UPMC Passavant

Community Health Needs Assessment

And

Community Health Strategic Plan

June 30, 2016

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EXECUTIVE SUMMARY

UPMC Passavant Plays a Major Role in its Community:

UPMC Passavant is a nonprofit, 437-bed acute-care hospital with two campuses located in the suburban North Hills of Pittsburgh, Pennsylvania. The hospital's primary location, in McCandless Township, Allegheny County, Pennsylvania, is a state-of-the-art tertiary care center that delivers a full range of quality medical services — including highly specialized medical and surgical treatment — to the residents of the northern region of the greater Pittsburgh area.

UPMC Passavant maintains a strong connection with its community and offers an array of community-oriented programs and services to improve the health of local residents. UPMC Passavant provides healthy lifestyle and chronic disease prevention education programs in the hospital and throughout the community.

UPMC Passavant in the Community

$11.6 million in charity care and unreimbursed amounts from programs for the poor

$6.2 million invested in dozens of community health and education programs

$784 million in economic impact to the community

UPMC Passavant is part of UPMC, a leading Integrated Delivery and Finance System (IDFS) headquartered in Pittsburgh, Pennsylvania.

Identifying the Community's Significant Health Needs:

In Fiscal Year 2016, UPMC Passavant conducted a Community Health Needs Assessment (CHNA) in keeping with requirements described in section 501(r)(3) of the Internal Revenue Code. Building on the initial CHNA conducted in Fiscal Year 2013, the Fiscal Year 2016 CHNA provided an opportunity for the hospital to re-engage with community stakeholders in a rigorous, structured process guided by public health experts.

An ongoing objective of the CHNA effort is to help align community benefit programs and resources with community health needs. This report documents progress toward addressing the significant health needs identified in Fiscal Year 2013, as well as an implementation plan to address new and ongoing community health needs over the Fiscal Year 2016-2019 period.

UPMC partnered with experts at the University of Pittsburgh Graduate School of Public Health (Pitt Public Health) to conduct the CHNA using a best-practice methodology. The assessment blended analysis of documented health and socioeconomic factors with a structured community input survey process that solicited feedback from a community advisory panel composed of leaders and organizations that represent patient constituencies, including medically-underserved, low-income, and minority populations within the hospital's community.

Addressing the Community's Significant Health Needs:

When the Fiscal Year 2013 CHNA was conducted, the significant health needs identified at that time were:

- **Heart Disease and Stroke**
- **Cancer**

Three years later, when the Fiscal Year 2016 CHNA was conducted, UPMC Passavant affirmed the following significant health needs:

- **Heart Disease and Stroke**
- **Cancer**

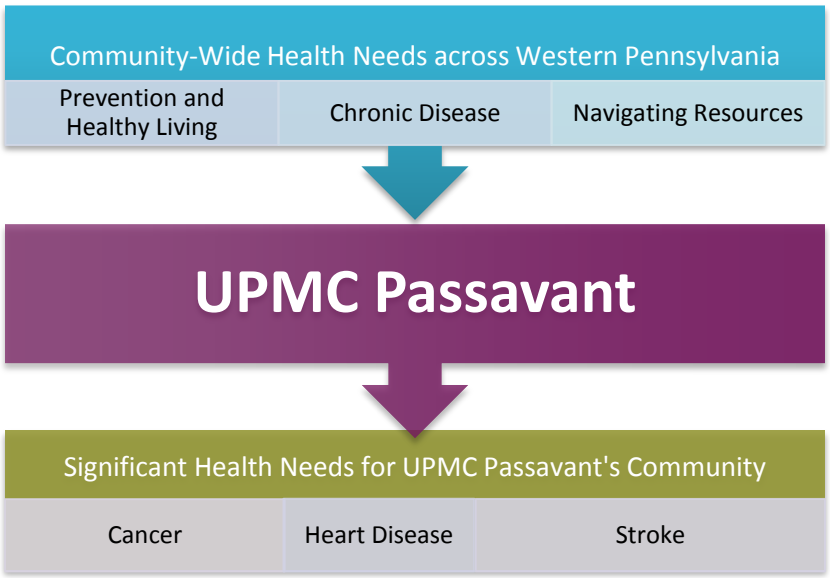
On April 28, 2016, the UPMC Passavant Board of Directors adopted an implementation plan to address the significant health needs identified in the Fiscal Year 2016 CHNA, and to set measurable targets for continued improvement. The plan drew support from an array of community partners, as well as from the larger UPMC system. This plan builds upon the Fiscal Year 2013 plan, recognizing that significant health issues will generally need more than two to three years to show meaningful improvement.

Topic	Importance to the Community
Heart Disease and Stroke	Heart disease and stroke are leading causes of death in the UPMC Passavant community. Risk factors for heart disease and stroke include diabetes, obesity, unhealthy eating, and lack of exercise.
Cancer	Cancer is also a leading cause of death in the UPMC Passavant community. Cancer screenings can help identify cancer in early stages when treatment is likely to work best.

Collective Impact Across Western Pennsylvania:

Western Pennsylvania has a diverse range of health needs. Key themes that emerged from the Fiscal Year 2016 UPMC Passavant CHNA process were consistent with those found through CHNAs conducted at other UPMC hospitals throughout western Pennsylvania. These themes are increasingly important in the rapidly changing landscape of health care reform:

- **Focus on a Few High-Urgency Issues and Follow-Through:** The hospital is concentrating on a limited number of significant community health needs, and has developed concrete plans to chart measurable improvements.
- **Chronic Disease Prevention and Care:** Nearly two-thirds of deaths in the community are attributable to chronic disease. UPMC Passavant is planning a wide range of prevention and chronic disease support activities.
- **Navigating Available Resources:** Established health care programs in UPMC Passavant's community are often untapped due, in part, to social and logistical challenges faced among populations and individuals lacking social support systems.
- **Community Partnerships:** UPMC Passavant is collaborating successfully with local organizations on improving community health. The hospital will also leverage resources and synergies within the UPMC system, which include population-focused health insurance products and comprehensive programs and resources targeted at areas including seniors and children.



PROGRESS REPORT 2013-2016: HEART DISEASE AND STROKE

GOAL: UPMC Passavant is increasing awareness of heart disease and stroke prevention.

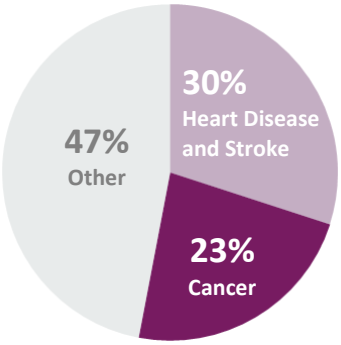
STRATEGY:
The hospital is leveraging community partnerships to address heart disease and stroke.

To achieve this goal, the hospital is targeting the general community, including patients. Risk factors for heart disease and stroke include diabetes, obesity, unhealthy eating, and lack of exercise. UPMC Passavant is enhancing and expanding programs to address these risk factors. In addition, the hospital is leveraging strong community partnerships to support its efforts. The hospital's recent actions include:

- Connecting cardiac patients with community resources during rehab
- Promoting heart disease prevention through community-wide events and programs
- Providing community education about identifying early symptoms of stroke

Community Need

Heart disease, stroke, and cancer are the leading causes of death in the UPMC Passavant service area.



(*PADOH, 2012*)

PROGRESS:
UPMC Passavant is making a measurable difference in its community.

Empowering 145 cardiac rehab patients to live healthier lives

With support from the Passavant Hospital Foundation, cardiac rehab patients with limited means can continue their rehabilitation at the Baierl YMCA. Through an individualized 12-week program, patients consult with certified personal trainers at the YMCA to improve their diet, quit smoking, and engage in physical rehab activity.

Educating more than 10,000 community members about heart disease and stroke

The hospital helps promote heart health and stroke awareness through its support of community-wide education, prevention, and screening events, including Go Red, Cranberry Heart Walks, senior health fairs, and symposiums. More than 3,000 individuals participated in these events this past year. In addition, the hospital supports the American Heart Association's CPR in Schools program. This past year, 7,320 middle school students from six local school districts were trained in hands-only CPR.

Promoting stroke prevention, awareness, and support programs

The hospital continues to build awareness about stroke prevention through several efforts, including: Wellness Wednesdays; Healthy Brain, Healthy Hearts; and the annual Stroke Survivors' Dinner, where UPMC medical experts educate attendees about the causes of stroke and ways to rehabilitate stroke patients. To date, 110 individuals have attended these events.

In 2014, UPMC Passavant earned the Get with the Guidelines® Stroke Gold Plus Quality Achievement Award.

PROGRESS REPORT 2013-2016: CANCER

GOAL: UPMC Passavant is increasing awareness of cancer prevention, screening, and management.

STRATEGY:
The hospital is leading efforts to address cancer in the community.

To achieve this goal, the hospital is targeting all community members, in particular women and individuals diagnosed with cancer. UPMC Passavant's cancer initiatives are aimed at prevention, management, and support. Efforts to promote cancer prevention and to help patients better manage their disease include:

- Expanding access to women's health screenings
- Educating community members
- Uniting community members by celebrating cancer survivors

PROGRESS:
UPMC Passavant is making a measurable difference in addressing cancer in its community.

Providing health screenings to uninsured and underinsured women

Health screenings can help detect cancer in early stages, when treatment is likely to work best. In partnership with Adagio Health, UPMC Passavant is harnessing the expertise of its cancer providers and offering free health screenings for eligible uninsured/underinsured women. These screenings include pelvic exams, pap tests, HPV testing, and breast exams. Since 2013, approximately 150 women have participated. The hospital also assists women with enrollment in the Pennsylvania Department of Health's HealthyWoman Program, through which eligible women receive screenings at no cost.

Additionally, UPMC Passavant continues to extend cancer prevention awareness through educational programs held at the local community college and senior centers. Discussion topics include: lung cancer, esophageal cancer, and colorectal cancer.

Uniting community members by celebrating breast cancer survivors

UPMC Passavant is at the forefront of providing a celebratory and supportive experience to cancer survivors and their loved ones. Social support and sharing experiences are psychosocial aspects that complement the success of traditional medical treatment. The hospital brings together cancer survivors and their loved ones at an annual event which is increasingly well attended, from 230 attendees in 2012 to 649 in 2015. Significantly, more than 90 percent of participants indicate the event achieves its goal of showing support and celebrating life.

Inspiring and celebrating cancer patients through art

Survivors and caregivers can commemorate cancer survivors by placing a leaf on a Celebration of Survivorship Tree. Located in the CancerCenter lobby, the tree emblem not only represents community support but was created by the UPMC Passavant community — designed by a radiation therapist at the UPMC Passavant CancerCenter, constructed and donated by Beatty Technical School, and its leaves fabricated and donated by Allegheny Plastics.

COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) REPORT

I. Objectives of a Community Health Needs Assessment

CHNA Goals and Purpose:

In Fiscal Year 2016, UPMC Passavant conducted a CHNA. In keeping with IRS 501(r) guidelines, the CHNA incorporated input from community stakeholders and public health experts, and established action plans to address identified significant community health needs. The plan builds upon a prior assessment and implementation plan developed in Fiscal Year 2013.

UPMC Passavant has many long-standing initiatives focused on improving the health of its community. UPMC approached this CHNA process as an opportunity to evaluate and assess needs through a formalized, rigorous, and structured process to ensure that health improvement efforts and resources are aligned with community health priorities. Goals of the CHNA were to:

- **Better understand community health care needs**
- **Develop a roadmap to direct resources where services are most needed and impact is most beneficial**
- **Collaborate with community partners where, together, positive impact can be achieved**
- **Improve the community's health and achieve measurable results**

The overall health of the community is a shared responsibility among many stakeholders and entities, including government agencies, health care providers, nongovernmental organizations, and community members themselves. While the new IRS CHNA requirements apply specifically to nonprofit hospital organizations, collaboration with community partners is essential for implementing and achieving effective community health improvement.

Description of UPMC Passavant:

UPMC Passavant is a nonprofit, 437-bed acute-care hospital with two hospital campuses; the main campus is located in Allegheny County, Pennsylvania. It offers a full range of quality medical services to the people of the North Hills of Pittsburgh and southern Butler County. The hospital provides area residents with access to medical, surgical, behavioral health, rehabilitation, and transitional care, as well as cutting-edge medical services not typically found at a local community hospital. Specialized services include CT imaging, digital mammography, minimally invasive surgery, and an on-site UPMC CancerCenter. During the Fiscal Year ended June 30, 2015, UPMC Passavant had a total of 22,697 admissions and observations, 62,087 emergency room visits, and 17,399 surgeries.

VITAL STATISTICS
Fiscal Year 2015

Licensed Beds	**437**
Hospital Patients	**22,697**
Emergency Dept. Visits	**62,087**
Total Surgeries	**17,399**
Affiliated Physicians	**366**

JOBS AND STRENGTHENING THE LOCAL ECONOMY

UPMC Passavant Employees	**2,013**
Community Benefits Contributions	**$22 million**
Free and Reduced Cost Care	**$12 million**

$784 million
Total Economic Impact of Hospital Operations

UPMC Passavant is part of UPMC, one of the country's leading Integrated Delivery and Finance Systems (IDFS), which positions the hospital to draw on the expertise of the larger organization when patients require access to more complex or highly specialized care.

II. Definition of the UPMC Passavant Community

For the purpose of this CHNA, the UPMC Passavant community is defined as Allegheny County. With 55 percent of patients treated at UPMC Passavant residing in Allegheny County, the hospital primarily serves residents of this geographic region. By concentrating on the county, UPMC Passavant can both consider the needs of the great majority of its patients and do so in a way that allows accurate measurement using available secondary data sources.

Most Patients Treated at UPMC Passavant Live in Allegheny County

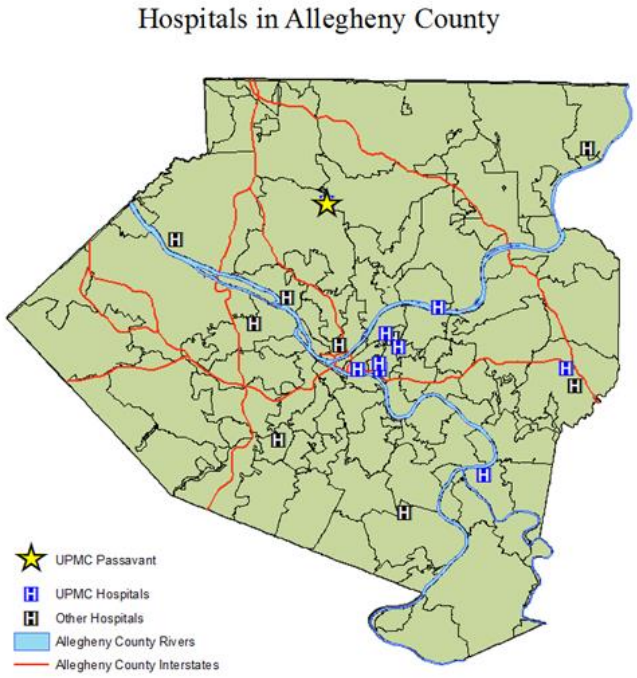
County	UPMC Passavant %	Medical Surgical Discharges
Allegheny County	54.5%	8,632
All Other Regions	45.5%	7,209
Total Hospital Discharges	100%	15,841

Source: Pennsylvania Health Care Cost Containment Council, FY2015

The hospital is situated in the northern region of the county, an area noted for its growth in recent years. While the county represents the basic geographic definition of UPMC Passavant's community, this CHNA also considered the hospital's immediate geographic "service area," which spans both Allegheny and Butler Counties. The service area analysis was conducted to identify areas of concentration with potentially higher health needs.

Existing Healthcare Resources in the Area:

UPMC Passavant is one of eight UPMC licensed hospitals, and is one of a total of 16 licensed hospitals in Allegheny County.



Additionally, UPMC Passavant is supported by nearly 110 UPMC outpatient offices within Allegheny County. These facilities include UPMC CancerCenters, Urgent Care Centers, Senior Living Facilities, Centers for Rehabilitation Services, Imaging Centers, Children's Hospital of Pittsburgh of UPMC satellite offices, and pediatric, primary, and specialty care doctors' offices.

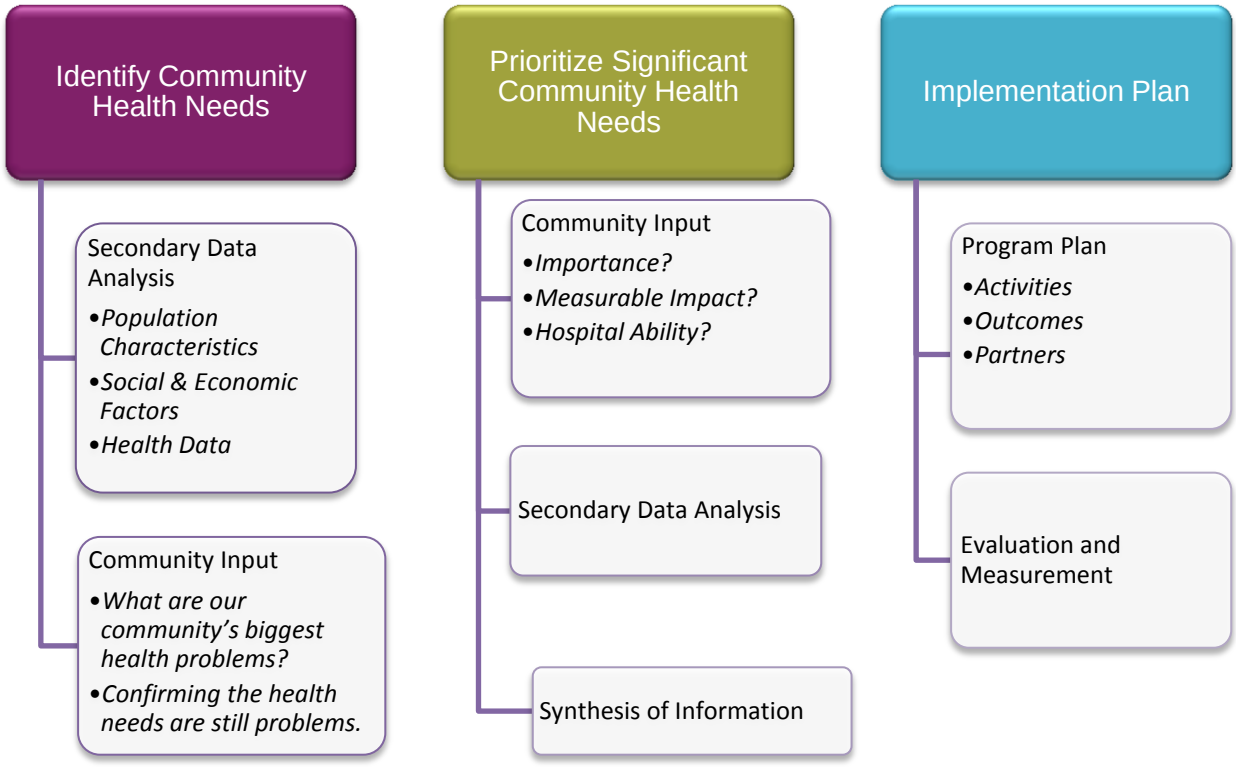
III. Methods Used to Conduct the Community Health Needs Assessment

Overview:

In conducting this CHNA and the prior CHNA conducted in Fiscal Year 2013, UPMC pursued an approach that was comprehensive, methodologically rigorous, inclusive, and open to the community's perspective on health care needs. To conduct the CHNA in a manner that reflects best practices, UPMC partnered with the University of Pittsburgh Graduate School of Public Health (Pitt Public Health). Pitt Public Health's mission is to provide leadership in health promotion, disease prevention, and the elimination of health disparities in populations. Pitt Public Health faculty and researchers' expertise supported a structured process for obtaining community input on health care needs and perceived priorities and helped establish criteria for the evaluation and measurement of progress.

Framework for Conducting the CHNA:

The Community Health Improvement Process developed by the Institute of Medicine served as a guiding framework in assessing the health needs of the UPMC hospital communities. The hospital adapted this model to guide the development of its CHNA.



Secondary Data Sources and Analysis:

To identify the health needs of a community, UPMC conducted an analysis of publicly available data. Secondary data — including population demographics, mortality, morbidity, health behavior, clinical care, and physical environmental data — were used to identify and prioritize significant community health needs. Data which informed this CHNA were compiled from a variety of state and national data sources and are reflected in the table below.

Population characteristics, socioeconomic, and health status data were also examined. Community-level data (usually county-level) were compared to the state, nation, and *Healthy People 2020* benchmarks to help identify key health issues. When available, data specific to low-income individuals, underserved minorities, and uninsured populations were examined. In addition, analysis considered federal designations of Health Professional Shortage Areas (HPSA) — defined as "designated as having a shortage of primary medical care providers" and Medically Underserved Areas (MUA) — which may consist of a whole county or a group of contiguous counties, a group of county or civil divisions, or a group of urban census tracts.

Publicly Available Data and Sources Used for Community Health Needs Assessment

Data Category	Data Items	Description	Source
Demographic Data	Population Change	Comparison of total population and age-specific populations in 2000 and 2010 by county, state, and nation.	U.S. Census
	Age and Gender	Median age, gender, and the percent of Elderly Living Alone by Zip Code, county, state, and nation in 2010.	
	Population Density	2010 total population divided by area in square miles by county, state, and nation.	
	Median Income/Home Values	By Zip Code, county, state, and nation in 2010.	
	Race/Ethnicity	Percent for each item by Zip Code, county, state, and nation in 2010. Note: Zip Code level data was not available for disabled.	
	Insurance: Uninsured, Medicare, Medicaid		
	Female Headed Households		
	Individuals with a Disability		
	Poverty		
	Unemployed		
	No High School Diploma		

Data Category	Data Items	Description	Source
Morbidity Data	Adult Diabetes	2010-2013 data collected and compared by county, state, and nation.	Allegheny County Health Survey, 2009-2010. PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics. U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System. National Center for Health Statistics.
	Cancer		
	Mental Health		
	Asthma (Childhood)		
	Birth Outcomes		
Health Behaviors Data	Obesity (Childhood and Adult)		
	Alcohol Use		
	Tobacco Use		
	Sexually Transmitted Disease		
Clinical Care Data	Immunization	2010-2015 data collected and compared by county, state, and nation.	Allegheny County Health Survey, 2009-2010. PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics. U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System. Health Resources and Services Administration (HRSA). National Center for Health Statistics.
	Cancer Screening (breast/colorectal)		
	Primary Care Physician Data		
Benchmark Data	Mortality Rates, Morbidity Rates, Health Behaviors, and Clinical Care Data	National benchmark goal measures on various topics for the purpose of comparison with current measures for neighborhood, county, state, and nation.	Healthy People 2020.

Information Gaps Impacting Ability to Assess Needs Described:

The best available data were used to obtain the most meaningful comparison and analysis possible. Public data sources, however, are limited by some information gaps, and small sample sizes can represent statistically unreliable estimates.

The community definition hinged at the county-level, in part, because the quality and availability of data at this level was generally most comprehensive and allowed for meaningful comparisons with state and national data. In some cases, data from geographical sources below the county level (such as Zip Codes) were available with adequate sample size for analysis. Whenever possible, population health data were examined for individual neighborhoods and sub-populations including low-income, high-minority, and uninsured populations.

Community Input:

Community input on the perceived health needs of the region was used to complement analysis of publicly available data. UPMC used an inclusive and systematic process to collect information pertaining to the community's perceptions of its greatest needs, as well as its expectations of what the hospital's role should be in meeting those needs.

The Fiscal Year 2016 CHNA builds on the assessment process originally applied in Fiscal Year 2013. In the initial assessment, Pitt Public Health facilitated this process and employed "Concept Mapping," a participatory, qualitative research method with a proven track record for gaining stakeholder input and consensus. In the subsequent assessment, UPMC conducted a survey of community leaders and stakeholders specific to the hospital's community to assess the continuing importance of identified community health needs.

To gather community input, the hospital formed a community advisory panel to provide broad-based input on health needs present in the hospital's surrounding community. These groups were made up of:

- **Persons with special knowledge or expertise in public health**
- **Representatives from health departments or governmental agencies serving community health**
- **Leaders or members of medically underserved, low-income, minority populations, and populations with chronic disease**
- **Other stakeholders in community health *(see Appendices C and D for more information on Concept Mapping and for a complete list and description of community participants)***

The full community input survey process consisted of multiple stages:

- **Brainstorming on Health Problems:** During brainstorming, the hospital's community advisory council met to gather input on the question, "What are our community's biggest health care problems?" Brainstorming resulted in the development of a 50-item list of health problems.
- **Rating and Sorting Health Problems to Identify Significant Health Needs:** Community members participated in the rating and sorting process via the Internet to prioritize the 50 health problems and identify significant health needs according to their perceptions of the community health needs. Each participant sorted the list into overarching themes, and then rated the problems using a 1 to 5 Likert scale (1 = not important; 5 = most important), according to the following criteria:
  - How important is the problem to our community?
  - What is the likelihood of being able to make a measurable impact on the problem?
  - Does the hospital have the ability to address this problem?
- **Confirming Topics:** In Fiscal Year 2016, community advisory panels were again surveyed about the continuing importance of the identified health needs. Advisory panel members participated in an online Qualtrics survey that solicited feedback on new health problems and asked participants to rate whether the health problem "remains a major problem," "is somewhat of a problem," or "is no longer a problem."

Synthesis of Information and Development of Implementation Plan:

In the final phase of the process, the community input survey results were summarized by experts from Pitt Public Health and merged with results gathered from the analysis of publicly available data. Through this process, UPMC hospital leadership identified a set of significant health needs that are critical, addressable, and have high levels of urgency in the community. The process then matched those needs to:

- **Best-practice methods for addressing these needs**
- **Existing hospital community health programs and resources**
- **Programs and partners elsewhere in the community that can be supported and leveraged**
- **Enhanced data collection concerning programs**
- **A system of assessment and reassessment measurements to gauge progress over regular intervals**

IV. Results of the Community Health Needs Assessment and In-Depth Community Profile

Characteristics of the Community:

Sizable Elderly Population with High Social Needs: A notable characteristic of Allegheny County is the large and increasing percentage of elderly residents (65 years and older). Allegheny County has a large elderly population (17 percent), especially when compared to Pennsylvania (15 percent), and the United States (13 percent). Similar to Allegheny County, UPMC Passavant's service area has a high percentage of elderly (16 percent). A sizable percentage of elderly live alone in Allegheny County and in UPMC Passavant's service area. Reflective of the higher proportion of elderly, the percentage of Medicare recipients was higher in the county than the state and nation (See Appendix B).

Allegheny County Has a Sizable Elderly Population

	Allegheny County	Pennsylvania	United States
Median Age	41.3	40.1	37.2
% Children (<18)	19.8%	22.0%	24.0%
% 18-64	63.4%	62.6%	63.0%
% 20-49	39.2%	39.0%	41.0%
% 50-64	21.3%	20.6%	19.0%
% 65+	16.8%	15.4%	13.0%
% 65-74	7.8%	7.8%	7.0%
% 75-84	6.1%	5.4%	4.3%
% 85+	2.9%	2.4%	1.8%
% Elderly Living Alone	13.1%	11.4%	9.4%

Source: U.S. Census

Economically Stable in Allegheny County Overall: When compared to the Commonwealth of Pennsylvania and the nation, the overall population of Allegheny County is economically stronger and faces fewer economic health challenges on average. Allegheny County tends to:

- **Be more educated**
- **Have fewer people unemployed**
- **Have fewer people living in poverty**
- **Have fewer uninsured and fewer recipients of the income based government Medicaid health insurance program (See Appendix B)**

Growing population and higher socioeconomic status in UPMC Passavant service area: In contrast to the population decline in Allegheny County, the UPMC Passavant service area, which includes suburbs in Pittsburgh's North Hills, is experiencing a growth. Since 2000, the population in the UPMC Passavant area has increased by 6 percent – from 265,410 in 2000 to 280,198 in 2010. Other characteristics of the service area are:

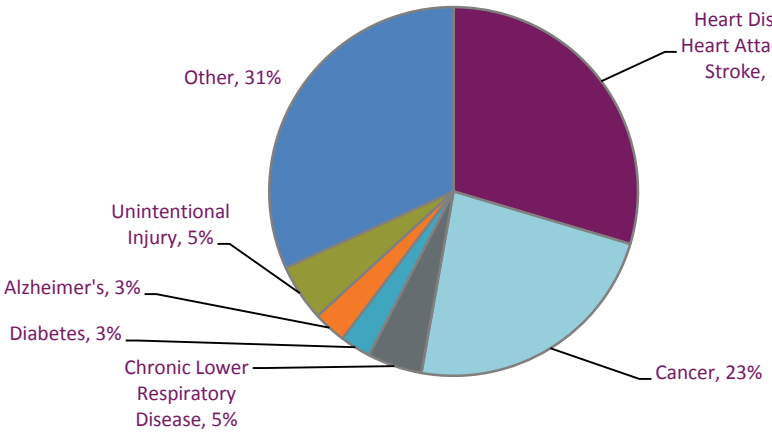
- **A higher percentage of families with children**
- **Comparatively higher median household income**
- **Lower percentage of families in poverty**
- **Lower percentage of residents without a high school diploma**
- **Lower percentage of unemployed residents**

Social and Economic Population Demographics		
	Allegheny County	UPMC Passavant Service Area
% Family Households with children <18	23.1%	29.4%
Median Household Income	$45,362	$65,790
% in Poverty	8.7%	4.4%
% with No High School Diploma (among those 25+)	8.4%	6.0%
% Unemployed (among total labor force)	7.2%	4.5%
Racial Groups		
% White	81.5%	92.3%
% African-American	13.2%	3.7%
% Other Race	5.3%	4.0%

Source: U.S. Census

Chronic Disease and Mortality:

Nearly two-thirds of deaths in Allegheny County are attributable to chronic disease.



Source: Pennsylvania Department of Health, 2012

Significant Health Needs for UPMC Passavant's Community:

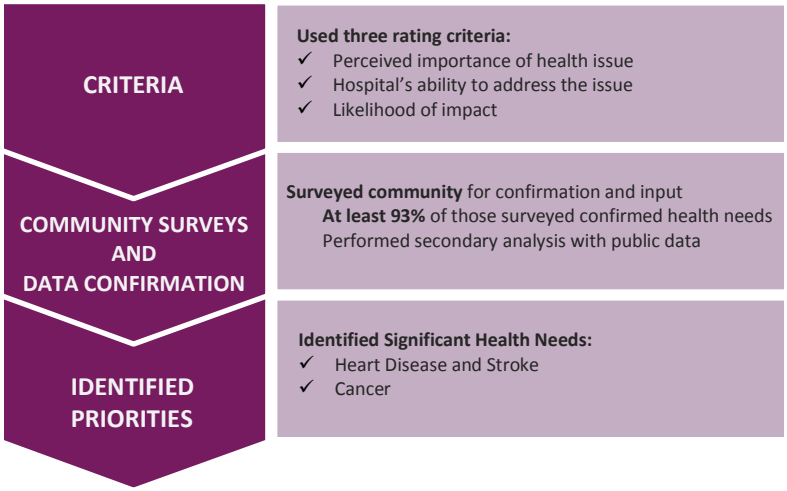
Concept Mapping input was deployed across all UPMC hospital communities within western Pennsylvania and yielded three overarching themes to contextualize the health care needs of the areas served by UPMC hospitals:

- **Chronic Disease**
- **Prevention and Healthy Living**
- **Navigating Resources**

For UPMC Passavant's community, the assessment identified significant health needs that were rated highly across the three criteria of importance, likelihood of making a measurable impact, and the hospital's ability to address the problem. The significant health needs are:

- **Heart Disease and Stroke**
- **Cancer**

Prioritizing Community Health Needs

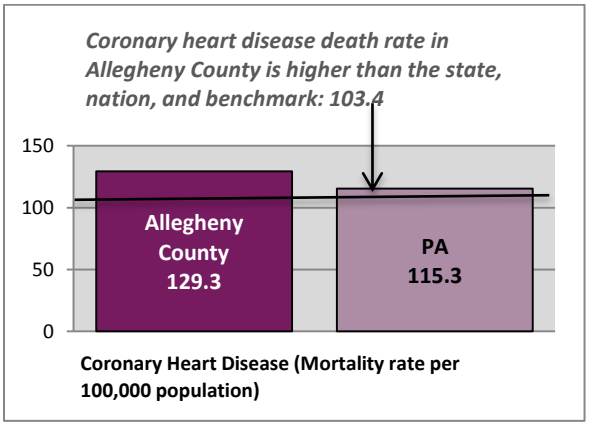


UPMC Passavant Significant Health Needs:

In-depth secondary data analysis reinforced that these health topics were areas of concern for the UPMC Passavant community.

Heart Disease and Stroke – Importance to the Community:

- **Heart disease and stroke are leading causes of death in Allegheny County, as well as in the state and nation.**
- **In Allegheny County, 30 percent of deaths are due to heart disease and stroke.**
- **Risk factors for heart disease and stroke include diabetes, obesity, unhealthy eating, and lack of exercise.**
- **Mortality rates in Allegheny County for coronary heart disease are higher, compared to the state and *Healthy People 2020* benchmarks, suggesting opportunities for improvement.**



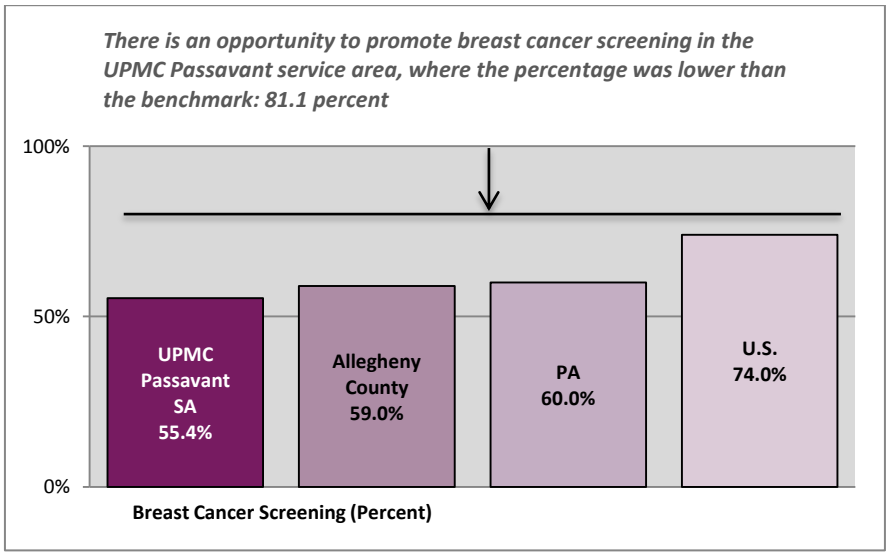
Sources: Pennsylvania Department of Health, 2012; National Center for Health Statistics 2013; Healthy People 2020

Heart disease and stroke affect many people: Heart disease and stroke are leading causes of death both nationally and locally. More than 740,000 deaths in the United States are due to heart disease and stroke, and nearly 4,000 individuals died of heart disease and stroke in 2012 in Allegheny County, which represented almost 30 percent of all deaths both nationally and locally. Risk factors for heart disease and stroke include diabetes, obesity, unhealthy eating, and lack of exercise. UPMC Passavant has an opportunity to enhance and expand programs that address these risk factors. In addition, there is potential to leverage strong community partnerships to augment efforts.

Heart disease and stroke are particularly relevant for sub-populations, including low-income, underserved minorities, and older individuals, within Allegheny County: Coronary heart disease, the most common heart disease, was elevated in subgroups within Allegheny County. Consistent with national trends, the coronary heart disease death rate was higher among men (170.6/100,000) compared to women (98.4/100,000), higher among African-Americans (165.5/100,000) than in Whites (124.7/100,000), and increased with age. Similarly, the stroke death rate was higher among men (35.4/100,000) compared to women (33.0/100,000), higher among African-Americans (45.3/100,000) than Whites (33.0/100,000), and also increased by age.

Cancer- Importance to the Community:

- **Cancer is also a leading cause of death in Allegheny County, as well as in the state and nation.**
- **In Allegheny County, 23 percent of deaths are due to cancer.**
- **Cancer screenings can help identify cancer in early stages when treatment is likely to work best.**
- **Screening for breast cancer was lower in the UPMC Passavant service area.**



Sources: Allegheny County Health Survey 2009-2010; Pennsylvania Department of Health, 2012. Healthy People 2020; U.S. Centers for Disease Control and Prevention, 2013

Cancer affects many people: Cancer is a leading cause of death both in the United States and in Allegheny County. More than 580,000 deaths in the United States are due to cancer, and nearly 3,100 individuals died of cancer in 2012 in Allegheny County. Similar to national data, cancer deaths contributed to 23 percent of all deaths in Allegheny County. Not only is cancer a major cause of death, but a large number of individuals in Allegheny County were newly diagnosed with cancer in 2012—almost 8,600 individuals.

Healthy behaviors, such as cancer screenings and a healthy weight, can help reduce one's cancer risk, but these behaviors are lower in some sub-populations, including low-income and underserved minorities, within Allegheny County: Through early detection, cancer screenings help further delay progression or worsening of cancer. However, in Allegheny County, women with less than a high school education were significantly less likely to report receiving a mammogram, compared to women with more education. There were no significant differences by age, income, or race. Maintaining a healthy weight can also help reduce cancer risk. A high percentage of Allegheny County residents were overweight or obese (62 percent), and a disproportionately higher percentage was observed in men (68 percent), those 45-64 years of age (70 percent), and African-Americans (72 percent). No significant differences were observed by household income or education level.

V. Overview of the Implementation Plan

Overview:

UPMC Passavant developed an implementation plan that addresses the significant community health needs identified through the CHNA process. The plan relies on collaboration and the leveraging of partnerships with many of the same organizations and stakeholders that participated in the assessment process. The plan also represents a synthesis of input from:

- **Community-based organizations**
- **Government organizations**
- **Non-government organizations**
- **UPMC hospital and Health Plan leadership**
- **Public health experts that include Pitt Public Health**

Adoption of the Implementation Plan:

On April 28, 2016 the UPMC Passavant Board of Directors adopted an implementation plan to address the identified significant health needs:

- **Heart Disease and Stroke**
- **Cancer**

A high level overview of the UPMC Passavant implementation plan is illustrated in the figure below and details are found in Appendix A:

High-Level Overview of UPMC Passavant Implementation Plan

Topic	Programs	Anticipated Impact Goal-Year 3	Planned Collaborations
Heart Disease and Stroke	**Heart Disease and Stroke Prevention, Management, and Support**	Increased awareness of ways to prevent and better manage heart disease and stroke, including identifying stroke symptoms early	Foundations, including Passavant Hospital Foundation, Baierl YMCA, other YMCAs, UPMC Passavant cardiac rehab, American Heart Association, EMS, skilled nursing facilities, other community partners
Cancer	**Cancer Prevention and Screening Programs** **UPMC Passavant Cancer Survivorship Celebration**	Increase awareness of cancer prevention and treatment Increase number of individuals reached through these programs Increase attendance at event	PA Department of Health, Adagio Health, local churches, American Cancer Society, schools, Passavant Hospital Foundation, community organizations and businesses

The UPMC Passavant implementation plan calls for collaboration with community partners and leveraging UPMC system-wide resources, to support a number of initiatives focused on the identified health priorities.

VI. APPENDICES

APPENDIX A:

Detailed Implementation Plan

Priority Health Issue: Addressing Heart Disease and Stroke

Heart disease and stroke are important priorities in UPMC Passavant's community: Cardiovascular disease, including different types of heart disease and stroke, is the leading cause of death in the UPMC Passavant community, as well as in the state and nation – accounting for 30 percent of total deaths.

UPMC Passavant is leveraging UPMC and community resources to address heart disease and stroke: UPMC Passavant's Heart and Vascular Institute and Primary Stroke Center provide expertise to promote heart disease and stroke prevention, as well as awareness throughout the community. UPMC Passavant has a strong program in heart care, including cardiology services, cardiac surgery services, and endovascular and vascular surgery, as well as wellness, rehabilitation, and education programs. Combined with support from the Passavant Hospital Foundation, UPMC Passavant's community outreach efforts include partnerships with local gyms to promote healthy hearts, and health education initiatives throughout the community, including at senior living facilities and schools. Programs strive to reach more community members with education regarding the prevention of cardiovascular disease, increasing the number of screenings for early detection, and providing support groups for those who are living with this chronic disease. In addition, UPMC Passavant's focus on heart disease is complemented by UPMC Insurance Services efforts to provide members with disease-specific care management.

Heart Disease and Stroke				
Program	Intended Actions	Anticipated Impact Goal-Year 3	Target Population	Planned Collaborations
Heart Disease and Stroke Prevention, Management, and Support	Continue to enhance heart disease management, in partnership with local gyms Promote prevention throughout the community through health fairs and education at senior living communities and schools	Increased awareness of ways to prevent and better manage heart disease and stroke, including identifying stroke symptoms early	General population Individuals at risk for heart disease/stroke	Foundations, including Passavant Hospital Foundation, Baierl YMCA, other YMCAs, UPMC Passavant cardiac rehab, American Heart Association, EMS, UPMC Heart and Vascular Institute, other community partners

Priority Health Issue: Addressing Cancer

Cancer is an important priority in UPMC Passavant's community: Cancer is the second leading cause of death in the UPMC Passavant community, the state, and the nation. For women, lung and breast cancers are the most common causes of cancer deaths. Although there are risk factors for cancer that cannot be avoided, such as age and family history, there are many behaviors that can help prevent cancer. These behaviors include tobacco avoidance, maintaining a healthy weight, good nutrition, and physical activity. Early detection is another important part of decreasing deaths due to cancer. When cancer is detected early, treatment is usually more effective.

UPMC Passavant is leveraging UPMC and community resources to address cancer: The UPMC CancerCenter at UPMC Passavant is an accredited cancer center and designated by the American College of Surgeons as a Comprehensive Community Cancer Program as well as a Comprehensive Breast Center. Accredited programs provide a range of cancer-related services including those focused on prevention, early detection, and providing the best care and support for those living with cancer. UPMC Passavant supports a range of cancer care efforts—from providing women-in-need with access to early cancer detection to celebrating cancer survivors. In addition, through partnerships with other community organizations, including the Passavant Hospital Foundation, the hospital is working collaboratively to promote cancer education throughout the community.

Cancer				
Program	Intended Actions	Anticipated Impact Goal-Year 3	Target Population	Planned Collaborations
Cancer Prevention and Screening Programs	Provide health education and screenings, such as pap smears and mammograms, to eligible low-income women. Help connect women to resources available throughout the community. Provide education throughout the community about cancer prevention. Explore approaches to enhance and expand cancer education, prevention, and support, including colorectal screenings, lung cancer screenings, and smoking cessation programs.	Increase awareness of cancer prevention and treatment Increase number of individuals reached through these programs	Low income (uninsured/ underinsured) Minorities Women General population	PA Department of Health, PA Healthy Woman, Adagio Health, local churches, Community organizations, schools, government representatives
Cancer Survivorship Celebration and Other Support Programs	Host annual event to meet the psychological needs of cancer survivors and those who support them by offering psychosocial support and coping strategies. Hold cancer support transition programs, bereavement programs, and remembrance services.	Increase attendance at events	Cancer survivors and loved ones	Passavant Hospital Foundation, Community organizations and businesses

Outcomes and Evaluation of Hospital Implementation Plans:

UPMC engaged with researchers from Pitt Public Health to develop evaluation metrics to measure and track progress related to this implementation plan. The metrics vary by hospital, according to health outcomes, current hospital efforts, and hospital resources.

The implementation plan was developed with the expectation that future progress would be reviewed by the hospital as well as potentially by public health agencies. Therefore, two types of outcomes are considered:

- **Process Outcomes (directly relating to hospital/partner delivery of services):**
  Process outcomes indicate efforts hospitals and community partners can undertake to increase delivery of a service designed to change a health impact indicator. These mostly involve increases (or better targeting) in programming, outreach, publicity, or related efforts. Process outcomes can be measured by increases in investment (dollars or personnel), outreach (media messages, public service announcements), service units delivered (classes, screenings), people attending or completing programs, and number of sites for delivery of programs.
- **Health Impact Outcomes (applies to changes in population health for which the hospital's efforts are only indirectly responsible):**
  Health impact outcomes are changes in population health related to a broad array of factors of which hospital and community partner efforts are only one contributing part. These outcomes include reductions in the prevalence of disease, risk factors, and health behaviors associated with disease. Benchmarks for progress in population indicators are available from *Healthy People 2020* and Robert Wood Johnson Foundation county health rankings.

APPENDIX B:

Detailed Community Health Needs Profile

Population Demographics:

Characteristics	Allegheny County	Pennsylvania	United States
Area (sq. miles)	730.08	44,742.70	3,531,905.43
Density (persons per square mile)	1675.6	283.9	87.4
Total Population, 2010	1,223,348	12,702,379	308,745,538
Total Population, 2000	1,281,666	12,281,054	281,424,600
Population Change ('00-'10)	(58,318)	421,325	27,320,938
Population % Change ('00-'10)	-4.6%	3.4%	9.7%
Age			
Median Age	41.3	40.1	37.2
% <18	19.8%	22.0%	24.0%
% 18-44	34.9%	34.3%	36.5%
% 45-64	28.5%	28.1%	26.4%
% >65+	16.8%	15.4%	13.0%
% >85+	2.9%	2.4%	1.8%
Gender			
% Male	47.9%	48.7%	49.2%
% Female	52.1%	51.3%	50.8%
Race/Ethnicity			
% White*	81.5%	81.9%	72.4%
% African-American*	13.2%	10.8%	12.6%
% American Indian and Alaska Native*	0.1%	0.2%	0.9%
% Asian*	2.8%	2.7%	4.8%
% Native Hawaiian/Other Pacific Islander*	0.0%	0.0%	0.2%
% Hispanic or Latino**	1.6%	5.7%	16.3%
Disability	12.8%	13.1%	11.9%

**Reported as single race; **Reported as any race*

Source: US Census, 2010

Social and Economic Factors:

Characteristics	Allegheny County	Pennsylvania	United States
Income, Median Household	$47,505	$49,288	$50,046
Home Value, Median	$119,000	$165,500	$179,900
% No High School Diploma*	7.4%	11.6%	14.4%
% Unemployed**	8.3%	9.6%	10.8%
% of People in Poverty	12.0%	13.4%	15.3%
% Elderly Living Alone	13.1%	11.4%	9.4%
% Female-headed households with own children <18	6.2%	6.5%	7.2%
Health Insurance			
% Uninsured	8.0	10.2	15.5
% Medicaid	11.3	13.1	14.4
% Medicare	12.1	11.2	9.3

**Based on those ≥25 years of age; **Based on those ≥16 years and in labor force*
Source: US Census, 2010

Leading Causes of Mortality for the United States Compared to Pennsylvania and Allegheny County (rates per 100,000 population):

Causes of Death	Allegheny County	Pennsylvania	United States
	Percent of Total Deaths	Percent of Total Deaths	Percent of Total Deaths
All Causes	100.0	100.0	100.0
Diseases of Heart	24.8	24.3	23.5
Malignant Neoplasms	23.2	22.8	22.5
Chronic Lower Respiratory Diseases	4.8	5.2	5.7
Cerebrovascular Diseases	4.8	5.1	5.0
Unintentional Injuries	5.0	4.9	5.0
Alzheimer's Disease	2.9	2.8	3.3
Diabetes Mellitus	2.7	2.9	2.9
Influenza and Pneumonia	2.1	1.9	2.2
Nephritis, Nephrotic Syndrome and nephrosis	2.1	2.2	1.8
Intentional Self-Harm (Suicide)	1.1	1.3	1.6

Sources: Pennsylvania Department of Health, 2012; National Center for Health Statistics, 2013

Comparison of Additional Health Indicators for Allegheny County to Pennsylvania, United States, and Healthy People 2020:

Characteristics	Allegheny County	Pennsylvania	United States	Healthy People 2020
Morbidity				
Diabetes (%)	11.0	10.0	8.7	NA
Mental Health (Mental health not good ≥1 day in past month (%)	43.0	35.0	NA	NA
Low Birthweight (% of live births)	7.6	8.1	8.0	7.8
Health Behaviors				
Obesity (Adult) (%)	28.5	30.0	29.4	30.5
Childhood Obesity (Grades K-6) (%)	15.3	16.4	17.7	15.7
Childhood Obesity (Grades 7-12) (%)	17.0	18.0	20.5	16.1
Excessive Alcohol Use (%)	33.0	17.0	16.8	24.4
Current Tobacco Use (%)	23.0	21.0	19.0	12.0
STDs (Gonorrhea per 100,000)*	251.5	150.5	250.6	251.9
Clinical Care				
Immunization: Ever had a Pneumonia Vaccination (65+) (%)	78.0	69.0	69.5	90.0
Cancer Screening				
Mammography (%)	59.0	60.0	74.0	81.1
Colorectal Screening (%)	66.0	69.0	67.3	70.5
Primary Care Physician: Population (PCP Physicians/100K Population)	108.6	82.0	75.8	NA
Receive Prenatal Care in First Trimester (%)	89.1	72.4	71.0	77.9

Sources:

Allegheny County Data: Allegheny County Health Survey 2009-2010; Pennsylvania Department of Health, 2012; Obesity Data, 2012-2013; Health Resources and Services Administration (HRSA), 2014-2015

Pennsylvania Data: Pennsylvania Department of Health, 2012; Data from Behavioral Risk Factor Surveillance System, 2013; Obesity Data, 2012-2013; Health Resources and Services Administration (HRSA), 2014-2015

U.S. Data: U.S. Centers for Disease Control and Prevention, 2013; Health Resources and Services Administration (HRSA), 2014-2015; Healthy People, 2020

**Gonorrhea data: County and Pennsylvania rates are per 15-35+ year old women; National and Healthy People 2020 rates are per 15-44 year old women*

APPENDIX C:

Input from Persons Representing the Broad Interests of the Community

Overview:

To identify and prioritize health needs of the communities served by UPMC hospitals, the organization solicited and took into account input from persons who represent the broad interests of the community. During June through July 2015, more than 1,500 community leaders and members representing medically underserved, low-income and minority populations, consumer advocates, nonprofit organizations, academic experts, local government officials, local school districts, community-based organizations, and health care providers were invited to participate in UPMC's community health needs survey. More than 500 individuals completed the survey, and greater than 70 percent of those participants self-identified as being a representative or member of a medically underserved, minority, or low-income population. The goal of the survey was not only to provide community members with an opportunity to comment on UPMC's 2013 CHNA and implementation strategy, but also to identify other potential significant health needs.

To ensure the CHNA community input process was conducted in a rigorous manner reflecting best practices, UPMC sought support and guidance from individuals and organizations with expertise in public health. UPMC engaged with the University of Pittsburgh Graduate School of Public Health (Pitt Public Health) Department of Behavioral and Community Health Sciences to build on the methodology employed in UPMC's 2013 CHNA. Pitt Public Health assisted in:

- Developing a framework to itemize and prioritize community health needs
- Developing a survey tool for obtaining structured input from community leaders and community members
- Administering the online survey using Qualtrics web software (and also in paper format upon request)
- Analyzing survey results

In addition, local and state public health department input and data were obtained and utilized in this community health needs assessment. UPMC relied on publicly available Pennsylvania Department of Health reports and additional local health department information accessed via telephone conversations and in-person meetings.

UPMC also considered findings from the Allegheny County Health Department's (ACHD) *2015 Community Health Assessment*, released in April 2015, which identified five areas of focus: chronic disease; maternal and child health; mental and substance use disorders; access; and environment. In addition, UPMC examined ACHD's *Plan for a Healthier Allegheny,* a strategic plan that addresses the health issues identified in the assessment. UPMC takes an active role in Allegheny County's community health initiatives. During Fiscal Years 2015 and 2016, UPMC representatives attended ACHD community and workgroup meetings, served on a County Advisory Council, and met with ACHD officials to discuss community health initiatives and identify approaches to better align efforts.

Stakeholder Input

UPMC Passavant's Fiscal Year 2016 CHNA builds on the assessment process originally applied in 2013. That assessment used concept mapping to elicit stakeholder prioritization of health problems and develop group consensus on priorities. In the concept mapping effort, community advisory panels at each hospital participated in focus groups to brainstorm and then sort a set of 50 community health problems (see Appendix D for list of 50 topics). Concept mapping software uses this sorting data to create a display that illustrates the relationships between health topics, and allows aggregation of topics into thematic areas. The 50 topics were grouped into three main thematic areas: prevention and healthy living, chronic disease, and navigating the health care system. For example, stakeholders reliably sorted "access to specialist care" and "care coordination and continuity" into a common group. These form clusters in concept maps and allow rational aggregation into larger health priority areas, in this case "navigating the health care system."

Community panel members then rated community health problem areas according to the following three dimensions — importance of the problem to the community, the likelihood of having a measurable impact on the problem, and the ability of the hospital to address the problem. Using a criterion of high ratings on all three dimensions, combined with results of secondary analysis of population health indicators, generated health topics which were considered significant health needs.

Confirming Community Health Needs

In Fiscal Year 2015, surveys of hospital community advisory panels were used to assess the stability and continuing importance of Fiscal Year 2013 significant health needs. Advisory panels were invited to participate in an online Qualtrics survey, administered by Pitt Public Health. Survey respondents were presented community health priorities from Fiscal Year 2013 and asked to rate these on whether the health problem "remains a major problem," "is somewhat of a problem," or "is no longer a problem." Before the survey was sent out, advisory panels were able to nominate new health priorities, which were added to this initial list. In addition, panels repeated their ratings of importance, impact, and hospital ability for a set of all 18 community health priorities identified by all UPMC hospitals in the previous Fiscal Year 2013 CHNA to identify potentially new community health needs. Finally, the survey included an open-ended question to allow participants an opportunity to suggest other health problems.

Overall, nearly 90 percent of participants responded that health topics identified in the first round of CHNAs continue to remain or are somewhat a problem in UPMC's hospital communities. Stability and consistency are not surprising, given that these are significant health issues that need more than two to three years to show meaningful improvement. Fiscal Year 2013 community health need priorities were considered to remain priorities if more than half of respondents considered them to "remain a major problem." If a Fiscal Year 2013 health priority did not achieve this rating, new priorities were added based on ratings of other health priorities. These new health priorities were identified by high scores on the dimensions of importance, measurable impact, and hospital ability and also represented health concerns not subsumed in current specified priorities.

Community Representation and Rationale for Approach

Each hospital community advisory panel consisted of hospital board members, hospital staff, and community members. Community members were leaders of organizations that represented different patient constituencies and medically underserved, low-income, and minority populations and were invited to participate to ensure that a wide range of community interests were engaged in identifying community health needs. Organizations serving the medically underserved were well represented on the panels. In addition to hospital panels, the CHNA also included a community-wide panel consisting of health departments, mental health service providers, philanthropies, and other agencies providing health services not linked to particular hospitals.

Analyses disaggregated ratings to confirm that ratings were stable across different stakeholders.

The panels ensured that a wide variety of constituencies had an opportunity to weigh in on hospital community health priorities. Use of advisory panels and a survey explicitly assessing the continuing relevance of prior health priorities offers a number of advantages:

- It explicitly assesses stability/change of community health needs, while allowing participants an opportunity to consider new health priorities
- It uses the same measures to assess importance, impact, and hospital ability to address health priorities, which will allow tracking over time
- It elicits perceptions of a broad and inclusive list of hospital and community leaders who in turn represent a broad group of constituents
- It allows assessment of consensus across different kinds of stakeholders

UPMC Passavant invited representatives from the following organizations to participate in the community needs survey conducted in June 2015:

- **Cranberry Township, Cranberry Township, PA**
- **LaRoche College, Pittsburgh, PA**
- **McCandless/Franklin Park Ambulance Authority, Wexford, PA**
- **North Allegheny School District, Wexford, PA**
- **North Hills Community Outreach, Pittsburgh, PA**
- **Passavant Hospital Foundation, Pittsburgh, PA**
- **Pennsylvania House of Representatives, Pittsburgh, PA**
- **The Pittsburgh North Regional Chamber, Wexford, PA**
- **Town of McCandless, McCandless, PA**

The UPMC Passavant community survey was also supported by members of the hospital's Board of Directors and physicians, as well as hospital leadership.

Additionally, a UPMC system-wide group comprised of individuals and organizations representing the broad interests of the region's communities — including representatives from medically underserved, low-income, and minority populations — was invited to participate in the survey. Invitees included representatives from the following organizations:

- **Achieva, Pittsburgh, PA**
- **Action Housing, Inc., Pittsburgh, PA**
- **Allegheny County Area Agency on Aging, Pittsburgh, PA**
- **Allegheny County Department of Human Services, Pittsburgh, PA**
- **Allegheny County Office of Children, Youth, and Families, Pittsburgh, PA**
- **Allegheny Intermediate Unit, Homestead, PA**
- **Bethlehem Haven, Pittsburgh, PA**
- **Big Brothers Big Sisters of Greater Pittsburgh, Pittsburgh, PA**
- **Carlow University, Pittsburgh, PA**
- **Catholic Charities Free Health Care Center, Pittsburgh, PA**
- **Center for Engagement and Inclusion, UPMC, Pittsburgh, PA**
- **City of Pittsburgh Bureau of Police, Pittsburgh, PA**
- **Community College of Allegheny County, Monroeville, PA**
- **Consumer Health Coalition, Pittsburgh, PA**
- **Coro Center for Civic Leadership, Pittsburgh, PA**
- **EDSI Solutions, Pittsburgh, PA**
- **Erie Regional Chamber and Growth Partnership, Erie, PA**
- **Expanding Minds, LLC, Pittsburgh, PA**
- **Goodwill of Southwestern Pennsylvania, Pittsburgh, PA**
- **Greater Pittsburgh Community Food Bank, Duquesne, PA**
- **Healthy Lungs Pennsylvania, Cranberry Township, PA**
- **Higher Achievement, Pittsburgh, PA**
- **Hosanna House, Inc., Wilkinsburg, PA**
- **iGate Corporation, Pittsburgh, PA**
- **Imani Christian Academy, Pittsburgh, PA**
- **Jewish Family and Children's Service of Pittsburgh, Pittsburgh, PA**
- **Josh Gibson Foundation, Pittsburgh, PA**
- **Junior Achievement of Western Pennsylvania, Pittsburgh, PA**
- **Kaplan Career Institute, Pittsburgh, PA**
- **Kingsley Association, Pittsburgh, PA**
- **LEAD Pittsburgh, Pittsburgh, PA**
- **Let's Move Pittsburgh, Pittsburgh, PA**
- **Mainstay Life Services, Pittsburgh, PA**
- **The Mentoring Partnership of Southwestern PA, Pittsburgh, PA**
- **NAMI Southwest Pennsylvania, Pittsburgh, PA**
- **Neighborhood Learning Alliance, Pittsburgh, PA**
- **Office of Human Services, Allegheny County Department of Human Services, Pittsburgh, PA**

- Operation StrongVet Western Pennsylvania, Wexford, PA
- Pennsylvania Health Access Network, Pittsburgh, PA
- Pennsylvania Health Law Project, Pittsburgh, PA
- Persad Center, Pittsburgh, PA
- Pittsburgh Action Against Rape, Pittsburgh, PA
- Pittsburgh Black Nurses in Action, Pittsburgh, PA
- Pittsburgh Board of Education, Pittsburgh, PA
- Pittsburgh Disability Employment Project for Freedom, Pittsburgh, PA
- Pittsburgh Job Corps Center, Pittsburgh, PA
- The Pittsburgh Promise, Pittsburgh, PA
- Ralph A. Falbo, Inc., Pittsburgh, PA
- Randall Industries, LLC, Pittsburgh, PA
- Salvation Army of Western Pennsylvania, Carnegie, PA
- Smart Futures, Pittsburgh, PA
- United Way of Allegheny County, Pittsburgh, PA
- University of Pittsburgh School of Health and Rehabilitation Sciences, Pittsburgh, PA
- University of Pittsburgh Health Sciences, Pittsburgh, PA
- UPMC Board Diversity and Inclusion Committee, Pittsburgh, PA
- Urban League of Greater Pittsburgh, Pittsburgh, PA
- Ursuline Support Services, Pittsburgh, PA
- VA Pittsburgh Healthcare System, Pittsburgh, PA
- The Waters Foundation, Pittsburgh, PA
- The Wynning Experience, Pittsburgh, PA
- Vibrant Pittsburgh, Pittsburgh, PA
- Western Pennsylvania Conservancy, Pittsburgh, PA
- Women for a Healthy Environment, Pittsburgh, PA
- Women's Center and Shelter of Greater Pittsburgh, Pittsburgh, PA
- YMCA of Greater Pittsburgh, Pittsburgh, PA
- YWCA of Greater Pittsburgh, Pittsburgh, PA

APPENDIX D:

Concept Mapping Methodology

Overview:

UPMC Passavant, with consultation and support from Pitt Public Health, utilized a research method known as concept mapping to develop a better understanding of perceived health problems for its community. Concept mapping is well suited for a Community Health Needs Assessment because the research method involves stakeholders in the process and allows for prioritization of health problems based on community input.

Concept mapping is a participatory research method that yields a conceptual framework for how a group of stakeholders views a particular topic or issue. The method explores the relationships of ideas and concepts and allows for the development of group consensus. It allows for the collection of a wide range of stakeholder-generated ideas and applies quantitative analytical tools (i.e., multidimensional scaling and hierarchical cluster analysis). Concept mapping output includes a concept map which is a diagram that illustrates the relationships between ideas. The research method is used to facilitate the creation of a shared vision and understanding within a group. The research method synthesizes individual data and includes a rating process that is used to prioritize key issues.

Each UPMC hospital completed the concept mapping and through the process identified hospital-specific priority community health problems based on stakeholder input.

Application of Concept Mapping for UMPC Passavant:

UPMC Passavant established a community advisory council. Participants contributed through face-to-face meetings and online input.

The concept mapping research method consisted of two stages:

- **Brainstorming — gathering stakeholder input**
- **Sorting and Rating — organizing and prioritizing the stakeholder input**

Brainstorming - Identifying Health Needs:

In the brainstorming meeting, the UPMC Passavant Community Advisory Council met in person to solicit members' input on the focal question, "What are our community's biggest health problems?"

Council members first brainstormed independently and then shared their lists with the Pitt Public Health research team. Their responses were then compiled to generate a full list of community health problems for the hospital. The Pitt Public Health research team shared the full list with the group and facilitated a group discussion of the responses to ensure the list was comprehensive and reflected the scope of health problems faced in the UPMC Passavant community.

The UPMC Passavant brainstorming list was integrated with brainstorming lists from the other UPMC hospitals to develop a final master list of community health problems to be used in the subsequent concept mapping sorting and rating. A consolidated final master list of the 50 community health problems was distilled from the robust community input. The following table presents each of the 50 community health problems and provides a numerical value in parentheses so that the item can be linked with the concept map presented in the following figure.

Final Master List of 50 Community Health Problems				
Nutrition and healthy eating (1)	Diabetes (11)	Medication management and compliance (21)	High blood pressure/ Hypertension (31)	Smoking and tobacco use (41)
Immunizations/ Vaccinations (2)	Health literacy – ability to understand health information and make decisions (12)	Exercise (22)	Breast cancer (32)	Adolescent health and social needs (42)
Lung cancer (3)	Urgent care for non-emergencies (13)	Navigating existing healthcare and community resources (23)	Pediatrics and child health (33)	Depression (43)
Maternal and infant health (4)	End of life care (14)	Preventive Screenings (cancer, diabetes, etc) (24)	Sexual health including pregnancy and STD prevention (34)	Support for families/caregivers (44)
Alcohol abuse (5)	Asthma (15)	Heart Disease (25)	Dementia and Alzheimer's (35)	Health insurance: understanding benefits and coverage options (45)
Adult obesity (6)	Prenatal care (16)	Primary Care (26)	Chronic Obstructive Pulmonary Disease (COPD) (36)	Preventive health/wellness (46)
Drug abuse (7)	Dental care (17)	Childhood obesity (27)	Stroke (37)	Injuries including crashes and sports related, etc (47)
Access to specialist physicians (8)	Financial access: understanding options (18)	Intentional injuries including violence and abuse (28)	Post-discharge coordination and follow-up (38)	Childhood developmental delays including Autism (48)
Behavioral health /mental health (9)	High cholesterol (19)	Cancer (29)	Arthritis (39)	Eye and vision care (49)
Geographic access to care (10)	Care coordination and continuity (20)	Social support for aging and 85 (30)	Senior health and caring for aging population (40)	Environmental health (50)

Sorting and Rating – Prioritizing Health Needs:

The UPMC Passavant Community Advisory Council completed the sorting and rating activities via the Internet. Each participant was asked to sort the master list of 50 community health problems into thematic areas, and to then rate the problems using a 1 to 5 Likert scale, according to the following criteria:

Importance:
How important is the problem to our community?
(1 = not important; 5 = most important)

Measurable Impact:
What is the likelihood of being able to make a measurable impact on the problem?
(1 = not likely to make an impact; 5 = highly likely to make an impact)

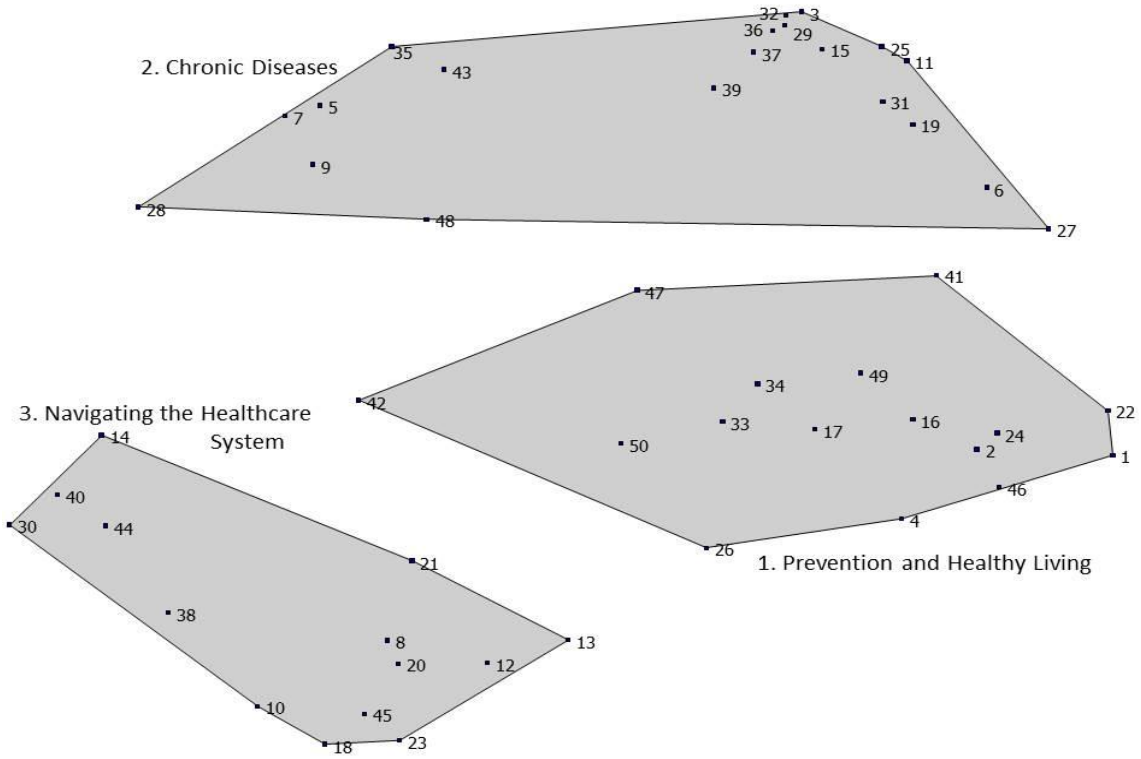
Hospital Ability to Address:
Does the hospital have the ability to address this problem?
(1 = no ability; 5 = great ability)

Multi-dimensional scaling was applied to the sorting data to examine similarities between the 50 community health problems. Hierarchical clustering was used to group the sorting data into common thematic areas and to establish a final cluster map which provided a visual representation of the data. The final cluster map of the 50 community health problems reflects three thematic areas (See Figure below):

- **Prevention and Healthy Living (16 items)**
- **Chronic Diseases (20 items)**
- **Navigating the Healthcare System (14 items)**

Each of the 50 community health problems are represented in the figure below as a point. The numbers next to each point correspond to the item number. For example, item #31 is High Blood Pressure/Hypertension. The proximity of the points to each other illustrates the group's thoughts about the degree of similarity between the items. For example, item #31 (High Blood Pressure/Hypertension) and item #19 (High Cholesterol) were felt to be very similar. Those two community health problems appear on the right side of the Chronic Diseases cluster.

Final Cluster Map:



For each of the rating criteria, the rating levels were broken into three equal distributions (tertiles) representing high, moderate, and low priority. The cut points for each rating criteria are as follows:

Importance:

Low (1-3.67); Moderate (3.68-4.06); High (4.07-5.0)

Measurable Impact:

Low (1-3.33); Moderate (3.34-3.83); High (3.84-5.0)

Hospital Ability to Address:

Low (1-3.20); Moderate (3.21-3.85); High (3.86-5.0)

Within each cluster, the rating data for each individual community health problem was examined across all three rating criteria. For example, in the Prevention and Healthy Living cluster, the 16 individual community health problems were identified as being low, moderate, or high for the importance, measurable impact, and hospital ability to address rating criteria.

The rating categories results were then combined with results from secondary data analyses and used to identify high priority community health problems for UPMC Passavant. UPMC Passavant leadership next consulted with experts from Pitt Public Health and members of the community advisory council to review the list of high priority community health problems and identify the set of needs that are critical, addressable, and have high levels of urgency in the community. The resulting list constituted the top tier of health problems for the community.