



Community Health Needs Assessment *And* Community Health Strategic Plan

June 30, 2016

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EXECUTIVE SUMMARY

UPMC Mercy Plays a Major Role in its Community:

UPMC Mercy is a nonprofit, 495-bed tertiary acute-care teaching hospital located in Pittsburgh, Pennsylvania. Situated in Uptown, an inner city Pittsburgh, Pennsylvania neighborhood in Allegheny County, the hospital delivers a full range of state-of-the-art, quality medical services — including highly specialized medical and surgical treatment — to the residents of Pittsburgh’s Uptown, Hill District, South Side, and South Hills neighborhoods. The hospital is the region’s only trauma and burn center, and welcomes more than 1,000 newborns annually. UPMC Mercy has served the community since 1847, when it was founded by the Sisters of Mercy. The hospital became UPMC Mercy in 2008, and remains Pittsburgh’s only Catholic hospital.

UPMC Mercy 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. UPMC Mercy’s Catholic mission to care for the underserved is reflected in the many programs it administers to address the health and spiritual needs of those in the immediate area. In 2015, the hospital provided \$26 million in charity care and unreimbursed amounts from programs for the poor.

UPMC Mercy in the Community

***UPMC Mercy is the only Catholic hospital
remaining in Pittsburgh.***

It is the safety net provider for the community.

***UPMC Mercy is the region’s only trauma
and burn center.***



UPMC Mercy 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 Mercy 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:

- **Behavioral Health and Detoxification**
- **Stroke**
- **Diabetes**

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

- **Behavioral Health and Detoxification**
- **Stroke**
- **Primary Care**

By focusing on efforts related to “Primary Care” — including access to preventive health and chronic disease management for diseases such as diabetes – UPMC Mercy will focus implementation efforts to make a greater impact on the health of the community.

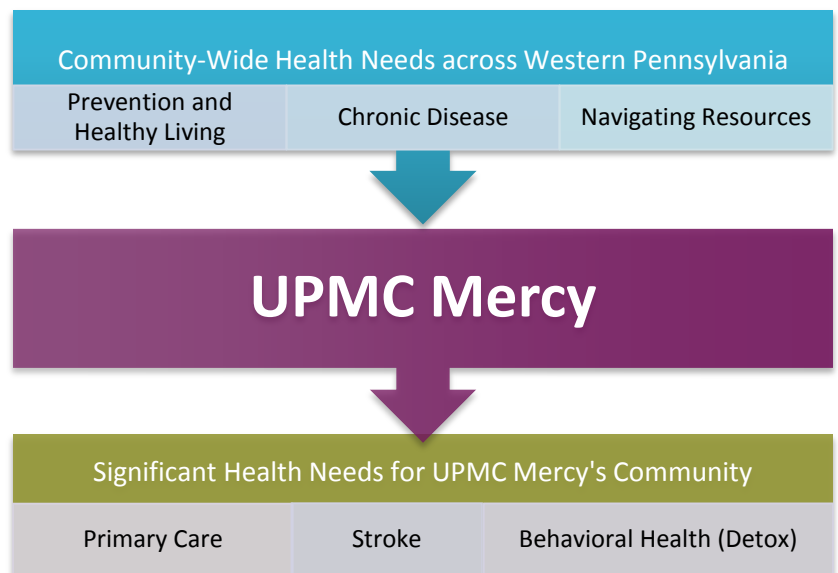
On May 31, 2016, the UPMC Mercy Board of Directors adopted an implementation plan to address the significant health needs identified in the Fiscal Year 2016 CHNA, and to set measurable targets for continued improvement. The plan drew support from an array of community partners, as well as from the larger 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 |
|---|---|
| Behavioral Health and Detoxification | Community resources that provide detox services have declined, due to closures of state mental hospitals and cuts in government support for behavioral health programs. Since 2009, the number of behavioral health and detoxification patients seen through UPMC Mercy’s Emergency Department has increased dramatically. |
| Stroke | Stroke is a leading cause of death in Allegheny County. |
| Primary Care | Chronic diseases, such as diabetes, are prevalent in Allegheny County. Primary care settings offer patients access to a wide spectrum of health services, including preventive care, preventive screenings, and coordinated care for chronic diseases. Regular primary care visits are beneficial to an individual’s overall health and wellness. |

Collective Impact Across Western Pennsylvania:

Western Pennsylvania has a diverse range of health needs. Key themes that emerged from the Fiscal Year 2016 UPMC Mercy 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 Mercy is planning a wide range of prevention and chronic disease support activities.
- **Navigating Available Resources:** Established health care programs in UPMC Mercy’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 Mercy 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: BEHAVIORAL HEALTH AND DETOX

GOAL: UPMC Mercy is improving access to behavioral health and detox services in the community.

STRATEGY:

The hospital plays a central role in addressing behavioral health and substance abuse.

To achieve this goal, UPMC Mercy is targeting behavioral health patients and detox patients. The hospital's emergency department is one of the busiest in the region, with a volume that continues to grow. To address this need, UPMC Mercy's Evaluation and Referral Center (ERC), embedded into the hospital's emergency department, helps facilitate appropriate levels of care and intervention for behavioral health and detox patients. ERC efforts include:

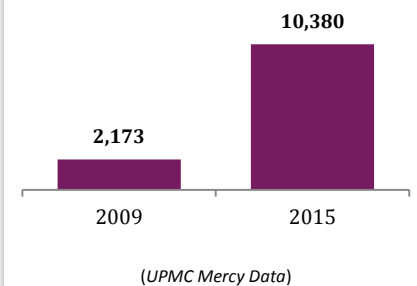
- » Enhancing referral sources to connect with individuals in crisis
- » Providing resources to help substance users begin their recoveries
- » Creating effective partnerships throughout Allegheny County

PROGRESS:

UPMC Mercy is making a measurable difference in its community.

Community Need

The number of behavioral health and detox patients seen at UPMC Mercy's Emergency Department continues to increase.



Connecting patients to appropriate levels of behavioral health care

Stabilizing patients in crisis

UPMC Mercy provides resources to stabilize patients in crisis. For patients in extreme need, the hospital partners with re:solve Crisis Network, which embeds three clinicians in the ERC. Demand for this service increased by 16 percent since 2013 (from 617 January-June 2013 to 718 in January-June 2015).

Helping patients reduce time in the hospital

The ERC plays a significant role in reducing the length of hospital stays. The number of patients staying less than 48 hours increased from 85 percent in 2013 (Calendar Year) to 88 percent in 2015 (January-June). Conversely, the number of patients staying more than 72 hours decreased from 3 percent in 2013 to 0 percent in 2015.

Offering detox packets to support outpatient recovery

UPMC Mercy offers detox packets (opioid and alcohol) to reinforce recovery efforts outside the hospital setting. The number of kits dispensed continues to increase, from 1,566 in 2013, 1,882 in 2014, to 2,378 in 2015 (annualized based on January-June data).

Building strong partnerships across Allegheny County's behavioral health network

The hospital hosts the Annual Southwest Pennsylvania Drug and Alcohol Provider Services Fair that connects behavioral health specialists and providers — 400 participants attended the most recent event. In addition, UPMC Mercy integrates behavioral health and detox education into training of social work students and nursing residents, augments staff training in Applied Suicide Intervention Skills, and enhances the "Detox Assessment Team" with experienced providers in inpatient detoxification. The hospital is building strong partnerships through the introduction of the Peer Navigator Program, which helps foster supportive relationships between patients and peer specialists.

PROGRESS REPORT 2013-2016: DIABETES AND STROKE

GOAL: UPMC Mercy is increasing awareness about the prevention and management of diabetes and stroke.

STRATEGY:

The hospital plays a central role in addressing diabetes and stroke.

To achieve this goal, UPMC Mercy is targeting all individuals. Risk factors for chronic disease — such as diabetes and stroke — include obesity, unhealthy eating, and lack of exercise. UPMC Mercy is enhancing programs to educate community members about these risk factors. In addition, the hospital is leveraging community partnerships to support its efforts. The hospital's recent efforts include:

- » Implementing a personalized diabetes management program
- » Building life-saving awareness and supporting stroke survivors
- » Participating in community-wide events
- » Collaborating with community partners

PROGRESS:

UPMC Mercy is making a measurable impact in its community.

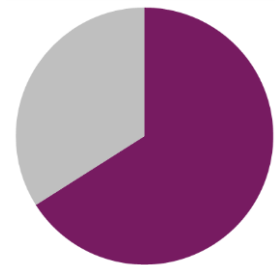


Integrating diabetes educators into primary care

In 2015, UPMC Mercy implemented the *Glucose to Goal* program to help individuals with diabetes improve the management of their condition. By harnessing the potential of electronic medical records, UPMC Mercy identifies individuals with diabetes who need help managing their disease. The hospital then connects these individuals with a certified diabetes educator who can help modify behaviors, such as controlling sugar levels through healthier eating — an approach considered highly effective in primary care settings. Additionally, UPMC Mercy provides individual and group support sessions — in 2015, more than 550 individuals participated in these programs.

Community Need

Nearly two-thirds of all deaths in Allegheny County are attributable to chronic disease, such as diabetes and stroke.



(PADOH, 2012)

Alerting community members about the signs of stroke

UPMC Mercy educates community members about stroke and its early symptoms. To assist in easing the transition from hospital to home, stroke educators work with patients and their loved ones to improve awareness of stroke symptoms. After participating in one-on-one training sessions, 90 percent of individuals are able to identify stroke symptoms, and 99 percent know when to call 911.

Supporting stroke survivors and their caregivers

The hospital also supports stroke survivors and their families through group outings, such as a Pittsburgh Pirates game (40 attendees) and group meetings with experts on life after a stroke.

Connecting with 1,065 individuals at community events

UPMC Mercy provides diabetes and stroke education and health screenings at community-wide events, including the American Diabetes Association Expo, the Annual Senior Community Health Fair at Point Park University, Go Red event, and the Annual Stroke Conference. In addition, UPMC Mercy has expanded its outreach to local parish festivals. Overall, the hospital has reached approximately 1,065 individuals through these community-wide events.

Much of this success results from the UPMC Mercy Diabetes Center's collaborative relationship with the University of Pittsburgh Diabetes Institute, Pittsburgh Regional Initiative for Diabetes Education (PRIDE), other UPMC Diabetes Centers and community-based providers and endocrinologists.



Collaborating with community organizations to promote healthy living in Pittsburgh's Hill District

In addition, UPMC Mercy lends its health expertise to other community organizations, such as Hill District 365, which supports and promotes healthy living in the Hill District neighborhood of Pittsburgh. The hospital assists Hill District 365 with teaching local residents about five areas of health: physical and nutritional health, mental and emotional health, spiritual health, environmental health, and financial health.

COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) REPORT

I. Objectives of a Community Health Needs Assessment

CHNA Goals and Purpose:

In Fiscal Year 2016, UPMC Mercy 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 Mercy 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 Mercy:

UPMC Mercy is a nonprofit, 495-bed tertiary acute-care teaching hospital located in Allegheny County, Pennsylvania, and the only Catholic hospital operating in southwestern Pennsylvania. It offers a full range of quality medical services to the people of Pittsburgh's Uptown, Hill District, and South Side neighborhoods, as well as the suburbs of Pittsburgh's South Hills. 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 the region's only Level I burn and trauma services, neurologic and neurosurgical care, orthopaedics, physical medicine and rehabilitation, cardiac services, and women's health. During the Fiscal Year ended June 30, 2015, UPMC Mercy had a total of 26,738 admissions and observations, 70,640 emergency room visits, and 18,607 surgeries.

| VITAL STATISTICS | | JOBS AND STRENGTHENING THE LOCAL ECONOMY | |
|------------------------|--------|--|--------------|
| Fiscal Year 2015 | | More than 7,200 UPMC employees live in neighborhoods surrounding UPMC Mercy. A majority of them reside in: | |
| Licensed Beds | 495 | Uptown/Hill District/ Downtown | 560 |
| Hospital Patients | 26,738 | Southside/Mt. Washington | 795 |
| Emergency Dept. Visits | 70,640 | South Hills | 2,564 |
| Total Surgeries | 18,607 | Community Benefits Contributions | \$48 million |
| Affiliated Physicians | 1,264 | Free and Reduced Cost Care | \$26 million |
| | | \$829 million Total Economic Impact of Hospital Operations | |

UPMC Mercy is a teaching hospital, with residency programs in general surgery, podiatry, emergency medicine, physical medicine and rehabilitation, and internal medicine. 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.

II. Definition of the UPMC Mercy Community

For the purpose of this CHNA, the UPMC Mercy community is defined as Allegheny County. With 77 percent of patients treated at UPMC Mercy residing in Allegheny County, the hospital primarily serves residents of this geographic region. By concentrating on the county, UPMC Mercy can 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 Mercy Live in Allegheny County

| County | UPMC Mercy % | Medical Surgical Discharges |
|---------------------------|--------------|-----------------------------|
| Allegheny County | 77.1% | 12,675 |
| All Other Regions | 22.9% | 3,774 |
| Total Hospital Discharges | 100% | 16,449 |

Source: Pennsylvania Health Care Cost Containment Council, Fiscal Year 2015

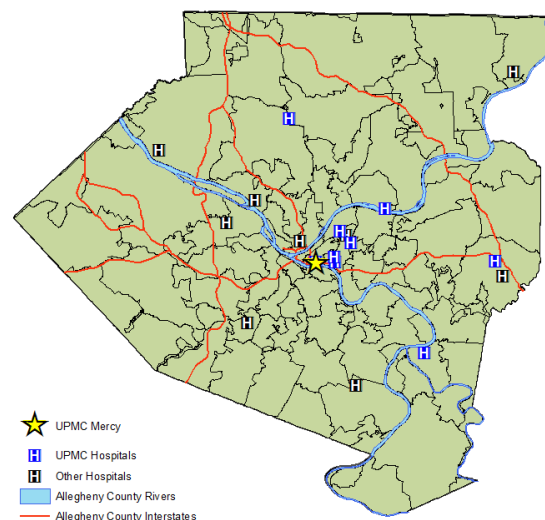
The hospital is situated centrally in the Uptown neighborhood of the City of Pittsburgh, an area noted for its economic challenges. While the county represents the basic geographic definition of UPMC Mercy’s community, this CHNA also considered specific focus areas within the hospital’s immediate geographic “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 Mercy is one of eight UPMC licensed hospitals and 16 total hospitals in Allegheny County.

Additionally, UPMC Mercy 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.

Hospitals in Allegheny County



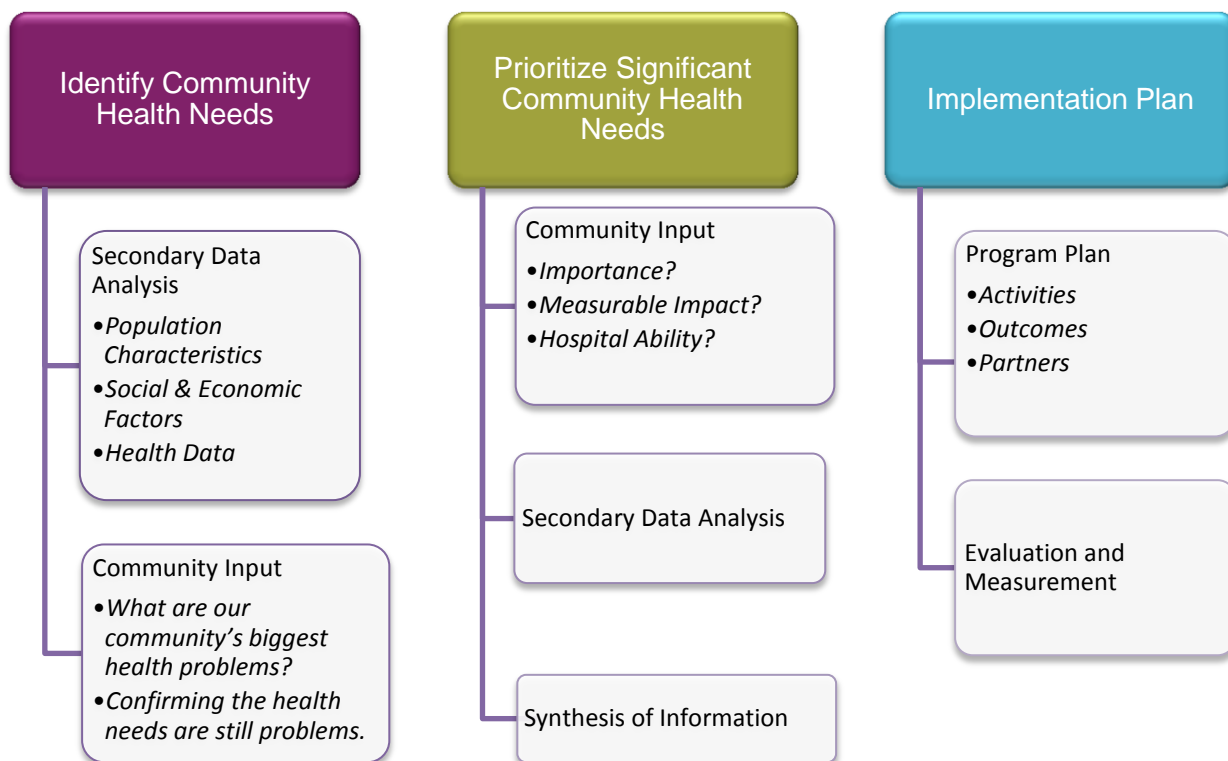
III. Methods Used to Conduct the Community Health Needs Assessment

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. |
| | Cancer | | |
| | Mental Health | | |
| | Asthma (Childhood) | | |
| | Birth Outcomes | | |
| Health Behaviors Data | Obesity (Childhood and Adult) | U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System. National Center for Health Statistics. | |
| | 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). A higher percentage of elderly in Allegheny 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).

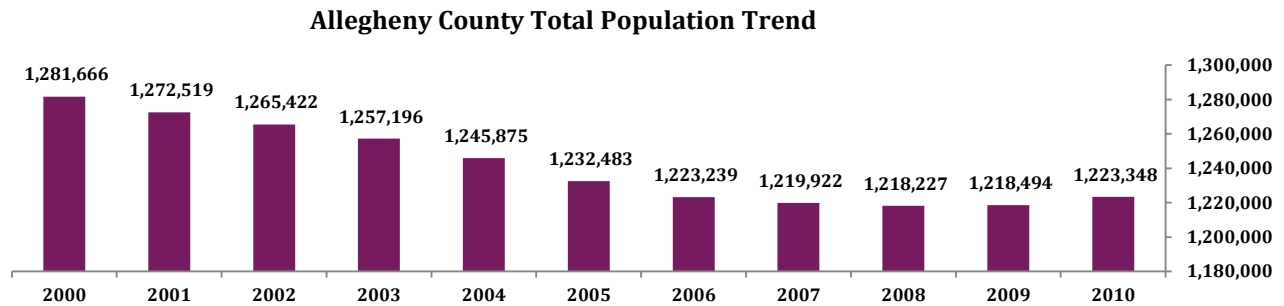
Allegheny County Has a Sizable Elderly Population

| Age Distribution - 2010 | | | |
|-------------------------|------------------|--------------|---------------|
| | 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% |

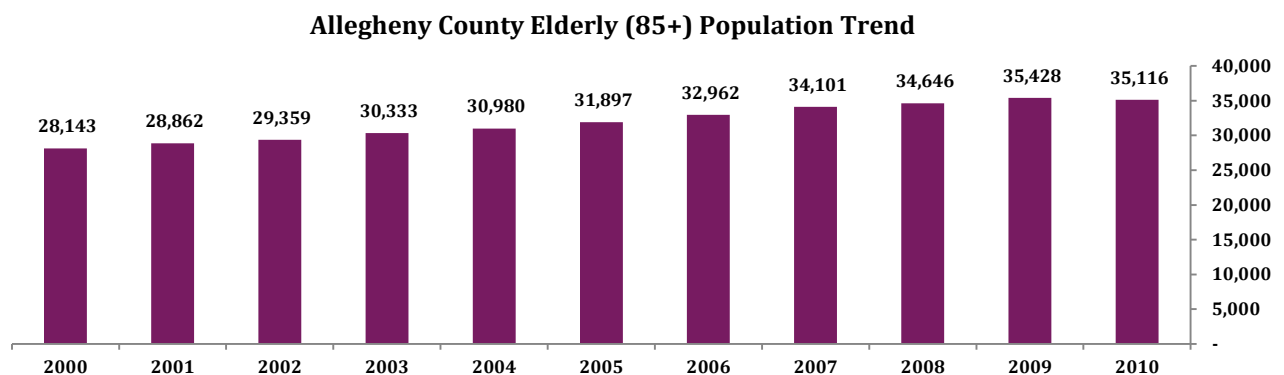
Source: U.S. Census

Total Population Decline in Allegheny County but Aging Population Increasing: In 2010, Allegheny County had a total population of 1,223,348. The population density of Allegheny County at the time was 1,675.6 people per square mile. Between 2000 and 2010, the county’s total population decreased from 1.28 million to 1.22 million, representing a five-percent decline (see figure below). At the same time, the county’s most elderly (age 85 and over) population *increased* significantly (see figure below). This trend resulted in a higher median age (41 years) in the county compared with Pennsylvania (40 years) and the United States (37 years).

Allegheny County's total population has seen a 5 percent decrease from 2000 to 2010.



However, the most elderly population (85+) has grown 25 percent from 2000 to 2010.



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 Medicaid health insurance program (See Appendix B)**

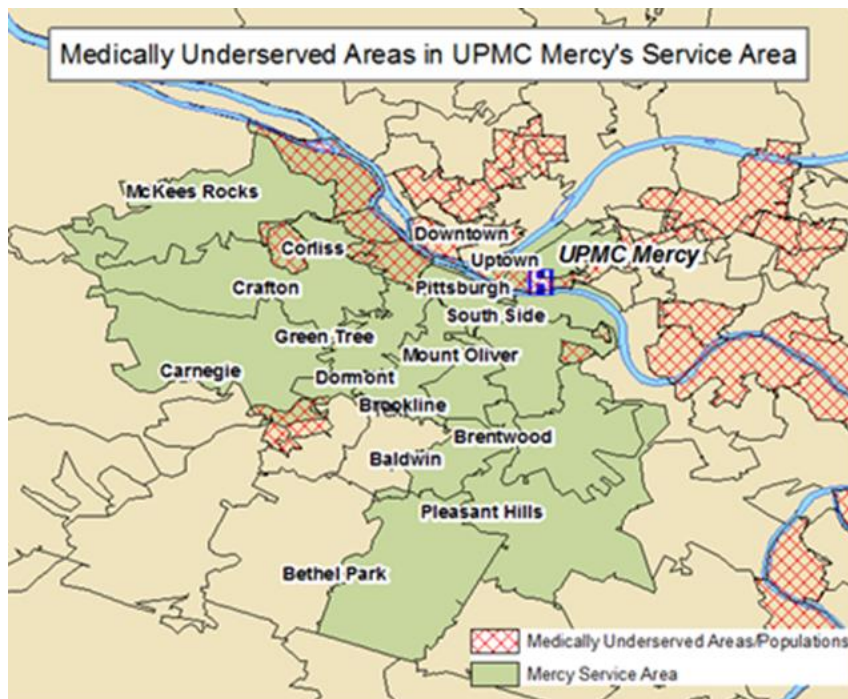
Medically Underserved Areas in UPMC Mercy Service Area: In contrast to the relatively strong Allegheny County statistics, UPMC Mercy is surrounded by some neighborhoods that have characteristics of populations more likely to experience health disparities. Compared to Allegheny County, the service area has a lower median household income and higher proportion of residents without a high school diploma. In addition, areas of concentration in the service area (such as Uptown, Zip Code 15219) are federally designated as Medically Underserved Areas (MUA).

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

| Social and Economic Population Demographics | | |
|---|------------------|-------------------------|
| | Allegheny County | UPMC Mercy Service Area |
| Median Household Income | \$45,362 | \$43,810 |
| % in Poverty (among families) | 8.7% | 9.1% |
| % with No High School Diploma (among those 25+) | 8.4% | 9.7% |
| % Unemployed (among total labor force) | 7.2% | 6.9% |
| Racial Groups | | |
| % White | 81.5% | 83.6% |
| % African-American | 13.2% | 11.7% |
| % Other Race | 5.3% | 4.7% |

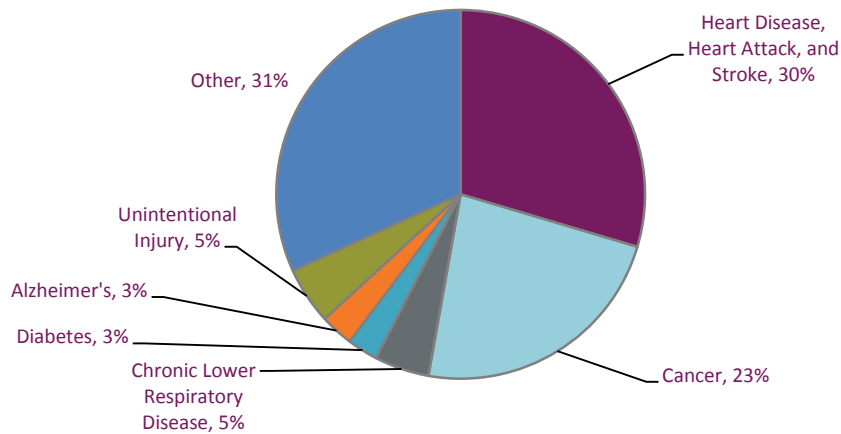
Source: U.S. Census



Sources: Health Resources and Services Administration, 2015

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 Mercy's Community:

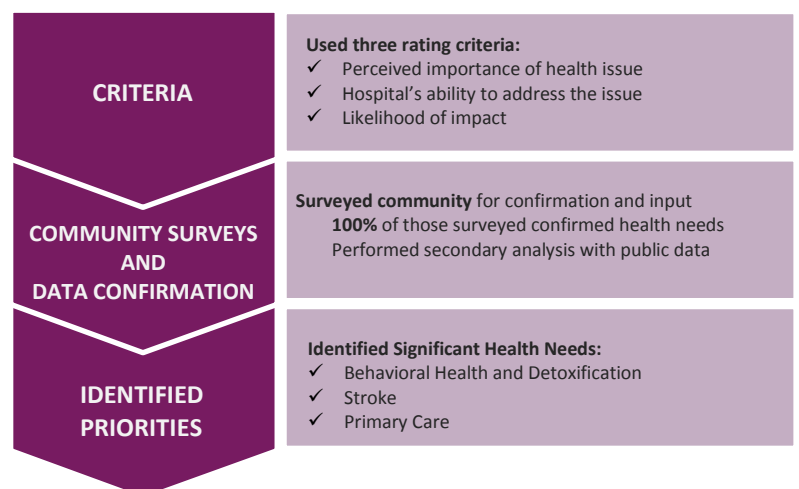
Concept mapping input was deployed across all UPMC hospital communities within western Pennsylvania and yielded three overarching themes to contextualize the health care needs of the areas served by UPMC hospitals:

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

For UPMC Mercy'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:

- **Behavioral Health and Detox**
- **Stroke**
- **Primary Care**

Prioritizing Community Health Needs



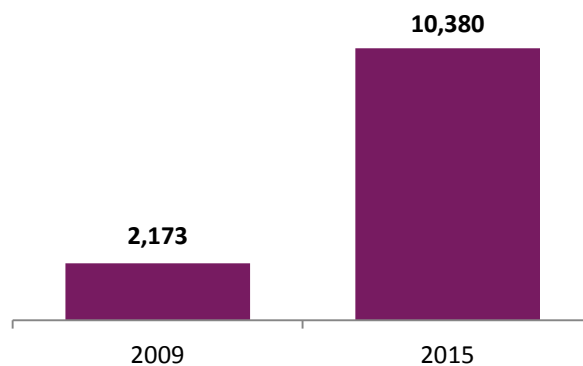
UPMC Mercy Significant Health Needs:

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

Behavioral Health and Detoxification Services – Importance to the Community:

- UPMC Mercy is one of only three hospital inpatient detox programs in western Pennsylvania.
- Closure of state mental hospitals and cuts in government support for behavioral health programs are resulting in decreased supply of and access to detox services.
- Since 2009, the number of behavioral health and detoxification patients seen through UPMC Mercy’s Emergency Department has increased significantly.

The Number of Behavioral Health and Detox Patients Seen at UPMC Mercy Emergency Department Continues to Increase



Source: UPMC Mercy

Demand for detox treatment is growing: Behavioral health, especially detox treatment for drug and/or alcohol dependence and abuse, is an important issue both nationally and locally. The U.S. Department of Health and Human Services reported that a large “treatment gap” for substance dependence and abuse exists nationally. In 2015, almost 24.1 million Americans reported illicit drug or alcohol dependence or abuse, and only 14.6 percent of illicit drug users and 7.6 percent of alcohol users received treatment. Echoing national statistics, the region has experienced an increase in the demand for detox services, during a time when access to services has decreased due to state mental health closures and cuts in government support. UPMC Mercy is one of only three hospital inpatient detox programs in western Pennsylvania, and the only inpatient detox hospital program in Allegheny County. Since 2009, the number of behavioral detox patients seen at the UPMC Mercy Emergency Department has increased dramatically — nearly tripling from 2,173 in 2009 to 10,380 in 2015.

National data suggest that medically underserved populations, low-income individuals, and underserved minorities are at increased risk for substance dependence or abuse: Publicly available health data on substance abuse and treatment are unavailable at the local level, but the U.S. Department of Health and Human Services reported in 2015 that a higher percentage of uninsured (5 percent) versus insured (2.4 percent), and those in poverty (4.8 percent) versus those not in poverty (2.3 percent), reported illicit drug dependence or abuse in the past year. Allegheny County Health Survey data on binge drinking, which is associated with alcohol dependence and abuse, showed that about 33 percent of Allegheny County adults were binge drinkers. A higher percentage were found in those with less than a high school education (43 percent), those earning <\$15,000 (36 percent), and African-Americans (38 percent).

Stroke - Importance to the Community:

- **Stroke is a leading cause of death in the UPMC Mercy service area and is associated with heart disease, which is the leading cause of death.**
- **Many risk factors contribute to stroke, such as having heart disease, being overweight/obese, diabetes, alcohol use, and lack of exercise.**

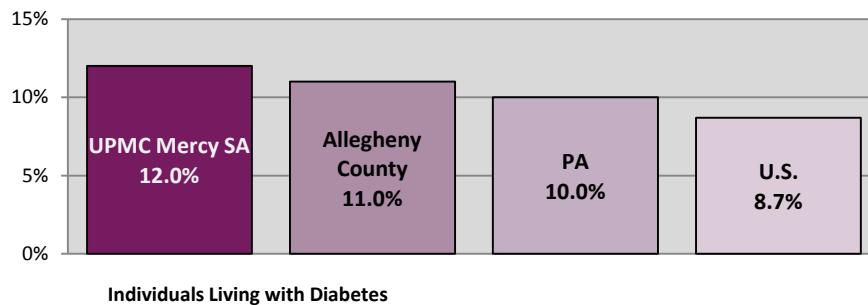
Stroke affects many people: Almost 130,000 individuals die from a stroke each year, which represents 5 percent of all deaths nationally. Similarly, 5 percent of all deaths in Allegheny County are due to stroke, and represent nearly 650 deaths. Risk factors for stroke include having heart disease, being overweight/obese, diabetes, alcohol use, and lack of exercise. UPMC Mercy has existing programs that address these risk factors for stroke, and there is potential to leverage strong community partnerships to enhance these efforts.

Stroke is particularly problematic for sub-populations within Allegheny County: The stroke death rate was higher among men (35/100,000) compared to women (33/100,000), higher among African-Americans (45/100,000) than Whites (33/100,000), and increased with age. In parallel with mortality rates, the prevalence of those experiencing a stroke is much higher among specific sub-populations within Allegheny County, especially those with lower incomes and older individuals.

Primary Care - Importance to the Community:

- Chronic diseases, such as diabetes and cancer, are prevalent in Allegheny County — about two-thirds of deaths are due to chronic diseases.
- Screening and other preventive measures can help identify diseases early on and improve care management of these diseases.
- Primary care offers preventive screenings for chronic diseases, and practices with an interdisciplinary team can help with continued monitoring to improve disease management.

Diabetes rates are higher in the UPMC Mercy 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

The prevalence of chronic diseases is high in the UPMC Mercy service area: Chronic diseases are significant in Allegheny County. Two-thirds of all deaths in Allegheny County are due to chronic diseases, such as diabetes and cancer. In addition, the incidence and prevalence of these diseases are high, compared to state, nation, and/or *Healthy People 2020* benchmarks. For example, the percentage of individuals living with diabetes is higher in the UPMC Mercy service area (12 percent), compared to the county (11 percent), state (10 percent), and nation (8.7 percent). In addition, for Allegheny County, cancer incidence is higher (492.5 per 100,000), compared to the state (476.1 per 100,000).

Healthy behaviors, such as preventive screenings, can help identify disease early on and improve better management of chronic diseases: Preventive screening can help identify these diseases early on — when treatment works best. Allegheny County data indicate that mammogram screening (59.0 percent) is much lower than the nation (74.0 percent), and benchmark (81.1 percent). Early detection of cancer and other types of chronic diseases can help delay progression or worsening of these conditions. In addition, increasing awareness about other healthy behaviors, such as engaging in healthier eating, physical activity, and not smoking, can help prevent chronic diseases. Approximately 29 percent of Allegheny County residents are obese, and 23 percent of residents are current smokers.

Primary care offers patients prevention and care management: The primary care setting offers patients a medical home where person-focused, comprehensive, and coordinated care can be achieved. In addition, care coordination, especially with an interdisciplinary team of behavioral specialists and social workers, can help better manage disease prognosis.

Recent analysis by the federal government suggests that demand for primary care will continue to grow as both the aging population increases, and as insurance coverage expands through the Affordable Care Act.

V. Overview of the Implementation Plan

Overview:

UPMC Mercy 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 May 31, 2016 the UPMC Mercy Board of Directors adopted an implementation plan to address the identified significant health needs:

- **Behavioral Health and Detoxification**
- **Stroke**
- **Primary Care**

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

High-Level Overview of UPMC Mercy Implementation Plan

| Topic | Programs | Anticipated Impact | |
|---|--|---|---|
| | | Goal-Year 3 | Planned Collaborations |
| Behavioral Health and Detoxification | Evaluation and Referral Center (expanded to incorporate inpatient perspective) Applied Suicide Intervention Skills Training Continuing of Care for Patients Peer Navigators | Improved coordination of behavioral health care services | Western Psychiatric Institute and Clinic of UPMC, including ambulatory detox, Community Care Behavioral Health, Allegheny Health Choices, Inc., re:solve |
| Stroke | UPMC Mercy Stroke Prevention and Support | Improved awareness of stroke prevention and early symptoms of stroke | UPMC Stroke Institute, EMS Providers, senior high rises, local parishes |
| Primary Care | UPMC Mercy Primary Care Initiatives UPMC Mercy Diabetes Prevention and Management Efforts | Improved access to primary care Improve diabetes prevention and management | UPMC System, Community Medicine Inc., University of Pittsburgh Providers, community-based organizations, University of Pittsburgh Diabetes Institute, Pittsburgh Regional Initiative for Diabetes Education (PRIDE), community-based providers and endocrinologists |

The UPMC Mercy 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 Behavioral Health and Detox

Behavioral health is a priority in UPMC Mercy’s community: Behavioral health care is an umbrella term that refers to a continuum of services for individuals at risk of, or suffering from, mental, behavioral, and/or addiction disorders. Effects of behavioral health issues include abnormal alterations in thinking, mood, or behavior associated with distress, as well as impaired functioning. The effects of mental illness include disruptions of daily function; incapacitating personal, social, and occupational impairment; and premature death. Behavioral health issues have become an increasing priority in UPMC Mercy’s community as demonstrated by the increase in the number of patients presenting in the emergency department with behavioral health and detox needs—from 2,173 patients in 2009 to 10,380 in 2015.

UPMC Mercy is leveraging UPMC and community resources to address behavioral health and detox: UPMC Mercy plays an important role in addressing the community’s needs relating to behavioral health and substance abuse. Through the emergency department, as well through a range of outreach initiatives, UPMC Mercy is assisting behavioral health and detox patients in receiving appropriate levels of care and intervention. Efforts include providing resources to help substance users begin their recoveries, linking individuals to appropriate levels of care, providing training in suicide first aid, and offering educational and networking opportunities among behavioral health care providers in the community. UPMC Mercy collaborates with other community-based behavioral health service organizations and Western Psychiatric Institute and Clinic of UPMC. In addition, UPMC Mercy programs are complemented by UPMC Insurance Services’ efforts in many clinical areas, including support for the identification, referral, treatment, and care coordination of health plan members requiring behavioral health and detoxification services.

| Behavioral Health and Detox | | | | |
|--|---|--|--|--|
| Program | Intended Actions | Anticipated Impact | Target Population | Planned Collaborations |
| | | Goal-Year 3 | | |
| Evaluation and Referral Center Applied Suicide Intervention Skills Training Continuity of Care for Patients into Ambulatory Detox Peer Navigators | Continue to leverage resources and connect behavioral health and detox patients to appropriate level and timely behavioral health care. Expand to incorporate inpatient perspective. Train individuals in Applied Suicide Interventions Skills. Continue to facilitate coordination with ambulatory detox by offering opioid and alcohol starter packs. Implement new effort to link individuals recovering from substance use with a peer who will serve as coach and facilitate care coordination. | Improved coordination of behavioral health care services | Behavioral health patients Detox patients | Western Psychiatric Institute and Clinic of UPMC, including ambulatory detox, Community Care Behavioral Health, Allegheny Health Choices, Inc., re:solve |

Priority Health Issue: Addressing Stroke

Stroke is a priority in UPMC Mercy’s community: Stroke is a leading cause of death in Allegheny County, as well as in the state and nation. Risk of stroke can be greatly reduced through lifestyle changes, and in some cases, medication. Stroke can cause death or significant disability, such as paralysis, speech difficulties, and other issues. Some treatments can reduce stroke damage if patients get medical care soon after symptoms begin. When a stroke occurs, early recognition of stroke symptoms and getting the patient to the hospital quickly can greatly improve his or her chances of recovery.

UPMC Mercy is leveraging UPMC and community resources to address stroke: UPMC Mercy is recognized as a Primary Stroke Center by the Joint Commission. Through its expertise in stroke care, community outreach focuses on education about early symptoms of stroke, providing screenings at community events, and targeting a range of populations—from patients and families to EMS providers and other health care professionals. Working through a variety of channels, UPMC Mercy continues to reach out to community members, and is ultimately building awareness and seating the urgent need for timely stroke treatment.

| Stroke | | | | |
|--|---|--|--------------------|---|
| Program | Intended Actions | Anticipated Impact Goal-Year 3 | Target Population | Planned Collaborations |
| UPMC Mercy Stroke Prevention and Support | <ul style="list-style-type: none"> Continue to provide community health screenings, including blood pressure screening. Continue to provide education about signs and early symptoms of stroke, targeting patients and families, and health care students. Continue to provide education at community events, including parish festivals. Continue to have stroke support groups. Explore approaches to enhance stroke care at UPMC Mercy. | Increase awareness of early signs and symptoms of stroke | General population | UPMC Stroke Institute, EMS Providers, senior high rises, local parishes |

Priority Health Issue: Addressing Primary Care, Including Diabetes

Primary care is a priority in UPMC Mercy’s community: Almost two-thirds of deaths in Allegheny County are due to chronic diseases, and the prevalence of chronic diseases, such as diabetes and cancer, are higher in Allegheny County, compared to the state. Education about preventive health behaviors, preventive screenings, and care management of these diseases can help improve early detection of the disease and disease prognosis. Primary care settings offer patients access to a wide spectrum of health services, including preventive care, preventive screenings, coordinated care for chronic conditions, and comprehensive acute care. In addition, regular primary care visits are beneficial to an individual’s overall health and wellness.

UPMC Mercy is leveraging UPMC and community resources to address diabetes: UPMC Mercy has an extensive suite of diabetes programs, especially those that are enhanced in the primary care setting. The *Glucose to Goal* program improves diabetes management in primary care settings. In addition, a recent grant from the Beckwith Institute is allowing UPMC Mercy to incorporate technology into monitoring the blood glucose levels of individuals with uncontrolled diabetes. Through the hospital’s American Diabetes Association-certified program, the hospital also continues to promote diabetes prevention at community events (e.g., parish festivals and Hill District 365 collaborations) and host the *Group Lifestyle Balance* program, which targets pre-diabetics and encourages healthy eating and exercise. In addition, UPMC Mercy programs are complemented by UPMC Insurance Services’ efforts in many clinical areas, including preventive care and care coordination efforts that support health plan members with diabetes. The hospital will explore opportunities to enhance its network of primary care providers to help improve care coordination, such as establishing an open-access primary care office and linking with other primary care providers in the UPMC network.

| Primary Care | | | | |
|---|--|--|---|---|
| Programs | Intended Actions | Anticipated Impact | Target Population | Planned Collaborations |
| | | Goal-Year 3 | | |
| UPMC Primary Care Initiatives | Enhance opportunities with primary care providers in the UPMC Mercy community to promote prevention and wellness efforts, care management, and care coordination. | Improved access to primary care | General community | UPMC System, Community Medicine Inc., University of Pittsburgh Providers, community-based organizations |
| UPMC Mercy Diabetes Prevention and Management Efforts | <p>Integrating technology into diabetes management, especially targeting individuals with uncontrolled diabetes.</p> <p>Continuing to improve diabetes management through the <i>Glucose to Goal</i> program, offered in primary care practices, Diabetes Self-Management Education, and Medical Nutrition.</p> <p>Continue to offer diabetes prevention and screenings through <i>Group Lifestyle Balance</i> program and community events.</p> | Improved diabetes prevention awareness and management of the condition | General population, specifically individuals at risk for diabetes and those diagnosed with diabetes | University of Pittsburgh Diabetes Institute, Pittsburgh Regional Initiative for Diabetes Education (PRIDE), other UPMC Diabetes Centers and community-based providers, primary care practices, endocrinologists, Beckwith Institute |

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 the 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 Mercy's Fiscal Year 2016 CHNA builds on the assessment process originally applied in Fiscal Year 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 Mercy invited representatives from the following organizations to participate in the community needs survey conducted in June 2015:

- American Heart Association, Pittsburgh, PA
- Brashear Association, Pittsburgh, PA
- Carnegie Library of Pittsburgh-Hill District, Pittsburgh, PA
- Catholic Charities, Pittsburgh, PA
- Catholic Diocese of Pittsburgh Pastoral Center, Pittsburgh, PA
- Celtic Healthcare, Pittsburgh, PA
- City of Pittsburgh Council, District 6, Pittsburgh, PA
- Community Workz, Inc., Pittsburgh, PA
- CORE, Pittsburgh, PA
- Dollar Bank, Pittsburgh, PA
- Duquesne University, Pittsburgh, PA
- Familylinks, Pittsburgh, PA
- FOCUS Pittsburgh, Hill District, Pittsburgh, PA
- Hill District Federal Credit Union, Pittsburgh, PA
- Hill House Association, Pittsburgh, PA
- Just Harvest, Pittsburgh, PA
- Oakland Planning and Development Corporation, Oakland, PA
- Pittsburgh Community Services, Inc., Pittsburgh, PA
- Pittsburgh Mercy Health System, Pittsburgh, PA
- Pittsburgh Parks Conservancy, Pittsburgh, PA
- Primary Care Health Services, Pittsburgh, PA
- Royal Tribe Music, Pittsburgh, PA
- Shields of Faith, Pittsburgh, PA
- The Corner, Pittsburgh, PA
- The People's Office, Pittsburgh, PA
- Thelma Lovett YMCA, Pittsburgh, PA
- Ujamaa Collective, Pittsburgh, PA
- University of Pittsburgh, Pittsburgh, PA
- Matilda H. Theiss Child Development Center, Pittsburgh, PA
- Urban League of Greater Pittsburgh, Pittsburgh, PA

The UPMC Mercy 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 Mercy, 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 UPMC Mercy:

UPMC Mercy 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 Mercy 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 Mercy community.

The UPMC Mercy 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 Mercy 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:

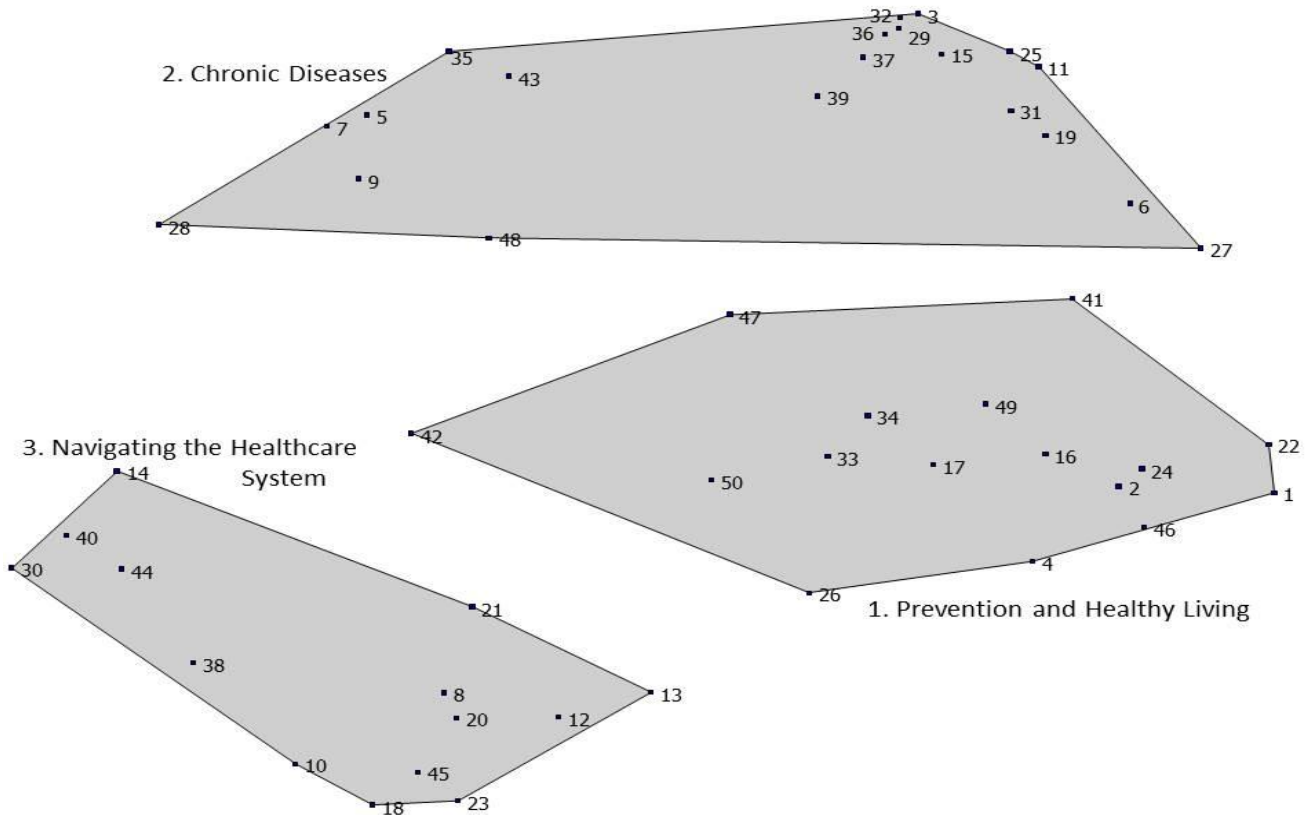
Does the hospital have the ability to address this problem?
(1 = no ability; 5 = great ability)

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, 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 Mercy. UPMC Mercy 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.