



**Community Health Needs Assessment**  
*And*  
**Community Health Strategic Plan**

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June 30, 2013

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## EXECUTIVE SUMMARY

### *UPMC Horizon Plays a Major Role in its Community:*

UPMC Horizon is a nonprofit, 207-bed acute-care teaching hospital located in Mercer County, Pennsylvania, approximately an hour northwest of Pittsburgh, Pennsylvania. Operating from campuses located in Farrell and Greenville, Pennsylvania, this state-of-the-art hospital delivers a full range of quality medical services—including highly specialized medical and surgical treatment — to the residents of Mercer County.

UPMC Horizon maintains a historically strong connection with its community, and offers an array of community oriented programs and services to improve the health of local residents. An example of the hospital’s continuing involvement with the community is active participation in the Community Health Partnership of Mercer County, one of the Commonwealth of Pennsylvania’s State Health Improvement Programs (SHIP). Across the state, SHIPs help increase broad awareness of public health issues by promoting community-based partnerships and empowering communities to address local health needs.

### *UPMC Horizon in the Community*

*UPMC Horizon employs nearly 1,000 individuals, and has an economic impact of \$200 million*

*UPMC Horizon is the only hospital in Mercer County recognized by the Joint Commission as a Top Performing Hospital in Quality*

*In 2012, the hospital provided \$7.5 million in charity care and unreimbursed amounts from programs for the poor*



*UPMC Horizon 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 2013, UPMC Horizon conducted a Community Health Needs Assessment (CHNA) in keeping with requirements described in section 501(R)(3) of the Internal Revenue Code. The CHNA provided an opportunity for the hospital to engage public health experts and community stakeholders in a formal process to ensure that community benefit programs and resources are focused on significant health needs.

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 rigorous analysis of documented health and socioeconomic factors with a structured community input process, known as “Concept Mapping.”

The CHNA process effectively engaged the community of UPMC Horizon in a broad, systematic way. The process included face-to-face meetings with the Community Advisory Council, as well as use of an online survey tool.

Through the CHNA process, UPMC Horizon identified significant health needs for its particular community. They are:

| Topic                                   | Importance to the Community  |
|---|--|
| <b>Cancer</b>                           | Cancer is a leading cause of death in Mercer County.<br>Cancer screenings can help identify cancer in early stages, when treatment is likely to work best.   |
| <b>Care Coordination and Continuity</b> | Community input gathered through the CHNA process placed significant emphasis on the need for assistance with care coordination and continuity.<br>Medication management can be challenging, especially for elderly living alone. A higher percentage of elderly living alone reside in Mercer County. |

*UPMC is Responding to the Community's Input:*

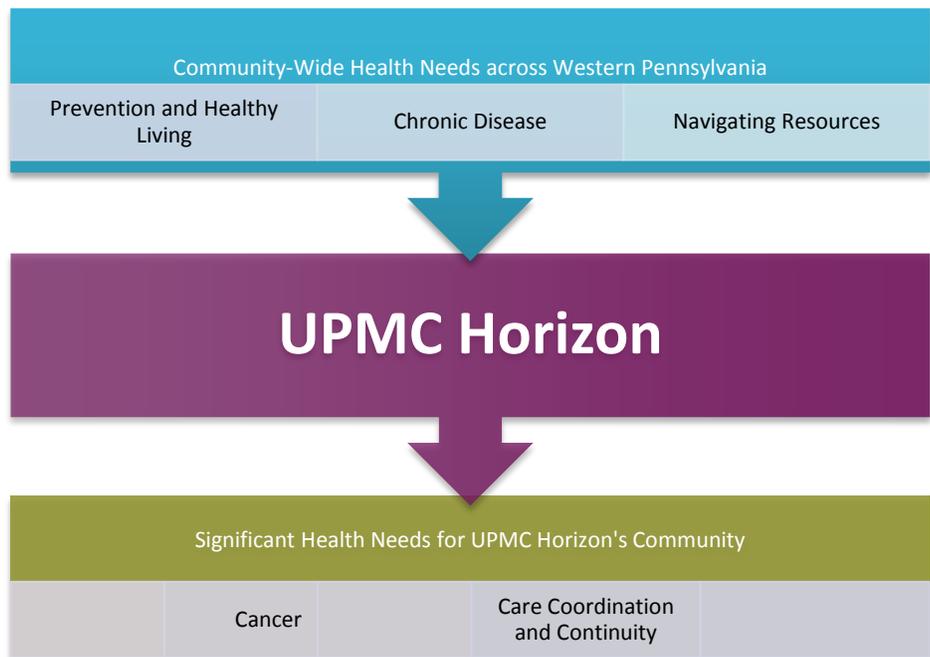
Western Pennsylvania has a diverse range of health needs. Key themes that emerged from the UPMC Horizon CHNA process were consistent with those found through CHNAs conducted at other UPMC hospitals throughout western Pennsylvania. In addition to being relevant to the CHNA, these themes are increasingly 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 Horizon is planning a wide range of initiatives to support prevention and care for chronic disease.
- **Navigating Available Resources:** Many established health care programs in UPMC Horizon'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 Horizon is collaborating successfully with local organizations on improving community health. The hospital will also leverage resources and synergies within the UPMC system, which includes population-focused health insurance products and comprehensive programs and resources targeted at areas including seniors.

*Identifying Significant Health Needs Relevant for the Hospital Community*



## *UPMC Horizon Is Improving Community Health in Measurable Ways:*

On April 30, 2013, the UPMC Horizon Board of Directors adopted an implementation plan to address the identified significant health needs and set measurable targets for improvement over the next three years.

The plan draws support from an array of active and engaged community partners, as well as from the larger UPMC system. Highlights of programs and goals contained in this plan are summarized below.

### *Preventing and Managing Cancer*

**Goal:** Enhance the hospital's programs that address cancer prevention, detection, education, and management, especially those focused on seniors and uninsured populations.

**Collaborating Partners:** Emergency Medical Services (EMS), UPMC Health Plan, local senior centers, religious and educational organizations, national advocacy organizations, civic organizations, Federally Qualified Health Center

- **The UPMC Cancer Center at UPMC Horizon is designated by the American College of Surgeons as a Comprehensive Cancer Center Program and also a Comprehensive Breast Center. Through the center and through partnerships with community organizations, UPMC Horizon will continue to focus on prevention and management of cancer in the community.**
  - » UPMC Horizon will continue to provide services — such as free mammograms — to women who are uninsured to help connect the UPMC Horizon community with cancer screening efforts.
  - » To focus on seniors, UPMC Horizon has engaged with the Greenville Senior Center, and is seeking to establish partnerships with the Mercer County Area Agency on Aging and other local senior organizations, such as the Hermitage Center for Aging and Geriatric Health.

### *Improving Care Coordination and Continuity*

**Goal:** Reduce readmissions through programs that address medication management and care coordination and continuity, including self-management education, follow-up, and unique partnerships in the community.

**Collaborating Partners:** EMS, Federally Qualified Health Center, home care agencies, skilled nursing facilities, primary care providers, area pharmacies

- **UPMC Horizon will offer numerous initiatives to assist community members—particularly those with chronic disease — in helping transition and coordinate the continuity of care.**
  - » Through a unique partnership with area pharmacies, UPMC Horizon provides a 30-day supply of medication to each patient prior to hospital discharge. In addition, the hospital pharmacy staff provides education to ensure that the patient knows how and when to take each medication to maintain compliance.
  - » Congestive heart failure patients are seen by a nurse at least twice during their hospitalization, with reinforcement of educational concepts upon discharge. Education is again delivered to the patient in writing, as well as orally from the nurse, to ensure understanding.

## COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) REPORT

### I. Objectives of a Community Health Needs Assessment

#### *CHNA Goals and Purpose:*

In Fiscal Year 2013, UPMC Horizon conducted a Community Health Needs Assessment (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.

UPMC Horizon 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 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 Horizon:*

UPMC Horizon is a nonprofit, 207-bed acute-care hospital located in Mercer County, Pennsylvania. Operating from campuses located in Farrell and Greenville, Pennsylvania, the hospital offers a full range of quality medical services to the people of the surrounding region. The hospital provides area residents with access to medical, surgical, rehabilitation, and transitional care, as well as cutting-edge medical services not typically found at a local community hospital. Specialized services include telemedicine, CT imaging, diabetes care, MRI, stroke and coronary care, gastroenterology, women's health, and an on-site UPMC CancerCenter. During the Fiscal Year ended June 30, 2012, UPMC Horizon had a total of 9,667 admissions and observations, 36,908 emergency room visits, and 7,293 surgeries.

UPMC Horizon is supported by an active medical staff representing many disciplines. It is also 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. The medical staff is augmented by specialists who travel to Mercer County from Pittsburgh to hold regular office hours and provide inpatient consultations.

## UPMC Horizon in Your Community



UPMC Horizon provides comprehensive medicine and compassionate care to Mercer County and the surrounding areas.

## Quality Care Mercer County Can Count On

- Recognized by the Joint Commission as a **Top Performing Hospital in Quality**, and the only hospital in Mercer County attaining this level of performance excellence.
- An on-site UPMC CancerCenter puts comprehensive cancer care close to home for residents of Mercer County.
- Advanced clinical services are offered to patients of UPMC Horizon with partnerships through Magee-Womens Hospital of UPMC, Children's Hospital of Pittsburgh of UPMC, and UPMC Presbyterian Shadyside.

## UPMC Horizon's Community Service and Community Benefit Initiatives:

- **Subsidizing Care through Charity Care and Shortfalls in Payments from Government Programs for the Poor:** In keeping with UPMC Horizon's commitment to serve all members of its community, the hospital provides certain care regardless of an individual's ability to pay. Avenues for offering care to those who can't afford it include free or subsidized care, and care provided to persons covered by governmental programs when those programs don't cover the full cost.
- **Providing Care for Low Income and Elderly Populations:** Recognizing its mission to the community, UPMC Horizon is committed to serving Medicare and Medicaid patients. In Fiscal Year 2012, these patients represented 62 percent of UPMC Horizon's patient population.
- **Offering Community Health Improvement Programs and Donations:** UPMC Horizon provides services to the community through outreach programs, including referral centers, screenings, and educational classes — all of which benefit patients, patients' families, and the community. Through the 2012 Fiscal Year, the hospital offered nearly 230 community health events, including screenings (blood sugar, breast cancer, and mammograms), flu vaccine distributions, distribution of CPR kits, and support of local events sponsored by the American Cancer Society, American Heart Association, and the American Red Cross. The hospital also provided information and health education for diverse, underserved populations. The estimated cost of these programs, in addition to donations to allied nonprofit partner organizations that enhance UPMC Horizon's community services, was \$4.3 million in Fiscal Year 2012.
- **Anchoring the Local Economy:** With deep roots in the community dating back to 1906, the hospital takes an active role in supporting the local economy through employment, local spending, and strategic community partnerships. A major employer in the area, UPMC Horizon has paid more than \$49.7 million in salaries and benefits to its 977 employees — 81 percent of whom live in the area — and generated a total economic impact of \$200 million in 2012.

## II. Definition of the UPMC Horizon Community

For the purpose of this CHNA, the UPMC Horizon community is defined as Mercer County. With 73 percent of patients treated at UPMC Horizon residing in Mercer County, the hospital primarily serves residents of this geographic region. By concentrating on the county, UPMC Horizon 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 Horizon Live in Mercer County*

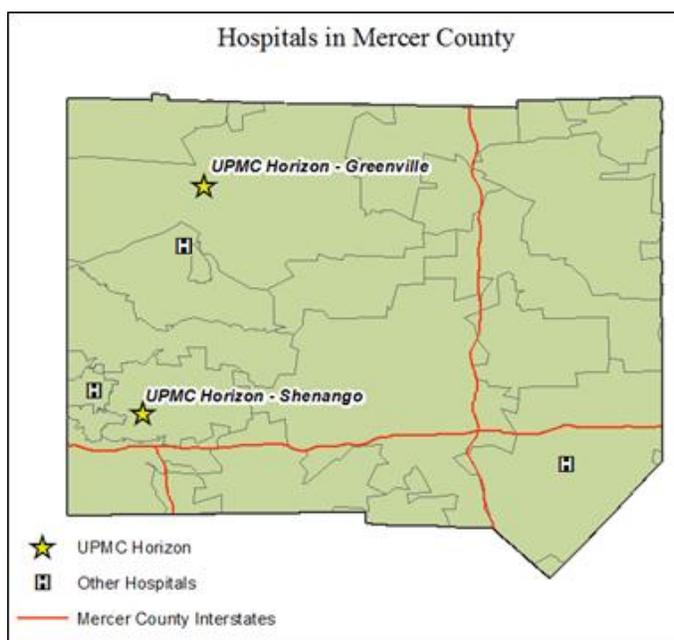
| County                    | UPMC Horizon % | Medical Surgical Discharges |
|---------------------------|----------------|-----------------------------|
| Mercer County             | 72.7%          | 4,874                       |
| All Other Regions         | 27.3%          | 1,826                       |
| Total Hospital Discharges | 100%           | 6,700                       |

*Source: Pennsylvania Health Care Cost Containment Council, FY2012*

The hospital campuses are situated in the southwestern and northwestern regions of Mercer County, which is located in Pennsylvania and includes portions that are rural. While the county represents the basic geographic definition of UPMC Horizon’s community, this CHNA also considered specific focus areas within the hospital’s immediate geographic “service area.” Small “focus area” analyses were conducted to identify geographical areas within the county, as well as areas of concentration with potentially higher health needs — such as areas with high minority populations, low per-capita incomes, and areas with historically distinct health needs. Health data reflecting Zip Codes of neighborhoods within the service area was also analyzed.

### *Existing Healthcare Resources in the Area:*

UPMC Horizon is the only UPMC licensed hospital and one of four total licensed hospitals in Mercer County.



In the immediate service area, UPMC Horizon is supported by more than 60 UPMC outpatient offices and other UPMC facilities located in the county. These facilities include three UPMC CancerCenters, an Urgent Care Center, three Centers for Rehabilitation Services sites, seven Imaging Centers, a Magee-Womens Hospital of UPMC satellite office, a Children’s Hospital of Pittsburgh of UPMC satellite office, and 47 pediatric, primary, and specialty care doctor’s offices.

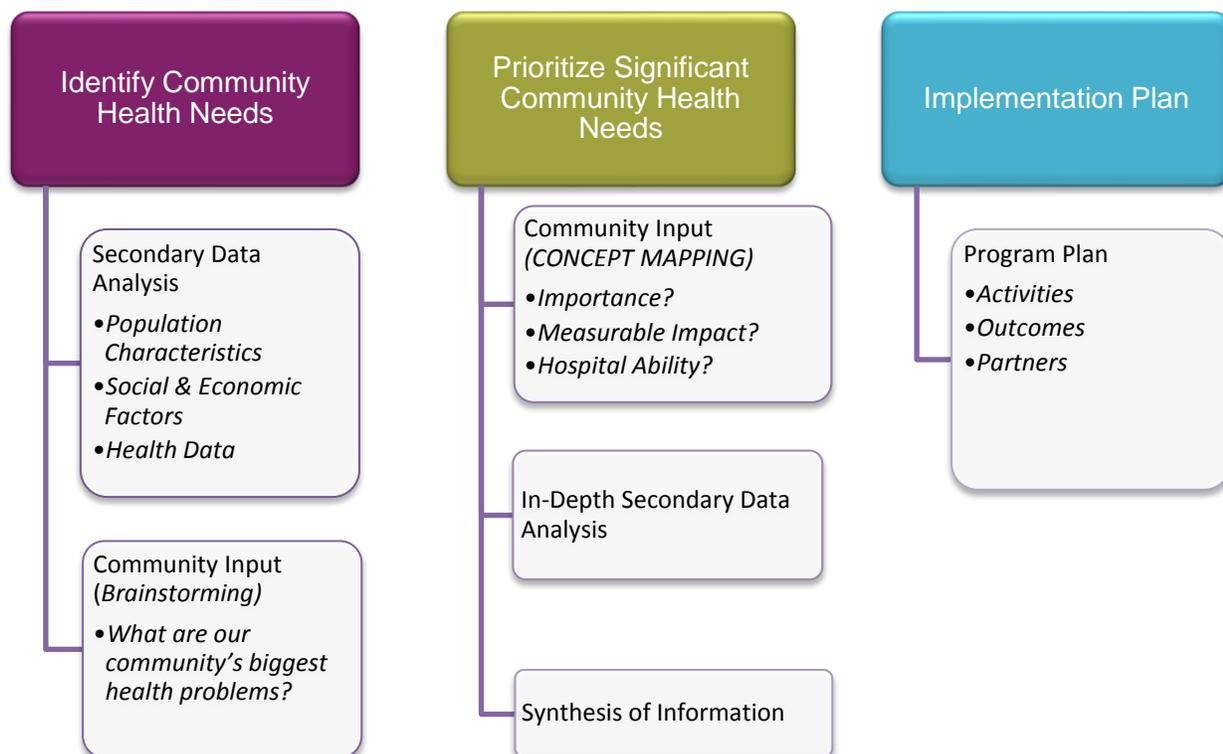
## III. Methods Used to Conduct the Community Health Needs Assessment

### Overview

In conducting this CHNA, 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 ensured that the CHNA was undertaken using a structured process for obtaining community input on health care needs and perceived priorities, and that analysis leveraged best practices in the areas of evaluation and measurement.

### 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 — with assistance of faculty from Pitt Public Health — conducted an analysis of publicly available data. Secondary data — including population demographics, mortality, morbidity, health behavior, clinical care, and physical environment 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.<br>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  | 2007 - 2009 data collected and compared by neighborhood, county, state and nation.   | PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics; |
|                           | Cancer  |  |   |
|                           | Mental Health   |  |   |
|                           | Asthma (Childhood)  |  |   |
|                           | Birth Outcomes  |  |   |
| Health Behaviors Data     | Obesity (Childhood and Adult)   |  | US Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System;  |
|                           | Alcohol Use   |  |   |
|                           | Tobacco Use   |  |   |
|                           | Sexually Transmitted Disease  |  |   |
| Clinical Care Data        | Immunization  |  | 2007 - 2009 data collected and compared by county, state and nation.<br>2011 County Health Rankings by County.                    |
|                           | Cancer Screening (breast/colorectal)                                      |  |   |
|                           | Primary Care Physician Data   | U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System;   |   |
| 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   |
|                           |   |  |   |
| Physical Environment Data | Access to Healthy Foods   | 2011 County Health Rankings by County.   | Robert Wood Johnson Foundation County Health Rankings   |
|                           | Access to Recreational Facilities   |  |   |

### *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. The CHNA 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. 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. (See Appendix C for more information on Concept Mapping.)

To gather community input, the hospital convened a community advisory council to provide broad-based input on health needs present in the hospital's surrounding community. UPMC also convened a community focus group for the purpose of discussing the overarching needs of the larger region served by UPMC's 13 licensed Pennsylvania hospitals. 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 Appendix D for a more complete list and description of community participants)**

The Concept Mapping process consisted of two 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 in order 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?

## *Synthesis of Information and Development of Implementation Plan:*

The Concept Mapping results were merged with results gathered from the analysis of publicly available data. In the final phase of the process, UPMC hospital leadership consulted with experts from Pitt Public Health, as well as the community advisory council, to identify 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, identified by Pitt Public Health**
- **Existing hospital community health programs**
- **Programs and partners elsewhere in the community that can be supported and leveraged**
- **Enhanced data collection concerning programs, again with the consultation of Pitt Public Health**
- **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:*

**Parts of Mercer County are Rural:** With a population of 116,638, and a population density of 173.4 residents per square mile, areas of Mercer County are relatively rural.

**Sizable Elderly Population with High Social Needs:** A notable characteristic of Mercer County is the large and increasing percentage of elderly residents (age 65 and over). Mercer County has a large elderly population (19 percent) compared to Pennsylvania (15 percent) and the United States (13 percent). A higher percentage of elderly in Mercer County live alone, compared with Pennsylvania and the United States. 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).

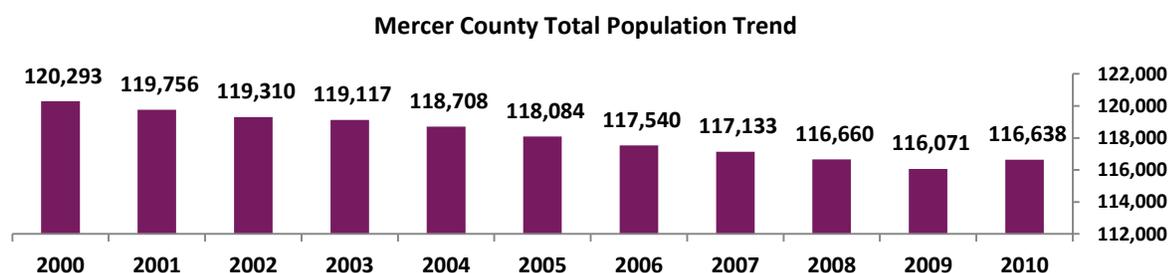
### *Mercer County Has a Sizable Elderly Population*

| Age Distribution - 2010 |               |              |               |
|-------------------------|---------------|--------------|---------------|
|                         | Mercer County | Pennsylvania | United States |
| Median Age              | 42.8          | 40.1         | 37.2          |
| % Children (<18)        | 21.6%         | 22.0%        | 24.0%         |
| % 18-64                 | 59.9%         | 62.6%        | 63.0%         |
| % 20-49                 | 35.4%         | 39.0%        | 41.0%         |
| % 50-64                 | 21.3%         | 20.6%        | 19.0%         |
| % 65+                   | 18.5%         | 15.4%        | 13.0%         |
| % 65-74                 | 8.8%          | 7.8%         | 7.0%          |
| % 75-84                 | 6.6%          | 5.4%         | 4.3%          |
| % 85+                   | 3.1%          | 2.4%         | 1.8%          |
| % Elderly Living Alone  | 13.9%         | 11.4%        | 9.4%          |

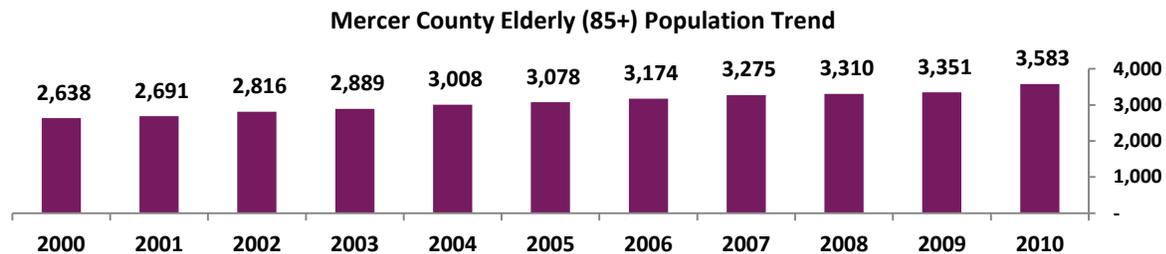
Source: U.S. Census

**Total Population Stable in Mercer County but Aging Population Increasing:** Although the population has remained stable since 2000, the county's most elderly population increased significantly (see figure below).

*Mercer County's total population has seen a 3 percent decrease from 2000 to 2010*



However, the most elderly population in Mercer County (85+) has seen a 36 percent increase from 2000 to 2010



Source: U.S. Census

**Medically Underserved Areas in Mercer County:** When compared to the Commonwealth of Pennsylvania and the nation, the overall population of Mercer County faces some economic challenges. Mercer County tends to have:

- **A lower median household income**
- **More residents in poverty**

| Social and Economic Population Demographics           |               |              |               |
|---|---------------|--------------|---------------|
|   | Mercer County | Pennsylvania | United States |
| Median Household Income                               | \$40,398      | \$49,288     | \$50,046      |
| Percent in Poverty (among families)                   | 16.7%         | 13.4%        | 15.3%         |
| Percent with No High School Diploma (among those 25+) | 11.8%         | 11.6%        | 14.4%         |
| Percent Unemployed (among total labor force)          | 10.0%         | 9.6%         | 10.8%         |
| Racial Groups   |               |              |               |
| Percent White   | 91.6%         | 81.9%        | 72.4%         |
| Percent African-American                              | 5.8%          | 10.8%        | 12.6%         |
| Percent Other Race                                    | 2.6%          | 7.3%         | 15.0%         |

Source: U.S. Census

In addition, areas in Mercer County are recognized by the federal government as being Medically Underserved Areas (MUA).

**Federally Designated Medically Underserved Areas:** Neighborhoods close to UPMC Horizon have characteristics of populations considered more likely to experience health disparities. In particular, the communities of Sharon (Zip Code 16146) and Farrell (Zip Code 16121) compared to Mercer County, had a lower median household income, higher percentage of families living in poverty, and higher percentage of residents with no high school diploma and who were unemployed. Sharon and Farrell are also federally designated as Medically Underserved Areas, and are both located in Mercer County.

The following factors are considered in the determination of MUAs:

- A high percentage of individuals living below the poverty level
- High percentages of individuals over age 65
- High infant mortality
- Lower primary care provider to population ratios

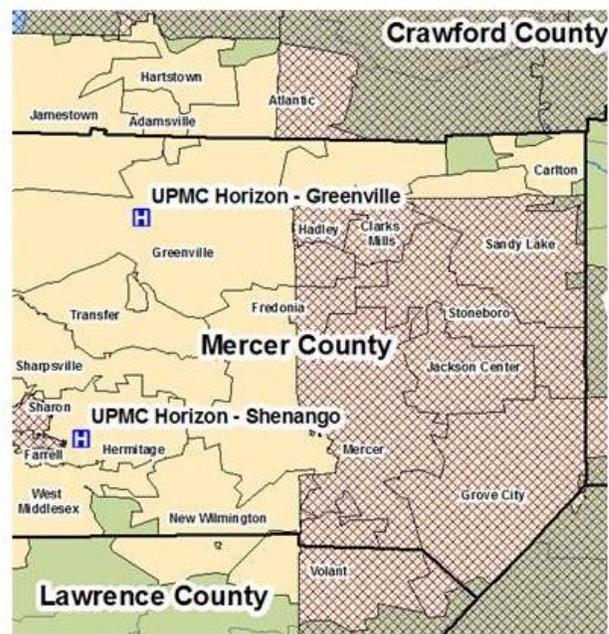
**Federally Designated Health Professional Shortage Areas:** The eastern part of Mercer County is federally designated as a Health Professional Shortage Area. The designation is based on the ratio of the population to the number of primary care providers. The ratio of providers to population in Mercer County is 1:2,047 which was lower than the ratio for Pennsylvania, 1:1,067.

*Federally Designated Medically Underserved Areas in Mercer County*



 UPMC Horizon Service Area with Medically Underserved Areas (MUA)

*Federally Designated Health Professional Shortage Areas in Mercer County*

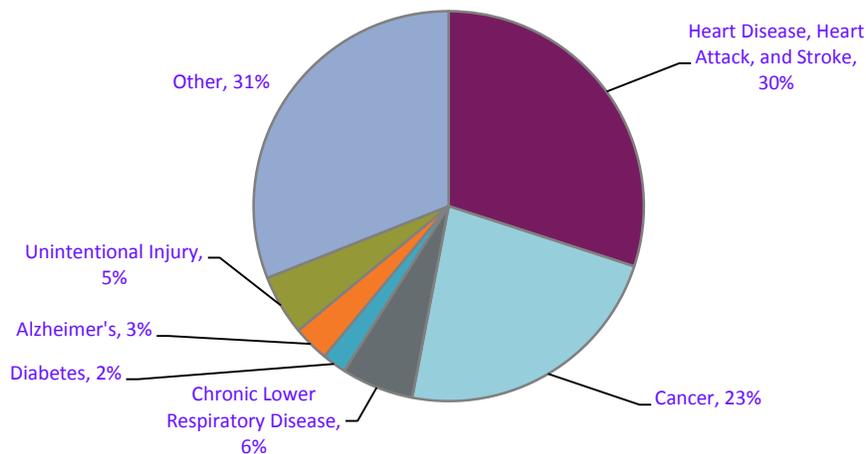


 UPMC Horizon Service Area with Health Professional Shortage Areas (HPSA)

Source: Health Resources and Services Administration

## *Chronic Disease and Mortality:*

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



*Source: Pennsylvania Department of Health, 2009*

## *Significant Health Needs for UPMC Horizon'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:

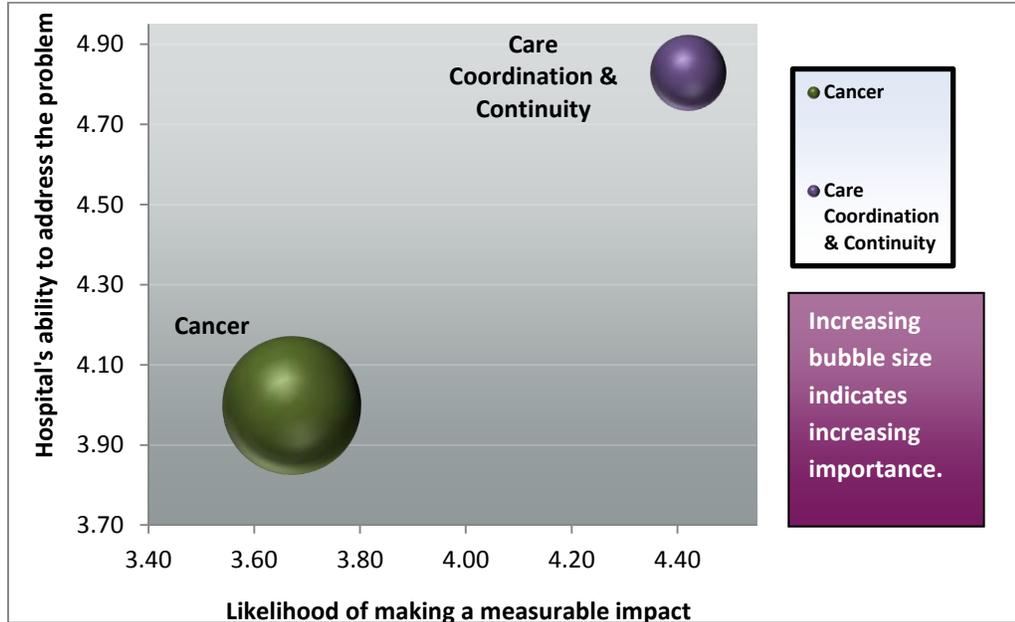
- Chronic Disease
- Prevention and Healthy Living
- Navigating Resources

For UPMC Horizon 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:

- **Cancer**
- **Care Coordination and Continuity**

The following illustration depicts where these significant health needs ranked within the criteria considered. Please note: metrics are rated on a Likert scale of 1 through 5.

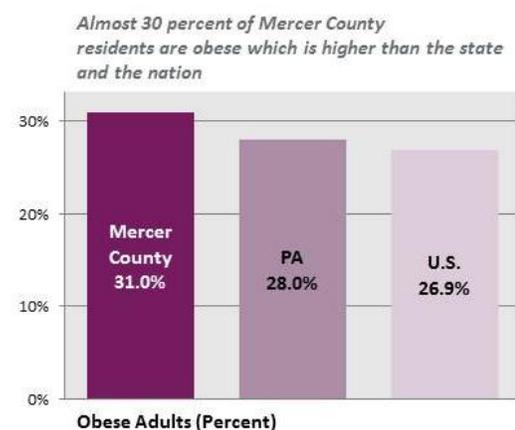
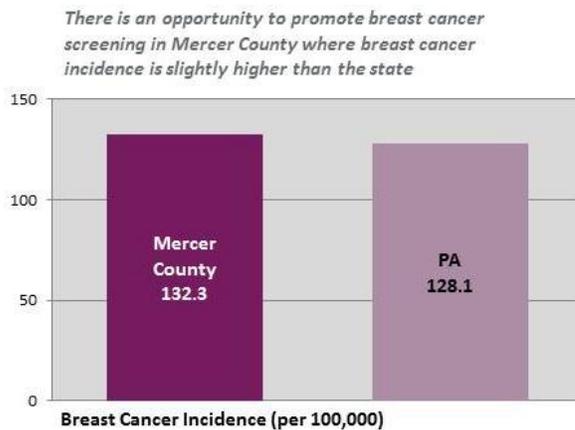
## UPMC Horizon Significant Health Needs



In-depth secondary data analysis reinforced that these health topics were areas of concern for the UPMC Horizon community. The secondary data findings are illustrated below:

### Cancer – Importance to the Community

- Cancer is a leading cause of death in Mercer County, as well as in the state and nation.
- In Mercer County, 23 percent of deaths are due to cancer.
- Cancer incidence is slightly higher in Mercer County, compared to Pennsylvania.
- Cancer screenings can help identify cancer in early stages when treatment is likely to work best.



Source: Pennsylvania Department of Health, 2007-2009; U.S. Centers for Disease Control and Prevention, 2009.

**Cancer affects many people:** Cancer is also a leading cause of death, both in the United States and in Mercer County. Nearly 570,000 deaths in the United States are due to cancer, and nearly 1,366 individuals died of cancer in 2009 in Mercer County. Similar to national data, cancer deaths contributed to 23 percent of all deaths, both nationally and in Mercer County. Not only is cancer a leading cause of death, but a large number of individuals were newly diagnosed with cancer in 2009—over 900 individuals.

**Healthy behaviors, such as cancer screenings and maintaining a healthy weight, can help reduce one’s cancer risk, but these behaviors are lower in some sub-populations within Mercer County:** Through early detection, cancer screenings help delay progression or worsening of cancer. Breast cancer incidence for Mercer County in 2007-2009 was slightly higher than the state. Maintaining a healthy weight can also help reduce cancer risk. A high percentage of Mercer County residents were overweight or obese (68 percent), and a disproportionately higher percentage was observed in men (75 percent), those age 45-64 years of age (73 percent), and those earning less than \$25,000 to \$50,000 (72-74 percent). Due to small sample sizes, data are not reported by racial groups, other than White.

### *Navigating Existing Resources – Importance to the Community*

**Care Coordination and Continuity:** The community identified navigating existing resources, specifically care coordination and continuity, as a significant health need for UPMC Horizon. Although local publicly available data are limited on this topic, qualitative information collected during the CHNA process and focus groups placed significant emphasis on the need for assistance with care coordination and continuity, such as medication management and compliance. Medication management can be particularly challenging for certain subgroups. In particular, elderly living alone, those whose medication is complex (e.g., more than 5 medications), and those with chronic disease — especially depression — may have more challenges in managing and complying with their medication. Given the demographic characteristics of Mercer County, there is opportunity to address care coordination and continuity, and to improve awareness of medication management.

## V. Overview of the Implementation Plan

### *Overview:*

UPMC Horizon has 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 who 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 30, 2013 the UPMC Horizon Board of Directors adopted an implementation plan to address the significant health needs:

- **Cancer**
- **Care Coordination and Continuity**

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

### *High-Level Overview of UPMC Horizon Implementation Plan*

| Topic                                   | Goal  | Collaborating Community Partners   |
|---|---|--|
| <b>Cancer</b>                           | Improve existing programs that address cancer prevention and education, detection, and management, specifically through strengthening programs focused on vulnerable populations such as seniors and the uninsured.   | EMS<br>UPMC Health Plan<br>Aging Institute of UPMC<br>Senior Services & the University of Pittsburgh<br>Local Senior Centers         |
| <b>Care Coordination and Continuity</b> | Reduce readmissions at UPMC Horizon through programs that address medication management and care transitions which includes education on post-discharge instructions, follow-up calls from a nurse, and medication management in partnership with local pharmacies. | Religious & Educational Organizations<br>National Advocacy Organizations<br>Civic Organizations<br>Federally Qualified Health Center |

## VI. APPENDICES

### APPENDIX A: Detailed Community Health Needs Assessment Implementation Plans

#### *Priority Health Issue: Addressing Cancer*

**Cancer is a priority in UPMC Horizon's community:** Cancer is the second leading cause of death in the UPMC Horizon community, as well as in the state and nation. For women, lung and breast cancers are the most common cause of cancer deaths. Other types of cancer prevalent in UPMC Horizon's community are colorectal cancer in both men and women, and prostate cancer in men. Although there are cancer risk factors that cannot be avoided, such as age and family history, there are many behaviors that can help prevent cancer. These behaviors include sun safety, tobacco avoidance, maintaining a healthy weight, good nutrition, and physical activity. Early detection is also important. Recommended screenings help identify cancer in its early stages when treatment is likely to be more effective. Awareness of these issues is specifically important in aging and senior populations, as incidence and mortality rates due to cancer begin to rise with age.

**UPMC Horizon is addressing this issue:** The UPMC Cancer Center at UPMC Horizon is an accredited cancer center and is designated by the American College of Surgeons as a Comprehensive Community Cancer Program, as well as a Comprehensive Breast Center. UPMC Horizon offers many programs in the hospital and in the community aimed at cancer prevention and education, including preventive screenings, as well as cancer management and support groups.

**UPMC Horizon plans to do more to focus on this priority:** UPMC Horizon will continue to offer existing programs addressing prevention, early detection, and management of cancer, and will expand these programs through increased promotion and leverage of community partnerships. In an effort to focus on seniors, UPMC Horizon has engaged with the Greenville Senior Center and would like to establish partnerships with the local Area Agency on Aging and other local senior organizations, such as the Hermitage Center for Aging and Geriatric Health.

| Cancer                               |   |   |  |   |
|--------------------------------------|---|---|--|---|
| Program                              | Activities  | Outcomes  | Target Population  | Partners  |
|                                      |   | Goal-Year 3   |  |   |
| <b>Cancer Prevention Initiatives</b> | <p>Utilize the Prevention Sub-Committee to oversee the following initiatives:</p> <p>Speakers Bureau: Present topics relevant to current health care problems and healthy behaviors.</p> <p>Community Lectures Series: Provide health related topics onsite (Womancare Center, Hermitage, Shenango Campus, Farrell, Greenville Campus, Greenville).</p> <p>Community Events: Participate in community events w/local partners to inform residents of UPMC Horizon Services, offer screenings &amp; provide health education material.</p> <p>Annual Comprehensive Health Fair at UPMC Horizon Womancare Center: Provide general health information for all ages along with comprehensive diagnostics for targeted populations with associated risk factors.</p> <p>Create key messages identified through community event programs.</p> | <ul style="list-style-type: none"> <li>• <b>Increase or maintain attendance at programs.</b></li> <li>• <b>Incorporate feedback from surveys into programs.</b></li> </ul>  | <p>All demographics, including: Men and women ages 50+&gt;People w/risk factors (family history, smoking, etc.).Seniors.</p> <p>Low Income.</p>  | <p>Schools, housing facilities for seniors, Chamber’s of Commerce, civic and social groups, social-service organizations, churches, government related entities, local primary care physicians, specialists, hospitalists, Primary Health Network, tertiary specialists (HVI, Stroke Institute, etc.) , businesses, local radio stations,</p> <p>various departments within UPMC Horizon including outpatient services, lab, hospitalists, local AAA, senior centers.</p> |
| <b>Cancer Screenings</b>             | <p>Provide prostate screenings during the month of September (prostate cancer awareness month).</p> <p>Provide breast cancer screening during the month of October.</p> <p>Provide free mammograms to uninsured/underinsured women through Community Health Partnership of Mercer County and Family Planning. Promote free screenings.</p> <p>Initiate outreach to local primary care physicians and specialists to encourage patients to have a colorectal screening.</p>  | <ul style="list-style-type: none"> <li>• <b>Increase or maintain prostate screenings, mammograms, and colorectal screenings.</b></li> <li>• <b>Promote free mammogram program and begin to track number of mammograms.</b></li> </ul> | <p>Men 55+ (prostate screening, following ACS guidelines).</p> <p>Women 50+, low income women/Farrell, uninsured/underinsured women, minorities and (mammograms).</p> <p>Men and women 50+, individuals with family history of CRC, seniors (colorectal screenings).</p> | <p>ACS, CHPMC, CMI &amp; ERMI, Lab, Womancare Center, Shenango Valley Urban League, Shenango Valley Ministerium, Family Planning, CHPMC, Magee-Womens Hospital of UPMC, Womancare Center Radiology, CHPMC, Sharon Regional Health System, Grove City Medical Center, Primary Health Network, PA DOH, Area Agency on Aging, ASC local AAA, senior centers.</p>   |

| Cancer                |   |   |                   |  |
|-----------------------|---|---|-------------------|--|
| Program               | Activities  | Outcomes  | Target Population | Partners   |
|                       |   | Goal-Year 3   |                   |  |
| Cancer Support Groups | <p><b>Look Good Feel Better program:</b> Provide free program that helps women cancer patients improve their self-image by teaching them hands on beauty techniques to manage effects of chemotherapy and radiation.</p> <p><b>Reach to Recovery:</b> Provide support program for women with breast cancer (in partnership with the ACS).</p> <p>Promote programs within CMI and Primary Health Network.</p> <p>Offer programs to women diagnosed with cancer</p> | <ul style="list-style-type: none"> <li>• Improve awareness of chronic conditions.</li> <li>• Increase participation in programs.</li> </ul> | Cancer patients.  | ACS, AHA, Sharon Regional Health System, American Cancer Society, local AAA, senior centers. |

### Priority Health Issue: Addressing Care Coordination and Continuity

**Care coordination and continuity is a priority in UPMC Horizon’s community:** The term “care transition” describes a continuous process in which a patient's care shifts from being provided in one setting of care to another, such as from a hospital to a patient's home or a skilled nursing facility. The Institute of Medicine notes in its report, *Crossing the Quality Chasm*, that on a national level, when patients experience care transitions, they often receive little information on how to proceed after the transition. This lack of information can contribute to the diminished health of the patient. Patients often lack information about when to resume normal activities, medication side effects, and where to get answers to questions they might have. These issues can be even harder to navigate for seniors, who are more likely to be living with chronic disease. Addressing the coordination of care, particularly at the time of transition, and ensuring the quality of care with standards and protocols, can help to prevent patients’ conditions from worsening and decrease the number of patients who are readmitted to the hospital.

**UPMC Horizon is addressing this issue:** UPMC Horizon currently offers numerous initiatives to address coordination of care transitions and continuity. Many of these programs focus on patients with chronic disease, which is the leading cause of death in the UPMC Horizon community. One chronic disease Horizon has focused on is congestive heart failure.

**UPMC Horizon plans to do more to focus on this priority:** UPMC Horizon plans to continue its initiatives focused on care coordination and continuity, and to expand these initiatives by educating more providers about standards and protocols, potentially making e-records available to area skilled nursing facilities to improve the ease of transition, and continuing to strive to reduce readmissions.

| Care Coordination and Continuity          |  |  |  |   |
|---|--|--|--|---|
| Program                                   | Activities   | Outcomes   | Target Population  | Partners  |
|   |  | Goal-Year 3  |  |   |
| <b>Care Coordination for CHF Patients</b> | <p>Work with paramedics and ambulance service managers to improve treatment time for cardiac patients.</p> <p>Provide education to CHF patients at least twice during their hospitalization.</p> <p>Upon discharge, reinforce educational concepts orally and in writing as part of the discharge instructions.</p> <p>Schedule a follow up appointment with the patient's PCP prior to discharge (the Primary Care Nurse Coordinator schedules appointment).</p> <p>Contact CHF patients 2+ times post-discharge for clinical follow-up.</p>  | <ul style="list-style-type: none"> <li>• <b>Reduce readmissions, to meet or exceed CMS guidelines.</b></li> </ul>    | Patients with congestive heart failure.                                  | Local EMS, EMMCO West (regional EMS Council), Primary Health Network, hospitalist, primary care provider, home care agencies. |
| <b>Medication Management</b>              | <p>Provide medication education with discharge instructions and follow-up with patients to prevent readmissions.</p> <p>Provide patients with Care Transitions Record- My UPMC Safe Discharge which includes active issues, current medications and allergies, advance care directives, and a list of red flag/warning symptoms that correspond to the patient's chronic illness.</p> <p>Meet with pharmacies to assess the feasibility of providing 30 day supply of medications to patients prior to discharge from the hospital. Pharmacy staff will provide medication education prior to discharge.</p> | <ul style="list-style-type: none"> <li>• <b>Reduce readmission rate to meet or exceed CMS guidelines.</b></li> </ul> | Patients with chronic disease or specifically, congestive heart failure. | Home care, primary care providers, SNFs, Primary Health Network, hospitalist, area pharmacies.                                |

## Outcomes and Evaluation of Hospital Implementation Plans

UPMC engaged with researchers from Pitt Public Health at the University of Pittsburgh 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 county rankings compiled by the Robert Wood Johnson Foundation.

The following table identifies measurable process outcomes and related health impact indicators proposed by Pitt Public Health. Some of the outcomes indicators, particularly the process outcomes, may be impacted in short time frames, such as the three-year span of a Community Health Needs Assessment cycle. Others, including many of the health impact indicators, are not expected to change significantly over the short-term.

|   | Process Outcomes<br>(Hospital/Partner Delivery of Services)   | Health Impact Outcomes<br>(Changes in Population Health)  |
|---|---|---|
| <b>Cancer Prevention and Education</b>                      | <i>Increase—</i><br>Mammograms to un- and underinsured<br>Colonoscopy access and outreach   | <i>Decrease—</i><br>Initial physician contact for patients with advanced disease<br>Breast cancer mortality<br>Colon cancer mortality |
| <b>Care Coordination Post-Discharge and Post-ED Episode</b> | <i>Increase—</i><br>Patient and family self-management through EMS contact<br>Follow-up after ED discharge (assistance with medication, discharge plan compliance, and home safety) | <i>Decrease—</i><br>Hospital readmissions<br>Frequent ED use  |

## APPENDIX B: Detailed Community Health Needs Profile

### Population Demographics:

| Characteristics                           | Mercer County | Pennsylvania | United States |
|---|---------------|--------------|---------------|
| Area (sq. miles)                          | 672.58        | 44,742.70    | 3,531,905.43  |
| Density (persons per square mile)         | 173.4         | 283.9        | 87.4          |
| Total Population, 2010                    | 116,638       | 12,702,379   | 308,745,538   |
| Total Population, 2000                    | 120,293       | 12,281,054   | 281,424,600   |
| Population Change ('00-'10)               | -3,655        | 421,325      | 27,320,938    |
| Population % Change ('00-'10)             | -3.0%         | 3.4%         | 9.7%          |
| <b>Age</b>                                |               |              |               |
| Median Age                                | 42.8          | 40.1         | 37.2          |
| % <18                                     | 21.6%         | 22.0%        | 24.0%         |
| % 18-44                                   | 31.3%         | 34.3%        | 36.5%         |
| % 45-64                                   | 28.6%         | 28.1%        | 26.4%         |
| % >65+                                    | 18.5%         | 15.4%        | 13.0%         |
| % >85+                                    | 3.1%          | 2.4%         | 1.8%          |
| <b>Gender</b>                             |               |              |               |
| % Male                                    | 49.0%         | 48.7%        | 49.2%         |
| % Female                                  | 51.0%         | 51.3%        | 50.8%         |
| <b>Race/Ethnicity</b>                     |               |              |               |
| % White*                                  | 91.6%         | 81.9%        | 72.4%         |
| % African-American*                       | 5.8%          | 10.8%        | 12.6%         |
| % American Indian and Alaska Native*      | 0.1%          | 0.2%         | 0.9%          |
| % Asian*                                  | 0.6%          | 2.7%         | 4.8%          |
| % Native Hawaiian/Other Pacific Islander* | 0.0%          | 0.0%         | 0.2%          |
| % Hispanic or Latino**                    | 1.1%          | 5.7%         | 16.3%         |
| <b>Disability</b>                         | 15.9%         | 13.1%        | 11.9%         |

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

Source: US Census

## Social and Economic Factors:

| Characteristics                                  | Mercer County | Pennsylvania | United States |
|--|---------------|--------------|---------------|
| Income, Median Household                         | \$40,398      | \$49,288     | \$50,046      |
| Home Value, Median                               | \$98,700      | \$165,500    | \$179,900     |
| % No High School Diploma*                        | 11.8%         | 11.6%        | 14.4%         |
| % Unemployed**                                   | 10.0%         | 9.6%         | 10.8%         |
| % of People in Poverty                           | 16.7%         | 13.4%        | 15.3%         |
| % Elderly Living Alone                           | 13.9%         | 11.4%        | 9.4%          |
| % Female-headed households with own children <18 | 6.5%          | 6.5%         | 7.2%          |
| Health Insurance                                 |               |              |               |
| % Uninsured                                      | 11.3          | 10.2         | 15.5          |
| % Medicaid                                       | 13.7          | 13.1         | 14.4          |
| % Medicare                                       | 13.6          | 11.2         | 9.3           |

\*Based on those ≥25 years of age; \*\*Based on those ≥16 years and in the civilian labor force

Source: US Census

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

| Causes of Death                             | Mercer 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                           | 25.5                    | 25.9                    | 24.6                    |
| Malignant Neoplasms                         | 24.1                    | 23.1                    | 23.3                    |
| Chronic Lower Respiratory Diseases          | 7.0                     | 5.2                     | 5.6                     |
| Cerebrovascular Diseases                    | 4.5                     | 5.5                     | 5.3                     |
| Unintentional Injuries                      | 4.8                     | 4.4                     | 4.8                     |
| Alzheimer's Disease                         | 4.2                     | 2.9                     | 2.8                     |
| Diabetes Mellitus                           | 2.6                     | 2.6                     | 2.2                     |
| Influenza and Pneumonia                     | 2.1                     | 2.0                     | 2.0                     |
| Nephritis, Nephrotic Syndrome and nephrosis | 2.1                     | 2.4                     | 1.5                     |
| Intentional Self-Harm (Suicide)             | 1.0                     | 1.3                     | 1.5                     |

Source: Pennsylvania Department of Health, 2009; National Center for Health Statistics, 2011

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

| Characteristics   | Mercer County | Pennsylvania | United States | Healthy People 2020 |
|---|---------------|--------------|---------------|---------------------|
| <b>Morbidity</b>  |               |              |               |                     |
| Diabetes (%)  | 10.0          | 9.0          | 8.0           | NA                  |
| Mental Health (Mental health not good ≥1 day in past month) (%) | 32.0          | 35.0         | NA            | NA                  |
| Low Birthweight (% of live births)                              | 7.1           | 8.4          | 8.2           | 7.8                 |
| <b>Health Behaviors</b>   |               |              |               |                     |
| Obesity (Adult) (%)   | 31.0          | 28.0         | 26.9          | 30.6                |
| Excessive Alcohol Use (%)                                       | 12.0          | 17.0         | 15.8          | 24.4                |
| Current Tobacco Use (%)   | 22.0          | 20.0         | 17.9          | 12.0                |
| STDs(Gonorrhea per 100,000)*                                    | 118.5         | 103.8        | 285           | 257                 |
| <b>Clinical Care</b>  |               |              |               |                     |
| Immunization: Ever had a Pneumonia Vaccination, 65+ (%)         | 70            | 70           | 68.6          | 90                  |
| <b>Cancer Screening</b>   |               |              |               |                     |
| Mammography (%)   | NA            | 63.0         | 75.0          | 81.1                |
| Colorectal Screening (%)  | NA            | 63.0         | 65.0          | 70.5                |
| Primary Care Physician: Population (Ratio)                      | 1:2,047       | 1:1,067      | NA            | NA                  |
| Receive Prenatal Care in First Trimester (%)                    | 72.9          | 70.9         | 71.0          | 77.9                |
| <b>Physical Environment</b>                                     |               |              |               |                     |
| Access to Healthy Foods (%)                                     | 73            | 57           | NA            | NA                  |
| Access to Recreational Facilities                               | 7             | 12           | NA            | NA                  |

**Sources:**

*Mercer County Data: Pennsylvania Department of Health, 2007-2009. Behavioral Risk Factor Surveillance System includes Mercer County, Crawford County, Lawrence County, Venango County; Pennsylvania Department of Health, EPIQMS, 2009, 2007-2009; Robert Wood Johnson County Health Rankings, 2011.*

*Pennsylvania Data: Pennsylvania Department of Health, 2009; Robert Wood Johnson County Health Rankings, 2011*

*U.S. Data: U.S. Centers for Disease Control and Prevention, 2009. Healthy People, 2020; National Center for Health Statistics. 2011.*

*\*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: Concept Mapping Methodology**

### **Overview:**

UPMC Horizon, 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 their 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 UPMC Horizon:*

UPMC Horizon 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 Horizon 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 list 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 Horizon community.

The UPMC Horizon 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 elderly (30)                   | Senior health and caring for aging population (40)        | Environmental health (50)  |

## *Sorting and Rating – Prioritizing Health Needs:*

The UPMC Horizon 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?

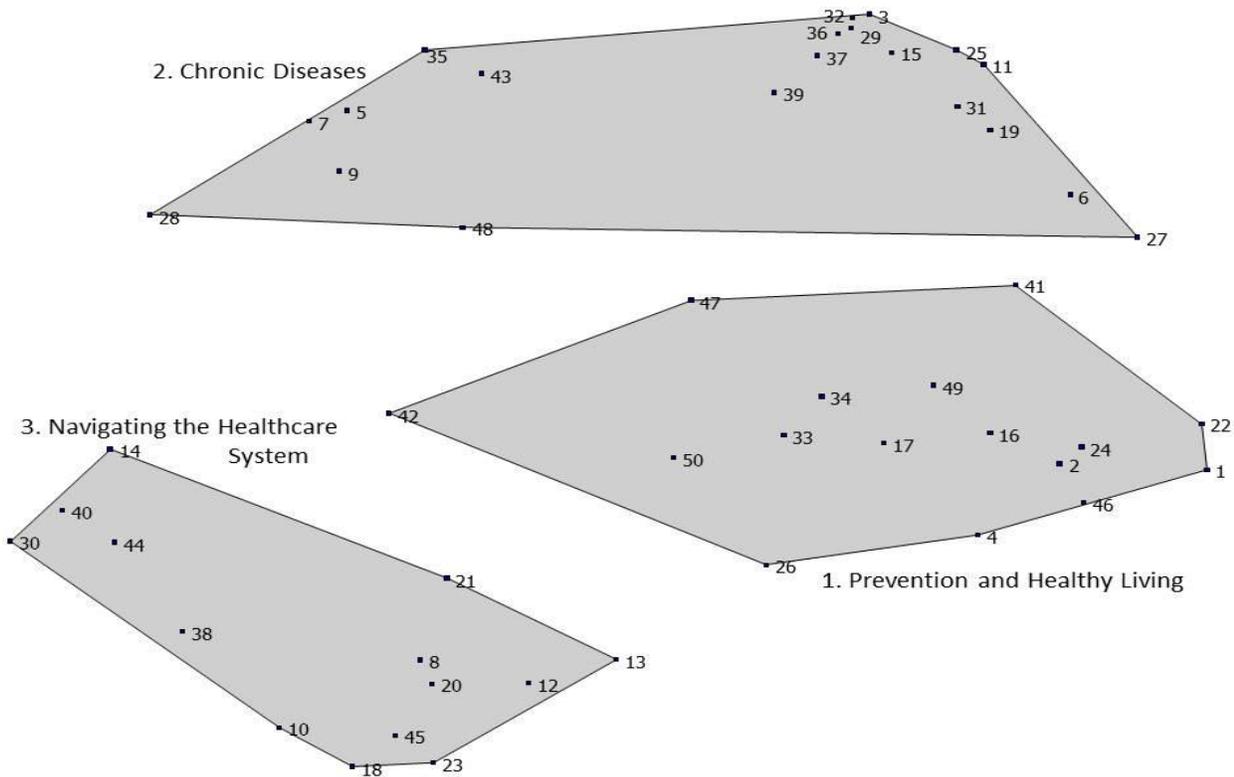
(1 = no ability; 5 = great ability)

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 thoughts about the degree of similarity between the items. For example, the 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 Horizon. UPMC Horizon 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.

## **APPENDIX D: Community Participants**

To ensure the CHNA was conducted in a rigorous manner reflecting best practices, UPMC sought support and expertise from individuals and organizations with expertise in public health. UPMC engaged with the University of Pittsburgh Graduate School of Public Health (Pitt Public Health) to:

- **Develop a framework to itemize and prioritize community health needs based on review and analysis of secondary data on community health**
- **Obtain community input on health needs and perceived health care priorities through a consistent, structured process**
- **Develop implementation strategies that leverage best practices in evidence-based community health improvement**
- **Establish evaluation and measurement criteria to monitor results of implemented efforts**

The following individuals from Pitt Public Health participated in the CHNA process:

- **Steven M. Albert, PhD, MPH, Professor and Chair – Department of Behavioral and Community Health Sciences, Pittsburgh, PA**
- **Jessica G. Burke, PhD, MHS, Associate Professor - Department of Behavioral and Community Health Sciences, Pittsburgh, PA**
- **Donna Almario Doebler, DrPH, MS, MPH, Visiting Assistant Professor - Department of Behavioral and Community Health Sciences, Pittsburgh, PA**
- **Jennifer Jones, MPH, Project Assistant - Department of Behavioral and Community Health Sciences, Pittsburgh, PA**

In addition, local and state public health department input and data were obtained and utilized in this community health assessment. UPMC sought input through meetings facilitated by Pitt Public Health, and relied on publically available Pennsylvania Department of Health reports and additional local health department information accessed via telephone conversations and special data requests.

Community input was garnered from a community advisory council, formed to represent the communities and constituencies served by the hospital. Council participants included representatives of medically underserved, low income and minority populations, consumer advocates, nonprofit organizations, academic experts, local government officials, community-based organizations, and health care providers.

The Community Advisory Council met between June 2012 and November 2012 and completed an online survey during August and September 2012. Their activities were facilitated by faculty from Pitt Public Health (see Appendix C).

UPMC Horizon Community Advisory Council included representatives from the following organizations:

- **American Cancer Society, New Castle, PA**
- **AWARE, Hermitage, PA**
- **Health Link Services, Hermitage, PA**
- **Mercer County Area Agency on Aging, Mercer, PA**
- **Mercer County Behavioral Health Commission, Mercer, PA**
- **Mercer County State Health Center, PA Department of Health, Jackson Center, PA**
- **Pennsylvania House of Representatives, Hermitage, PA**
- **Primary Health Network, Federally Qualified Health Center, Sharon, PA**
- **Shenango Valley Urban League, Farrell, PA**
- **Southwest Regional Mercer County Police Department, Farrell, PA**

The UPMC Horizon Community Advisory Council was also supported by members of the hospital's Board of Directors, physicians, and hospital leadership.

A focus group, also comprised of individuals and organizations representing the broad interests of the community - including representatives from medically underserved, low income, and minority populations - met in August 2012. This meeting included a discussion facilitated by Pitt Public Health faculty to identify important health needs in UPMC's communities. Participants included representatives from the following organizations:

- **Addison Behavioral Care, Pittsburgh, PA**
- **Allegheny County Area Agency on Aging, Pittsburgh, PA**
- **Center for Inclusion, UPMC, Pittsburgh, PA**
- **Consumer Health Coalition, Pittsburgh, PA**
- **Disabilities Resource Committee, UPMC Community Provider Services, Pittsburgh, PA**
- **Greater Pittsburgh Community Food Bank, Duquesne, PA**
- **LEAD Pittsburgh, Pittsburgh, PA**
- **Pennsylvania Health Access Network, Pittsburgh, PA**
- **Refugee Services, Jewish Family & Children's Services, Pittsburgh, PA**
- **Three Rivers Center for Independent Living, Pittsburgh, PA**
- **United Way of Allegheny County, Pittsburgh, PA**
- **UPMC Board Diversity and Inclusion Committee, Pittsburgh, PA**
- **UPMC Health Plan, Pittsburgh, PA**
- **Urban League of Pittsburgh, Pittsburgh, PA**
- **VA Pittsburgh Healthcare System, Pittsburgh, PA**
- **Women's Shelter of Greater Pittsburgh, Pittsburgh, PA**
- **YMCA of Greater Pittsburgh, Pittsburgh, PA**
- **YWCA of Greater Pittsburgh, Pittsburgh, PA**

UPMC also invited representatives of the following to participate:

- **Allegheny Conference on Community Development**
- **HI-HOPE (Hazelwood Initiative)**
- **Kingsley Association**
- **Pennsylvania Psychological Association**
- **PERSAD**
- **Salvation Army of Western Pennsylvania**
- **The Pennsylvania Health Law Project**