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HERITAGE VALLEY HEALTH SYSTEM

Community Health Needs Assessment

Final Summary Report

June 2019

BAKER TILLY

Candor. Insight. Results.

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Our Commitment to Community Health

The mission of Heritage Valley Health System (HVHS) is “to improve the health and well-being of all people in the communities we serve.” With 3,500 employees and more than 450 physicians, Heritage Valley offers a broad range of medical, surgical, and diagnostic services at our two hospitals, Heritage Valley Sewickley and Heritage Valley Beaver; in 60 physician offices; and 18 community satellite facilities.

Heritage Valley Health System is driven to serve the community in accordance with our mission and vision to be a leader among community health systems nationally. We will provide exceptional health services across a seamless delivery system, built upon collaborative relationships connecting physicians, employees, and the community. We will address both prevention and treatment of disease throughout the continuum of life.

The 2019 Community Health Needs Assessment (CHNA) was conducted by HVHS to gain a better understanding of the health needs across the communities we serve. The 2019 CHNA builds upon previous assessments conducted in 2013 and 2016 and will continue to guide our community benefit and community health improvement efforts.

Consistent with previous assessments, the 2019 CHNA focused on the health needs of residents of Beaver County and select municipalities in the western portion of Allegheny County. The assessment was conducted from June to November 2018 with subsequent community health improvement planning through June 2019.

The CHNA included a mix of quantitative and qualitative research to collect and analyze health trends, socio-economic data, and stakeholder perceptions. Community engagement was an integral part of the 2019 CHNA. Heritage Valley Health System solicited insight from a diverse mix of community members and leaders, including public health experts and individuals of medically underserved, low income, and minority populations. The CHNA research will be used to guide community health improvement efforts across the HVHS service area over the next three-year cycle.

We extend our thanks to the hundreds of community stakeholders that participated in the 2019 CHNA research and to our many partners who will continue to help us address health needs and disparities across our community.

We invite our community partners to learn more about the CHNA and opportunities for collaboration to address identified health needs. Please visit our website or contact Arlene Bell, Director Community Health Services at abell@hvhs.org.

Executive Summary

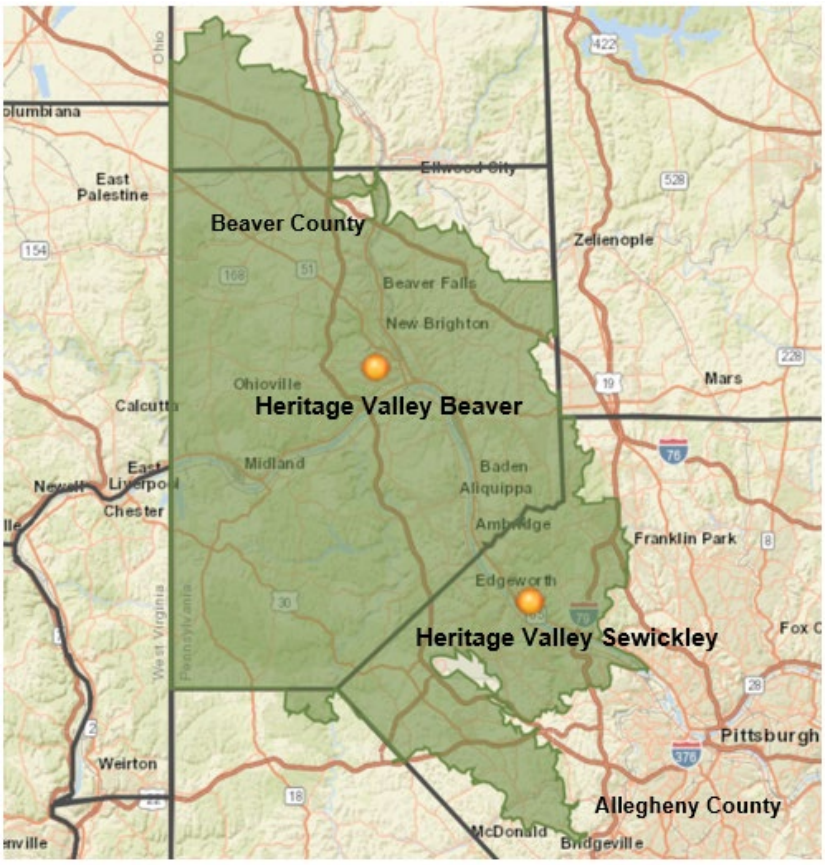
Heritage Valley Health System Service Area

Heritage Valley Health System operates two hospitals within Allegheny and Beaver Counties in Pennsylvania: Heritage Valley Beaver and Heritage Valley Sewickley. The primary service area defined for the purposes of the CHNA encompasses 28 zip codes spanning most of Beaver County and the western portion of Allegheny County.

The 2018 population for the 28-zip code service area is 250,831. The population increased approximately 1% from 2010 to 2018, but it is expected to decline 0.4% through 2023

Heritage Valley Health System Primary Service Area

Zip Codes
15001, Aliquippa
15003, Ambridge
15005, Baden
15009, Beaver
15010, Beaver Falls
15026, Clinton
15027, Conway
15042, Freedom
15043, Georgetown
15046, Crescent
15050, Hookstown
15052, Industry
15056, Leetsdale
15059, Midland
15061, Monaca
15066, New Brighton
15071, Oakdale
15074, Rochester
15077, Shippingport
15081, South Heights
15108, Coraopolis
15126, Imperial
15143, Sewickley
15225, Neville Island
16115, Darlington
16120, Enon Valley
16136, Koppel
16141, New Galilee



Service Area Population

2018 Population	% Growth 2010 - 2018	% Growth 2018 - 2023
250,831	0.8%	-0.4%

Overview of the Heritage Valley Health System 2019 CHNA

CHNA Leadership
The 2019 CHNA was overseen by a Planning Committee of representatives from HVHS. Planning Committee members are listed below, along with Baker Tilly consultant team members. Baker Tilly assisted in all phases of the CHNA including project management, quantitative and qualitative data collection, and report writing.

HVHS CHNA Planning Committee
Michael Baker, Business Advisor
Arlene Bell, Director Community Health Services

Consulting Team
Catherine Birdsey, MPH, CHNA Project Manager
Jessica Losito, BS, Research Consultant
Colleen Milligan, MBA, Director, CHNA Services

CHNA Methodology
The 2019 CHNA was conducted from June 2018 to May 2019 and used both primary and secondary study methods to compare health trends and disparities across the service area. Primary study methods were used to solicit input from health care consumers and key community stakeholders representing the broad interests of the community. Secondary study methods were used to identify and analyze statistical demographic and health trends.

Specific CHNA study methods included:

- An analysis of existing secondary data sources, including public health statistics, demographic and social measures, and health care utilization
- A Key Informant Survey with 29 community leaders and representatives
- A Community Member Survey with 2,541 residents across the 28-zip code service area
- Focus Groups with 10 health and social service partner agencies to inform action planning and strategies to address community health priorities
- A Community Partner Meeting with 21 individuals representing diverse community agencies to gather insight on priority health needs and determine opportunities for partnership on community health improvement efforts
- Steering committee meetings with community agencies to develop planning for community health improvement activities

The 2019 CHNA built upon the health systems' 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 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, HVHS solicited and received input from persons who represent the broad interests of residents served by each hospital. These individuals brought wide perspectives on community health needs, existing community resources available to meet those needs, and gaps in the current service delivery system. Through facilitated dialogue, the following health issues were prioritized as the most significant health needs for the service area:

- Access to Care
- Behavioral Health (including Mental Health and Substance Use Disorder)
- Chronic Disease Management
- Healthy Living

Heritage Valley Health System and its partners agreed that HVHS was best positioned to lead efforts to address access to care and chronic disease management. Partners and HVHS determined that existing community agencies were already focused on behavioral health and healthy living. Heritage Valley Health System will continue to lend support to initiatives to address behavioral health and healthy living, while not taking a leadership role.

Summary of CHNA Findings in Support of Priority Needs

The following section summarizes key CHNA findings in support of the identified priority issues for the HVHS service area. Recognizing the relationship between social determinants of health and health status, demographic and socioeconomic measures for the service area are also presented.

Key CHNA Findings
1. The service area population is primarily White, but diversity is increasing as Asian, Black/African American, and Hispanic/Latino populations slowly grow. The CHNA findings indicate that these growing populations experience disparities across social, economic, and health factors, including higher poverty and uninsured rates and higher death rates due to chronic conditions. Heritage Valley and its community partners will continue to monitor the health of all residents and work to address disparities.
2. The rate of primary, dental, and mental health care providers per 100,000 population increased in Beaver County, but current rates are lower than the state and the nation. Beaver County is a Health Professional Shortage Area for mental health care.
3. Transportation was identified by health and social service providers as a missing community resource and leading health care access barrier. Out-of-pocket costs were seen as an access barrier by both providers and residents. One in 10 Community Survey respondents reported not being able to see a doctor due to cost.

Key CHNA Findings cont'd

4. Key Informant Survey participants named overweight/obesity as the #1 community health concern and health habits as the #1 contributing factor. Approximately one in four service area adults are obese, consistent with state and national percentages. In Beaver County, one in five students are also obese, higher than the state and the nation. Beaver County has fewer options for physical activity and higher food insecurity among children.
5. Focus Group participants acknowledged health habits—particularly nutrition—as a leading contributor to poor health outcomes. Participants specifically listed lack of knowledge, busy lifestyles, and social determinants as contributors to poor health habits.
6. Service area death rates due to heart disease and cancer are higher than the state and nation. Higher cancer incidence in the service area may indicate late detection and treatment, suggesting opportunities for increased screening.
7. One in five service area residents are age 65 or older, reflecting an older demographic than the state or nation. Approximately two-thirds of these seniors manage two or more chronic conditions and 14% live alone, which may impede chronic disease management and contribute to social isolation.
8. Overall smoking rates among adults declined and are consistent with the nation, but the percentage of mothers who smoke during pregnancy remains higher than state and national averages. Smoking rates among youth also declined, but the prevalence of vaping increased.
9. Mental health and substance abuse were the #2 and #3 top community health concerns according to Key Informant Survey participants, yet were considered to be the services least available to residents. The service area has higher rates of death due to both suicide and drug abuse compared to the state and the nation.
10. Approximately 2 in 5 students report feeling consistently sad or depressed, higher than the state and an increase from previous years. One in 5 youth in Allegheny County report using alcohol, higher than the state. Youth in both Allegheny (15.9%) and Beaver (10.4%) Counties are more likely to report marijuana use than the state.

Health Disparities

A socio-economic profile by zip code was developed for the 28 zip codes that make up the HVHS service area to identify areas that may experience disparities based on socio-economic and health data. Recognizing that zip code-level data may not depict unique disparities across neighborhoods within the zip code, municipal data was incorporated for additional analysis, as available.

Data analysis determined that Aliquippa City, Ambridge Borough, Beaver Falls City, and Coraopolis Borough exhibited disparities across social, economic, and health factors.

Of the four municipalities, all except Ambridge Borough are designated by the Health Resources & Services Administration (HRSA) as Medically Underserved Areas (MUA). MUAs are defined

as having too few primary care providers, high infant mortality, high poverty, and/or a high elderly population. Aliquippa City and Beaver Falls City have the highest poverty rates and among the highest uninsured rates. Residents from the respective zip codes of these two cities accounted for more than one-quarter of patients who visited a HVHS emergency department (ED) five or more times in FY2018.

Socioeconomic Disparity and Emergency Department Usage among High Need Communities

	People in Poverty	% of Population Uninsured	Designated as MUA	% of Total HVHS ED visits 5+ Times in FY2018*
Aliquippa City	29.5%	9.2%	X	17.9%
Ambridge Borough	19.6%	7.1%		8.2%
Beaver Falls City	27.5%	8.8%	X	13.9%
Coraopolis Borough	16.8%	9.9%	X	5.5%
Total Service Area	9.8%	5.3%		1,126

*Indicators based on zip code data: 15003, Ambridge; 15001, Aliquippa; 15010, Beaver Falls; 15108, Coraopolis

Results from the Community Survey supported disparities identified in the statistical data. Respondents from Ambridge were the most likely of any zip code to report limited activity due to poor physical or mental health. Ambridge residents were also more likely to report low fruit and vegetable consumption and higher food insecurity. Approximately half of all Community Survey respondents reported having at least one chronic disease risk factor, including high blood pressure, high cholesterol, and/or overweight/obesity. Respondents from Aliquippa, zip code 15001, exceeded the total service area percentage for all of these measures.

As part of its community health improvement Implementation Plan, HVHS will focus specific efforts on these four geographic areas to reduce disparities.

Board Approval

The 2019 CHNA Final Report and corresponding Implementation Plans for Heritage Valley Beaver and Heritage Valley Sewickley were reviewed and approved by the HVHS Board of Directors in June 2019. Following the Boards' approval, the CHNA report was made available to the public via the health systems' website: http://www.heritagevalley.org/pages/community-health-needs-assessment.

Full Report of CHNA Data and Findings

Secondary Data Profile

Background

Secondary data, including demographic and public health indicators, were analyzed for the HVHS service area 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.

All reported demographic data were provided by ESRI Business Analyst, 2018 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, chronic disease prevalence and mortality, mental health and substance use disorder, and maternal and child health. Data are most robust at the county-level, and are reported for both Allegheny and Beaver Counties. Allegheny County includes the City of Pittsburgh; reported data may be skewed by the conditions of the city. Zip code and/or municipality data are provided as available to portray the health status of the HVHS service area.

Public health data for Allegheny and Beaver 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 for Pennsylvania are reported by county or by region. The regions reported in this assessment include:

- Region 1: Allegheny County
- Region 2: Beaver/Butler Counties

Additionally, the Allegheny County Health Department produces BRFSS results by Allegheny County district. The HVHS service area comprises parts of Districts 1 and 2. Findings for these districts are presented throughout the report.

Summary of Secondary Data Findings

The population of the HVHS service area is primarily White, but diversity is increasing. The White population as a percentage of the total population is declining, while Asian, 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.

According to the US Census Bureau, by 2030, all baby boomers will be older than age 65. By 2060, the median age of the US population is expected to grow from a current age of 38 to age 43. The 2018 median age for HVHS service area residents is 45 years, exceeding current and projected state and national medians. The aging population of the area will have wide ranging implications for health, social, and economic factors.

The HVHS service area fares better than the state and the nation on most economic indicators. Service area residents are less likely to live in poverty, have a lower unemployment rate, and are more likely to have attained higher education. However, minority populations including Black/African American or Hispanic/Latino residents are more likely to be impacted by adverse socioeconomic factors. Poverty is one of the biggest drivers of disparity. Poverty rates among minority populations across Pennsylvania and both service counties are approximately double or more than among Whites. Socioeconomic disparity contributes to worse health outcomes.

The service area shows a variety of key health strengths as evidenced in this report:

1. Service area residents are more likely to have health insurance and receive routine care when compared to the state and the nation. The percentage of uninsured residents declined, while the percentage of adults receiving preventative checkups increased.
2. The number of primary, mental, and dental health providers increased in Allegheny and Beaver Counties over the past five years.
3. Adults in Allegheny and Beaver Counties have better overall health with fewer adults self-reporting “poor” or “fair” health status.
4. The percentage of adults and youth who report smoking declined in both counties. Current percentages are consistent with or better than state and national percentages.
5. Current death rates due to heart disease and cancer are higher than state and national comparisons, but rates are declining.
6. Fewer senior Medicare beneficiaries have been diagnosed with multiple chronic conditions compared to state and national benchmarks.

7. The percentage of births to teenage mothers declined in both counties over the past decade and is lower than state and national benchmarks.
8. Mothers in both Allegheny and Beaver Counties meet national benchmarks for first trimester prenatal care and preterm birth.

There are also other areas that offer opportunities for improvement.

1. Despite the decline in the uninsured rate, Black/African American and Hispanic/Latino residents continue to have higher uninsured rates than Whites.
2. Beaver County has lower primary, dental, and mental health provider rates than the state and the nation; Beaver County is a Health Professional Shortage Area for mental health care.
3. The premature death rate for both counties exceeds the state and the nation.
4. Smoking rates among adults declined, but the current percentage of mothers who smoke during pregnancy exceeds state and national averages. Smoking rates among youth also declined, but the prevalence of vaping increased.
5. Allegheny and Beaver Counties meet the Healthy People 2020 goal for adult obesity, however, current percentages indicate that one in four adults living in the counties are obese. Approximately one in ten adults also have diabetes.
6. A higher percentage of Beaver County students are overweight or obese compared to the state. Children living in the county are also more likely to be food insecure.
7. Fewer residents of Beaver County have access to physical activity venues; the percentage of inactive adults in the county is higher than the state and the nation.
8. Cancer incidence and death rates are higher in Allegheny and Beaver Counties, indicating delayed detection and treatment.
9. Blacks/African Americans have higher rates of death due to chronic disease.
10. Allegheny County has higher rates of chlamydia, gonorrhea, and HIV than the state; rates for chlamydia and gonorrhea are increasing.
11. The suicide death rate is higher for both counties compared to state and/or national rates; the Allegheny County death rate increased steadily over the past decade.
12. The drug-induced death rate is higher for both counties compared to state and national rates and increasing. Between 2013 and 2017, overdose deaths increased by nearly 170% in Allegheny County and 110% in Beaver County.
13. A higher percentage of youth in both counties report consistently feeling sad or depressed; the percentage increased from 2013 to 2017. Youth are also more likely to report using alcohol and/or marijuana.

Full Report of Demographic Findings

Demographic Overview

The HVHS primary service area spans 28 zip codes in Allegheny and Beaver Counties. Demographic data are presented for the aggregate service area, as well as both counties for benchmark comparisons. The populations for the primary service area and Butler County overall are projected to decline between 2018 and 2023. The population for Allegheny County, which includes the City of Pittsburgh, will remain stable with a projected growth of less than 1%.

Population Growth

	2018 Population	% Growth from 2010	% Growth by 2023
Primary Service Area	250,831	0.8%	-0.4%
Allegheny County	1,236,649	1.1%	0.4%
Beaver County	168,656	-1.1%	-1.4%

A higher proportion of service area residents are White compared to the state and the nation, but diversity is increasing. The percentage of the total population that identifies as White is projected to decrease through 2023, while the percentage of residents identifying as Asian, Black/African American, and/or Hispanic/Latino is projected to increase. Consistent with the demographics of the service area, residents are more likely to speak English as their primary language when compared to the state and the nation.

Pennsylvania has a higher median resident age than the nation. The median age of residents in the service area and both counties is higher than the state and the nation.

2018 Population Overview

	White	Black or African American	Asian	Hispanic or Latino (any race)	Speak English Only*
Primary Service Area	89.6%	5.6%	1.9%	1.9%	95.5%
Allegheny County	79.4%	13.4%	4.0%	2.2%	92.8%
Beaver County	90.3%	6.3%	0.5%	1.7%	97.2%
Pennsylvania	79.3%	11.3%	3.6%	7.6%	89.2%
United States	70.0%	12.9%	5.7%	18.3%	78.9%

*Data are reported for 2012-2016 based on availability.

2010-2023 Population Change by Race/Ethnicity

	White		Black/African American		Asian		Hispanic or Latino	
	2010	2023	2010	2023	2010	2023	2010	2023
Primary Service Area	91.0%	88.4%	5.6%	5.7%	1.2%	2.4%	1.3%	2.4%
Allegheny County	81.5%	77.6%	13.2%	13.5%	2.8%	5.1%	1.6%	2.8%
Beaver County	91.2%	89.5%	6.3%	6.4%	0.4%	0.6%	1.2%	2.1%
Pennsylvania	81.9%	77.1%	10.9%	11.7%	2.8%	4.3%	5.7%	9.2%
United States	72.4%	68.2%	12.6%	13.0%	4.8%	6.4%	16.4%	19.8%

2018 Population by Age

	Under 14 years	15-24 years	25-34 years	35-54 years	55-64 years	65+ years	Median Age
Primary Service Area	15.8%	11.1%	11.5%	25.2%	15.7%	20.7%	45.0
Allegheny County	15.0%	12.9%	13.0%	24.3%	14.7%	20.1%	42.7
Beaver County	15.3%	10.6%	11.6%	24.6%	16.1%	21.9%	46.0
Pennsylvania	16.7%	13.1%	12.6%	24.9%	14.2%	18.6%	41.4
United States	18.6%	13.3%	13.9%	25.3%	13.0%	16.0%	38.3

The median household income for service area residents exceeds county, state, and national benchmarks. Residents are less likely to live in poverty or receive Food Stamp/SNAP benefits. Children in particular are less likely to live in poverty; the service area percentage is lower than the national percentage by more than 7 points. The service area also has a more prominent white collar workforce and a lower unemployment rate compared to the state and the nation.

2018 Median Household Income and 2012-2016 Poverty/Food Stamp Status

	Median Household Income	People in Poverty	Children in Poverty	Households with Food Stamp/ SNAP Benefits
Primary Service Area	$59,062	9.8%	13.9%	10.8%
Allegheny County	$55,870	12.7%	17.5%	12.3%
Beaver County	$53,275	10.8%	17.0%	13.3%
Pennsylvania	$57,362	13.3%	19.1%	13.0%
United States	$58,100	15.1%	21.2%	13.1%

2018 Population by Occupation and Unemployment

	White Collar Workforce	Blue Collar Workforce	Unemployment Rate
Primary Service Area	63.0%	37.0%	4.5%
Allegheny County	68.0%	32.0%	5.5%
Beaver County	58.0%	42.0%	4.8%
Pennsylvania	61.0%	39.0%	6.1%
United States	61.0%	39.0%	4.8%

Homeownership and housing affordability are measures of economic stability. The median home value in the service area is lower than both the state and the nation, despite households having a higher median income. Residents are more likely to own their home when compared to the state and the nation.

Housing cost burden is defined by the US Census Bureau as spending more than 30% of household income on rent or mortgages expenses. Housing cost-burdened households are more likely to have difficulty affording other necessities like food, transportation, and medical care. Fifty percent of renters across the state and the nation are considered housing cost burdened, higher than the service area percentage. Home owners in the service area are also less likely to be considered housing cost-burdened.

2018 Population by Household Type

	Renter-Occupied	Owner-Occupied	Median Home Value
Primary Service Area	27.2%	72.8%	$151,171
Allegheny County	38.4%	61.6%	$138,601
Beaver County	26.2%	73.8%	$133,923
Pennsylvania	32.3%	67.7%	$185,452
United States	36.9%	63.1%	$218,492

2012-2016 Housing Cost Burden

	Percent of Renters Paying 30% or More of Income on Rent	Percent of Mortgages Costing 30% or More of Household Income
Primary Service Area	41.6%	22.5%
Allegheny County	45.9%	22.1%
Beaver County	44.2%	23.4%
Pennsylvania	49.6%	28.0%
United States	51.1%	30.8%

Education is the largest predictor of poverty and one of the most effective means of reducing inequalities. Residents of the service area have generally achieved higher levels of education than the state and the nation. The percentage of residents attaining less than a high school diploma is lower than state and national benchmarks; residents are more likely to have a bachelor's degree or higher.

2018 Population (25 Years or Over) by Educational Attainment

	Less than a High School Diploma	High School Graduate/GED	Bachelor's Degree or Higher
Primary Service Area	6.6%	32.5%	33.4%
Allegheny County	5.5%	27.4%	41.6%
Beaver County	7.4%	37.7%	25.4%
Pennsylvania	9.6%	34.7%	31.6%
United States	12.3%	27.0%	31.8%

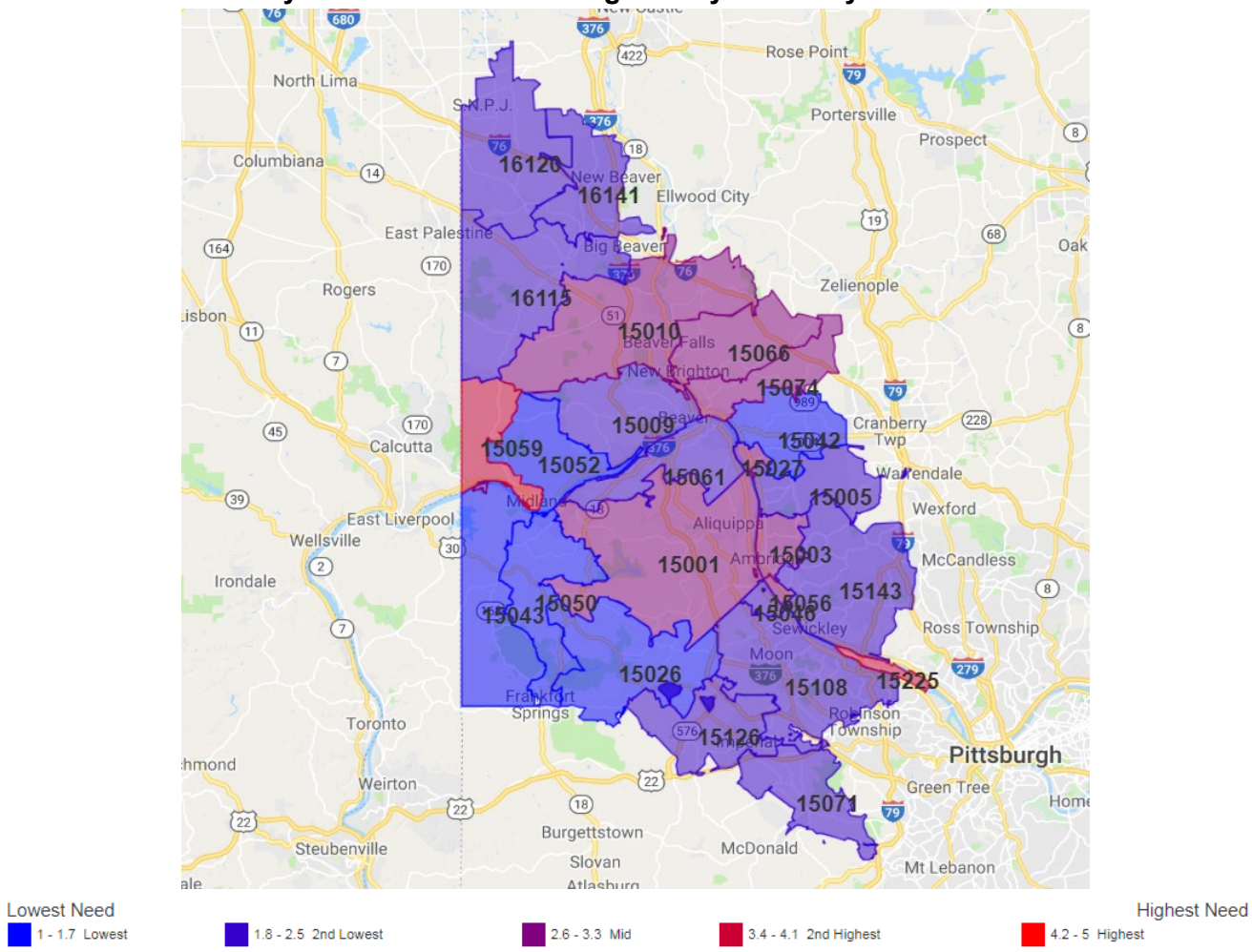
Community Need Index

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 data indicators across 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 Heritage Valley Health System's 28 zip code service area is 2.3, indicating lower overall community need.

Community Needs Index for Heritage Valley Health System's Service Area



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. Note: The 2% point difference does not represent statistical significance.

Zip code 15059, Midland has the highest CNI score, indicating the greatest community need. Midland residents are more diverse and have greater numbers of unemployed, uninsured, and people living in poverty, as well as fewer people with at least a high school diploma than the county average. Zip codes 15225, Neville Island and 15003, Ambridge also have higher CNI scores. Socioeconomic indicators for residents of these zip codes indicate that poverty, unemployment, and/or lower educational attainment percentages are higher than county percentages.

Social Determinants of Health Indicators by Zip Code

	Black/ African American	Hispanic / Latino	Language Other than English Spoken at Home	HHs in Poverty	Unemp-loyment	Less than HS Diploma	Without Health Insurance	CNI Score
Allegheny County	**13.4%**	**2.2%**	**7.2%**	**13.0%**	**5.5%**	**5.5%**	**6.0%**	**2.6**
15225 (Neville Island)	3.5%	9.4%	3.9%	12.4%	9.0%	9.0%	7.3%	3.4
15056 (Leetsdale)	8.2%	3.4%	3.2%	11.9%	6.0%	8.3%	7.7%	2.6
15108 (Coraopolis)	5.4%	2.5%	7.8%	8.6%	4.1%	5.9%	4.5%	2.2
15046 (Crescent)	2.4%	2.0%	4.4%	5.5%	3.5%	5.3%	6.3%	1.8
15071 (Oakdale)	2.5%	2.0%	5.5%	6.0%	4.1%	4.2%	4.8%	1.8
15126 (Imperial)	2.4%	1.7%	6.3%	8.4%	4.4%	5.6%	4.3%	1.8
15143 (Sewickley)	2.7%	2.0%	9.4%	5.1%	3.1%	2.9%	2.5%	1.8
Beaver County	**6.3%**	**1.7%**	**2.8%**	**11.0%**	**4.8%**	**7.4%**	**6.0%**	**2.5**
15059 (Midland)	13.8%	4.4%	2.3%	21.0%	6.9%	15.8%	8.6%	3.6
15003 (Ambridge)	11.4%	2.8%	3.6%	13.6%	6.8%	8.1%	5.7%	3.2
15066 (New Brighton)	6.4%	1.6%	2.3%	14.3%	5.6%	9.4%	8.5%	3.0
15010 (Beaver Falls)	7.5%	1.5%	2.6%	13.4%	4.8%	7.5%	6.6%	2.8
15074 (Rochester)	8.3%	1.7%	1.8%	12.9%	5.2%	9.1%	8.6%	2.8
15001 (Aliquippa)	13.4%	1.8%	4.2%	12.1%	4.7%	7.0%	6.2%	2.6
15027 (Conway)	1.2%	1.3%	2.7%	11.8%	3.4%	7.8%	4.7%	2.6
15009 (Beaver)	1.5%	1.7%	3.2%	6.4%	3.6%	6.0%	3.6%	2.4
15061 (Monaca)	3.1%	1.8%	1.9%	7.9%	3.7%	7.1%	4.3%	2.4
16141 (New Galilee)*	0.8%	0.8%	1.9%	9.2%	4.6%	10.5%	7.4%	2.2
16120 (Enon Valley)*	0.2%	0.6%	5.9%	8.9%	3.3%	11.4%	5.8%	2.2
15005 (Baden)	1.2%	1.4%	4.1%	5.7%	4.5%	5.1%	3.9%	2.2
16115 (Darlington)	0.6%	0.8%	2.3%	10.0%	4.8%	7.6%	5.0%	1.8
15042 (Freedom)	1.2%	1.1%	1.6%	8.0%	4.4%	6.1%	5.0%	1.6
15052 (Industry)	1.4%	1.7%	2.0%	9.3%	5.2%	5.1%	7.7%	1.4
15026 (Clinton)	1.0%	1.1%	1.9%	8.8%	5.3%	4.8%	4.8%	1.4
15043 (Georgetown)	0.6%	0.7%	5.0%	8.6%	6.0%	6.4%	3.9%	1.2
15050 (Hookstown)	0.5%	1.2%	1.9%	7.3%	7.0%	7.3%	5.1%	1.2
15077 (Shippingport)	0.0%	0.9%	0.8%	5.9%	8.8%	7.6%	7.3%	NA**
15081 (South Heights)	5.3%	1.3%	5.2%	7.0%	2.5%	6.7%	2.6%	NA**
16136 (Koppel)	2.1%	2.4%	8.1%	9.5%	7.7%	7.3%	11.4%	NA**
HVHS Service Area	**5.6%**	**1.9%**	**4.5%**	**9.8%**	**4.5%**	**6.6%**	**5.3%**	**NA**
Pennsylvania	**11.3%**	**7.6%**	**10.8%**	**12.8%**	**6.1%**	**9.6%**	**8.0%**	**NA**

* Zip codes 16120 and 16141 are located in Lawrence County with a portion in Beaver County.
** CNI scores cannot be generated for zip codes 15077, 15081, and 16136, likely due to low population counts.

The following tables profile social determinants of health, including poverty, unemployment, and educational attainment, by race and ethnicity. Data are reported by county due to data limitations for the service area. Minority populations within the counties, particularly Allegheny County, are impacted by adverse social determinants of health when compared to Whites.

2012-2016 Poverty Rates by Race and Ethnicity

	White		Black/African American		Hispanic/Latino	
	Count	Percentage	Count	Percentage	Count	Percentage
Allegheny County	86,491	8.9%	48,040	31.3%	5,032	22.6%
Beaver County	13,743	9.1%	3,169	32.0%	331	14.0%
Pennsylvania	1,050,106	10.4%	374,712	28.2%	255,243	31.5%

2012-2016 Unemployment Rates by Race and Ethnicity

	White		Black/African American		Hispanic/Latino	
	Count	Percentage	Count	Percentage	Count	Percentage
Allegheny County	43,968	5.2%	18,919	15.4%	996	5.9%
Beaver County	7,221	5.6%	988	12.4%	65	4.0%
Pennsylvania	518,168	6.0%	165,097	15.2%	74,989	13.0%

2012-2016 Bachelor's Degree or Higher by Race and Ethnicity

	White		Black/African American		Hispanic/Latino	
	Count	Percentage	Count	Percentage	Count	Percentage
Allegheny County	299,859	40.5%	18,794	19.1%	5,498	41.5%
Beaver County	27,088	23.7%	1,139	17.5%	396	29.7%
Pennsylvania	2,259,211	30.3%	148,706	17.2%	64,903	14.8%

Full Report of Public Health Data Findings

Access to Health Care

Allegheny and Beaver Counties received the following rankings for clinical care out of 67 counties in Pennsylvania, as reported by the University of Wisconsin County Health Rankings & Roadmaps program. The rankings are based on a number of indicators, including health insurance coverage and provider access. Both counties improved in the rankings in comparison to the rankings provided at the time of the 2016 CHNA. Beaver County rose in the rankings by 20 points.

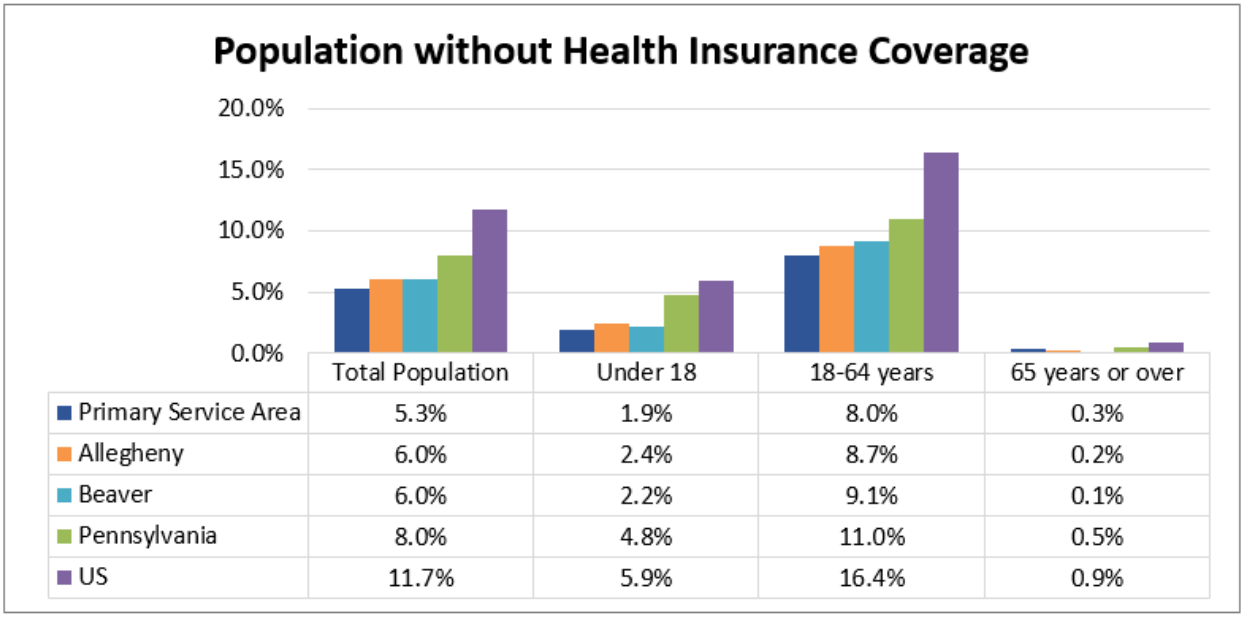
2018 Clinical Care County Health Rankings

#21 Allegheny County (#26 in 2015)
#27 Beaver County (#47 in 2015)

Health Insurance Coverage

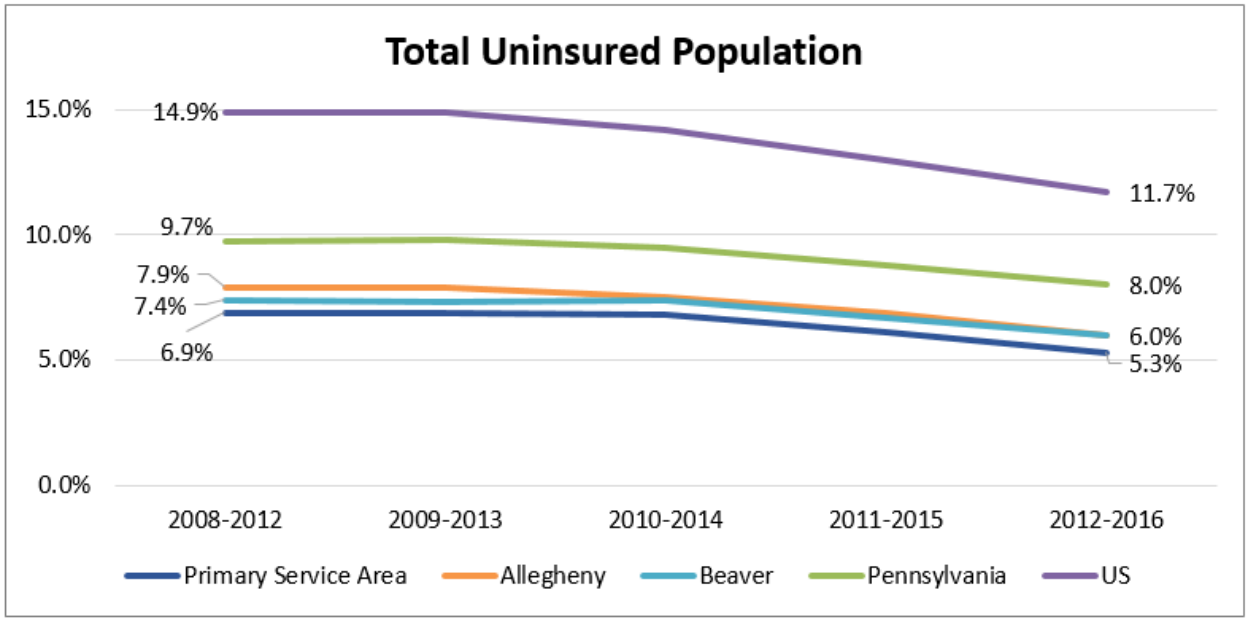
Fewer residents in the HVHS service area are uninsured when compared to county, state, and national benchmarks. The percentage of uninsured service area residents declined by approximately 2 percentage points over the past five years. However, the service area does not meet the Healthy People 2020 goal of having 100% of all residents insured. The percent uninsured is highest among adults ages 18 to 64, which is consistent with national trends.

Fewer service area residents are uninsured compared to the state and the nation; the rate is declining



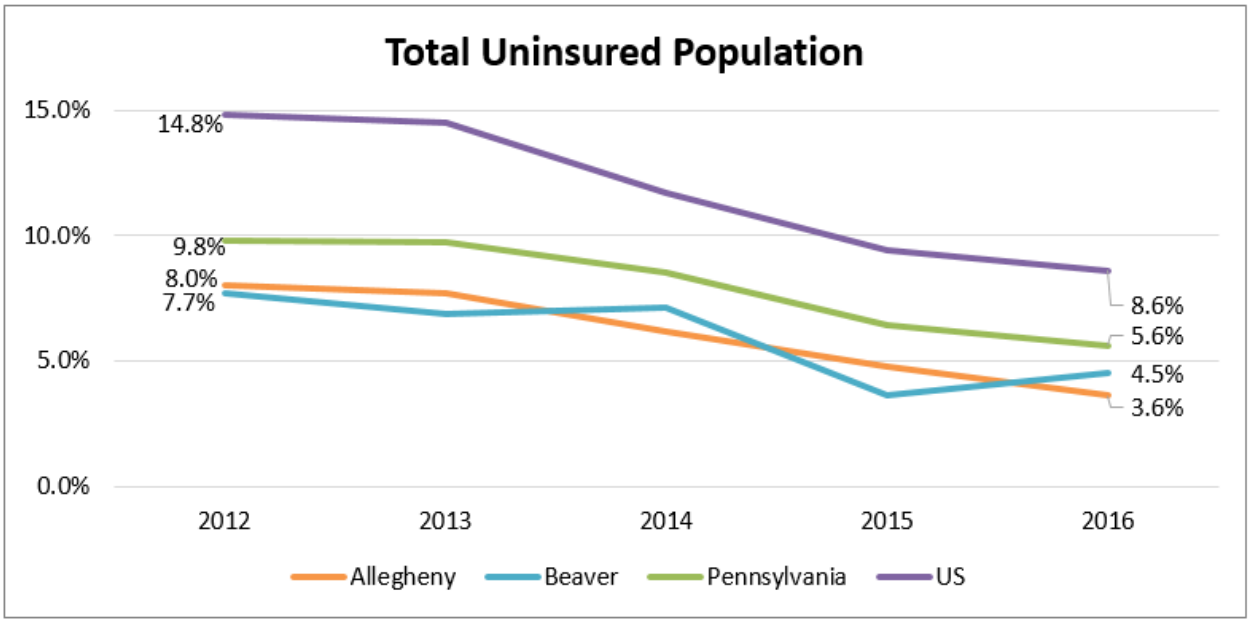
	Total Population	Under 18	18-64 years	65 years or over
Primary Service Area	5.3%	1.9%	8.0%	0.3%
Allegheny	6.0%	2.4%	8.7%	0.2%
Beaver	6.0%	2.2%	9.1%	0.1%
Pennsylvania	8.0%	4.8%	11.0%	0.5%
US	11.7%	5.9%	16.4%	0.9%

Source: US Census Bureau, 2012-2016



Source: US Census Bureau, 2008-2012 - 2012-2016

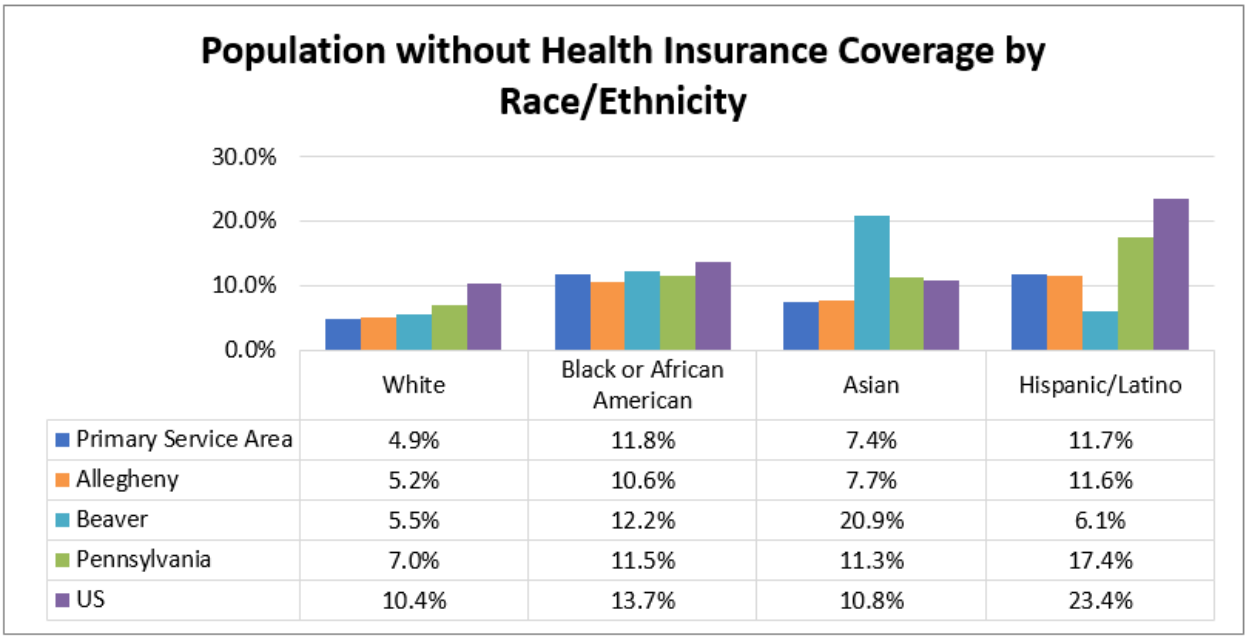
Uninsured rates for Allegheny and Butler Counties are also reported annually. The annual uninsured rate for both counties declined notably after 2013, the year of implementation for the Affordable Care Act individual insurance mandate. Annual trends for the HVHS service area are not available due to data limitations.



Source: US Census Bureau, 2012-2016

The percent uninsured across Pennsylvania and the nation is highest among Hispanic/Latino residents. Within the HVHS service area, Black/African American and Hispanic/Latino residents have a similar uninsured rate that exceeds the uninsured rate of other racial groups.

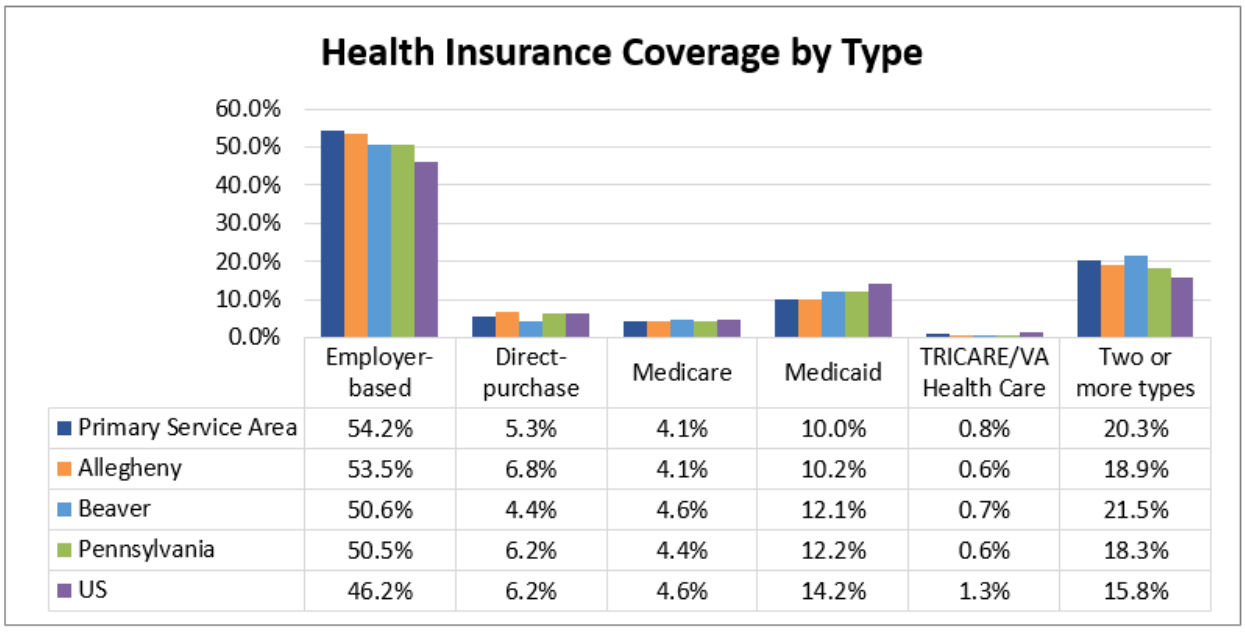
The uninsured rate is highest among Blacks/African Americans and Hispanics/Latinos



	White	Black or African American	Asian	Hispanic/Latino
Primary Service Area	4.9%	11.8%	7.4%	11.7%
Allegheny	5.2%	10.6%	7.7%	11.6%
Beaver	5.5%	12.2%	20.9%	6.1%
Pennsylvania	7.0%	11.5%	11.3%	17.4%
US	10.4%	13.7%	10.8%	23.4%

Source: US Census Bureau, 2012-2016

The following graph depicts health insurance coverage by type of insurance. Residents of the HVHS service area are most likely to be covered by employer-based insurance, followed by a combination (private and/or public) of insurance types, consistent with state and national trends.



	Employer-based	Direct-purchase	Medicare	Medicaid	TRICARE/VA Health Care	Two or more types
Primary Service Area	54.2%	5.3%	4.1%	10.0%	0.8%	20.3%
Allegheny	53.5%	6.8%	4.1%	10.2%	0.6%	18.9%
Beaver	50.6%	4.4%	4.6%	12.1%	0.7%	21.5%
Pennsylvania	50.5%	6.2%	4.4%	12.2%	0.6%	18.3%
US	46.2%	6.2%	4.6%	14.2%	1.3%	15.8%

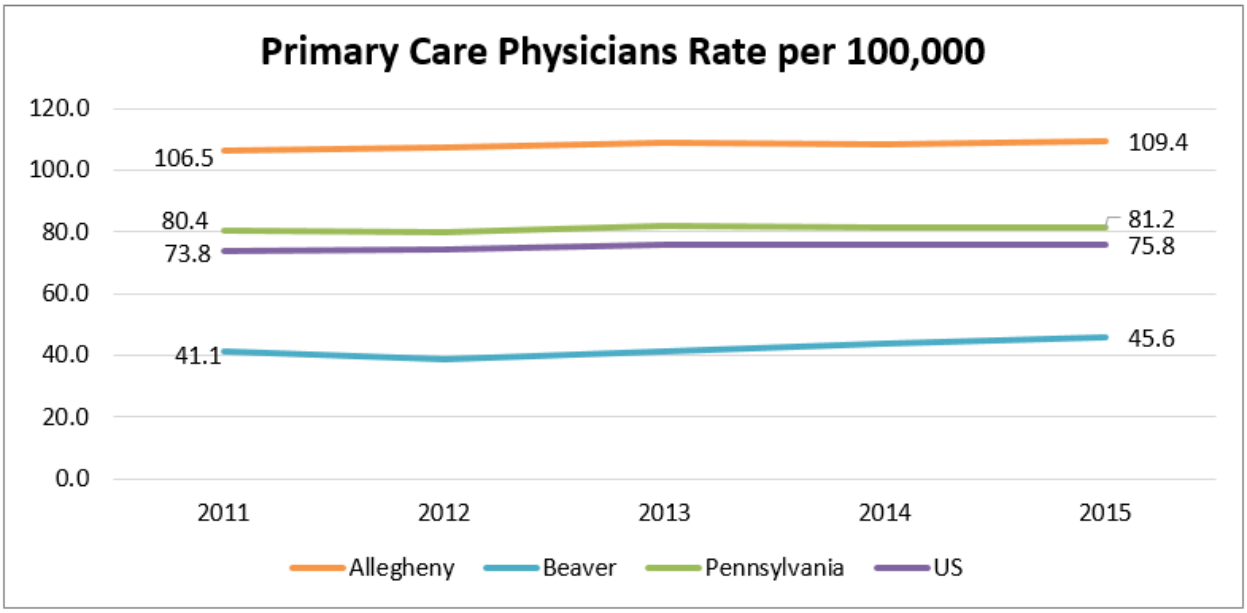
Source: US Census Bureau, 2012-2016

Provider Access

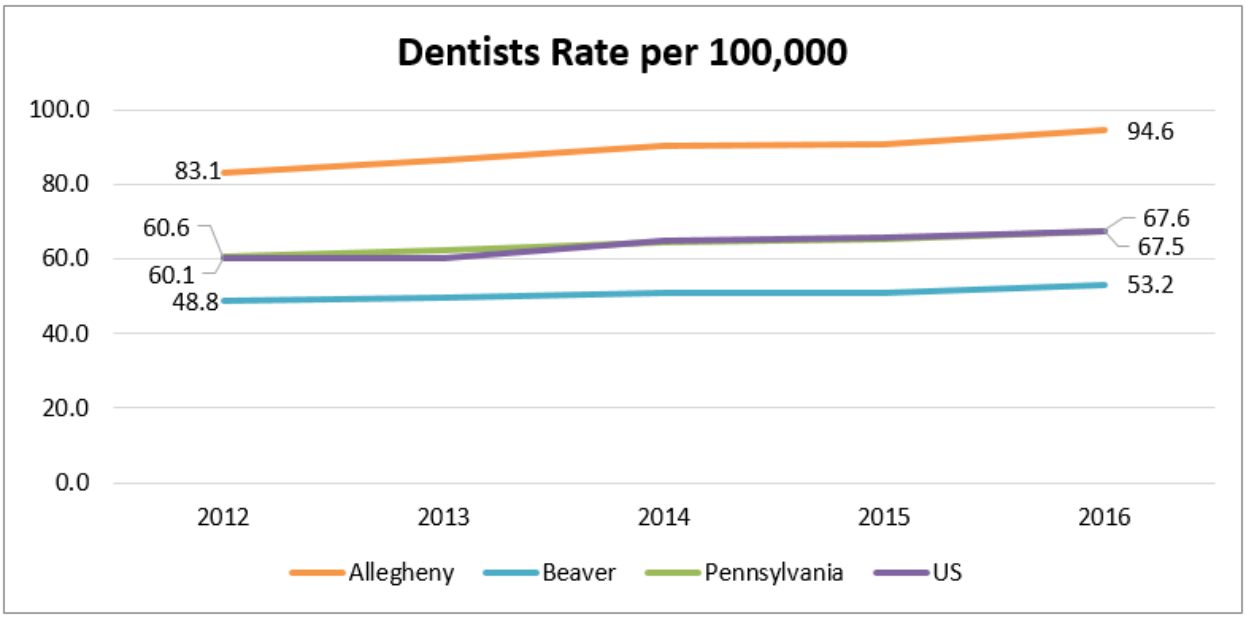
Provider rates are measured as the number of providers in an area per 100,000 people, and are measured against state and national benchmarks for primary, dental, and mental health care. The following graphs show the change in provider rates over the past five reporting years, as available.

Provider rates for primary, dental, and mental health care increased in both Allegheny and Beaver Counties. Allegheny County provider rates exceed state and national benchmarks, but Beaver County rates are lower than all other reported geographies. The Beaver County mental health provider rate is particularly low at less than half of the state rate. Beaver County is designated as a Health Professional Shortage Area for mental health care.

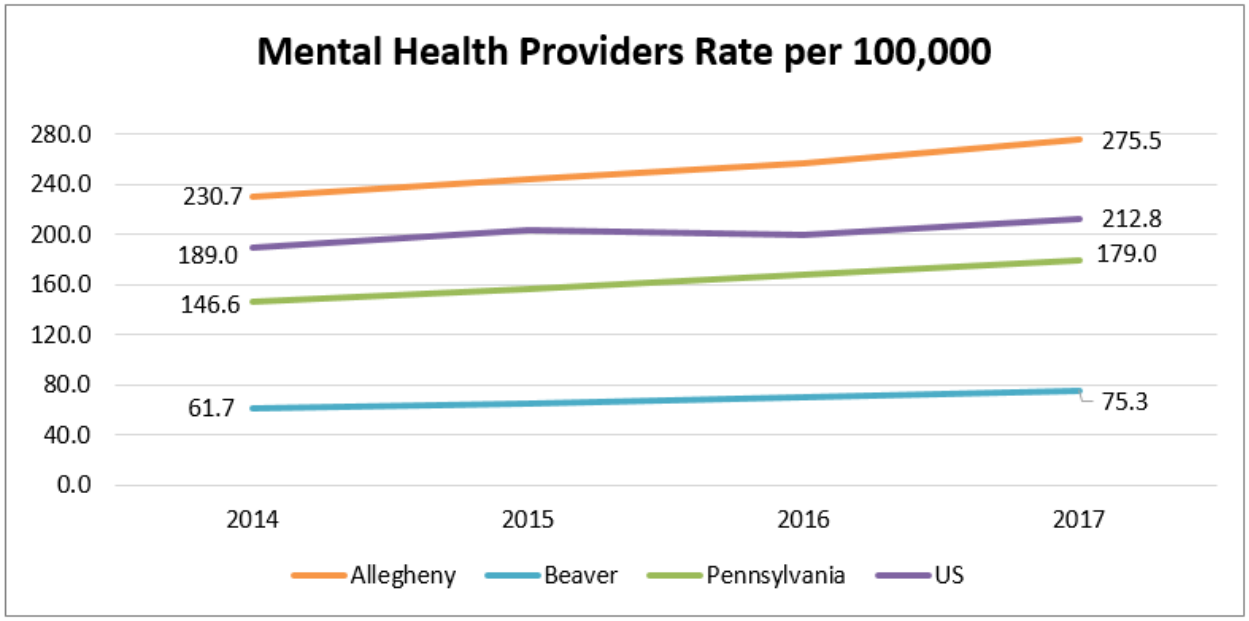
Beaver County provider rates are lower than all other reported geographies; the county is a HPSA for mental health care



Source: Health Resources & Services Administration, 2011-2015
*Providers are identified based on the county in which their preferred professional mailing address is located. Provider rates do not take into account providers that serve multiple counties or satellite clinics.



Source: Health Resources & Services Administration, 2012-2016



Source: Centers for Medicare and Medicaid Services, 2014-2017
*An error occurred in the County Health Rankings method for identifying mental health providers in 2013. Data prior to 2014 are not shown.

The Health Resources & Services Administration (HRSA) is responsible for designating Health Professional Shortage Areas (HPSAs), as well as Medically Underserved Areas (MUAs). Shortage areas are determined based on a defined ratio of total health professionals to total population. Medically Underserved Areas are areas designated as having too few primary care providers, high infant mortality, high poverty, or a high elderly population. The following HPSAs and MUAs are located within the HVHS service area:

Allegheny County:

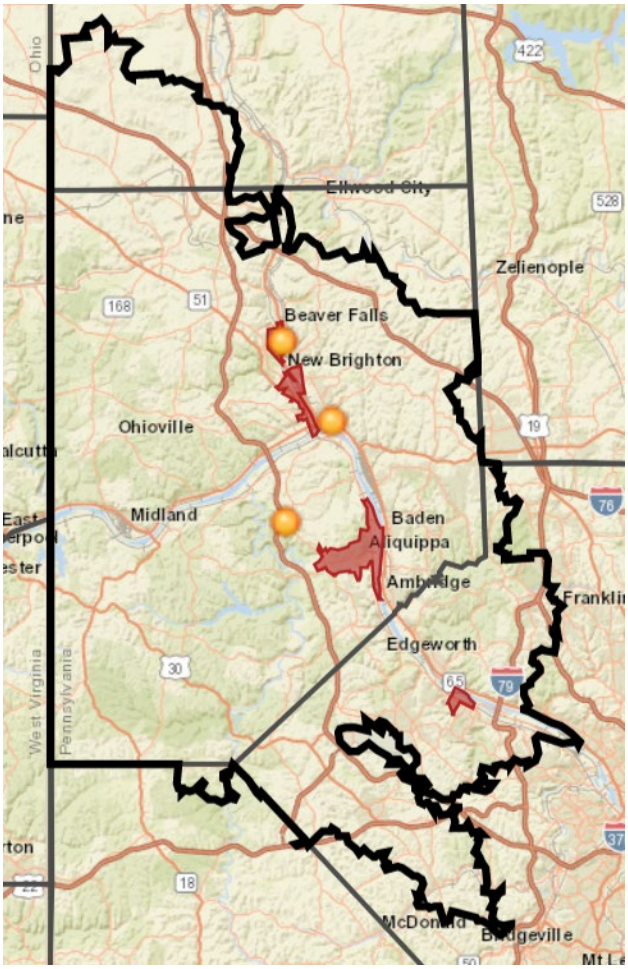
- Coraopolis: Medically Underserved Area

Beaver County:

- All of Beaver County: Mental health shortage area
- Aliquippa: Primary care shortage area; Medically Underserved Area
- Beaver/Beaver Falls: Medically Underserved Area

Federally Qualified Health Centers (FQHCs) are defined as "community-based health care providers that receive funds from the HRSA Health Center Program to provide primary care services in underserved areas." Services are provided on a sliding fee scale based on patient ability to pay. The following map identifies the location of HPSAs, MUAs, and FQHCs within the HVHS service area.

HPSA/MUAs (red shading) and FQHCs (orange pins) within HVHS Service Area



FQHC Location	Address
Beaver Falls Primary Care/Dental Center	1302 7th Ave, Beaver Falls, PA 15010
Rochester Health Center	176 Virginia Ave, Rochester, PA 15074
Autumn Street Health Center	99 Autumn St, Aliquippa, PA 15001

Source: Health Resources & Services Administration

Routine Care

Health insurance coverage and provider availability can impact the number of residents who have a primary care provider and receive routine care. Allegheny County adults are more likely

The percentage of adults who receive routine check-ups increased across the state

to receive routine checkups when compared to the state, but less likely to have a regular doctor despite having a higher primary care provider rate. Beaver County is reported in aggregate with Butler County due to data limitations. Adults in the two counties are just as likely to receive a routine checkup when compared to the state and more likely to have a regular doctor. The percentage of adults who received a routine checkup within the past two years increased across Pennsylvania and the reported counties.

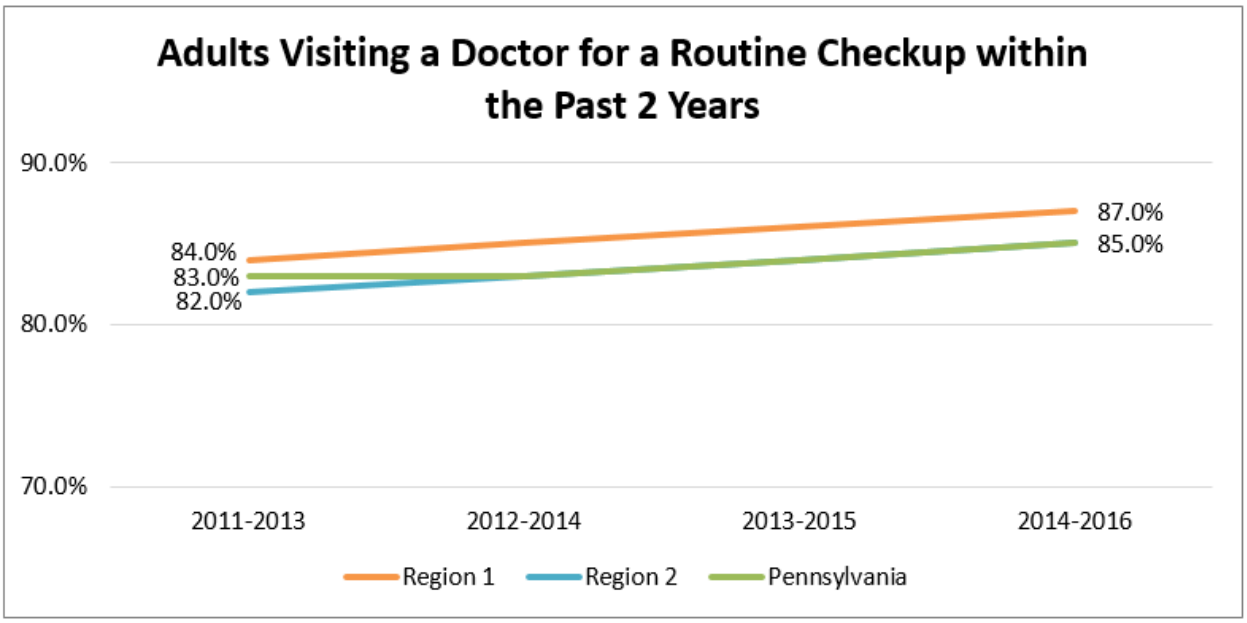
Adults in all reported counties are less likely to consider cost as a barrier to receiving care when compared to the state. Adults in Beaver/Butler County are the least likely to consider cost as a barrier to receiving care.

Adults in all reported counties are less likely to defer health care due to cost

Adult Health Care Access

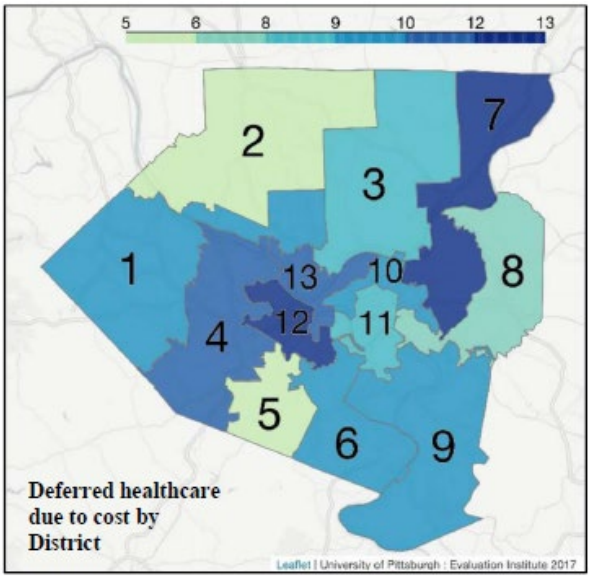
	Does Not Have a Personal Doctor	Received a Routine Checkup within the Past 2 Years	Unable to See a Doctor within the Past Year due to Cost
Region 1: Allegheny County	16%	87%	10%
Region 2: Beaver/Butler Counties	12%	85%	8%
Pennsylvania	14%	85%	12%

Source: Pennsylvania Department of Health, 2014-2016



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

The following figure displays the percentage of adults who deferred health care due to cost barriers by district in Allegheny County. The HVHS service comprises parts of Districts 1 and 2. Adults in District 1 are more likely to defer health care due to cost when compared to District 2 and the county overall.



Source: Allegheny County Health Department

Overall Health Status

Allegheny and Beaver Counties received the following health outcomes rankings out of 67 counties in Pennsylvania, as reported by the University of Wisconsin County Health Rankings & Roadmaps program. Health outcomes are measured in relation to premature death (before age 75) and quality of life. Both counties improved in the rankings in comparison to the rankings provided at the time of the 2016 CHNA.

2018 Health Outcomes County Health Rankings

#31 Allegheny County (#34 in 2015)

#40 Beaver County (#43 in 2015)

Although Allegheny and Beaver Counties improved in the health outcomes ranking, both counties have a higher premature death rate than the state and the nation. However, adults are less likely to self-report having “poor” or “fair” health status and report a similar or lower average of poor physical and mental health days compared to the state and the nation.

Health Outcomes Indicators
(Red = Higher than the State and 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
Allegheny County	7,082	13.7%	3.5	4.0
Beaver County	7,747	13.7%	3.6	4.0
Pennsylvania	6,900	15.1%	3.9	4.3
United States	6,700	16.0%	3.7	3.8

Source: National Center for Health Statistics, 2014-2016; Centers for Disease Control and Prevention, 2016

Health Behaviors

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

Smoking

The percent of adults who report smoking declined in both counties from 2014 to 2016. Beaver County had the greatest decline in the adult smoking percentage (4 points); adults in the county are less likely to smoke when compared to the state and the nation. However, neither county meets the Healthy People 2020 goal for adult smoking of 12%.

The percentage of adults who report smoking declined in both counties

The Pennsylvania Youth Survey (PAYS) is conducted every other year among students in grades 6, 8, 10, and 12 to monitor health risk behaviors. According to 2017 PAYS results, the percentage of students who report smoking declined four percentage points in both counties from 2013 to 2017. However, the prevalence of vaping increased among students across the state. Students in both counties, particularly Allegheny, are more likely to report vaping compared to the state.

Smoking among youth declined in both counties, but vaping increased

Tobacco Trends among Adults and Youth (Grades 6, 8, 10, 12)
(Green = Decrease of More than 2 Points)

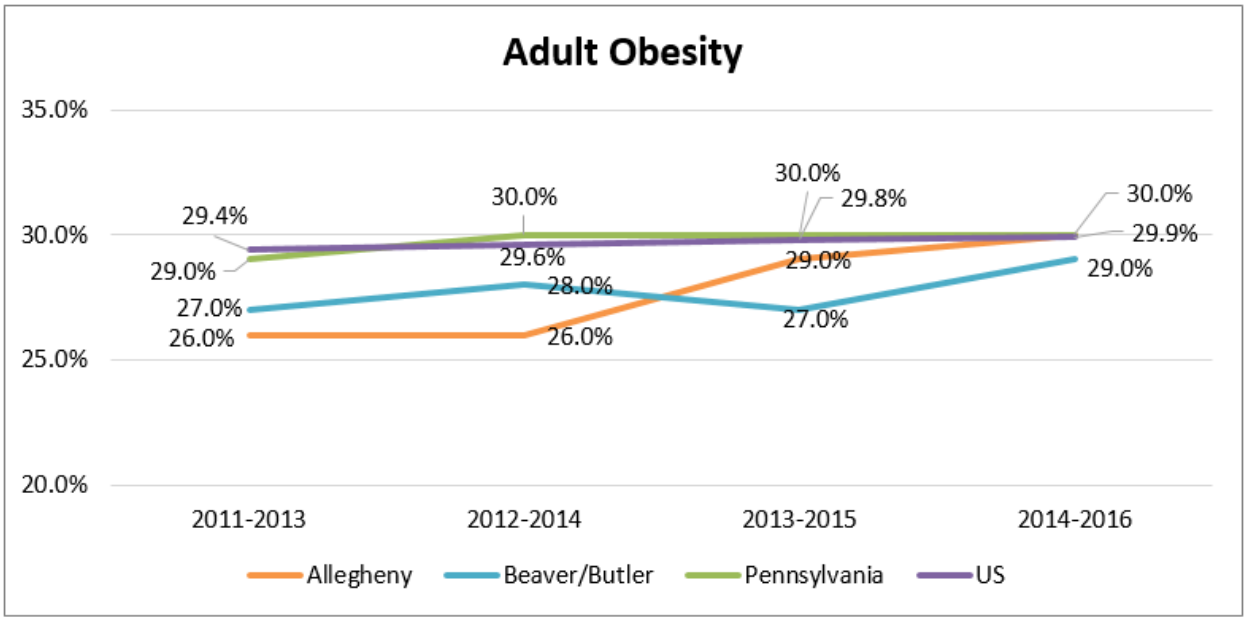
	Adult Smoking		Youth Smoking (past 30 days)		Youth Vaping (past 30 days)	
	2014	2016	2013	2017	2015*	2017
Allegheny County	18.7%	17.0%	8.7%	4.7%	20.9%	22.0%
Beaver County	18.6%	14.9%	9.6%	5.8%	17.7%	17.8%
Pennsylvania	19.9%	18.0%	8.0%	5.6%	15.5%	16.3%
United States	17.0%	17.0%	NA	NA	NA	NA
Healthy People 2020	12.0%	12.0%	NA	NA	NA	NA

Source: Centers for Disease Control and Prevention, 2014-2016; Pennsylvania Commission on Crime and Delinquency, 2013-2017; Healthy People 2020
*Vaping data was not reported for 2013.

Obesity

Adult obesity increased across the state

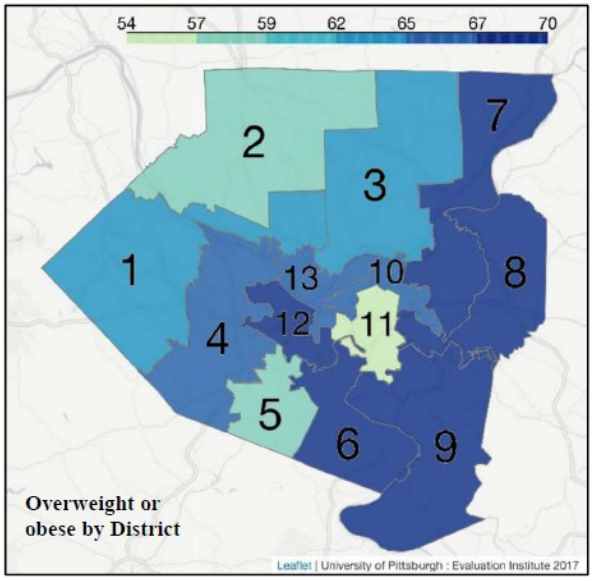
Obesity is associated with an increased risk of disease and mortality, as well as a reduced quality of life. Healthy People 2020 sets a goal of having no more than 30.5% of all adults obese. Allegheny and Beaver Counties have met the Healthy People 2020 goal, and fewer adults are obese when compared to state and national averages. However, current percentages indicate that roughly one in four adults living in the counties are obese. Across Pennsylvania, the percentage of obese adults is increasing.



Source: Centers for Disease Control and Prevention, 2011-2016; Pennsylvania Department of Health, 2011-2013 – 2014-2016

*The national percentage is reported annually (2012-2016) due to data availability.

The following figure displays the percentage of overweight and obese adults by district in Allegheny County. The HVHS service comprises parts of Districts 1 and 2. A lower percentage of adults in the two districts are overweight or obese compared to the rest of the county.



Source: Allegheny County Health Department

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 2015-2016 school year, a higher percentage of Beaver County students are obese compared to the state.

A higher percentage of Beaver County students are obese compared to the state; children in the county are also more likely to be food insecure

Overweight and Obesity among Students
(Red = Higher than the State)

	Overweight		Obese	
	K-6 Grade	7-12 Grade	K-6 Grade	7-12 Grade
Allegheny County	14.4%	15.7%	13.7%	16.3%
Beaver County	16.1%	17.3%	18.8%	22.8%
Pennsylvania	15.2%	16.5%	16.7%	19.1%

Source: Pennsylvania Department of Health, 2015-2016

Food insecurity, defined as being without a consistent source of sufficient and affordable nutritious food, negatively impacts the opportunity for healthy eating and healthy weight management. Food insecurity among children is higher than the general population in both counties. Beaver County has the highest percentage of food insecure children; the percentage exceeds the state and the nation.

Food Insecure Residents
(Red = Higher than the State and Nation)

	All Residents	Children
Allegheny County	13.7%	16.4%
Beaver County	12.3%	17.9%
Pennsylvania	12.5%	16.9%
United States	12.9%	17.5%

Source: Feeding America, 2016

Children in Beaver County are more likely to be food insecure, but they are less likely to be eligible for free or reduced price lunches at school. Eligibility for free lunch includes households with an income at or below 130% of the poverty income threshold, while eligibility for reduced priced lunch includes households with an income between 130% and 185% of the poverty threshold. Food insecurity is reflective of a variety of social factors including cost of living, income, access to healthy food options, transportation, housing, etc.

Children in Beaver County are more likely to be food insecure, but less likely to be eligible for free or reduced price lunch

Children Eligible for Free or Reduced Price Lunch

	Percent
Allegheny County	42.1%
Beaver County	32.3%
Pennsylvania	48.2%

Source: National Center for Education Statistics, 2015-2016

Regular physical activity can reduce the likelihood of obesity and improve overall health outcomes. Access to physical activity includes access to parks, gyms, pools, etc. Residents of Allegheny County have more options for physical activity, and adults are less likely to report being physically inactive when compared to the state and the nation. In contrast, less than 70% of Beaver County residents have access to physical activity; adults are more likely to report being physically inactive.

Residents of Beaver County have fewer options for physical activity and are more likely to be physically inactive

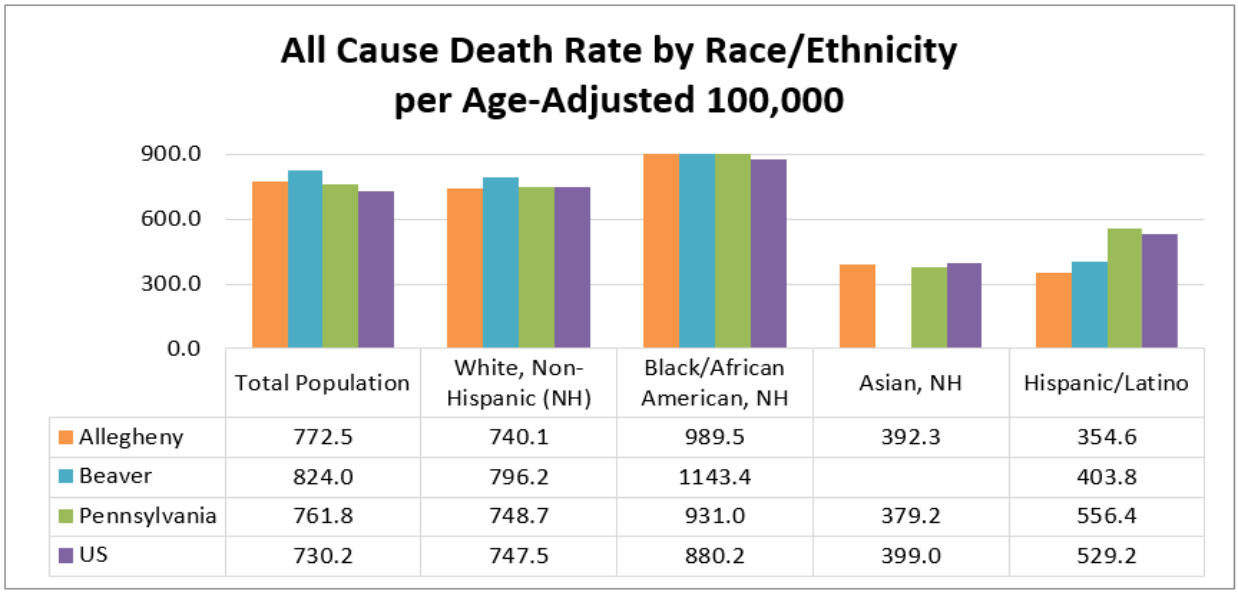
Physical Activity
(Red = Lower Access and Higher Inactivity than the State and/or Nation)

	Access to Physical Activity	Physically Inactive Adults
Allegheny County	88.3%	22.5%
Beaver County	69.2%	26.4%
Pennsylvania	67.8%	24.0%
United States	83.0%	23.0%

Source: Business Analyst, Delorme Map Data, ESRI, & US Census Tigerline Files, 2010 & 2016; Centers for Disease Control and Prevention, 2014

Mortality

The following graph depicts the all cause age-adjusted death rate by county and by race/ethnicity. The overall death rate for both counties is higher than the state and the nation. Across Pennsylvania and both counties, the death rate is highest among Blacks/African Americans compared to Whites, Asians, and Hispanics/Latinos.

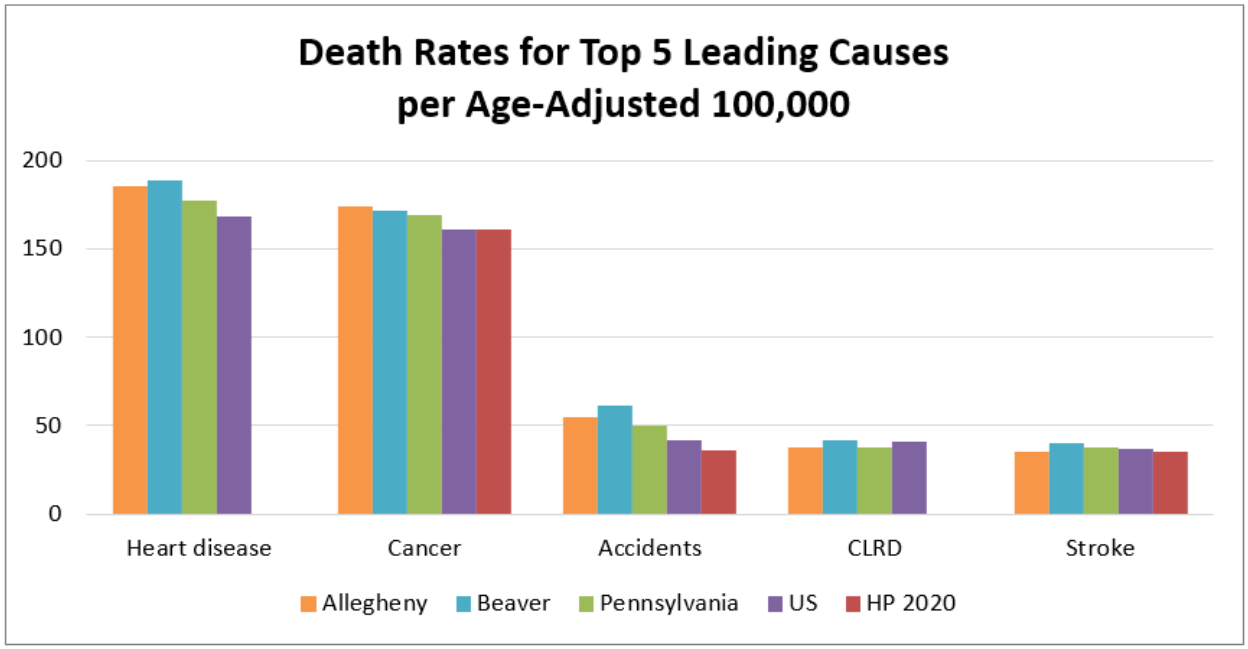


Source: Centers for Disease Control and Prevention, 2012-2016
*Data for Beaver County is reported as available due to low death counts.

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 county.

Residents of both counties have higher rates of death due to heart disease, cancer, and accidents

Residents of Allegheny and Beaver Counties have a higher rate of death due to heart disease, cancer, and accidents when compared to state and national benchmarks. Death rates due to heart disease are particularly high, exceeding the state rate by 8-12 points. Beaver County also has a higher rate of death due to CLRD and stroke.



Source: Centers for Disease Control and Prevention, 2012-2016; Healthy People 2020

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

A similar percentage of county adults have been diagnosed with heart disease and stroke when compared to the state. Adults in Region 2: Beaver/Butler Counties have a slightly higher prevalence of heart attack compared to the state.

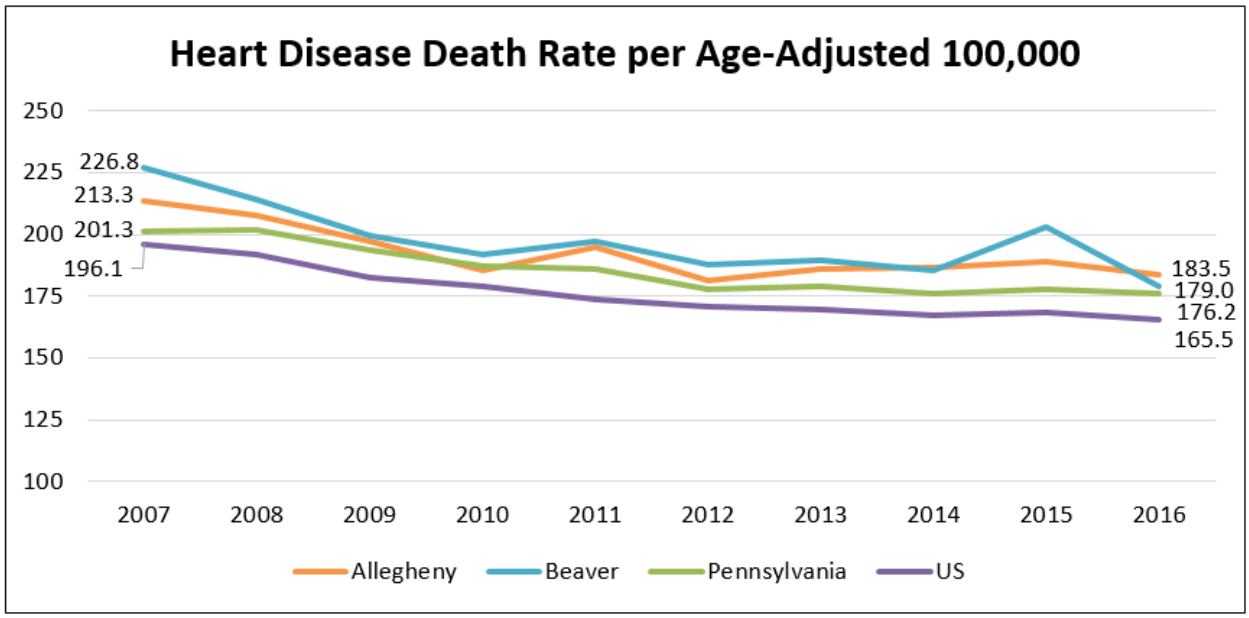
The heart disease death rate is higher in Allegheny and Beaver Counties compared to the state and the nation, but the rate is declining. From 2007 to 2016, the death rate declined 30 points in Allegheny County and 48 points in Beaver County. Across both counties, the death rate is highest among Blacks/African Americans, consistent with state and national trends.

The heart disease death rate exceeds the state and the nation, but the rate declined 30 or more points in both counties from 2007 to 2016

Heart Disease Prevalence among Adults

	Heart Disease	Heart Attack	Stroke
Region 1: Allegheny	7%	7%	5%
Region 2: Beaver/Butler	7%	9%	4%
Pennsylvania	7%	7%	5%

Source: Pennsylvania Department of Health, 2014-2016



Source: Centers for Disease Control and Prevention, 2007-2016

Heart Disease Death Rates per Age-Adjusted 100,000 by Race and Ethnicity

	White, Non-Hispanic	Black/African American, Non-Hispanic	Hispanic/Latino
Allegheny County	178.0	228.8	81.1
Beaver County	182.2	275.0	NA
Pennsylvania	174.1	217.6	114.4
United States	170.9	212.6	118.2

Source: Centers for Disease Control and Prevention, 2012-2016

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, but both Allegheny and Beaver Counties exceed the goal.

Several types of heart disease, including coronary heart disease, are risk factors for stroke. Allegheny County meets the Healthy People 2020 goal for stroke death, but Beaver County exceeds all state and national benchmarks.

Coronary Heart Disease and Stroke Death Rates
(Red = Higher than the State and Nation)

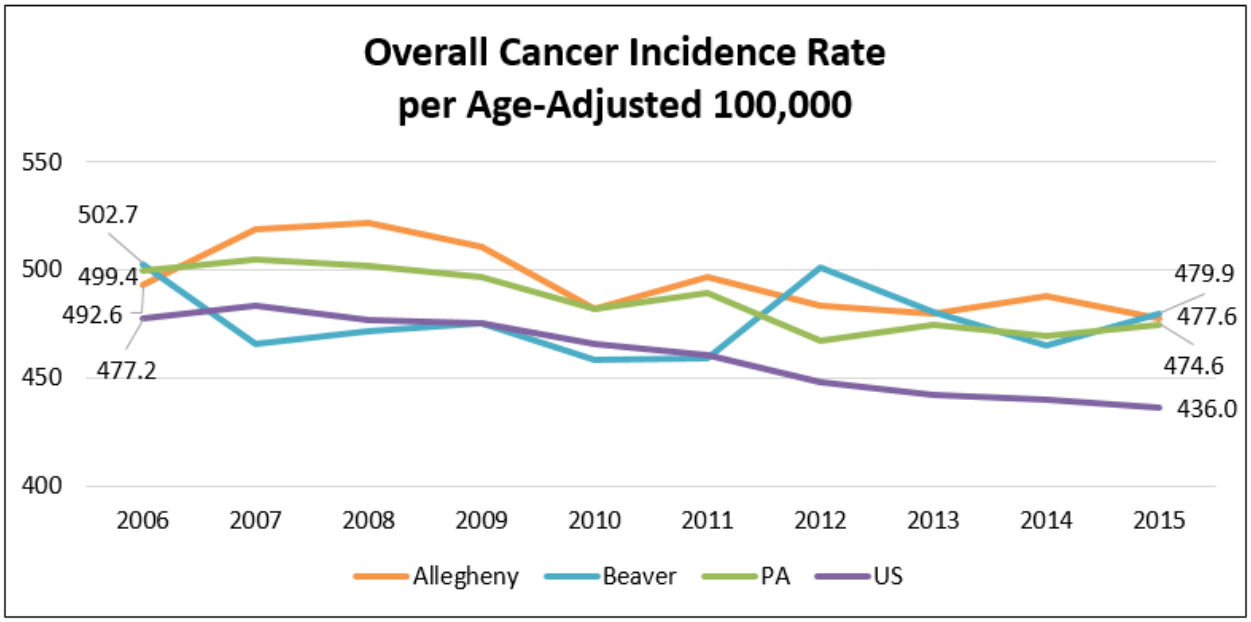
	Coronary Heart Disease Death per Age-Adjusted 100,000	Stroke Death per Age-Adjusted 100,000
Allegheny County	117.4	35.0
Beaver County	108.7	40.0
Pennsylvania	100.0	37.5
United States	96.8	37.2
Healthy People 2020	103.4	34.8

Source: Centers for Disease Control and Prevention, 2014-2016

Cancer

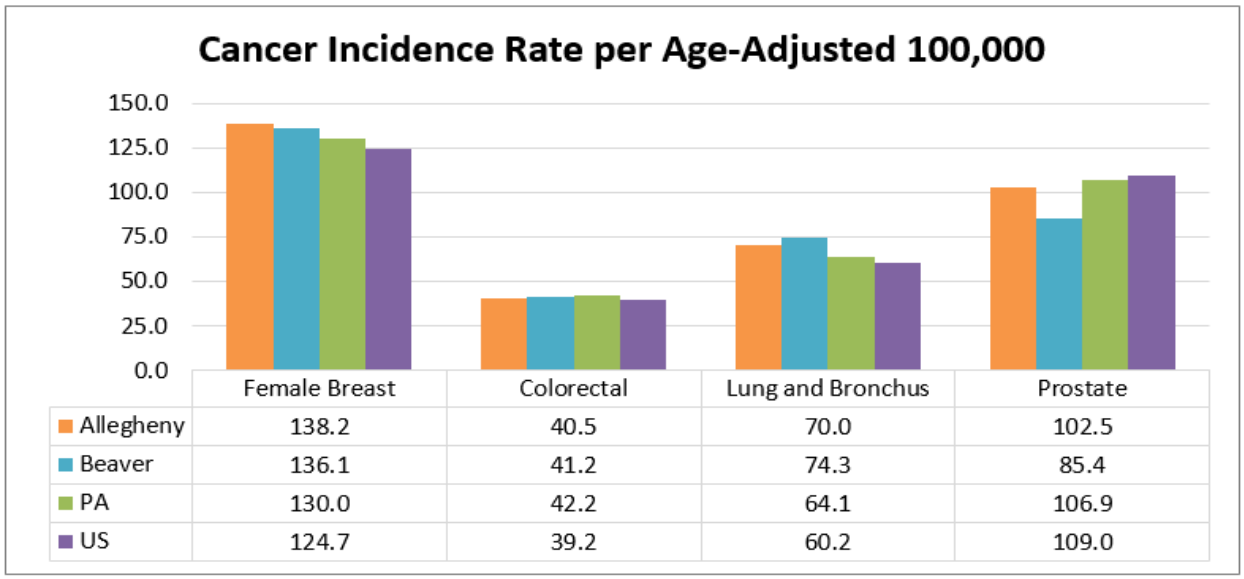
The age-adjusted overall incidence of cancer for Pennsylvania, Allegheny County, and Beaver County is higher than the national incidence of cancer. Among the Pennsylvania geographies, Allegheny consistently has the highest cancer incidence rate, but the rate has declined.

The cancer incidence rate is higher across Pennsylvania and both counties compared to the nation



Source: National Cancer Institute, 2006-2015; Pennsylvania Department of Health, 2006-2015

Presented below are incidence rates for commonly diagnosed cancers: breast (female), colorectal, lung, and prostate (male). Pennsylvania and both counties have higher age-adjusted incidence rates for all of the cancer types except prostate than the nation in general.

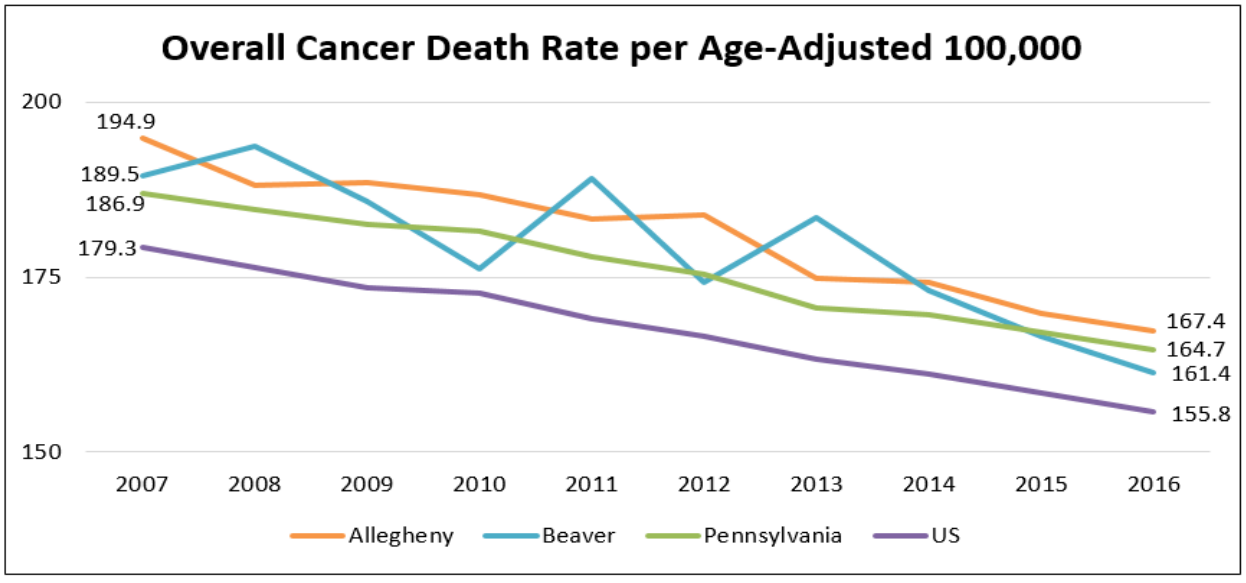


	Female Breast	Colorectal	Lung and Bronchus	Prostate
Allegheny	138.2	40.5	70.0	102.5
Beaver	136.1	41.2	74.3	85.4
PA	130.0	42.2	64.1	106.9
US	124.7	39.2	60.2	109.0

Source: National Cancer Institute, 2011-2015; Pennsylvania Department of Health, 2011-2015

Cancer death rates among Allegheny and Beaver Counties also exceed state and national benchmarks, indicating delayed detection and treatment. Across both counties, the death rate is highest among Blacks/African Americans, consistent with state and national trends. However, the cancer death rate is declining in both counties, falling approximately 28 points from 2007 to 2016.

The cancer death rate is declining in both counties, but exceeds state and national benchmarks



Source: Centers for Disease Control and Prevention, 2007-2016

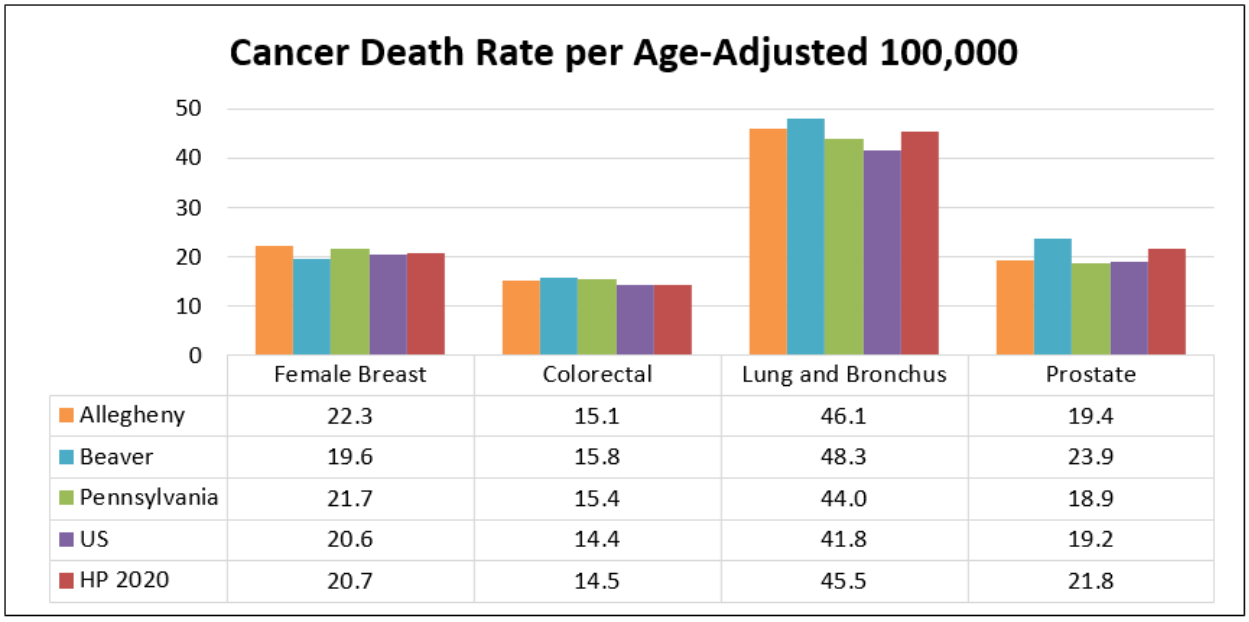
Cancer Death Rates per Age-Adjusted 100,000 by Race and Ethnicity

	White, Non-Hispanic	Black/African American, Non-Hispanic	Hispanic/Latino
Allegheny County	169.0	217.5	74.3
Beaver County	168.6	196.5	NA
Pennsylvania	167.2	210.9	109.1
United States	165.7	190.0	112.6

Source: Centers for Disease Control and Prevention, 2012-2016

Presented below are death rates for commonly diagnosed cancers. Both counties exceed state and/or national benchmarks for death due to colorectal and lung cancer. Allegheny County meets the Healthy People 2020 goal for prostate cancer death, while Beaver County meets the Healthy People 2020 goal for female breast cancer death.

Both counties exceed state and national benchmarks for colorectal and lung cancer death



	Female Breast	Colorectal	Lung and Bronchus	Prostate
Allegheny	22.3	15.1	46.1	19.4
Beaver	19.6	15.8	48.3	23.9
Pennsylvania	21.7	15.4	44.0	18.9
US	20.6	14.4	41.8	19.2
HP 2020	20.7	14.5	45.5	21.8

Source: Centers for Disease Control and Prevention, 2012-2016

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 (COPD), emphysema, and asthma, all of which contribute to lower quality of life and increased risk of early death.

Approximately 10% of adults in both counties have been diagnosed with asthma and/or COPD, consistent with state trends. A lower percentage of students have been diagnosed

The prevalence of CLRD is similar to or lower than state trends

with asthma compared to the state.
Allegheny County residents have a lower rate of CLRD death compared to the state and the nation, while the Beaver County rate is on par with the nation. The death rate among Beaver County residents is higher among Blacks/African Americans than Whites, contrary to state and national trends.

CLRD Prevalence among Adults

	Asthma Diagnosis (Current)	COPD Diagnosis (Ever)
Region 1: Allegheny	9%	8%
Region 2: Beaver/Butler	10%	8%
Pennsylvania	10%	7%

Source: Pennsylvania Department of Health, 2014-2016

Asthma among Students

	Students with Asthma	
	Count	Percentage
Allegheny County	18,896	11.5%
Beaver County	2,773	8.5%
Pennsylvania	226,994	12.1%

Source: Pennsylvania Department of Health, 2015-2016

CLRD Death Rates per Age-Adjusted 100,000 by Race and Ethnicity

	Total Population	White, Non-Hispanic	Black/African American, Non-Hispanic	Hispanic/Latino
Allegheny County	37.5	37.4	37.0	NA
Beaver County	41.6	41.2	46.0	NA
Pennsylvania	38.0	38.7	34.0	19.4
United States	41.2	46.3	29.7	17.8

Source: Centers for Disease Control and Prevention, 2012-2016

Air quality can contribute to the prevalence of CLRD. The Environmental Protection Agency (EPA) produces the Air Quality Index Report to measure air pollution across the nation. The following table shows the number of unhealthy air quality days for 2017 in Allegheny and Beaver Counties, as reported by the EPA. Allegheny County reports more unhealthy air quality days.

Air Quality Index Report

	Number of Days when Air Quality was…				
	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy
Allegheny County	161	173	30	1	NA
Beaver County	211	152	2	NA	NA

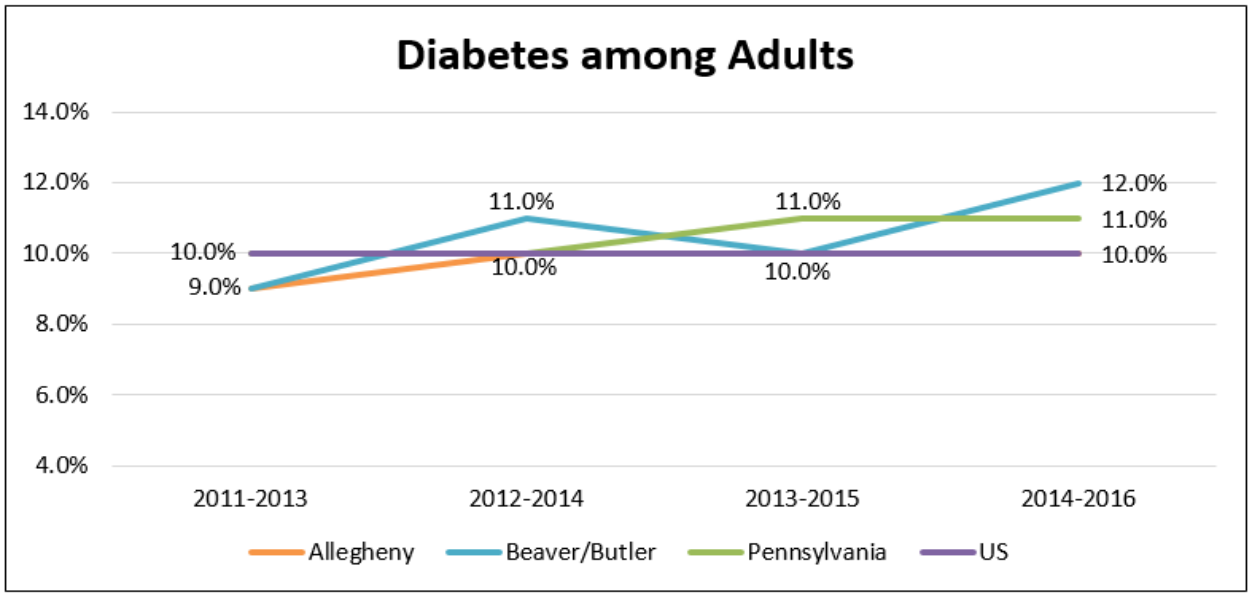
Source: Environmental Protection Agency, 2017

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 $322 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.

The percentage of Allegheny County adults diagnosed with diabetes is on par with the nation, and has been consistent over the past five years. In Beaver County, the percentage of adults diagnosed with diabetes increased above the state and national percentages.

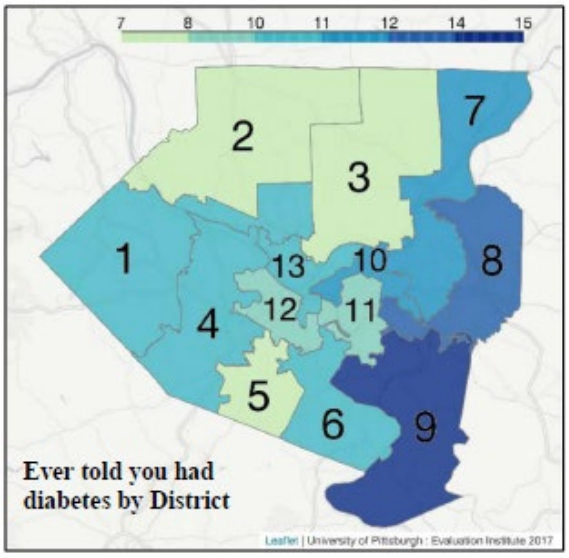
A higher percentage of Beaver County adults have been diagnosed with diabetes



Source: Centers for Disease Control and Prevention, 2011-2016; Pennsylvania Department of Health, 2011-2013 – 2014-2016

*The national percentage is reported annually (2012-2016) due to data availability.

The following figure displays the percentage of adults diagnosed with diabetes by district in Allegheny County. The HVHS service comprises parts of Districts 1 and 2. A lower percentage of adults in the two districts have diabetes compared to the rest of the county.



Source: Allegheny County Health Department

Both Allegheny and Beaver Counties have a lower or comparable diabetes death rate to the state and the nation. Across all reported geographies the death rate is higher among Blacks/African American and Hispanic/Latino populations compared to Whites.

The diabetes death rate is highest among minority populations

Diabetes Death Rates per Age-Adjusted 100,000 by Race and Ethnicity

	Total Population	White, Non-Hispanic	Black/African American, Non-Hispanic	Hispanic/Latino
Allegheny County	19.6	17.3	36.6	NA
Beaver County	21.9	20.4	48.2	NA
Pennsylvania	21.9	20.7	33.7	24.3
United States	21.1	18.6	38.6	25.6

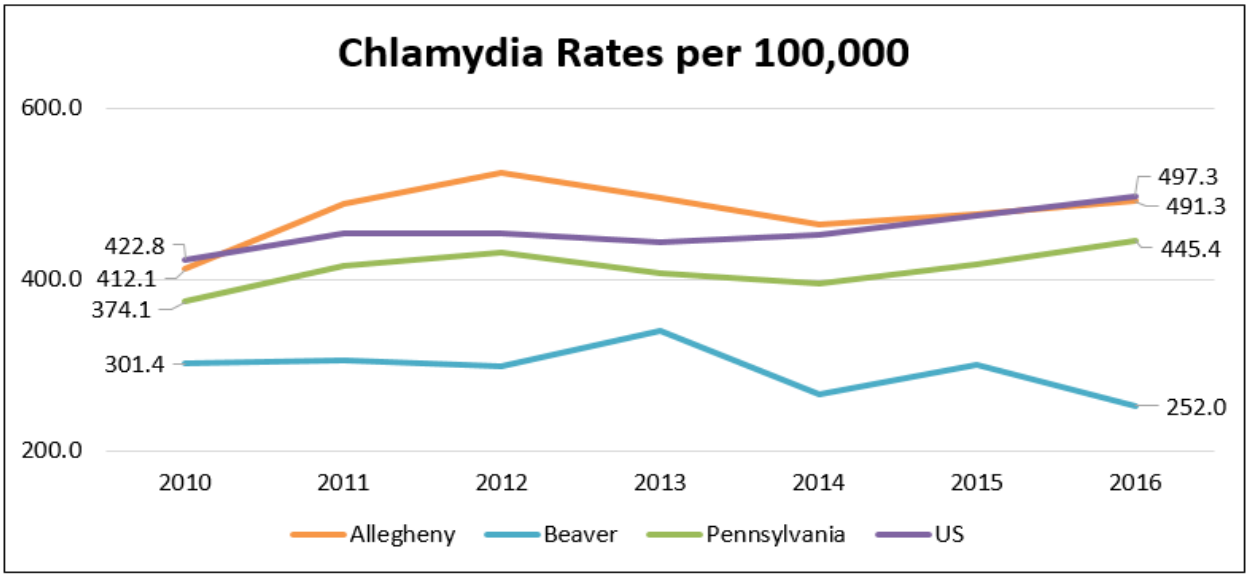
Source: Centers for Disease Control and Prevention, 2012-2016

Notifiable Diseases

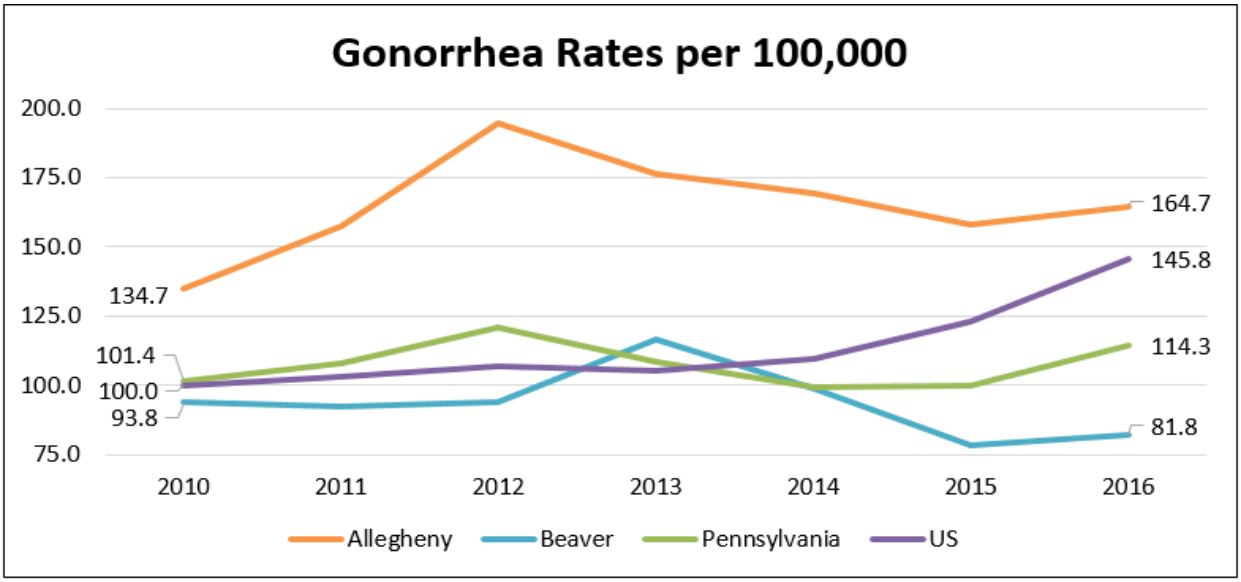
Allegheny County rates of chlamydia and gonorrhea exceed the state and/or nation

Sexually Transmitted Infections

Sexually transmitted diseases (STDs) that require reporting to the CDC and state and local health bureaus upon detection include chlamydia, gonorrhea, and HIV. Pennsylvania has a lower rate of chlamydia and gonorrhea infections than the nation. In Allegheny County, the rate of infection is similar to or higher than national rates. Rates of infection have increased since 2010. Beaver County has lower rates of chlamydia and gonorrhea infection than all other geographies.



Source: Centers for Disease Control and Prevention, 2010-2016; Pennsylvania Department of Health, 2010-2016



Source: Centers for Disease Control and Prevention, 2010-2016; Pennsylvania Department of Health, 2010-2016

Allegheny County also has a higher incidence of HIV compared to the state; the rate is similar to the nation. Beaver County has a lower incidence rate than the state and the nation with a total of 12 cases between 2013 and 2016.

HIV Incidence Rate

	2015 Crude Incidence Rate per 100,000	Cumulative 2013-2016 Incidence Count
Allegheny County	11.5	514
Beaver County	1.8	12
Pennsylvania	9.1	4,705
United States	12.3	159,676

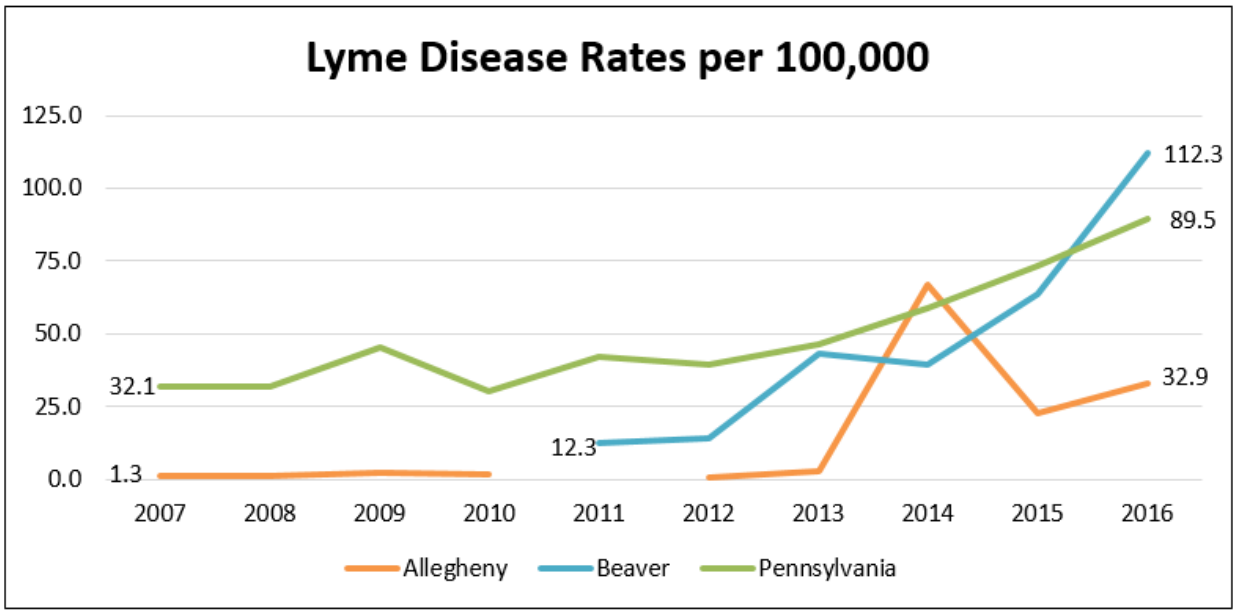
Source: Centers for Disease Control and Prevention, 2015-2016; Pennsylvania Department of Health, 2013-2016 & 2015

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 increased across the state. In Beaver County, the incidence rate increased sharply from 2011 to 2016 by 100 points. The Allegheny County rate has consistently been lower than the state.

The Beaver County Lyme disease incidence rate increased 100 points from 2011 to 2016



Source: Pennsylvania Department of Health, 2007-2016

*Data for 2011 for Allegheny County and data for years prior to 2011 for Beaver County are not reported due to data availability.

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 5 µg/dL measure. The following table depicts children ages 0 to 6 who have tested positive for elevated blood lead levels. Findings are consistent with the state.

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
Allegheny County	0-2 years	28.9%	1.4%
	3-6 years	4.2%	2.4%
Beaver County	0-2 years	26.1%	2.0%
	3-6 years	4.6%	1.2%
Pennsylvania	0-2 years	26.0%	1.8%
	3-6 years	4.5%	2.4%

Source: Pennsylvania Department of Health, 2014

Behavioral Health

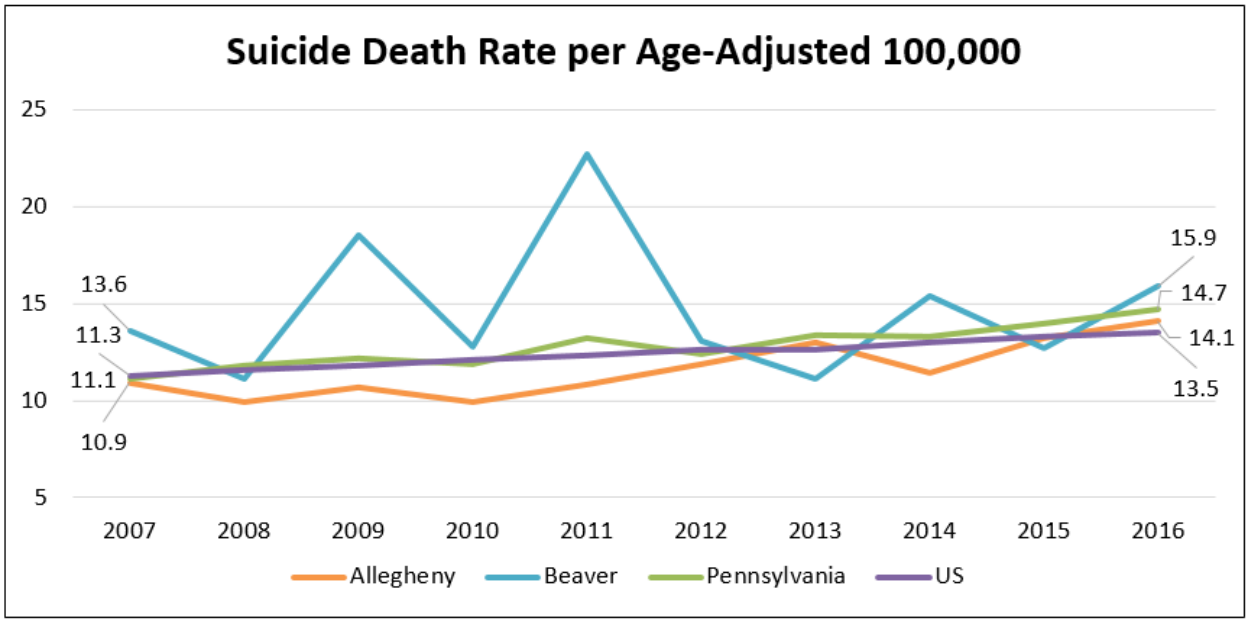
Mental Health

Allegheny and Beaver County adults report an average of four poor mental health days over a 30-day period. Poor mental health can have a negative impact on quality of life and can increase risk for death due to suicide. Both counties have a higher reported suicide rate than the nation and do not meet the Healthy People 2020 goal of 10.2 per 100,000. The Allegheny County suicide death rate has been increasing steadily since 2011. The Beaver County rate has remained variable, but consistently above the state rate.

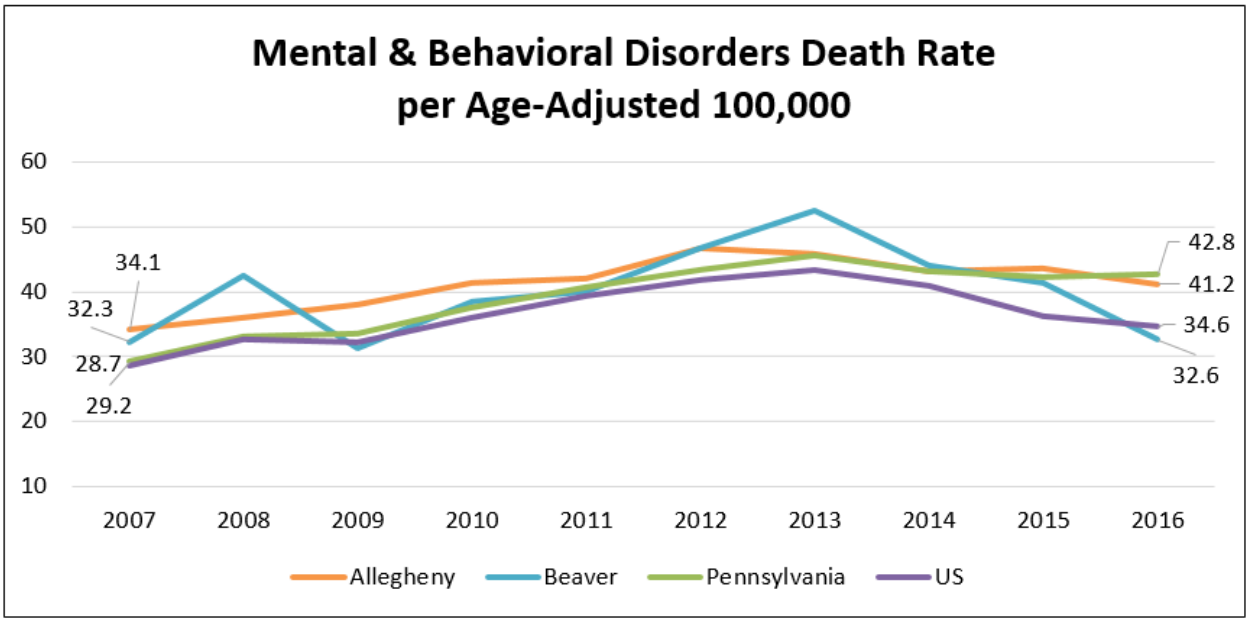
The suicide rate for both counties exceeds the HP 2020 goal

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. Both counties have a lower reported mental and behavioral disorders death rate compared to the state. The Allegheny County rate increased steadily from 2007 to 2012, but the rate is currently declining. The Beaver County rate is also declining, falling approximately 20 points from 2013 to 2016.

The mental and behavioral disorders death rate is declining in both counties



Source: Centers for Disease Control and Prevention, 2007-2016



Source: Centers for Disease Control and Prevention, 2007-2016

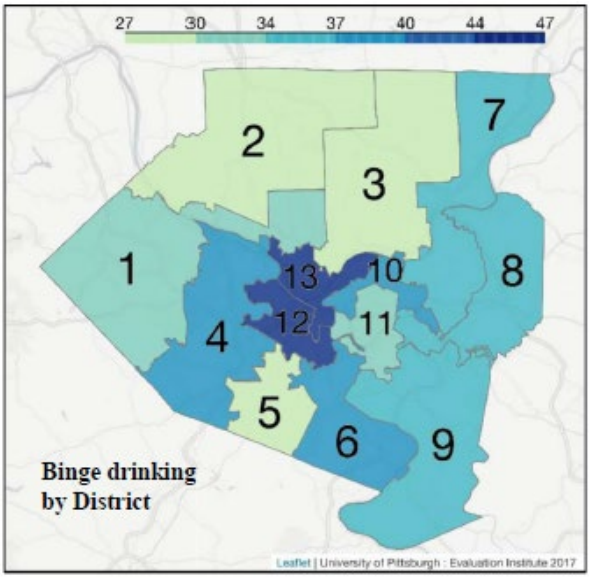
Substance Abuse

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).

Nearly one in four adults in Allegheny County report excessive drinking, higher than the state and the nation. In both counties, approximately one in four driving deaths is attributed to driving under the influence, slightly lower than state and national percentages.

One in four driving deaths in both counties is due to driving under the influence

The following figure displays the percentage of adults who report binge drinking by district in Allegheny County. The HVHS service comprises parts of Districts 1 and 2. Although a higher percentage of Allegheny County adults report abusing alcohol, the percentage is lower in Districts 1 and 2.



Source: Allegheny County Health Department

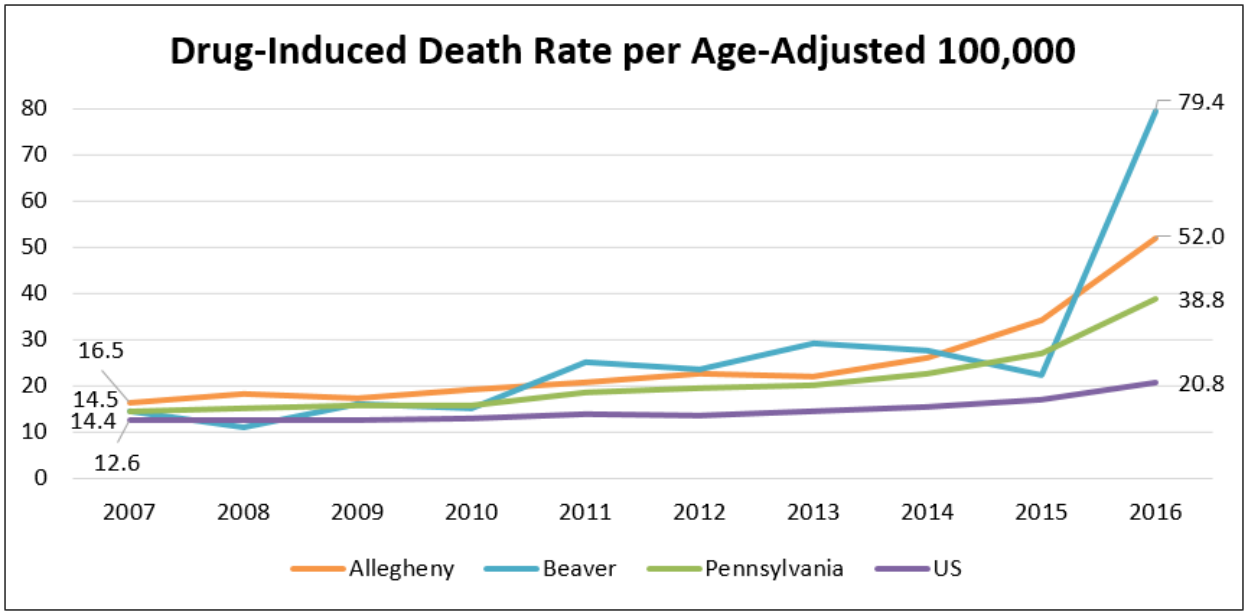
Drug-induced deaths include all deaths for which drugs are the underlying cause, including drug overdoses and deaths from medical conditions resulting from chronic drug use. Pennsylvania has a higher drug-induced death rate than the nation. The drug-induced death rate for Allegheny and Beaver Counties exceeds the state rate. The Allegheny County death rate more than doubled from 2013 to 2016. The Beaver County death rate increased 57 points from 2015 to 2016; 115 drug-induced deaths occurred in the county in 2016.

The Allegheny County drug-induced death rate more than doubled from 2013; the Beaver County death rate increased 57 points from 2015 to 2016

Substance Abuse Measures

	Excessive Drinking (Adults)	Percent of Driving Deaths due to DUI
Allegheny County	24.3%	27.1%
Beaver County	20.1%	28.8%
Pennsylvania	20.5%	30.1%
United States	18.0%	29.0%

Source: Centers for Disease Control and Prevention, 2016; National Highway Traffic Safety Administration, 2012-2016



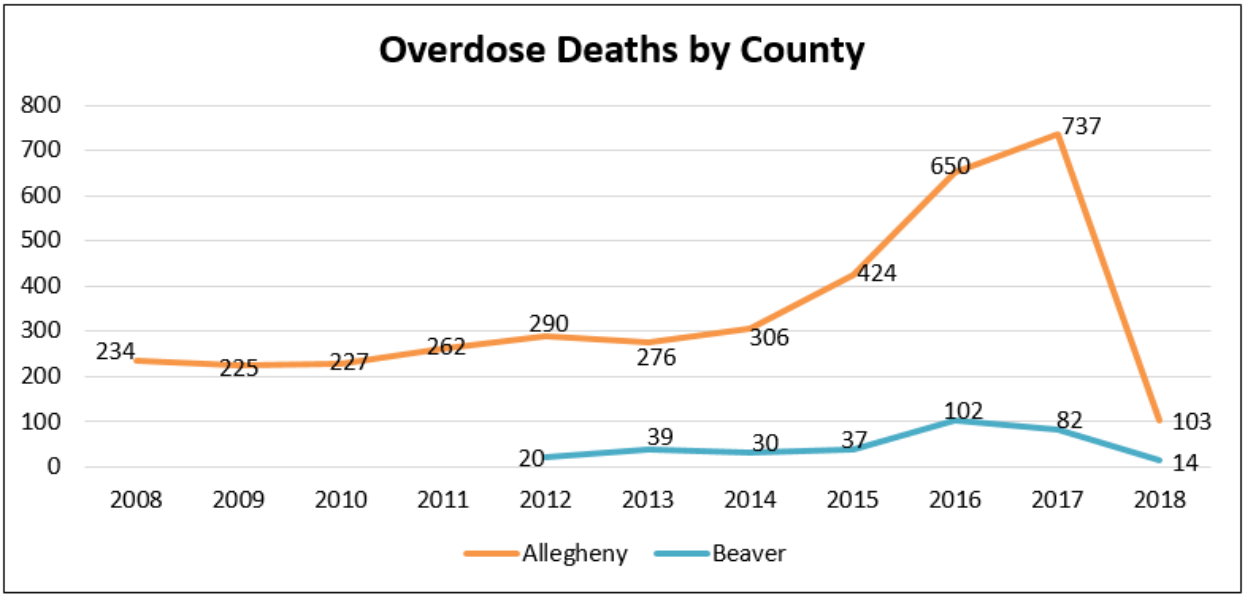
Source: Centers for Disease Control and Prevention, 2007-2016

OverdoseFreePA, operated by the Pennsylvania Overdose Prevention Technical Assistance Center out of the University of Pittsburgh School of Pharmacy, is a statewide collaborative to increase community awareness and knowledge of overdose and overdose prevention strategies. The following figures reflect overdose death data reported by OverdoseFreePA.

The number of overdose deaths in Allegheny County increased by nearly 170% between 2013 and 2017. The county has had 103 overdose deaths to date in 2018.

The number of overdose deaths in Allegheny County increased by nearly 170% from 2013 to 2017

The number of overdose deaths in Beaver County increased steadily from 2012 to 2016, and remained high in 2017. However, the 2018 year-to-date death count is lower than in previous years. During May to June 2018, the county had 11 overdose deaths compared to 26 deaths during the same time period in 2017.



Source: OverdoseFreePA, 2008-2016

The following table shows the number of overdose deaths in 2017 and year-to-date 2018 for HVHS service area zip codes. Only zip codes with three or more deaths are reported. Within the service area, Beaver Falls and Ambridge had the highest number of overdose deaths. Recognizing the connection to social determinants of health, both areas were also noted as having higher poverty rates in comparison to the county in general.

Overdose Deaths by Zip Code

Allegheny County	Number of Fatal Overdoses
15108 (Coraopolis)	12
15126 (Imperial)	5
15143 (Sewickley)	5
15071 (Oakdale)	4
Beaver County	**Number of Fatal Overdoses**
15010 (Beaver Falls)	25
15003 (Ambridge)	16
15066 (New Brighton)	9
15001 (Aliquippa)	9
15009 (Beaver)	7
15074 (Rochester)	7
15061 (Monaca)	5
15027 (Conway)	3

Source: OverdoseFreePA, 2017

The following table depicts overdose deaths by gender, age, and race/ethnicity for the most recently reported full calendar year, 2017. The majority of overdose deaths were among males, individuals ages 25 to 44, and Whites.

Overdose Death Demographics

	Allegheny County	Beaver County
Total Deaths	737	82
Gender		
Male	70.6%	72.0%
Female	29.4%	28.0%
Age Group		
0-17 years	0.3%	0.0%
18-24 years	7.2%	7.3%
25-34 years	28.5%	41.5%
35-44 years	22.7%	23.2%
45-54 years	23.5%	13.4%
55-64 years	14.9%	12.2%
65 years or over	3.0%	2.4%
Race/Ethnicity		
White	85.9%	91.5%
Black/African American	12.9%	8.5%
Asian	0.2%	0.0%
Other race	0.7%	0.0%
Hispanic/Latino	0.4%	0.0%

Source: OverdoseFreePA, 2017

Youth

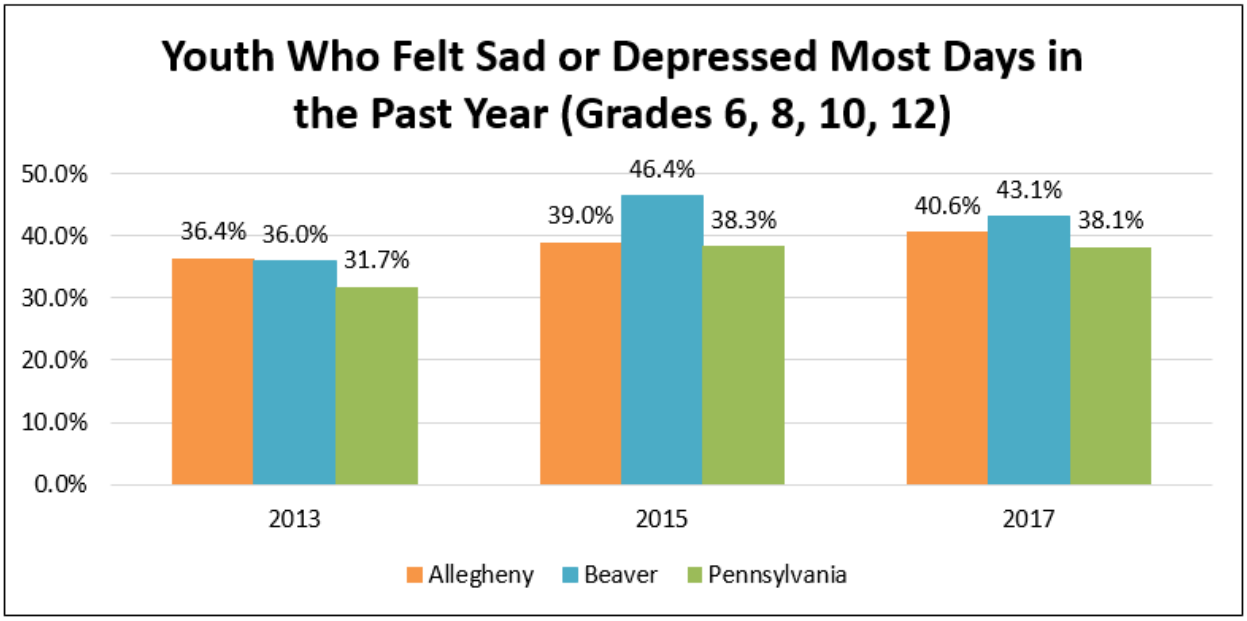
Young people who consistently feel depressed or sad may be at risk for self-harm and risky behaviors, including committing suicide. The following figures depict the percentage of students who felt sad or depressed on most days during the past year. Across both counties and all grade levels, a higher percentage of students feel consistently sad or depressed compared to the state. The percentages increased from 2013 to 2017.

A higher percentage of students consistently feel sad or depressed when compared to the state

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

	6th Grade	8th Grade	10th Grade	12th Grade
Allegheny County	33.7%	42.9%	43.1%	40.5%
Beaver County	38.8%	44.8%	46.3%	41.5%
Pennsylvania	32.3%	36.9%	41.4%	40.8%

Source: Pennsylvania Commission on Crime and Delinquency, 2017



Source: Pennsylvania Commission on Crime and Delinquency, 2013-2017

Substance use among youth can lead to many negative health outcomes. Alcohol and marijuana use is highest among students in grades ten and twelve, particularly in Allegheny County. However, sixth and eighth grade students in both counties exceed state benchmarks for marijuana use, and sixth and eighth grade students in Beaver County exceed state benchmarks for alcohol use.

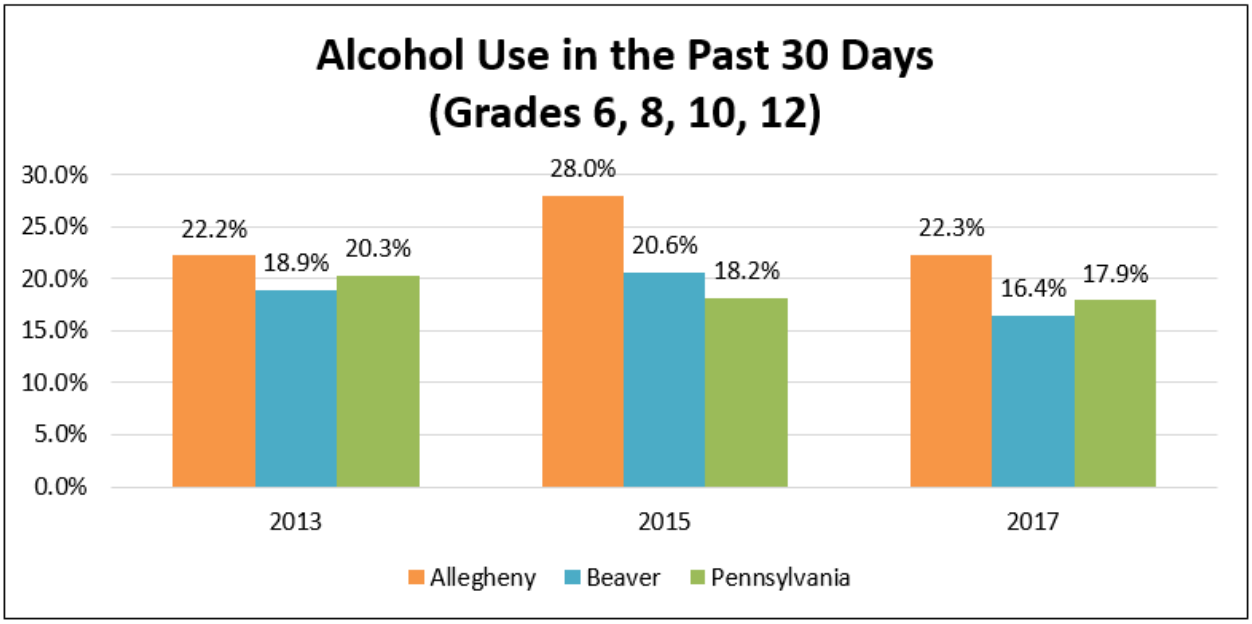
A higher percentage of students in both counties report using marijuana compared to the state

The collective percentage of students who report using alcohol remained variable from 2013 to 2017. The percentage of students who report using marijuana increased in Allegheny County.

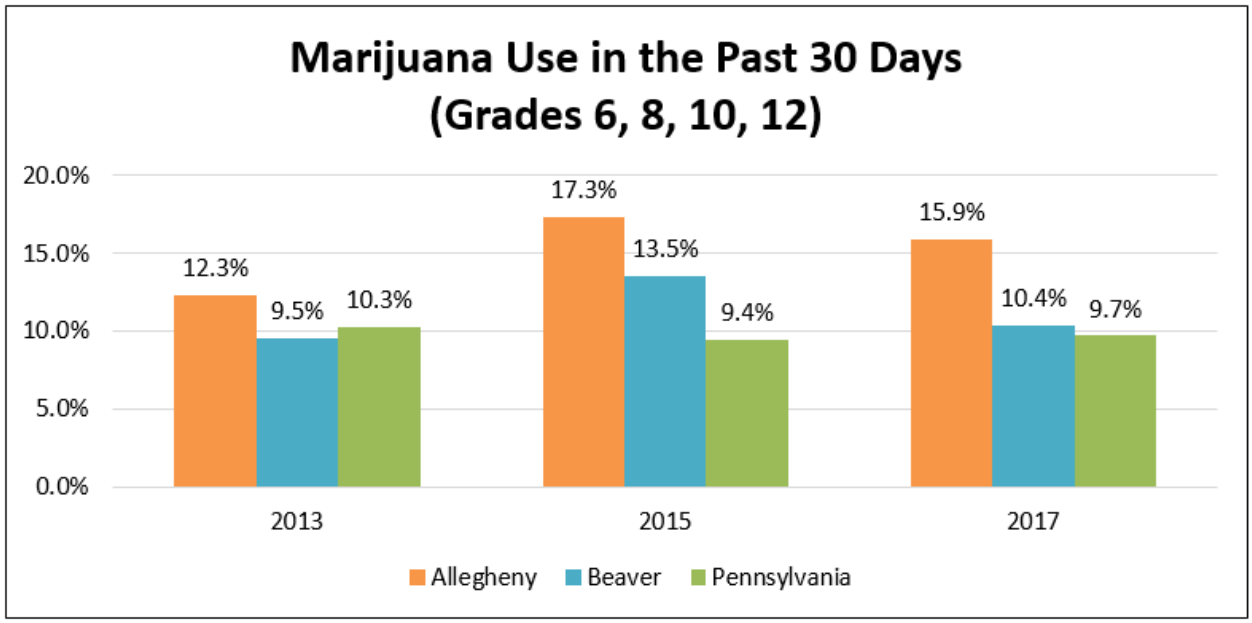
Youth Substance Abuse Measures

	6th Grade	8th Grade	10th Grade	12th Grade
Used Alcohol in the Past 30 Days				
Allegheny County	2.9%	9.5%	25.8%	41.0%
Beaver County	4.9%	13.3%	18.6%	30.7%
Pennsylvania	3.3%	9.3%	22.3%	35.9%
Used Marijuana in the Past 30 Days				
Allegheny County	1.4%	8.9%	17.5%	28.8%
Beaver County	1.3%	6.8%	13.9%	20.9%
Pennsylvania	0.5%	4.6%	12.0%	20.8%

Source: Pennsylvania Commission on Crime and Delinquency, 2017



Source: Pennsylvania Commission on Crime and Delinquency, 2013-2017



Source: Pennsylvania Commission on Crime and Delinquency, 2013-2017

Senior Health

Seniors face a growing number of challenges related to health and well-being as they age. People over 65 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

According to the CDC, "Among Medicare fee-for-service beneficiaries, people with multiple chronic conditions account for 93% of total Medicare spending." The tables below note the percentage of Allegheny and Beaver County Medicare Beneficiaries who have been diagnosed with a chronic condition.

Fewer senior Medicare beneficiaries are impacted by multiple chronic diseases

Medicare beneficiaries 65 years or over in Allegheny and Butler Counties are less likely to have multiple chronic conditions when compared to the state and the nation. In addition, Beaver County beneficiaries have a lower prevalence of nearly all reported conditions. Seniors in Allegheny County have a higher prevalence of the following conditions: Alzheimer's disease, COPD, depression, heart failure, and ischemic heart disease.

Chronic Conditions among Medicare Beneficiaries 65 Years or Over
(Red = Higher than the State and Nation; Green = Lower than the State and Nation)

	Allegheny County	Beaver County	PA	US
Alzheimer's Disease	13.6%	11.6%	11.8%	11.3%
Arthritis	33.2%	29.3%	33.5%	31.3%
Asthma	7.6%	7.7%	7.8%	7.6%
Cancer	9.3%	8.3%	9.8%	8.9%
COPD	11.4%	10.6%	11.0%	11.2%
Depression	16.0%	14.5%	14.9%	14.1%
Diabetes	23.1%	25.1%	26.5%	26.8%
Heart Failure	15.5%	13.4%	14.7%	14.3%
High Cholesterol	41.6%	43.5%	53.0%	47.8%
Hypertension	54.8%	55.3%	61.0%	58.1%
Ischemic Heart Disease	28.6%	26.7%	30.2%	28.6%
Stroke	5.4%	4.1%	4.9%	4.2%

Source: Centers for Medicare & Medicaid Services, 2015

Number of Chronic Conditions among Medicare Beneficiaries 65 Years or Over
(Green = Lower than the State and Nation)

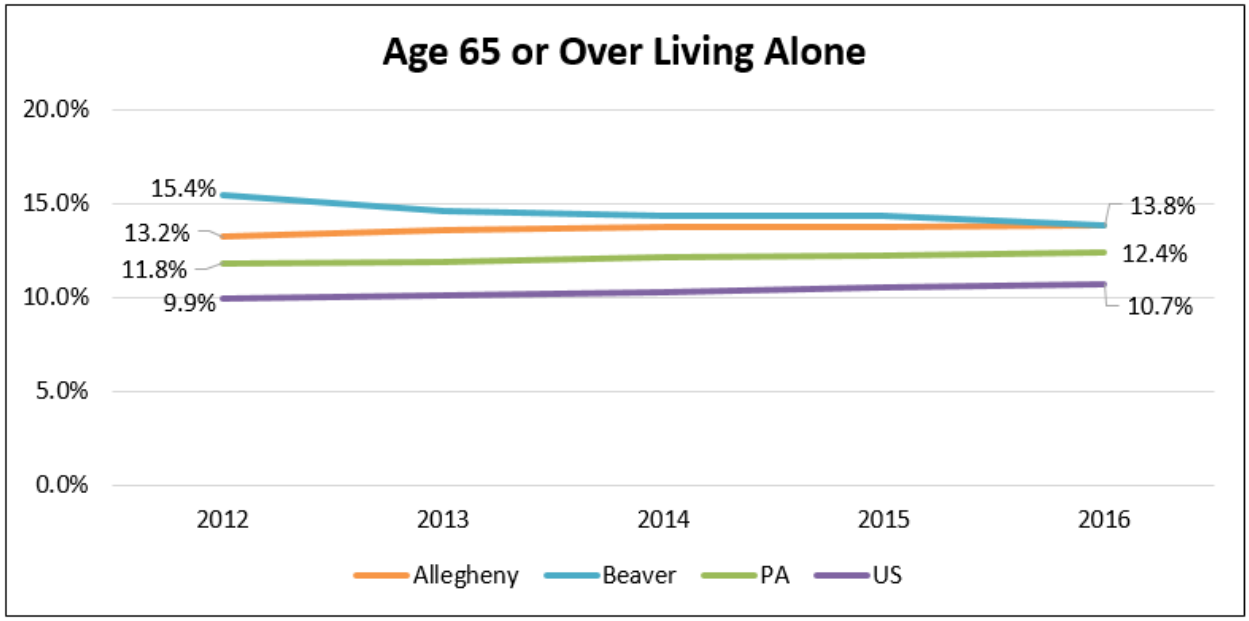
	Allegheny County	Beaver County	PA	US
0 to 1 condition	35.4%	34.6%	28.5%	32.3%
2 to 3 conditions	27.3%	29.3%	31.1%	30.0%
4 to 5 conditions	19.6%	20.9%	22.9%	21.6%
6 or more conditions	17.8%	15.3%	17.6%	16.2%

Source: Centers for Medicare & Medicaid Services, 2015

Social Isolation among Seniors

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. In Pennsylvania, seniors are more likely to live alone than seniors across the nation, and the percentage is increasing. A higher percentage of Allegheny and Beaver County seniors live alone compared to the state.

A higher percentage of seniors live alone compared to the state and the nation



Source: American Community Survey, 2012-2016

Chronic Disease Screenings among Seniors

Regular screenings are essential for the early detection and management of chronic conditions. The following table analyzes diabetes and mammogram screenings among Medicare enrollees. Medicare enrollees in Allegheny and Beaver Counties are less likely to receive annual hA1c tests for diabetes or biannual mammogram screenings compared to the state and the nation.

Chronic Disease Screenings among Medicare Enrollees

	Annual hA1c Test from a Provider (65-75 Years)	Mammogram in Past Two Years (67-69 Years)
Allegheny County	81.1%	53.9%
Beaver County	82.6%	53.8%
Pennsylvania	86.3%	64.8%
United States	85.0%	63.0%

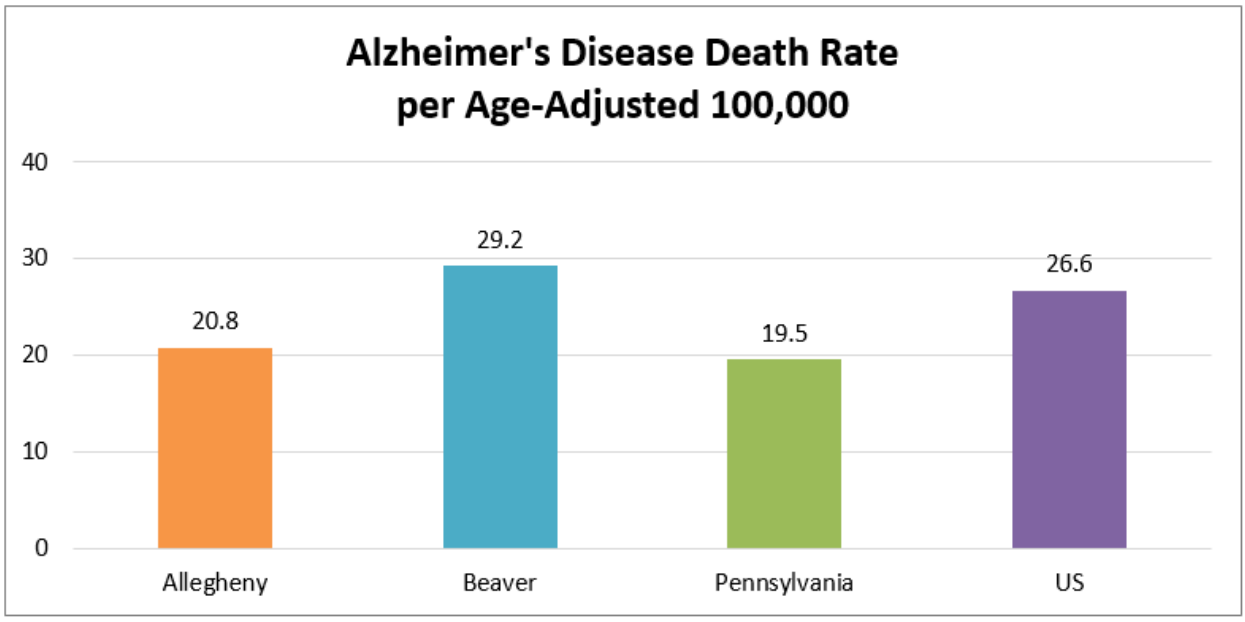
Source: Dartmouth Atlas of Healthcare, 2014

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."

The Beaver County age-adjusted death rate due to Alzheimer's disease exceeds the state and national rates. The Allegheny County rate is similar to the state rate.

The Beaver County Alzheimer's disease death rate exceeds the state and the nation



Source: Centers for Disease Control and Prevention, 2012-2016

Immunizations

Pneumococcal disease continues to be a leading cause of serious illness among older adults. According to the CDC, approximately 20%–25% of pneumococcal cases are potentially preventable with proper vaccination. Approximately 80% of people aged 65 and older in Allegheny County received a pneumonia vaccine, exceeding the state average, compared to 69% of seniors in Beaver County.

Adults 65 Years or Over Who Received a Pneumonia Vaccination

	Ever Received a Pneumonia Vaccination
Region 1: Allegheny	79%
Region 2: Beaver/Butler	69%
Pennsylvania	72%

Source: Pennsylvania Department of Health, 2014-2016

Maternal and Infant Health

Total Births

The birth rate in Allegheny and Beaver Counties is similar to the state rate. In both counties, particularly in Beaver County, the majority of births are to White mothers. Allegheny County has greater diversity with nearly 20% of births among Black/African American mothers. A lower percentage of births in both counties are to Hispanic/Latino mothers compared to the state.

2016 Births by Race and Ethnicity

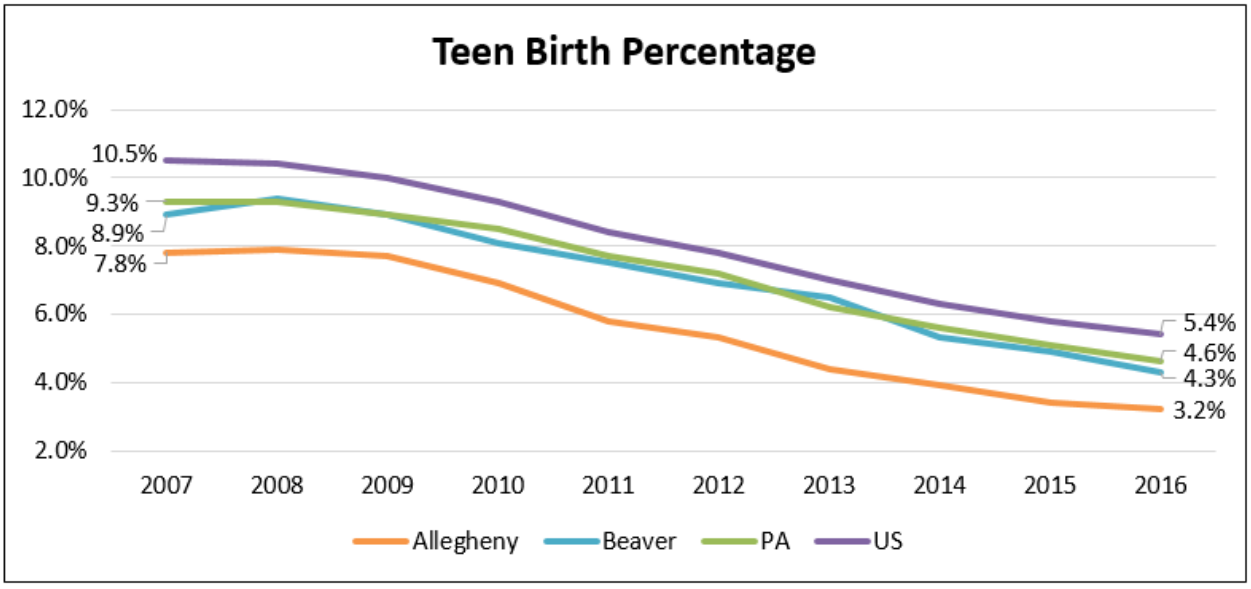
	Total Births	Birth Rate per 1,000	White Births as Percentage of Total	Black/African American Births as Percentage of Total	Hispanic/ Latino Births as Percentage of Total
Allegheny County	13,222	20.9	69.7%	19.2%	2.3%
Beaver County	1,675	19.4	86.1%	7.6%	2.5%
Pennsylvania	139,356	21.4	70.3%	13.7%	11.0%

Source: Pennsylvania Department of Health, 2016

Teen Births

The percentage of births to teenagers declined across the state and in both counties. Both counties have a lower teenage birth percentage compared to the state and the nation.

The percentage of births to teenage mothers is declining across the state



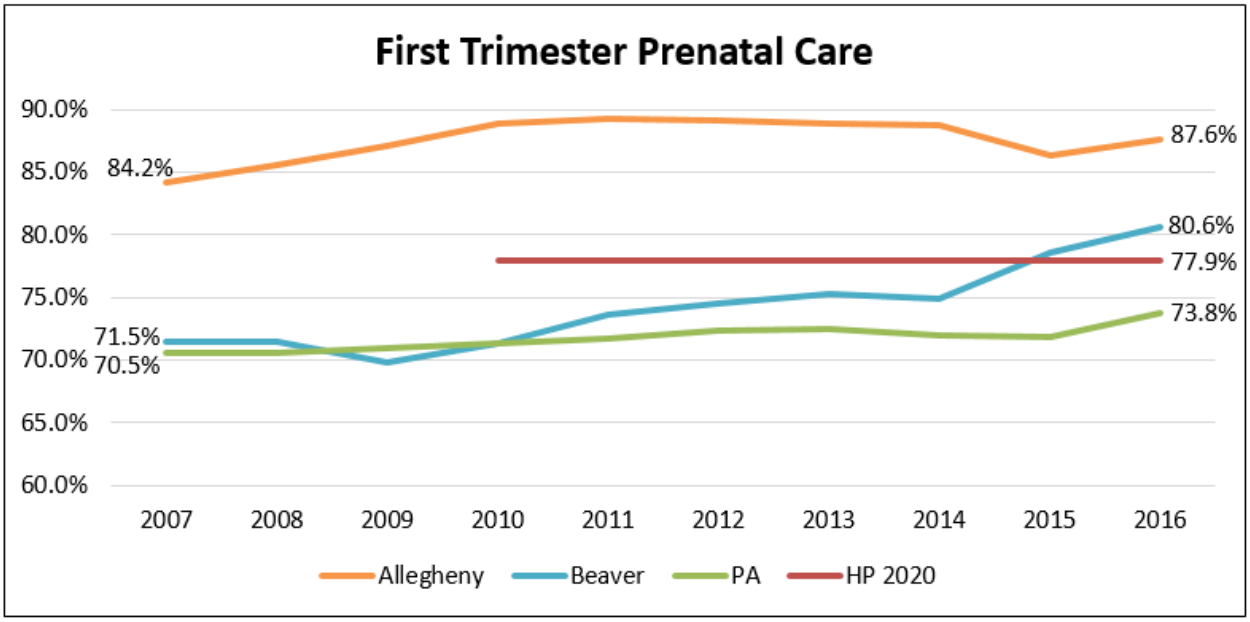
Source: Centers for Disease Control and Prevention, 2007-2016; Pennsylvania Department of Health, 2007-2016

Prenatal Care

Engaging in early prenatal care increases the chances that a mother and her baby will have a healthy pregnancy and a healthy birth. Entry into prenatal care after the first trimester

Both counties meet the HP 2020 goal for mothers accessing first trimester prenatal care

can suggest barriers to accesing care. Allegheny and Beaver Counties exceed the Healthy People 2020 goal for mothers accessing prenatal care in the first trimester, as well as the Pennsylvania statewide average. The percentage of mothers receiving early prenatal care increased across the state over the past decade.



Source: Pennsylvania Department of Health, 2007-2016; Healthy People 2020

The following municipalities within the HVHS service area do not meet the Healthy People 2020 goal for mothers receiving first trimester prenatal care by more than 5 percentage 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 5 Points

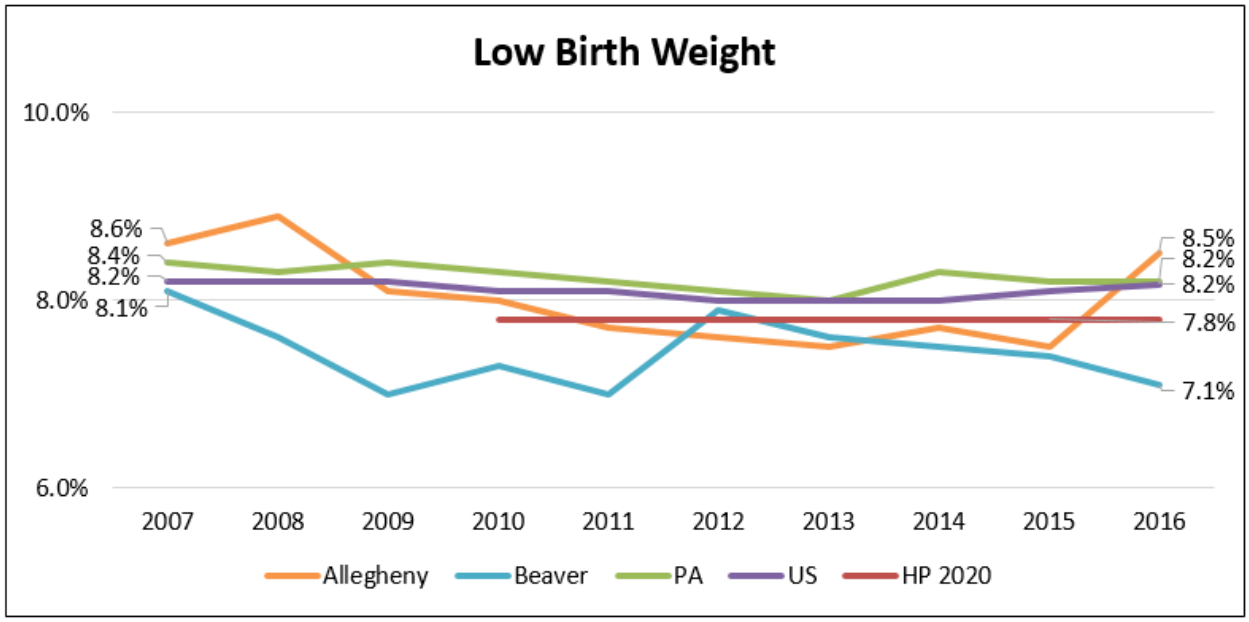
Allegheny County Municipality	%
Leetsdale Borough	70.0%
Beaver County Municipality	%
Darlington Township	62.3%
East Rochester Borough	62.5%
Pulaski Township	64.4%
Aliquippa City	64.9%
White Township	67.6%
Rochester Borough	70.2%
Ambridge Borough	70.3%
Beaver Falls City	70.3%

Source: PA Department of Health, 2012-2016
*Only municipalities with more than 20 reported births are included.

Low Birth Weight

Low birth weight is defined as a birth weight of less than 5 pounds, 8 ounces. Low birth weight is often a result of premature birth, fetal growth restrictions, or birth defects and can be associated with a variety of negative birth outcomes. Beaver County meets the Healthy People 2020 goal for low birth weight infants. The Allegheny County percentage of low birth weight babies increased from 2015 to 2016 and exceeds all state and national benchmarks.

The Allegheny County low birth weight percentage increased from 2015 to 2016



Source: Centers for Disease Control and Prevention, 2007-2016; Pennsylvania Department of Health, 2007-2016; Healthy People 2020

The following municipalities within the HVHS service area do not meet the Healthy People 2020 goal for low birth weight babies (7.8%) by more than 3 percentage 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

Allegheny County Municipality	%
Leet Township	16.7%
Neville Township	16.7%
Beaver County Municipality	%
Vanport Township	22.9%
Aliquippa City	13.2%
Rochester Borough	11.4%
Ohioville Borough	10.9%

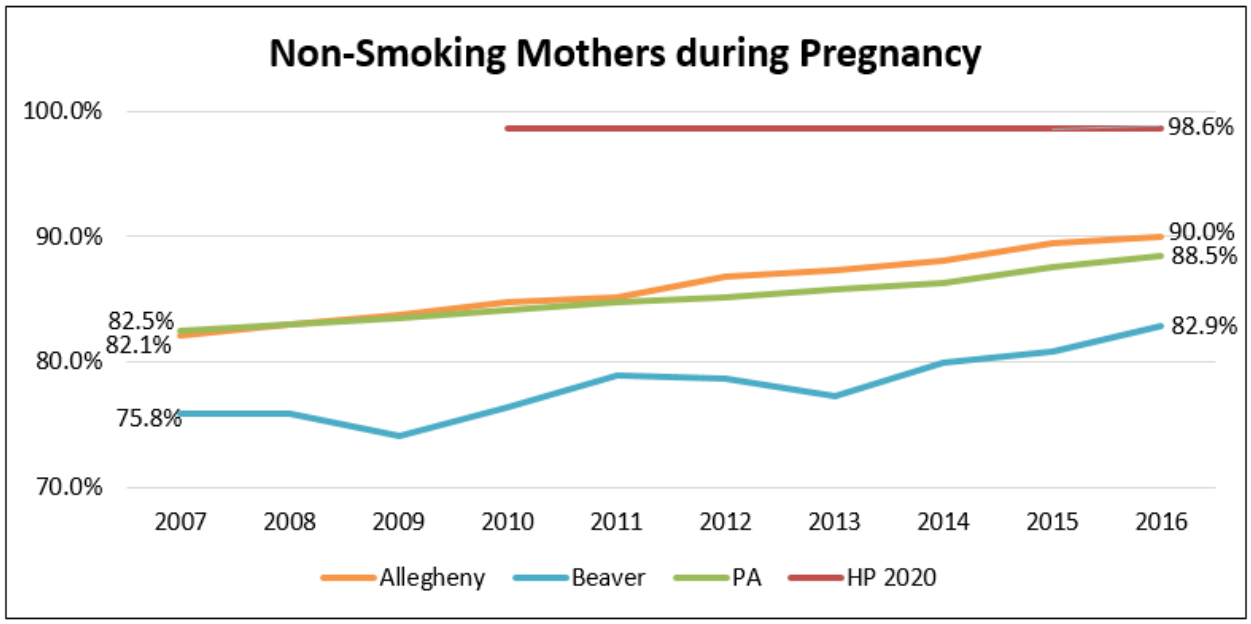
Source: Pennsylvania Department of Health, 2012-2016

*Only municipalities with more than 20 reported births are included.

Smoking during Pregnancy

Smoking during pregnancy is associated with a variety of negative birth outcomes, including low birth weight. Healthy People 2020 set a goal of reducing the number of pregnant women who smoke to 1.4%. Allegheny and Beaver Counties do not meet the Healthy People 2020 goal with 10% of mothers in Allegheny County and 17.1% of mothers in Beaver County reporting smoking during pregnancy.

17.1% of Beaver County mothers smoke during pregnancy

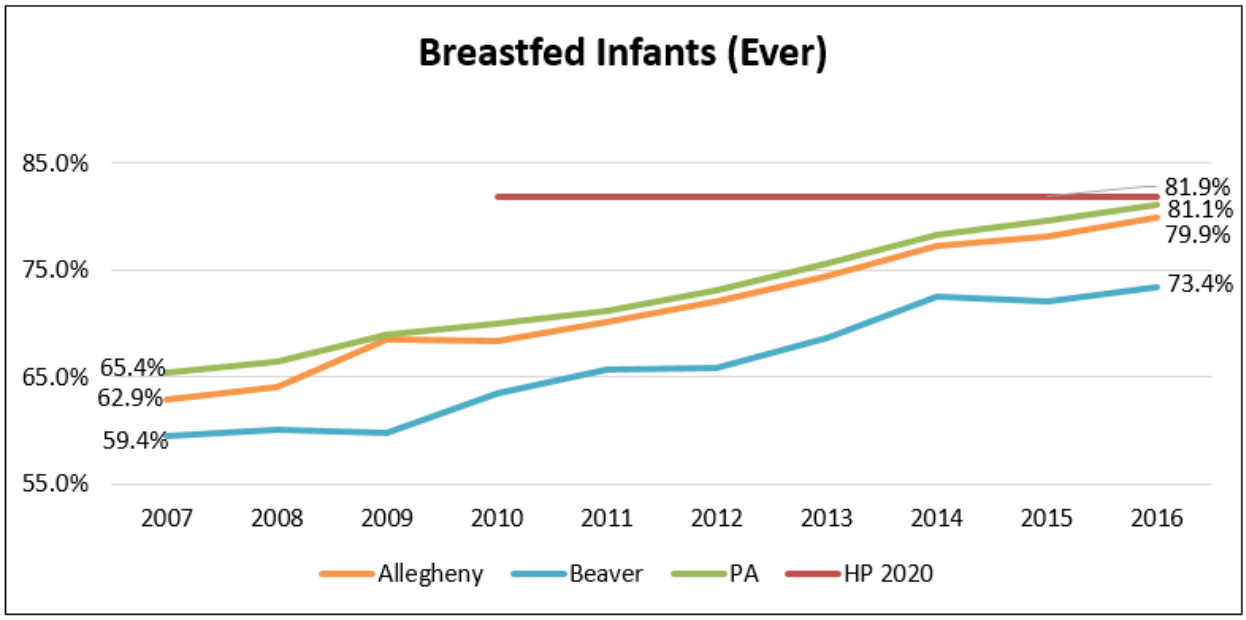


Source: Pennsylvania Department of Health, 2007-2016; Healthy People 2020

Breastfeeding

Breastfeeding is recommended to ensure healthy nutritional intake for babies and to promote bonding between mother and child. Healthy People 2020 set a target for 81.9% of all infants to have initiated breastfeeding at the time of delivery discharge. Allegheny County nearly meets the Healthy People 2020 target, but less than 74% of Beaver County infants are breastfed. However, the percentage of infants who are breastfed increased in both counties from 2007 to 2016.

Less than 74% of Beaver County mothers initiate breastfeeding, but the percentage is increasing

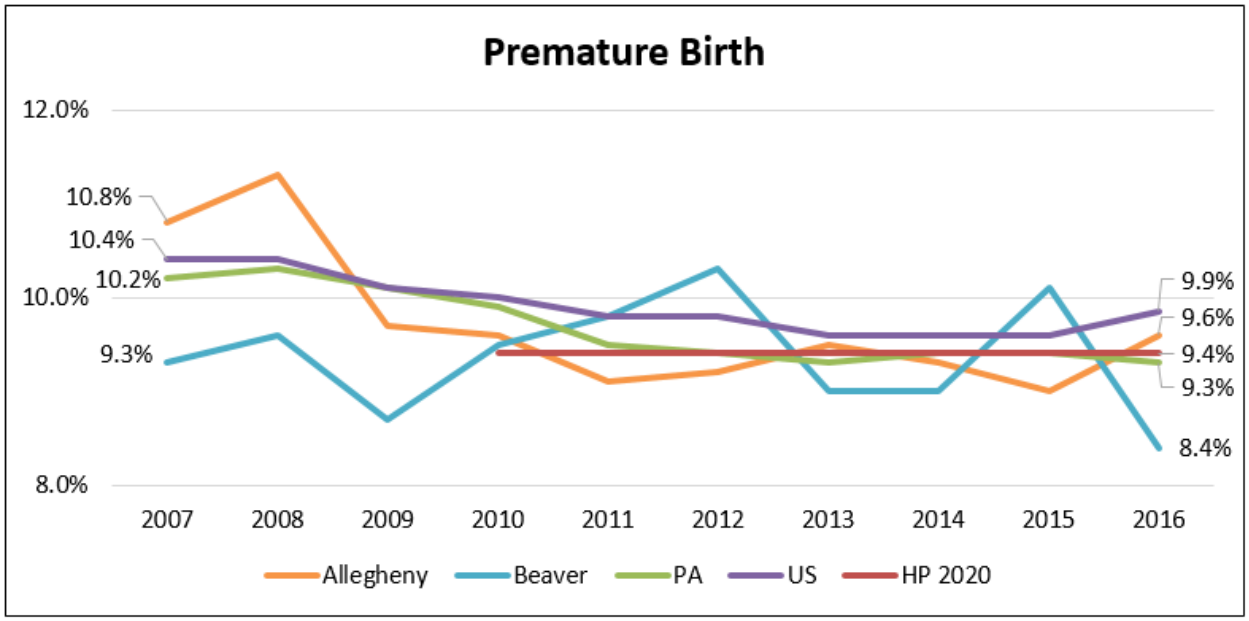


Source: Pennsylvania Department of Health, 2007-2016; Healthy People 2020

Preterm Birth

Preterm birth is defined as birth before 37 weeks of pregnancy, and can contribute to infant death or disability. Both Allegheny and Beaver Counties meet or nearly meet the Healthy People 2020 goal for preterm birth. The preterm birth percentage for both counties has been variable, but it improved from 2006 to 2015.

Both counties meet or nearly meet the HP 2020 goal for preterm birth



Source: Centers for Disease Control and Prevention, 2007-2016; Pennsylvania Department of Health, 2007-2016; Healthy People 2020

Maternal and Child Health Disparities

Black/African American and Hispanic/Latina mothers have a higher percentage of low birth weight and preterm babies

Maternal and child health indicators are presented in the table below by race and ethnicity. In both Allegheny and Beaver Counties, Black/African American and Hispanic/Latina mothers have a higher percentage of low birth weight babies and preterm births compared to White mothers. Black/African American and Hispanic/Latina mothers in Beaver County are also less likely to receive first trimester prenatal care. However, Hispanic/Latina mothers in both counties are less likely to smoke during pregnancy and more likely to breastfeed.

Maternal and Child Health Indicators by Race and Ethnicity

	Allegheny County	Beaver County
Mothers with First Trimester Care		
Total Population	87.6%	80.6%
White	87.8%	82.3%
Black/African American	87.3%	76.6%
Hispanic/Latina	85.0%	65.9%
Low Birth Weight Infants		
Total Population	8.5%	7.1%
White	6.5%	6.4%
Black/African American	14.8%	14.4%
Hispanic/Latina	8.1%	NA
Non-Smoking Mothers During Pregnancy		
Total Population	95.2%	83.3%
White	90.2%	83.9%
Black/African American	86.9%	77.2%
Hispanic/Latina	95.2%	83.3%
Breastfeeding		
Total Population	79.9%	73.4%
White	81.9%	75.6%
Black/African American	67.5%	54.1%
Hispanic/Latina	89.8%	85.4%
Preterm Births		
Total Population	9.6%	8.4%
White	8.2%	7.8%
Black/African American	14.3%	15.7%
Hispanic/Latina	9.9%	NA

Source: Pennsylvania Department of Health, 2016; Healthy People 2020

Heritage Valley Health System Utilization Data

Emergency Department

The emergency department (ED) is often the primary source of care for high risk patients. These patients typically have unmet primary care needs, co-occurring physical and behavioral health conditions, and adverse social determinants of health impeding proactive disease management efforts. The following table analyzes the zip code of residence for patients visiting the ED five or more times within FY2018.

More than half of the patients who visited the hospital ED five or more times within FY2018 resided in four Beaver County zip codes, shown in the table below. Residents from the four zip codes also had the highest number of overdose deaths in 2017 and year-to-date 2018.

Patients who accounted for 50% of ED high utilizers reside in zip codes that also had the highest number of overdose deaths in 2017-2018

Recognizing the relationship between social determinants of health and health status, socioeconomic measures for the top originating zip codes for high utilizers are analyzed to identify the potential for high risk patients and health disparity.

Residents from zip code 15001, Aliquippa accounted for the highest percentage of high utilizers and visits by high utilizers. The zip code received a CNI score of 2.6, indicating moderate socioeconomic need. Residents from zip code 15010, Beaver Falls accounted for the second highest percentage of high utilizers and visits by high utilizers. The zip code received a slightly higher CNI score of 2.8. More than 13% of Beaver Falls residents live in poverty.

Zip Codes Accounting for 50% of Unique Patients Visiting the Emergency Department 5 or More Times in FY2018

	All ED Patients	All ED Visits	Patients Visiting 5+ Times (High Utilizers)	Percentage of All High Utilizers	Visits by High Utilizers	Percentage of All Visits by High Utilizers
15001, Aliquippa	7,131	11,109	201	17.9%	1,325	17.0%
15010, Beaver Falls	6,099	9,488	156	13.9%	1,025	13.1%
15066, New Brighton	3,129	5,166	112	9.9%	835	10.7%
15003, Ambridge	3,095	5,036	92	8.2%	680	8.7%
FY2018 Total	**50,857**	**75,532**	**1,126**	**100%**	**7,811**	**100%**

Source: Heritage Valley Health System, FY2018

The top five ED diagnoses in FY 2018, accounting for 10% of all ED visits are shown in the table below. Chest pain comprised the largest number of ED visits, followed by abdominal pain.

Top Five ED Diagnoses in FY2018

	Number of Visits
Chest pain, unspecified	1,761
Abdominal pain, unspecified	1,673
Acute upper respiratory infection, unspecified	1,603
Urinary tract infection, not specified	1,592
Headache	1,188

Source: Heritage Valley Health System, FY2018

Mental, behavioral, and neurodevelopment disorder diagnoses accounted for 2,117 ED visits in FY2018 or 2.8% of all visits. The following table depicts ED visit counts for specific mental health and substance use disorder diagnoses.

Mental Health ED Diagnoses in FY2018

	Number of Visits
Major depression	582
Anxiety disorders (excluding phobia)	492
Reaction to severe stress and adjustment disorders	39

Source: Heritage Valley Health System, FY2018

Substance Use Disorder ED Diagnoses in FY2018

	Number of Visits
Alcohol Abuse	240
Alcohol dependence	63
Opioid dependence	42
Opioid abuse	17

Source: Heritage Valley Health System, FY2018

Ambulatory Care Sensitive Conditions

Ambulatory care is care provided on an outpatient basis and includes diagnosis, observation, consultation, treatment, intervention, etc. Ambulatory care sensitive (ACS) conditions are conditions that if effectively treated and managed in an outpatient setting, should not be the primary reason for a hospital visit. Ambulatory care sensitive utilization trends can identify access to care barriers and inform the need for community health management resources. The following table depicts the prevalence of ACS conditions as primary diagnoses in the HVHS inpatient setting. In FY2018, mental health conditions accounted for nearly 2,000

Mental health conditions accounted for the highest number of reported ACS conditions in the inpatient setting

inpatient visits. Congestive heart failure accounted for the next highest number of discharges at 802.

Prevalence of Ambulatory Care Sensitive Conditions in the Inpatient Setting in FY2018

	Discharges
Mental Health	1,948
Congestive Heart Failure	802
Pneumonia	644
Cancer	532
Diabetes	410
Hypertension	378
Chronic Obstructive Pulmonary Disorder	367
Substance Abuse	189
Coronary Artery Disease	143
Asthma	58

Source: Heritage Valley Health System, FY2018

Readmission Rates

The following table depicts 30-day readmissions among patients admitted to HVHS for select chronic conditions (primary diagnosis). Readmissions include admission to the hospital for any reason within 30 days of the initial visit. The inpatient readmission count for HVHS was highest among mental health patients.

The inpatient readmission count was highest among patients seen for a primary mental health diagnosis

Readmissions by Chronic Condition as Primary Diagnosis

	30-Day Readmissions	Percent of all 30-Day Readmissions
Mental Health	420	10.2%
Congestive Heart Failure	345	8.4%
Chronic Obstructive Pulmonary Disorder	80	1.9%
Diabetes	78	1.9%
Substance Abuse	42	1.0%
Asthma	14	0.3%
Hypertension	9	0.2%

Source: Heritage Valley Health System, FY2018

Key Informant Survey

Executive Summary

A Key Informant Survey was conducted with 29 community representatives to solicit information about health needs and disparities among residents. Key informants included health and social service providers; community and public health experts; civic, religious, and social leaders; community planners, policy makers, and elected officials; and others representing diverse populations including minority, low-income, and other underserved or vulnerable populations. A list of the represented community organizations and the key informants' respective role/title, is included in Appendix B. Key informant names are withheld for confidentiality.

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.

Key informants indicated that they served residents across Heritage Valley Health System's service area. The majority of informants served residents in Beaver County. Four informants indicated they also serve residents outside of the service area, including one or more neighboring counties (e.g. Butler, Lawrence, Washington).

Counties Served by Key Informants

	Percent of Informants*	Number of Informants
Allegheny County	37.9%	11
Beaver County	82.8%	24
Other (in addition to service area counties)	13.8%	4

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

Approximately 45% of key informants served all population groups. The most commonly served special population groups were low income/poor, seniors/elderly, and children/youth.

Top 10 Populations Served by Key Informants

	Percent of Informants*	Number of Informants
Low Income/Poor	48.3%	14
Not Applicable (Serve All Populations)	44.8%	13
Seniors/Elderly	41.4%	12
Children/Youth	34.5%	10
Black/African American	27.6%	8
Disabled	27.6%	8
Men	27.6%	8
Women	27.6%	8
Uninsured/Underinsured	27.6%	8
Families	24.1%	7

*Key informants were able to select multiple populations. Percentages do not add up to 100%.

Approximately 38% of key informants “disagreed” or “strongly disagreed” 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

- Overweight/Obesity
- Mental health conditions
- Substance abuse

Top Contributing Factors

- Health habits (diet, physical activity)
- Drug/Alcohol use
- Availability of health and wellness programs

Key informants acknowledged poor health habits as key underlying factors of health issues within the community. According to informants, lack of knowledge, awareness, and motivation contribute to poor health habits. Social determinants of health – particularly poverty, transportation, and the built environment – also play a key role in determining health behaviors. Low-income residents and neighborhoods often lack resources to meet basic needs to promote health. Respondents recommended more preventative health and wellness programs that actively engage residents and investment in healthy community infrastructure (e.g. recreation, public transportation, farmers markets) to address health needs.

Mental health and substance abuse were seen as top health concerns across the service area. Key informants indicated that demand for these services exceeds supply. More than half of informants “disagreed” or “strongly disagreed” that residents receive mental health or substance abuse care when they need it.

When asked how local and regional health care providers can better engage community members to achieve optimal health outcomes, informants made recommendations focused on community and partner agency collaboration; preventative health and wellness programs; and improved health care access. They encouraged health care providers to partner with social service providers and integrate care services into the community.

Summary of Findings

Top Health Concerns

Respondents were asked to rank order what they perceived as the top three health conditions impacting the populations they serve. They were then asked to rank order what they saw as the top three contributing factors to those health conditions. The top ten responses rank ordered by number of Key Informants selecting as a #1 health concern are depicted in the tables below.

Approximately one-quarter of respondents identified overweight/obesity and mental health conditions as the top health concerns affecting residents. Substance abuse was identified as the #3 health concern by 15% of informants, however, 18% of informants selected it within their top three choices, the highest of any health concern.

Poor health habits related to diet and exercise were identified as the top contributor to overweight/obesity and other health conditions. According to informants, affected residents lack

knowledge and awareness of healthy habits, as well as motivation to support behavior change. Informants noted a need for more health and wellness programs in the community, and to actively engage residents in these programs.

> *"We have not figured out how to motivate people to embrace diet and exercise as the best medicines long-term, and accept poor health as a chronic, manageable condition."*
> *"The lack of physical activity and poor food choices increases the risk of chronic disease. With busy schedules people are not as interested in attending traditional health and wellness programs, so how do we help to support behavior change?"*
>
> *"People do not seem to value health education."*

Social determinants of health, particularly poverty, are also key contributors to top health concerns among residents, as noted by informants:

> *"I think that there are many factors that contribute to poor health care outcomes for the community. With regard to the population my agency serves, the majority of these factors are rooted in poverty. Our families have poor access to health care due to a lack of transportation in many parts of the county, homelessness or sub-standard housing, unrealistic hours of providers, and motivation."*
>
> *"As the community has declined, the social norm is to exist in survival mode - make it to the next day with what you have today. As we work to revitalize our community, social practices of encouraging healthy living need to be paramount."*
>
> *"We believe that social determinants of health are important, but often go unnoticed and are not typically part of the clinical dialogue. We feel strongly that health issues that have reached epidemic proportions--like chronic diet-related diseases--can be reversed through innovative community partnerships with organizations like the Food Bank."*
>
> *"Beaver County's high median age and aging population is a significant factor. Working, working longer, and deferring retirement due to family cash flow/lack of savings and high cost of care, etc."*

Top 10 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	Overweight/Obesity	26.9%	13.0%	10
2	Mental health conditions	23.1%	15.6%	12
3	Substance abuse	15.4%	18.2%	14
4	Diabetes	11.5%	11.7%	9
5	Heart disease and stroke	7.7%	9.1%	7
6	Alzheimer's disease/dementia	3.9%	1.3%	1
7	Cancers	3.9%	9.1%	7
8	Disability	3.9%	5.2%	4
9	Other*	3.9%	6.5%	5
10	Autism	0.0%	1.3%	1

*Other health conditions: Homelessness, nutrition, health and wellness programs for all ages, health issues for the aging population, and high blood pressure

Top 10 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	Health habits (diet, physical activity)	29.6%	19.0%	15
2	Drug/alcohol use	18.5%	15.2%	12
3	Availability of health and wellness programs	14.8%	11.4%	9
4	Poverty	11.1%	7.6%	6
5	Ability to afford health care (doctor visits, prescriptions, deductibles, etc.)	7.4%	5.1%	4
6	Availability of healthy food options	7.4%	6.3%	5
7	Education attainment	3.7%	6.3%	5
8	Environmental quality	3.7%	3.8%	3
9	Social support (family, friends, social network)	3.7%	2.5%	2
10	Availability of arts and cultural activities	0.0%	0.0%	0

Health Care Access

Key informants were asked to rate resident barriers to accessing health care services within the service area. The following table depicts their responses on a scale of (1) “strongly disagree” to (5) “strongly agree.”

The availability of providers that accept Medicaid/Medical Assistance received the second highest mean score, along with availability of providers that are culturally sensitive. Nonetheless, Medicaid/Medical Assistance accepting provider are not considered to be widely available across the community. Approximately one in five respondents “disagreed” or “strongly disagreed” that Medicaid/Medical Assistance providers are available to residents.

Perceptions were divided on cultural sensitivities and competencies among providers. Cultural competency received the highest mean score, while sufficient number of bilingual providers received one of the lowest mean scores.

Resident Health Care Access Barriers

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	**Mean Score**
Providers in the community are culturally sensitive to race, ethnicity, cultural preferences, etc. of patients.	10.3%	6.9%	37.9%	41.4%	3.5%	**3.2**
There are a sufficient number of providers that accept Medicaid/Medical Assistance in the community.	7.1%	14.3%	28.6%	50.0%	0.0%	**3.2**
Residents have a regular primary care provider/doctor/practitioner that they go to for health care.	0.0%	24.1%	41.4%	31.0%	3.5%	**3.1**
There are a sufficient number of bilingual providers in the community.	17.2%	34.5%	41.4%	6.9%	0.0%	**2.4**
Residents have available transportation (public, personal, or other service) for medical appointments and other services.	20.7%	51.7%	17.2%	10.3%	0.0%	**2.2**

Key informants were then asked to rate the availability and accessibility of primary and specialty care providers. The following table depicts their responses on a scale of (1) “strongly disagree” to (5) “strongly agree.” Services are ranked in descending order by mean score for residents’ ability to receive care.

Informants identified mental health and substance abuse services as least available and accessible to residents. More than half of informants “disagreed” or “strongly disagreed” that residents receive these services when they need them. Informants also identified a lack of social supports to promote behavioral health treatment and prevention efforts. “Our consumers lack basic social support from family, friends and the community.”

Dental care and vision care services also received lower overall mean scores for accessibility of care. One informant identified that dental and vision care services are particularly limited for low-income individuals and seniors.

Health Care Provider Availability

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	**Mean Score**
Primary Care						
Residents can receive care when they need it.	3.7%	11.1%	29.6%	51.9%	3.7%	**3.41**
There are a sufficient number of providers in the community.	0.0%	14.8%	14.8%	66.7%	3.7%	**3.59**
Specialty Care Services						
Residents can receive care when they need it.	0.0%	18.5%	33.3%	44.4%	3.7%	**3.33**
There are a sufficient number of providers in the community.	0.0%	23.1%	26.9%	50.0%	0.0%	**3.27**
Vision Care Services						
Residents can receive care when they need it.	3.7%	33.3%	22.2%	37.0%	3.7%	**3.04**
There are a sufficient number of providers in the community.	4.0%	24.0%	20.0%	44.0%	8.0%	**3.28**
Dental Care Services						
Residents can receive care when they need it.	0.0%	44.4%	18.5%	33.3%	3.7%	**2.96**
There are a sufficient number of providers in the community.	3.9%	26.9%	7.7%	53.9%	7.7%	**3.35**
Substance Abuse Services						
Residents can receive care when they need it.	11.1%	44.4%	25.9%	11.1%	7.4%	**2.59**
There are a sufficient number of providers in the community.	15.4%	38.5%	19.2%	19.2%	7.7%	**2.65**
Mental Health Care Services						
Residents can receive care when they need it.	23.1%	34.6%	26.9%	11.5%	3.9%	**2.38**
There are a sufficient number of providers in the community.	20.0%	48.0%	12.0%	16.0%	4.0%	**2.36**

Key informants were asked to identify the primary reasons that individuals who have health insurance do not receive regular care to maintain their health. Approximately one-quarter of informants agreed that residents feel healthy, indicative of a lack of emphasis on preventative health care. The second top reason is that individuals lack transportation, consistent with the top identified resident health care access barrier. Other top reasons for not receiving care are fear of diagnosis, treatment and/or inability to afford care.

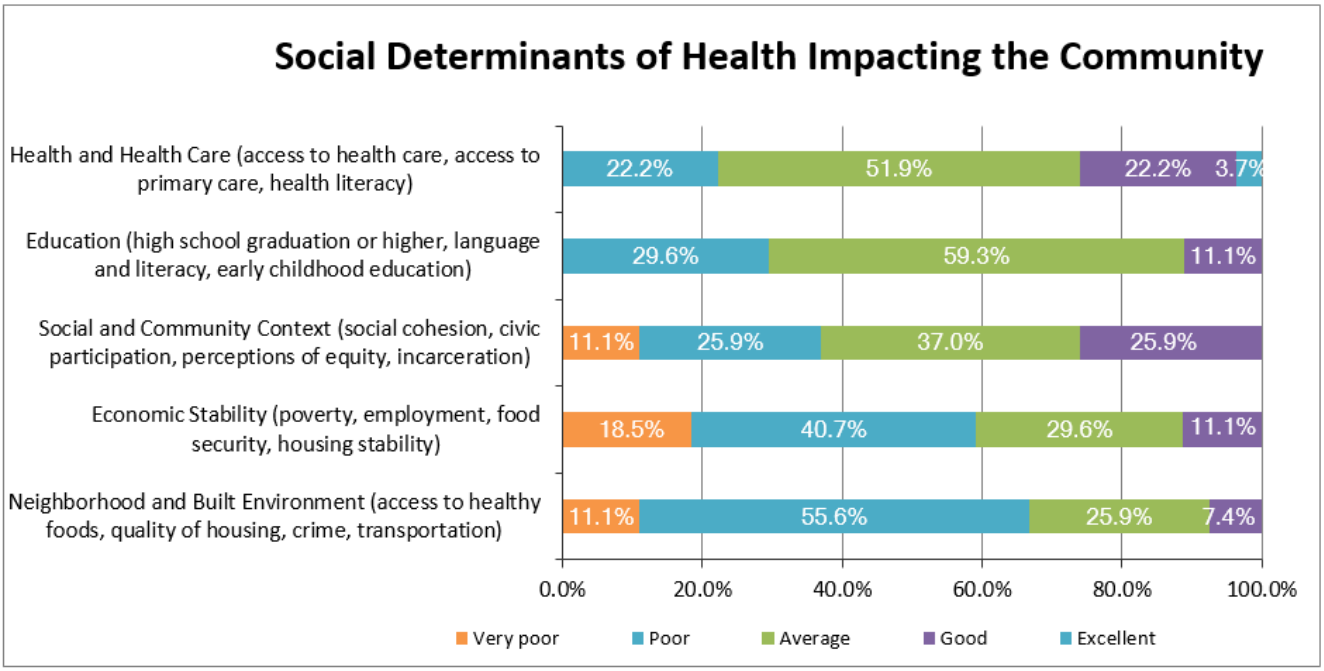
Top Reasons that Individuals with Insurance Do Not Receive Regular Care

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")	25.9%	**11**	40.7%
2	Lack of transportation to access health care services	22.2%	**13**	48.1%
3	Fear of diagnosis, treatment	18.5%	**10**	37.0%
4	Unable to afford care (copays, deductibles, prescriptions, etc.)	18.5%	**14**	51.9%
5	Awareness/Emphasis of preventive health measures	7.4%	**10**	37.0%
6	Challenges of navigating the health care system	7.4%	**7**	25.9%

Social Determinants of Health

Social determinants of health are community factors present in varying levels of quality that impact the ability of individuals to access health care and maintain healthy lifestyles. Social determinants of health such as education, income, and social cohesion account for a significant proportion of health and wellness.

Key informants were asked to rate their perception of the quality of social determinants of health affecting wellness in the community they serve on a scale of (1) “very poor” to (5) “excellent.” Health and health care were rated the highest by informants, while neighborhood/built environment and economic stability were rated the lowest.



Ranking	Social Determinant of Health	Mean Score
1	Health and Health Care	3.07
2	Education	2.81
3	Social and Community Context	2.78
4	Economic Stability	2.33
5	Neighborhood and Built Environment	2.30

Respondents had the opportunity to write in additional insights to support their perception of the quality of social determinants of health affecting wellness. The write in comments centered around two themes: 1) The impact of community blight and lack of a healthy built environment on quality of life, and 2) Disparity in access to protective factors (e.g. healthy food, quality housing, health care), particularly among low income residents. Specific comments by key informants included:

"Overall, I would say it is good, but for segments of the population, many of these could be poor (uninsured, mentally ill, etc.)."

"Based on an abundance of research, we know that lack of access to adequate amounts of healthy food results in poor health outcomes for people across their lifespan. We also know that healthy food is integral to healing from an acute health crisis or managing a chronic health issue. Lack of access to affordable and nutritious foods is one of the driving factors leading to chronic diet-related disease."

"A windshield survey was done around the Ambridge area about 1-2 miles away from Center for Hope. Fast food places and run down areas are surrounded by high-end areas. The students of RMU noted possible prostitution and drug abuse while driving around and writing their observation about the nearby neighborhood. I do believe there is a lot of support and the community wants to help, but having a cohesive environment that supports regular doctor, dental, and vision testing is challenging."

"As the community declined, the "broken windows theory" embedded itself into our community. Once a vacant house begins to fall apart, it is easy to see the impact that has on the rest of the block - reducing the motivation from property owners to maintain and improve their own home… The longer blight remains, the lower the property values are, the less likely it is for proper tenants to take residence nearby, and crime increases. All of these factors begin to degrade the quality of life of those that remain in the community... It is our theory that as we improve housing stock, recreational amenities and public perception of our community, we can motivate our residents to invest more in themselves and to pursue healthier lifestyles..."

Community Resources

Key informants were asked to share what key services they believe that, if strengthened, would help residents optimize their health. Overwhelmingly, respondents indicated that greater transportation options would improve the health and wellbeing of residents in the service area. The other services that respondents indicated a need to strengthen included mental health and substance abuse services and healthy food options. While mental health and substance abuse services are a clinical need, healthy food options comprise a social determinant of health that impact individuals' ability to make healthy choices.

Top 10 Resources That Can Be Strengthened Within the Community to Optimize Health

Ranking	Resource	Percent of Informants	Number of Informants
1	Transportation options	84.6%	22
2	Mental health services	57.7%	15
3	Substance abuse services	53.9%	14
4	Healthy food options	50.0%	13
5	Health and wellness education and programs	46.2%	12
6	Dental care	34.6%	9
7	Multi-cultural or bilingual health care providers	34.6%	9
8	Child care providers	30.8%	8
9	Home health care services	30.8%	8
10	Outlets for physical activity (parks, rec centers, gyms, walking trails, etc.)	30.8%	8

Specific comments related to needed community resources included:

"I feel that schools may help oversee the issues with children. Not all issues, but at least dental, vision, and check-ups (immunizations) are tracked."

"Research shows that people who have stable housing tend to have more positive health outcomes. They are better able to control things like diet, taking medications as prescribed, and simply being able to focus on personal hygiene. As such, we aim to rehouse households who are homeless within 30 days. As we see safe, affordable housing dwindling in our county, linking these households to stable housing is becoming increasingly challenging."

"Navigating through the health care system and understanding their options/choices is challenging for seniors as well as Social Security Disability Insurance/Supplemental Security Income individuals."

"Some areas, i.e. Midland, need improved transportation. Need to determine how best to offer health and wellness programs and market, with limited funding available, so as to keep costs down to participants."

Lastly, key informants were asked for open-ended feedback regarding how local and regional partners can promote a healthier community. Overwhelmingly, the feedback revolved around increasing collaboration among existing agencies and residents. The other most common themes included increasing awareness and access to available health services and promoting health and wellness programs within the community.

Specific comments on these issues included the following:

"A needs assessment (survey) is a great start. I would also encourage nurses to go out into the community to seek feedback from people within the community. Perhaps the library. Many poverty-stricken individuals go to the library to use the computers. "

"Health care continues to be about when people are sick, and not about well care. Taking health initiatives outside of the hospital setting may better engage people in how to be well."

"Healthy Cooking demos at farmers markets, as well as healthy eating information or how to use fresh fruits and vegetables."

"Make health education and screening available at senior centers, community buildings and/or churches."

"Providers should attempt to understand and treat patients more holistically when they do seek care (screening for social determinants of health and providing interventions) and should do more to meet potential patients where they are in their communities."

"There are several proven models of partnerships between housing providers and health care providers working together to provide both a stable home and health care supports. These models have shown both housing stability as well as positive health outcomes."

"Work more closely on programs with school districts and also through area employers."

Community Member Survey

Executive Summary

An online Community Member Survey was conducted with residents of HVHS's 28 zip code service area in August and September 2018. The survey was conducted with adults age 18 or over to better understand health status and risk behaviors, barriers to accessing health services, and the health and social needs of community members. A total of 2,541 individuals responded to the survey. Data are analyzed for all respondents in aggregate, as well as for nine zip codes with 100 or more respondents.

Common strengths shared or perceived among survey respondents are outlined below:

- Despite the prevalence of chronic disease reported by respondents, the majority of individuals described their health as "excellent", "very good" or "good".
- Fewer than 13% of respondents reported regular consumption of sugar-sweetened beverages or alcohol, and fewer than 4% reported regular consumption of fast food.
- Fewer than 8% of respondents reported smoking cigarettes or using electronic cigarettes regularly.
- Nearly 100% of survey respondents reported that they had health insurance.
- Approximately 96% of respondents reported having a personal doctor and 87% reported visiting a doctor for a routine checkup within the past year.
- Approximately 85% of age-recommended women received breast cancer screenings; approximately 73% of age-recommend men received prostate cancer screenings.

Areas of opportunities were also indicated and are outlined below for improvement:

- Approximately 26% of respondents reported being unable to work or conduct activities of daily living for at least one day in the past month due to poor physical or mental health.
    - Respondents from 15061, Monaca and 15003, Ambridge were the most likely to report experiencing five or more days of limited activity due to poor physical or mental health.
- Approximately 22% of respondents did not participate in at least 30 minutes of physical activity on any day in the past month. Fewer than half of respondents reported eating two or more cups of fruits or vegetables each day.
- Approximately 3% of respondents indicated that they did not have enough to eat, while an additional 13% had enough food, but not always the kinds of food they wanted.
    - Respondents from 15003, Ambridge were among the least likely to meet fruit and vegetable consumption guidelines and were the most likely to be food insecure.

- Respondents from 15003, Ambridge were the most likely to report drinking sugar-sweetened beverages, smoking cigarettes, and/or being exposed to second hand smoke on a regular basis. Respondents from 15143, Sewickley were the most likely to report drinking alcohol regularly.
- According to informants, the top barrier that keeps community residents from accessing needed health care is “cost/paying out-of-pocket expenses.” Among respondents, one in 10 reported that there was a time in the past 12 months when they needed to see a provider, but could not due to cost. Nearly 15% of respondents reported that there was a time in the past 12 months when they had trouble affording medicine prescribed to them.
    - Respondents from 15009, Beaver were the most likely to report not seeing a health care provider due to cost, while respondents from 15003, Ambridge were the most likely to report having trouble affording a prescription medication.
- Among respondents who reported delaying needed medical care in the past 12 months, the most common reason given was not being able to get an appointment soon enough.
- Approximately half of respondents reported being diagnosed with high blood pressure, high cholesterol, or overweight/obesity. One in five respondents also reported having been diagnosed with diabetes and/or cancer.
    - Respondents from 15010, Beaver Falls reported the highest prevalence of respiratory conditions (asthma and COPD).
    - Respondents from 15005, Baden reported among the highest prevalence of high blood pressure, high cholesterol, and heart disease or stroke.
    - Respondents from 15001, Aliquippa reported among the highest prevalence of high blood pressure, high cholesterol, overweight/obesity, and diabetes.
- The top three community health concerns according to respondents were cancers, overweight/obesity, and diabetes. Mental health was ranked as the seventh top health concern by respondents, but mental health services were identified as the top missing resource or service in the community.

Demographics

The largest percentages of respondents resided in 15001, Aliquippa (19%) and 15108, Coraopolis (13%). Approximately 13% of respondents resided in zip codes 15143, Sewickley and 15009, Beaver, the locations of Heritage Valley Health System hospitals. The majority of respondents were female (71%), between the ages of 55 and 74 (64%), and White (97%). Approximately 58% of respondents reported a household income of $50,000 or greater. About 40% attained a bachelor’s degree or higher and 38% had some college experience or an associate’s degree. An equal percentage of respondents were employed (full-time or part-time) or retired. Demographic data for all survey respondents is shown in the following tables.

Respondents by Zip Code of Residence

Zip Code/Town	Percent	Count
15001 Aliquippa	18.7%	476
15108 Coraopolis	13.4%	340
15143 Sewickley	7.8%	197
15061 Monaca	7.0%	178
15003 Ambridge	6.1%	156
15010 Beaver Falls	5.8%	148
15009 Beaver	5.2%	132
15066 New Brighton	5.2%	131
15005 Baden	4.8%	122
15074 Rochester	3.8%	97
15042 Freedom	3.0%	75
15059 Midland	2.6%	66
15126 Imperial	2.4%	62
15071 Oakdale	1.8%	47
15026 Clinton	1.8%	46
15052 Industry	1.8%	46
15046 Crescent	1.6%	41
15050 Hookstown	1.5%	38
16115 Darlington	1.4%	36
15027 Conway	1.2%	31
16120 Enon Valley	0.6%	16
15043 Georgetown	0.6%	15
15056 Leetsdale	0.5%	12
16141 New Galilee	0.4%	11
15081 South Heights	0.3%	8
16136 Koppel	0.3%	7
15225 Neville Island	0.2%	5
15077 Shippingport	0.1%	2

Respondent Demographics

	Percent	Count
Gender		
Female	70.6%	1,795
Male	28.8%	733
Do not identify as male or female	0.5%	13
Race/Ethnicity		
White or Caucasian	96.5%	2,121
Black or African American	1.9%	42
Other*	0.9%	20
American Indian or Alaska Native	0.5%	11
Asian	0.1%	2
Native Hawaiian or Pacific Islander	0.1%	2
Hispanic, Latino/a, or of Spanish origin (any race)	0.6%	13
Age		
18-24	1.6%	40
25-34	3.2%	82
35-44	5.5%	140
45-54	11.8%	300
55-64	31.0%	787
65-74	32.6%	829
75-84	12.5%	318
85+	1.8%	45
Household Income		
Less than $10,000	2.8%	46
$10,000-$14,999	4.5%	75
$15,000-$19,999	3.5%	58
$20,000-$24,999	5.2%	87
$25,000-$34,999	11.0%	183
$35,000-$49,999	15.4%	256
$50,000-$74,999	22.3%	371
$75,000 or more	35.4%	590
Education		
Less than a high school diploma	0.7%	15
Grade 12 (High school diploma or GED)	21.9%	482
Some college	21.9%	481
Associate's degree	15.9%	351
Bachelor's degree	23.4%	516
Master's degree or higher	16.2%	356

*Most common responses: Hispanic, human.

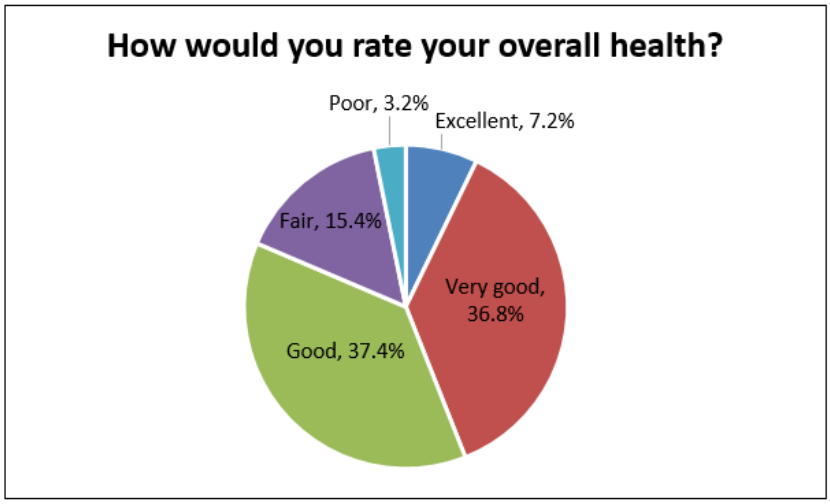
Respondent Demographics cont'd

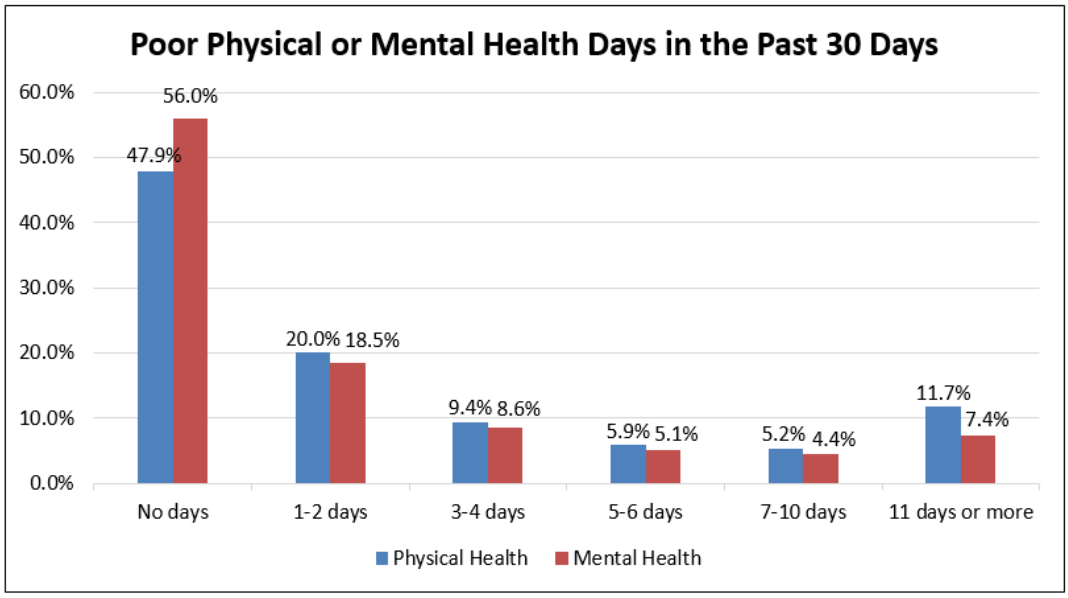
	Percent	Count
Employment		
Employed, working full-time	36.5%	807
Employed, working part-time	7.3%	161
Not employed, looking for work	1.2%	27
Not employed, not looking for work	0.7%	16
Retired	44.3%	979
Disabled, not able to work	5.7%	125
Student	0.5%	10
Homemaker	3.8%	83

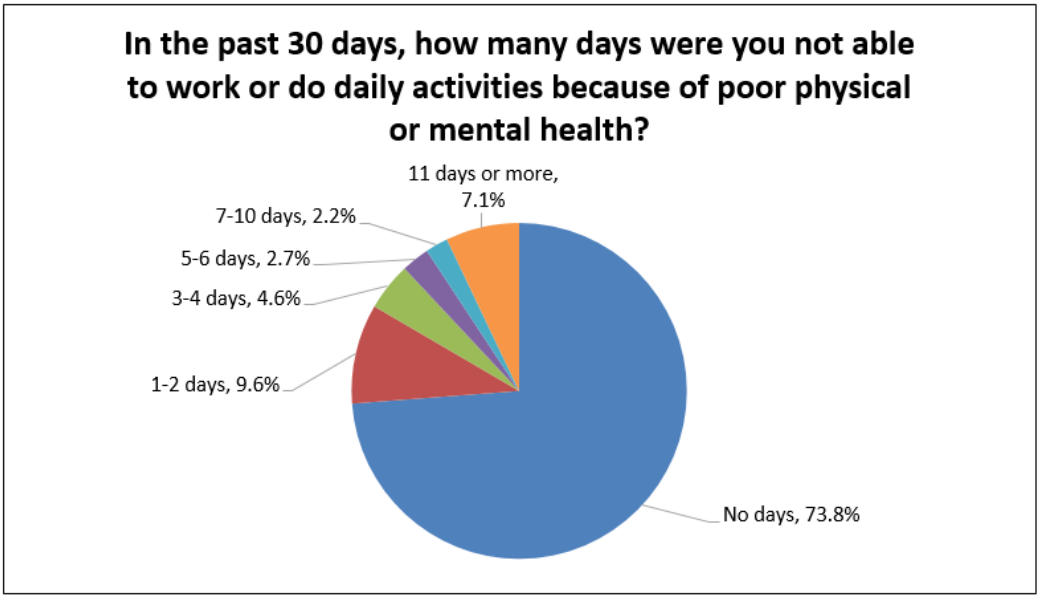
Overall Health Status

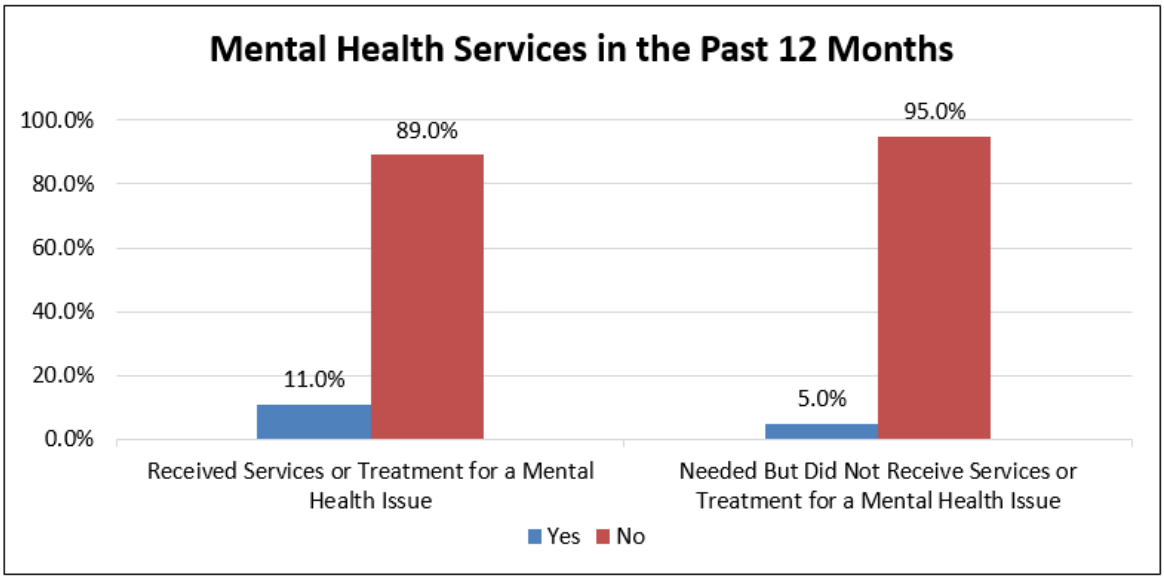
The majority of respondents (81%) reported that they are in "excellent," "very good," or "good" overall health. However, over the past 30 days, 52% of respondents reported at least one day of poor physical health and 44% of respondents reported at least one day of poor mental health. Of note is that one in ten respondents reported 11 days or more of poor physical health in the past 30 days. Approximately one in four respondents were unable to work or conduct activities of daily living for at least one day due to poor physical or mental health.

Approximately 11% of all respondents received services or treatment for a mental health issue in the past 12 months. An additional 5% of respondents needed but did not receive services. Respondents from 15061, Monaca and 15003, Ambridge were the most likely to report experiencing five or more days of limited activity due to poor physical or mental health, and to have not received needed mental health services or treatment.




Poor Physical or Mental Health Days in the Past 30 Days
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
47.9%
56.0%
20.0%
18.5%
9.4%
8.6%
5.9%
5.1%
5.2%
4.4%
11.7%
7.4%
No days
1-2 days
3-4 days
5-6 days
7-10 days
11 days or more
Physical Health
Mental Health


In the past 30 days, how many days were you not able to work or do daily activities because of poor physical or mental health?
11 days or more, 7.1%
7-10 days, 2.2%
5-6 days, 2.7%
3-4 days, 4.6%
1-2 days, 9.6%
No days, 73.8%



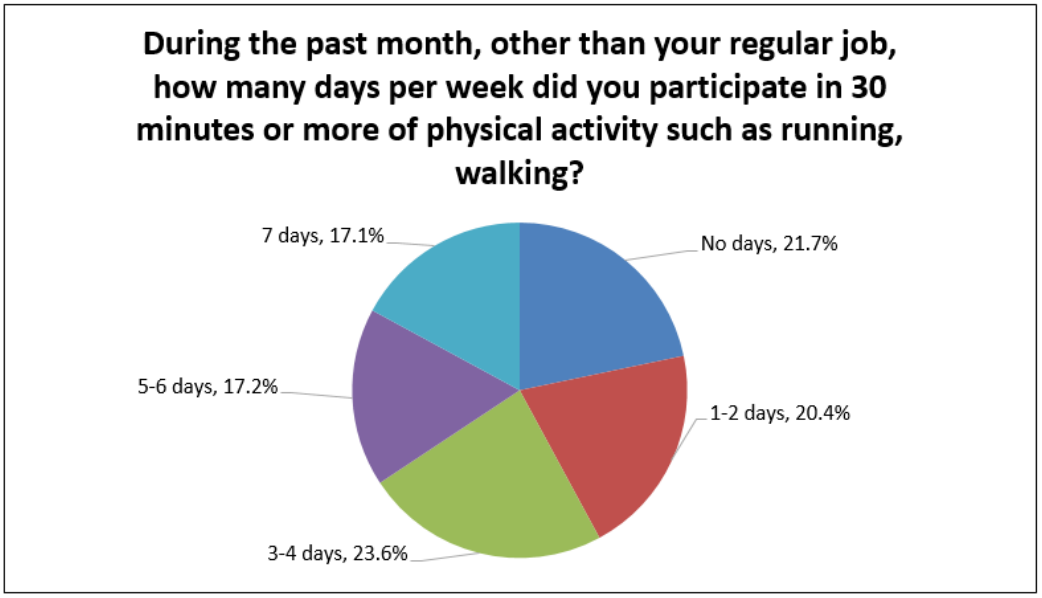
Five or More Days of Limited Activity Due to Poor Physical or Mental Health by Zip Code

Zip Code/Town	Percent	Count
15061 Monaca	16.5%	29
15003 Ambridge	15.2%	23
15066 New Brighton	13.5%	17
15143 Sewickley	12.0%	23
15010 Beaver Falls	11.9%	17
15001 Aliquippa	11.1%	51
15009 Beaver	7.7%	10
15108 Coraopolis	7.5%	25
15005 Baden	6.8%	8

Respondents Who Needed But Did Not Receive Services or Treatment for a Mental Health Issue by Zip Code

Zip Code/Town	Percent	Count
15003 Ambridge	8.5%	13
15061 Monaca	6.9%	12
15066 New Brighton	5.5%	7
15143 Sewickley	4.6%	9
15009 Beaver	4.6%	6
15005 Baden	4.2%	5
15010 Beaver Falls	4.1%	6
15108 Coraopolis	3.6%	12
15001 Aliquippa	2.8%	13

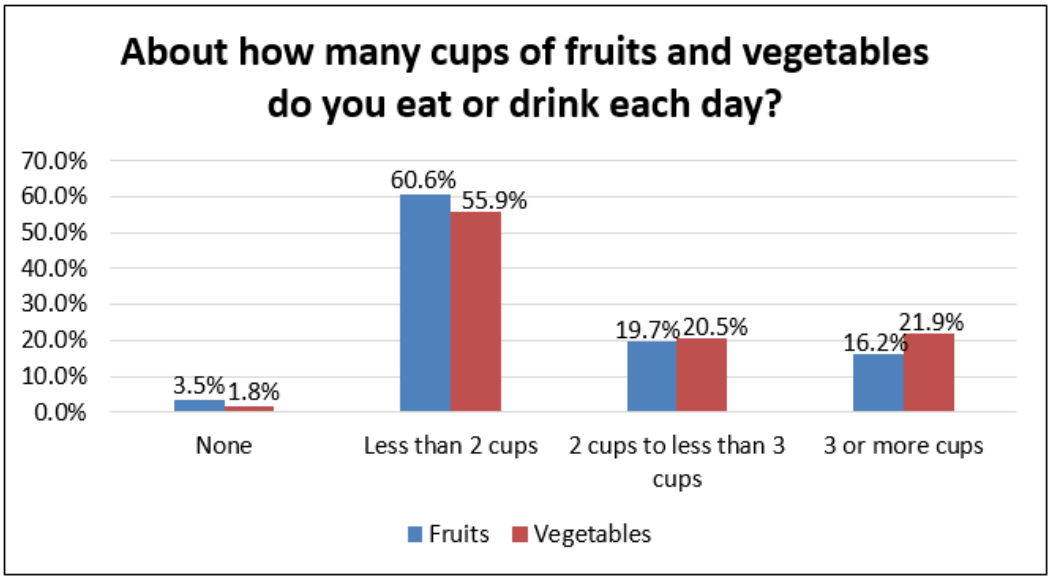
According to the Office of Disease Prevention and Health Promotion, adults should participate in at least 150 minutes of moderate-intensity aerobic physical activity each week, the equivalent of 30 minutes on at least five days. Fewer than 35% of respondents met the physical activity guideline; 22% of respondents did not participate in at least 30 minutes of physical activity on any day in the past month. Respondents from 15066, New Brighton were the least likely to participate in physical activity, followed by respondents from 15061, Monaca.



Respondents Who Did Not Participate in 30 Minutes or More of Physical Activity on Any Day in the Past Month by Zip Code

Zip Code/Town	Percent	Count
15066 New Brighton	30.4%	38
15061 Monaca	25.5%	42
15010 Beaver Falls	25.4%	35
15005 Baden	22.1%	25
15001 Aliquippa	20.6%	90
15108 Coraopolis	20.6%	64
15003 Ambridge	17.5%	25
15143 Sewickley	17.1%	31
15009 Beaver	16.3%	20

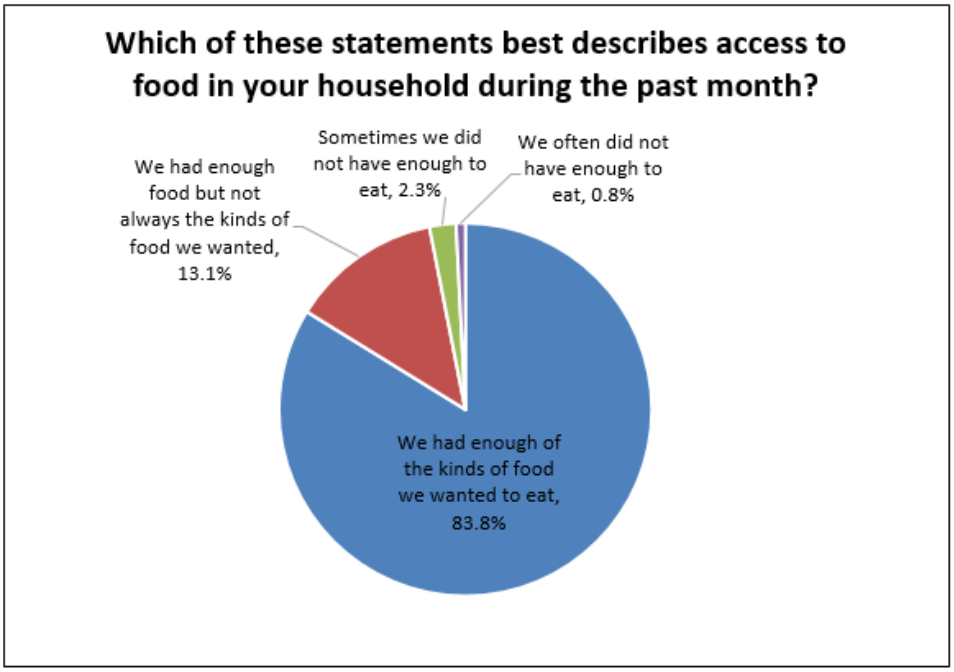
Federal guidelines for fruit and vegetable consumption recommend that adults eat at least 1½ to 2 cups per day of fruit and 2 to 3 cups per day of vegetables. Fewer than 36% of respondents reported eating two or more cups of fruit each day, and fewer than 43% of respondents reported eating two or more cups of vegetables each day. Respondents from zip codes 15005, Baden and 15003, Ambridge were among the least likely to meet fruit and vegetable consumption guidelines.



Fruit and Vegetable Consumption by Zip Code

	Fruit: Less than 2 Cups/None		Vegetables: Less than 2 Cups/None	
Zip Code/Town	Percent	Count	Percent	Count
15005 Baden	69.4%	79	60.3%	67
15003 Ambridge	68.5%	100	64.6%	91
15009 Beaver	66.9%	81	51.8%	60
15010 Beaver Falls	65.5%	91	55.6%	74
15066 New Brighton	65.0%	80	61.6%	72
15108 Coraopolis	63.2%	201	59.9%	185
15001 Aliquippa	63.0%	279	58.6%	248
15143 Sewickley	60.3%	108	44.6%	77
15061 Monaca	60.0%	99	59.1%	97

For some, low consumption of fruits and vegetables may be impacted by access to food or food insecurity. Approximately 3% of respondents indicated that they “often” or “sometimes” did not have enough to eat, while 13% had enough food, but not always the kinds of food they wanted. Respondents from zip code 15003, Ambridge reported the highest combined percentage for not having enough food and not having enough of the kinds of foods they wanted to eat.



Food Access by Zip Code

	We had enough of the kinds of food we wanted to eat		We had enough food but not always the kinds of food we wanted		We did not have enough to eat (often/ sometimes)	
Zip Code/Town	Percent	Count	Percent	Count	Percent	Count
15005 Baden	90.4%	103	7.0%	8	2.6%	3
15143 Sewickley	90.2%	166	7.1%	13	2.7%	5
15010 Beaver Falls	87.1%	122	10.7%	15	2.1%	3
15001 Aliquippa	85.6%	386	11.5%	52	2.9%	13
15108 Coraopolis	85.2%	276	13.0%	42	1.8%	6
15066 New Brighton	84.3%	107	13.4%	17	2.4%	3
15009 Beaver	83.7%	103	13.0%	16	3.3%	4
15061 Monaca	83.1%	138	16.3%	27	0.6%	1
15003 Ambridge	82.2%	120	11.0%	16	6.9%	10

Respondents were presented with a list of health behaviors and asked to indicate how frequently they engage in the behaviors on a scale of “never” to “every day.” Their responses are depicted below in rank order by the percentage of respondents who reported engaging in the behavior “every day” or “most days.”

Fewer than 13% of respondents reported engaging in any of the specified health behaviors "every day" or "most days." Respondents were most likely to report regularly drinking sugar-sweetened beverages or alcohol. Approximately 7% of respondents reported smoking cigarettes or being exposed to second hand smoke on a regular basis. According to 2016 BRFSS data, the statewide average for adults who report smoking is 18%.

Respondent Reported Health Behaviors "Every Day" or "Most Days"

Health Behavior	Percent	Count
Drink sugar-sweetened beverages	12.9%	303
Drink alcohol (beer, wine, liquor)	10.0%	239
Exposed to second hand smoke or vaping mist	7.5%	177
Smoke cigarettes	7.4%	176
Eat fast food	3.6%	85
Use electronic cigarettes	0.5%	12

The following table depicts the percentage of respondents who engaged in the specified health behaviors "every day" or "most days" by zip code. Survey respondents from 15003, Ambridge were the most likely to report drinking sugar-sweetened beverages, smoking cigarettes, and/or being exposed to second hand smoke. Respondents from 15143, Sewickley were the most likely to report drinking alcohol. Six percent or fewer of respondents in any zip code reported eating fast food, and 1% or fewer respondents reported using electronic cigarettes.

Respondent Reported Health Behaviors "Every Day" or "Most Days" by Zip Code

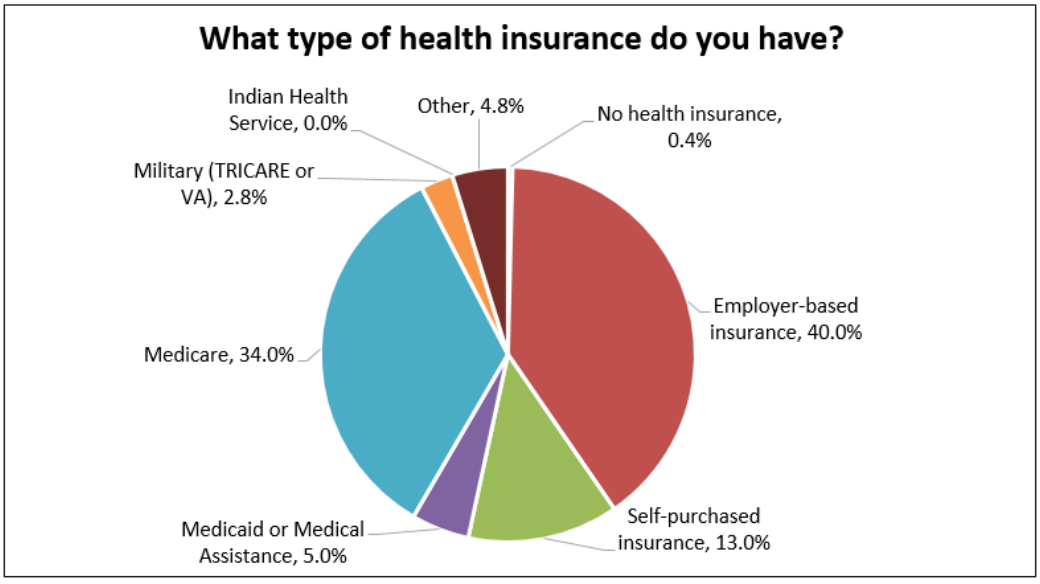
	Eat fast food		Drink sugar-sweetened beverages		Smoke cigarettes	
Zip Code/Town	Percent	Count	Percent	Count	Percent	Count
15061 Monaca	6.1%	10	12.0%	20	6.0%	10
15001 Aliquippa	4.5%	20	11.3%	50	8.2%	37
15108 Coraopolis	4.4%	14	11.8%	38	4.6%	15
15066 New Brighton	3.2%	4	15.8%	20	12.5%	16
15010 Beaver Falls	2.9%	4	8.0%	11	6.4%	9
15009 Beaver	2.5%	3	12.5%	15	4.1%	5
15003 Ambridge	2.0%	3	18.0%	26	14.5%	21
15005 Baden	1.8%	2	12.1%	14	0.9%	1
15143 Sewickley	1.7%	3	10.5%	19	7.1%	13

Respondent Reported Health Behaviors "Every Day" or "Most Days" by Zip Code cont'd

	Use electronic cigarettes		Exposed to second hand smoke or vaping mist		Drink alcohol (beer, wine, liquor)	
Zip Code/Town	Percent	Count	Percent	Count	Percent	Count
15061 Monaca	0.0%	0	7.2%	12	10.1%	17
15001 Aliquippa	0.4%	2	7.8%	35	9.1%	41
15108 Coraopolis	0.3%	1	5.0%	16	15.0%	48
15066 New Brighton	0.8%	1	11.1%	14	4.8%	6
15010 Beaver Falls	0.0%	0	2.9%	4	6.4%	9
15009 Beaver	0.8%	1	2.4%	3	14.7%	18
15003 Ambridge	1.4%	2	13.8%	20	4.8%	7
15005 Baden	0.0%	0	1.8%	2	7.9%	9
15143 Sewickley	0.0%	0	6.5%	12	19.7%	36

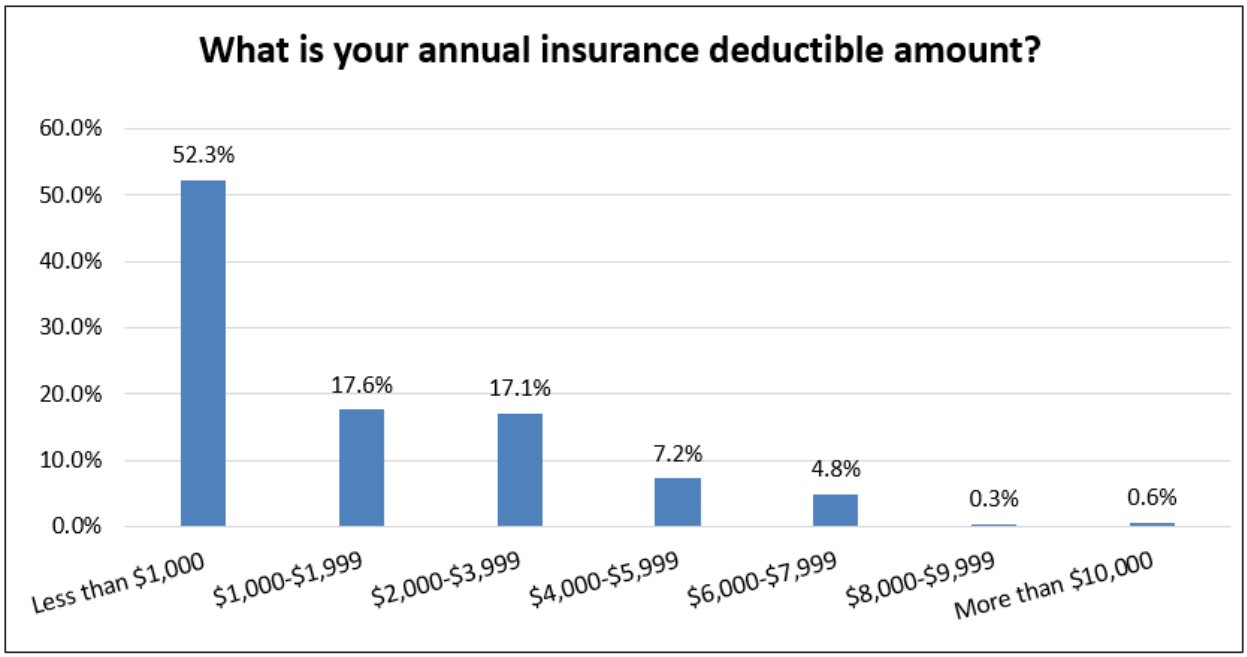
Access to Care

Nearly 100% of survey respondents reported that they had health insurance. Respondents were asked to "check all that apply" in indicating their insurance provider. Approximately 53% of respondents indicated private health insurance coverage (employer-based or self-purchased). Nearly 40% of respondents indicated federal or state subsidized programs, including Medicaid and/or Medicare. "Other" insurance types indicated by respondents included specific providers such as UPMC, Highmark, AARP, and HOP, among others, which may have been private or public programs.



Though most survey respondents were insured, almost half had an annual insurance deductible over $1,000. Approximately 9% (n=201) of respondents reported that there was a time in the past 12 months when they needed to see a health care provider, but could not because they

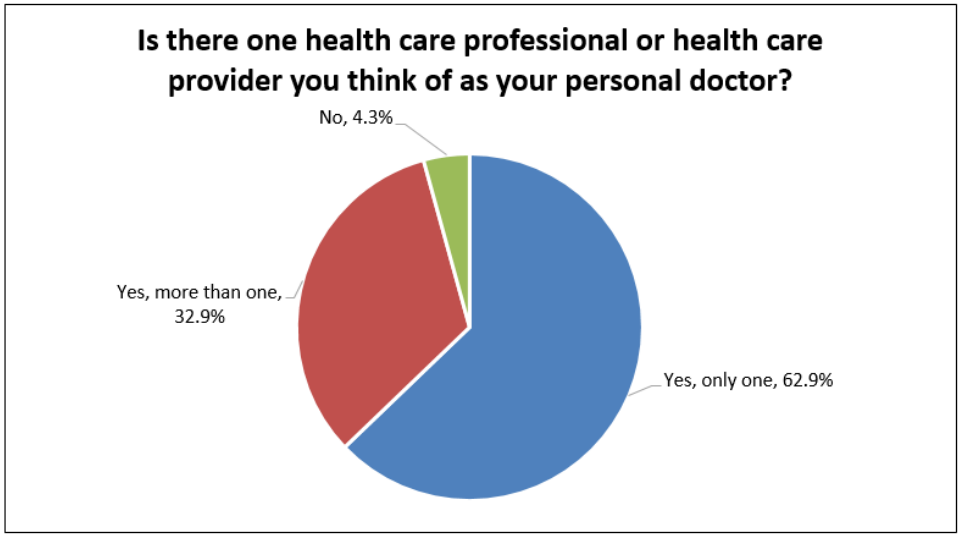
could not afford their deductible. Among respondents who delayed care due to their deductible, 32% had a deductible under $1,000 and 43% had a deductible of $1000 to $3,999. The finding indicates that even small deductible amounts can be a barrier to receiving care.

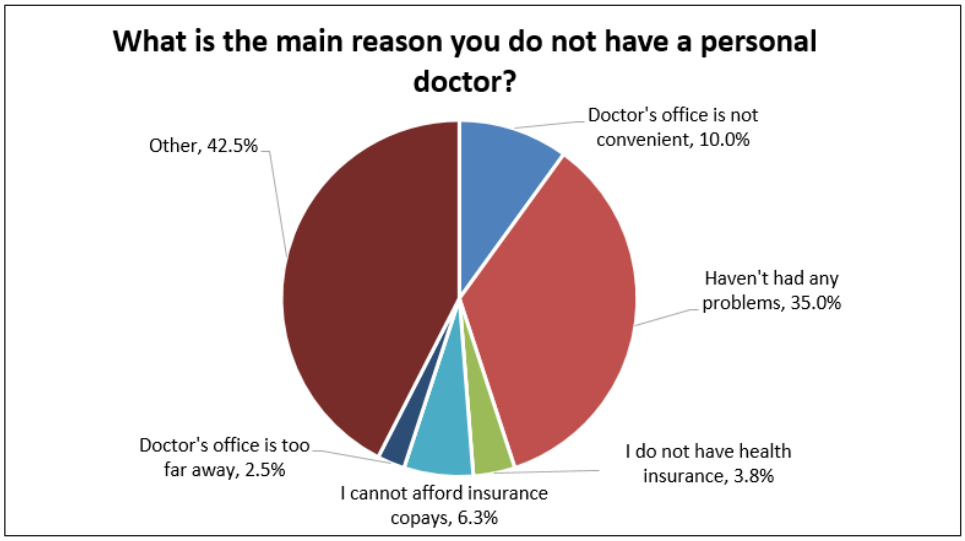


Deductible Amount among Respondents Delaying Care in the Past 12 Months

	Percent	Count
Less than $1,000	31.8%	55
$1,000-$1,999	19.1%	33
$2,000-$3,999	23.7%	41
$4,000-$5,999	16.2%	28
$6,000-$7,999	7.5%	13
$8,000-$9,999	1.2%	2
More than $10,000	0.6%	1

Health insurance coverage and out-of-pocket expenses can impact the number of individuals who have a regular primary care provider and receive routine care. Approximately 96% of respondents reported having a personal doctor. Of the 4% (n=100) without a personal doctor, 35% reported they had not experienced any health problems requiring a provider. About 43% of respondents reported an “other” reason for not having a personal doctor, including difficulty finding a doctor they can trust, doctors leaving their practice/retiring, doctors not accepting their insurance, and long wait times to get an appointment with a preferred doctor. About 10% of respondents noted cost as a barrier to having a personal doctor, including not having health insurance or not being able to afford insurance copays.





Among all respondents, with or without a personal doctor, 8% reported that there was a time in the past 12 months when they needed to see a health care provider, but could not due to out-of-pocket costs. Additionally, 14% of respondents reported that there was a time in the past 12 months when they had trouble affording medicine prescribed to them. A higher percentage of respondents from zip code 15009, Beaver reported not seeing a health care provider due to cost, while a higher percentage of respondents from 15003, Ambridge reported having trouble affording a prescription medication. However, the percentages for both zip codes account for fewer than 25 respondents.

Respondents Who Experienced Health Care Cost-Related Barriers in the Past 12 Months

	Percent	Count
Did not see a health care provider due to cost	8.4%	195
Had trouble affording prescribed medicine	14.4%	334

Respondents Who Experienced Health Care Cost-Related Barriers by Zip Code

	Did not see a health care provider due to cost		Had trouble affording prescribed medicine	
Zip Code/Town	Percent	Count	Percent	Count
15009 Beaver	11.0%	13	14.4%	17
15003 Ambridge	9.0%	13	16.6%	24
15001 Aliquippa	8.6%	37	15.2%	66
15061 Monaca	8.5%	14	15.7%	26
15066 New Brighton	7.5%	9	16.7%	20
15108 Coraopolis	6.6%	21	9.1%	29
15143 Sewickley	6.3%	11	10.8%	19
15005 Baden	5.2%	6	14.0%	16
15010 Beaver Falls	5.2%	7	12.4%	17

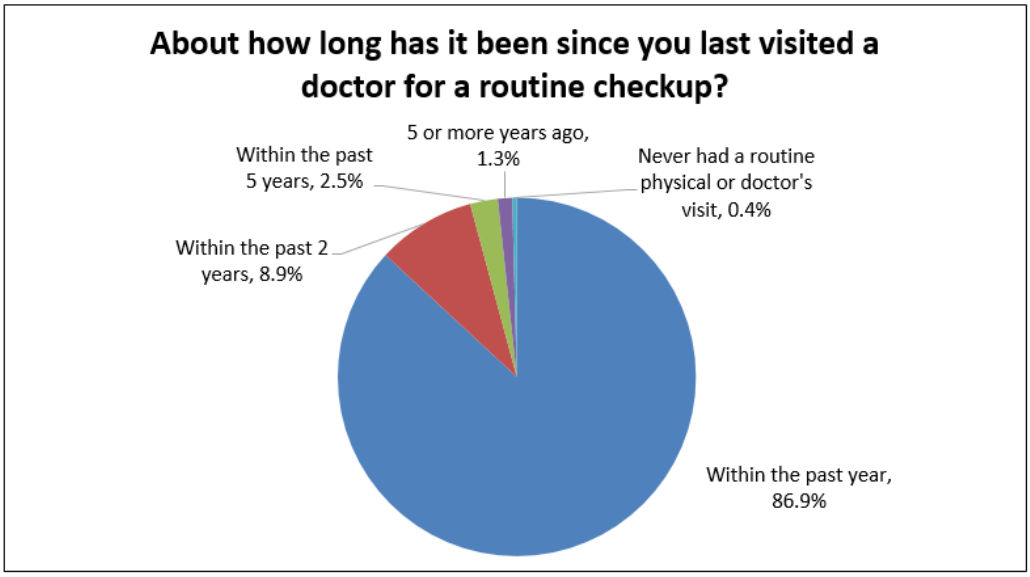
As a follow-up question, respondents were presented with a list of potential health care access barriers, including cost, and asked to indicate any barrier(s) that caused them to delay medical care in the past 12 months. Approximately 68% of respondents reported that they had not delayed medical care in the past 12 months. Among respondents who did delay medical care, the most common reason was not being able to get an appointment soon enough, followed by not being able to afford the out-of-pocket costs.

Top 5 Reasons for Delaying Needed Medical Care in the Past 12 Months

	Percent	Count
Did not delay getting medical care/did not need medical care	68.2%	1,741
Couldn't get an appointment soon enough	8.9%	227
Couldn’t afford the out-of-pocket costs	8.1%	206
Other*	3.2%	82
Couldn't get through on the telephone	2.6%	66
The provider would not take your insurance	2.5%	63

*Most common “other” responses: Out-of-pocket/insurance costs, limited office hours of providers, and long wait times.

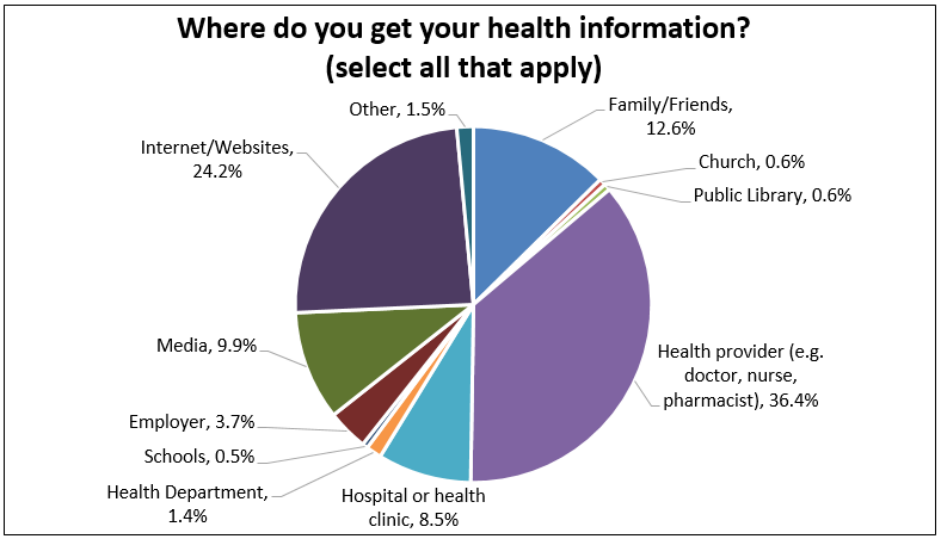
Approximately 87% of respondents visited a doctor for a routine checkup within the past year. Additionally, 95% or more of respondents in all reported zip codes except 15066, New Brighton and 15061, Monaca received a routine checkup within the past two years.



Respondents Receiving a Routine Checkup within the Past 2 Years by Zip Code

Zip Code/Town	Percent	Count
15009 Beaver	98.3%	115
15005 Baden	98.2%	113
15108 Coraopolis	98.1%	310
15010 Beaver Falls	97.8%	131
15001 Aliquippa	97.3%	420
15143 Sewickley	95.4%	168
15003 Ambridge	95.0%	135
15061 Monaca	93.3%	153
15066 New Brighton	89.9%	107

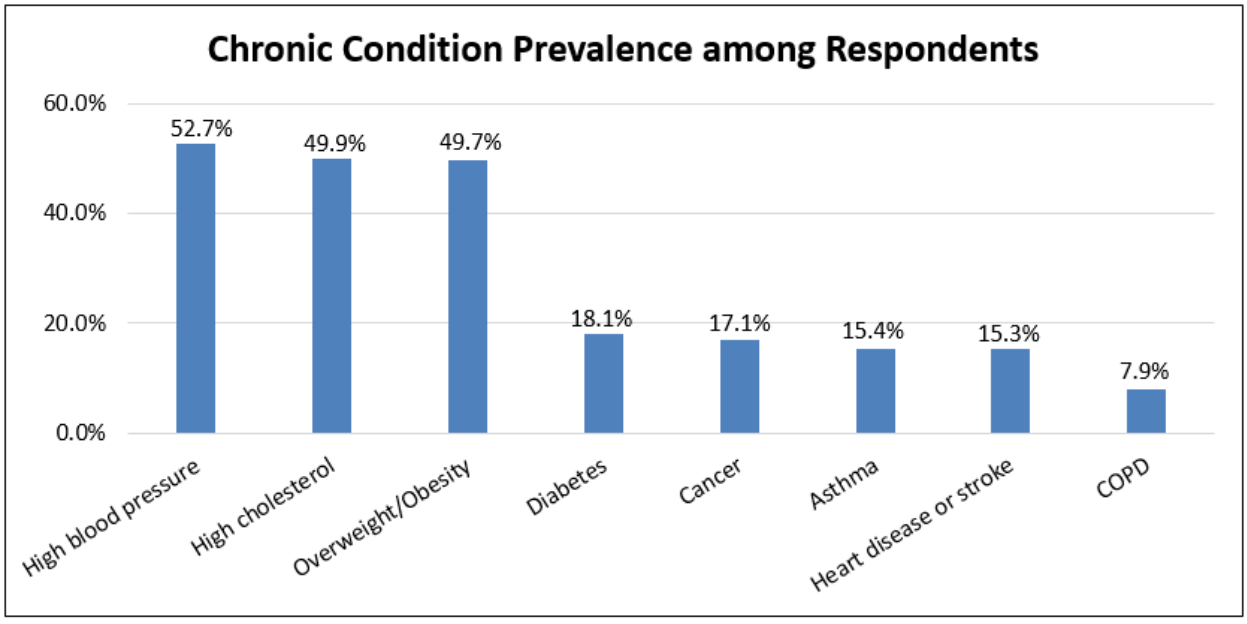
The most common source for health information among respondents was a health provider (36%), followed by the internet/websites (24%) and family/friends (13%). Approximately 10% of respondents also utilized the media or a hospital/health clinic.



*Most common "other" responses: Insurance company, personal profession (nurse, doctor, etc.), and personal research.

Chronic Disease

The most prevalent chronic conditions reported by respondents were high blood pressure, high cholesterol, and overweight/obesity. Approximately one in five respondents also reported having been diagnosed with diabetes and/or cancer.



Chronic condition prevalence by respondent zip code is depicted in the tables below. The top two zip codes with the highest percentage of respondents reporting a chronic condition are highlighted in yellow. Of note is that respondents from 15010, Beaver Falls reported the highest prevalence of respiratory conditions (asthma and COPD). Respondents from 15005, Baden reported among the highest prevalence of high blood pressure, high cholesterol, and heart disease or stroke. Respondents from 15001, Aliquippa reported among the highest prevalence of high blood pressure, high cholesterol, overweight/obesity, and diabetes.

Chronic Condition Prevalence by Zip Code
(Yellow = Top Two Zip Codes with the Highest Respondent Reported Prevalence)

	Asthma		Cancer		Heart disease or stroke		High cholesterol	
Zip Code/Town	Percent	Count	Percent	Count	Percent	Count	Percent	Count
15010 Beaver Falls	18.9%	24	11.7%	15	11.5%	14	46.9%	60
15066 New Brighton	16.5%	19	8.7%	10	15.8%	18	41.4%	48
15005 Baden	16.1%	18	19.3%	22	19.5%	22	52.2%	59
15003 Ambridge	15.6%	22	14.3%	20	15.9%	22	51.4%	72
15061 Monaca	15.2%	24	20.9%	33	14.6%	23	45.1%	73
15108 Coraopolis	14.0%	42	17.1%	51	15.4%	45	45.7%	138
15001 Aliquippa	11.6%	47	19.1%	78	13.2%	54	55.6%	233
15143 Sewickley	11.5%	20	18.3%	32	19.8%	34	46.2%	80
15009 Beaver	11.5%	13	15.9%	18	15.3%	17	47.8%	55

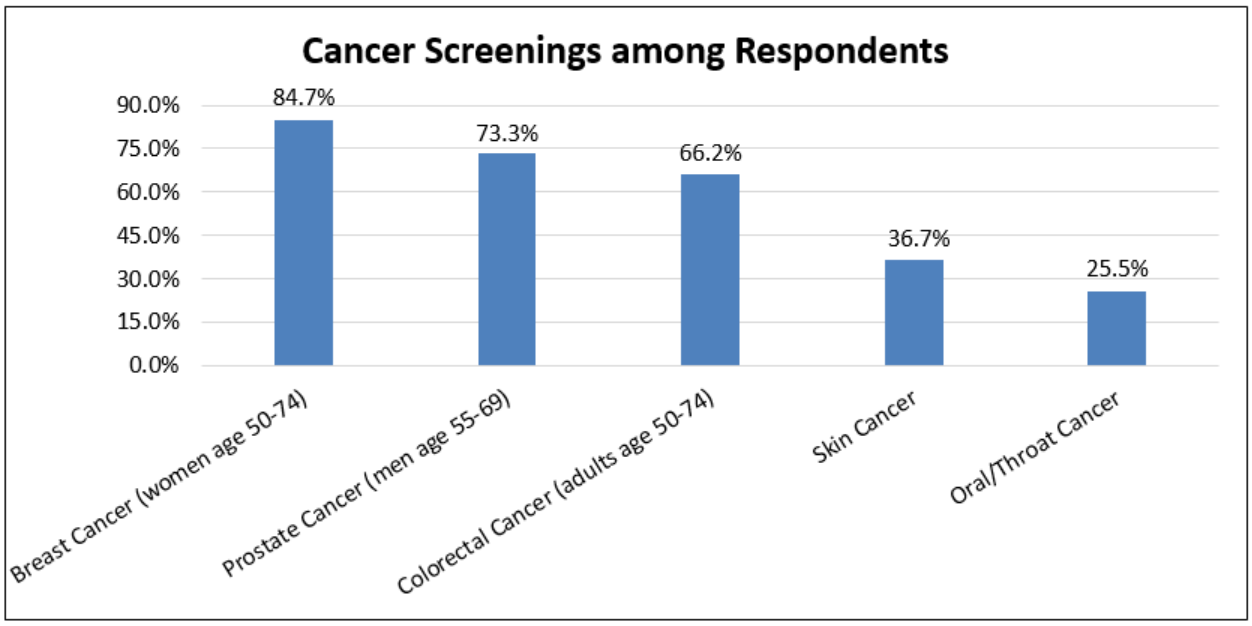
Chronic Condition Prevalence by Zip Code
(Yellow = Top Two Zip Codes with the Highest Respondent Reported Prevalence)

	High blood pressure		COPD		Diabetes		Overweight/ Obesity	
Zip Code/Town	Percent	Count	Percent	Count	Percent	Count	Percent	Count
15010 Beaver Falls	47.3%	61	9.4%	12	16.5%	21	48.0%	60
15066 New Brighton	52.2%	60	6.1%	7	20.5%	24	57.4%	66
15005 Baden	60.0%	69	6.3%	7	11.7%	13	47.7%	52
15003 Ambridge	52.4%	75	7.8%	11	23.7%	33	50.4%	70
15061 Monaca	45.7%	74	6.3%	10	16.5%	26	44.7%	71
15108 Coraopolis	53.3%	162	7.0%	21	15.5%	46	45.8%	138
15001 Aliquippa	56.8%	239	5.1%	21	21.4%	89	52.5%	213
15143 Sewickley	48.3%	83	8.0%	14	11.0%	19	43.1%	75
15009 Beaver	40.7%	46	6.1%	7	14.4%	16	45.5%	51

Approximately 17% of respondents reported having a cancer diagnosis. Cancer screenings are essential for the early detection and treatment of cancer. The United States Preventative Services Task Force (USPSTF) released the following screening recommendations for adults for breast, colorectal, and prostate cancer:

- Breast Cancer: Screenings target women aged 50 to 74
- Colorectal Cancer: Screenings target men and women aged 50-74
- Prostate Cancer: Screenings target men aged 55-69

Formal recommendations have not been released for skin or oral/throat cancer. The following chart illustrates the prevalence of cancer screenings among age-/gender-qualified respondents. Percentages for skin and oral throat cancer include both genders and all ages.



Community Health and Resources

The top three community health concerns identified by respondents were cancers, overweight/obesity, and diabetes. In comparison to Key Informant Survey respondents, Community Member Survey respondents perceived greater concern for chronic conditions versus behavioral health conditions. The top three community health concerns identified by Key Informant Survey respondents were overweight/obesity, mental health conditions, and substance abuse. Substance abuse and mental health were ranked as the sixth and seventh top health concerns by Community Member Survey respondents, respectively.

Despite the lower perceived concern for mental health conditions, respondents identified mental health services as the top missing resource or service in the community. Other top missing resources or services in the community, as reported by respondents, included health and wellness education and programs and outlets for physical activity.

Top 10 Health Concerns Affecting Community Residents According to Respondents

Ranking	Health Concern	Percent	Count
1	Cancers	21.8%	1,340
2	Overweight/Obesity	12.9%	792
3	Diabetes	12.5%	769
4	Heart disease and stroke	11.2%	687
5	Alzheimer's disease/dementia	10.7%	660
6	Substance abuse	10.0%	612
7	Mental health conditions	7.1%	434
8	Tobacco use	2.5%	153
9	Respiratory disease	2.5%	152
10	Disability	2.2%	135

Top 10 Missing Resources or Services in the Community According to Respondents

Ranking	Resource or Service	Percent	Count
1	Mental health services	21.8%	1,340
2	Health and wellness education and programs	12.9%	792
3	Outlets for physical activity	12.5%	769
4	Transportation options	11.2%	687
5	Healthy food options	10.7%	660
6	Substance abuse services	10.0%	612
7	Community clinics/Federally Qualified Health Centers (FQHCs)	7.1%	434
8	Home health care services	2.5%	153
9	Child care providers	2.5%	152
10	Dental care	2.2%	135

When asked about the most significant barriers that keep community members from accessing needed medical care, respondents identified out-of-pocket costs as the top barrier, followed by lack of health insurance coverage.

Top 5 Barriers that Keep People in the Community from Accessing Health Care When They Need It According to Respondents

	Percent	Count
Cost/Paying out-of-pocket expenses	28.6%	1,517
Lack of health insurance coverage	21.1%	1,118
Can't find doctor/Can't get appointment	10.8%	570
Difficult to understand/Navigate health care system	10.4%	549
Lack of transportation	8.2%	436

Comments by Survey Respondents

Community members were asked to provide feedback about what is being done well in the community related to health. Their responses are themed below with select comments.

- Availability of quality, convenient health care services
  - *"I like having more walk in clinics in this area. It's so convenient to get in quickly when you need to."*
  - *"Our specialists are good and hospitals well run. Staff of hospitals are very good."*
  - *"New surgical and cancer facilities providing service in our immediate area."*
  - *"We are near a hospital, urgent care centers and a variety of specialized physicians."*
- Health and wellness outreach (health fairs, screenings, classes) to residents
  - *"There is very good and ample information regarding health services available in the community."*
- Physical activity outlets (walking trails, gyms, parks, YMCAs)
  - *"We have numerous parks and walking trails for outdoor physical activity. The community center now has a very nice gym as well as indoor walking track for exercise. We have a center for the elderly to socialize."*

Community members were then asked to provide any suggestions to improve health in the community. Themes from their responses are shown below.

- Affordable health care (insurance, deductibles, prescription drugs)
  - *"The cost of medications and insurance have risen to the extent that many cannot afford them. This often results in poor health in all segments of our society."*
- Environmental issues
  - *"Better air and water quality. I believe that many cancers in this area directly relate to both."*
- Health care access, coordination
  - *"Discontinue the hospitalists! They may be capable doctors but they readily admit that they don't know the patients and their health histories. We do a lot of research selecting our doctors (PCPs and specialists), only to have you turn us over to someone that we don't know and more importantly, doesn't know our medical history."*
  - *"More evening options for appointments at all facilities. Most people work and don't have many days to take off for appointments. It deters people from going to the doctor unless they are really sick."*
  - *"Need additional specialists in some areas so people don't have to wait so long for appointment."* (e.g. endocrinologists, dermatologists, pediatricians)

- Health education and promotion (healthy eating, exercise, chronic disease)
  - *"Education in the schools so children will live a healthy lifestyle naturally. Physical activity options - wall climbing, bike trails, walking trails."*
  - *"More parks, opportunities for community fitness and health events. More indoor parks and activities for long winter months."*
- Mental health and substance abuse services (e.g. treatment facilities, providers)
  - *"Need mental health services and need to do more to combat drug problem. We also need to make it more affordable to seniors!"*
- Senior services (e.g. housing, health care, transportation)
  - *"More elder care options including home health and activities of daily living."*
  - *"A good transportation system to get the elderly to and from doctor appointments."*
- Transportation
  - *"Improved access to affordable and timely transportation that doesn't require being picked up 3 hours before your appointment and/or 3 hours after."*

Lastly, community members were asked to share any additional feedback with HVHS to inform their community health improvement activities. Themes and select comments are shown below.

- Primary care and specialist provider recruitment
  - *"We need more doctors. Each doctor has too many patients."*
  - *"Need to attract more doctors in specialty fields such as neurology, endocrinology, and urology."*
- Health education and program outreach and communication
  - *"Just keep up the news with the newsletter, in the local paper, on the radio, TV, flashing billboards, on the Internet to keep everyone informed."*
  - *"There are a lot of programs that people don't know about. The word should be put out more readily."*
- Heritage Valley Health System quality care perception
  - *"I have always received excellent care at HVHS."*
  - *"Heritage Valley Health System is awesome. Please continue great services, doctors, and care. The patient access to My Health is exceptional. Thanks for this service!"*

Focus Groups

Background

Two focus groups were conducted in October 2018 with health and social service providers within the HVHS primary service area. The objectives of the Focus Groups were to better understand the impacts and challenges of health needs in the community and how to increase cross-sector collaboration to address those health needs. A total of 10 individuals participated in the Focus Groups. The following is a breakdown of the Focus Group location and participants:

- October 25, 2018, 4:00-5:30pm at Heritage Valley Women's Health Center
  - 7 Participants
- October 26, 2018; 8:00-9:30am at Heritage Valley Edgeworth Medical Neighborhood
  - 3 Participants

Summary of Findings

Community Health and Wellness

Participants had opposing opinions when asked if they would describe the community they serve as "healthy." Many participants agreed that there are services and programs available to promote health, including outdoor recreation areas, community farmers markets and gardens, senior centers, and a number of food insecurity programs. One participant noted that many of the services are free to community members.

However, while these assets exist within the community, many residents still struggle to maintain or improve their health due to social determinants and the inability to access services. Participants noted that the community is comprised of a large rural population with pockets of higher poverty. Affected residents often cannot afford healthy foods, recreation opportunities, or health care, and transportation barriers prohibit them from accessing free or reduced-cost options. Health care services were particularly seen as limited for rural residents due to a lack of providers in their communities and lack of free medical transportation services.

Participants identified seniors and homeless individuals as being among the most underserved in the community. Transportation is a primary barrier to seniors maintaining their health. "In Allegheny County, anyone 60 or older gets free transportation, but in Beaver County 55 and older residents only get a discount on transportation." "Transportation quits at 6pm in Beaver, in Pittsburgh it goes until midnight." "There are a few ride sharing options, but they do not like ride sharing." Lack of transportation presents challenges in accessing medical care, community services, and employment.

Additionally, participants noted a shortage of home care workers to assist seniors choosing to age in place. The Medicaid Home & Community-Based Services waiver created more home care options, but the available workforce is insufficient to fulfill these services. "The funds are

there and the hours are there, but there aren't enough workers. Unless you have a passion to do the work you can work at Aldi for the same amount of money."

Access to health care is a key need among the homeless population. These individuals struggle to acquire health care insurance due to lack of resources to understand their options and lack of a permanent address to receive necessary paperwork. Lack of transportation also prohibits individuals from getting to appointments. Among those homeless individuals who do access care, inconsistent social and environmental supports are barriers to following provider instructions. One participant provided the example that many homeless individuals do not have the ability to refrigerate prescribed medications.

Key Informant Survey respondents rated overweight/obesity, mental health conditions, and substance abuse as the top health concerns for community residents. Focus Group participants agreed with the identified issues, and provided the following feedback:

- "The opioid epidemic hit Beaver County hard."
- "Mental health is underserved across the nation."
- "Mental health is affected when an individual is food insecure. Food insecurity is a stressor for children and affects brain structure."
- "Those with substance abuse issues also usually have a mental health issue, which spills over to physical health."

According to Focus Group participants, the biggest challenges to optimizing the health of all residents are transportation, nutrition education, and poor health habits. Select themes and comments for each of the challenges are provided below.

- Transportation. Public transportation is more accessible in urban areas, while much of the community was characterized as rural. However, participants noted that transportation barriers are primarily driven by cost concerns. "It's bigger than just having the ability to ride a bus. It's more the issue of affording it." "Jitneys are available, but the fare is too expensive for individuals struggling to meet basic needs."
- Nutrition Education. Participants felt that healthy cooking is a lifelong skill that has the potential to influence the health of entire families and multiple generations. Nutrition education, with living cooking demonstrations, is needed in the community to help individuals develop this skill set.
- Poor Health Habits. Participants shared that busy lifestyles are barriers to planning meals and cooking. Individuals make poor food choices out of convenience, even when they aware that the food is unhealthy. Participants also noted that poor health habits are driven by social determinants. "Distressed communities may only have access to fast food restaurants, not supermarkets with fresh fruits and vegetables."

Community Health Promotion Initiatives

Participants were asked to provide examples of community actions and initiatives that have been successful in addressing identified health issues. Their responses are outlined below:

- ConvenientCare centers operated by HVHS are the appropriate answer for medical care, especially in Beaver County.
- Enlisting Beaver Falls Family Practice medical residents to provide care at the Women's Center of Beaver County. Note: Beaver Falls Family Practices plans to expand the program in December 2018 to include homeless outreach.
- Health information sharing between HVHS and the Housing and Homeless Coalition of Beaver County.
- Public service announcements by the Truth Initiative and CDC regarding the opioid epidemic and smoking risk.
- Rochester Health Center dental clinic funded in part by Heritage Valley Beaver Foundation.
- UPMC and Highmark insurance companies $25 gym membership benefit

Focus Group participants also identified policies that have been successful in improving health.

- Patient satisfaction and outcome measures that promote better doctor-patient engagement.
- Pennsylvania Prescription Drug Monitoring Program (PDMP) integration with electronic health records and pharmacy management systems to monitor patient prescriptions for controlled substances.
- Tobacco tax implemented in partnership with the American Heart Association.
- Reinstatement of the General Assistance program, providing a small monthly cash amount to qualified individuals.
- Tobacco free parks initiative.

Participants also noted the followed *needed* policies to promote health.

- A partnership between Medicaid and supportive housing programs to allow Medicaid dollars to be used for housing costs.
- Rejection of proposed Senate Bill 6, which would revoke cash assistance for those with substance abuse issues and impose a $100 replacement fee for a lost or stolen Supplemental Nutrition Assistance Program (SNAP) EBT card.
- Smoking ban for all casinos.

Focus Group participants agreed that collaboration among health and social service partners is needed to promote the health of community residents. Participants provided the following suggestions to promote cross-sector collaboration:

- Engage providers through monthly or quarterly forums to promote information sharing and joint initiatives. Forums may engage providers across the region or in specific neighborhoods.

- Encourage information sharing among residents by providing information to direct service line employees and by including community members in health discussions and volunteer opportunities.
- Partner with Allegheny County and Live Well Allegheny to share information and provide health education to the public.
- Partner with 412 Food Rescue and the Health Department to expand programs and offer additional services. Specific opportunities for HVHS include:
    - Nutrition education programs at 412 Food Rescue
    - Transportation assistance for residents accessing programs
- Offer a mobile van with primary care services in downtown Beaver Falls

Participants acknowledged the following barriers to cross-sector collaboration:

- Resource availability including time, personnel, and expertise.
- Competition among local organizations for funding.
- Additional “asks” of health care providers around social needs (e.g. emergency room providers may not have time to ask patients about food insecurity issues).
- Lack of community outreach positions within health care and community organizations.

Additional barriers to community health promotion include lack of awareness among residents of available services and programs, and lack of resident engagement in service offerings. Participants identified the following tactics that have been successful in sharing health-related information with residents and increasing participation in health programs:

- Providing targeted communications on social network platforms like Facebook.
- Utilizing diverse media, including posters, newspaper advertisements, church bulletins, mailing lists, internet websites, etc.
- Offering incentives such as grocery store gift cards.
- Marketing programs and activities that are attractive to the layperson (i.e. less clinical and “scary” to consumers).
- Encouraging participants to complete less popular programs before gaining admittance to desired programs (i.e. prerequisites).
- Promoting community ownership of health improvement initiatives by engaging residents in planning and development discussions.

Focus Group participants provided recommendations for HVHS to expand its existing health improvement programs, as well as support ongoing community initiatives through partnership. Specific recommendations by participants included:

- Build a sidewalk in front of the outpatient facility near Robert Morris University that connects to the campus.
- Collaborate with the Innovation Hub coming to Beaver County; sponsor the community kitchen, after school program, etc.
- Collaborate with the Safe Sitter Program to offer CPR certifications.

- Engage partners to share available HVHS programs at their facilities and on their social media sites.
- Invite community organizations to use HVHS meeting space when needed.
- Offer shortened versions of Club 5210 and the LifeSmart Program for residents who cannot commit 3-6 months to the programs.
- Offer transportation (e.g. bus tickets) for individuals returning for follow-up appointments.
- Partner with food banks to increase awareness of food insecurity in Western Pennsylvania and address resident food needs.
- Partner with schools to provide nutrition education to elementary students.
- Partner with the emerging hotel businesses to encourage guests to visit walkable amenities, thereby encouraging physical activity, boosting the local economy, and providing brand recognition for HVHS.
- Partner with the Ohio River Trail Council to connect the existing trail systems.
- Provide a dietitian and/or nutritionist to visit the Women's Center of Beaver County during family meals to offer education, cooking classes.
- Provide needed supplies such as toiletries, Band-Aids, etc. in HVHS stamped bags for homeless community outreach.
- Provide staff members to visit mental health organizations to teach cooking skills, laundry skills, etc.
- Provide transportation for tests/screenings once a week or have a doctor/nurse on wheels in medically underserved communities.
- Sponsor free fitness stations along existing walking paths.
- Sponsor community walking tours, highlighting the town's history, upcoming events, etc.
- Update walking maps for all riverfront towns, make them accessible via smartphones.
- Work with the summer lunch program in Moon Crest to provide children with lunch and snacks when school is not in session.

Community Partner Meeting

Background

A Community Partner Meeting was held on Friday, November 9, 2018 at HVHS offices in Moon Township, Allegheny County. A total of 21 people attended representing HVHS, health and social service agencies, senior services, local government, businesses, and civic organizations. The objective of the meeting was to share data from the CHNA and determine consensus on community health priorities, as well as opportunities for collaboration among partner agencies.

Research from the CHNA was shared with participants ahead of the meeting and presented at the session. Large group dialogue was facilitated to discuss priority areas, existing resources to address needs, gaps in services, and opportunities for cross-sector collaboration.

Prioritization of Identified Community Needs

The presentation of CHNA findings culminated with a list of five key community health needs derived from CHNA data analysis. The list of needs, including contributing factors and opportunities for improvement, is shown in the table below. Social determinants of health were recognized as cross-cutting factors across all health issues.

Identified Community Health Needs and Contributing Factors Across the Service Area

SOCIAL DETERMINANTS OF HEALTH

Access to Care	Healthy Living	Chronic Disease Management	Mental Health	Substance Use Disorder
Contributing factors and opportunities for improvement as identified in CHNA research				
Ability to Afford Care	Built environment/ infrastructure	Aging population	Availability of Providers	Availability of Providers
Availability of Dental Care	Health Education	Alzheimer's Disease	Comorbidities	Comorbidities
Availability of Primary, Specialty Care	Health Habits	Cancer Incidence and Death	Depression/Stress	Drug/Alcohol Use
Medicaid/Medical Assistance Providers	Healthy Food Access	Comorbidities	Early Detection	Drug-Induced/Opioid Death
Preventative Health Care Perceptions	Obesity	Diabetes Prevalence	Emergency Department Use	DUI-Related Death
Transportation	Preventative Care	Heart Disease Death	Stigma	Opiate/Narcotic Controls
Uninsured & Underinsured	Smoking	Respiratory Disease	Suicide Death	Stigma

Large Group Discussion

Large group discussion followed the presentation of the CHNA findings for participants to share takeaways from the research. The following section summarizes key themes and specific comments from the discussion grouped by priority health issue.

Heritage Valley Health System Initiatives

Representatives from HVHS outlined services and initiatives provided by the health system to increase access to care and address chronic conditions. Through prior implementation and strategic planning, HVHS has committed to addressing access to care and chronic disease management needs. Both HVHS leadership and meeting participants agreed that HVHS should continue to provide leadership in these area.

Recent initiatives by HVHS to provide accessible and integrated care include ConvenientCare centers, provider recruitment, and Medical Neighborhoods. Medical Neighborhoods offer health care coordinated through a primary care physician with access to ancillary services such as lab testing, diagnostic imaging, walk-in clinics and specialty physician care – all located within the community.

Related to chronic disease, HVHS offers several prevention and management programs for adults and youth. Programs include support groups, nutrition counseling, diabetes education, pediatric asthma support, Freedom From Smoking program, and LifeSmart, a diabetes prevention program for adults.

The health system will continue to seek opportunities to improve access to care and assist residents in preventing and managing chronic conditions, in partnership with community organizations. One opportunity recommended by meeting participants was to work with the Primary Health Network to resume services at the Aliquippa location on Franklin Avenue to better reach underserved residents. Another suggestion was to partner with food banks to offer pantry boxes specific to medical conditions (e.g. diabetes). Medical food boxes are currently being piloted in Allegheny County.

Healthy Living

Meeting participants discussed a community approach to promoting healthy living among residents. As part of the discussion, participants identified current barriers to healthy living, existing community resources, and opportunities for collaboration to address gaps in services.

Barriers to healthy living, as identified by participants, are outlined below:

- Lack of awareness of available resources and services.
- Lack of communication and resource sharing across municipal and county lines.
- Lack of engagement of health and social service providers in collective forums.
- Lack of services in areas accessible to or frequented by residents.
- Lack of trust among residents for organizations providing services.

Participants identified the following existing resources and initiatives to address healthy living:

- Club 5210 is a health and wellness program conducted for children in grades 3-5. The program is offered as a partnership between HVHS, school districts, and the YMCA.
- Moon Township has 1,000 acres of green space that is available for recreation, farmers' markets, etc. The township also offers a seniors' program with more than 500 members.
- Live Well Allegheny offers an online, public calendar to publish events and identify potential health improvement partners.
- Penn State Extension has an office in every county in Pennsylvania. The Beaver County office recently "hired" four community health and wellness volunteers in partnership with Uncommon Grounds Café to address food deserts in Aliquippa.
- The Family Life Center (FLC) serves community members through empowerment and education. The FLC partners with various organizations, including HVHS and the Greater Pittsburgh Community Food Bank to bring services directly to its clientele.
- The Senior Center at Beaver Valley Mall offers fitness and wellness activities, nutritious meals, and health education for adults age 50 or over. The center is seeking opportunities to expand its services and offer onsite services by other organizations.

Participants identified the following opportunities to improve healthy living within the community:

- Engage Beaver County health and social service providers in a similar initiative as Live Well Allegheny; promote collaboration between the two organizations.
- Engage employers and the Beaver County Chamber of Commerce in health improvement discussions to better reach the workforce population.
- Pursue cross-sector, cross-county healthy living grant opportunities.
- Pursue student loan forgiveness programs for needed health and social service professions to attract a younger workforce.
- Promote Naturally Occurring Care Communities that empower residents to be their own advocates for health. The communities are founded on an infrastructure of healthy living and community champions that lead the process.

Mental Health and Substance Use Disorder (SUD)

The community has several ongoing initiatives to address mental health and substance use disorder. The Beaver County Behavioral Health and Developmental Services leads many of the initiatives. The agency recently received a $750,000 federal grant to promote treatment over incarceration. The Beaver County System of Care: Optimizing Resources, Education and Supports is another active community partner. The organization recently received an annual $125,000 grant to prevent youth substance abuse in Aliquippa. The Beaver Falls Drug Diversion Program began as a pilot program in 2016 for individuals charged with public intoxication. Enrollees receive treatment services, drug screenings, and vocational resources. Charges are waived for those individuals who comply with the program for 60 days.

Participants agreed that these organizations are leading the way for improving behavioral health among residents, but that they face barriers to providing comprehensive services. These barriers, as identified by participants, include:

- A “Not in my backyard” mentality that prohibits the development of needed substance use disorder treatment facilities (e.g. residential treatment and detox).
- Grant funding opportunities for behavioral health are often specific or targeted in what the dollars can be used for, and may not fully address the need or service gap.
- Stigma and community culture of self-sufficiency prevent people from accessing care.
- There are disparities in mental health care access among at-risk populations (e.g. College students, LGBTQ community, seniors, veterans).
- There is an increasing demand for mental health services, but lack of adequate government funding to support these services.

Participants identified the following opportunities to improve behavioral health services within the community:

- Addressing stigma and bullying among youth, particularly the LGBTQ community, to prevent poor mental health and suicide.
- Integrating primary care services and behavioral health care at HVHS Medical Neighborhoods.
- Inviting Beaver County and statewide mental health representatives to the conversation to identify needed resources and further opportunities for collaboration.
- Seeking innovative funding opportunities and partnerships to address behavioral health. E.g. Penn State Extension is looking to address behavioral health as part of its ongoing nutrition and food insecurity initiatives.
- Promoting and sponsoring programs like the Youth Ambassador Program (YAP) to increase awareness of mental health and wellness, and reduce stigma.

Feedback from the Community Partner Meeting was compiled and reviewed with the CHNA Planning Committee to make the final determination on the priority areas that HVHS would address. Specific insights and recommendations from community partner attendees were integral in developing Implementation Plans.

Prioritization of Community Health Needs

Representatives of HVHS met with community stakeholders at a Community Partner Meeting held on Friday, November 9, 2018. In advance of the meeting, attendees were provided CHNA summary findings that highlighted health disparities and key findings across the service area.

The objective of the meeting was to share data from the CHNA and determine consensus on health priorities, as well as opportunities for collaboration among partner agencies. The presentation of CHNA findings culminated with a list of five health needs. The list of needs, including contributing factors and opportunities for improvement, is shown in the table below. Social determinants of health were recognized as cross-cutting factors across all health issues.

Identified Community Health Needs and Contributing Factors Across the Service Area

SOCIAL DETERMINANTS OF HEALTH

Access to Care	Healthy Living	Chronic Disease Management	Mental Health	Substance Use Disorder
Contributing factors and opportunities for improvement as identified in CHNA research				
Ability to Afford Care	Built environment/ infrastructure	Aging population	Availability of Providers	Availability of Providers
Availability of Dental Care	Health Education	Alzheimer's Disease	Comorbidities	Comorbidities
Availability of Primary, Specialty Care	Health Habits	Cancer Incidence and Death	Depression/Stress	Drug/Alcohol Use
Medicaid/Medical Assistance Providers	Healthy Food Access	Comorbidities	Early Detection	Drug-Induced/Opioid Death
Preventative Health Care Perceptions	Obesity	Diabetes Prevalence	Emergency Department Use	DUI-Related Death
Transportation	Preventative Care	Heart Disease Death	Stigma	Opiate/Narcotic Controls
Uninsured & Underinsured	Smoking	Respiratory Disease	Suicide Death	Stigma

Participants agreed that the five identified health issues are the top needs across the service area. Through facilitated and open dialogue, participants considered contributing social issues, existing community resources, gaps in services, and expertise to address the health issues.

Both HVHS leadership and community representatives agreed that HVHS has the expertise and resources to lead efforts to address access to care and chronic disease management needs. Representatives agreed that other community agencies are focused on behavioral health and healthy living. Heritage Valley Health System will continue to lend support to initiatives to address these areas, while not taking a leadership role.

Heritage Valley Health System used this information to adopt the system-wide priorities of access to care and chronic disease management. Heritage Valley Beaver and Heritage Valley Sewickley each developed an Implementation Plan outlining community health and benefit activities over the next three-year cycle in support of these priorities.

Board Approval and Next Steps

The 2019 CHNA Final Report and corresponding Implementation Plans for Heritage Valley Beaver and Heritage Valley Sewickley were reviewed and approved by the HVHS Board of Directors in May 2019. Following the Boards' approval, the CHNA report was made available to the public via the health systems' website: http://www.heritagevalley.org/pages/community-health-needs-assessment.

Heritage Valley Health System thanks our community partners for their participation and valuable insight in the CHNA process. We welcome continued collaboration to address our communities' most pressing health needs and to promote health for all residents. To learn more about the CHNA, please contact Arlene Bell, Director Community Health Services at abell@hvhs.org.

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Appendix B: Key Informant Survey Participants

A Key Informant Survey was conducted with 29 community representatives. The organizations represented by key informants, and their respective role/title, included:

Key Informant Organization	Key Informant Title/Role
Beaver County Behavioral Health	Deputy Administrator
Beaver County Chamber of Commerce	Executive Director
Beaver County Children and Youth Services	Administrator
Beaver County Continuum of Care (Housing & Homeless Coalition)	Coordinator
Beaver County Farmer's Markets, Inc.	President
Borough of Sewickley	Borough Manager
Center at the Mall	Program Manager
City of Beaver Falls	Director of Community Development
Concordia Visiting Nurses/Good Samaritan Hospice	President/CEO
Explore Sewickley	Board President
Family Life Center	Vice President/Board Member
Greater Pittsburgh Community Food Bank	Director of Health and Wellness
Heritage Valley Health System	Registered Nurse, Certified Case Manager
Homemaker-Home Health Aide Service of Beaver County, Inc.	Executive Director
Housing Authority of the County of Beaver	Executive Director
Job Training for Beaver County	Case Manager
Job Training for Beaver County, Inc.	Executive Director
Martin Luther King Celebration Committee	Founder/Coordinator
Medic Rescue	Community Outreach/Training Center Coordinator
Moon Township	Community Engagement Coordinator
Mooncrest Neighborhood Programs	Executive Director
PA CareerLink Beaver County	Administrator
Penn State Extension	Extension Educator
Pittsburgh Airport Area Chamber of Commerce	President/CEO
Robert Morris University	Associate Professor of Nursing - Community Health Nursing Professor
Sewickley Valley YMCA	CEO
The Prevention Network & CLASS Academy	President/CEO
United Way of Beaver County	Executive Director
Urban League of Greater Pittsburgh	Job Counselor

Appendix C: Community Partner Meeting Participants

A Community Partner Meeting was conducted with 21 individuals representing the HVHS service area. Attendees represented a wide variety of community organizations including health and social service agencies, senior services, local government, businesses, and civic organizations. Participant names and their respective organizations are included below:

Name	Organization
Steve Alger	Housing Authority of Beaver County
Michael Baker	Heritage Valley Health System
Arlene Bell	Heritage Valley Health System
Mary Ann Bolland	Homemaker - Home Health Aide Services
Mary Alice Gettings	Penn State Extension
Linda Hall	Beaver County Office on Aging
Trish Hooper	Sewickley YMCA
Cheryl King	Franklin Centre of Beaver County
Leslie Kisow	Lutheran SeniorLife
Jack Manning	Beaver County Chamber
Gerard Mike	Beaver County Behavioral Health
Norman Mitry	Heritage Valley Health System
Shelly Moore	Community College of Beaver County
Amy Ottaviani	Moon Township
Susan Pollack	Beaver County Office on Aging
Tabitha Reefer	Greater Pittsburgh Community Food Bank
Darlene Thomas	Women's Center of Beaver County
John Thomas	Family Life Center, Inc.
Martin Trettel	Concordia/Concordia Visiting Nurses
Bethany Williams	City of Beaver Falls
Christina Winniewicz	Lutheran SeniorLife

Appendix D: Heritage Valley Health System FY 2016 Evaluation of Impact

Access to Primary Care

Goal Statement: Increase access to affordable quality health care for service area residents

Objectives:

1. Continue to deploy/enhance Medical Neighborhoods	Services were expanded at the Ellwood Medical Neighborhood in January 2018. An expanded Robinson Township Medical Neighborhood opened at a new site in October 2018. A new Center Township Medical Neighborhood opened in March 2019.
2. Participate in insurer-based initiatives to enhance primary care services and revise payment models	Heritage Valley participates in initiatives with UPMC Health Plan, Highmark, and Aetna. The health system has also established the Heritage Valley Health Network which has both a Clinically Integrated Network (for commercially insured patients) and an Accountable Care Organization (for patients enrolled in traditional Medicare)
3. Utilize EMR to enhance collaborative relationships between primary care and specialists	EHR performance improvement (formerly called advancing care) scored 25 out of 25 points for a time period of October 1, 2017 through December 21, 2017 (Meaningful Use metrics)
4. Recruit and position appropriate numbers of primary care physicians and mid-level providers to meet the community need	From July 2016 through November 2018: 6 primary care physicians were added and all are still with the system; 28 CRNPs and PAs were added at primary care physician offices or ConvenientCare sites and 22 are still with Heritage Valley
5. Implement Find a-A- Doctor phone answering service	Heritage Valley has simplified the process to find a new doctor by implementing a telephone line, dedicated for this purpose. Telephone Number: 1-844-769-DOCS (3627) helps patients identify physicians accepting new patients in the areas that they would like to receive care.

Healthy Living

Goal Statement: To Increase the percentage of Beaver County residents that are at a healthy weight through eating a healthy diet and regular physical activity.

Objectives:

1. Collaborate with local organizations and groups to encourage exercise and healthy eating	Heritage Valley Health System collaborated with various organizations to promote the importance of exercise and physical activity. Examples include the following: The Beaver County Community College and over 100 exhibitors for the "What's on Your Plate" Community Expo – offering free food and food samples, free screenings, presentations; Collaborated with the Sewickley YMCA Senior Olympics Day –providing blood pressure screenings/education regarding physical activity; Collaborated with local food pantries – providing education about healthy foods, Collaborated with local farmer's markets – with menus and conversation with attendees regarding healthy foods and the importance of maintaining good health; Collaborated with the Coraopolis and Beaver Falls Communities for the WalkWorks initiative promoting a network of community –based walking routes that encourages sustainable physical activity through the built environment. These initiatives encourage healthy lifestyle behaviors. Collaborated with the Beaver County Senior Center providing presentations on healthy eating by dietitians; Collaborated with Mooncrest Neighborhood Programs on healthy eating presentations and the development of Mooncrest Club 5210; provided a vendor booth for the Freedom Area School District and Riverside High School where an "Ask the Dietician" booth and presentation was held for the Health and Wellness Expo. Collaborated with the Good Samaritan Church in Ambridge on the Bridge to Healthy Living Wellness Expo. From FY 2016 to FY2018, 75 community events with various partner organizations were held to encourage exercise and physical activity. Over 13,014 people in the Heritage Valley Service Delivery area were impacted through these collaborative initiatives.
2. Continue the school-based health and wellness program (Club 5210)	Club 5210 is designed as an after-school health and wellness program and addresses the growing incidence of childhood obesity.

	The emphasis of this program is on improving healthy lifestyle habits for children in grades 3-5 through education regarding healthy eating and the importance of physical activity. Community Partnerships include: Rochester Area Elementary School; New Brighton Area Elementary School, Quaker Valley Area Elementary Schools and the Beaver and Sewickley YMCAs. Children Enrolled: FY16 Enrollments - 54 FY17 Enrollments - 81 FY18 Enrollments – 52 A total of 187 children were impacted from FY 2016-2018. A recent review of the program showed that 100% of the students and parents indicated satisfaction with the program and children demonstrated improved knowledge gained on pre/post-tests regarding healthy eating and the importance of physical activity in their daily lives.
3. Start Club 5210 Community –Based Programs	Club 5210 Community-Based programs have been expanded to include community non-profit organizations. This community partnership included the Sewickley YMCA and two child-serving non-profit organizations. Two community organizations located in Coraopolis and Moon Township implemented community –based club 5210 programs. The programs were provided on –site and served a total of 47 children from FY 2016- FY 2018. During operation of these programs, 87% of parents have noticed positive changes in their child's eating habits and 94% noticed an increase in their child's physical activity by the end of the program.
4. Increase the number of community residents participating in the LifeSmart program.	Heritage Valley LifeSmart is a diabetes prevention program that is offered through a partnership between Heritage Valley health System and UPMC Health Plan. The program provides healthy lifestyle programs for adults within the Heritage Valley Health System community who have who have been identified as having prediabetes, the leading risk factor for type 2 diabetes, metabolic syndrome or obesity. The Group Lifestyle Balance Program which is the main component of the program involves lessons on how to eat healthy, how to incorporate physical activity in daily life and developing problem solving skills. Baseline data indicates

	that in 2013, 240 participants enrolled in the program. Enrollments by year are reflected below: - 220 participants enrolled in 2016 -198 participants enrolled in 2017 -244 participants enrolled in 2018 From 2016 to 2018, there was a 10.9% increase in enrollments. From 2016 - 2018 a total of 662 participants have been enrolled in the LifeSmart Program. Those that stayed in the program through six months experienced a decrease of 7.6 % of their body weight, while increasing physical activity to 150 minutes per week. By learning to eat healthy and improve physical activity, many participants also experienced reductions in lab values such as Cholesterol, blood pressure, glucose and triglycerides.

Diabetes

Goal Statement: Reduce risk factors for diabetes and pre-diabetes and improve management of chronic disease through healthy lifestyle choices.

Objectives:

1. Consider the creation of a diabetes (diabetes patients and pre-diabetes patients) registry to be used to coordinate a collaborative care model for diabetes with primary care physicians	Heritage Valley has entered into quality based incentive programs with several payers (UPMC, Highmark, Aetna and Cigna). Each of those programs sets thresholds on compliance to a set of diabetic measures such as annual screening, diabetic retinopathy exam, diabetic nephropathy testing, Hb A1C control and medication adherence. The team of Practice Based Care Managers monitors their practice's compliance and actively works to improve rates by following up with the patients that are non-compliant.
2. Link diabetes patients to a primary care physician	Diabetes patients, once identified through Heritage Valley, are linked to a primary care physician for medical care, support and management. There are over 125 Heritage Valley Medical Group Physicians throughout the service delivery area that routinely refer and link their patients for endocrinology

	and/or diabetes education services and supports.
3. Offer a set of integrated educational and behavioral modification opportunities for diabetes patients	Heritage Valley offers a set of educational and behavioral opportunities for individuals diagnosed with diabetes. Heritage Valley is an American Diabetes Association (ADA) approved program where Healthy Living with Diabetes group classes, One on One Instruction with a Certified Diabetes Nurse Educator, and One on One instruction with a Registered Dietitian for Nutrition Counseling (Medical Nutrition Therapy) is available. Healthy Living with Diabetes classes cover information related to managing diabetes and keeping blood glucose in good control. These classes are taught by Registered Nurses and Registered Dietitians who are also certified diabetes educators. Heritage Valley Endocrinology specializes in the diagnosis and treatment of diabetes and hormone disorders. Physicians work with patients to create a comprehensive care plan and individualized therapy. Diabetes support groups are structured to provide on-going support for individuals diagnosed with diabetes. Diabetes Support Groups are free for those who wish to meet with others with similar problems. Special topics are addressed at each meeting with speakers from different disciplines.
4. Increase enrollment of women in the gestational diabetes program	Gestational diabetes is a type of diabetes that occurs in about 7% of all pregnancies. It is important to manage diabetes for the health of both mother and baby. Community Health Services offers medical nutrition therapy, pregnancy health services and diabetes education for individuals diagnosed with gestational diabetes. -2016 87 women enrolled -2017 84 women enrolled -2018 69 women enrolled Most recent clinical outcomes for those instructed by certified diabetes educators indicated that 100% of the women monitored their blood sugars by testing first thing in the morning and 1-2 hours after meals. For those women enrolled and upon delivery, 96% of the baby's birth weight was in target range.

5. Explore the development of an internet based diabetes prevention program	Heritage Valley Health System currently offers an in- person group diabetes prevention program. This program can be expanded by implementing an internet-based (digital) prevention program. The feasibility for implementing this type of program is being explored for future funding and development.
6. Include patients with diabetes in the LifeSmart Program (Diabetes Prevention Program)	Pre-diabetes patients often convert to diabetes while in the LifeSmart Program. New on-set diabetes patients are best suited for the Healthy Living with Diabetes Program (A diabetes education program). Inclusion of diabetes patients in the LifeSmart Program will continue to be evaluated based on appropriateness for the individual for this type of service.

Smoking

Goal Statement: Educate the community on the health issues related to smoking to increase the percentage of residents who quit or attempt to quit smoking.

Objectives:

1. Focus smoking prevention initiatives on pregnant women	In April 2017 Heritage Valley Community Health Services focused prevention efforts on the PA Free Quit line Pregnancy Protocol. Through this program pregnant women are offered incentives after receiving telephonic coaching to quit. Financial incentives to participate are based on completed calls during pregnancy and post-partum. Towards this effort in FY 17, 64 pregnant women were referred to the PA Quit Line Pregnancy Protocol. This number increased to 91 in FY 2018.
2. Implement the Freedom From Smoking Program	Heritage Valley Community Health Services implemented The American Lung Association's Freedom from Smoking Program in 2017. This program is a free eight session education program available in a group or individual basis. This program is designed to guide individuals through the quitting process. Program topics include: lifestyle changes that make quitting easier, preparing for quit day and staying smoke free.
3. Continue to refer patients to local	Smoking can contribute to early development

programs and the PA Free Quit Line (1-800-Quit- Now)	of diabetes-related complications and exposure to second-hand smoke. It can worsen other chronic conditions, such as asthma as well as cause low birth weight babies for pregnant women. Individuals enrolled in Community Health Services Programs are referred to the PA. Free Quit Line. From 2016-18, 171 individuals were referred to the PA Free Quit Line for smoking cessation services. In addition, Heritage Valley Health System offers the American Lung Association's Freedom from Smoking Program at no cost for individuals seeking to quit smoking. From FY 16 – 2018, 56 individuals were referred to the Freedom from Smoking Program.

Cardiovascular/Respiratory Health

Goal Statement: Reduce risk factors for cardiovascular and respiratory health issues through healthy lifestyle choices.

Objectives:

1. Increase the number of residents who participate in the pediatric asthma program	Heritage Valley Health System's free Pediatric Asthma Program enrolls children ages 3-18 with a diagnosis of asthma like symptoms. The main focus of the program is education of the child and parent on managing the asthma and preventing acute episodes. Registered nurses target high-risk patients requiring further assessment, intervention and follow-up. Interventions may include assessment by a trained acute care nurse, tele-management, smoke cessation counseling, individual counseling and/or referral to other community resources as needed. From 2016 to FY 2018 there was a 19% increase in children enrolled in the service delivery area enrolled in the program.
2. Link with Healthy Living Objectives, described in this plan	The LifeSmart program and other disease management and intervention programs offered through Community Health Services and the community engages individuals and promotes sustained lifestyle changes. These various approaches (community outreach, pediatric asthma, smoking cessation, walking routes and the LifeSmart

	Program) help to educate and activate individuals to live healthier lifestyles.
3. Reduce readmission rate within 30 days for these conditions utilizing an aggressive collaborative/integrated care paradigm	Heritage Valley changed the metric used for readmission monitoring in recent years. Between FY 2016 and FY 2017 the 30-day Readmission Rate (all payer) decreased from 10.5% to 9.1%. More recently, the Risk Adjusted Readmission Ratio (Actual to expected) declined from 1.24 in FY 2017 to 1.05 in FY 2018.
4. Continue community education campaign for stroke risk factors and warning signs for stroke	High blood pressure, diabetes, smoking, obesity and having a sedentary lifestyle are all risk factors for stroke. Community Health Services programs are designed to address these critical risk factors. Community education occurs throughout the service delivery area at health fairs through glucose and blood pressure screenings as well as through community presentations. Pivotal to community education efforts is raising awareness regarding the warning signs of stroke to the community. The following reflects the number of events that were held from FY 2016 – 2018 that addressed risk factors for stroke: - FY 2016, 48 events - FY 2017, 43 events - FY 2018, 39 events A total of 130 events were held for FY2016 – 2018 regarding risk factors for stroke