## **UPMC** East



## **Community Health Needs Assessment**

And

# **Community Health Strategic Plan**

June 30, 2013

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#### **EXECUTIVE SUMMARY**

UPMC East Plays a Major Role in its Community:

UPMC East is a nonprofit, 156-bed acute-care hospital located in Monroeville, Pennsylvania, an eastern suburb of Pittsburgh, Pennsylvania located in Allegheny County. The new, state-of-the-art hospital delivers a full range of quality medical services to the residents of Pittsburgh's eastern communities, and began operations in July of 2012. Its opening generated new economic energy in the community, created more than 700 jobs, and provided residents access to UPMC's nationally renowned medical services without traveling out of area.

UPMC maintains a historically strong connection with the community, having long been a significant provider of care for residents in the Monroeville area through outpatient operations including a UPMC CancerCenter, UPMC surgery and UPMC outpatient centers, imaging services, a UPMC Sleep Lab, a Magee-Womens Hospital of UPMC satellite office, a Children's Hospital of Pittsburgh of UPMC satellite office, and more than 50 pediatric, primary, and specialty care doctor's offices. Since the opening of UPMC East, the hospital has committed to developing a new suite of community-oriented programs and services that will provide health education for residents in the area.

**UPMC** East in the Community

More than 700 people work at UPMC East, UPMC's newest hospital

UPMC East brings UPMC's worldclass care to Pittsburgh's eastern suburbs, and has become an economic engine that is stimulating the local and county economies



UPMC East 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 East 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 East 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.

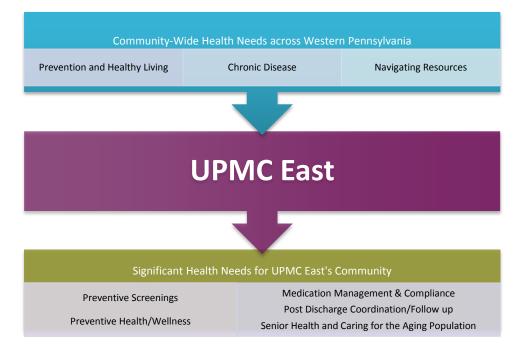
Through the CHNA process, UPMC East identified significant health needs for its particular community. They are:

| Topic  | Importance to the Community  |
|--|--|
| Senior Health and Caring for the Aging Population  | UPMC East's service area has a larger percentage of seniors ages 65+, most elderly (85+), and seniors living alone compared to the county, state, and nation.  As individuals age, the risk for co-morbid health conditions increases. In addition, preventing falls and improving health literacy related to medication compliance, for example, are very important for the elderly.                                |
| Preventive Health/Wellness and Preventive Screenings   | Preventive Health/Wellness, including Preventive Screenings, can help prevent and detect some of the leading causes of death—such as heart disease, cancer, and diabetes—in early stages when treatment is likely to work best.  Cancer screenings were lower in the UPMC East service area than benchmarks.   |
| Navigating Existing Resources:<br>Medication Management and<br>Compliance and Post-discharge<br>Coordination and Follow-up | The community identified navigating existing resources, specifically medication management and compliance and post-discharge coordination and follow-up, as significant health needs for UPMC East.  Research suggests that adverse events after discharge, and subsequent re-hospitalizations, can be reduced through interventions at the time of hospital discharge, and also through follow-up with the patient. |

# UPMC is Responding to the Community's Input:

Western Pennsylvania has a diverse range of health needs. Key themes that emerged from the **UPMC East 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:

Identifying Significant Health Needs Relevant for the Hospital Community



- 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 East 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 East'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 East 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 and behavioral health.

### UPMC East Is Improving Community Health in Measurable Ways:

On May 13, 2013, the UPMC East 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.

**Goal:** Initiating and collaborating on the development of a suite of community health programs to promote healthy living and chronic disease prevention in the community.

Collaborating Partners: Local senior centers, UPMC Heart and Vascular Institute, local hospice, UPMC St. Margaret and Magee Women's Hospital of UPMC, UPMC Sports Medicine, UPMC Senior Living Communities, Monroeville Chamber of Commerce, Western Psychiatric Institute and Clinic of UPMC

- UPMC East will be introducing a new community health program each month. Examples include the following:
  - » Senior programming will include lectures and educational events addressing nutrition, bone health and fall prevention.
  - » Chronic disease prevention events will include heart health lectures and vascular screenings, diabetes education given by an endocrinologist and a certified diabetes educator, stroke awareness to detect the signs and symptoms of stroke, and cancer screenings, as well as sessions dealing with behavioral health problems such as depression and alcohol abuse.
  - » Through a partnership with UPMC St. Margaret and Magee-Womens Hospital of UPMC, the hospital will hold obesity programs that counsel on nutrition and dieting, as well as offer bariatrics information.
  - "Ask a Pharmacist" will provide opportunities for community members to ask any questions they may have about their current medications. UPMC East pharmacists will travel to local area personal care/assisted living facilities to spend one-on-one time with patients.

| Programs/Event   | Senior Health | Preventive<br>Screenings | Preventative<br>Health and<br>Wellness | Medication<br>Management | Post-Discharge<br>Coordination |
|--|---------------|--------------------------|--|--------------------------|--------------------------------|
| Healthy Eating for Seniors                                       | X             |                          | X                                      |                          |                                |
| Heart Health Lecture and Vascular Screenings                     |               | X                        | x                                      |                          |                                |
| Diabetes Prevention and Management                               |               | X                        | Х                                      | Х                        |                                |
| Senior Homecare Options  | Х             |                          |  |                          | Х                              |
| Stroke Awareness   |               |                          | Х                                      |                          |                                |
| Obesity Awareness and Treatment                                  |               |                          | Х                                      |                          |                                |
| Ask a Pharmacist   | Х             |                          |  | х                        | Х                              |
| Sports Injury Awareness: Concussion Prevention                   |               |                          | x                                      |                          |                                |
| Bone Health: Osteoporosis Screenings and Elderly Fall Prevention | x             | x                        | x                                      |                          |                                |
| Cancer Awareness   |               | Х                        | Х                                      |                          |                                |
| Behavioral Health:<br>Depression and Substance Abuse             | X             |                          | Х                                      | X                        |                                |

## **COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) REPORT**

## I. Objectives of a Community Health Needs Assessment

## CHNA Goals and Purpose:

In Fiscal Year 2013, UPMC East conducted a Community Health Needs Assessment (CHNA). In keeping with IRS 501(r) guidelines, the CHNA incorporated input from community stakeholders such as 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 and public health experts, and established action plans to address identified significant community health needs.

UPMC East is a new hospital, and will be focused on creating a suite of initiatives aimed at 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 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 East:

UPMC East is a nonprofit, 156-bed acute-care hospital located in Allegheny County, Pennsylvania. It offers a full range of quality medical services to the people of Monroeville and Pittsburgh's eastern suburbs. 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 CT imaging, digital mammography, minimally invasive surgery, and an on-site UPMC CancerCenter. UPMC East opened in July of 2012, and is UPMC's newest hospital. During the first two quarters of operation, UPMC East had a total of 4,083 admissions and observations, 17,851 emergency room visits, and 1,395 surgeries.

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

#### **UPMC East** in Your Community



UPMC East is UPMC's new, state-of-the-art hospital built to serve the needs of our neighbors in the communities east of Pittsburgh, Pennsylvania.

#### A World-Class Hospital Right Around the Corner

- 156 private rooms each with its own bathroom are designed to reduce the chance of falls and to improve safety.
- The building is designed to maximize solar efficiencies and reduce energy operating expenses by 18 percent.

#### Designed to Play a Vital Role in the Community

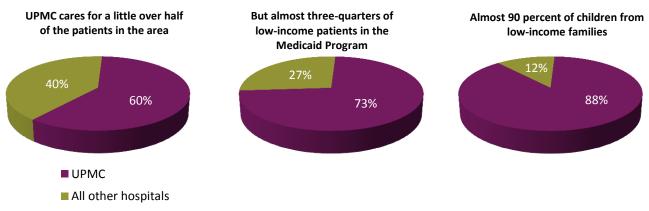
- UPMC made \$2.4 million of improvements to intersections and roads leading to the hospital.
- A storm water management system was incorporated into the hospital design to help mitigate local flooding and overflow.

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

UPMC East provides a broad array of benefits to the community.

- Subsidizing Care through Charity Care and Shortfalls in Payments from Government Programs for the Poor:
  In keeping with UPMC East'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 East is committed to serving Medicare and Medicaid patients. In Fiscal Year 2012, these patients represented 75 percent of UPMC East's patient population. UPMC East and the larger UPMC organization care for a disproportionate share of the community's most vulnerable, as shown below:

#### UPMC CARES FOR A DISPROPORTIONATE NUMBER OF ALLEGHENY COUNTY'S MOST VULNERABLE



Source: Pennsylvania Health Care Cost Containment Council, FY2012

## **UPMC** East

- Offering Community Health Improvement Programs and Donations: UPMC East provides services to the
  community through outreach programs, including referral centers, screenings, educational classes, and funding of
  schools of health professions all of which benefit patients, patients' families, and the community.
- Anchoring the Local Economy: A major area employer, UPMC has a special mission to support the region's
  economic health. By employing residents, doing business with local vendors, and supporting community economic
  development, UPMC East employs more than 700 individuals, many of whom live in the area and generate other
  economic impact and development contributing to the resurgence of this area. UPMC East has also made
  significant public infrastructure improvements to the neighborhoods surrounding the hospital campus, and has
  provided support for the development of new businesses along the nearby Route 22 corridor.

## II. Definition of the UPMC East Community

For the purpose of this CHNA, the UPMC East community is defined as Allegheny County. With 62 percent of patients treated at UPMC East residing in Allegheny County, the hospital primarily serves residents of this geographic region. By concentrating on the county, UPMC East 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 East Live in Allegheny County

| County                    | UPMC East % | Medical Surgical Discharges |  |
|---------------------------|-------------|-----------------------------|--|
| Allegheny County          | 61.6%       | 692                         |  |
| All Other Regions         | 38.4%       | 431                         |  |
| Total Hospital Discharges | 100%        | 1,123                       |  |

Source: Pennsylvania Health Care Cost Containment Council, FY2013 Quarter 1

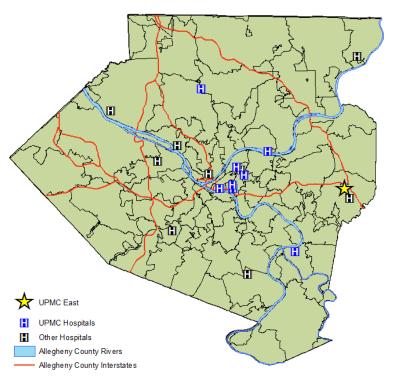
The hospital is situated in the eastern region of the county, which is composed of a mix of residential and commercial neighborhoods that are suburbs of Pittsburgh. While the county represents the basic geographic definition of UPMC East's community, this CHNA also considered specific focus areas within 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 East is one of eight UPMC licensed hospitals, and is one of a total of 16 licensed hospitals in Allegheny County.

In the immediate service area, UPMC East is supported by more than 60 UPMC outpatient offices, in addition to the seven other licensed UPMC hospitals and numerous other UPMC facilities located in the county. These facilities include UPMC CancerCenters, a UPMC Surgery Center and UPMC Outpatient Center, an Urgent Care Center, two Centers for Rehabilitation Services sites, four Imaging Centers, a UPMC Sleep Lab, a Magee-Womens Hospital of UPMC satellite office, a Children's Hospital of Pittsburgh of UPMC satellite office, a Western Psychiatric Institute and Clinic of UPMC outpatient location, and more than 50 pediatric, primary, and specialty care doctor's offices.

## Hospitals in Allegheny County



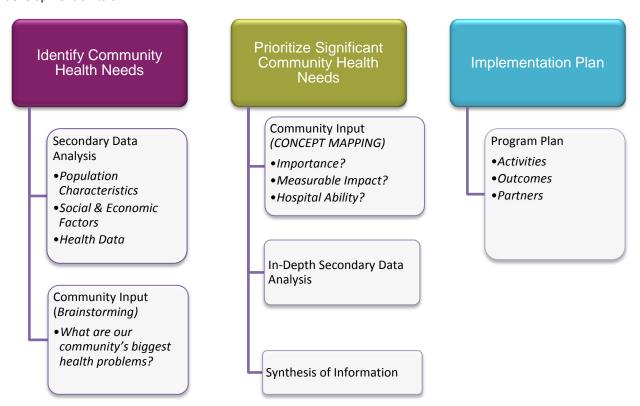
## III. Methods Used to Conduct the Community Health Needs Assessment

#### 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 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-<br>specific populations in 2000 and 2010 by<br>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,   |             |  |  |
|                  | Insurance: Uninsured, Medicare,<br>Medicaid | county, state and nation in 2010.  Note: Zip Code level data was not available for disabled.                     |             |  |  |
|                  | 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  | Allegheny County Health   |  |
|                      | Cancer  | by neighborhood, county, state and nation.   | Survey, 2009-2010;  |  |
|                      | Mental Health   |  | PA Department of Health Behavioral Risk Factors   |  |
|                      | Asthma (Childhood)  |  | Surveillance System; Birth,<br>Death, and Other Vital   |  |
|                      | Birth Outcomes  |  | Statistics; Cancer Statistics;  |  |
| Health Behaviors     | Obesity (Childhood and Adult)   |  | U.S. Centers for Disease  |  |
| Data                 | Alcohol Use   |  | Control and Prevention Behavioral Risk Factors  |  |
|                      | Tobacco Use   |  | Surveillance System;  |  |
|                      | Sexually Transmitted Disease  |  | National Center for Health<br>Statistics.   |  |
| Clinical Care Data   | Immunization  | 2007 - 2009 data collected and compared by county, state and nation. 2011 County Health Rankings by  | Allegheny County Health<br>Survey, 2009-2010;   |  |
|                      | Cancer Screening (breast/colorectal)  | County.  | PA Department of Health<br>Behavioral Risk Factors  |  |
|                      | Primary Care Physician Data   |  | Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics;                     |  |
|                      |   |  | U.S. Centers for Disease<br>Control and Prevention<br>Behavioral Risk Factors<br>Surveillance System; |  |
|                      |   |  | Robert Wood Johnson<br>Foundation County Health<br>Rankings;  |  |
|                      |   |  | National Center for<br>Health Statistics.   |  |
| Benchmark Data       | Mortality Rates, Morbidity Rates,<br>Health Behaviors and Clinical Care<br>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 | Access to Healthy Foods   | 2011 County Health Rankings by County.   | Robert Wood Johnson   |  |
| Data                 | Access to Recreational Facilities   |  | Foundation County Health Rankings.  |  |

## 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 subpopulations 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:

Sizable Elderly Population: A notable characteristic of the region surrounding UPMC East is the large and increasing percentage of elderly residents. The UPMC East immediate service area in particular has a large elderly population aged 65 and over (19 percent), especially when compared to Allegheny County (17 percent), 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

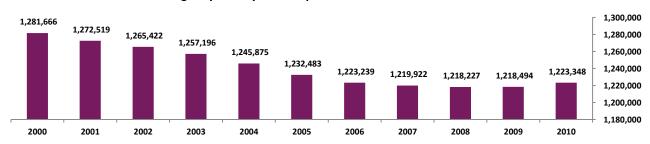
| Age Distribution - 2010 |                  |                        |              |               |  |
|-------------------------|------------------|------------------------|--------------|---------------|--|
|                         | Allegheny County | UPMC East Service Area | Pennsylvania | United States |  |
| Median Age              | 41.3             | 43.8                   | 40.1         | 37.2          |  |
| % Children (<18)        | 19.8%            | 20.3%                  | 22.0%        | 24.0%         |  |
| % 18-64                 | 63.4%            | 60.4%                  | 62.6%        | 63.0%         |  |
| % 20-49                 | 39.2%            | 35.3%                  | 39.0%        | 41.0%         |  |
| % 50-64                 | 21.3%            | 23.1%                  | 20.6%        | 19.0%         |  |
| % 65+                   | 16.8%            | 19.3%                  | 15.4%        | 13.0%         |  |
| % 65-74                 | 7.8%             | 9.4%                   | 7.8%         | 7.0%          |  |
| % 75-84                 | 6.1%             | 7.0%                   | 5.4%         | 4.3%          |  |
| % 85+                   | 2.9%             | 3.0%                   | 2.4%         | 1.8%          |  |
| % Elderly Living Alone  | 13.1%            | 13.2%                  | 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 population *increased* by 25 percent, from 28,143 to 35,116 (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).

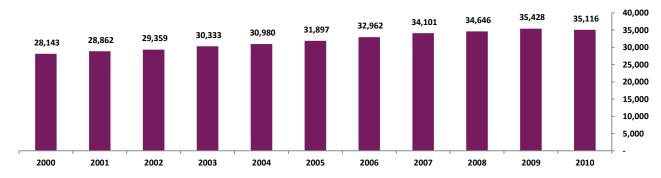
## Allegheny County's total population has seen a 5 percent decrease from 2000 to 2010

## **Allegheny County Total Population Trend**



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

Allegheny County Elderly (85+) Population Trend



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 families living in poverty
- Have fewer uninsured and fewer recipients of the income based Medicaid health insurance program (See Appendix B)

Compared to Allegheny County, the immediate service area of UPMC East is characterized by:

- Comparatively higher median household income
- . A lower percentage of families in poverty
- A lower percentage of residents without a high school diploma
- A lower percentage of unemployed

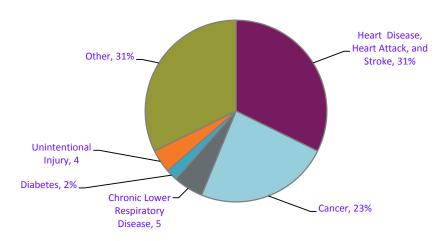
Similar to the good supply of primary care physicians to the population in Allegheny County (1:638), none of the UPMC East service area is federally designated as a Medically Underserved Area.

| Social and Economic Population Demographics     |                  |                        |  |  |  |  |
|---|------------------|------------------------|--|--|--|--|
|   | Allegheny County | UPMC East Service Area |  |  |  |  |
| Median Household Income                         | \$45,362         | \$50,719               |  |  |  |  |
| % in Poverty (among families)                   | 8.7%             | 5.6%                   |  |  |  |  |
| % with No High School Diploma (among those 25+) | 8.4%             | 6.9%                   |  |  |  |  |
| % Unemployed (among total labor force)          | 7.2%             | 4.7%                   |  |  |  |  |
| Racial Groups                                   |                  |                        |  |  |  |  |
| % White   | 81.5%            | 79.3%                  |  |  |  |  |
| % African-American                              | 13.2%            | 15.6%                  |  |  |  |  |
| % Other Race                                    | 5.3%             | 5.1%                   |  |  |  |  |

Source: U.S. Census

## Chronic Disease and Mortality:

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



Source: Pennsylvania Department of Health, 2009

## Significant Health Needs for UPMC East'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 community:

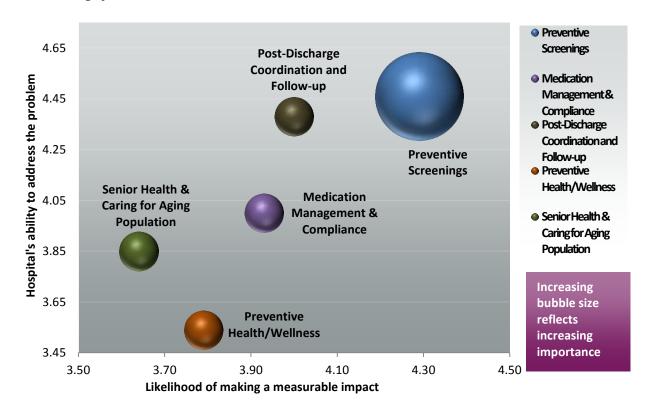
- Chronic Disease
- Prevention and Healthy Living
- Navigating Resources

For UPMC East's community, the assessment identified several 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:

- Senior Health and Caring for the Aging Population
- Preventive Screenings
- Preventive Health/Wellness
- Medication Management and Compliance
- Post-discharge Coordination and Follow-up

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 East Significant Health Needs**



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

## Senior Health Concerns – Importance to the Community

- UPMC East's service area has a larger percentage of seniors ages 65+, most elderly (85+), and seniors living alone compared to the county, state, and nation.
- As individuals age, the risk for co-morbid health conditions increases. In addition, preventing falls and improving health literacy related to medication compliance, for example, are very important for the elderly.

|                        | UPMC East<br>Service Area | Allegheny<br>County | Pennsylvania | United States |
|------------------------|---------------------------|---------------------|--------------|---------------|
| % 65+                  | 19.3%                     | 16.8%               | 15.4%        | 13.0%         |
| % 85+                  | 3.0%                      | 2.9%                | 2.4%         | 1.8%          |
| % Elderly Living Alone | 14.5%                     | 13.1%               | 11.4%        | 9.4%          |

Source: U.S. Census 2010

Increasing trends in the aging population. The U.S. aging population (65+) is predicted to more than double by 2030, which has consequences on health care and aging services. These trends are especially important for the UPMC East service area, where a sizable percentage of elderly aged 65 years and older (19 percent) live. The newly opened UPMC East has several community events underway and has planned efforts to coordinate with aging agencies to assist in serving the growing senior population.

Increasing need for aging-related services. For older adults, navigating resources can be challenging. Even more so, and as community members commented in focus groups, tapping into health care services is more challenging for older adults whose family members no longer live in close proximity. U.S. Census data support this notion—a higher percentage of elderly are living alone (15 percent) in the UPMC East service area, and these statistics are higher compared to the county (13 percent), the state (11 percent), and the nation (9 percent).

Older individuals, more health problems, so prevention is key. Health problems affect seniors more so than other age groups. In fact, national data show that almost four out of five older adults have one chronic condition. In Allegheny County, older residents experience more health problems, such as diabetes (22 percent), limitations in activities (40 percent), and a majority of influenza and pneumonia deaths (88 percent). Therefore, preventive care and screenings are key. Many individuals with diabetes are undiagnosed — for example, only about 65 percent of older adults reported receiving a test for diabetes in the past three years. Percentages of older adults receiving influenza and pneumonia immunizations (72 percent and 78 percent, respectively) were much lower than the national benchmark of 90 percent.

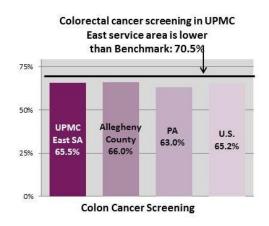
Navigating Existing Resources: Post-Discharge Coordination & Medication Management and Compliance – Importance to the Community

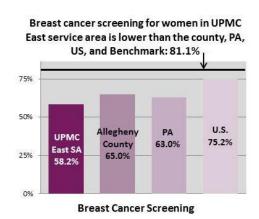
The community identified navigating existing resources, specifically medication management and compliance and post-discharge coordination and follow-up, as significant health needs for UPMC East. Although local publicly available data are limited on this topic, qualitative information collected during the CHNA process and focus groups placed significant

emphasis on the need for assistance with navigating available health care resources. Post discharge coordination and follow-up, especially medication management, can be particularly challenging for certain subgroups. In particular, elderly living alone, those whose medication is complex (e.g., >5 medications), and those with chronic disease — especially depression — may have more challenges in managing and complying with their medication. Research suggests that adverse events after discharge, and subsequent re-hospitalizations, can be reduced through interventions at the time of hospital discharge, and also through follow-up with the patient.

Chronic Disease Prevention: Preventive Health/Wellness and Preventive Screenings – Importance to the Community

- Preventive screenings can help identify some of the leading causes of death—such as heart disease, cancer, and diabetes—in early stages when treatment is likely to work best.
- Cancer screenings were lower in the UPMC East service area than benchmarks.





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

Screening rates are on par with state and nation: Preventive screenings are a cost-effective approach in promoting health, and can help further delay the progression or worsening of certain diseases. Screening rates within Allegheny County for conditions such as colorectal cancer were generally on par with or above that of the state and the nation.

Opportunities for improvement within specific clinical areas and sub-populations reflect the opportunity for navigation to existing resources: In the UPMC East service area, colorectal screening and mammogram screening were lower, compared to the county, state, and national benchmarks. Additionally, variations in screening rates were observed for certain demographics and areas within Allegheny County. For colorectal screening, a higher proportion of older individuals (65+) reported having a colorectal screening, compared to people 50 to 64 years old. In addition, those with a college degree reported receiving colorectal screening more so than those without a degree. No significant differences were observed based on sex, household income, or race.

For mammography screening, women with less than a high school education were significantly less likely to report receiving a mammogram, compared to women with more education. There were no significant differences by age, income, or race.

## V. Overview of the Implementation Plan

#### Overview:

UPMC East 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 May 13, 2013, the UPMC East Board of Directors adopted an implementation plan to address the identified significant health needs:

- Senior Health and Caring for the Aging Population
- Preventive Health and Wellness
- Preventive Screenings
- Medication Management and Compliance
- Post-Discharge Coordination and Follow Up

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

High-Level Overview of UPMC East Implementation Plan

| Programs/Event   | Senior Health | Preventive<br>Screenings | Preventative<br>Health and<br>Wellness | Medication<br>Management | Post-Discharge<br>Coordination |
|--|---------------|--------------------------|--|--------------------------|--------------------------------|
| Healthy Eating for Seniors                                       | X             |                          | X                                      |                          |                                |
| Heart Health Lecture and Vascular Screenings                     |               | x                        | x                                      |                          |                                |
| Diabetes Prevention and Management                               |               | x                        | X                                      | Х                        |                                |
| Senior Homecare Options  | x             |                          |  |                          | X                              |
| Stroke Awareness   |               |                          | X                                      |                          |                                |
| Obesity Awareness and Treatment                                  |               |                          | Х                                      |                          |                                |
| Ask a Pharmacist   | Х             |                          |  | Х                        | Х                              |
| Sports Injury Awareness: Concussion Prevention                   |               |                          | х                                      |                          |                                |
| Bone Health: Osteoporosis Screenings and Elderly Fall Prevention | х             | x                        | х                                      |                          |                                |
| Cancer Awareness   |               | x                        | Х                                      |                          |                                |
| Behavioral Health:<br>Depression and Substance Abuse             | Х             |                          | х                                      | х                        |                                |

## **VI. APPENDICES**

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

Goal: Engage the Community by Implementing a New Suite of Educational Programs and Develop Relationships with Community Partners

UPMC East's Community Advisory Council identified significant health needs in the UPMC East community: Senior Health, Preventive Screenings, Preventive Health and Wellness, Medication Management, and Post-Discharge Coordination. The new suite of programs will be aimed at community health education, screenings, and chronic disease management, and is designed to engage community members while leveraging and building relationships with community partners. Each month throughout the year, a new community program focusing on one or more of the priorities identified will be implemented.

| Programs/Event   | Senior Health | Preventive<br>Screenings | Preventative<br>Health and<br>Wellness | Medication<br>Management | Post-Discharge<br>Coordination |
|--|---------------|--------------------------|--|--------------------------|--------------------------------|
| Healthy Eating for Seniors                                       | X             |                          | X                                      |                          |                                |
| Heart Health Lecture and Vascular<br>Screenings                  |               | X                        | х                                      |                          |                                |
| Diabetes Prevention and Management                               |               | Х                        | Х                                      | Х                        |                                |
| Senior Homecare Options  | Х             |                          |  |                          | Х                              |
| Stroke Awareness   |               |                          | Х                                      |                          |                                |
| Obesity Awareness and Treatment                                  |               |                          | Х                                      |                          |                                |
| Ask a Pharmacist   | Х             |                          |  | Х                        | Х                              |
| Sports Injury Awareness: Concussion<br>Prevention                |               |                          | х                                      |                          |                                |
| Bone Health: Osteoporosis Screenings and Elderly Fall Prevention | х             | х                        | х                                      |                          |                                |
| Cancer Awareness   |               | Х                        | Х                                      |                          |                                |
| Behavioral Health:<br>Depression and Substance Abuse             | X             |                          | X                                      | Х                        |                                |

|          |  | Outcomes  | Torget  |  |
|----------|--|---|---|--|
| Program  | Activities   | Goal-Year 3   | Target<br>Population                                | Partners   |
| January  | Senior Health/Preventive Health & Wellness:<br>Geriatric Preventive Care<br>Healthy snacking for your football game parties<br>Jan. 3, 2013, 11:15 am.   | Offer program and increase number of participants.  | Seniors.  | Monroeville<br>Senior Center<br>Morningside<br>Senior Center         |
| February | Preventive Health & Wellness/Preventive Screenings: Cardiovascular Disease Heart health lectures: vein disease, carotid disease, arterial aneurysms, and PAD—peripheral arterial disease Vascular screenings and Ankle-Brachial Index Community Room, February 23, 2013, 10:00 am – 1:00 pm. | Offer heart health lectures/vascular screening and increase number of participants.   | General population.                                 | Heart and<br>Vascular<br>Institute                                   |
| March    | Preventive Health & Wellness/Preventive Screenings/Medication Management: Diabetes Advances in diabetes management: Endocrinologist from UPMC Diabetes and Endocrinology Center and Certified Diabetes Educator Biometric Screenings (Emed)  March 30, 2013, 7:00 am – 11:00 am.             | Offer diabetes management and screening programs and increase number of participants.  Set up infrastructure to expand diabetes education and management services at UPMC East. | People with diabetes.  General population. Seniors. | Senior Center  |
| April    | Post-Discharge Coordination/Senior Health:<br>Senior homecare options is a program that will<br>address discharge coordination needs for seniors.<br>East Liaison for Senior Provider Services will<br>present. April 15, 2013, 7:00 pm.   | Offer program and increase participation.   | Seniors and family.                                 |  |
| May      | Preventive Health & Wellness: Stroke Awareness Signs and symptoms of stroke. May 21, 2013.   | Offer stroke awareness program and increase number of participants.   | General population.                                 |  |
| June     | Preventive Health & Wellness: Obesity/Nutrition Education: Partner with UPMC St. Margaret and Magee-Womens Hospital of UPMC to offer Bariatrics information. Nutrition lecture—Alternative Supplements, Popular Diets—What is the Evidence?  | Offer educational programs on nutrition and increase number of participants.  Generate referrals to outpatient diabetes education and/or referrals to endocrinologist.          | Obese patients.  General population.                | UPMC St.<br>Margaret and<br>Magee –<br>Womens<br>Hospital of<br>UPMC |
| July     | Medication Management/Post-Discharge Coordination/Senior Health: Ask a Pharmacist - Seniors can have all questions regarding medication answered.  | Offer program and increase participation.   | Seniors.  | Senior<br>Centers<br>Personal Care<br>Homes                          |
| August   | Preventive Health & Wellness: Sports Injury Prevention Concussion awareness lecture at local HS: concussion prevention and signs and symptoms of concussion and links to emergency medicine.   | Offer program and increase number of attendees.  Offer program at additional school locations.  | Adolescents and family.                             | UPMC Sports<br>Medicine  |

| Program   | Activities   | Outcomes Goal-Year 3  | Target<br>Population         | Partners   |
|-----------|--|---|------------------------------|--|
| September | Preventive Health & Wellness/Preventive Screenings/Senior Health: Orthopedics Geriatric fracture program. Fall prevention in senior centers. Screenings – osteoporosis. Celebrate Monroeville (participation). | Offer program and increase number of attendees.                       | General population. Seniors. | Senior<br>Center/<br>Senior Living<br>community<br>Monroeville<br>Chamber of<br>Commerce |
| October   | Preventive Health & Wellness/Preventive Screenings: Cancer Breast cancer and colon cancer lectures. Screenings—mammography and other cancers.  | Offer cancer awareness events and increase number of participants.    | Women.  General population.  | Magee-<br>Womens<br>Hospital of<br>UPMC  |
| November  | Preventive Health & Wellness: Primary Care Health and wellness focus.  | Offer health and wellness events and increase number of participants. | General population.          | Senior Center  |
| December  | Preventive Health & Wellness/Medication Management/Senior Health: Behavioral Health Depression, drug and alcohol topics.   | Offer program and increase number of participants.                    | General population.          | Western<br>Psychiatric<br>Institute and<br>Clinic of<br>UPMC                             |

## 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.

The following table identifies measurable process outcomes and related health impact indicators considered in the development of this plan. 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.

| Health Topic         | Process Outcomes<br>(Hospital/Partner Delivery of Services)   | Potential Health Impact Outcomes<br>(Changes in Population Health)  |
|----------------------|---|---|
| Older Adult Wellness | Increase—    Osteoporosis screening    Medication management education    Access to home care services    Pneumonia vaccination | Decrease—     Falls-related ED admissions     Hospitalization for preventable conditions     Hospital readmission |

## **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%         |

<sup>\*</sup>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           |

<sup>\*</sup>Based on those ≥25 years of age; \*\*Based on those ≥16 years and in the civilian labor force Source: US Census, 2010

Leading Causes of Mortality for Allegheny County, Pennsylvania and the United States (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                                  | 100.00                  | 100.0                   | 100.0                   |
| Diseases of Heart                           | 26.83                   | 25.9                    | 24.6                    |
| Malignant Neoplasms                         | 23.02                   | 23.1                    | 23.3                    |
| Chronic Lower<br>Respiratory Diseases       | 5.06                    | 5.2                     | 5.6                     |
| Cerebrovascular Diseases                    | 5.52                    | 5.5                     | 5.3                     |
| Unintentional Injuries                      | 1.84                    | 4.4                     | 4.8                     |
| Alzheimer's Disease                         | 2.79                    | 2.9                     | 2.8                     |
| Diabetes Mellitus                           | 2.22                    | 2.6                     | 2.2                     |
| Influenza and Pneumonia                     | 2.35                    | 2.0                     | 2.0                     |
| Nephritis, Nephrotic Syndrome and nephrosis | 2.51                    | 2.4                     | 1.5                     |
| Intentional Self-Harm (Suicide)             | 0.97                    | 1.3                     | 1.5                     |

 $Sources: Pennsylvania\ Department\ of\ Health,\ 2009;\ National\ Center\ for\ Health\ Statistics,\ 2011$ 

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

| Characteristics   | Allegheny<br>County | Pennsylvania | United<br>States | Healthy People 2020 |
|---|---------------------|--------------|------------------|---------------------|
| Morbidity   |                     |              |                  |                     |
| Diabetes (%)  | 11.0                | 9.0          | 8.0              | NA                  |
| Mental Health (Mental health not good ≥1 day in past month) (%) | 38.0                | 35.0         | NA               | NA                  |
| Low Birthweight (% of live births)                              | 8.1                 | 8.4          | 8.2              | 7.8                 |
| Health Behaviors  |                     |              |                  |                     |
| Obesity (Adult) (%)   | 28.5                | 28.0         | 26.9             | 30.6                |
| Childhood Obesity (Grades K-6) (%)                              | 15.9                | 16.8         | 17.4             | 15.7                |
| Childhood Obesity (Grades 7-12) (%)                             | 15.0                | 18.2         | 17.9             | 16.1                |
| Excessive Alcohol Use (%)                                       | 33.0                | 17.0         | 15.8             | 24.4                |
| Current Tobacco Use (%)   | 23.0                | 20.0         | 17.9             | 12.0                |
| STDs(Gonorrhea per 100,000)*                                    | 175.3               | 103.8        | 285              | 257                 |
| Clinical Care (%)   |                     |              |                  |                     |
| Immunization: Ever had a Pneumonia Vaccination (65+) (%)        | 78                  | 70           | 68.6             | 90                  |
| Cancer Screening  |                     |              |                  |                     |
| Mammography (%)   | 59.0                | 63.0         | 75.0             | 81.1                |
| Colorectal Screening (%)  | 66.0                | 63.0         | 65.0             | 70.5                |
| Primary Care Physician: Population (Ratio)                      | 1:638               | 1:1,067      | NA               | NA                  |
| Receive Prenatal Care in First Trimester (%)                    | 87.1                | 70.9         | 71.0             | 77.9                |
| Physical Environment  |                     |              |                  |                     |
| Access to Healthy Foods (%)                                     | 66                  | 57           | NA               | NA                  |
| Access to Recreational Facilities                               | 16                  | 12           | NA               | NA                  |

## Sources:

Allegheny County Data: Allegheny County Health Survey 2009-2010; Pennsylvania Department of Health, 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 East, 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 problems.

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

## Application of Concept Mapping for UMPC East:

UPMC East 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 East 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 East community.

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

## Sorting and Rating – Prioritizing Health Needs:

The UPMC East 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:**

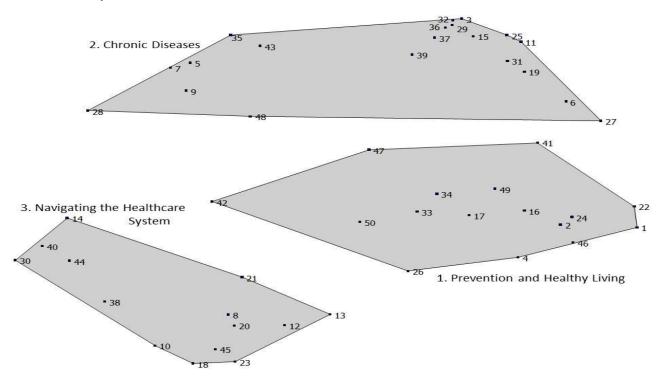
Does the Hospital have the ability to address this problem? (1 = no ability; 5 = great ability)

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, measureable 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 East. UPMC East 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 from the Allegheny County Health Department 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 East's Community Advisory Council included representatives from the following organizations:

- Chief of Police, Monroeville, PA
- Community Leaders, Monroeville, PA
- Gateway Board of School Directors, Gateway School District, Monroeville, PA
- Mayor's Office, City of Monroeville, PA
- Monroeville Area Chamber of Commerce, Monroeville, PA
- Monroeville Arts Council, Monroeville, PA

- Monroeville Senior Citizens Center, Monroeville, PA
- Turtle Creek Valley Council of Governments, Monroeville, PA
- Westmoreland County Chamber of Commerce, Greensburg, PA
- YMCA of Greater Pittsburgh, East District

The UPMC East 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 that included 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
- 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
- Office of Inclusion and Diversity, UPMC, 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 the following organizations to participate:

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