHNA. A leading indicator of health outcomes is premature death; Cumberland, Dauphin, and York Counties have a lower premature death rate than the state and/or the nation.
    - Cumberland County has the best health outcomes ranking. The county has the lowest premature death rate, smoking rate among adults, and obesity rates.
- Smoking: All counties have a lower smoking rate among adults when compared to the state and the nation. Smoking rates declined in Dauphin and York Counties.
- Cancer: The cancer death rate declined for all counties. All counties except Perry have a similar or lower rate of death than the state and the nation.
- Senior Health: Senior Medicare Beneficiaries in all counties have lower rates of asthma, chronic obstructive pulmonary disease (COPD), and/or heart failure when compared to the state and the nation. Beneficiaries in nearly all counties are more likely to receive diabetes and mammogram screenings.
- Maternal and Child Health:
    - Teen Birth: The percentage of births to teenagers declined for all counties. All counties have a lower percentage of teen births compared to the nation.

- Low Birth Weight: All counties except Dauphin meet or nearly meet the Healthy People 2020 goal for low birth weight. The Dauphin County percentage has consistently exceeded all state and national benchmarks over the past decade.
- Breastfeeding: The percentage of mothers who breastfeed increased. All counties meet or nearly meet the Healthy People 2020 goal for the measure.
- Preterm Birth: All counties nearly meet the Healthy People 2020 goal.

Areas of Opportunity for the South Central Region:

- Health Insurance Coverage: Uninsured rates are higher among Blacks/African Americans and Hispanics/Latinos than Whites. Hispanics/Latinos have the highest uninsured rates, particularly in Perry and York Counties.
- Provider Rates: Perry and York Counties have lower primary, dental, and mental healthcare provider rates than the state and the nation. The primary care provider rate decreased for both counties from the FY2016 CHNA; the Perry County rate is less than half of the state rate. Western Perry County is a Health Professional Shortage Area (HPSA) for dental care for low income individuals. York City is a HPSA for dental and mental healthcare.
- Obesity: More than one quarter of adults in the region are obese. Adults in Dauphin, Perry, and York Counties are more likely to be obese than the state and the nation. Youth in the three counties are also more likely to be overweight and/or obese.
- Death rates for Minority Populations: Black/African American residents in Cumberland, Dauphin, and York Counties have a higher overall rate of death than Whites. They also have higher rates of death due to heart disease, cancer, and diabetes.
- Heart Disease and Stroke: The heart disease death rate decreased for all counties over the past decade. However, all counties except York have a higher rate of death than the state and the nation. Similarly, all counties except Perry have a higher rate of death due to stroke than the state and the nation.
- Chronic Lower Respiratory Disease: Perry County has a lower adult smoking rate when compared to the state and the nation, but the rate increased from the FY2016 CHNA. The county also has a higher rate of death due to chronic lower respiratory disease when compared to the state and the nation.
- Diabetes: Adult diabetes prevalence increased for Dauphin and York Counties; current rates exceed the state and the nation. Adults in Cumberland and Perry Counties have a similar diabetes prevalence rate to the state, however, the diabetes death rate for Perry County exceeds the state and the nation.
- Notifiable Diseases**:**
  - Chlamydia and Gonorrhea: Chlamydia and gonorrhea incidence rates for Cumberland, Perry, and York Counties are lower than state and national benchmarks, but rates are increasing. Cumberland County had the greatest increase in the chlamydia incidence rate, while York County had the greatest increase in the gonorrhea incidence rate.

        - Dauphin County chlamydia, gonorrhea, and HIV incidence rates exceed the state and the nation. Incidence rates for chlamydia and gonorrhea increased sharply over the past one to two years.

    - Lyme Disease**:** Lyme disease incidence increased across the region. All counties have a higher incidence rate than the state.

    - Child Lead Poisoning: Children in all counties except Dauphin are less likely than children across the state to be tested for lead poisoning. York County has a higher percentage of children who test positive for lead poisoning.

- Mental Health and Substance Abuse:
    - Suicide Death: The suicide death rate for Cumberland, Dauphin, and York Counties exceeds the Healthy People 2020 goal; the rate for York County also exceeds the state and the nation. The 2015 suicide death rate for all three counties is higher than in 2006.

    - Mental and Behavioral Disorders Death: The mental and behavioral disorders death rate increased across the state and for all reportable counties in the region. The York County death rate exceeds state and national benchmarks.

    - Excessive Drinking**:** Adults in all counties except York are more likely to drink excessively when compared to the state and the nation. Perry County has the highest percentage of adults who drink excessively and the highest percentage of driving deaths due to DUI.

    - Drug-Induced Deaths:
        - Drug-induced deaths include drug overdoses and deaths from medical conditions resulting from chronic drug use. All South Central region counties have a lower rate of death than the state, but rates for Dauphin and York Counties exceed the nation. Death rates for Cumberland, Dauphin, and York Counties increased over the past decade.

        - Deaths due to drug-related overdoses increased for all counties. Dauphin and York Counties are among the top 50% of Pennsylvania counties with regard to overdose death rates.

    - Youth Indicators:
        - The percentage of students who felt sad or depressed on most days during the past year increased for all counties except Cumberland. Perry County students are the most likely to have feelings of depression.

        - Substance use is most prevalent among tenth and twelfth grade students. Perry County students exceed the state benchmark for alcohol use; Dauphin and York County students exceed the state for marijuana use.

- Senior Health:
  - Senior Medicare Beneficiaries in all counties have higher rates of diabetes, high cholesterol, and/or hypertension when compared to the state and the nation.
  - All counties have a similar or lower percentage of seniors who live alone when compared to the state, but the percentage increased.
  - Perry County has the lowest percentage of senior Medicare Beneficiaries with Alzheimer's disease, but the county death rate exceeds the state and the nation.
- Maternal and Child Health:
  - Prenatal Care: The percentage of mothers receiving first trimester care is higher in all counties except Perry when compared to the state, but no counties meet the Healthy People 2020 goal for the measure. Black/African American and Hispanic/Latina mothers are the least likely to receive care.
  - Smoking during Pregnancy: The percentage of mothers in the region who smoke during pregnancy decreased, but no counties meet the Healthy People 2020 goal for the measure. White mothers are the most likely to smoke during pregnancy.
  - Outcomes for Minority Populations: Black/African American and Hispanic/Latina mothers are less likely than White mothers to receive first trimester prenatal care, and they have higher rates of low birth weight and preterm birth. Black/African American mothers are also less likely to breastfeed.

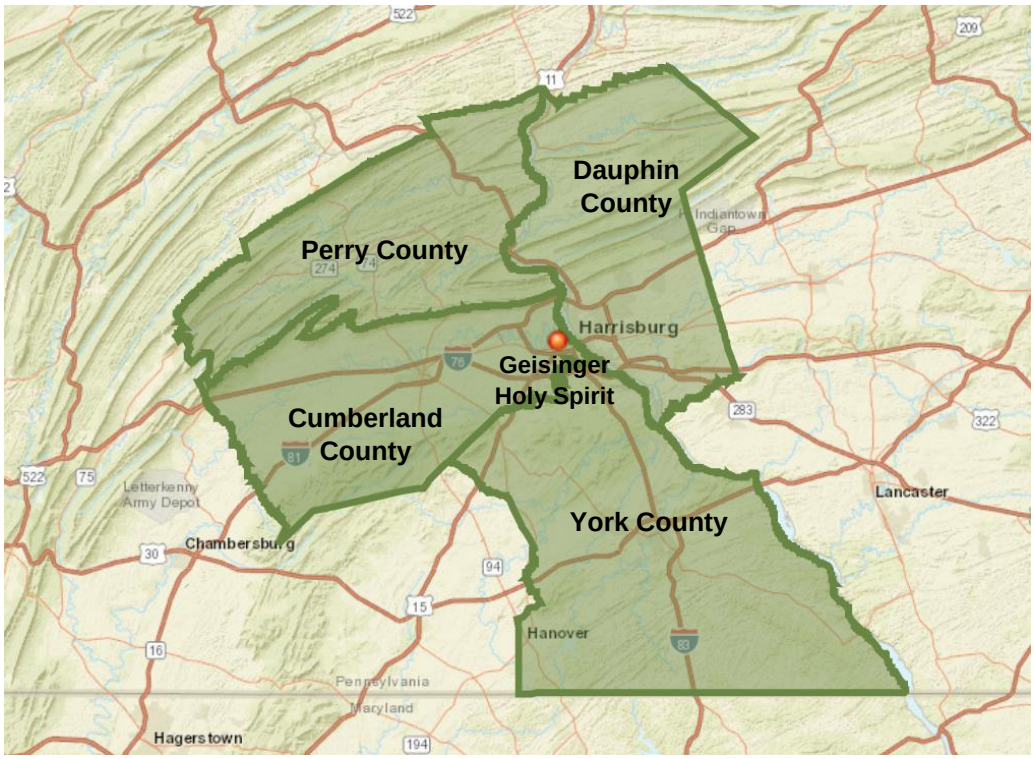
Full Report of Demographic Analysis

The following section outlines key demographic indicators related to the social determinants of health within the service counties. Social determinants of health are factors within the environment in which people live, work, and play that can affect health and quality of life, and are often the root cause of health disparity. Healthy People 2020 defines a health disparity as "a particular type of health difference that is closely linked with social, economic, or environmental disadvantage." All reported demographic data are provided by ESRI Business Analyst, 2017 and the US Census Bureau, American Community Survey.

South Central Region Demographic Overview

The 2017 population of the South Central region is 1,026,593. York County comprises the largest portion of the population (44%), followed by Dauphin County (27%). County populations are expected to grow with increases of 1% (Perry) to 6% (Cumberland) by 2022.

South Central Region Service Counties



Population Growth

	2017 Population	% Growth from 2010	% Growth by 2022
Cumberland County	253,836	7.8%	5.5%
Dauphin County	276,447	3.1%	2.2%
Perry County	46,674	1.5%	1.2%
York County	449,636	3.4%	2.4%

The South Central region population is primarily White, but increasingly diverse. The percentage of White residents decreased from 2010 to 2017, and is projected to decrease through 2022. The percentage of residents identifying as Black/African American and/or Hispanic/Latino is increasing. Dauphin County has the most diverse population; residents are less likely to speak English as their primary language when compared to the state. Residents in all counties are more likely to speak primarily English when compared to the nation.

Pennsylvania has a higher median age than the nation. The median age of the South Central region counties is consistent with the state. Perry County has the highest median age, exceeding the nation by 5 points.

2017 Population Overview

	Cumberland County	Dauphin County	Perry County	York County	PA	US
White	87.9%	70.2%	96.3%	86.4%	79.6%	70.2%
Black or African American	4.0%	17.9%	0.9%	6.1%	11.2%	12.8%
Asian	4.2%	4.3%	0.6%	1.5%	3.5%	5.6%
Hispanic or Latino (any race)	4.0%	9.4%	2.0%	7.7%	7.4%	18.2%
Speak English Only*	91.8%	88.6%	95.8%	93.0%	89.4%	79.0%

*Data is reported for 2011-2015

2010-2022 Population Change by Race/Ethnicity

	White		Black/African American		Hispanic or Latino	
	2010	2022	2010	2022	2010	2022
Cumberland County	90.9%	85.5%	3.2%	4.6%	2.7%	4.9%
Dauphin County	72.7%	68.0%	18.1%	17.8%	7.0%	11.4%
Perry County	97.4%	95.3%	0.6%	1.0%	1.3%	2.6%
York County	88.5%	84.4%	5.6%	6.7%	5.6%	9.7%

2017 Population by Age

	Cumberland County	Dauphin County	Perry County	York County	PA	US
Under 14 years	15.9%	17.8%	17.6%	17.9%	16.8%	18.6%
15-24 years	14.0%	12.1%	11.0%	11.9%	13.2%	13.3%
25-34 years	11.9%	13.1%	11.8%	12.1%	12.5%	13.8%
35-54 years	25.3%	25.5%	26.3%	26.7%	13.7%	6.6%
55-64 years	13.9%	14.4%	15.6%	14.2%	14.1%	12.9%
65+ years	18.8%	16.9%	17.4%	16.9%	18.1%	15.6%
Median Age	41.7	40.5	42.8	41.5	41.3	38.2

All South Central region counties have a higher median household income than the state and the nation. All counties except Dauphin also have lower poverty rates. Dauphin County poverty rates are similar to the state. Approximately 20% of children in the county live in poverty.

Cumberland and Dauphin Counties have a more prominent white collar workforce compared to other counties in the region and the state and the nation. Perry and York Counties have a larger blue collar workforce. All counties except York have a lower unemployment rate than the state and the nation. The York County unemployment rate is similar to the nation.

2017 Median Household Income and 2011-2015 Poverty/Food Stamp Status

	Cumberland County	Dauphin County	Perry County	York County	PA	US
Median Household Income	$65,757	$57,598	$57,428	$62,100	$56,184	$56,124
People in Poverty	8.8%	13.6%	9.4%	10.7%	13.5%	15.5%
Children in Poverty	12.2%	20.1%	13.6%	16.5%	19.2%	21.7%
Households with Food Stamp/SNAP Benefits	7.1%	12.5%	8.8%	10.6%	12.9%	13.2%

2017 Population by Occupation and Unemployment

	Cumberland County	Dauphin County	Perry County	York County	PA	US
White Collar Workforce	65.0%	63.0%	53.0%	56.0%	60.0%	61.0%
Blue Collar Workforce	35.0%	37.0%	47.0%	44.0%	40.0%	39.0%
Unemployment Rate	4.3%	5.3%	4.7%	5.7%	6.2%	5.5%

Homeownership is a measure of housing affordability and economic stability. Householders in all service counties except Dauphin are more likely to own their home when compared to the state and the nation; Dauphin County mirrors the nation for home ownership. Dauphin County has a similar median household income and median home value to Perry County, but the percentage of home owners in Perry County is 10 points higher than in Dauphin County.

2017 Population by Household Type

	Cumberland County	Dauphin County	Perry County	York County	PA	US
Renter-Occupied	29.9%	37.3%	22.1%	26.3%	32.3%	37.3%
Owner-Occupied	70.1%	62.7%	77.9%	73.7%	67.7%	62.7%
Median Home Value	$198,453	$171,851	$171,852	$191, 666	$182,727	$207,344

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. Residents in all service counties are more likely to have graduated from high school when compared to the nation. A higher percentage of residents in Perry and York Counties completed their education with a high school diploma. Residents in Cumberland and Dauphin Counties are more likely to have attained higher education; Cumberland County exceeds the state and the nation for this measure.

2017 Population (25 Years or Over) by Educational Attainment

	Cumberland County	Dauphin County	Perry County	York County	PA	US
Less than a High School Diploma	7.9%	10.4%	10.9%	10.9%	10.1%	12.6%
High School Graduate/GED	29.7%	29.7%	39.7%	34.8%	31.2%	23.4%
Bachelor's Degree or Higher	34.6%	30.2%	17.2%	24.3%	30.3%	31.0%

Across the South Central region, Black/African American and Hispanic/Latino residents are impacted by poorer social determinants of health when compared to Whites. The following table profiles poverty, unemployment, and educational attainment by race and ethnicity.

Note: Blacks/African Americans account for less than 1% of the population in Perry County.

2011-2015 Social and Economic Differences by Race and Ethnicity

People in Poverty								
	Cumberland County		Dauphin County		Perry County		York County	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
White	16,052	7.8%	17,430	9.0%	4,079	9.3%	32,961	8.6%
Black/African American	1,580	27.5%	12,563	26.5%	32	10.9%	6,820	28.2%
Hispanic/Latino	1,371	20.6%	6,771	31.9%	72	10.4%	9,180	33.6%
Unemployment Rate								
	Cumberland County		Dauphin County		Perry County		York County	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
White	9,345	5.2%	7,840	4.8%	2,231	6.2%	20,415	6.4%
Black/African American	915	14.0%	5,649	15.8%	0	0.0%	3,080	16.4%
Hispanic/Latino	575	10.6%	1,741	12.3%	29	6.1%	2,563	14.0%
Bachelor's Degree or Higher								
	Cumberland County		Dauphin County		Perry County		York County	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
White	50,237	32.7%	44,975	31.2%	4,937	15.8%	63,974	23.1%
Black/African American	761	16.1%	4,348	14.9%	18	11.0%	2,090	14.1%
Hispanic/Latino	649	16.2%	1,611	15.0%	40	10.8%	1,748	12.7%

South Central Region Special Population Groups

The Amish are a prominent population group within Pennsylvania communities. According to the 2010 study, *The Amish Population: County Estimates and Settlement Patterns*, "The Amish are growing faster than almost any other subculture, religious or non-religious, in North America. One reason is that they are a "high fertility" group. For the Amish, large families are an expression both of religious convictions and of a people whose economy is based on agriculture and other manual trades where the labor of children is valued."

The following table depicts estimated population counts for Amish settlements within the South Central region. The population is captured by church district, which is typically comprised of a few dozen families. The Lancaster/Chester/York settlement has the largest estimated Amish population, however, the population is primarily within Lancaster County.

2017 Amish Population by Settlement

County	Settlement	Districts	Population
Cumberland/Franklin	Newburg/Cumberland Valley	6	954
Dauphin	Millersburg/Lykens Valley	9	1,462
Lancaster/Chester/York	Lancaster County	220	36,918
Perry	Loysville/Blain	6	920
York	New Freedom/Glen Rock	1	72
South Central region		236	40,326
Pennsylvania		497	74,251

Source: Elizabethtown College, Young Center for Anabaptist and Pietist Studies, 2017

A study published in 2016 by The Sentencing Project, a nonprofit advocacy organization, found that in state prisons, African Americans are incarcerated five times more than Whites, and Hispanics are incarcerated nearly two times more than Whites. There is one prison facility within the South Central region, State Correctional Institution, Camp Hill. The zip code of origin for the facility, 17001, Camp Hill, is a PO Box. Demographic data are not reported for PO Box zip codes, and therefore, cannot be analyzed to determine racial and ethnic diversity.

State and Federal Prison Facilities and Racial/Ethnic Demographics

Prison Facility	Location	Inmate Population	County Demographics	
			Black/African American	Hispanic/ Latino
State Correctional Institution, Camp Hill	17001, Camp Hill (Cumberland County)	3,484	4.0%	4.0%

Source: Federal Bureau of Prisons and Pennsylvania Department of Corrections

Full Report of Public Health Statistical Analysis

Public health data were analyzed across a number of health issues, including access to care, health behaviors and outcomes, chronic disease morbidity and mortality, mental health and substance abuse trends, and maternal and child health measures.

Data were compiled from secondary sources including the Pennsylvania Department of Health, the Centers for Disease Control and Prevention (CDC), the Behavioral Risk Factor Surveillance System (BRFSS), the University of Wisconsin County Health Rankings & Roadmaps program, among other sources. A comprehensive list of data sources can be found in Appendix A.

Public health data focus on county-level reporting; zip code data is provided as available. Public health data for the service counties are compared to state and national averages and Healthy People 2020 (HP 2020) goals, where applicable, to provide benchmark comparisons. Healthy People is a U.S. Department of Health and Human Services health promotion and disease prevention initiative. Healthy People provides science-based, 10-year national objectives for improving the health of all Americans.

Age-adjusted rates are referenced throughout the report to depict the burden of disease among residents. Age-adjusted rates are summary measures adjusted for differences in age distributions so that data from one year to another, or between one geographic area and another, can be compared as if the communities reflected the same age distribution.

The BRFSS is a telephone survey conducted nationally by the CDC to assess health-related risk behaviors, chronic health conditions, and the use of preventive services. BRFSS findings are reported by county or by region. The regions reported in this assessment include:

- Region 1: Cumberland and Perry Counties
- Region 2: Dauphin and Lebanon Counties
- Region 3: York County

Access to Healthcare

South Central region service counties received the following County Health Rankings for Clinical Care Access out of 67 counties in Pennsylvania. The rankings are based on a number of indicators, including health insurance coverage and provider access. The Perry County ranking improved from the 2014 rankings reported as part of the FY2016 CHNA. All other counties maintained a similar ranking.

2017 Clinical Care County Health Rankings

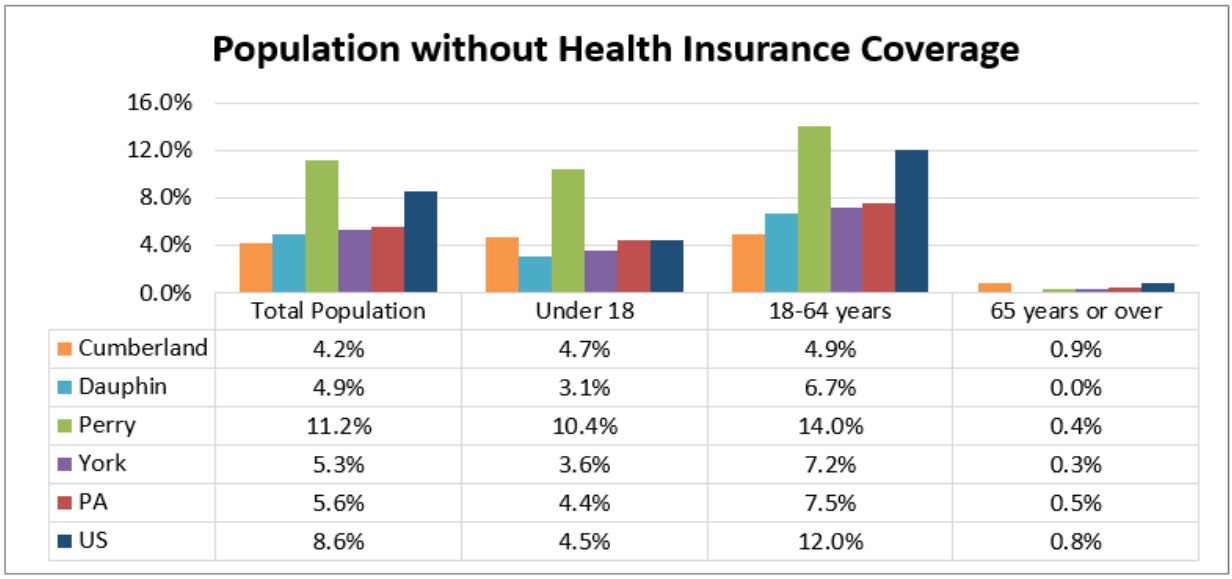
#6 Cumberland County (#4 in 2014)
#7 York County (#7 in 2014)
#13 Dauphin County (#13 in 2014)
#35 Perry County (#54 in 2014)

Health Insurance Coverage

All South Central region counties except Perry have a lower uninsured rate when compared to the state and the nation. The Perry County uninsured rate represents a five-year aggregate that includes data years prior to the implementation of the Affordable Care Act (ACA) individual mandate, which may account for the higher rate. However, the county uninsured rate remained stable through the most recent reporting timeframe, including ACA implementation years.

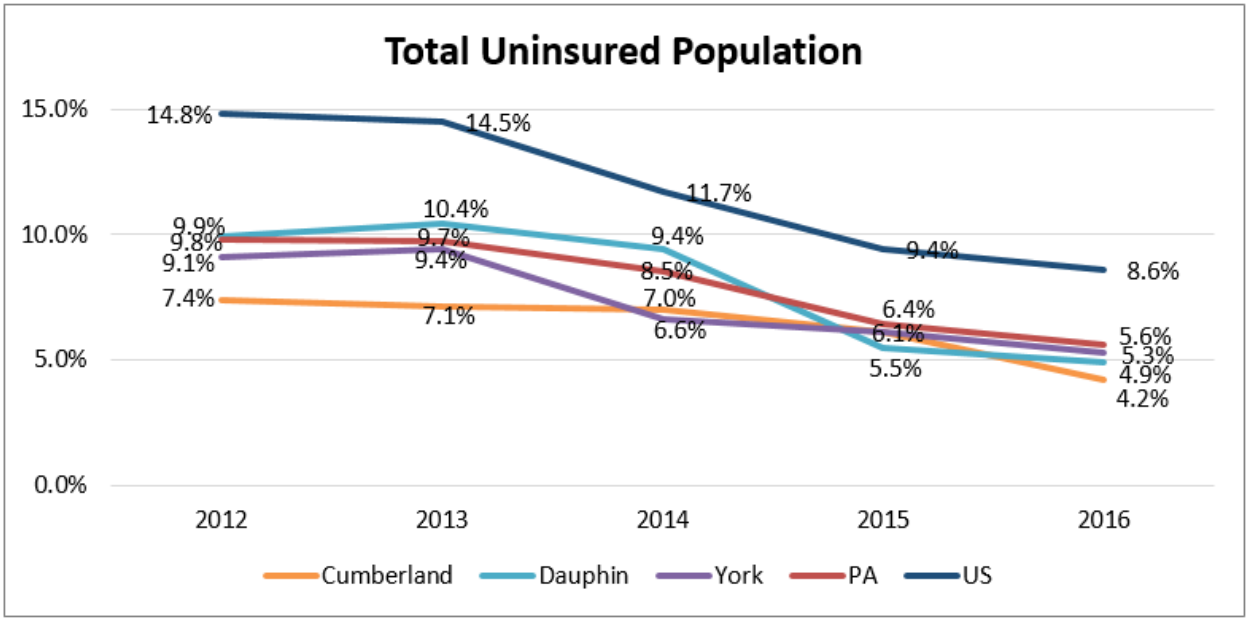
The uninsured rate declined in Cumberland, Dauphin, and York Counties; 4% to 5% of people in the counties are uninsured

The percentage of uninsured residents declined in Cumberland, Dauphin, and York Counties. Dauphin County had the greatest rate decline of 5 points from 2012 to 2016. However, counties do not meet the Healthy People 2020 goal of having 100% of all residents insured.

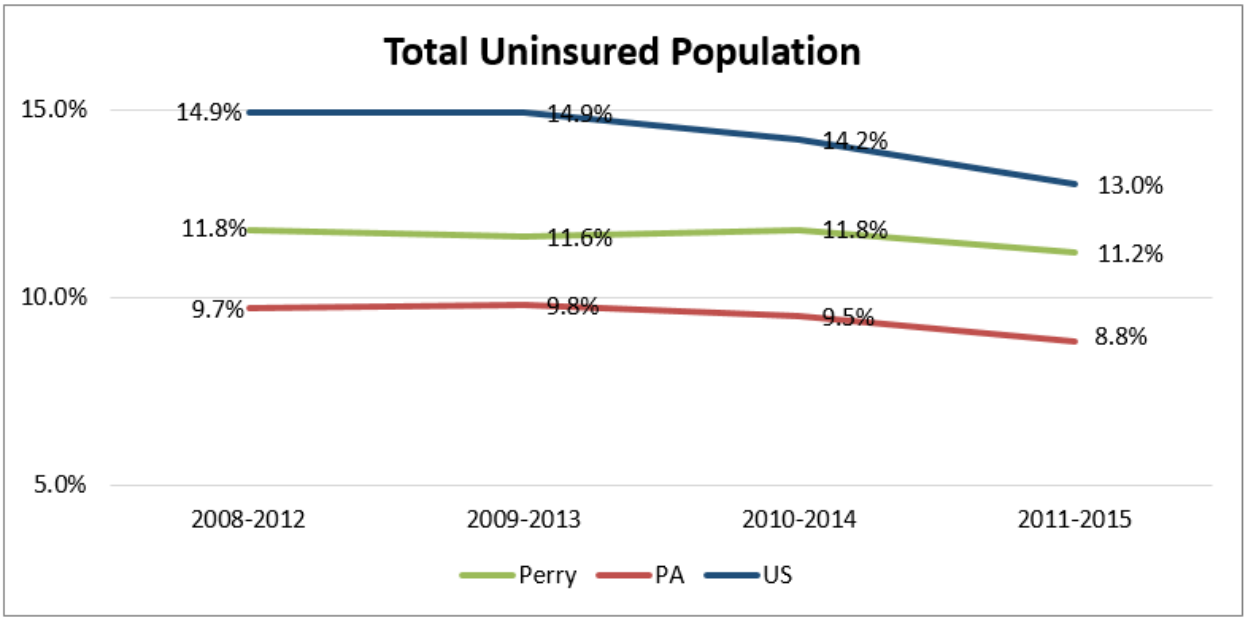


	Total Population	Under 18	18-64 years	65 years or over
Cumberland	4.2%	4.7%	4.9%	0.9%
Dauphin	4.9%	3.1%	6.7%	0.0%
Perry	11.2%	10.4%	14.0%	0.4%
York	5.3%	3.6%	7.2%	0.3%
PA	5.6%	4.4%	7.5%	0.5%
US	8.6%	4.5%	12.0%	0.8%

Source: American Community Survey, 2016 & 2011-2015
*Perry County data is reported for 2011-2015. All other data is reported for 2016.



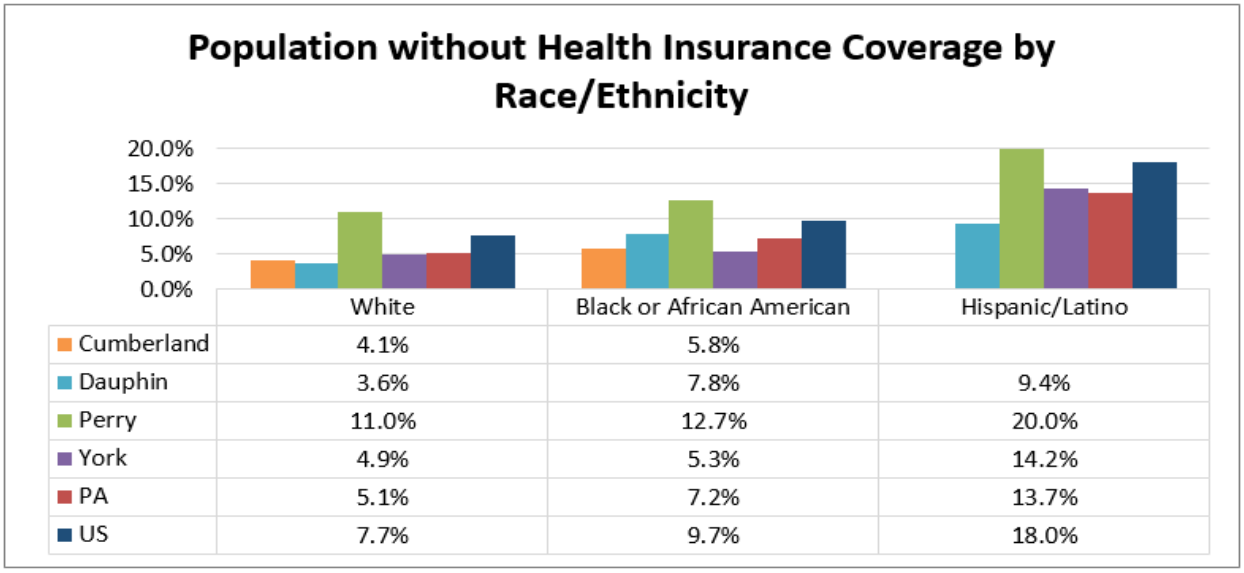
Source: American Community Survey, 2012-2016



Source: American Community Survey, 2008-2012 – 2011-2015

Uninsured rates are highest among Hispanic/Latino residents. Perry and York Counties have higher uninsured rates among the Hispanic/Latino population when compared to the state benchmark. York County is particularly affected as 8% of the total population is Hispanic/Latino, corresponding to a higher number of uninsured residents.

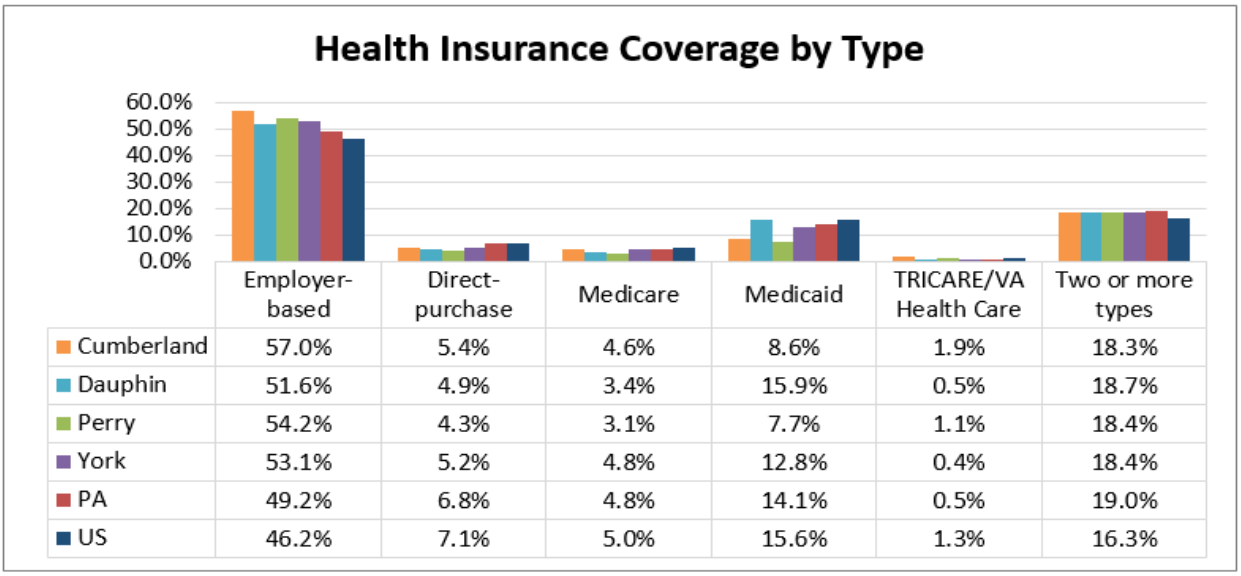
Uninsured rates are highest among Hispanic/Latino residents, particularly in Perry and York Counties



	White	Black or African American	Hispanic/Latino
Cumberland	4.1%	5.8%	
Dauphin	3.6%	7.8%	9.4%
Perry	11.0%	12.7%	20.0%
York	4.9%	5.3%	14.2%
PA	5.1%	7.2%	13.7%
US	7.7%	9.7%	18.0%

Source: American Community Survey, 2016 & 2011-2015
*Perry County data is reported for 2011-2015. All other data is reported for 2016. Cumberland County data is not reported for Hispanics/Latinos.

The following graph depicts health insurance coverage by type of insurance. Residents in the South Central region are most likely to be covered by employer-based insurance, followed by a combination (private and/or public) of insurance types. South Central region residents are more likely to be covered by employer-based insurance compared to the state and the nation.



	Employer-based	Direct-purchase	Medicare	Medicaid	TRICARE/VA Health Care	Two or more types
Cumberland	57.0%	5.4%	4.6%	8.6%	1.9%	18.3%
Dauphin	51.6%	4.9%	3.4%	15.9%	0.5%	18.7%
Perry	54.2%	4.3%	3.1%	7.7%	1.1%	18.4%
York	53.1%	5.2%	4.8%	12.8%	0.4%	18.4%
PA	49.2%	6.8%	4.8%	14.1%	0.5%	19.0%
US	46.2%	7.1%	5.0%	15.6%	1.3%	16.3%

Source: American Community Survey, 2016 & 2011-2015
*Perry County data is reported for 2011-2015. All other data is reported for 2016.

Provider Access

Provider rates are measured for primary, dental, and mental healthcare. In the following table, cells highlighted in green represent provider rates that increased from the previous reporting year. Cells highlighted in red represent provider rates that decreased from the previous

reporting year. Provider rates are compared to rates reported in the 2014 County Health Rankings, a source for the FY2016 CHNA.

Across the region, dental and mental healthcare provider rates increased from the previous report year. The primary care provider rate also increased in Dauphin County.

Dental and mental healthcare provider rates increased across the region, but Perry and York Counties continue to have lower rates

Perry and York Counties have lower provider rates than the state and the nation. The primary care provider rate decreased in both counties from the 2014 County Health Rankings report. The primary care provider rate for Perry County is less than half of the state rate.

The Health Resources & Services Administration (HRSA) is responsible for designating Health Professional Shortage Areas (HPSAs). Western Perry County is designated as a HPSA for dental care among low income individuals. The dental provider rate for the county is less than one-third of the state rate. York City is also designated as a HPSA for dental care and mental healthcare.

The primary care provider rate for Perry County is less than half of the state rate

Provider Rate Trends per 100,000*
(Green = Increase of More than 2 Points; Red = Decrease of More than 2 Points)

	Primary Care		Dental Care		Mental Healthcare	
	2011	2014	2012	2015	2014**	2016
Cumberland County	91.6	92.3	64.1	71.0	155.9	174.6
Dauphin County	88.9	99.5	66.0	69.2	166.1	182.1
Perry County	34.8	32.9	15.3	19.7	19.8	26.3
York County	72.1	69.9	46.8	49.7	78.4	95.7
Pennsylvania	80.4	81.4	60.6	65.4	146.6	167.3
United States	73.8	75.8	60.1	65.8	189.0	200.0

Source: Health Resources & Services Administration, 2011-2015; Centers for Medicare and Medicaid Services, 2013-2016

*Providers are identified based on the county in which their preferred professional/business mailing address is located. Provider rates do not take into account providers that serve multiple counties or satellite clinics.

**Data are reported by the County Health Rankings (CHR). An error occurred in the method for identifying mental health providers in the 2014 CHR report. Data are shown for the 2015 CHR report (data year 2014).

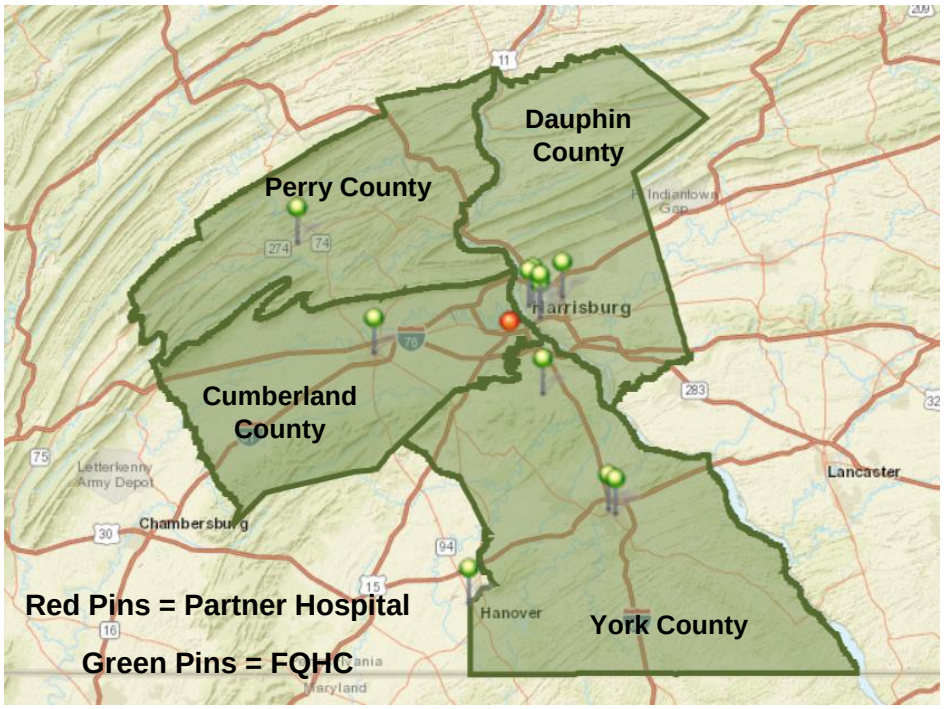
Health Professional Shortage Areas

Geographic Area/Population	Primary Care	Dental Care	Mental Healthcare
Western Perry County (low income population): Blain, Jackson, Landisburg, Northeast Madison, Saville, Southwest Madison, Toboyne, Tyrone		X	
York City		X	X

Source: Health Resources & Services Administration, 2017

Federally Qualified Health Centers (FQHCs), as defined by HRSA, “are community-based healthcare providers that receive funds from the HRSA Health Center Program to provide primary care services in underserved areas.” They provide care services on a sliding fee scale based on patient ability to pay. The following map identifies the location of FQHCs within the region.

Federally Qualified Health Center Locations



FQHC	Address
Cumberland County	
Sadler Health Center Corporation	100 North Hanover St., Carlisle, 17013
Dauphin County	
Hamilton Health Center: Downey School-Based Clinic	1313 Monroe St., Harrisburg, 17103
Hamilton Health Center: Foose School-Based Clinic	1301 Sycamore St., Harrisburg, 17104
Hamilton Health Center: Senior High Rise	1301 N 6th St., Harrisburg, 17102
Hamilton Health Center: South Allison Hill	110 South 17th St., Harrisburg, 17104
Hamilton Health Center: Union Deposit Family Practice	891 S Arlington Ave., Harrisburg, PA 17109
Perry County	
Sadler Health Center Corporation	1104 Montour Rd., Loysville, 17047
York County	
Family First Health: George Street Center	116 South George St., York 17401
Family First Health: Hannah Penn Center	415 East Boundary Ave., York 17403
Family First Health: Hanover Center	1230 High St., Hanover 17331
Family First Health: Lewisberry Center	308 Market St., Lewisberry 17339

Source: Pennsylvania Association of Community Health Centers & Health Resources & Services Administration

Routine Care

Health insurance coverage and provider rates impact the number of adults who have a primary care provider and receive routine care. The percentage of adults who receive routine checkups is increasing across the state and in Reporting Regions 1 and 3.

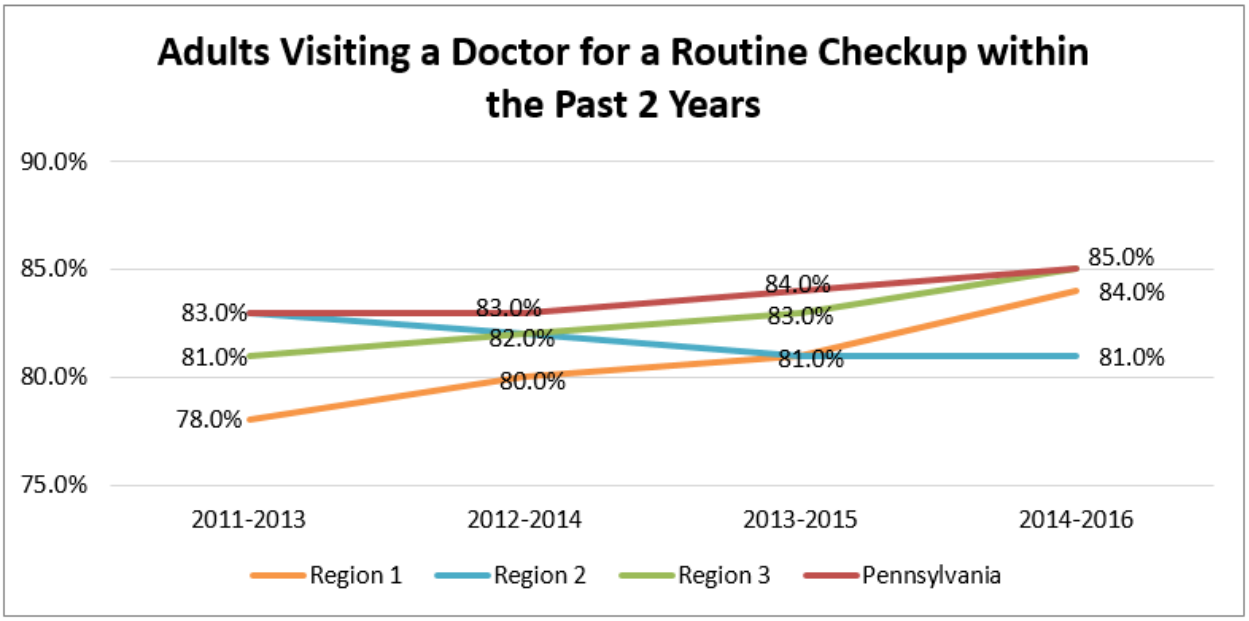
The percentage of adults receiving routine check-ups is increasing across the state

Adults in Reporting Region 2, including Dauphin County, are less likely to have a personal doctor or to have received a recent routine checkup. The percentage of adults receiving routine checkups decreased over the past five years. Dauphin County has a lower uninsured rate than the state and the nation and higher provider rates. Results may reflect Lebanon County.

Adult Healthcare Access

	Does Not Have a Personal Doctor	Received a Routine Checkup within the Past 2 Years	Unable to See a Doctor within the Past Year due to Cost
Region 1: Cumberland/ Perry	12%	84%	11%
Region 2: Dauphin/ Lebanon	16%	81%	10%
Region 3: York	10%	85%	12%
Pennsylvania	14%	85%	12%

Source: PA Department of Health BRFSS, 2014-2016



Source: PA Department of Health, 2011-2013 – 2014-2016

Overall Health Status

South Central region service counties received the following County Health Rankings for Health Outcomes out of 67 counties in Pennsylvania. Health outcomes are measured in relation to premature death (before age 75) and quality of life. Dauphin, Perry, and York County rankings improved from the 2014 rankings reported as part of the FY2016 CHNA. Cumberland County maintained a favorable ranking.

2017 Health Outcomes County Health Rankings

#5 Cumberland County (#4 in 2014)

#12 York County (#18 in 2014)

#18 Perry County (#44 in 2014)

#39 Dauphin County (#52 in 2014)

Cumberland County has the best health outcomes ranking in the region. The premature death rate and the percentage of county adults who self-report having “poor” or “fair” health status are the lowest in the region and lower than the state and the nation.

Dauphin County has the lowest health outcomes ranking in the region. However, the premature death rate is on par with the state and the nation, and adults report a similar average of poor physical and mental health days.

Perry County is the only service county with a higher premature death rate than both the state and the nation. Despite the higher death rate, adults are less likely to report having “poor” or “fair” health status.

Health Outcomes Indicators
(Red = Higher Premature Death Rate than the State and the Nation)

	Premature Death Rate per 100,000	Adults with “Poor” or “Fair” Health Status	30-Day Average - Poor Physical Health Days	30-Day Average - Poor Mental Health Days
Cumberland County	5,348	11.7%	3.1	3.5
Dauphin County	6,727	14.0%	3.5	3.7
Perry County	7,312	11.8%	3.2	3.6
York County	6,088	12.6%	3.1	3.5
Pennsylvania	6,843	15.3%	3.5	3.9
United States	6,600	15.0%	3.6	3.7

Source: National Center for Health Statistics, 2012-2014; CDC BRFSS, 2015

Health Behaviors

Individual health behaviors include risk behaviors like smoking, excessive drinking, and obesity, or positive behaviors like exercise, good nutrition, and stress management. Health behaviors may increase or reduce the chance of disease. The prevalence of these health behaviors is provided below, with benchmark comparisons, as available.

Risk Behaviors

Adults in the South Central region service counties have lower smoking rates when compared to the state and the nation, but do not meet the Healthy People 2020 goal. York County has the highest rate of adult smokers, exceeding the Healthy People 2020 goal by 5 points, but the rate declined 2 points from 2006-2012 (2014 County Health Rankings report).

Adults in the South Central region are less likely to smoke when compared to the state and the nation, but do not meet the HP 2020 goal

Excessive drinking includes heavy drinking (two or more drinks per day for men and one or more drinks per day for women) and binge drinking (five or more drinks on one occasion for men and four or more drinks on one occasion for women). Adults in all counties except York are more likely to drink excessively compared to adults across the state and the nation. The percentage of excessive drinkers increased for all counties from 2006-2012 to 2015. Adults in Perry County are the most likely to drink excessively; the county had the largest percentage point increase from 2006-2012 (6 points).

Health Risk Behavior Changes among Adults from the FY2016 CHNA to Present (Green = Decrease of More than 2 Points; Red = Increase of More than 2 Points)

	Smoking		Excessive Drinking	
	2006-2012	2015	2006-2012	2015
Cumberland County	14.9%	15.9%	14.2%	19.2%
Dauphin County	18.9%	16.6%	17.8%	18.7%
Perry County	13.9%	16.4%	14.7%	20.5%
York County	19.6%	17.2%	16.1%	17.5%
Pennsylvania	19.9%	18.1%	17.3%	18.1%
United States	18.1%	18.0%	15.0%	18.0%
Healthy People 2020	12.0%	12.0%	NA	NA

Source: CDC BRFSS*, 2006-2012 & 2015 & Healthy People 2020

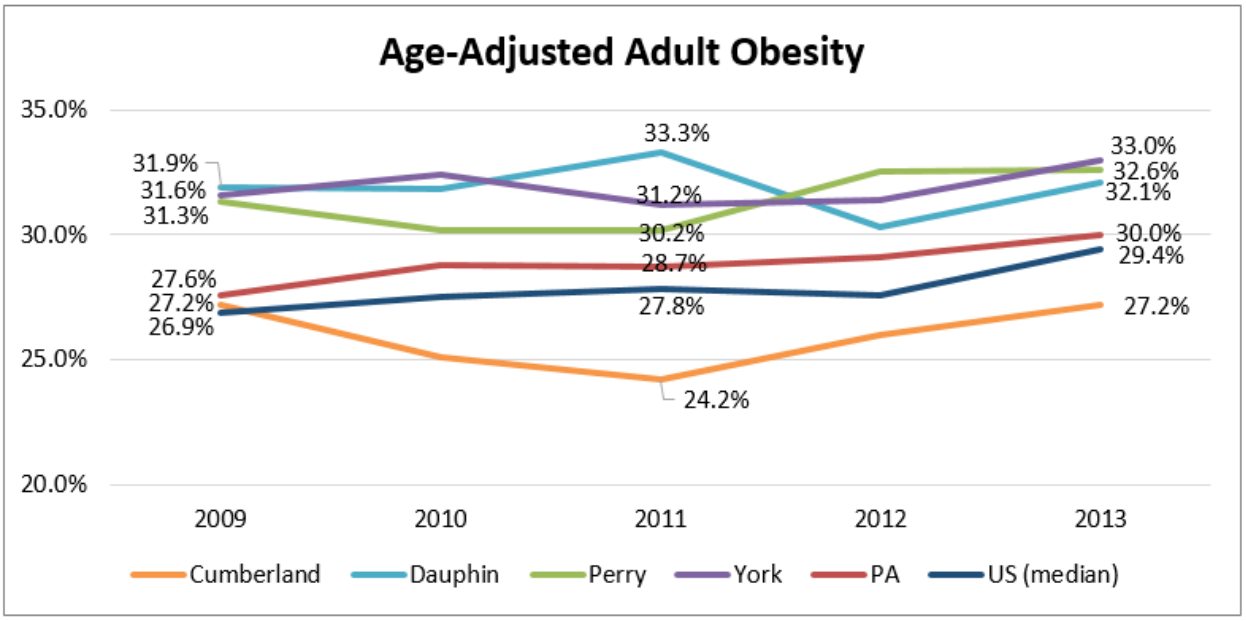
*A change in methods occurred in 2011 that may affect the validity of comparisons to past years.

Obesity

The percentage of obese adults and youth is a national epidemic. Across Pennsylvania and the nation, approximately 30% of adults are obese. Adults in Dauphin, Perry, and York Counties are more likely to be obese when compared to the state and the nation and do not meet the Healthy People 2020

Approximately one-quarter to one-third of service county adults are obese

goal of 30.5%. The adult obesity percentage in Cumberland County is lower than state and national rates, but accounts for more than one-quarter of adults.



Source: CDC BRFSS, 2009-2013
*A change in methods occurred in 2011 that may affect the validity of comparisons to past years.

Pennsylvania youth are screened for BMI as part of school health assessments. Data are reported for students in grades K-6 and 7-12. As of the 2012-2013 school year, approximately 13% to 17% of K-6 graders and 17% to 23% of 7-12 graders in the service counties are obese. Dauphin County has the highest percentage of students who are overweight, exceeding state benchmarks by 12 to 15 points. Perry County 7-12 grade students also have a higher obesity rate compared to the state.

Dauphin County K-6 graders exceed state benchmarks for overweight. A higher percentage of children in the county are eligible for free or reduced price lunches.

Overweight and Obesity among Students
(Red = Higher Overweight/Obesity Rate than the State by More than 2 Points)

	Overweight		Obese	
	K-6 Grade	7-12 Grade	K-6 Grade	7-12 Grade
Cumberland County	18.0%	13.7%	14.3%	17.3%
Dauphin County	33.5%	37.3%	16.7%	18.2%
Perry County	13.7%	16.0%	16.2%	22.8%
York County	24.3%	25.7%	12.9%	18.4%
Pennsylvania	22.0%	22.1%	16.4%	18.0%

Source: PA Department of Health, 2012-2013

Food insecurity, defined as being without a consistent source of sufficient and affordable nutritious food, contributes to obesity rates. Residents and children in all counties are just as likely or less likely to be food insecure when compared to the state and the nation. Children in Dauphin County are the most likely to be eligible for free or reduced price lunches; the county percentage is similar to the national percentage.

Food Insecure Residents

	All Residents	Children
Cumberland County	10.3%	15.2%
Dauphin County	13.5%	16.3%
Perry County	9.9%	16.4%
York County	10.5%	16.3%
Pennsylvania	13.1%	17.9%
United States	13.4%	17.9%

Source: Feeding America, 2015

Children Eligible for Free or Reduced Price Lunch

	Percent
Cumberland County	27.2%
Dauphin County	51.2%
Perry County	38.4%
York County	40.7%
Pennsylvania	45.6%
United States	52.0%

Source: National Center for Education Statistics, 2014-2015

Access to physical activity includes access to parks, gyms, pools, etc. Residents in Perry and York Counties are less likely to have access to physical activity opportunities when compared to the state and the nation. Perry County residents have the fewest opportunities for physical activity; more than one-quarter of adults in the county are physically inactive.

Physical Activity
(Red = Lower Access and Higher Inactivity than the State and Nation by More than 2 Points)

	Access to Physical Activity	Physically Inactive Adults
Cumberland County	85.7%	17.4%
Dauphin County	89.6%	23.2%
Perry County	63.9%	28.2%
York County	77.9%	21.7%
Pennsylvania	85.2%	23.1%
United States	84.0%	22.0%

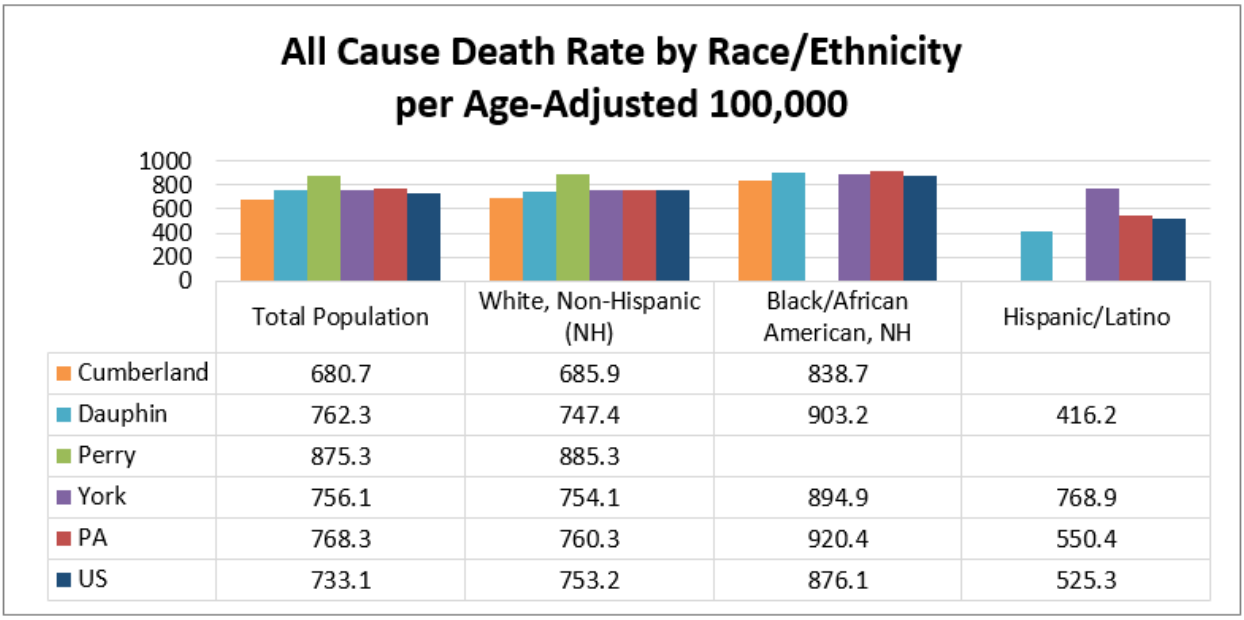
Source: Business Analyst, Delorme Map Data, ESRI, & US Census Tigerline Files, 2010 & 2014; CDC BRFSS, 2013

Mortality

The 2015 all cause age-adjusted death rate varies across South Central region counties. The Cumberland County death rate is lower than state and national rates, but the Perry County death rate exceeds both benchmarks Dauphin and York County death rates are similar to the state.

Across the South Central region, Blacks/African Americans have a higher death rate than Whites

Across the region, death rates are higher among Blacks/African Americans compared to Whites. Blacks/African Americans in Cumberland and Dauphin Counties experience the greatest disparity with death rates that exceed White rates by 153 to 156 points. The Black/African American death rate for Perry County is not reported due to a low death count.



	Total Population	White, Non-Hispanic (NH)	Black/African American, NH	Hispanic/Latino
Cumberland	680.7	685.9	838.7	
Dauphin	762.3	747.4	903.2	416.2
Perry	875.3	885.3		
York	756.1	754.1	894.9	768.9
PA	768.3	760.3	920.4	550.4
US	733.1	753.2	876.1	525.3

Source: CDC WONDER, 2015
*Cumberland and Perry County data are limited due to low death counts.

The top five causes of death in the nation, in rank order, are heart disease, cancer, accidents, chronic lower respiratory disease (CLRD), and stroke. The following chart profiles death rates for the top five causes by service county.

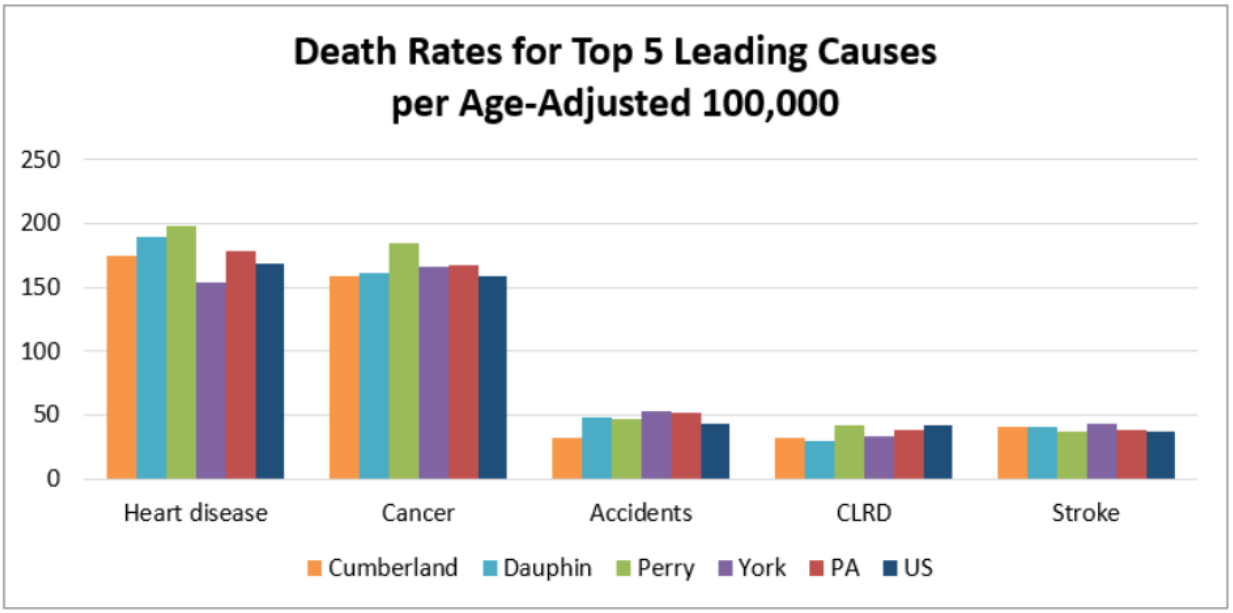
Perry County has the highest overall death rate and higher death rates due to heart disease, cancer, and CLRD

Perry County has the highest overall death rate in the region. County death rates due to heart disease, cancer, and CLRD are also the highest in the region and exceed all state and/or national benchmarks.

Cumberland, Dauphin, and York county death rates due to cancer and CLRD are similar to or lower than state and national benchmarks. Cumberland and Dauphin Counties meet the Healthy People 2020 goal for cancer death. York County also has a lower death rate due to heart disease compared to state and national benchmarks.

All South Central region counties except Perry have a higher death rate due to stroke than the state and the nation. All counties except Cumberland have a higher rate of death due to accidents. Death rates for both causes are highest in York County. Note: Accidental deaths include transport accidents, falls, accidental discharge of firearms, drowning, exposure to fire or smoke, and poisoning.

All South Central region counties except Perry have a higher rate of death due to stroke, and all counties except Cumberland have a higher rate of death due to accidents



Source: CDC WONDER, 2015; Healthy People 2020
*The death rate due to accidents in Perry County represents a 2013-2015 rate due to a low death count.

Chronic Diseases

Chronic disease rates are increasing across the nation and are the leading causes of death and disability. Chronic diseases are often preventable through reduced health risk behaviors like smoking and alcohol use, increased physical activity and good nutrition, and early detection of risk factors and disease.

Heart Disease and Stroke

Heart disease is the leading cause of death in the nation. Approximately 5% to 7% of adults in the South Central region have been diagnosed with a form of heart disease, similar to the state rate. Adults in the South Central region also have similar rates of heart attack and stroke when compared to the state.

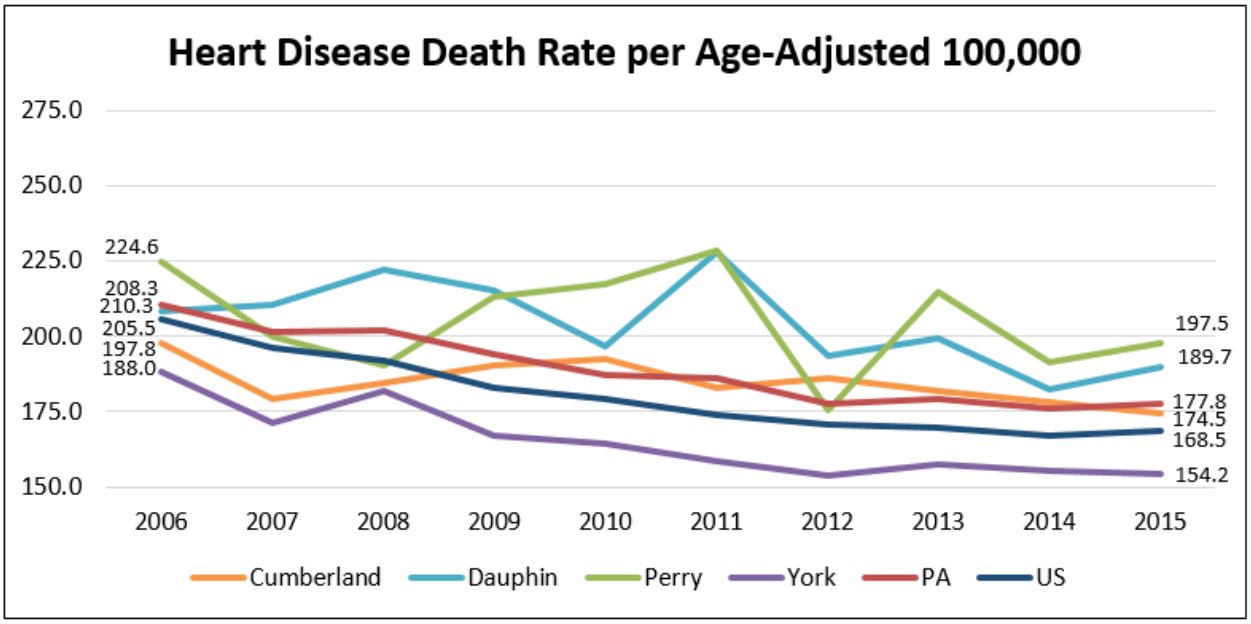
The heart disease death rate is decreasing in all counties, but York is the only county to have a lower death rate than state and national benchmarks

Heart disease death rates decreased across the South Central region. York County had the greatest decline in the death rate, and is the only county to have a lower rate of death than the state and the nation. Perry and Dauphin Counties have the highest rates of death, exceeding the state rate by 20 points and 12 points, respectively.

Heart Disease Prevalence among Adults

	Heart Disease	Heart Attack	Stroke
Region 1: Cumberland/ Perry	5%	5%	4%
Region 2: Dauphin/ Lebanon	6%	5%	4%
Region 3: York	7%	8%	4%
Pennsylvania	7%	7%	5%

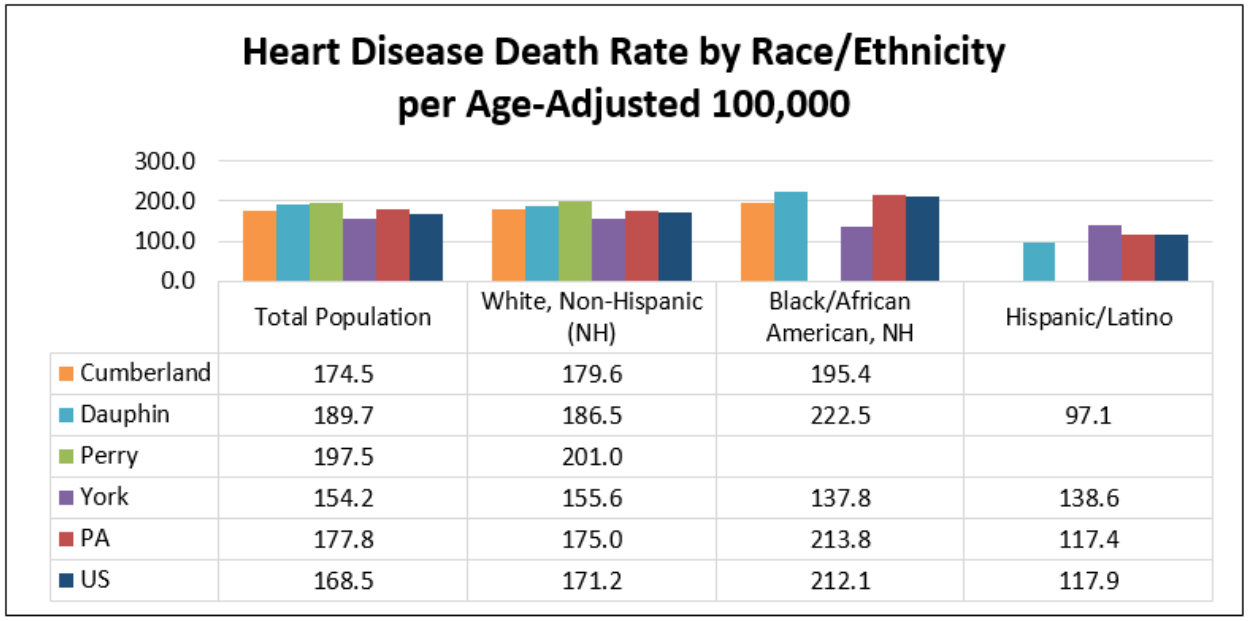
Source: PA Department of Health, 2014-2016



Source: CDC WONDER, 2006-2015

Across the state and the nation, Blacks/African Americans have a higher heart disease death rate than Whites. Cumberland and Dauphin Counties mirror the state and national trend. Blacks/African Americans in Dauphin County have the greatest disparity with a death rate that is 36 points higher than the rate among Whites. In York County, Whites have a higher heart disease death rate than Blacks/African Americans.

The heart disease death rate among Blacks/African Americans in Dauphin County is 36 points higher than the rate among Whites



	Total Population	White, Non-Hispanic (NH)	Black/African American, NH	Hispanic/Latino
Cumberland	174.5	179.6	195.4	
Dauphin	189.7	186.5	222.5	97.1
Perry	197.5	201.0		
York	154.2	155.6	137.8	138.6
PA	177.8	175.0	213.8	117.4
US	168.5	171.2	212.1	117.9

Source: CDC WONDER, 2013-2015
*Death rates are reported as a 2013-2015 aggregate. Cumberland and Perry County data are limited due to low death counts.

Coronary heart disease (CHD) is characterized by the buildup of plaque inside the coronary arteries. Pennsylvania and the nation meet the Healthy People 2020 goal for CHD death. In the South Central region, all counties except Perry also meet the Healthy People 2020 goal. Perry County exceeds the goal by 20 points.

All service counties except Perry meet the HP 2020 goal for CHD-related death

Several types of heart disease, including coronary heart disease, are risk factors for stroke. All South Central region counties have a higher death rate due to stroke than the Healthy People 2020 goal. Death rates for Cumberland, Dauphin, and York County also exceed the state and the nation.

All service counties exceed the HP 2020 goal for stroke related death

Coronary Heart Disease and Stroke Death Rates
(Green = Meets Healthy People 2020 Goal; Red = Higher than the State and the Nation)

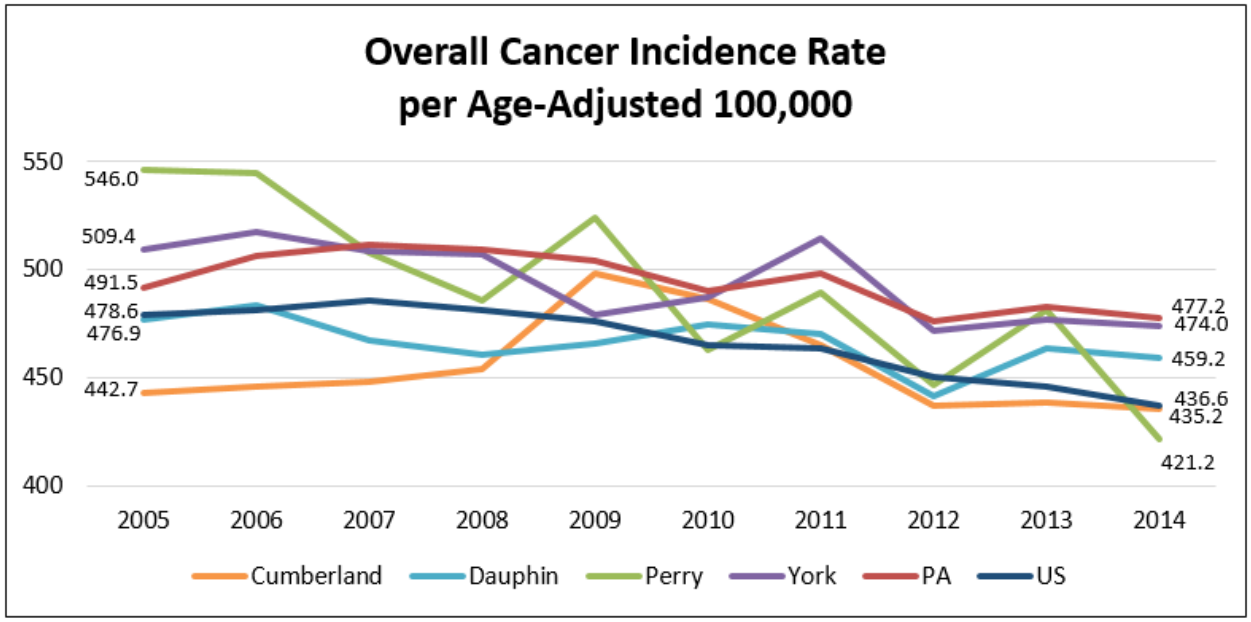
	Coronary Heart Disease Death per Age-Adjusted 100,000	Stroke Death per Age-Adjusted 100,000
Cumberland County	88.3	40.2
Dauphin County	94.8	41.2
Perry County	123.5	37.4
York County	93.4	43.7
Pennsylvania	99.7	38.8
United States	97.2	37.6
HP 2020	103.4	34.8

Source: CDC WONDER, 2015

Cancer

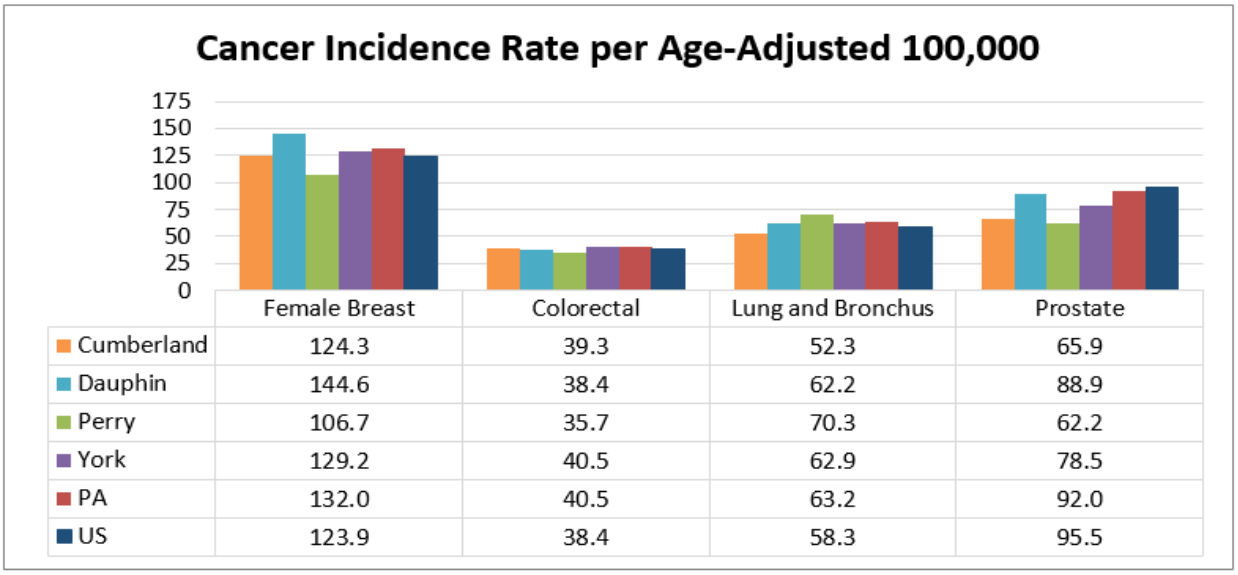
Cancer incidence across Pennsylvania is declining, but the current rate exceeds the national rate by 41 points. All South Central region counties have a lower cancer incidence rate than the state; Cumberland and Perry Counties also have a lower incidence rate than the nation. Incidence rates for Dauphin, Perry, and York Counties declined from 2005 to 2014, particularly for Perry County.

All service counties have a lower cancer incidence rate than the state; incidence rates for Perry and York Counties declined notably



Source: CDC National Program of Cancer Registries, 2005-2014; PA Department of Health, 2005-2014

Presented below are the incidence rates for the most commonly diagnosed cancers: breast (female), colorectal, lung, and prostate (male). Cumberland and York Counties have similar or lower incidence rates for all cancer types when compared to the state and the nation. Dauphin and Perry Counties have a higher incidence of female breast and lung cancer, respectively. In all South Central region counties, the prostate cancer incidence rate is lower than the state and the nation.



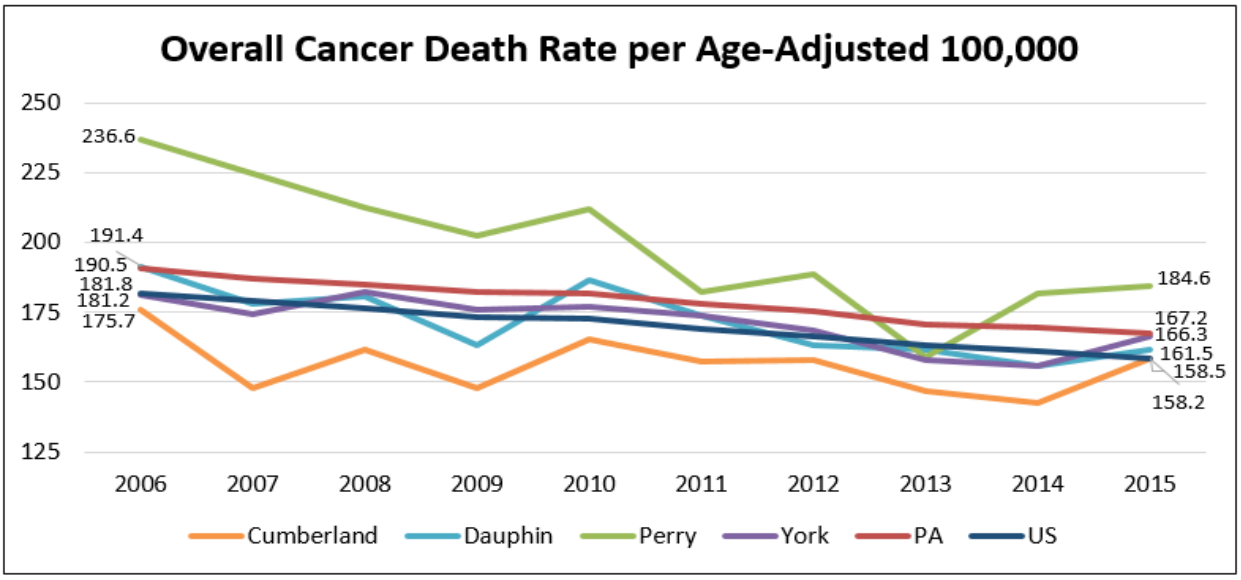
	Female Breast	Colorectal	Lung and Bronchus	Prostate
Cumberland	124.3	39.3	52.3	65.9
Dauphin	144.6	38.4	62.2	88.9
Perry	106.7	35.7	70.3	62.2
York	129.2	40.5	62.9	78.5
PA	132.0	40.5	63.2	92.0
US	123.9	38.4	58.3	95.5

Source: CDC National Program of Cancer Registries, 2014; PA Department of Health, 2014
*Colorectal cancer data for Perry County is reported for 2012-2014 due to a low count.

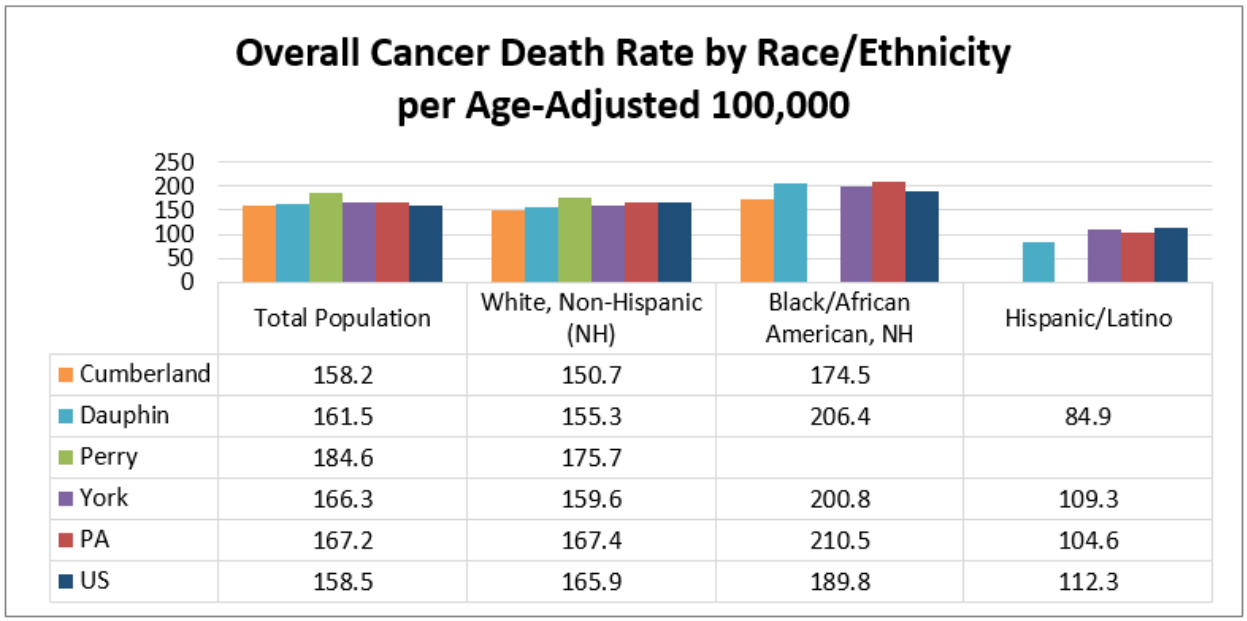
Cancer death rates among South Central region service counties have been variable over the past decade, but generally declining. All counties except Perry have a similar or lower cancer death rate than the state and the nation. Cumberland and Dauphin Counties meet the Healthy People 2020 goal (161.4). The cancer death rate for Perry County exceeds state and national benchmarks, but declined 52 points between 2006 and 2015.

Across the region, Blacks/African Americans have a higher cancer death rate than Whites. Blacks/African Americans in Dauphin County have the greatest disparity with a death rate that is 51 points higher than the rate among Whites.

Perry County has a higher cancer death rate than the state and the nation, but the rate declined 52 points from 2006 to 2015



Source: CDC Wonder, 2006-2015

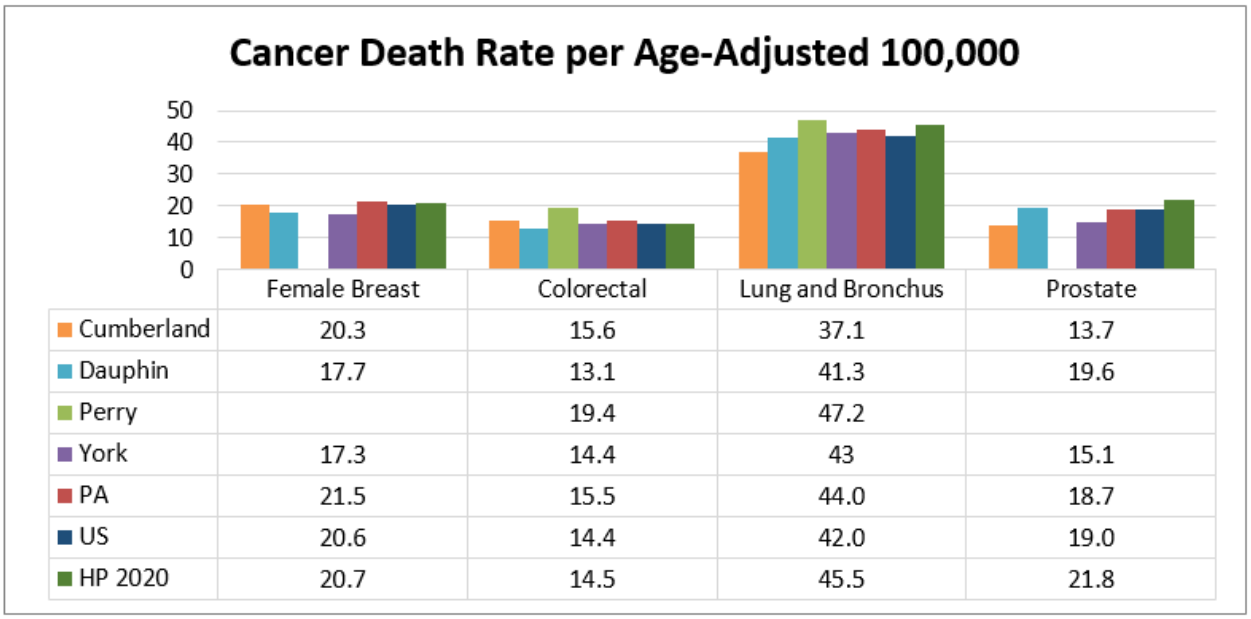


	Total Population	White, Non-Hispanic (NH)	Black/African American, NH	Hispanic/Latino
Cumberland	158.2	150.7	174.5	
Dauphin	161.5	155.3	206.4	84.9
Perry	184.6	175.7		
York	166.3	159.6	200.8	109.3
PA	167.2	167.4	210.5	104.6
US	158.5	165.9	189.8	112.3

Source: CDC Wonder, 2013-2015
*Death rates are reported as a 2013-2015 aggregate. Cumberland and Perry County data are limited due to low death counts.

Presented below are the death rates for the most commonly diagnosed cancers. Dauphin and York Counties meet the Healthy People 2020 goal for all cancer types. Cumberland County meets the goal for all types except colorectal cancer. Perry County has higher death rates due to colorectal and lung cancer.

Cumberland, Dauphin, and York Counties meet or nearly meet the HP 2020 goal for all cancer types



	Female Breast	Colorectal	Lung and Bronchus	Prostate
Cumberland	20.3	15.6	37.1	13.7
Dauphin	17.7	13.1	41.3	19.6
Perry		19.4	47.2	
York	17.3	14.4	43	15.1
PA	21.5	15.5	44.0	18.7
US	20.6	14.4	42.0	19.0
HP 2020	20.7	14.5	45.5	21.8

Source: CDC Wonder, 2013-2015
*Death rates are reported as a 2013-2015 aggregate.

Chronic Lower Respiratory Disease

Chronic lower respiratory disease (CLRD) is the third most common cause of death in the nation. CLRD encompasses diseases like chronic obstructive pulmonary disorder, emphysema, and asthma.

York County has the highest rate of adult smokers and adults with asthma, but the CLRD death rate is lower than state and national benchmarks

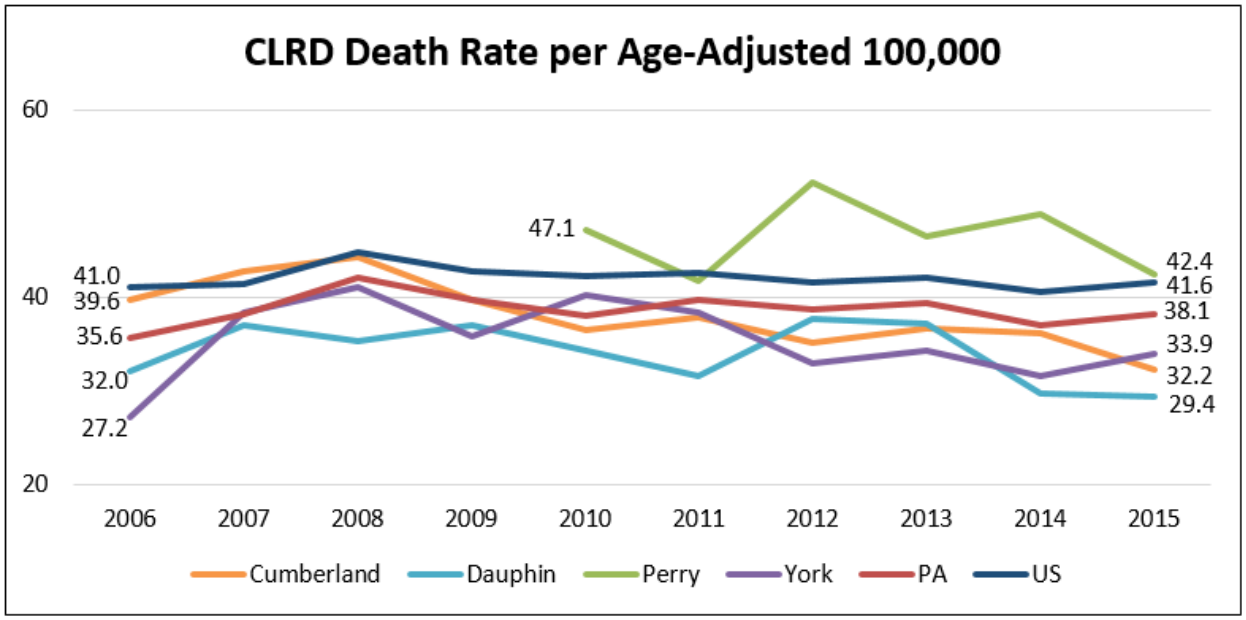
Reporting Region 3, York County, has a higher incidence of adults with asthma. York County also has the highest rate of adult smokers, exceeding the Healthy People 2020 goal by 5 points. The current CLRD death rate for York County is higher than at the beginning of the decade, but lower than state and national benchmarks.

Cumberland, Dauphin, and York Counties have a lower rate of death due to CLRD when compared to the state and the nation. Death rates for Cumberland and Dauphin Counties declined slightly from 2006 to 2015. Perry County has a higher rate of CLRD death than the state and the nation. The rate has been variable over the past five years.

Chronic Lower Respiratory Disease Prevalence among Adults

	Asthma Diagnosis (Current)	COPD Diagnosis (Ever)
Region 1: Cumberland/Perry	9%	7%
Region 2: Dauphin/Lebanon	10%	6%
Region 3: York	14%	7%
Pennsylvania	10%	7%

Source: PA Department of Health, 2014-2016



Source: CDC Wonder, 2006-2015

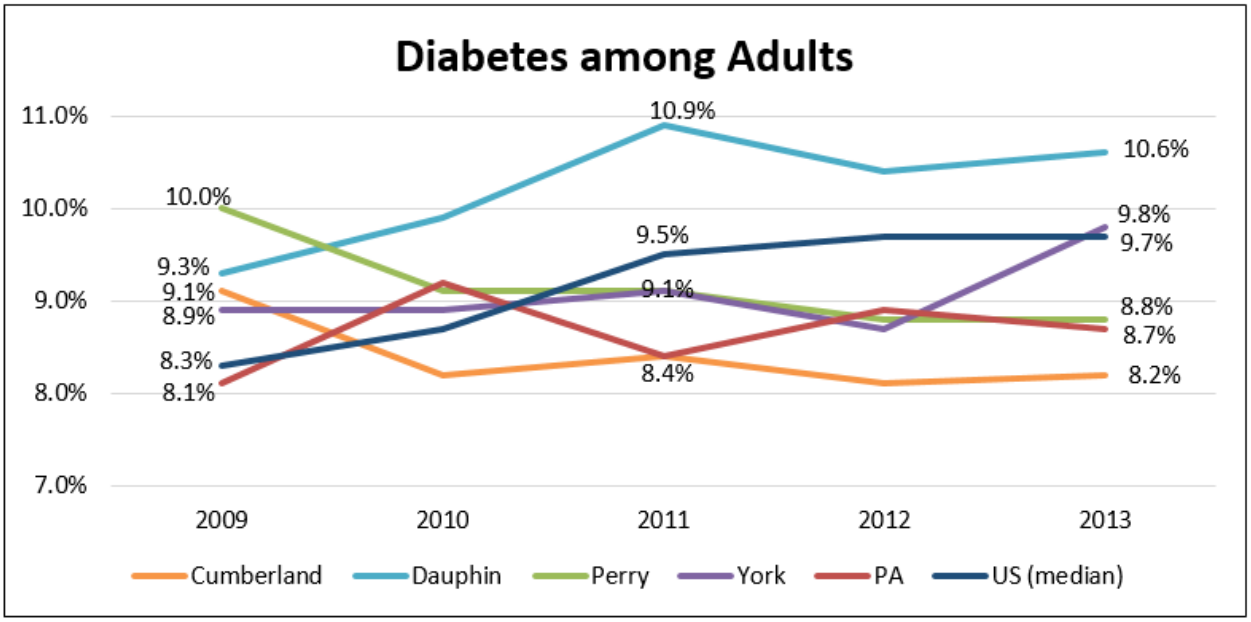
*Perry County death rates are not reported for 2006-2009 due to low annual death counts.

Diabetes

Diabetes is among the top 10 causes of death in the nation. According to the American Diabetes Association, diabetes and prediabetes affect more than 110 million Americans and cost $332 billion per year. Diabetes can cause a number of serious complications. Type II diabetes, the most common form, is largely preventable through diet and exercise.

Pennsylvania has a lower prevalence of adult diabetes than the nation. Prevalence rates for Cumberland and Perry Counties are similar to the state rate. Prevalence rates for Dauphin and York Counties exceed the state and national rate.

Approximately 11% of Dauphin County adults have diabetes, higher than the state and the nation



Source: CDC Diabetes Atlas & BRFSS, 2009-2013

*A change in methods occurred in 2011 that may affect the validity of comparisons to past years.

Cumberland, Dauphin, and York Counties have a lower diabetes death rate than the state and the nation. Current death rates for all counties are lower than rates at the beginning of the decade, but they have been variable.

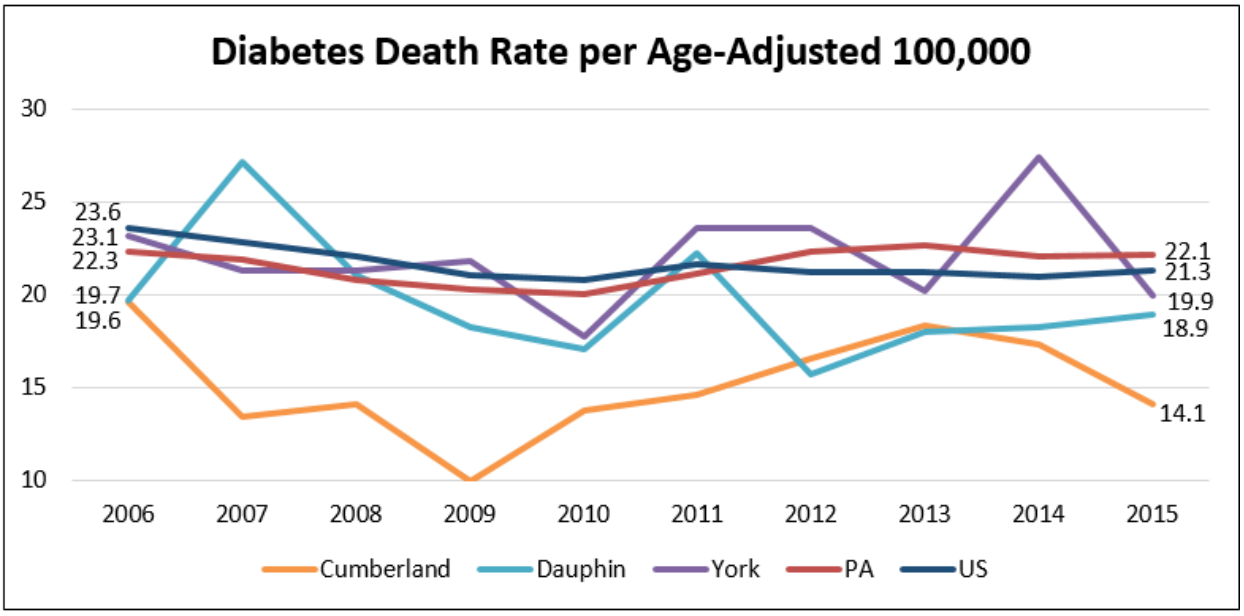
The diabetes death rate is lower in Cumberland, Dauphin, and York Counties compared to the state and the nation

Year-over-year trends are not reported for Perry County due to low death counts. However, the age-adjusted death rate for the county for 2015 is reported. The rate, 42.4 per 100,000, is 20 points higher than the state rate. The three-year (2013-2015) aggregate death rate for the county is 35.9 per 100,000, also higher than the state rate of 22.2 per 100,000.

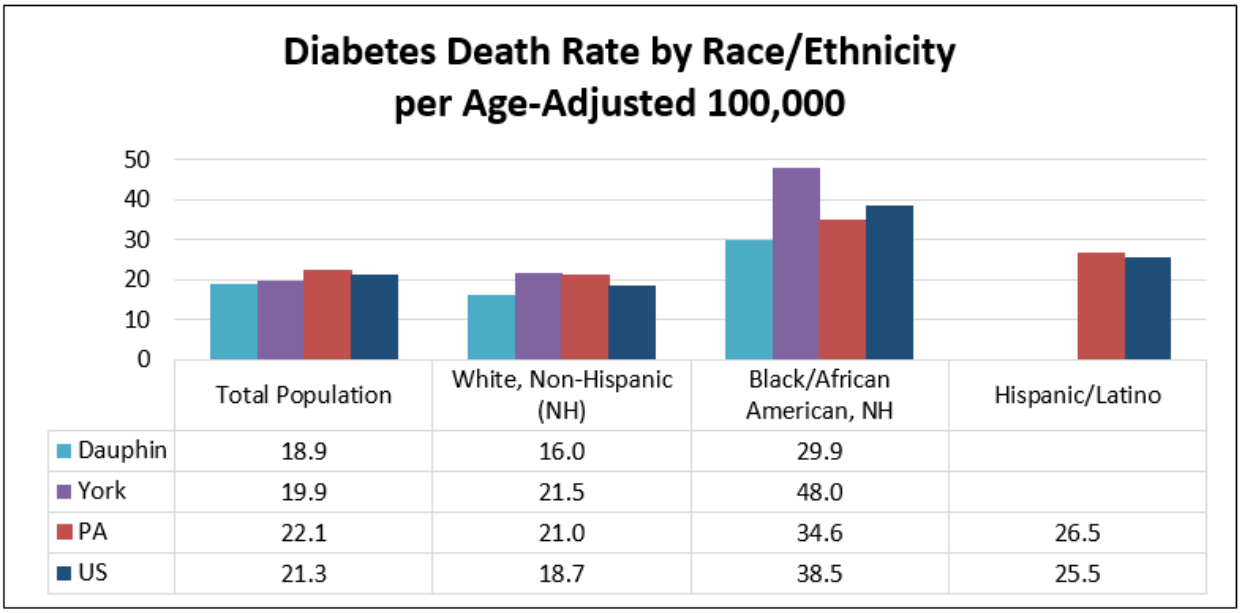
The 2015 diabetes death rate for Perry County exceeds the state rate by 20 points

Across Pennsylvania and the nation, the diabetes death rate is highest among Blacks/African Americans. Dauphin and York Counties also report higher death rates among Blacks/African Americans. Blacks/African Americans in York County have the greatest disparity with a death rate that is 27 points higher than the rate among Whites. Racial and ethnic data are not reported for Cumberland and Perry Counties due to low death counts.

The diabetes death rate among Blacks/African Americans in York County is 27 points higher than the rate among Whites



Source: CDC Wonder, 2006-2015
*Annual death rates are not reported for Perry County due to low death counts.



	Total Population	White, Non-Hispanic (NH)	Black/African American, NH	Hispanic/Latino
Dauphin	18.9	16.0	29.9	
York	19.9	21.5	48.0	
PA	22.1	21.0	34.6	26.5
US	21.3	18.7	38.5	25.5

Source: CDC WONDER, 2013-2015
*Hispanic/Latino death rates are not reported for Dauphin and York Counties due to low death counts.

Notifiable Diseases

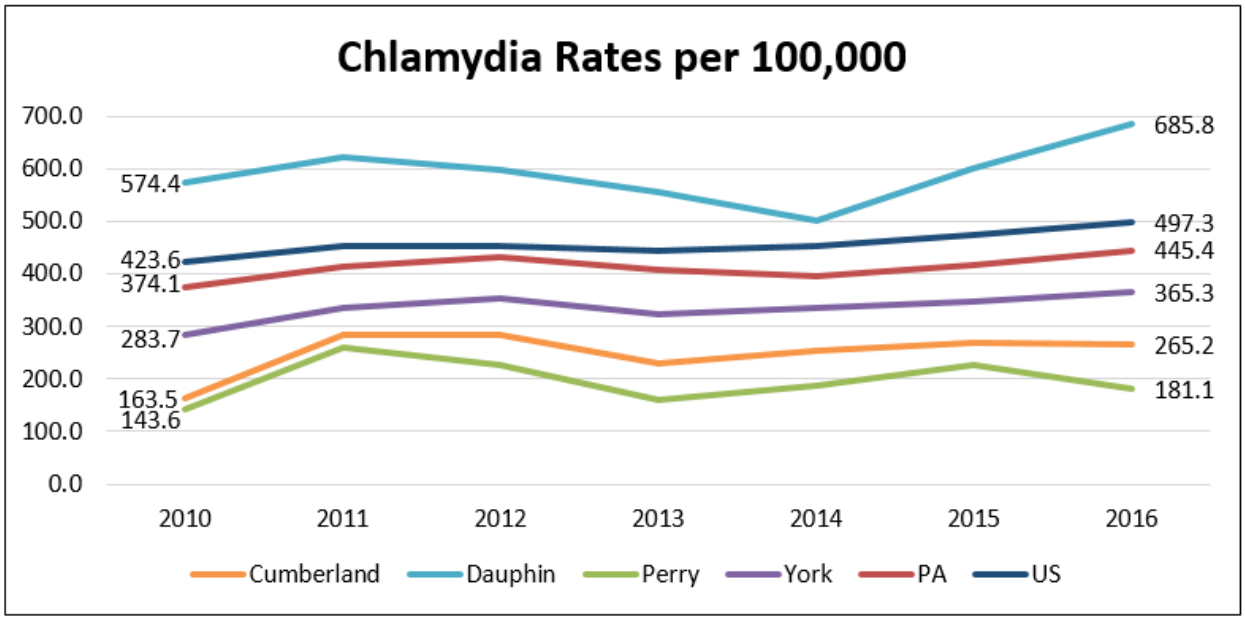
Sexually Transmitted Infections

Sexually transmitted infections (STIs) include chlamydia, gonorrhea, and HIV. Chlamydia incidence in Cumberland, Perry, and York Counties is lower when compared to the state and the nation, but increasing. Cumberland County had the greatest rate increase of 102 points between 2010 and 2016. The chlamydia incidence rate for Dauphin County exceeds the state and the nation by 189 to 240 points.

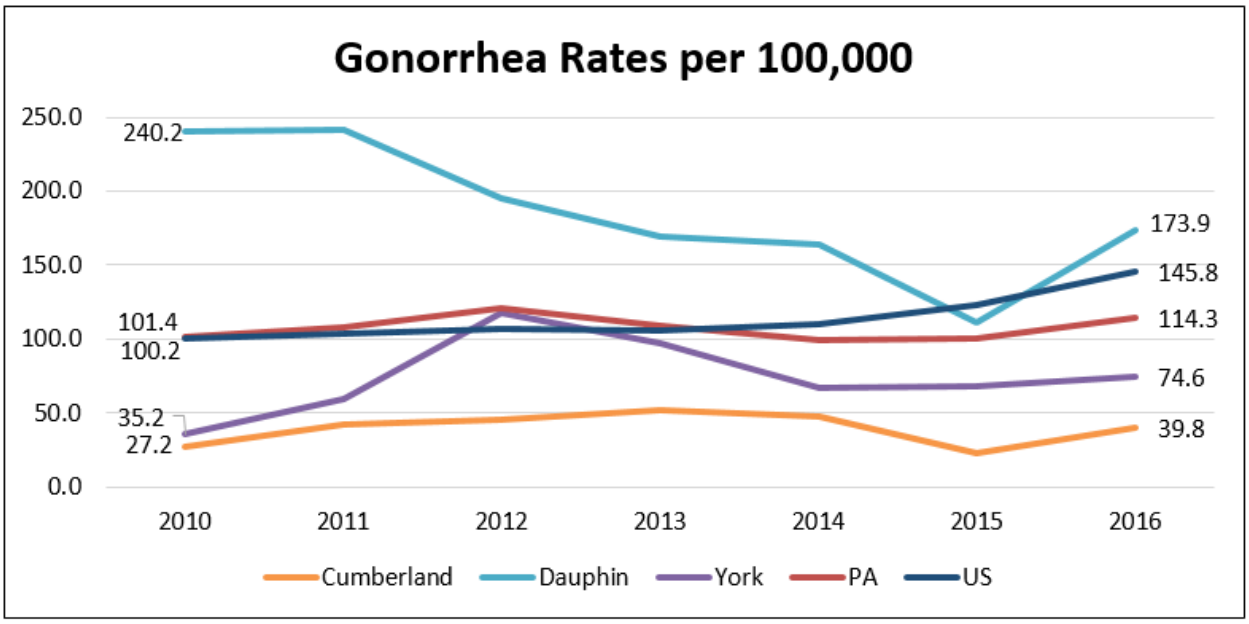
Dauphin County has a higher incidence of chlamydia, gonorrhea, and HIV when compared to the state and the nation

Gonorrhea incidence is also lower in Cumberland and York Counties when compared to the state and the nation, but increasing. York County had the greatest rate increase of 39 points between 2010 and 2016. The gonorrhea incidence rate for Dauphin County exceeds the state and the nation. The rate declined 129 points between 2010 and 2015, but increased in 2016. Annual incidence rates are not reported for Perry County due to low counts. The three-year (2014-2016) aggregate rate for the county is 19.7 per 100,000.

Chlamydia and gonorrhea rates are increasing across the South Central Region



Source: CDC Sexually Transmitted Diseases, 2010-2016 & PA Department of Health, 2010-2016



Source: CDC Sexually Transmitted Diseases, 2010-2016 & PA Department of Health, 2010-2016
*Annual rates are not reported for Perry County due to low counts.

All service counties except Dauphin have a lower incidence of HIV compared to the state and the nation. A total of 326 cases of HIV occurred in all counties between 2013 and 2016; 47% of cases were in Dauphin County.

HIV Incidence Rate

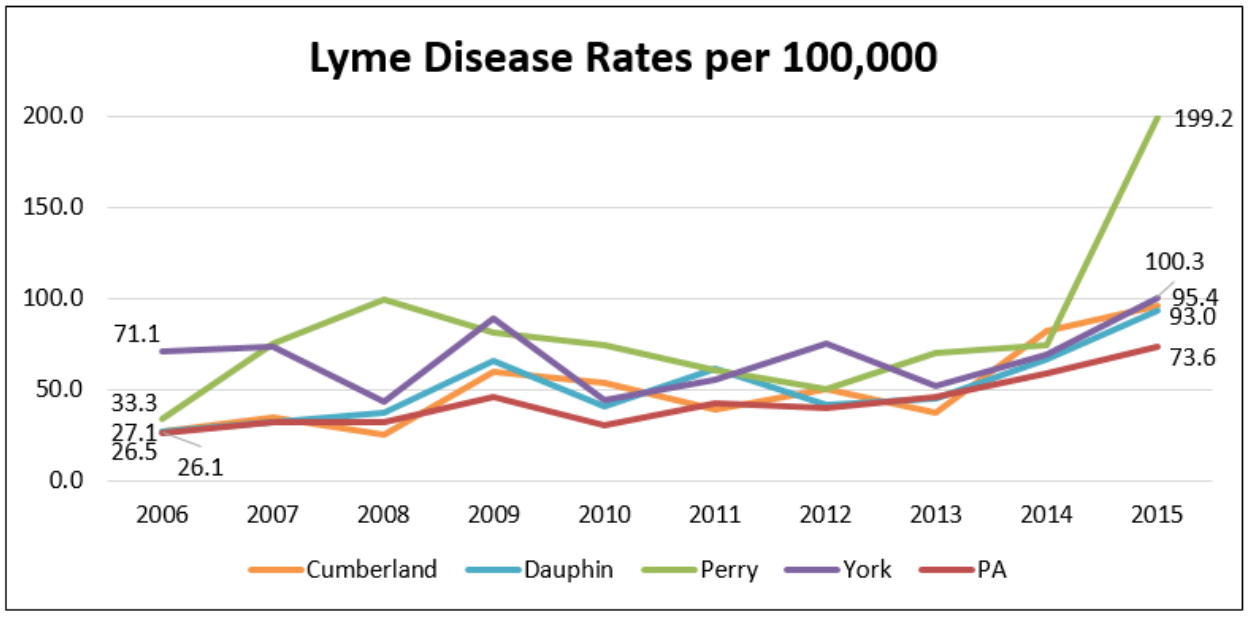
	2015 Crude Incidence Rate per 100,000	Cumulative 2013-2016 Incidence Count
Cumberland County	2.8	44
Dauphin County	12.5	153
Perry County	4.4	6
York County	6.3	123
Pennsylvania	9.1	4,705
United States	12.3	NA

Source: CDC, 2015 & PA Department of Health, 2013-2016 & 2015

Lyme Disease

Lyme disease, according to the CDC, “is transmitted to humans through the bite of infected blacklegged ticks. Typical symptoms include fever, headache, fatigue, and a characteristic skin rash called erythema migrans. If left untreated, infection can spread to joints, the heart, and the nervous system.” The northeast United States, from Virginia to Maine, is one of the primary geographic areas for infection.

The incidence of Lyme disease has increased steadily across the state and the region, particularly in the last three years. All service counties have a higher Lyme disease incidence rate than the state. Perry County has the highest incidence rate; 91 people received a Lyme disease diagnosis in 2015 compared to 34 people in 2014.



Source: PA Department of Health, 2006-2015

Child Lead Screening and Poisoning

The CDC estimates that at least four million households have children living in them that are being exposed to high levels of lead. Lead exposure increases the risk for central nervous system damage, slowed growth and development, and hearing and speech problems.

The measure for high levels of lead exposure or lead poisoning was recently revised from 10 micrograms per decileter of blood (µg/dL) or higher to 5 µg/dL of blood or higher. The Pennsylvania Department of Health reports blood lead levels based on the original measure. The following table depicts children between 0 and 6 years who have been tested for blood lead levels and who have lead poisoning.

Children in all South Central region counties except Dauphin are less likely to be tested for lead poisoning. York County has a higher percentage of children who test positive for lead poisoning.

Lead Screening and Poisoning among Children 0 to 6 Years of Age

	Age Group	Percent Tested for Lead Poisoning	Percent with Blood Lead Levels ≥10 µg/dL
Cumberland County	0-2 years	11.2%	2.0%
	3-6 years	1.6%	1.2%
Dauphin County	0-2 years	24.8%	1.8%
	3-6 years	6.7%	2.6%
Perry County	0-2 years	21.6%	0.9%
	3-6 years	1.4%	0.0%
York County	0-2 years	20.0%	2.5%
	3-6 years	2.6%	2.7%
Pennsylvania	0-2 years	26.0%	1.8%
	3-6 years	4.5%	2.4%

Source: PA Department of Health, 2014

Behavioral Health

Mental Health

The suicide rate is one measure of mental health status. The rate for Cumberland, Dauphin, and York Counties exceeds the Healthy People 2020 goal; the York County rate also exceeds the state and the nation. York County had the greatest rate increase of 4 points between 2006 and 2015.

The York County suicide and mental and behavioral disorders death rates exceed the state and the nation

Mental and behavioral disorders span a wide range of disorders, including dementia, amnesia, Schizophrenia, phobias, and mood or personality disorders. The disorders are not induced by alcohol and other psychoactive substances, but they may result from substance abuse.

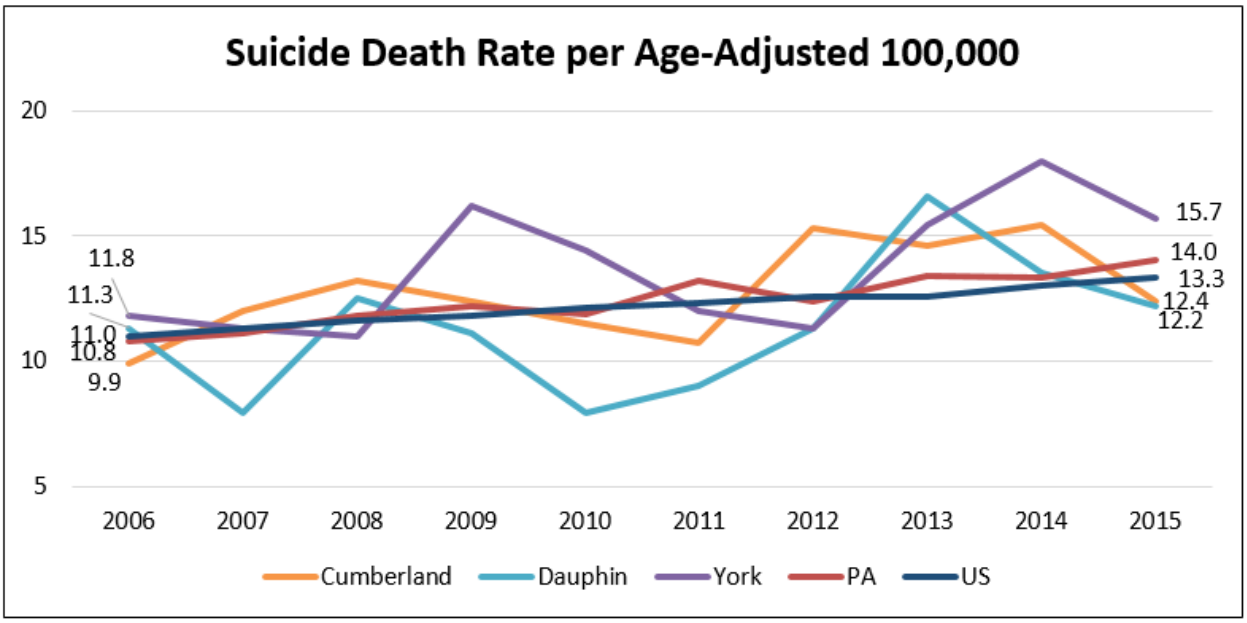
The mental and behavioral disorders death rate increased across Pennsylvania and the nation. Death rates also increased for South Central region counties, but rates for Cumberland, Dauphin, and Perry Counties are lower than state and national rates. The York County death rate exceeds state and national benchmarks and increased 16 points from 2006 to 2015.

Perry County suicide and mental and behavioral disorders death rate data represent three-year (2013-2015) aggregates due to low death counts; year-over-year trends are not reported.

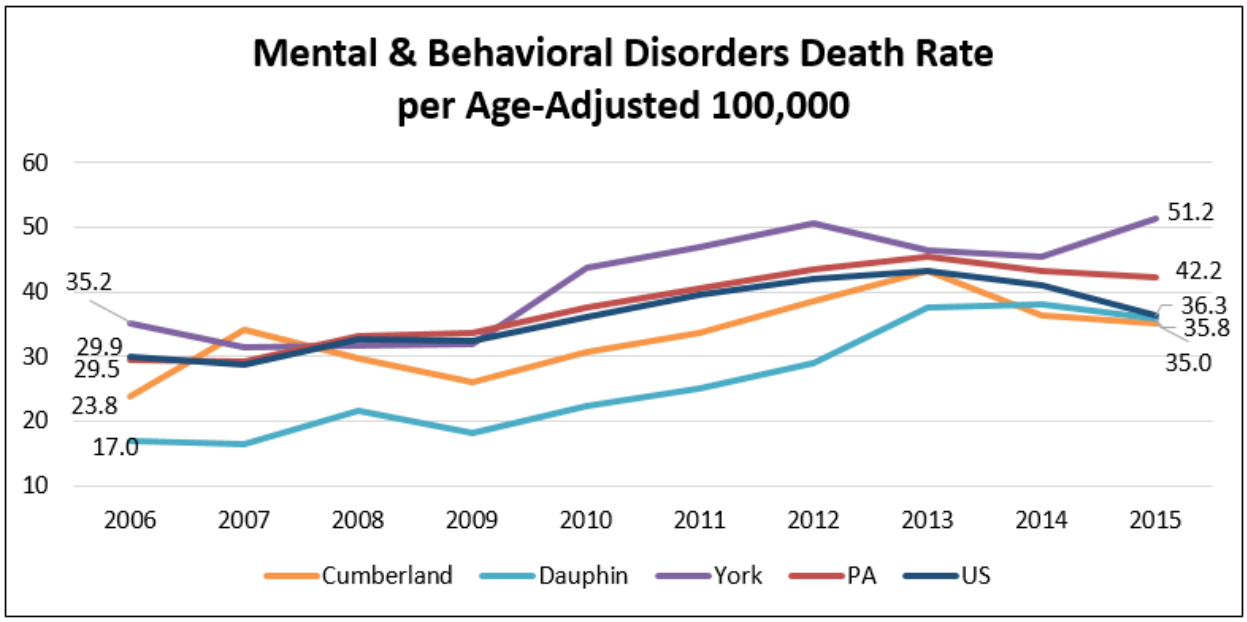
Mental Health Measures

	30-Day Average - Poor Mental Health Days (Adults)	Suicide Rate per Age-Adjusted 100,000	Mental & Behaviors Disorders Death Rate per Age-Adjusted 100,000
Cumberland County	3.5	12.4	35.0
Dauphin County	3.7	12.2	35.8
Perry County	3.6	NA (n=17)	28.6
York County	3.5	15.7	51.2
Pennsylvania	3.9	14.0	42.2
United States	3.7	13.3	36.3
HP 2020	NA	10.2	NA

Source: CDC BRFSS & WONDER, 2013-2015 & 2015 & Healthy People 2020
*Suicide and mental and behavioral disorders death data for Perry County are reported for 2013-2015 due to a low death count.



Source: CDC Wonder, 2006-2015



Source: CDC Wonder, 2006-2015

Substance Abuse

Substance abuse includes both alcohol and drug abuse. Adults in all counties except York are more likely to drink excessively compared to adults across the state and the nation. Perry and York Counties have a higher percentage of driving deaths due to driving under the influence (DUI).

Perry County has the highest percentage of adults who drink excessively and the highest percentage of driving deaths due to DUI

Drug-induced deaths include all deaths for which drugs are the underlying cause, including drug overdoses and deaths from medical conditions resulting from chronic drug use. Pennsylvania has a higher drug-induced death rate than the nation. The drug-induced death rate for Dauphin and York Counties is lower than the state, but exceeds the nation. All counties exceed the Healthy People 2020 goal. Death rates for Cumberland, Dauphin, and York Counties increased between 2006 and 2015.

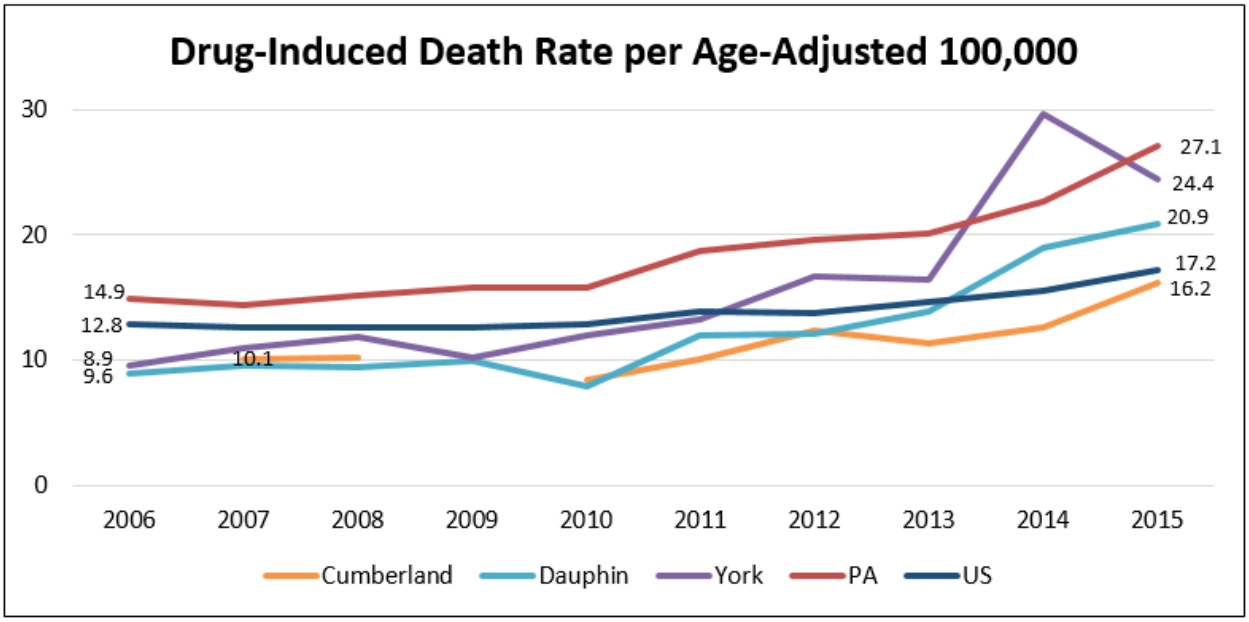
The Perry County drug-induced death rate represents a three-year (2013-2015) aggregates due to low death counts; year-over-year trends are not reported.

Dauphin and York Counties have a higher drug-induced death rate than the nation, and had the largest rate increases between 2006 and 2015

Substance Abuse Measures

	Excessive Drinking (Adults)	Percent of Driving Deaths due to DUI	Drug-Induced Death Rate per Age-Adjusted 100,000
Cumberland County	19.2%	27.7%	16.2
Dauphin County	18.7%	31.6%	20.9
Perry County	20.5%	39.6%	16.7
York County	17.5%	36.7%	24.4
Pennsylvania	18.1%	32.0%	27.1
United States	18.0%	30.0%	17.2
HP 2020	NA	NA	11.3

Source: CDC BRFSS & WONDER, 2013-2015 & 2015; National Highway Traffic Safety Administration, 2011-2015; Healthy People 2020
*The drug-induced death rate for Perry County is reported for 2013-2015 due to a low death count.



Source: CDC Wonder, 2006-2015
*Death rate data are not reported for Cumberland County for 2006 and 2009 due to low death counts.

Licensed drug and alcohol treatment providers in Pennsylvania that receive federal, state, or local funds from the Department of Drug and Alcohol Programs are required to report admission data to the Department. Providers that do not receive federal, state, or local funds are not required to report admission data, but may do so voluntarily. The following tables profile information from reporting providers.

Across the South Central region, there are 54 licensed drug and alcohol treatment facilities. The majority of facilities provide outpatient services and are located within Dauphin and York Counties. Outpatient services typically focus on individuals with mild addiction, providing education, counseling, and support.

The number of drug and alcohol treatment admissions declined in all counties except York from fiscal years 2013-2014 to 2014-2015. The percentage of individuals admitted for treatment more than once within a year declined in all counties except Dauphin. Across the region, the majority of admissions are due to drug abuse.

Drug and alcohol treatment admissions decreased in all counties except York; the majority of admissions across the region are due to drug abuse

Licensed Drug and Alcohol Treatment Facilities

	Total Facilities	Inpatient Non-Hospital	Inpatient Hospital	Partial Hospitalization	Outpatient Facilities
Cumberland County	11	0	0	1	11
Dauphin County	21	7	0	0	14
Perry County	2	0	0	0	2
York County	20	4	0	5	18
Pennsylvania	721	177	14	125	575

Source: PA Department of Health, FY2014-2015

Admissions to State Supported Facilities by Fiscal Year (FY)

	Admissions		Number of Clients Admitted		Percent of Clients Admitted Once	
	FY 13-14	FY 14-15	FY 13-14	FY 14-15	FY 13-14	FY 14-15
Cumberland County	825	789	608	594	73.2%	76.6%
Dauphin County	916	784	781	639	86.3%	82.6%
Perry County	274	249	199	186	68.8%	75.3%
York County	1,455	1,712	1,044	1,254	72.2%	73.4%

Source: PA Department of Health, FY2013-2015

Primary Diagnosis on Admission to State Supported Facilities by Fiscal Year (FY)

	Drug Abuse		Alcohol Abuse		Other*	
	FY 13-14	FY 14-15	FY 13-14	FY 14-15	FY 13-14	FY 14-15
Cumberland County	54.6%	57.4%	40.8%	39.1%	4.6%	3.5%
Dauphin County	66.6%	67.0%	25.0%	29.9%	8.5%	3.1%
Perry County	56.3%	55.9%	31.2%	32.3%	12.6%	11.8%
York County	64.6%	65.2%	32.4%	31.7%	3.1%	3.1%

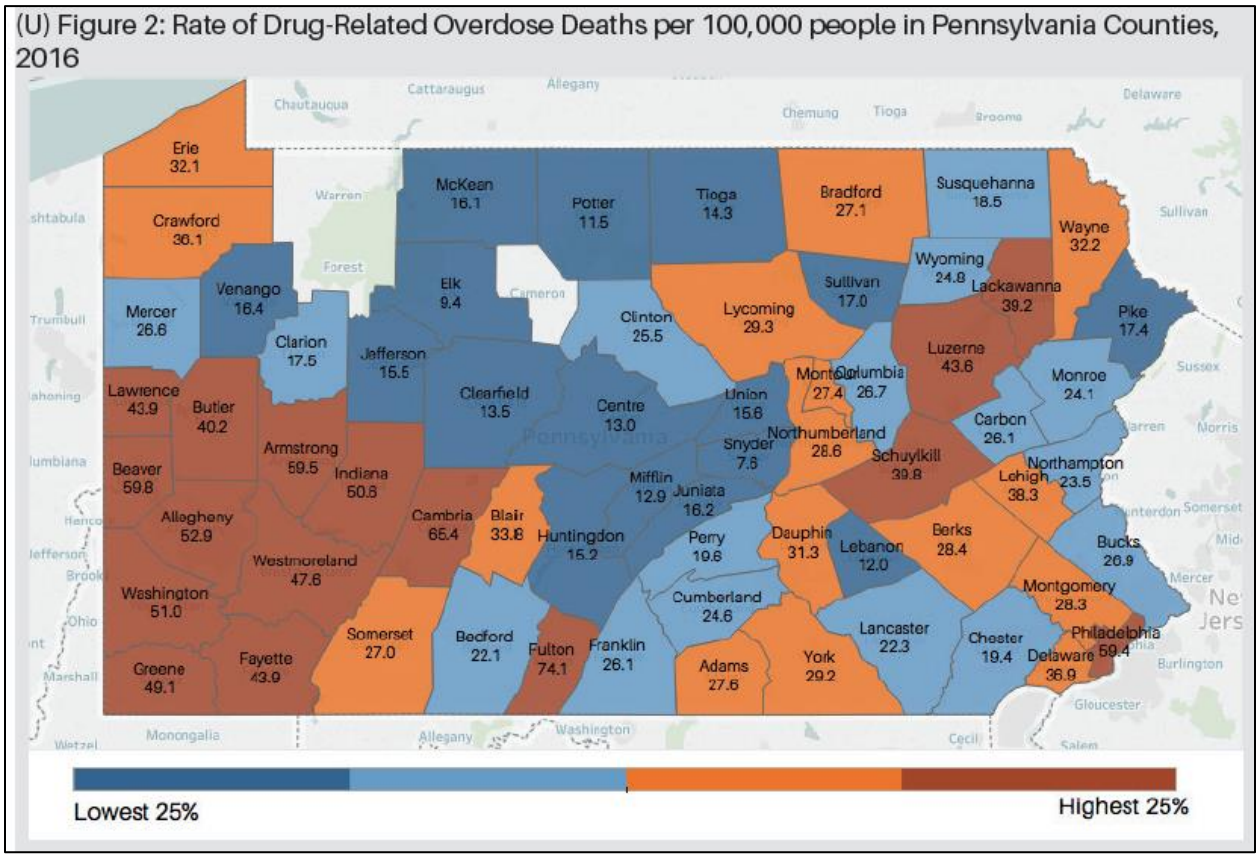
Source: PA Department of Health, FY2013-2015

*Includes family members receiving counseling.

In 2016, the Drug Enforcement Administration, Philadelphia Division released a report analyzing overdose deaths in Pennsylvania. According to the report, 4,642 drug-related overdose deaths were recorded in the state for a rate of 36.5 per 100,000, an increase of 37% from 2015. The following figure profiles the rate of drug-related overdose deaths by Pennsylvania county. Dauphin and York Counties are among the top 50% of Pennsylvania counties with regard to overdose death rates, however, death rates increased for all counties from 2015 to 2016.

There were 4,642 drug-related overdose deaths in Pennsylvania in 2016; Dauphin and York Counties rank among the top 50% of counties based on death rates

(U) Figure 2: Rate of Drug-Related Overdose Deaths per 100,000 people in Pennsylvania Counties, 2016

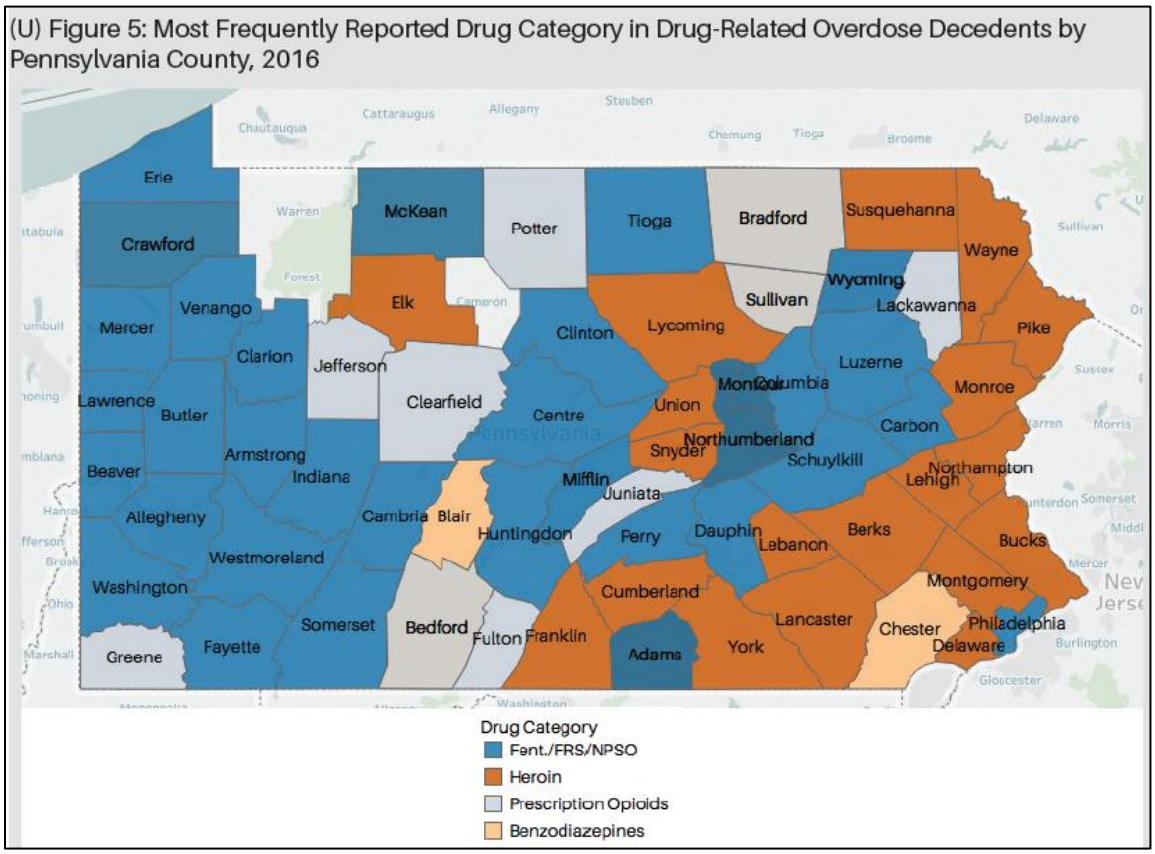


County Rankings by Rate of Drug-Related Overdose Deaths per 100,000 (2015 and 2016)

	2015			2016		
	Rank	Death Rate	Death Count	Rank	Death Rate	Death Count
Cumberland County	39	16.6	41	40	24.6	58
Dauphin County	16	30.0	82	23	31.3	84
Perry County	61	6.6	3	45	19.6	9
York County	28	22.4	99	25	29.2	127

Across Pennsylvania, fentanyl and heroin are the most commonly reported drug categories among drug-related overdose deaths. The most commonly reported drug categories for South Central region drug overdose deaths varied by county, as shown in the figure below.

(U) Figure 5: Most Frequently Reported Drug Category in Drug-Related Overdose Decedents by Pennsylvania County, 2016



Youth

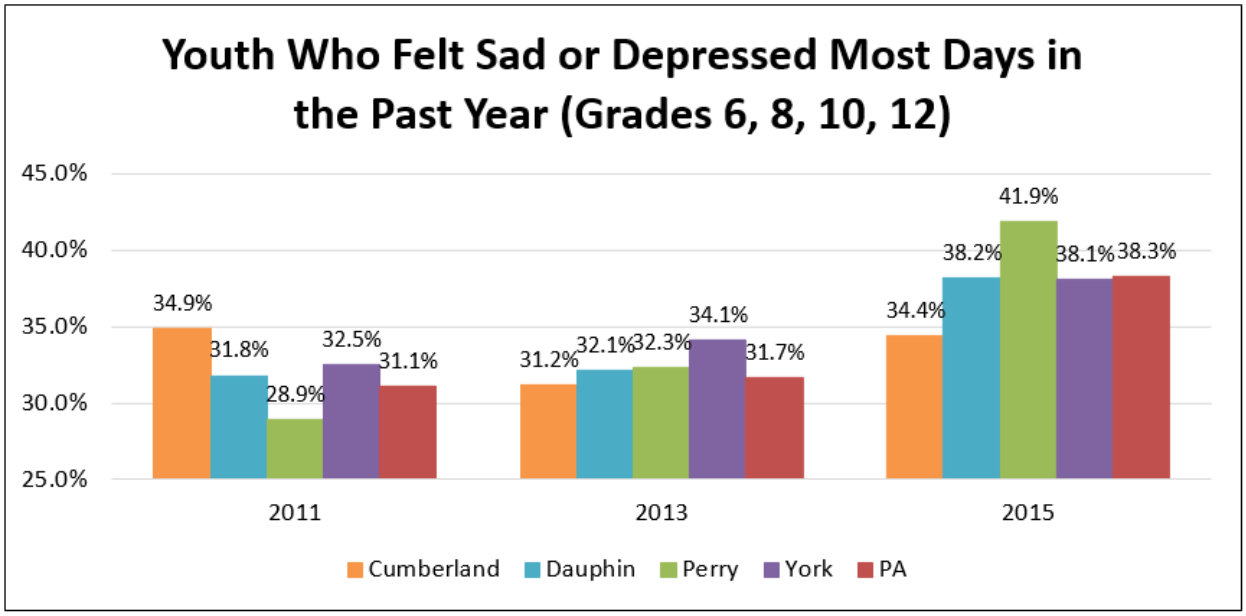
Youth who consistently feel depressed or sad may be at risk for committing suicide. The following figures depict the percentage of students in grades sixth through twelfth who felt sad or depressed on most days during the past year. Across all counties, approximately 30% to 47% of students consistently feel sad or depressed. Perry County students are generally the most likely to feel sad or depressed, but percentages increased for all counties except Cumberland from 2011 to 2015.

The percentage of students who consistently feel sad or depressed increased in all counties except Cumberland

Youth Who Felt Sad or Depressed on Most Days in the Past Year

	6th Grade	8th Grade	10th Grade	12th Grade
Cumberland County	29.8%	33.8%	36.4%	37.7%
Dauphin County	34.8%	36.3%	41.0%	40.3%
Perry County	41.2%	40.2%	39.9%	47.4%
York County	34.9%	38.0%	39.6%	40.7%
Pennsylvania	33.9%	37.7%	40.6%	40.7%

Source: Pennsylvania Commission on Crime and Delinquency, 2015



Source: Pennsylvania Commission on Crime and Delinquency, 2011-2015

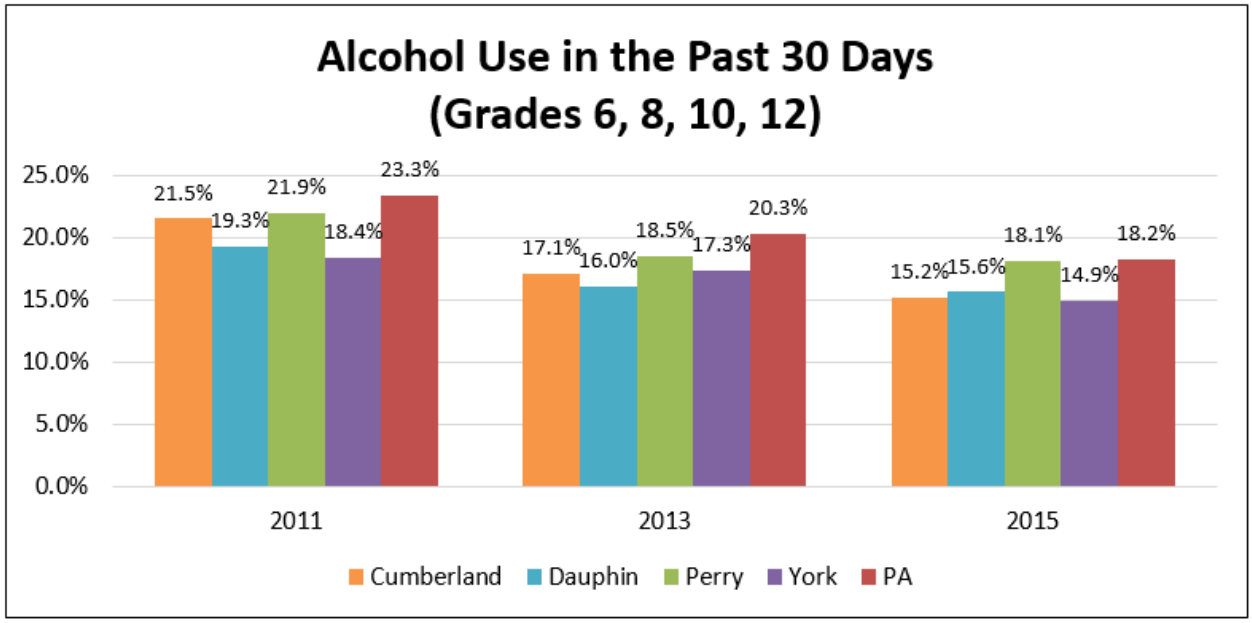
Alcohol and marijuana use is highest among students in grades ten and twelve. Students in Perry County exceed the state benchmark for alcohol use. Students in Dauphin and York Counties exceed the state benchmark for marijuana use. Alcohol use among students decreased in all counties from 2011 to 2015. Marijuana use decreased among students in Cumberland County, but remained constant in all other counties.

Alcohol use among students decreased in all counties from 2011 to 2015

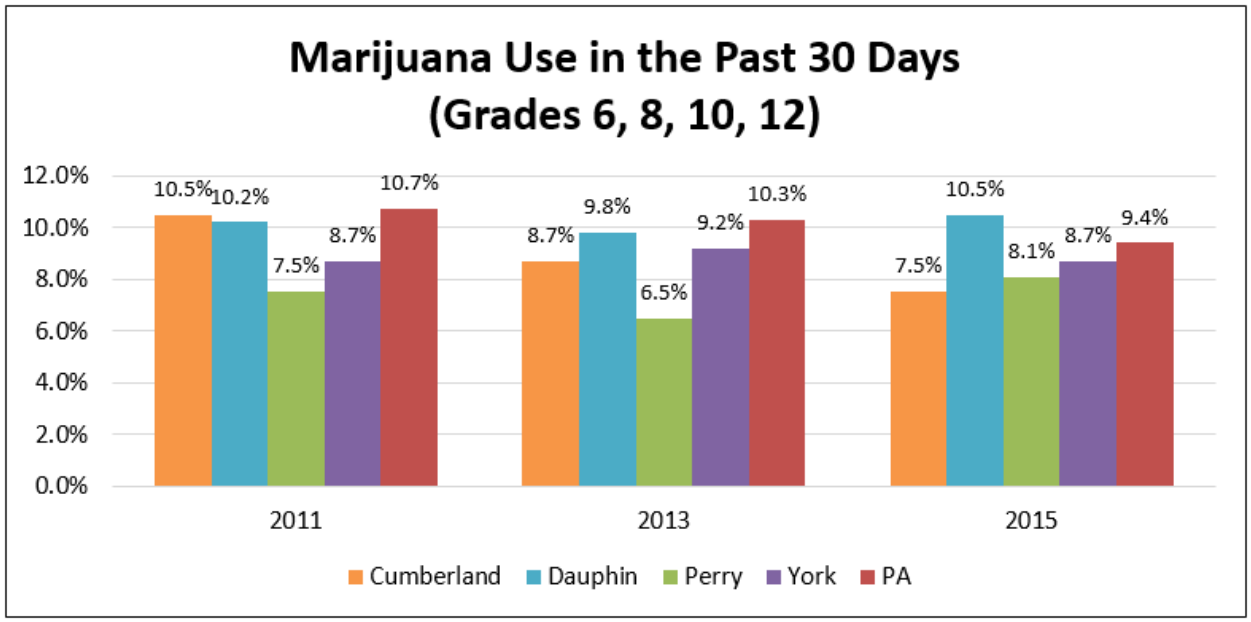
Youth Substance Abuse Measures

	6th Grade	8th Grade	10th Grade	12th Grade
Used Alcohol in the Past 30 Days				
Cumberland County	2.2%	6.2%	19.4%	35.8%
Dauphin County	3.8%	6.5%	18.3%	33.5%
Perry County	6.0%	8.3%	25.3%	38.8%
York County	3.4%	9.5%	20.7%	32.9%
Pennsylvania	3.3%	9.5%	22.3%	37.6%
Used Marijuana in the Past 30 Days				
Cumberland County	0.3%	2.1%	11.3%	17.4%
Dauphin County	0.7%	3.9%	14.6%	21.9%
Perry County	0.3%	3.0%	11.9%	20.7%
York County	0.8%	4.1%	13.7%	21.0%
Pennsylvania	0.6%	3.8%	12.0%	20.8%

Source: Pennsylvania Commission on Crime and Delinquency, 2015



Source: Pennsylvania Commission on Crime and Delinquency, 2011-2015



Source: Pennsylvania Commission on Crime and Delinquency, 2011-2015

Senior Health

Seniors face a number of challenges related to health and well-being as they age. They are more prone to chronic disease, social isolation, and disability. The following sections highlight key health indicators for the region's senior population.

Chronic Conditions

The following table notes the percentage of Medicare Beneficiaries 65 years or over who have been diagnosed with a chronic condition. Cells highlighted in red represent percentages that are above state and national benchmarks by more than 2 points.

Medicare Beneficiaries in nearly all service counties have a higher prevalence of diabetes, high cholesterol, and hypertension

All or nearly all South Central region counties have a lower prevalence of asthma, COPD, and heart failure when compared to the state and the nation. Nearly all counties have a higher prevalence of diabetes, high cholesterol, and hypertension.

Chronic Conditions among Medicare Beneficiaries 65 Years or Over (Red = Higher than the State and the Nation by More than 2 Points)

	Cumberland County	Dauphin County	Perry County	York County	Pennsylvania	United States
Alzheimer's Disease	11.6%	11.6%	10.2%	11.0%	11.8%	11.3%
Arthritis	35.1%	31.8%	30.9%	32.0%	33.5%	31.3%
Asthma	6.7%	6.2%	7.6%	7.4%	7.8%	7.6%
Cancer	9.3%	9.3%	9.1%	9.4%	9.8%	8.9%
COPD	9.2%	9.6%	12.0%	10.2%	11.0%	11.2%
Depression	15.0%	13.8%	14.6%	16.2%	14.9%	14.1%
Diabetes	25.9%	27.2%	29.3%	27.3%	26.5%	26.8%
Heart Failure	13.6%	13.8%	13.6%	13.6%	14.7%	14.3%
High Cholesterol	57.1%	51.4%	60.2%	58.1%	53.0%	47.8%
Hypertension	63.1%	61.1%	62.2%	64.0%	61.0%	58.1%
Ischemic Heart Disease	29.1%	28.5%	31.1%	27.9%	30.2%	28.6%
Stroke	4.5%	4.8%	4.3%	3.9%	4.9%	4.2%

Source: Centers for Medicare & Medicaid Services, 2015

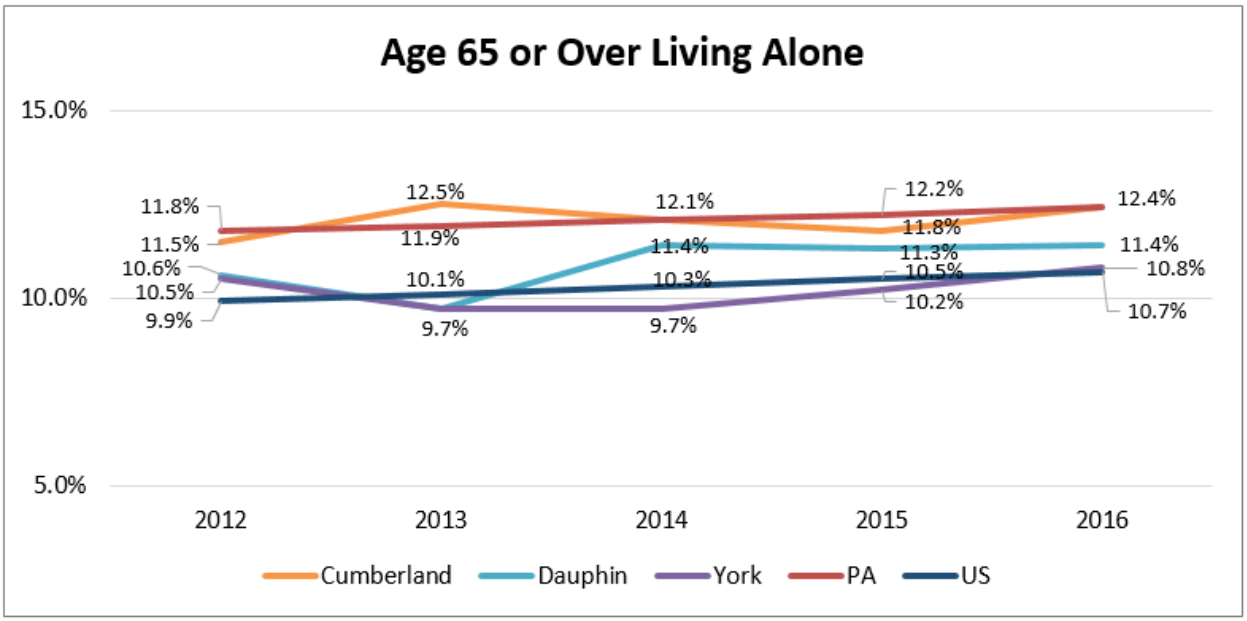
According to the CDC, "Among Medicare fee-for-service beneficiaries, people with multiple chronic conditions account for 93% of total Medicare spending." The table below notes the percentage of South Central region Medicare Beneficiaries by number of chronic conditions. County Medicare Beneficiaries have similar chronic condition counts to the state and the nation.

Number of Chronic Conditions among Medicare Beneficiaries 65 Years or Over (Red = Higher than the State and the Nation by More than 2 Points)

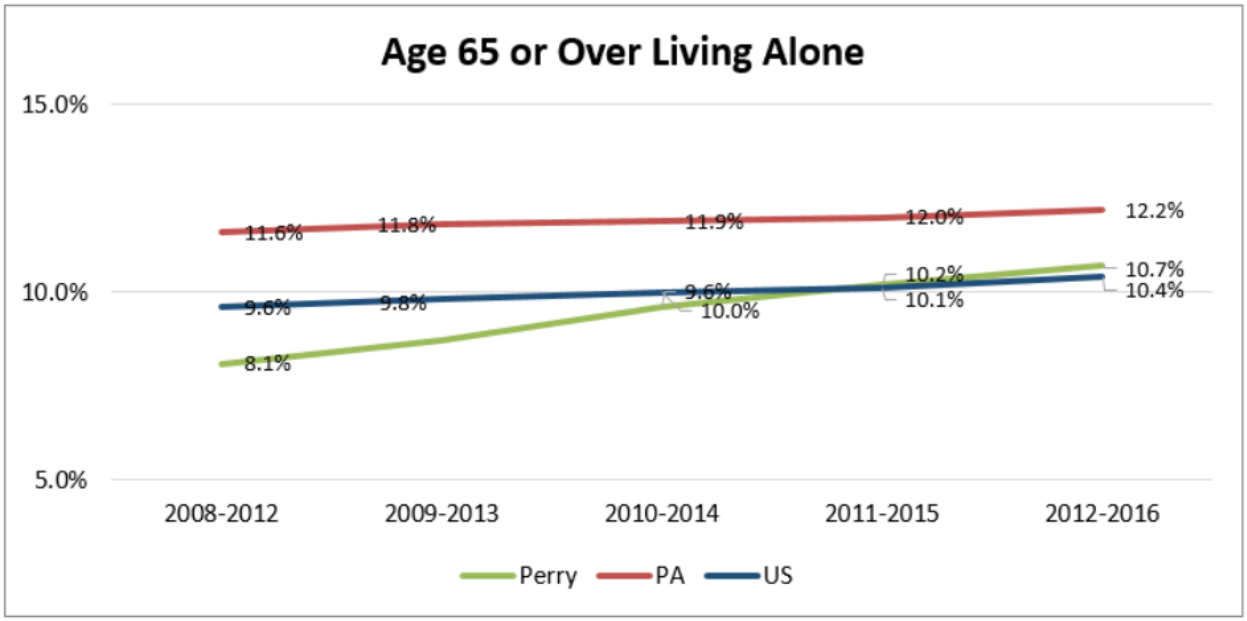
	Cumberland County	Dauphin County	Perry County	York County	Pennsylvania	United States
0 to 1 condition	26.7%	29.9%	27.1%	25.5%	28.5%	32.3%
2 to 3 conditions	32.7%	31.7%	31.5%	34.1%	31.1%	30.0%
4 to 5 conditions	23.8%	21.8%	23.4%	24.0%	22.9%	21.6%
6 or more conditions	16.8%	16.6%	18.0%	16.4%	17.6%	16.2%

Source: Centers for Medicare & Medicaid Services, 2015

As seniors age, they are at risk for isolation due to physical limitations and decreasing social circles. One indicator of isolation is the percentage of seniors age 65 or over who live alone. All South Central region counties have a similar or lower percentage of seniors who live alone when compared to the state. However, the percentage of seniors who live alone increased in all counties.



Source: American Community Survey, 2012-2016



Source: American Community Survey, 2008-2012 – 2011-2015

Regular screenings are essential for the early detection and management of chronic conditions. The following table analyzes diabetes and mammogram screenings among Medicare enrollees. All South Central region counties exceed the state and national benchmarks for diabetes screenings; all counties except Dauphin exceed benchmarks for mammogram screenings

Chronic Disease Screenings among Medicare Enrollees

	Annual hA1c Test from a Provider (65-75 Years)	Mammogram in Past Two Years (67-69 Years)
Cumberland County	87.5%	65.1%
Dauphin County	89.0%	60.2%
Perry County	90.4%	64.9%
York County	89.9%	67.6%
Pennsylvania	86.3%	64.8%
United States	85.0%	63.0%

Source: Dartmouth Atlas of Health Care, 2014

Assistance with Activities of Daily Living (ADLs)

Chronic conditions and related disabilities can lead to limitations in activities of daily living. Approximately 5% of older adults in Pennsylvania have difficulty dressing or bathing, 25% have difficulty walking or climbing steps, and 5% have difficulty with vision. Percentages for these indicators within the three reporting regions are similar to or lower than state benchmarks.

Adults 65 Years or Over Requiring Assistance with ADLs

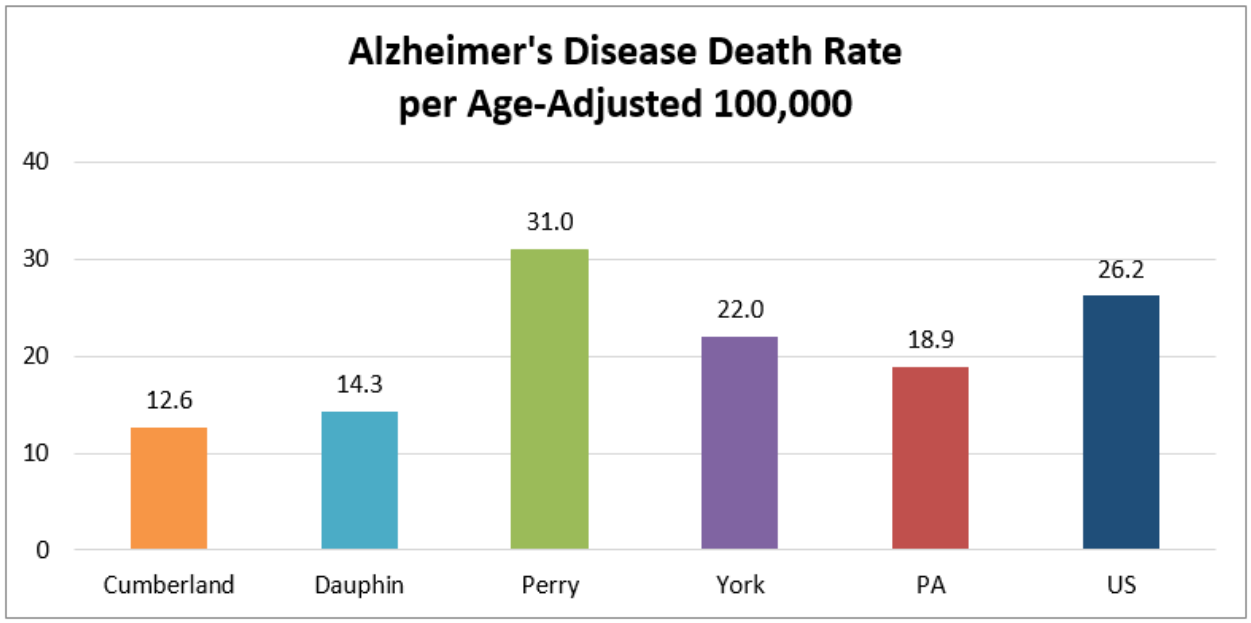
	Have Difficulty Dressing or Bathing	Have Serious Difficulty Walking or Climbing Stairs	Blind or Serious Difficulty Seeing, Even with Glasses
Region 1: Cumberland/Perry	1%	21%	5%
Region 2: Dauphin/Lebanon	5%	19%	5%
Region 3: York	4%	25%	6%
Pennsylvania	5%	25%	5%

Source: PA Department of Health BRFSS, 2014-2016

Alzheimer's Disease

According to the National Institute on Aging, "Although one does not die of Alzheimer's disease, during the course of the disease, the body's defense mechanisms ultimately weaken, increasing susceptibility to catastrophic infection and other causes of death related to frailty."

Perry County has the lowest percentage of Medicare Beneficiaries age 65 years or over with Alzheimer's disease, but the county death rate exceeds the state and the nation. Death rates for all other South Central region counties are lower than the state and/or nation.



Source: CDC Wonder, 2013-2015

Immunizations

Pneumococcal disease continues to be a leading cause of serious illness among older adults. According to the CDC, approximately 13,500 cases of invasive pneumococcal disease occurred among adults age 65 years or over in 2013. Approximately 20%–25% of the cases are potentially preventable with proper vaccination. Older adults in the South Central region are just as likely or more likely to receive a pneumonia vaccine when compared to the state.

Adults 65 Years or Over Who Received a Pneumonia Vaccination

	Ever Received a Pneumonia Vaccination
Region 1: Cumberland/Perry	80%
Region 2: Dauphin/Lebanon	78%
Region 3: York	72%
Pennsylvania	72%

Source: PA Department of Health BRFSS, 2014-2016

Maternal and Infant Health

Total Births

The overall birth rate is highest in Dauphin and Perry Counties. Births in all counties were primarily to White mothers. Dauphin County had the most births to non-White mothers; York County had the most births to Hispanic/Latino mothers.

2015 Births by Race and Ethnicity

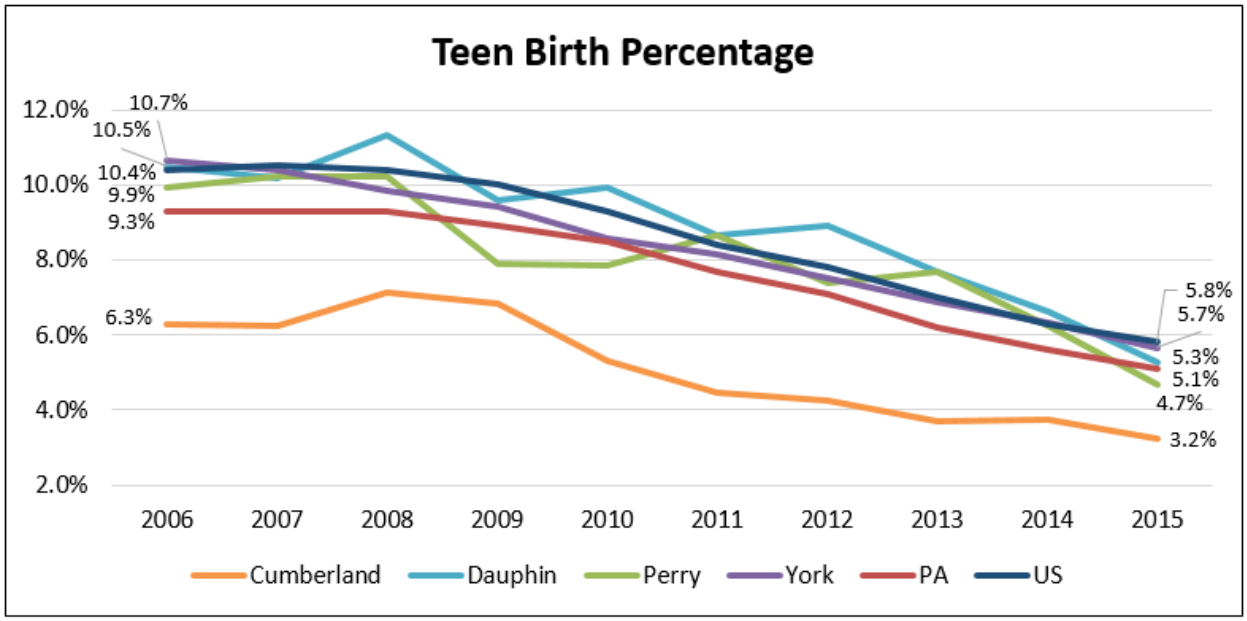
	Total Births	Birth Rate per 1,000	White Birth Count	Black/African American Birth Count	Hispanic/ Latino Birth Count
Cumberland County	2,638	21.2	2,181	126	112
Dauphin County	3,371	24.0	1,919	757	423
Perry County	534	23.6	514	1	8
York County	4,962	22.2	3,926	352	531

Source: PA Department of Health, 2015

Teen Births

The percentage of births to teenagers is declining in all counties. Dauphin, Perry, and York Counties had the greatest decline in teen births over the past decade (5 points). All counties have a lower percentage of teen births compared to the nation, Cumberland and Perry Counties also have a lower percentage compared to the state.

The percentage of births to teenage mothers is declining in all counties; all counties have a lower percentage when compared to the nation



Source: CDC National Vital Statistics System, 2006-2015 & PA Department of Health, 2006-2015

Prenatal care should begin during the first trimester to ensure a healthy pregnancy and birth. None of the South Central region counties meet the Healthy People 2020 goal for first trimester care. However, the percentage of mothers receiving first trimester care is higher in all counties except Perry when compared to the state. The percentage of Dauphin County mothers receiving first trimester care increased by 7 points between 2006 and 2015; percentages in all other counties remained stable.

South Central region counties do not meet HP 2020 goals for prenatal care or smoking during pregnancy

Low birth weight is defined as a birth weight of less than 5 pounds, 8 ounces. It is often a result of premature birth, fetal growth restrictions, or birth defects. The low birth weight percentage across the state and the nation has been consistent over the past decade at approximately 8%. York County percentages are consistent with state and national trends. Percentages for Cumberland and Perry Counties have been variable, but have consistently met the Healthy People 2020 goal. Percentages for Dauphin County have also been variable, but have consistently exceeded all state and national benchmarks.

Mothers in the South Central region do not meet the Healthy People 2020 goal for smoking during pregnancy, and all counties except Cumberland exceed the state benchmark. However, the percentage of mothers who smoke during pregnancy is decreasing in all counties. York County had the greatest percentage point decline (6 points) between 2006 and 2015.

All South Central region counties meet the HP 2020 goals for breastfeeding and preterm birth

Mothers in all South Central region counties meet or nearly meet the Healthy People 2020 goal for breastfeeding and preterm birth. Between 2006 and 2015, York County had the greatest improvement in the percentage of breastfeeding mothers, while Dauphin County had the greatest improvement in premature births.

Across the South Central region, Black/African American and Hispanic/Latina women are more likely than White women to have adverse maternal and child health outcomes. They do not meet the Healthy People 2020 goal for first trimester care by as much as 24 points. They also have higher rates of low birth weight infants and preterm births, and are less likely to breastfeed.

Black/African American and Hispanic/Latina women have worse maternal and child health outcomes than White women

White mothers are more likely to smoke during pregnancy. In Cumberland County, 13% of White mothers smoke during pregnancy compared to 8% of Black/African American and 5% of Hispanic/Latina mothers.

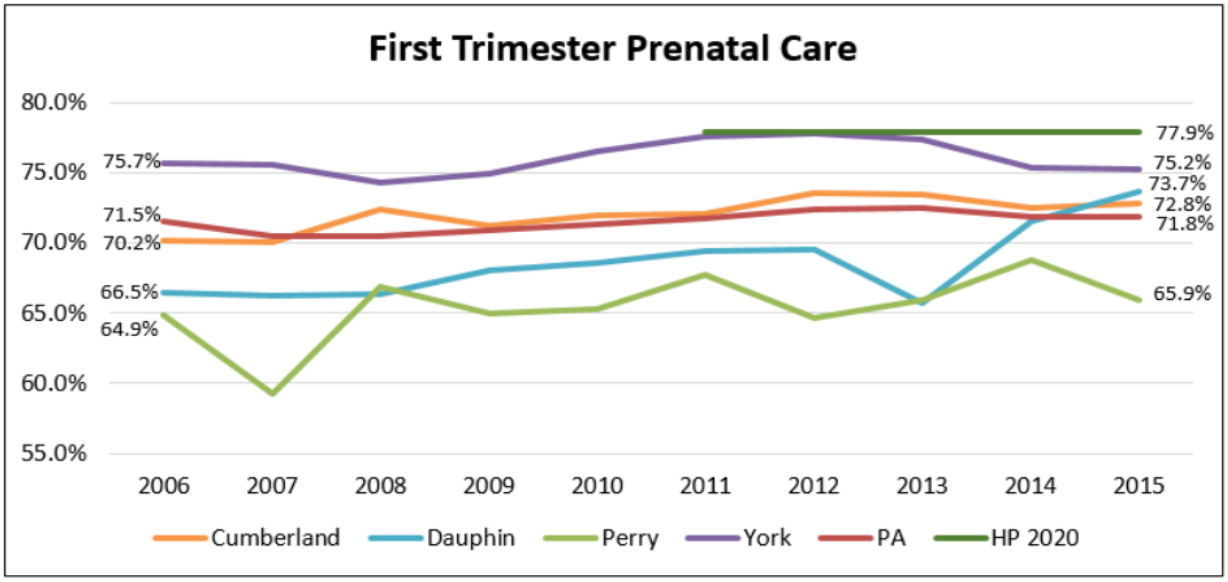
Maternal and Child Health Indicators by Race and Ethnicity

	Cumberland County	Dauphin County	Perry County	York County	Healthy People 2020 Goal
Mothers with First Trimester Care					
Total Population	72.8%	73.7%	65.9%	75.2%	77.9%
White	74.2%	77.3%	NA	77.6%	
Black/African American	54.2%	69.7%	NA	61.2%	
Hispanic/Latina	69.8%	68.1%	NA	66.6%	
Low Birth Weight Infants					
Total Population	7.3%	9.5%	6.0%	8.2%	7.8%
White	6.4%	8.0%	NA	7.4%	
Black/African American	11.1%	12.2%	NA	15.3%	
Hispanic/Latina	11.6%	9.7%	NA	9.2%	
Non-Smoking Mothers during Pregnancy					
Total Population	88.6%	86.0%	79.8%	87.1%	98.6%
White	87.5%	84.9%	NA	86.7%	
Black/African American	92.3%	85.0%	NA	86.0%	
Hispanic/Latina	95.3%	89.9%	NA	91.5%	
Breastfeeding					
Total Population	88.2%	81.8%	83.1%	83.7%	81.9%
White	88.4%	86.5%	NA	84.5%	
Black/African American	78.6%	69.5%	NA	72.6%	
Hispanic/Latina	86.4%	78.9%	NA	84.5%	
Preterm Births					
Total Population	9.6%	9.9%	10.1%	9.6%	9.4%*
White	9.0%	9.2%	NA	9.1%	
Black/African American	11.1%	12.8%	NA	13.9%	
Hispanic/Latina	16.1%	10.9%	NA	10.4%	

Source: PA Department of Health, 2015 & Healthy People 2020

*The Healthy People 2020 goal for preterm birth was revised in 2017 from 11.4% to 9.4%.

**Indicators by race and ethnicity are only reported for counties with more than 20 births among minority populations.



Source: PA Department of Health, 2006-2015 & Healthy People 2020

The following municipalities within each county do not meet the Healthy People 2020 goal for mothers receiving first trimester prenatal care (77.9%) by more than 3 points. Municipalities are presented in ascending order by percentage of mothers receiving first trimester prenatal care.

Municipalities That Do Not Meet the Healthy People 2020 Goal (77.9%) for Mothers Receiving First Trimester Prenatal Care by More Than 3 Points

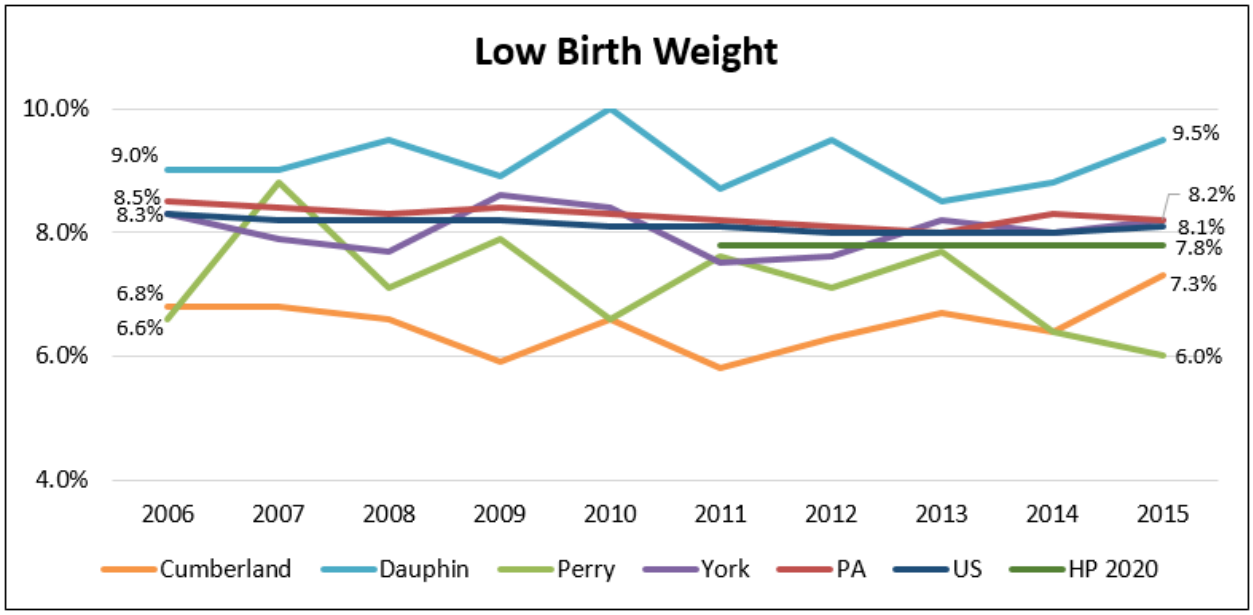
Cumberland County		Dauphin County		Perry County		York County	
Municipality	%	Municipality	%	Municipality	%	Municipality	%
Hopewell Twp.	39.0%	Lykens Twp.	23.2%	Jackson Twp.	20.3%	Lower Chanceford Twp.	48.6%
South Newton Twp.	50.0%	Mifflin Twp.	26.2%	Northeast Madison Twp.	28.6%	Washington Twp.	56.5%
Upper Mifflin Twp.	51.9%	Gratz Boro.	42.9%	Southwest Madison Twp.	43.2%	York City	65.6%
Penn Twp.	54.8%	Washington Twp.	55.6%	Toboyne Twp.	44.0%	York Haven Boro.	66.7%
North Newton Twp.	56.0%	Harrisburg City	56.0%	Saville Twp.	49.4%	Hanover Boro.	68.3%
Newville Boro.	59.6%	Upper Paxton Twp.	58.3%	Tyrone Twp.	53.5%	Peach Bottom Twp.	69.1%
Carlisle Boro.	61.2%	Steelton Boro.	60.6%	Tuscarora Twp.	59.5%	Chanceford Twp.	69.5%
Upper Frankford Twp.	62.6%	Halifax Boro.	61.3%	Liverpool Twp.	61.1%	Wrightsville Boro.	69.8%
Southampton Twp.	62.7%	Highspire Boro.	63.4%	Newport Boro.	63.5%	Franklin Twp.	69.8%
Lower Frankford Twp.	64.7%	Lykens Boro.	64.8%	Spring Twp.	63.8%	Manchester Boro.	70.2%
West Pennsboro Twp.	67.5%	Williamstown Boro.	67.5%	Landisburg Boro.	64.0%	Heidelberg Twp.	70.7%
Wormleysburg Boro.	67.9%	Middletown Boro.	67.7%	Duncannon Boro.	64.1%	Dillsburg Boro.	71.6%
Mount Holly Springs Boro.	68.2%	Penbrook Boro.	68.0%	Oliver Twp.	64.8%	North York Boro.	72.0%

Source: PA Department of Health, 2011-2015
*Only municipalities with more than 20 reported births are included.

Municipalities That Do Not Meet the Healthy People 2020 Goal (77.9%) for Mothers Receiving First Trimester Prenatal Care by More Than 3 Points (cont'd)

Cumberland County		Dauphin County		Perry County		York County	
Municipality	%	Municipality	%	Municipality	%	Municipality	%
South Middleton Twp.	68.4%	Paxtang Boro.	69.5%	Centre Twp.	65.2%	Lewisberry Boro.	72.5%
Shippensburg Twp.	68.9%	Londonderry Twp.	69.9%	Greenwood Twp.	65.5%	Loganville Boro.	73.8%
Shippensburg Boro.	68.9%	Williams Twp.	70.0%	Buffalo Twp.	67.3%	Yoe Boro.	73.9%
Middlesex Twp.	69.3%	Royalton Boro.	70.1%	Wheatfield Twp.	68.5%	Felton Boro.	74.3%
Monroe Twp.	72.1%	Elizabethville Boro.	70.5%	Juniata Twp.	68.7%	Codorus Twp.	74.3%
Mechanicsburg Boro.	72.3%	Wiconisco Twp.	71.0%	Miller Twp.	70.3%	Monaghan Twp.	74.4%
East Pennsboro Twp.	74.0%	Halifax Twp.	71.1%	Carroll Twp.	71.8%	Shrewsbury Boro.	74.4%
New Cumberland Boro.	74.4%	Millersburg Boro.	72.5%	Bloomfield Boro.	72.4%	Penn Twp.	74.4%
Dickinson Twp.	74.5%	Lower Swatara Twp.	72.6%	Watts Twp.	74.1%	Paradise Twp.	74.5%
		Lower Paxton Twp.	73.8%	Millerstown Boro.	74.4%	Manheim Twp.	74.6%
		Susquehanna Twp.	74.3%				
		Swatara Twp.	74.8%				

Source: PA Department of Health, 2011-2015
*Only municipalities with more than 20 reported births are included.



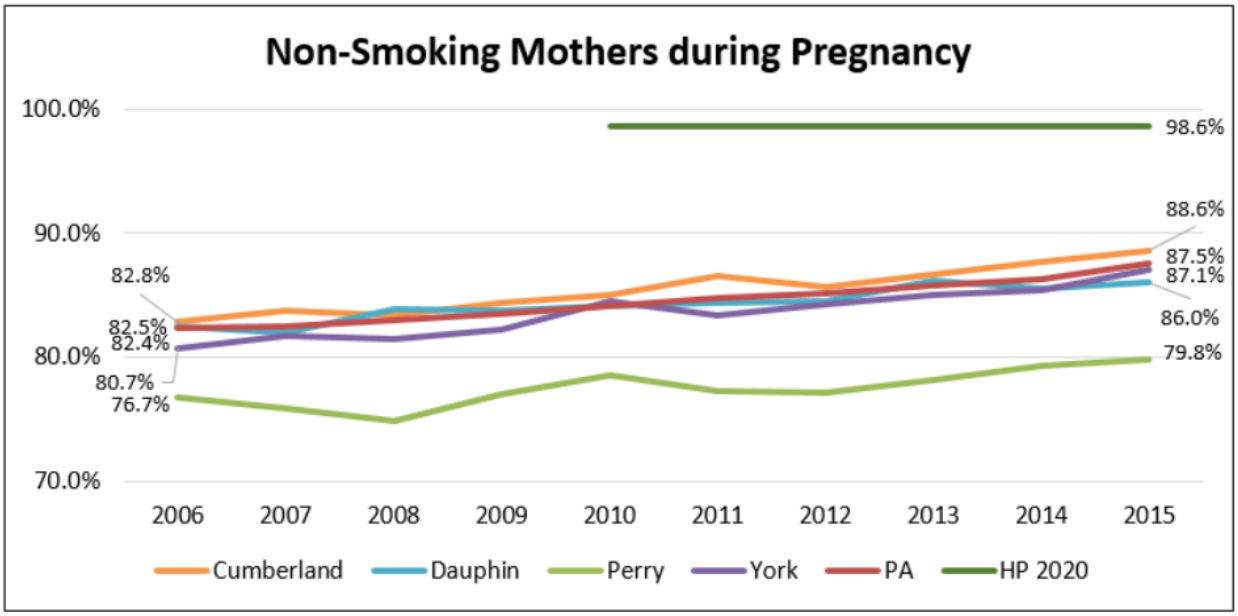
Source: PA Department of Health, 2006-2015 & Healthy People 2020

The following municipalities within each county do not meet the Healthy People 2020 goal for low birth weight babies (7.8%) by more than 3 points. Municipalities are presented in descending order by percentage of low birth weight babies.

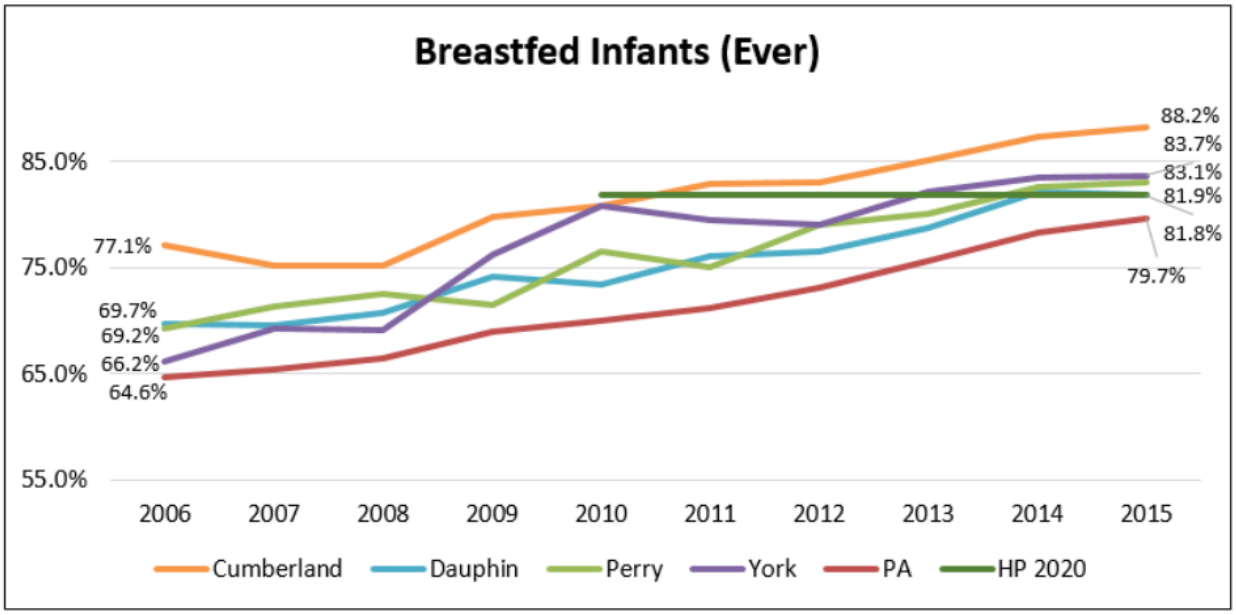
Municipalities that Do Not Meet the Healthy People 2020 Goal (7.8%) for Low Birth Weight Babies by More Than 3 Points

Cumberland County		Dauphin County		Perry County		York County	
Municipality	%	Municipality	%	Municipality	%	Municipality	%
Newburg Boro.	13.6%	Williams Twp.	13.3%	Greenwood Twp.	14.5%	East Prospect Boro.	18.3%
		Harrisburg City	11.9%	Miller Twp.	14.1%	York Haven Boro.	12.1%
		Middletown Boro.	11.1%	Duncannon Boro.	11.1%	Lewisberry Boro.	11.8%
						York City	11.5%
						North York Boro.	11.3%
						Red Lion Boro.	10.9%

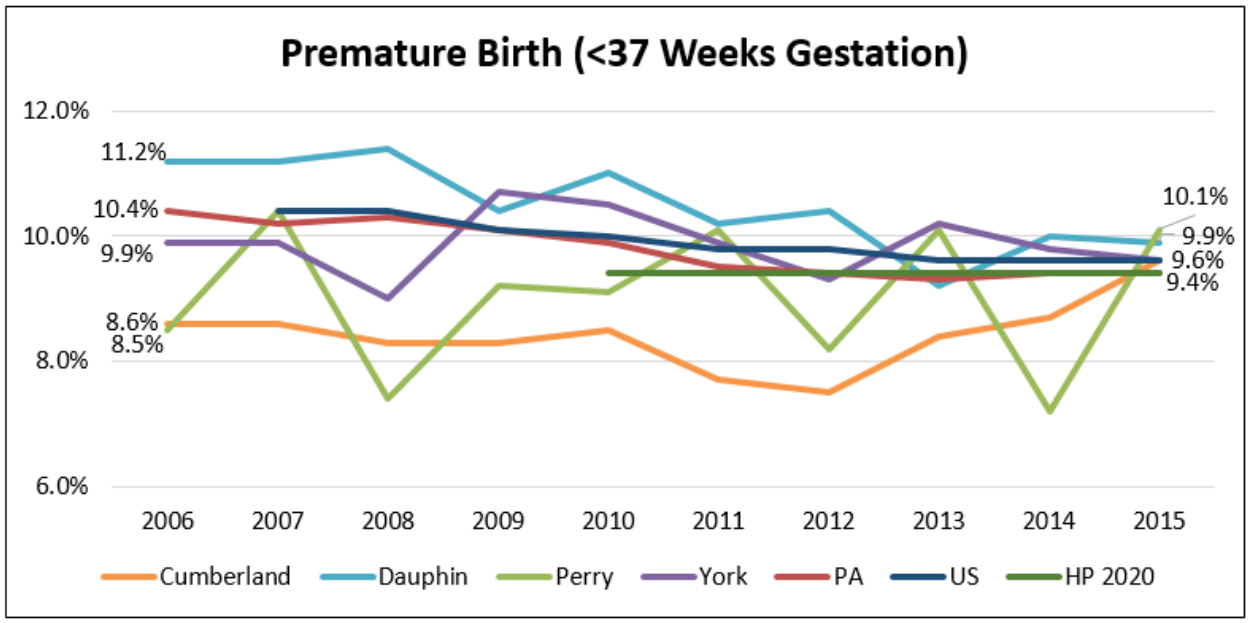
Source: PA Department of Health, 2011-2015
*Only municipalities with more than 20 reported births are included.



Source: PA Department of Health, 2006-2015 & Healthy People 2020

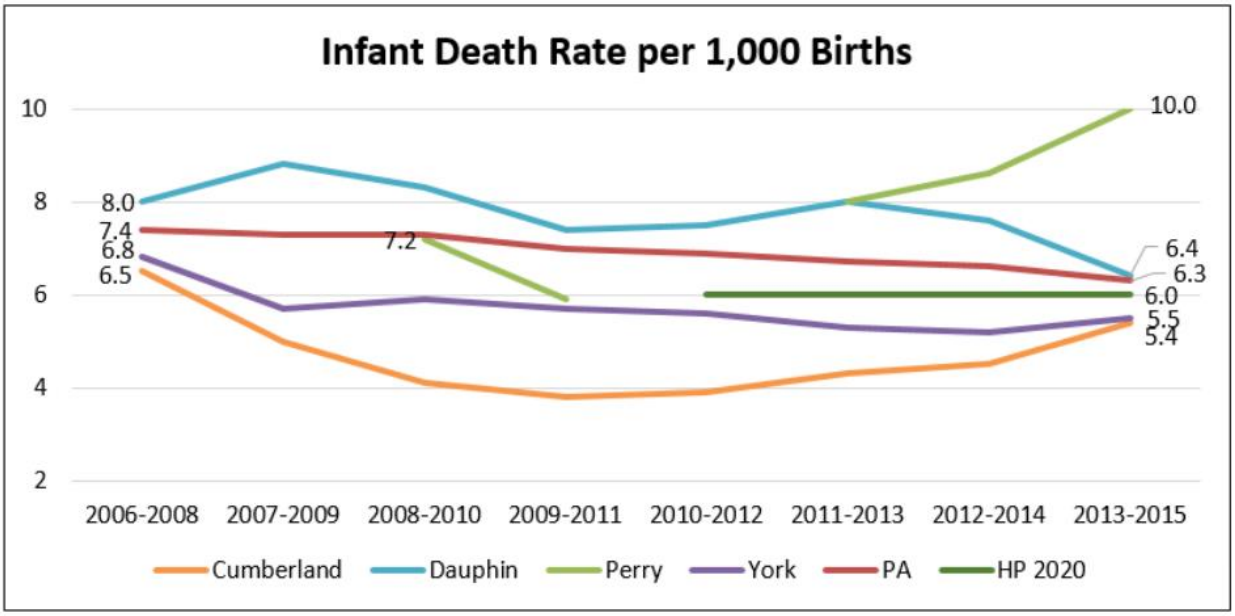


Source: PA Department of Health, 2006-2015 & Healthy People 2020



Source: PA Department of Health, 2006-2015 & Healthy People 2020

Maternal and child health indicators and disparities impact infant death rates. Death rates for Cumberland and York Counties meet the Healthy People 2020 goal. The Dauphin County death rate is decreasing and nearly meets the Healthy People 2020 goal. The Perry County death rate is the highest in the region, exceeding the Healthy People 2020 goal by 4 points.



Source: PA Department of Health, 2006-2015 & Healthy People 2020
*Data for Perry County is limited due to low death counts.

Death rates by race and ethnicity are reported for Dauphin and York Counties. Blacks/African Americans and Hispanics/Latinos have a higher infant death rate than Whites.

Infant Death Rate by Race and Ethnicity

	White Infant Death Rate	Black/African American Infant Death Rate	Hispanic/ Latino Infant Death Rate
Dauphin County	2.6	17.8	NA
York County	4.3	11.5	11.0
Pennsylvania	4.8	13.3	7.1

Source: PA Department of Health, 2013-2015

Key Informant Survey Summary

The Key Informant Survey was conducted with 34 community leaders representing diverse populations across the South Central region. The most commonly served populations by key informants are shown in the table below.

Populations Served by Key Informants

	Percent of Informants*	Number of Informants
Not Applicable (Serve all populations)	44.1%	15
Low income/Poor	41.2%	14
Uninsured/Underinsured	38.2%	13
Children/Youth	29.4%	10
Families	29.4%	10
Seniors/Elderly	26.5%	9
Homeless	20.6%	7
Disabled	14.7%	5
Men	14.7%	5
Women	11.8%	4
Other**	11.8%	4

*Key informants were able to select multiple counties. Percentages may not add up to 100%.

**Other response: Persons with behavioral health issues, food insecure residents, undergraduate students.

Approximately 44% of key informants “disagree” that the community is healthy. When asked what health conditions and factors contribute to poor health among residents, informants identified the following top needs:

Top Health Conditions

- Substance abuse
- Mental health conditions
- Diabetes
- Overweight/Obesity

Top Contributing Factors

- Ability to afford healthcare
- Health habits
- Drug/Alcohol use

Informants acknowledged the impact of social determinants, particularly affordable care and poverty, on the top contributing factors to health conditions. “There is a lack of affordable healthcare, a lack of providers taking Medicaid, and limited transportation and support services. Prevention services are not readily available and/or affordable. There is a lack of living wage employment or local employment opportunities.” “The ‘healthy options’ tend to be more expensive and not everyone can afford the better options.”

Behavioral health providers were identified as the most needed resource in the community; 91% of key informants disagree that there is a sufficient number. Informants identified the need for cross-agency collaboration to improve access to behavioral health services for all residents. “Continued, vigorous, collaborative and inclusive leadership on the opioid epidemic is also

desperately needed. Geisinger is a huge resource. How do we do a better job of bridging health system solutions to people in need? How do we create stronger community pipelines across many other organizations (no wrong door) to evidence-based drug treatment services?"

Approximately 24% to 44% of informants disagree that residents have a regular primary care provider and can access a medical specialist when they need care. The top barriers to accessing healthcare services are a lack of bilingual providers, transportation for appointments, and providers that accept Medicaid/Medical Assistance. Informants also noted that residents may not seek regular care because they "feel healthy" and/or cannot afford out-of-pocket costs (copays, deductibles, prescriptions, etc.). Potentially related to residents not feeling like they need to go to the doctor is lack of awareness or emphasis of preventive health measures.

Social determinants of health impact the ability of individuals to access healthcare and maintain healthy lifestyles. The majority of key informants rated social determinants within the community as "average." Education, including graduation rates, language and literacy, etc., was rated the highest by informants (2.91 out of 5). Health and healthcare, including access to care and health literacy, and economic stability, including poverty, employment, and food insecurity, were rated the lowest by informants (2.52 and 2.55 respectively).

Key informants were asked to share what resources are missing in the community that would help residents optimize their health. The top identified missing resources were mental health services, health and wellness education and programs, and transportation options. "There is a need for opportunities for social connectivity - ways to address social isolation/stress." "There is a need for more community outreach to those who lack transportation resources, health insurance, education; meet people where they are." "Most services that are considered specialty are at least 30 miles away. There is a lack of public transportation services."

When asked how local and regional healthcare providers can better engage community members to achieve optimal health outcomes, informants made recommendations focused on community engagement; prevention; improved healthcare access; and community partnerships to address needs. The following are select recommendations by informants:

- Continue to improve patient and community member engagement through programs like the Fresh Food Farmacy
- Emphasize prevention through health promotion education and outreach both in the clinical and community setting
- Expand community-based models like the Nurse-Family Partnership, Community Health Workers, and Camden Coalition's Hot Spotter's initiative
- Improve access to behavioral health providers
- Improve access to health services and promotion initiatives by "meeting people where they are"; improving transportation options for medical appointments; and increasing awareness of available clinic locations and hours of operation
- Promote and support cross-agency partnerships to improve community health and offer community-based services

Key Informant Survey Analysis

Background

A Key Informant Survey was conducted with community representatives to solicit information about health needs and disparities among residents. Key informants were asked a series of questions about their perceptions of health needs in the community, health drivers, barriers to care, and recommendations for community health improvement.

The survey was conducted with 113 key informants across the 19-county service area; 34 informants serve the South Central region. Approximately 44% of informants serve all population groups. The most commonly served special population groups are low income/poor and uninsured/underinsured. A list of community organizations represented by key informants, and their respective role/title, is included in Appendix B.

South Central Region Counties Served by Key Informants

	Percent of Informants*	Number of Informants
Perry County	82.4%	28
Cumberland County	73.5%	25
Dauphin County	70.6%	24
York County	47.1%	16

*Key informants were able to select multiple counties. Percentages may not add up to 100%.

Populations Served by Key Informants

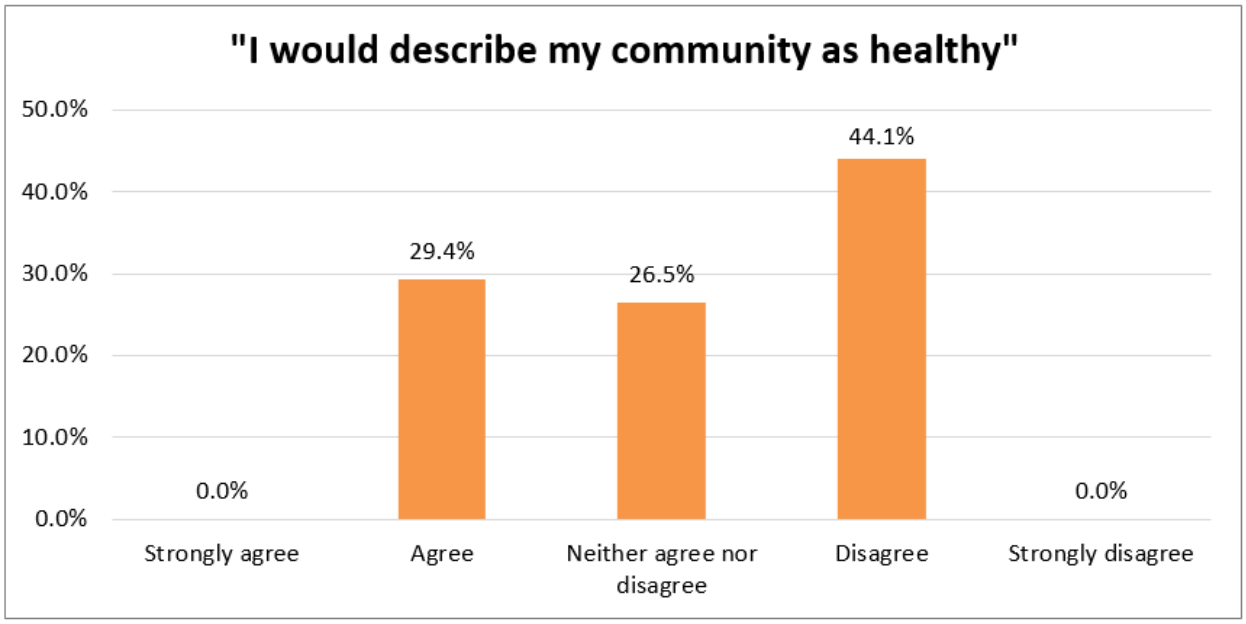
	Percent of Informants*	Number of Informants
Not Applicable (Serve all populations)	44.1%	15
Low income/Poor	41.2%	14
Uninsured/Underinsured	38.2%	13
Children/Youth	29.4%	10
Families	29.4%	10
Seniors/Elderly	26.5%	9
Homeless	20.6%	7
Disabled	14.7%	5
Men	14.7%	5
Women	11.8%	4
Other**	11.8%	4
Black/African American	8.8%	3
LGBTQ+ community	8.8%	3
Hispanic/Latino	5.9%	2
American Indian/Alaska Native	2.9%	1
Asian/Pacific Islander	2.9%	1
Immigrant/Refugee	2.9%	1

*Key informants were able to select multiple counties. Percentages may not add up to 100%.

**Other response: Persons with behavioral health issues, food insecure residents, undergraduate students.

Community Health Needs

Approximately 44% of informants “disagree” that their community is healthy, while less than 30% of informants “agree” that their community is healthy. When asked what health conditions are affecting residents, informants stated that substance abuse is the top concern for the region, followed by mental health conditions, diabetes, and overweight/obesity.



Health Conditions Affecting Residents

Ranking	Condition	Informants Selecting as the Top (#1) Health Concern	Informants Selecting as a Top 3 Health Concern	
			Percent	Count
1	Substance abuse	24.2%	14.1%	14
2	Mental health conditions	21.2%	21.2%	21
3	Diabetes	18.2%	10.1%	10
4	Overweight/Obesity	18.2%	21.2%	21
5	Cancers	6.1%	4.0%	4
6	Alzheimer's disease/Dementia	3.0%	2.0%	2
7	Heart disease and stroke	3.0%	8.1%	8
8	Infectious disease	3.0%	2.0%	2
9	Other*	3.0%	4.0%	4
10	Dental problems	0.0%	4.0%	4
11	Suicide	0.0%	3.0%	3
12	Tobacco use	0.0%	2.0%	2
13	Autism	0.0%	1.0%	1
14	Disability	0.0%	1.0%	1
15	Domestic violence	0.0%	1.0%	1
16	Respiratory disease	0.0%	1.0%	1

*Other responses: Chronic conditions, drug use, access to care, women’s health issues.

Key informants identified the top contributing factor to health conditions as the ability to afford healthcare, followed by health habits, such as diet and physical activity.

> *"There is a lack of affordable healthcare, a lack of providers taking Medicaid, and limited transportation and support services. Prevention services are not readily available and/or affordable. There is a lack of living wage employment or local employment opportunities."*

> *"The "healthy options" tend to be more expensive and not everyone can afford the better options."*

Informants highlighted the interrelatedness of contributing factors and the impact of social determinants of health. Specific comments from respondents highlight the issues:

> *"So many are interrelated. Lack of transportation, educational training beyond high school for a better paying job, and poor parenting skills are paramount problems."*

> *"Substance abuse concerns transcend socio economic boundaries - I am sure the determinants are varied and to an extent interrelated."*

> *"Our health systems need to invest more in integrated, community health solutions that are available in local neighborhoods."*

Top Contributing Factors to Conditions Affecting Residents

Ranking	Contributing Factor	Informants Selecting as the Top (#1) Contributor	Informants Selecting as a Top 3 Contributor	
			Percent	Count
1	Ability to afford healthcare	26.5%	15.7%	16
2	Health habits	17.6%	15.7%	16
3	Drug/Alcohol use	11.8%	6.9%	7
4	Poverty	8.8%	6.9%	7
5	Availability of health and wellness programs	5.9%	5.9%	6
6	Availability of healthy food options	5.9%	5.9%	6
7	Health literacy	5.9%	9.8%	10
8	Lack of preventive healthcare	5.9%	5.9%	6
9	Education attainment	2.9%	2.9%	3
10	Environmental quality	2.9%	1.0%	1
11	Number of healthcare providers available in the community	2.9%	4.9%	5
12	Social support	2.9%	4.9%	5
13	Stress	0.0%	4.9%	5
14	Transportation	0.0%	3.9%	4
15	Other*	0.0%	2.9%	3
16	Health insurance	0.0%	1.0%	1
17	Unemployment	0.0%	1.0%	1

*Other responses: Marketing of unhealthy foods, lack of exercise, parental choices/role modeling, stigma.

Healthcare Access

Key informants were asked to rate the availability of health services within the region. The following table depicts their responses on a scale of (1) “strongly disagree” to (5) “strongly agree.”

Access to a regular primary care provider and vision care received the highest overall mean scores, indicating greater availability within the community. However, the services are still considered limited. Approximately 24% to 29% of informants “disagree” that they are available to residents.

Informants were least likely to agree that there is a sufficient number of mental health/behavioral health and bilingual providers. Transportation to medical appointments is also a top concern for the region. “There is no public transportation in Perry County and it is extremely limited in northern Dauphin County and Cumberland County which makes seeking assistance difficult.”

Access to Healthcare Services

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	**Mean Score**
Residents have a regular primary care provider/doctor/practitioner that they go to for healthcare.	0.0%	23.5%	44.1%	29.4%	2.9%	**3.12**
Residents can receive vision care when they need it.	8.8%	20.6%	38.2%	29.4%	2.9%	**2.97**
Providers in the community are culturally sensitive to race, ethnicity, cultural preferences, etc. of patients.	8.8%	17.6%	55.9%	14.7%	2.9%	**2.85**
Residents can access a medical specialist (i.e., Cancer, Cardiovascular, Neuroscience, Orthopedics, Women’s and Children’s, etc.) when they need care.	5.9%	38.2%	29.4%	23.5%	2.9%	**2.79**
Residents can receive dental care when they need it.	17.6%	32.4%	26.5%	20.6%	2.9%	**2.59**
There are a sufficient number of providers that accept Medicaid/Medical Assistance in this community.	20.6%	41.2%	26.5%	11.8%	0.0%	**2.29**
Residents have available transportation (public, personal, or other service) for medical appointments and other services.	17.6%	47.1%	26.5%	8.8%	0.0%	**2.26**
There are a sufficient number of bilingual providers in this community.	23.5%	44.1%	26.5%	5.9%	0.0%	**2.15**
There are a sufficient number of mental/behavioral health providers in the community.	44.1%	47.1%	8.8%	0.0%	0.0%	**1.65**

Key informants were then asked to identify the primary reasons that individuals who have health insurance do not receive regular care to maintain their health. The top reasons identified by informants are that individuals feel healthy and don't need to go to the doctor and/or are unable to afford care. The third most common reason is lack of awareness or emphasis of preventive health measures.

Primary Reason Individuals with Insurance Do Not Receive Regular Care

Ranking	Reason	Informants Selecting as the Top (#1) Reason	Informants Selecting as a Top 3 Reason	
			Percent	Count
1	Feel healthy ("Don't need to go to the doctor")	21.2%	17.2%	17
2	Unable to afford care (copays, deductibles, prescriptions, etc.)	21.2%	25.3%	25
3	Awareness/Emphasis of preventive health measures	18.2%	14.1%	14
4	Lack of transportation to access healthcare services	15.2%	10.1%	10
5	Limited office hours of providers (no weeknight/weekend office hours)	9.1%	7.1%	7
6	Providers not accepting insurance/new patients	6.1%	11.1%	11
7	Fear of diagnosis, treatment	3.0%	6.1%	6
8	Lack of providers available in the community	3.0%	5.1%	5
9	Personal beliefs or community biases related to religion, spirituality, culture, gender/sexual orientation, etc.	3.0%	2.0%	2
10	Providers do not speak their language	0.0%	1.0%	1
11	Other*	0.0%	1.0%	1

*Other responses include: Unable to afford insurance premiums.

Social determinants of health impact the ability of individuals to access healthcare and maintain healthy lifestyles. Key informants were asked to rate social determinants of health in the community, including economic stability, education, health and healthcare, neighborhood and built environment, and social and community context, on a scale of (1) "very poor" to (5) "excellent."

The majority of key informants rated social determinants as "average." Education was rated the highest with an average rating of 2.91. However, 24% of informants stated it is "poor" or "very poor."

Health and healthcare was rated the lowest by key informants with an average rating of 2.52. Informants cited concerns related to social isolation and community and patient engagement:

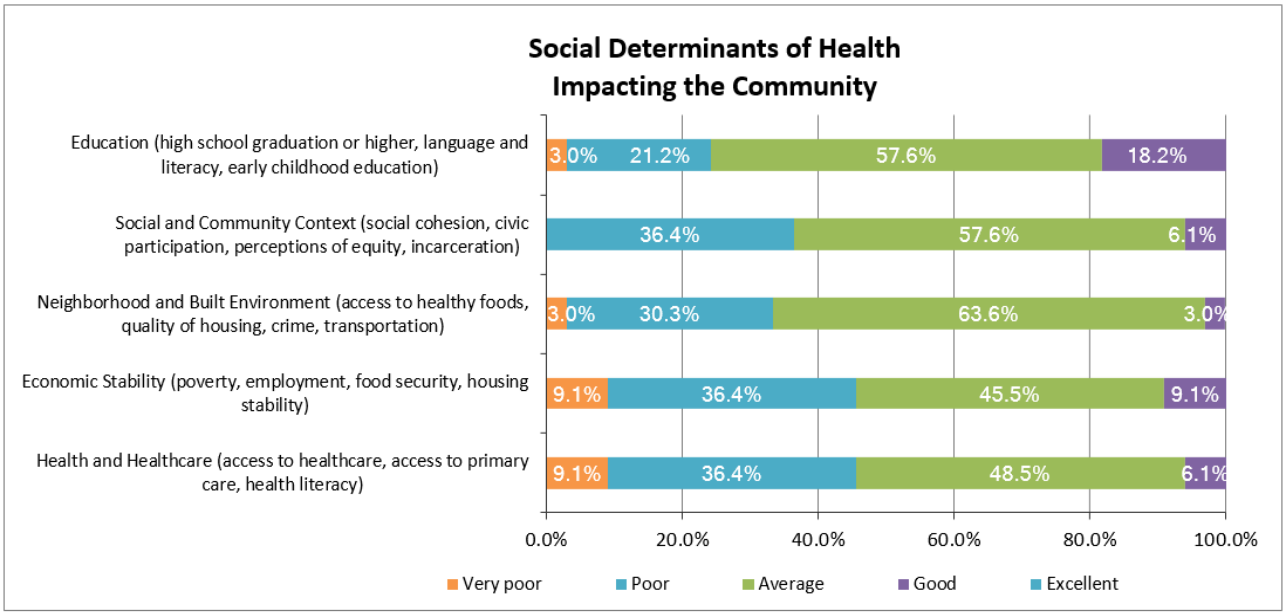
"Within Cumberland County, and to a lesser degree Perry County, availability of healthcare resources is not the primary issue. Failure of patients to actively accept accountability for their health and to use available resources in a judicious manner is the bigger issue."

"Social isolation and lack of engagement in community events precipitate sedentary lifestyles and unhealthy dietary/exercise habits."

Economic stability also received a low rating by informants with an average mean score of 2.55. Informants cited concerns related to poverty and employment opportunities:

"Over one-third of our population lives 200% or below poverty level. At least half of our school districts' students receive free/reduced lunches. Workforce development programs are needed."

"To have any success in improving population health, we need to focus more intently on root issues of poor health for low-income, vulnerable individuals and families. For example, half of the families in our region who rely on food from local food banks are working households… Increasing local employment opportunities that provide family sustaining wages is essential."



Ranking	Social Determinant of Health	Mean Score
1	Education	2.91
2	Social and Community Context	2.70
3	Neighborhood and Built Environment	2.67
4	Economic Stability	2.55
5	Health and Healthcare	2.52

Other Comments to Support Perceptions of Social Determinants of Health

- *"As a region, we need to shift our focus to prevention and come together to more effectively address social determinants of health. It will take time but it's the right path and Geisinger has significant capacity to be a leader. Continued, vigorous, collaborative and inclusive leadership on the opioid epidemic is also desperately needed. Geisinger is a huge resource. How do we do a better job of bridging health system solutions to people in need? How do we create stronger community pipelines across many other organizations (no wrong door) to evidence-based drug treatment services?"*
- *"Lack of public transportation is why I rated neighborhood and built environment low."*
- *"There are more issues in Dauphin and Perry Counties than in Cumberland County."*
- *"The mixed urban rural nature of the mid-state tends to contribute to lack of access."*
- *"There are rarely second chance employment opportunities or supports to help those re-entering the community to do well. No public transportation for those 59 and younger without a disability. Healthy eating is not something many learn at home and many purchase already processed food."*
- *"There is a very significant lack of understanding and training as it relates to dementia in the local provider and healthcare community. While our constituents may have access to care, they have limited access to quality care capable of responding to their needs."*

Community Resources

Key informants were asked to share what resources are missing in the community that would help residents optimize their health. More than three-quarters of informants identified the need for mental health services. Specific comments related to this issue were:

> *"Since the closure of the state hospital, there are not enough mental health providers for the severely ill patients."*
>
> *"Mental health issues are high and the number of group homes are limited."*
>
> *"There is a need for opportunities for social connectivity - ways to address social isolation/stress."*

More than half of the informants identified the need for health and wellness education and programs, transportation options, and dental care.

> *"There is a need for more community outreach to those who lack transportation resources, health insurance, and education; Meet people where they are."*
>
> *"Many people are health illiterate and only go to the doctor when or after there is a very great need."*
>
> *"Most services that are considered specialty are at least 30 miles away. There is a lack of public transportation services."*

Missing Resources within the Community to Optimize Health

Ranking	Resource	Percent of Informants	Number of Informants
1	Mental health services	78.8%	26
2	Health and wellness education and programs	69.7%	23
3	Transportation options	60.6%	20
4	Dental care	51.5%	17
5	Substance abuse services	45.5%	15
6	Healthy food options	42.4%	14
7	Community Clinics/Federally Qualified Health Centers (FQHC)	39.4%	13
8	Housing	33.3%	11
9	Multi-cultural or bilingual healthcare providers	30.3%	10
10	Home healthcare services	21.2%	7
11	Primary care services	21.2%	7
12	Specialty care services	21.2%	7
13	Child care providers	18.2%	6
14	Other	18.2%	6
15	Emergency care	15.2%	5
16	Outlets for physical activity (parks, rec centers, gyms, walking trails, etc.)	15.2%	5
17	Vision care	6.1%	2

"Other" Missing Resources

- *"Available but not as plentiful as needed."*
- *"More community outreach to those who lack transportation resources, health insurance, education. Meet people where they are."*
- *"More parenting skill training and communication/negotiation skills trainings."*
- *"Specialties that take Medicaid products/insurances."*

Other Comments to Support Selection of Top Missing Community Resources

- *"Completed a health access assessment of Perry County. Greatest perceived needs: substance abuse and behavioral health services and urgent care. Based on inventory of services greatest deficit - dental services."*
- *"I have a family member that needed in-patient mental health treatment and after spending 12 hours in crisis in the emergency room, the closest bed that we could get him in was in Reading (he lived on the West Shore, Cumberland County). There is a serious lack of providers."*
- *"Individuals are not aware of the care they should be receiving, or have little access to receiving it for an affordable price. There is also a huge gap in behavioral health services for all ages."*
- *"Primary care provider offices are saturated and no one is accepting MA. Many cannot afford healthcare services. Experiencing high levels of homelessness - we lack significant affordable housing to meet the need. Lack of employment opportunities that provide living wages and/or benefits."*
- *"Transportation is particularly difficult in rural areas."*
- *"We need more and better ways to reach all parents to improve family communication skills and support, as well as overall nutrition, health and wellbeing education. We also need more support for families dealing with disabled and ill seniors or other family members, especially if they don't qualify for Medicare or Medicaid."*

Key informants were asked for open-ended feedback regarding how local and regional healthcare providers can better engage community members to achieve optimal health outcomes. Informants made the following recommendations:

> Continue to improve patient and community member engagement through programs like the Fresh Food Farmacy
> Emphasize prevention through health promotion education and outreach both in the clinical and community setting
> Expand community-based models like the Nurse-Family Partnership, Community Health Workers, and Camden Coalition's Hot Spotter's initiative
> Improve access to behavioral health providers
> "Meet people where they are" to improve access to health services and promotion initiatives
> Improve transportation options for medical appointments
> Promote and support cross-agency partnerships to improve community health and offer community-based services
> Publish clinic locations and hours to improve access to appointments

To determine existing resources within the community and opportunities for collaboration, key informants were asked to share information about health and wellness programs or initiatives that their organization offers now or plans to provide in the future:

- Advantage Home Health Services: Advantage designed a specialized chronic care/caregiver model of care (S.T.A.R - Striving Together Achieving Results) as well as health and wellness programs for independent living and assisted living facilities to improve caregiver training and patient engagement.

- Alzheimer's Association: Each chapter offers five core services to support individuals with Alzheimer's and their families: information and referral; care consultation; support groups; safety services; and education. Some chapters offer special programs for people living with early-onset Alzheimer's, rural and/or multicultural outreach, care coordination services, and training programs for families and professionals.

- Dickinson College: In the process of forming the Community Health Learning and Action Network with Cumberland and Perry County organizations.

- Partnership for Better Health: Support the following community initiatives: Cumberland-Perry Task Force on Opioid Prescribing; Cumberland-Perry Affordable Housing Leadership Council; Cumberland County Health Improvement Partnership Program; Youth Networking Forum; Perry County Health Coalition.

- Penn State Extension: Offer multiple programs for youth and families: https://extension.psu.edu/.

- Pennsylvania Psychiatric Leadership Council: Developing a plan to recruit and retain psychiatrists in rural PA.

- Saint Elizabeth Ann Seton Catholic Church: Offer exercise programs, mental health counselors on-site, support groups, educational/informational sessions for youth and seniors, and community blood drives.

South Central Region Partner Forum Summary

As part of the Geisinger FY2019 CHNA, six Partner Forums were conducted across the 19-county service area, one each within the South Central and Western regions and two within the Central and Northeast regions. The objective of the forums was to share research to date and solicit feedback from community representatives. Participants were asked to share insight on priority health needs, underserved populations, existing community resources to address health needs, and gaps in services. The forum also served as a platform to identify opportunities for collaboration to address health needs.

South Central Region Partner Forum Logistics

January 9, 2018, 8:30-11:00am
Geisinger Holy Spirit, Camp Hill, Cumberland County
44 Attendees

Participants from the following counties were invited to the South Central region Partner Forum.

- Cumberland County
- Dauphin County
- Perry County
- York County

A list of attendees and their respective organizations is included in Appendix C.

South Central Region Partner Forum Findings

A total of 44 people representing a diverse mix of community organizations attended the South Central region Partner Forum. According to these participants, the cumulative ranking of health concerns in the South Central region are 1) maternal and child health; 2) substance abuse; 3) access to care; 4) aging services; 5) chronic disease management; 6) healthy lifestyles; and 7) mental healthcare. It is worthwhile to note that in rating the health issues, the criterion of “scope” and “severity” tended to be rated higher while “ability to impact” was ranked lowest. The voting and follow-up discussion illuminated the complexities of these issues and the myriad factors that influence our efforts to improve outcome measures for health needs.

Forum participants named immunizations and dental care as two of the top health concerns among children within the category of Maternal and Child Health. Substance abuse ranked as the second highest health priority, largely due to the impact of the opioid epidemic across the region. Partners identified the need for more substance abuse prevention programs across all age spans. Low income and uninsured populations are most likely to experience challenges in accessing care. Community Health Workers were seen as a successful initiative to increase access. The need for additional services for seniors reflects the increasing senior population. Programs that address social isolation, end-of-life planning, and caregiver support were of particular need. The forum participants ranked chronic disease management and healthy lifestyles lower than other health issues. Availability of high quality health providers and known interventions were considered positive. Free programs to motivate individuals to improve health

status were needed in local neighborhoods. Mental health was ranked as the least pressing need, but considered as a frequently co-existing condition among those with substance abuse disorders.

Prioritization Process

The CHNA research findings to date, which included secondary data analysis and Key Informant Survey results, were provided to participants in advance of the forum and formally presented to attendees. Questions about the data were encouraged and clarified. At the conclusion of the data presentation, a list of six health topics were presented to the group to consider as the top health needs in the community. Participants were asked to offer suggestions for additional health needs not captured on the list. Discussion ensued about factors that impact health and subcategories within each of the health categories. Ultimately, the participants agreed that the following health issues accurately represent the significant health concerns across the community.

Identified community health needs as identified by participants to consider for prioritization (listed in alphabetical order)

- Access to Care
- Aging Services
- Chronic Disease Management
- Healthy Lifestyles
- Maternal and Child Health
- Mental Healthcare
- Substance Abuse

To prioritize these health issues, participants were asked to rank the health issues by rating each need on a scale of 1 (low) to 4 (very high) for the following criteria:

- **Scope (How many people are affected?)**
- **Severity (How critical is the issue?)**
- **Ability to Impact (Can we achieve the desired outcome?)**

Participants used their smart phones or paper ballots to rate each health issue. Voting results were compiled and shared with the participants as depicted in the following tables.

Priority Health Need Rankings – South Central Region Partner Forum
Rankings are based on a score of 1 (low) to 4 (very high)

Overall Ranking	Identified Health Need	Scope of the Issue	Severity of the Issue	Ability to Impact the Issue	Overall Score
1	Maternal and Child Health	3.3	3.3	2.3	9.0
2	Substance Abuse	3.2	3.2	2.3	8.7
3	Access to Care	3.1	2.9	2.5	8.5
4	Aging Services	2.8	2.8	2.4	8.1
5	Chronic Disease Management	2.8	2.7	2.4	8.0
6	Healthy Lifestyles	2.7	2.6	2.3	7.6
7	Mental Healthcare	2.4	2.1	2.2	6.8

Voting results were presented in order of overall scores with ranking of individual criterion displayed. Participants' scoring rated "scope of the issue" and "severity of the issue" similarly, while "ability to impact the issue" consistently scored the lowest among the criterion.

The facilitators encouraged open dialogue among the group to discuss the ranking` and participants' considerations in assigning scores. Participants discussed how each health issue had a broader impact on the community beyond the individuals directly affected, which impacted their scoring. Participants that gave high scores to the "scope" and "severity" of maternal and child health spoke of the lifetime impact of early preventive care for children. The impact on community-wide quality of life was noted as an effect of increased substance abuse among community residents. Crime, homelessness, vagrancy, and workforce productivity were named as possible impacts. Participants named the lack of services, needed policy changes, and fewer successful intervention models as reasons for low scores on the "ability to impact" criterion. Some participants in the group were outspoken about the need for increased senior services in the area, which was discussed more as part of the small group dialogue.

Participants clearly differentiated between substance abuse and mental healthcare needs. Mental healthcare received the lowest overall score, as well as lowest scores for "scope," "severity," and "ability to impact." Respondents felt that fewer people in the community were impacted by mental healthcare needs versus substance abuse issues. The "ability to impact" mental healthcare needs reflected participants' views of a lack of services in the community.

Participants were asked what influenced them to score chronic disease and healthy lifestyles among the lower priorities. Some thought that while these issues impact a large percentage of the population, they did not view the impact on the overall community to be as detrimental as other issues. "There are services to treat people and known interventions." Some scored the "ability to impact" these issues lower due to the challenge of behavior change among individuals.

Small Group Discussion

Participants were divided into small groups based on their areas of expertise, knowledge, or interest in each of the health issues. The facilitators and table leaders led the small group dialogue, and worksheets were provided to guide and capture discussion.

Participants were asked to consider the following questions to identify community assets, missing resources, underserved populations, and recommendations for hospitals to address these health issues.

Existing Community Resources

- What organizations are working on these issues?
- What resources exist in the community that can help impact this issue?
- Are there models of success or innovative partnerships around this issue?

Underserved Populations

- What populations are most at risk or underserved related to these issues?
- What barriers exist that keep people from accessing services?

Missing Resources

- What do residents need to help them address this issue?
- What additional services could help improve health around this issue?
- What community inputs will be required?
- What partners could help?

The following section summarizes key findings from the small group discussion. A list of assets as identified by the participants is included in Appendix D.

Maternal and Child Health

Participants defined maternal and child health to include prenatal and postnatal periods, as well as child and youth health from birth to age 18. By adopting this broad definition for Maternal and Child Health, the group emphasized the importance of promoting health at an early age to impact wellness over the lifespan. The group identified a variety of community organizations that provide health and social services to mothers and children. However, the group agreed that these services are not equally available across the counties that make up the South Central region.

Transportation needs often multiply the challenges of reaching needing services. Public transportation is limited to town centers, placing a higher burden on individuals who live outside the town center and in rural areas. Recommendations were made to provide satellite sites or relocate services to within the communities of the most vulnerable. Partnerships with food banks, schools, churches, and other community resources were suggested. Another suggestion was to engage the Pennsylvania Public Transportation Association to increase transportation options in rural communities.

Participants said immunizations and dental care were among the top health concerns for children in the community. Lack of immunizations contributes to missed days of school. Dental hygiene and treatment are important to maintain overall health. A recommendation was made to provide toothbrushes and toothpaste to students and conduct a lesson on dental hygiene during the school day. Lack of knowledge related to dental care, compounded by language challenges, documentation status, and health insurance status, contribute to dental health disparities among immigrant populations. Participants noted that many residents are not aware of the relationship of dental care to overall health status.

Partners identified the following populations as underserved with regard to maternal and child health services:

- Mothers in Perry County: There is a lack of OB/GYN providers.
- Refugees from Nepal: There is a need for interpreter services and culturally sensitive providers to improve care services for this population.
- Undocumented citizens: Language, knowledge, culture, and/or lack of health insurance can contribute to health disparities among this population.
- Young pregnant women: Lack of health insurance or awareness of available benefits prevents young women from having the benefit of coordinated pregnancy care services and early prenatal care.

Substance Abuse

Participants ranked substance abuse as the second highest health priority for the South Central region. Increased opioid abuse and related overdose deaths within the South Central region were discussed as key reasons for the high rating. Participants asserted that the opioid epidemic impacts people from all walks of life across the community.

Participants identified the need for substance abuse prevention programs across all ages. Some recommended *Too Good for Drugs*, an evidence-based 10-part series for K-12th graders. The program develops a framework of social and emotional skills through goal-setting, decision-making, and effective communication skills.

Community education to promote safe drug storage and disposal techniques is needed. Seniors were seen as most likely to improperly store and dispose of drugs. Senior centers and retirement communities were suggested as potential partners to host education programs.

Participants also recognized the need to reduce the number of opioids prescribed by healthcare providers. Continued education about safety and effective alternative treatments was recommended for healthcare and dental providers.

Through the voting exercise, participants ranked mental healthcare concerns lowest among the identified health needs. During small group discussions, participants discussed the co-occurring relationship between substance abuse and mental health needs. Mental illness can lead to substance abuse and substance abuse can reveal symptoms of mental illness.

While the group agreed that demand for substance abuse prevention and treatment services far outweighs current availability of services, the following populations were noted as experiencing further disparities in accessing substance abuse services.

- Non-English speaking populations/Immigrants: These residents can be isolated and among the least likely to receive health services due to lack of health insurance, language barriers, cultural sensitivity, etc.
- Unemployed individuals: Unemployment can increase the likelihood of substance abuse. The National Survey on Drug Use and Health reported that unemployed workers are almost twice as likely to be addicted to alcohol or drugs.
- Uninsured individuals: Those without health insurance often do not have a consistent primary care provider to coordinate services. Self-pay costs for substance abuse treatment is prohibitive for most people.

Access to Care

Partners identified low income and uninsured populations as being the most underserved by healthcare services due to a lack of affordable care options. The region has two Federally Qualified Health Centers (FQHCs): Hamilton Health Center in Harrisburg and Sadler Health Center in Carlisle. Overburdened by the need, there can be long waits for appointments, particularly for dental care and other specialists. Public transportation is limited, creating additional barriers for those who do not have their own transportation.

Participants shared that Hamilton Health Center employs Community Health Workers (CHWs) to improve healthcare services for under- and uninsured residents. Group members noted the success of the initiative and suggested more CHWs be used in areas outside of Harrisburg, particularly in Perry County where medical services are limited.

Participants said more mental and behavioral healthcare providers were needed in the community. Psychiatrists and other specialist are particularly underrepresented. Integration of primary and mental healthcare is needed to breakdown what they called “silos of care.”

Participants went on to say that many community resources are largely unknown by residents and/or inaccessible due to transportation limitations. PA 211 was given as an example. The free, 24-hour referral resource for health, housing, and human services is available across Pennsylvania, but most residents do not know it exists, and the agency does not receive funding for advertising. Transportation remains a key barrier to accessing services. Partners recommended partnering with rabbittransit and other services to improve transportation options, particularly in rural areas.

Aging Services

Partners discussed some of the issues impacting seniors within the South Central region. Seniors are at risk for social isolation and poorer health outcomes. As seniors age, they may become disconnected from friends and family due to medical conditions and physical limitations that prohibit them from leaving their homes. Participants advocated for an increase of in-home

social support and services to assist seniors in accessing community resources. Partnerships with churches, civic groups, and case management programs were suggested as ways to provide services.

Low- and middle-income seniors were identified as particularly at-risk for social isolation due to lack of funding for in-home services. Low-income seniors are often not aware of free- or low-cost services available to them. Middle-income seniors may not qualify for income-based services, yet may not be able to afford full-cost services.

Participants also described a need for end-of-life planning and care for seniors. Many seniors do not communicate or document their end-of-life care preferences, leaving their families to make decisions for them during stressful and emotional times. Recommendations were made for primary care providers to initiate discussions with senior patients and encourage them to develop formal plans. Providers and seniors should jointly develop Physician Orders for Life-Sustaining Treatment, a medical record form that dictates doctor's orders for end-of-life care.

African American and Latino seniors were seen as experiencing further disparities related to end-of-life care. Cost of care and awareness of services combined with cultural norms, language barriers, and other preferences can inhibit the use of end-of-life services. Faith communities were seen as good partners to promote end-of-life care among African American and Latino seniors.

Support services for seniors caring for other seniors are needed in the community. Support groups, respite care, in-home care, and case management are needed for caregivers. Group participants suggested respite volunteers and VA clinics as possible partners.

Chronic Disease and Healthy Lifestyles

Small group participants discussed the prevalence of chronic disease across the region and acknowledged that chronic diseases are the top three causes of death. Group participants acknowledged the high quality healthcare available across the region and the number of known interventions to treat and manage conditions. Health providers and partners like the YMCA, YWCA, schools, religious organizations, and other community partners are seen as promoting healthy lifestyles and providing education to reduce risk for disease and increase health status. The group acknowledged that not everyone can afford a gym membership, but multiple options for safe outdoor recreation exist across the community. Encouraging and educating individuals to improve health habits was seen as the biggest challenge. The priority of health among other daily needs and stressors, education about how to improve diet, the cost of healthy foods, and knowledge about available resources present barriers to health improvement. Good relationships with physicians and health providers, case managers, community health workers and other health and social service partners are seen as the most successful in motivating people to improve their health. Written "prescriptions" for exercise or healthy food was mentioned and supermarket shopping education were mentioned as examples of a successful initiatives. Suggestions included providing free activities like walking clubs, community/park exercise programs, healthy cultural cooking, and similar activities within neighborhoods.

Focus Group Research Summary

Background

As part of the 2018 CHNA, 12 Focus Groups were conducted in March and April 2018 within the CHNA hospitals' primary service areas. Focus Groups were conducted with seniors age 55 or older at local subsidized senior housing and senior centers. The objectives of the Focus Groups were to collect perspectives on individual and community-wide health issues, barriers and assets to accessing healthcare, preferences for healthcare delivery, and existing or needed community resources. A total of 137 people participated in the Focus Groups across the 19-county region. The following is a breakdown of the focus group locations and participants per region.

Central Region Focus Groups
Jersey Shore Senior Community Center, Jersey Shore, Lycoming County
10 Attendees

Lincoln Towers, Shamokin, Northumberland County
35 Attendees

Danville Area Community Center, Danville, Montour County
7 Attendees

Heritage House, Lewisburg, Union County
10 Attendees

Westminster Place at Bloomsburg, Bloomsburg, Columbia County
11 Attendees

Northeast Region Focus Groups
Daniel Flood Apartments, Kingston, Luzerne County
8 Attendees

Kingston Active Adult Center, Kingston, Luzerne County
13 Attendees

Linden Crest Apartments, Clarks Summit, Lackawanna County
4 Attendees

Abington Senior Community Center, Clarks Summit, Lackawanna County
8 Attendees

South Central Region Focus Groups
Susquehanna View Apartments, Camp Hill, Cumberland County
10 Attendees

Marysville-Rye Senior Center, Marysville, Perry County
13 Attendees

Western Region Focus Groups
Kish Apartments, Lewistown, Juniata County
8 Attendees

Unique Findings by Region

Central Region

- Outside of the Danville area, participants were less likely to agree that providers—particularly specialty providers—are available close to home. Most travel to Danville for specialty care.
- Seniors state they can generally get primary care appointments within one week if they are willing to see a Physician Assistant. The wait is upwards of two weeks if they want to see their physician.
- Two groups brought up that Geisinger is closing adult dentistry services in Danville. They were concerned that the decision was “all about the money” and asked “Where else can we go for dental care?”
- Participants at the Danville Area Community Center were most aware of the Silver Circle program. A few had signed up for the program, but none were actively using services. They thought other health education programs were provided by Geisinger, but were not aware of the programs or actively receiving information.

Northeast Region

- More likely (with South Central) to have access to primary and specialty care close to home.
- While transportation was seen as an issue in all groups, those in the Northeast groups seemed most impacted by transportation needs. “When you don’t drive, you are limited in everything.” On demand and reliable, advance reservation ride shares for seniors were recommended.
- Only those in the Northeast groups mentioned having a difficult time understanding their medical bills. They would prefer itemized bills that show exactly what they are being charged.

South Central Region

- These groups were more likely to say they had access to primary and specialty providers and multiple hospitals and health systems close to home.
- The Marysville group was aware of changes to the local healthcare system, including the emergence of UPMC. They have access to multiple hospitals and thought all were reputable. The biggest impact on their community has been the loss of provider practices.
- While seniors generally felt safe in their community, they were keenly aware of the increase of drug abuse and crime.
- These groups were most willing to talk about mental health issues and to be forthcoming with experiences. The Susquehanna View Apartments experienced multiple suicides in recent years, which prompted residents there to be more aware of issues.
- Participants in both groups were the least likely to consider transportation as a barrier to accessing services. Many still drove or used rabbittransit vans. Bus stops were nearby to the Susquehanna View Apartments and accessible.

Western Region

- Social isolation among seniors was prominently discussed among this group. Participants affirmed that there are few activities for seniors within the Kish Apartments and the larger community. Residents seek more community engagement and recommended that school groups, Boy/Girl Scouts, and other groups visit or provide special events at Kish Apartments.

Common Discussion Themes

Where Seniors Live

The majority of participants have lived in their respective communities for most of their lives. Many recounted the ways in which the community had changed during their lifetime. About 20% of seniors in the groups had recently moved to the area to be closer to family as they aged. Nearly all participants living in an apartment downsized from a single-family home.

About 65% of focus group participants reside in senior apartments; 35% live in single family homes. Those seniors who participated in the focus groups held at senior centers were more likely to still own their home. Those who lived in a single family home included single and married individuals. Among those single seniors living in a house, most had family or other local support that checked on them and helped with needs. Those who were married seemed more confident in their ability to take care of their home, but also had local support when they needed it. Many had family, particularly adult children, living nearby.

Most participants who lived in apartments lived alone. Some had family members in the area, but many did not have family members that regularly visited them. These residents said that they "looked after one another," although some residents are "loners." Housing managers and social support staff also check in on residents regularly. Most participants valued these relationships and saw them as an important factor to choosing to live on their own rather than in a nursing home or personal care community. Participants recognized that social isolation is prevalent among their peers. Factors that increased isolation for residents included a lack of activities to engage residents, disability, and depression, often brought on by chronic conditions or loss of friends and family members.

> *"Most people are independent, but they need some help. We watch out for them."*
>
> *"People are sick or have medical conditions; that's why you don't see them."*
>
> *"Some residents don't leave their apartments, not even for the fire alarm."*
>
> *"We have families, but they don't check in with us."*
>
> *"We have formed a welcoming committee to introduce new residents and make them aware of the activities available."*

The groups discussed the availability of senior housing and services to help seniors age in place within their communities. Participants thought that subsidized senior housing was more readily available, but affordable housing for middle-class seniors is lacking. Home care and home health services are prevalent in larger communities, but lacking in rural communities.

> *"It's hard to find help, even for someone to clean the house."*
>
> *"I've looked into home care agencies, but I don't trust the caregivers."*
>
> *"The Meadows (senior living community) is lovely, but it's expensive."*
>
> *"There is community in the low-income apartment complexes. The middle class doesn't have options. What's next?"*

Transportation Options

Approximately 75% of the focus group participants living in senior housing no longer drive, while the other 25% living in senior housing own a car and drive regularly. Driving prevalence was consistent with health status and activity level. Those who owned their home predominantly had cars and drove regularly.

Those that do not drive rely on public transportation and friends and family members to drive them. While some used the bus, reserved senior rideshares through rabbittransit, Mifflin Juniata Call-a-Ride Service (MJCARS), and County of Lackawanna Transit System (COLTS) were more commonly used. In communities where there was public transportation, there was typically a bus stop at the senior housing location, which residents found convenient. Seniors can ride the bus for free. Rabittransit provides reserved paratransit services in Adams, Columbia, Cumberland, Montour, Northumberland, Snyder, Union, Perry, and York Counties; MJCARS provides reserved services in Mifflin and Juniata Counties. Reservations for both services must be scheduled by noon on the previous day and can be made up to two weeks in advance. Rides can be scheduled for medical and non-medical appointments within the service area. Pick up windows can be from 1-3 hours depending on other riders and destinations.

Those who had used shared-ride options had differing opinions of the service. Some thought the service was inexpensive and helpful for disabled seniors. Others thought the services were inconvenient and unreliable due to the need for advanced scheduling, long wait-times for pick-ups or drop-offs, and missed stops. Some did not like that they were limited in how much groceries they could purchase by only what they could carry.

> *"The days I take rabbittransit, I call my 'county tour' days. I just leave enough time for the ride."*
>
> *"My mother is 96 years old. She can't wait 30 to 40 minutes for a bus. I just take her."*
>
> *"Rabbittransit is convenient as long as it's not an emergency."*
>
> *"Seniors can only carry a few bags at a time. Public transportation limits how much food you can buy."*
>
> *"Sometimes I am late to my appointments or miss them because the van is late."*
>
> *"Taxis are too expensive."*
>
> *"We need 'old age Uber.'"*
>
> *"We're lucky to have rabbittransit. I don't have another way to get around."*
>
> *"When I schedule transportation, they give me a three-hour window for a pick-up time. I have to sit in the lobby to make sure I don't miss them."*

Activities in the Community

Seniors in the focus groups were most likely to participate in activities within their housing complex or at the senior center. Likely, those that participated in the focus groups more frequently partook of these activities than seniors who did not participate in the focus groups, particularly within in the senior housing.

All of the senior apartments hosted onsite activities most days of the week. Activities ranged from bingo and games to exercise to health and wellness talks. While these activities occurred daily and many of the focus group attendees participated in these activities, there was still a sense of wanting more organized activities or things to do. Many said they wasted the day watching television, talking with friends, playing cards, or "just watching the cars go by."

The senior centers offered daily activities, although hours of operation were limited. Most close by early afternoon. Activities at the senior centers were similar to the senior apartments, including bingo and games, exercise, and health and wellness talks. Some senior centers also organized and helped prepare Meals on Wheels distribution. Others organized donations and provided free lunches for anyone in need to attend, including homeless.

Some focus group participants were active volunteers at their church, the local hospital, within the senior center, or at their senior housing. Those that are volunteers are very active in this capacity, listing dozens of activities they are involved with. Within all of the groups, fewer than 20% of participants were active at this level.

Participants were less likely to seek out other activities within the community, with the exception of those that participated in senior programs like Geisinger Silver Circle, Silver Sneakers, or other organized memberships. Awareness of these programs differed within the geographic locations of the focus groups with the Central and Northeast regions being most aware of Silver Circle. Those individuals saw the program as being a good source of health information. Some took advantage of discounted exercise programs available to members.

At least half of participants in the sessions were familiar with the Silver Sneakers exercise and wellness program. Silver Sneaker members regularly went to a participating gym to exercise and for socialization. Silver Sneakers was highly regarded by members in the focus groups.

The participants thought Geisinger Silver Circle and Silver Sneakers were good examples of senior-oriented programs to encourage healthy eating and exercise. They encouraged more programs that focused on nutrition education, particularly for those with chronic conditions, and senior-friendly physical activity. Water aerobics was specifically requested and not available in all communities.

> *"We have Geisinger, which is a real asset."*
>
> *"Evan (Evangelical Community Hospital) has a lot of great outreach programs."*
>
> *"Exercise makes me feel healthy. Silver Sneakers helped me get back on my feet."*
>
> *"I felt great when I went to the gym. My arthritis stops me now."*
>
> *"If I don't have company, I sit and watch TV all day."*
>
> *"We need resources to support healthy aging."*

Community and Individual Health

Participants had opposing opinions when asked if they would describe their community as "healthy." Those that affirmed their community as healthy, cited community assets like good healthcare, local universities, and a clean environment.

> *"People live a long time here. I think it has to do with the hard work ethic we all had."*

Many remembered their communities as being healthier "when we were young." "You don't see as many children playing outside as you used to." Other participants noted that chronic conditions, particularly diabetes, are prevalent among local residents, as well as a lack of emphasis on healthy behaviors.

> *"The community is average. We have a lot of the same conditions as other communities: heart disease, diabetes, cancer."*
>
> *"You don't see children walking or playing on the sidewalks anymore. When we were young, we used to walk from one side of town to the other. We played all day at the playground or pool. You didn't come home until dinner. Now all the kids are on their screens inside and their parents are afraid to let them play alone."*
>
> *"We are right on the edge of coal country and there are a lot of health issues here."*

Asked about their own health, most described their health as "average" or in accordance with their age. "I'm as healthy as I can be at my age." Other participants said they struggled to maintain their health, primarily due to chronic conditions. "I have a lot of health issues. I take 31 pills per day." Participants attributed sedentary activity and poor diet as contributors to feeling unhealthy. Socialization and "activities that engage your mind" were seen by some as an important contributor to health.

> *"It's important to get outside and get around people, keep busy."*
>
> *"The most exercise I get is walking from my apartment to the elevator."*

Participants are knowledgeable of what constitutes a healthy diet, but the majority of individuals described their diet as unhealthy. The seniors named living alone or "only cooking for one or two" among the top barriers to eating healthy. Most primarily cook with a microwave or eat out. Other barriers to eating healthy were "discipline to not eat unhealthy foods" and the expense of "healthy" foods. Fruits and vegetables were considered "available but expensive." The region's agricultural heritage was noted by some as a cornerstone to the "good nutrition we had growing up." "I eat a lot more processed food now than I ever cooked for my family."

For some their earlier food culture continues to influence what they eat today. Others have changed their diet because of a chronic condition, particularly diabetes. "I can't just eat what I used to anymore; I need to watch my sugar." Many struggle with knowing what foods are "okay to eat." "It's hard to know what you're getting at a restaurant." Some meet with a nutritionist that provides education and recommendations. Nutrition education and recommendations "to stretch food dollars" were requested by numerous focus group participants.

"Healthy food is expensive. The nutritionist tells me what to eat, but I can't."

"I don't cook as much anymore, we eat out. If you want to eat healthy, you have to cook."

"I eat frozen vegetables. They're cheaper, last longer, and they're just as good as fresh."

"I know what a healthy meal looks like; it's eating it that is hard."

"I would like diabetes education. I just take my insulin. I would like to know what's new and how I can take better care of myself."

"My husband was diagnosed with diabetes. We eat healthier now."

"We need healthy recipes that are easy to make for a single person."

"We need help to stretch our Social Security dollars to be able to buy healthy foods."

Participants get health information from a wide variety of sources. The primary sources are healthcare providers and the internet. Other sources include newsletters from the local health system or their health insurance plans, newspaper, TV, AARP, and senior centers. Bulletin boards or newsletters were seen as the best way to communicate health information, but some preferred email or Facebook. "I like having a link I can click on for more information."

Participants most likely seek information about their health conditions, including signs and symptoms and how to better manage chronic conditions. "I want to know if there is new treatments or something else that could help me."

Many participants noted the increased communication they received lately from their doctor and hospital. "They call you after your appointment to check in. They asked if I got my prescription and if I had any questions." "After my recent hospital stay, I got calls from the hospital and my doctor's office." These follow up calls were generally appreciated and seen as good practice.

Access to Care

All of the focus group participants had Medicare and about 40% qualified for Medicaid. A few participants experienced being uninsured prior to turning 65 years old, typically when they were in-between jobs. Asked how being uninsured impacted their health, participants stated that they either did not go to the doctor or that they "just paid out-of-pocket." While many reflected on healthcare "costing a lot less back then," some still struggled to pay medical bills. A few participants had used free or reduced-cost clinics when they were uninsured and considered them to be an asset to the community.

"If you were uninsured, you just didn't go to the doctor."

"You just paid out-of-pocket if you were uninsured. You could afford to back then."

"I had a baby when I was uninsured. It was a long time ago, so it was only a couple of hundred dollars."

"When I finally got health insurance and was able to go to the doctor, he told me I had almost all of the risk factors for heart disease."

Despite all participants having health insurance, some still struggle to afford healthcare costs. “Prescriptions are the toughest.” Some ask their providers to prescribe cheaper, generic prescriptions when possible. Others skip pills or cut pills in half to make them last longer and reduce costs.

Provider Relationships

All of the participants had a regular healthcare provider that they see. About 70-80% have been with their doctor for a long time. Some have needed to change doctors when local practices closed or doctors left. Participants agreed that they want their provider to be close to their home. Most thought 10-20 minutes was acceptable. Negative perceptions increased as distance of providers (both primary care and specialists) increased.

Most chose their primary care provider (PCP) based on reputation and word of mouth from friends or family members. Referrals from another professional or conducting a phone or internet search were also commonly mentioned. Insurance is a key determinant in choosing a provider.

Participants had differing opinions on their preference for the level of their primary care provider. Most went to practices that employed both doctors and advanced practitioners. Fewer had practices with only doctors, which generally had one to three physicians.

About half of the participants prefer to see a physician rather than an advanced practitioner. Experience and education level were top reasons for their preference. Most of those who had seen an advanced practitioner had good experiences. Those that preferred to see advanced practitioners noted “they are more personable,” “more up-to-date on medical practices,” and “easier to reach for follow-up questions.” The majority of attendees that had experience with both physicians and advanced practitioners agreed that within the same practice, they could get an appointment with a nurse or advanced practitioner sooner than with a physician.

> *“I have a doctor, but I can’t get in to see him. If I want an appointment, it’s with a P.A.”*
>
> *“I prefer a doctor generally, but the physician assistant can be more on the ball.”*
>
> *“I would rather see a doctor and have everything taken care of at once.”*
>
> *“I would rather see a P.A. They explain things to me. The doctor doesn’t have time.”*
>
> *“If I’m paying for a doctor, I want to see a doctor.”*
>
> *“It doesn’t matter to me who I see, but I would like to see my PCP once in a while. I have to schedule with him one year in advance.”*

The majority of participants have a good relationship with their healthcare provider. Participants described positive attributes as “someone who listens to me,” “asks and answers questions,” and “looks at me while we’re talking.” Participants also named quick service and follow-through as positive characteristics of a PCP office.

> *“My doctor explains everything to me. I can ask questions.”*

"My doctor shakes my hand and smiles."

Negative perceptions of providers included "he looks at the computer instead of me," "I feel rushed during the appointment," and "my doctor is always behind schedule." Difficulty with scheduling appointments and understanding medical bills also negatively impacts participants' perceptions of their PCP practice.

"I ask a question, but they're writing and not listening."

"I would like to receive an itemized bill that easily shows the fees I am being charged."

"My doctor tells me he'll see me in three months, but the schedule isn't out yet at reception. I have to remember to call back when the schedule is out."

"The wait for my appointment is terrible. I sometimes wait hours to see my doctor."

"When I call for an appointment, I'm told nothing is available and to call back later. You have to be your own advocate and assertive."

All participants have seen or are currently seeing a specialist provider. Participants in the South Central and Northeast regions generally agreed that specialists are available and there are multiple providers to choose from. Participants in the Western and Central regions were more likely to disagree that specialists are readily available, stating they travel to State College or Danville for care. Some rural communities in the Western and Central regions have clinics with specialists that are available one day per month, but appointments are difficult to obtain in a timely manner. Specialty practices that were identified as missing or lacking in the community include, cardiology, dermatology, dentistry, endocrinology, otolaryngology, psychiatry, rheumatology, and urology.

The majority of participants in the focus groups understand the written instructions provided by their doctor. "They are easy to read and in plain English. The prescriptions, too." Those that navigate the appointment on their own feel most comfortable asking questions if they do not understand something. Many take notes during the appointment or rely on the "after visit printout" for follow-up needs. This group of seniors is more likely to use online resources like myGeisinger for information and to communicate with their providers.

"I'm comfortable asking questions, but many people are not."

"I use myGeisinger a lot to ask questions."

"If I don't understand, I tell them, 'Please speak English.'"

"My doctor asks me if I understand his instructions. I appreciate it."

About one-third of participants take someone with them to their medical appointments. Within this group about half prefer to have support to make sure they heard and understand the conversation. Some of these individuals record the conversation and/or have their companion take notes. The other half require a high level of assistance to get to the appointment and need assistance communicating with their provider. Patient advocates were recommended as a way to assist more fragile or elderly patients.

"I take somebody with me. Once I hear bad news, I stop listening."

"My son takes me to the doctor. I don't know what they talk about."

"I take notes. It's helpful to have something to walk away with from the appointment."

"We go to the doctor as a couple, one for the appointment and one to listen."

"I take my dad. Otherwise he wouldn't tell me what the doctor said."

Health Behaviors

Nearly all participants have been advised at some point by their healthcare provider to change a health behavior related to diet, exercise, or smoking. "Every time I see my doctor, he tells me to lose weight." Participants generally feel comfortable talking to their provider about lifestyle changes and view their provider as a trusted source for information. While participants have frequently received pamphlets or printed information, they generally agree that information alone is not enough for many to make a change. "Changing your behavior takes motivation and willpower." Some participants more readily made changes, while others did not start to change their health behaviors until their daily activities were impacted. "People want to make changes on their terms." Support groups, follow up from their providers, and support of family and friends were named as ways that helped participants make a behavior change.

"Discipline is hard. I go to the nutritionist and she tries."

"I can't make a change overnight; I need to work at it a little at a time."

"If it's not broke, I don't fix it."

"I'm too old to change what I'm doing now."

"The doctor gives me instructions, but does anyone follow them?"

"I'm 98. The doctor said I should eat healthy. My son said I should eat anything I want!"

One area where the focus group participants were more likely to follow their providers' instructions was for health screenings. More than 90 percent of the participants followed their providers' guidance in receiving recommended health screenings. "The screenings are covered and it's better to catch it early." "I get my screening, whether I want to or not."

Pain and Depression

About 50% of participants have been prescribed pain medication within the past few years by a healthcare provider. Participants said they received instructions on how to properly take their pain medication, most often from their pharmacist. In some cases, participants declined to fill the prescription or stopped taking the medication due to side effects, which were primarily dizziness or drowsiness. These individuals opted for over-the-counter pain medications. Participants were aware of alternative pain therapies such as exercise, but few individuals had tried the therapies.

"I had to cut back on my pain meds, they were too much. I'd rather feel alert."

"Therapies can be helpful, but insurance only pays for so much and it is a lot of travel and driving."

When asked about proper disposal of unused medications, the majority of participants stated that they had not received any instructions from their provider or their pharmacist. Some who knew about medication drop boxes at pharmacies and police stations had used these resources, while others flushed leftover medication in the toilet or kept it.

"I had to sign a paper that I wouldn't sell or share my pain medication."

"I received a flyer from Geisinger on where to take my old medications."

Participants said that loneliness, sadness, and depression are common among seniors. Nearly all attendees admitted to having these feelings some times. While participants were generally forthcoming in the focus group about their experiences or observations with depression, groups varied on their comfort level to talk openly about their feelings with their provider, family, or friends. Some groups concurred that they were comfortable talking to their provider about their "state of mind."

"I tell my doctor everything. We talk about it if I'm feeling depressed."

"My doctor asks me if I've been feeling sad or depressed. She wants to know."

"You can tell when someone's feeling down. They stay in their room. We check in on each other."

In more than half of the groups, participants said they were uncomfortable broaching the subject with their healthcare provider or admitting to having issues when asked. Those that avoid talking about feeling depressed gave different reasons.

"I deal with depression myself. I go for a walk, talk to people, or smoke a cigarette."

"My doctor asks me about depression every time I see him, but I wouldn't confide in him. I have friends I will talk to."

"Shame on me if I don't say anything to my doctor, but I need an established relationship."

"We were taught not to talk about our feelings."

"What's the use in talking about it, it doesn't change the situation."

Participants acknowledged that depression and other mental health issues are often not talked about. There is concern over "what people might think" or that "you can't manage on your own" and will "have to go to a nursing home." Others thought that more resources were needed to help seniors with mental health needs.

"Things spread. You have to be careful who you tell."

"We need education to identify conditions and available resources. Our families should be able to recognize changes and approach us."

"We need programs to help with stress management."

"They should post crisis numbers in the elevator and in the newsletter."

Prioritization of Community Health Needs

On February 15, 2018, the Geisinger CHNA Regional Advisory Committee met to review research findings and partner input from the FY2019 Geisinger CHNA. Common themes had emerged throughout the research that were consistent across the Geisinger service area (listing in alphabetical order):

- Access to Care
- Aging Services
- Chronic Disease Management
- Healthy Lifestyles
- Maternal and Child Health
- Mental Healthcare
- Substance Abuse

In advance of the meeting, individual platform representatives were asked to review data provided to them that outlined specific health issues and health disparities within their hospital service area related to these broad health priorities. Platform representatives were asked to rate the local hospital's ability to respond to each need based on:

1. Relevance: *How well does this need align with our core competencies or mission?*
2. Effectiveness: *Can we have a measureable impact on this issue?*
3. Feasibility: *Do we have resources, capacity, capabilities, support, etc. to address this need?*

At the meeting, platform representatives shared their scoring based on the criteria provided and discussed contributing factors, including ongoing or new initiatives, community partners, and concurrent strategic initiatives related to population health. Common ranking of issues began to emerge across the platforms pertaining to prioritization of substance abuse, access to care, and chronic disease, while differences were identified in regard to maternal and child health, aging services, and mental health.

Each region was reviewed and platform representatives discussed their perspectives from the rating exercise. Each region and individual platform was discussed in depth to consider statistical research and community partner perspectives on the most pressing community health needs in each community.

At the conclusion of the prioritization meeting, the Regional Advisory Committee recommended the following priorities be adopted across the Geisinger service area with regional oversight of Implementation Planning and community benefit activities.

- **Access to Care**
- **Behavioral Health (to include substance abuse and mental health strategies)**
- **Chronic Disease Prevention and Management (with a focus on increasing healthy habits)**

This approach was approved by Geisinger leadership for development of Implementation Planning.

Evaluation of Impact from Prior CHNA Implementation Plan

Background

In FY2016, Geisinger Holy Spirit (GHS) completed a Community Health Needs Assessment and developed a supporting three-year Community Health Implementation Plan (CHIP) for FY2017-2019 to address identified health priorities. The strategies implemented to address the health priorities reflect Geisinger's mission and commitment to improving the health and well-being of the community.

Guided by the findings from the FY2016 CHNA and input from key community stakeholders, Geisinger Holy Spirit leadership identified the following priorities for FY2017-2019:

- Improving access to healthcare
- Addressing needs related to behavioral health and substance abuse
- Improving healthy behaviors

FY2017-2019 Evaluation of Impact

Geisinger Holy Spirit developed and implemented a plan to address community health needs that leverages resources across the health system and the community. The following section highlights outcomes from the implemented action items.

Goal: Improving Access to Healthcare

Action Item 1: Develop primary care and pediatric clinical services.	
Objectives	1. Develop new primary care and pediatric practices in the GHS service area. 2. Explore options for the development of pediatric urgent care. 3. Expand pediatric sub-specialty services across the region.
Anticipated Impact	1. Improved primary care access in underserved communities. 2. Increased availability of pediatric resources in the community.
Collaborations/ Resources	1. Geisinger Holy Spirit Community Practice service line leadership 2. Geisinger Holy Spirit Medical Group leadership 3. Geisinger Holy Spirit Pediatric service line

Program Highlights:

- A primary care and pediatrics practice opened on November 1, 2017 at 310 East Penn Drive in Enola. Lab Services are also provided on site.
- Geisinger Holy Spirit and Geisinger Janet Weis Children's Hospital partnered to provide the following pediatric specialties locally:
    - Cardiology, endocrinology, gastroenterology, and general surgery (available at the Silver Creek Center in Mechanicsburg).
    - Dermatology and neurology (available in Camp Hill).
    - Orthopaedics (available in Lemoyne and Harrisburg).

Action Item 2: Develop cardiovascular clinical services.	
Objectives	1. Obtain Chest Pain Center designation. 2. Expand the Heart Failure Clinic to East Shore and Carlisle offices.
Anticipated Impact	1. Decreased morbidity/mortality related to Acute Coronary Syndrome. 2. Improved quality of care for cardiovascular-related illness. 3. Increased community knowledge for heart attack care. 4. Improved disease management, patient outcomes, and quality of life.
Collaborations/ Resources	1. Geisinger Holy Spirit Cardiovascular service line leadership 2. Geisinger Holy Spirit EMS service line leadership 3. Geisinger Holy Spirit Pediatric service line

Program Highlights:

- Geisinger Holy Spirit achieved certification as an accredited Chest Pain Center for Primary Percutaneous Coronary Intervention (PCI) and Resuscitation (highest level). The certification is effective until September 2019.
- The hospital opened a Heart Failure Clinic at Progress Center Cardiology practice in January 2016.

Action Item 3: Develop bariatric surgery services.	
Objectives	1. Develop a Bariatric Surgery Program, including a medical/gastrointestinal/ nutrition program. 2. Implement the ProvenCare Bariatric Surgery Program.
Anticipated Impact	1. Increased community access to weight management programs. 2. Improved population health through decreased co-morbidity related to weight management.
Collaborations/ Resources	1. Geisinger Holy Spirit Surgery service line leadership

Program Highlights:

- Geisinger Holy Spirit offered a bariatric surgery program and support group. The program includes medical weight management and a nutrition clinic. Services are located in the Medical Arts Building in a suite adjacent to General Surgery to provide private consultation rooms for patients.

Action Item 4: Develop dermatology services.	
Objectives	1. Explore options for the development of a dermatology practice.
Anticipated Impact	1. Improved access to dermatology services in underserved communities.
Collaborations/ Resources	1. Geisinger Holy Spirit Dermatology service line leadership 2. Geisinger Holy Spirit Medical Group leadership

Program Highlights:

- A new dermatology practice opened in August 2017 in the Medical Arts Building, Suite 100. The hospital plans to move the practice to a larger space on the main campus in May 2018.

Action Item 5: Develop emergency services.	
Objectives	1. Obtain Level II Trauma Designation. 2. Expand the Emergency Department physical plant to accommodate increased volumes of patients.
Anticipated Impact	1. Improved access to emergency and trauma services. 2. Reduced patient transfers due to lack of services.
Collaborations/ Resources	1. Geisinger Holy Spirit EMS service line leadership 2. Geisinger Holy Spirit Trauma service line leadership 3. Geisinger Holy Spirit Medical Group leadership

Program Highlights:

- Geisinger Holy Spirit was accredited by the Pennsylvania Trauma Systems Foundation (PTSF) as a Level II Trauma Center, effective September 1, 2017.
- The John R. Dietz Emergency Center at GHS was renovated and reopened in May 2017. The Emergency Center offers expanded treatment capacity and a new dedicated unit for trauma patients. The first floor includes three new triage rooms, two new seclusion rooms, a new waiting room and registration area, and 31 newly renovated patient rooms. The second floor includes a rooftop helipad, a dedicated Trauma Services elevator, a Trauma Services office suite, a 30-person conference room, and three on-call rooms.

Action Item 6: Develop neuroscience services, including neurology and neurosurgery.	
Objectives	1. Expand neurological/surgical capacity through additional hospital resources. 2. Improve recognition and treatment of depression in the stroke population.
Anticipated Impact	1. Improved access to neuroscience services in underserved communities.
Collaborations/ Resources	3. Geisinger Holy Spirit Neuroscience service line leadership 4. Geisinger Holy Spirit stroke coordinator 5. Geisinger Holy Spirit Behavioral health service line leadership

Program Highlights:

- Geisinger Holy Spirit's Neurology and Neurosurgery Services were moved to the American Office Center, a larger location adjacent to the Hospital, in April 2016.
- The following neuroscience services were added to the region and beyond:
    - Neurophysiology with electromyography (EMG) and electroencephalography (EEG) at the Camp Hill neurology office and GHS Hospital.
    - Outreach clinic for neurosurgery patients at Geisinger Lewistown Hospital.

- Vagal Nerve Stimulator clinic, Deep Brain Stimulator (DBS) programming, and Botox for spasticity at the Camp Hill neurology office.
- Sleep study software, ALICE.

> Geisinger Holy Spirit partnered with the Lebanon Veterans Administration (VA) Hospital to assist with their critical need for neurology and neurosurgery. The hospital received referrals from the VA and provided testing that was otherwise not available.

Action Item 7: Develop oncology services.	
Objectives	1. Expand breast care resources and services.
Anticipated Impact	1. Improved access to breast care services in underserved communities.
Collaborations/ Resources	1. Geisinger Holy Spirit Oncology service line leadership

Program Highlights:

> The GHS Cancer Center is the only provider in the area to offer the SAVI procedure, a replacement for whole radiation breast surgery.

> Geisinger Holy Spirit recruited a general surgeon in January 2018 to work in both the Breast Care Center and the General Surgery practice. A second GHS general surgeon completed oncoplastic surgery breast care training.

> Geisinger Holy Spirit providers were interviewed by CBS 21 in October 2017 for Breast Cancer Awareness Month. The providers addressed breast care issues, such as mammography, self-breast exams, and therapy for post breast cancer surgery.

> The GHC Breast Care Center and Cancer Center hosted a local Breast Summit in August 2017 for area providers to network and discuss current patient care treatments.

Action Item 8: Develop pulmonary services.	
Objectives	1. Explore options for the development of a pulmonary practice.
Anticipated Impact	1. Improved access to pulmonary services in underserved communities.
Collaborations/ Resources	1. Geisinger Holy Spirit Pulmonary service line leadership 2. Geisinger Holy Spirit Medical Group leadership

Program Highlights:

> A GHS pulmonary practice opened on May 31, 2016, at 897 Poplar Church Road in Camp Hill. The practice includes access to low dose CT scans and a Lung Nodule Clinic.

> A pulmonary rehab program started on February 6, 2018. The program is located at the GHS main campus and shares space with the cardiac rehab program.

Action Item 9: Develop women's services clinical program.	
Objectives	1. Explore options to expand the Neonatal Intensive Care Unit (NICU). 2. Explore options for a Maternal-Fetal Medicine service line at GHS.
Anticipated Impact	1. Improved access to neonatal and high-risk pregnancy services in underserved communities.
Collaborations/ Resources	1. Geisinger Holy Spirit Women's Care service line leadership

Program Highlights:

- Maternal-Fetal Medicine was added to the OB/GYN office in the American Office Center in June 2016. Services are provided four days per month. Ultrasound equipment is available.

Action Item 10: Continue collaboration with area healthcare coalitions, including Northern Dauphin Health Initiative (NDHI) and Perry County Health Coalition (PCHC).	
Objectives	1. Ensure GHS's representation/participation at meetings of various healthcare coalitions in our service area.
Anticipated Impact	1. Increased access to healthcare services for underserved residents. 2. Increased awareness of Geisinger Holy Spirit's services. 3. Increased dialogue with area physicians, non-profit agencies, and community service organizations.
Collaborations/ Resources	1. Local coalitions and their members 2. Community service organizations, government agencies, and physicians 3. Geisinger Holy Spirit Service Lines and liaisons

Program Highlights:

- Geisinger Holy Spirit representatives were active in NDHI and PCHC, including PCHC's Behavioral Health Task Force and Primary Care Task Force.
    - PCHC hosted a special event with Pennsylvania Physician General, Dr. Rachel Levine, on July 20, 2017, at the Perry County Courthouse. Dr. Levine's keynote address was "Building Strong Rural Health Partnerships." Highlights of the Coalition's work and accomplishments were presented.
    - PCHC's Behavioral Health Task Force hosted a Learning Breakfast for Ministers on October 17, 2017, at Highland United Presbyterian Church in Newport, PA. Topics included how to identify mental illness, available mental health resources, meeting people in recovery, and a pastor's perspective.
    - PCHC supported the development of Hamilton Health Center's satellite location in Newport, PA. Hamilton Health Center is a FQHC. The facility is expected to open in June 2018. Adult and pediatric medical care and OB/GYN services will be provided.
- Geisinger Holy Spirit provided screenings (BMI, PSA) for annual NDHI events, including Ladies' Night Out and Family Wealth thru Health.
- Geisinger Holy Spirit Duncannon Center providers hosted PCHC members for discussion of primary care opportunities and a tour of the facility in November 2017.

Action Item 11: Improve health literacy among patients and the community.	
Objectives	1. Increase literacy among patients by adjusting patient education materials and consent forms to appropriate reading levels. 2. Participate in a system wide committee to review patient education materials and consents to improve patient literacy.
Anticipated Impact	1. Improved patient education for procedure consents and improved patient understanding of disease management care instructions.
Collaborations/ Resources	1. Hospital staff 2. Director of Patient Experience

Program Highlights:

- A system-wide health literacy committee was formed in 2015. The committee meets monthly to review patient education materials and consents with the goal of improving literacy for identified patient populations. In 2016, the committee attended a literacy seminar to include topics related to patient education, train the trainer, and literacy moments for providers.
- Geisinger implemented new interpretive devices (Stratus) across all hospitals in the system.
- All hospital patient documents were inventoried for available Spanish translation.
- A flex pool was created for sign-language and Spanish speaking interpreters. The hospital is exploring opportunities to develop Spanish speaking clinics.
- A health literacy awareness presentation was provided at the Wellness Grand Rounds in 2017.

Addressing Needs Related to Behavioral Health and Substance Abuse

Action Item 1: Promote behavioral health advocacy efforts.	
Objectives	1. Participate in state and federal committees in an effort to improve funding and programming for behavioral health services.
Anticipated Impact	1. Improved access to behavioral health services throughout the state.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health service line leadership 2. State agencies: Hospital Association of Pennsylvania (HAP); PA Office of Mental Health and Substance Abuse Services (OMHSAS); PA Department of Human Services (DHS)

Program Highlights:

- The former GHS Behavioral Health Administrative Director was Chair of HAP's statewide Behavioral Health Task Force. The task force pursued advocacy initiatives addressing the effective delivery of behavioral health services.
- Geisinger Holy Spirit is aligned with the Geisinger Department of Psychiatry and Geisinger Neuroscience Institute to include goals to improve behavioral health services and access.
- Geisinger implemented a medication take-back program in 2015 to include disposal boxes at several retail locations in central and northeast Pennsylvania. Two collection sites were established in the GHS service area in 2017. In 2018, approximately 68 pounds of unused or expired medicines were collected at the sites.

Action Item 2: Enhance Emergency Department (ED) capacity and security for behavioral health consumers.	
Objectives	1. Create designated and secure space within the ED to provide specialized behavioral health emergency care.
Anticipated Impact	1. Improved access to safe care options and a reduction of the traumatic impact of behavioral health emergencies.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health service line leadership 2. Geisinger Holy Spirit Emergency Services service line leadership 3. ED construction design team 4. Dauphin County Mental Health Program

Program Highlights:

> Geisinger Holy Spirit clinical staff and leadership continue to discuss plans to enhance the ED for behavioral healthcare. Tentative plans include hiring behavioral health staff to work in the ED and dedicated psychiatric consultation coverage.

Action Item 3: Explore the need for additional psychiatric services in the region.	
Objectives	1. Explore the need for additional pediatric psychiatry services. 2. Explore the development and implementation of telepsychiatry services. 3. Provide access to primary and specialty care offices in the community. 4. Pilot integrated behavioral healthcare services into GHS Medical Group primary and specialty care offices (Patient Centered Medical Model).
Anticipated Impact	1. Improved access to pediatric psychiatry services. 2. Increased response to urgent psychiatric consultation and treatment needs. 3. Increased access to behavioral health services in the community and primary care setting.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health service line leadership 2. Geisinger Holy Spirit Pediatric Sub-Specialty service line leadership 3. Geisinger Holy Spirit Medical Group leadership 4. Geisinger Telemedicine Department 5. PA Office of Mental Health and Substance Abuse Services 6. Dauphin County Mental Health Program 7. Payors/Insurance companies

Program Highlights:

> Several pediatric psychiatrists were hired by GHS to better serve the community.

> Telepsychiatry service started at the Pediatric Psychiatry Service Office at the Silver Spring Center in Mechanicsburg. Approximately four hours of clinical time are available per week. The hospital is exploring other Geisinger locations for telepsychiatry services.

> Initial steps were taken to integrate behavioral health services at the Dillsburg Primary Care practice, starting with a timelier intake process.

> The GHS Women's Behavioral Health Service and OB/GYN practices started discussions for integrating services.

Action Item 4: Explore further collaboration between behavioral health services and primary care physicians in the area.	
Objectives	1. Improve the accessibility of behavioral health outpatient services for primary care patients as part of the continuum of care.
Anticipated Impact	1. Improved continuity of care for behavioral health patients.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health service line leadership 2. Geisinger Holy Spirit Medical Group leadership

Program Highlights:

> Geisinger Holy Spirit continues to foster collaboration between behavioral health and Medical Group providers to better serve patients. The hospital is exploring the hiring of a psychologist to oversee the integration process.

Action Item 5: Explore the need to enhance or modify behavioral health services offered by area schools.	
Objectives	1. Determine the appropriate number of behavioral health providers and resources, including technology, needed to meet the increasing demand for services.
Anticipated Impact	1. Increased access to behavioral health services in area schools.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health service line leadership 2. Area school districts 3. PA Office of Mental Health and Substance Abuse Services 4. Dauphin County Mental Health Program 5. PA Department of Human Services

Program Highlights:

> Geisinger Holy Spirit continues to foster partnerships with area school districts to assess and meet behavioral health service needs. Current initiatives are based on the need for school-based psychotherapy. The hospital dedicated a therapist to provide this service to students.

Action Item 6: Cooperate with area police departments to provide Naloxone in the field.	
Objectives	1. Improve the care provided directly and urgently to behavioral health consumers in the field.
Anticipated Impact	1. Improved care and better clinical outcomes.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health service line leadership 2. PA Chiefs of Police in service area 3. PA Department of Drug and Alcohol 4. Geisinger Holy Spirit EMS leadership

Program Highlights:

- Program started in September 2015. To date, 19 police agencies participate, and these first responders have administered Naloxone to 207 patients, 179 of whom have experienced rapid and complete reversal of respiratory depression and other opioid overdose symptoms. Patients who receive Naloxone from police officers are evaluated, treated, and transported by EMS to a hospital emergency department for evaluation by a physician.

Improving Healthy Behaviors

Action Item 1: Expand community participation in Spirit of Health, a hospital-based program.	
Objectives	1. Increase Spirit of Health membership. 2. Increase fitness opportunities for the community.
Anticipated Impact	1. Increased opportunities for residents to access health information. 2. Greater community access to no-cost fitness classes.
Collaborations/ Resources	1. Geisinger Holy Spirit service lines 2. Local fitness centers and dance studios

Program Highlights:

- The hospital-based program, Spirit of Women, rebranded to Spirit of Health in 2017. The program's eNewsletter distribution list reaches 3,500 people.
- The Spirit of Health programs included a quarterly health lecture, followed by a facilitated physical activity, such as a Zumba or yoga. All programs were free to the community.

Action Item 2: Increase the number of community health and education events.	
Objectives	1. Showcase new physicians as community health education presenters. 2. Offer community health and education sessions at locations other than Geisinger Holy Spirit main campus and at various times of the day.
Anticipated Impact	1. Increased patient and physician engagement. 2. Increased access to no-cost health and wellness education and services for the community. 3. Increased opportunities for members of the community to better monitor their own health.
Collaborations/ Resources	1. Geisinger service lines 2. Geisinger Holy Spirit Medical Group 3. Community organizations (e.g. churches, libraries, shopping centers)

Program Highlights:

- New GHS physicians were featured as speakers at community health events and DocTalk segments on local television station, CBS 21. Mid-level providers, registered nurses, and registered dietitians also participated in speaking engagements.
- The GHS Community Health Education and Wellness (CHEW) team offered blood pressure screenings at the Colonial Park Mall, Fredricksen Library, and Carlisle Senior Action Center

on a recurring basis. A total of 3,009 people received screenings during the events in FY2017. Clients also had the opportunity to consult with GHS providers.

- The CHEW team partnered with Urology of Central PA in summer 2017 to offer free prostate-specific antigen (PSA) screenings at Bethesda Mission and during the Harrisburg Senators game in June 2017. A total of 82 people received screenings during the events.
- Free carotid screenings were offered at the hospital in November 2017; 71 people received screenings.
- Various other health screenings were provided at common local areas, including the Fredricksen Library, community events, the hospital, and local churches. The hospital offered free health screenings at the 2017 health fair at the Fredricksen Library. Eighty people had their blood pressure taken, and 75 took glucose/cholesterol tests. The hospital also offered bone density and BMI screenings and provided diabetes education and cardiovascular risk assessments.
- The hospital offered a free event focused on chronic bone, joint, and spine pain in January 2018. Three GHS orthopedic surgeons presented to 54 attendees.
- In February 2017, GHS offered a free heart health event. Two GHS cardiologists and a MyCode staff member were present to provide information about cardiomyopathy, arrhythmia, and MyCode genetic testing. A dietitian conducted a cooking demonstration and offered samples to the 70 attendees. Free health screenings were offered, including blood pressure, glucose/cholesterol, BMI, and cardiovascular risk assessments.
- The hospital offered a free CPR class to the community in February 2018. Five participants learned how to perform CPR on a victim of cardiac arrest, how to assist a person who is choking, and how to use an automated external defibrillator (AED).
- The hospital hosted a free health screening event in March 2018. Sixty-six attendees took advantage of the Abdominal Aortic Aneurysm (AAA) screenings. The hospital also offered blood pressure, glucose/cholesterol, and bone density screenings.

Action Item 3: Expand health and wellness activities offered to all Geisinger Holy Spirit employees.	
Objectives	1. Improve employee mental and physical health and well-being. 2. Increase promotion of the Get Fresh Market program to GHS employees.
Anticipated Impact	1. Improved employee health and well-being. 2. Improved employee diet and lifestyle choices.
Collaborations/ Resources	1. Geisinger myHealth Rewards program 2. Geisinger Holy Spirit employees and families 3. Sodexo food services

Program Highlights:

- A Wellness department office was established at GHS for employees. Employees were encouraged to participate in events hosted by the Wellness department and in the Geisinger myHealth Rewards program.

> The Get Fresh Market for fresh produce was successfully implemented at GHS. The market is available to employees during the summer and fall.

Action Item 4: Create a Whole Woman Wellness Program for female cancer patients at GHS.	
Objectives	1. Offer programs for improved mind, body, and spirit, specifically targeted to women battling breast and/or gynecological cancers. 2. Create a referral system to the program for physicians treating female cancer patients.
Anticipated Impact	1. Improved mental and physical health for patients undergoing cancer treatments. 2. Improved physician and patient engagement.
Collaborations/ Resources	1. Geisinger Holy Spirit Cancer Center 2. Geisinger Holy Spirit OB/GYN Department

Program Highlights:

> In April 2016, the GHS Breast Care Center initiated a quarterly program called *Take Charge Cancer Wellness Program*. The first program session focused on cancer-fighting foods and included a cooking demonstration. Other sessions included a program on spirituality and the health benefits of prayer, a full-body drumming workout that uniquely combines cardio, conditioning, and strength training, and a multi-level fitness program designed to teach participants how to tailor the pace and intensity of exercise for a personalized workout. Approximately 10 people attended each quarterly program.

Action Item 5: Investigate options to offer diabetes classes and support groups in strategic areas of need.	
Objectives	1. Improve diabetic patient outcomes. 2. Create a referral system to the program for physicians treating diabetic patients.
Anticipated Impact	1. Improved quality of life for patients diagnosed with diabetes. 2. Improved physician and patient engagement.
Collaborations/ Resources	1. Geisinger Holy Spirit Diabetes Services 2. Geisinger Holy Spirit Medical Group 3. Geisinger Holy Spirit Physician Liaisons 4. Community organizations (e.g., churches, senior centers)

Program Highlights:

> Diabetic educators were integrated into the broader nutrition program at GHS. Educators provided outpatient services at the Carlisle and Duncannon Centers and in the Camp Hill office.

> Geisinger Holy Spirit Diabetes Services held a monthly diabetes support group at Wegmans in Mechanicsburg. The group averaged 11 participants per month starting in July 2017.

- Diabetes Services also partnered with a Weis Registered Dietitian on two occasions to provide educational sessions on choosing healthy foods. Twenty-six people attended the sessions. The hospital is exploring opportunities for further partnership with Weis.
- Diabetes Services achieved inpatient certification in November 2016 for the Diabetes Program.

Action Item 6: Explore options for the expansion of the mall Walking Loop program.	
Objectives	1. Increase fitness opportunities for the community.
Anticipated Impact	1. More community opportunities for physical fitness.
Collaborations/ Resources	1. Local malls 2. Senior centers

Program Highlights:

- The hospital offered a Walking Loop program at the Colonial Park Mall in Harrisburg.

Action Item 7: Explore options for offering a community tobacco cessation program.	
Objectives	1. Decrease the number of patients and residents who use tobacco products. 2. Create a referral system to the program for primary care physicians treating patients who use tobacco products.
Anticipated Impact	1. A decrease in the number of patients and residents who use tobacco products. 2. Improved physician and patient engagement.
Collaborations/ Resources	1. Geisinger Holy Spirit Behavioral Health 2. Geisinger Holy Spirit Cardiac Rehab 3. Geisinger Holy Spirit Respiratory Therapy 4. Geisinger Holy Spirit Oncology 5. Geisinger Holy Spirit Medical Group

Program Highlights:

- Geisinger Holy Spirit Respiratory Therapy started a smoking cessation program for inpatients and those on observational status in February 2016 and a smoking cessation support group for the community in April 2017. The support group was attended by four people; one person successfully quit smoking. Respiratory Therapy staff plan to present at a GHS Medical Group meeting to increase awareness of the support group and patient referrals.

Action Item 8: Explore options for providing health education in Spanish (Promotores de Salud - Promoters of Health) for patients/families with significant chronic illness.	
Objectives	1. Improve patient collaboration in the management of chronic conditions.
Anticipated Impact	1. Improved prevention of health complications due to chronic illness. 2. Improved health literacy and medication compliance. 3. Improved non-medication management of chronic conditions.
Collaborations/ Resources	1. Medical Outreach Service 2. Harrisburg Area Community College Nursing Students 3. St. Francis Soup Kitchen 4. Local Emergency Rooms

Program Highlights:

- The Promotores de Salud program seeks to reverse unhealthy lifestyles among Latinos/Hispanics by taking health education out of the hospital and into the community. The hospital developed a library of culturally competent dietary materials, cookbooks, and other health information and distributed the materials in food pantries, soup kitchens, and other public places. Nursing students developed relationships with clients and provided limited home visits as health coaches. For clients with limited English or Spanish proficiency, students enlisted alternative teaching methods. Additional programs offered by Promotores de Salud included a morning walking series and oral healthcare in partnership with a free local dental clinic. At the dental clinic, children received toothbrushes and ADA coloring books while their parents received dental care.
- Bilingual registered nurses at GHS completed a Promotoras program offered by the U.S. Department of Health and Human Services, Office of Minority Health. As a result of the program, nurses were trained as frontline public health workers and visited Hispanic community centers, clinics, churches, food pantries, and other gathering places. They delivered easy-to-understand health education in Spanish and one-on-one consultations regarding “health numbers” such as weight, blood pressure, sugar levels, and cholesterol. The Promotoras helped clients monitor their health numbers using screenings cards provided at clinic visits. To date, 359 encounters have occurred and 123 of the encounters were referrals from nursing students in the community. The number includes first-time encounters and return visits.

Implementation Plan for FY2019-2022

Geisinger Holy Spirit Hospital developed a comprehensive Implementation Plan to guide community benefit and community health improvement activities during the three year cycle for FY2019-2022. Goals and objectives of the plan are outlined below. The full plan is available on the Geisinger website at https://www.geisinger.org/about-geisinger/in-our-community/chna.

Access to Care

Goal: Ensure residents have access to quality, comprehensive health care close to home.

Objectives:

- Increase the number of residents who have a regular primary care provider
- Increase access to primary and specialty care physicians practicing within Medically Underserved Areas (MUAs) or Health Professional Shortage Areas (HPSAs)
- Reduce barriers to receiving care for residents without transportation
- Promote awareness of available options for assistance to pay for health care needs
- Foster pursuit of health careers and ongoing training of health professionals

Behavioral Health Care

Goal: Model best practices to address community behavioral health care needs and promote collaboration among organizations to meet the health and social needs of residents.

Objectives:

- Advance local and state dialogue to address behavioral health needs
- Foster integration of behavioral and primary health care
- Provide education to increase residents' awareness of Behavioral Health issues and reduce stigma associated with behavioral health conditions
- Increase access to behavioral health services

Chronic Disease Prevention and Management

Goal: Reduce risk factors and premature death attributed to chronic diseases.

Objectives:

- Encourage community initiatives that support access to and availability of healthy lifestyle choices
- Initiate early stage interventions for individuals at high risk for chronic disease
- Develop integrative care models to improve outcomes for patients with chronic disease

Board Approvals and Next Steps

The Geisinger Holy Spirit Hospital FY2019 CHNA final report was reviewed and approved by the Geisinger Health Affiliate Boards on June 20, 2018 and the Geisinger Health Board of Directors on June 21, 2018. Following the Boards' approval, all CHNA reports were made available to the public via the Geisinger website at https://www.geisinger.org/about-geisinger/in-our-community/chna.

For nearly a century Geisinger has provided superior health care services to the communities we serve in northeast and central Pennsylvania. We are proud of our non-profit mission and work every day to ensure we meet the health care needs of the region, now and for years to come.

Appendix A: Public Health Secondary Data References

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Appendix B: Key Informants

A key informant survey was conducted with 34 community representatives. The organizations represented by key informants, and their respective role/title, included:

Key Informant Organization	Key Informant Title/Role
Advantage Home Health Services, LLC	Chief Executive Officer
Alzheimer's Association	Vice President
Central Pennsylvania Food Bank	Health Innovations Coordinator
Community Members	Nurse
Cumberland County Housing and Redevelopment Authorities	Executive Director
Cumberland/Perry MH/IDD	Administrator
Dickinson College	Associate Professor
Families United Network Inc.	Resource Family Specialist
Geisinger	Research Project Manager II
Geisinger	Senior Director Clinical Nutrition
Geisinger	Directory of Ambulatory Care Gaps & Best Practice
Geisinger	Systems Analyst
Geisinger	Director
Geisinger	Director, Patient Liaisons and Interpretive Services
Geisinger	Director, Corporate Communications
Geisinger Holy Spirit	Registered Nurse
Geisinger Holy Spirit	Financial Planning Manager
Geisinger Holy Spirit	Operations Manager
Geisinger, CPIO	Research Project Manager/Med Take Back
Hamilton Health Center, Inc.	Chief Compliance Officer
Northern Dauphin Human Services Center	Operation Manager/Community Liaison
PA Psychiatric Leadership Council	Senior Consultant
Partnership for Better Health	Executive Director
Penn State Extension	Senior Extension Educator/Registered Dietitian
Penn State Health	Senior Instructor
Penn State Health	Director, Community Health
Perry County	Commissioner
Perry County Health Coalition	Member
Perry County Health Coalition	Consultant
Sadler Health Center	CEO
Saint Elizabeth Ann Seton Catholic Church	Pastor
Shelter Service, Inc.	Executive Director
Susquenita School District	School Nurse
Tri County Community Action	Executive Director

Appendix C: Partner Forum Participants

One partner forum was conducted with 44 community representatives. The participants and their respective organization, included:

Partner Forum Participants	Organization
Sister Mary Joseph Albright	Geisinger Holy Spirit
Jorja Barton	Central PA Food Bank
Lisa Baumann	Geisinger Health Plan
Gil Brown	Hospice of Central PA
Adrian Buckner	United Way Capital Region
Emily Bumgarner	Harrisburg Area YMCA
Austin Cohrs	Penn State Health
Lew Davey	Perry County Health Coalition
Cliff Deardorff	Perry County Health Coalition
Nina DelGrande	SpiriTrust Lutheran
Judy Dillon	Penn State Health
Doris Ditzler	Partnership for Better Health
Mike Eschenmann	DCNR Bureau of Recreation and Conservation
Joni Fegan	Geisinger Holy Spirit
Katie Flickinger	Geisinger Holy Spirit
Vanessa Garcia	Geisinger Holy Spirit
Kathryn Gent	Pennsylvania 92nd District
Kelly Gollick	Contact Helpline
Kenneth Green	Sadler Health Center
Amber Hauck	Priority Healthcare
Karen Howenstine	Geisinger Holy Spirit
Susan Jacobs	Harrisburg Area YMCA
Dawn Keefer	Pennsylvania 92nd District
Colleen Kinney	Domestic Violence Services of Cumberland and Perry Counties
Kathleen Lacomba	Tri County Community Action
John Logan	Hamilton Health Center
Jodi Lomison	Hospice of Central PA
Megan Maurer	Harrisburg Area YMCA
Elizabeth Mihmet	Hospice of Central PA
Ginger Monsted	PA LINK
Jeannine Peterson	Hamilton Health Center
Gail Snyder	Penn State Hershey
Cheryl Sola	Geisinger Holy Spirit
Nadine Srouji	Geisinger Holy Spirit
Rebekkah Stanko	Geisinger Holy Spirit
Barry Stein	Jewish Family Service
Ruth Stoll	Beacon Clinic
Annie Strite	Cumberland and Perry County Mental Health and Intellectual and Developmental Disabilities
Cynthia Swartz	Geisinger Holy Spirit
Robin Tolan	Cumberland and Perry County Mental Health and Intellectual and Developmental Disabilities
Maria Welch	Geisinger Health Plan
Gail Witwer	Partnership for Better Health
Susan Wokulich	United Way Capital Region
Jillian Yoder	Cumberland County Housing and Redevelopment

Appendix D: Existing Community Assets to Address Community Health Needs

The following community assets and potential partners in addressing priority health needs were identified during the CHNA.

- Advantage Home Health Services, LLC
- Alzheimer's Association
- Beacon Clinic
- Boys and Girls Club
- Catholic Charities
- Central Pennsylvania Food Bank
- Churches
- Civic Organizations
- Community Dropbox Locations
- Community Health Workers
- Community Members
- Contact Helpline
- Cumberland and Perry County Mental Health and Intellectual and Developmental Disabilities
- Cumberland County Housing and Redevelopment Authorities
- DARE America
- DCNR Bureau of Recreation and Conservation
- Dickinson College
- Domestic Violence Services of Cumberland and Perry Counties
- Downey School-Based Health Center
- Emergency Medical Services
- Employee Assistance Programs
- Families United Network, Inc.
- Family First Health (George Street Center, Hannah Penn Center, Hanover Center, Lewisberry Center)
- Family Health Council of Central PA
- Geisinger Center for Pharmacy Innovation and Outcomes
- Geisinger Health Plan
- Geisinger Holy Spirit
- Grocery Stores
- Hamilton Health Center
- Hamilton Health Center – Senior High Rise
- Harrisburg Area YMCA
- Health Insurance Plans
- Hospice of Central PA
- Jewish Family Service
- Keystone Human Services
- Local Hospitals
- NHS Human Services
- NHS The Stevens Center
- Northern Dauphin Human Services Center

- PA 211
- PA LINK
- PA Prescription Drug Monitoring Program
- PA Psychiatric Leadership Council
- Partial Hospitalization Programs
- Partnership for Better Health
- Penn State Extension
- Penn State Health
- Penn State Hershey
- Pennsylvania 92nd District
- Pennsylvania Public Transportation Association
- Pennsylvania Psychiatric Leadership Council
- Perry County Health Coalition
- Physicians
- Pinnacle Health
- Police Departments
- Priority Healthcare
- Respite Volunteers
- RSVP of the Capital Region, Inc.
- Sadler Health Center Corporation
- Saint Elizabeth Ann Seton Catholic Church
- Salvation Army
- Schools
- Senior Centers
- Shelter Service, Inc.
- South Central Task Force
- SpiriTrust Lutheran
- Susquehanna View Apartments
- Susquenita School District
- Tri County Community Action
- United Way Capital Region
- VA Medical Centers
- Women, Infants, and Children
- YMCA
- YWCA