



# Community Health Needs Assessment

*And*

# Community Health Strategic Plan

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June 30, 2013

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## EXECUTIVE SUMMARY

### *UPMC Bedford Memorial Plays a Major Role in its Community:*

UPMC Bedford Memorial is a nonprofit, 49-bed acute-care hospital located in Bedford County, Pennsylvania. UPMC Bedford Memorial is the county's only hospital and delivers a full range of quality medical services — including highly specialized medical and surgical treatment — to the residents of Bedford County.

UPMC Bedford Memorial maintains a historically strong connection with its rural community. In addition to being the primary source of health care services in the county, the hospital offers an array of community-oriented programs and services to improve the health of local residents.

### *UPMC Bedford Memorial in the Community*

*The only hospital in Bedford County*

*Providing health care, as well as economic support, to this rural community*

*Total economic impact of the hospital is \$59.3 million*



*UPMC Bedford Memorial 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 Bedford Memorial 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 Bedford Memorial in a broad, systematic way. The process included face-to-face meetings with the hospital's Community Advisory Council, as well as use of an online survey tool.

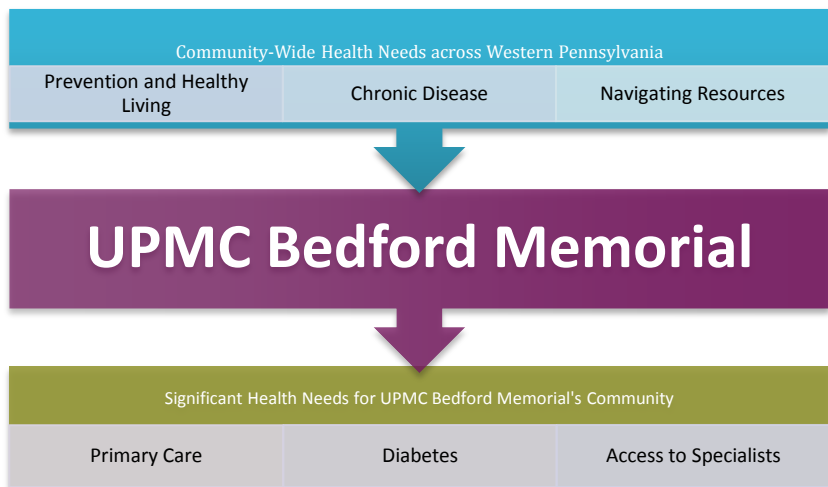
Through the CHNA process, UPMC Bedford Memorial identified significant health needs for its particular community. They are:

Topic	Importance to the Community
<b>Diabetes</b>	Diabetes is a leading cause of death in Bedford County. Obesity, a risk factor associated with diabetes, is high in Bedford County.
<b>Access to Providers (Primary Care and Specialty Care)</b>	Bedford County is designated by the federal government as a Health Professional Shortage Area. Reflecting the rural nature of the area, there are fewer people per square mile and fewer doctors per person compared to the state and the nation.

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

Western Pennsylvania has a diverse range of health needs. Key themes that emerged from the UPMC Bedford Memorial 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 Bedford Memorial 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 Bedford Memorial'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 Bedford Memorial 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 children.

## *UPMC Bedford Memorial Is Improving Community Health in Measurable Ways:*

On March 28, 2013, the UPMC Bedford Memorial Board of Directors adopted an implementation plan to address the identified significant health needs and set measurable targets for improvement over the next three years.

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

### *Preventing and Managing Diabetes*

**Goal:** Increase community participation in diabetes education, prevention, detection and management programs held at UPMC Bedford Memorial.

**Collaborating Partners:** Area gyms, Bedford County Cooperative Extension Office, Penn State University, St. Francis University, Chamber Foundation, Chestnut Ridge Medical Center, Pennwood Medical Center, Homewood Spring House Estates, Bedford Internal Medicine

- **UPMC Bedford Memorial will continue to focus on preventing and managing diabetes in the community.**
  - » UPMC Bedford Memorial medical staff will provide education at Chestnut Ridge Medical Center, a physician practice site. Patients will be seen by registered dietitians and a certified diabetes educator.
  - » UPMC Bedford Memorial will continue to host an Annual Health Fair for National Diabetes Day, which includes free screenings. The hospital also provides community diabetes lectures presented by UPMC Bedford Memorial staff, and an affordable battery of 28 diagnostic tests to detect diabetes and related chronic conditions throughout the community.
  - » A diabetes self-management education class will be offered to patients and caregivers, and taught by a certified diabetes educator and registered dietitian.

### *Enhancing Access to Providers: Specialty Care and Primary Care*

**Goal:** Develop comprehensive virtual care capabilities to enhance access to specialty medical services for residents of the community. Maintain and enhance existing primary care services within Bedford County.

**Collaborating Partners:** UPMC Center for Connected Medicine, Hyndman Area Health Center, Pennsylvania Department of Health, Area Agency on Aging and other local agencies and organizations

- **The hospital deploys Pittsburgh-based clinical and information technology resources to bring much needed medical and surgical care to the community.**
  - » The Teleconsult Center at UPMC Bedford Memorial opened in January 2013, and currently provides care in a variety of clinical areas, such as surgery, gastroenterology and endocrinology. The center plans to add capabilities in the areas of gastrointestinal surgery, hepatobiliary, plastic surgery, surgical oncology, endocrine surgery, genetic counseling and neurosurgery, as well as infectious diseases, pulmonary, and maternal and infant medicine.
- **UPMC Bedford Memorial is deeply invested in primary care, through UPMC Family Health Services located in Everett, Pa., and continued strong relationships with local private practice physicians.**
  - » UPMC Bedford Memorial plans to evaluate the number of primary care physicians (PCP) in Bedford County on an ongoing basis and coordinate with UPMC St. Margaret Family Medicine residents as they rotate through the hospital, with the goal of having them return to Bedford County to practice.
  - » UPMC Bedford Memorial works with the Hyndman Area Health Center, a local Federally Qualified Health Center, which offers dental services on a sliding payment scale to the community.



## COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) REPORT

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

#### *CHNA Goals and Purpose:*

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

UPMC Bedford Memorial 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 Bedford Memorial:*

UPMC Bedford Memorial is a nonprofit, 49-bed acute-care hospital located in Bedford County, Pennsylvania. It is the only hospital in Bedford County, and offers a full range of quality medical services to the people of the surrounding region. The hospital provides area residents with access to medical, surgical and rehabilitation care, as well as cutting-edge medical services not typically found at a local community hospital. Specialized services include virtual care, CT imaging, MRI, stroke and coronary care, and cardiopulmonary rehab. During the Fiscal Year ended June 30, 2012, UPMC Bedford Memorial had a total of 2,867 admissions and observations, 16,179 emergency room visits, and 2,830 surgeries.

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

## UPMC Bedford Memorial in Your Community



*As the only hospital in Bedford County, UPMC Bedford Memorial plays a central role in providing care and supporting the local, rural community.*

### Serving Community's Medical Needs

- **Uncompensated care: \$1.6 million.**
- **Virtual care programs offer top care without travel to Pittsburgh.**
- **Nearly 300 babies delivered each year.**
- **Annual health fair provided free screenings and tests to 200 local residents.**

### Special Role in Community Support

- **336 employees and an economic impact of \$59.3 million.**
- **Hospital foundation scholarships, clinical time for nursing and allied health students, and shadowing opportunities for younger students helped foster well-paying clinical careers.**

## UPMC Bedford Memorial's Community Service and Community Benefit Initiatives:

UPMC Bedford Memorial 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 Bedford Memorial'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, 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 Bedford Memorial is committed to serving Medicare and Medicaid patients. In Fiscal Year 2012, these patients represented 58 percent of UPMC Bedford Memorial's patient population.
- **Educating the Next Generation of Health Professionals:** Support for education, particularly medical education, is important in Bedford County for a number of reasons, including strengthening the workforce in a rural economy and improving access to health care for individuals living in the area. In addition to providing scholarships to medical school for Bedford County residents who wish to return to practice medicine and working to recruit primary care medical residents from UPMC St. Margaret, UPMC Bedford Memorial also provides nearly 12,000 hours of clinical rotation time for nursing and allied health students and 600 hours of shadowing time for younger students so that they may become interested in a health care career.
- **Offering Community Health Improvement Programs and Donations:** With deep roots in the community since 1951, the hospital provides services to the community through outreach programs, including referral centers, screenings, and educational classes — all of which benefit patients, patients' families, and the community. Through the 2012 Fiscal Year, the hospital offered 125 community health events and programs, including health fairs, health screenings — such as the multi-phasic screening which entails a series of 28 tests offered throughout the county at an affordable price for those who may not have geographic access to a health care provider. The hospital also provides education and prevention events on chronic diseases including diabetes, cancer, and arthritis. The estimated cost of these programs, in addition to donations to allied nonprofit partner organizations that enhance UPMC Bedford Memorial's community services, was \$2.2 million in Fiscal Year 2012.
- **Anchoring the Local Economy:** The hospital takes an active role in supporting the local economy through employment, local spending, and strategic community partnerships. By employing residents, doing business with local vendors, and supporting community economic development, UPMC Bedford Memorial has paid more than \$18 million in salaries and benefits to its 336 employees — 86 percent of whom live in the area — and generated a total economic impact of \$59.3 million in 2012.

## II. Definition of the UPMC Bedford Memorial Community

For the purpose of this CHNA, the UPMC Bedford Memorial community is defined as Bedford County. With 86 percent of patients treated at UPMC Bedford Memorial residing in Bedford County, the hospital primarily serves residents of this geographic region. By concentrating on the county, UPMC Bedford Memorial 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.

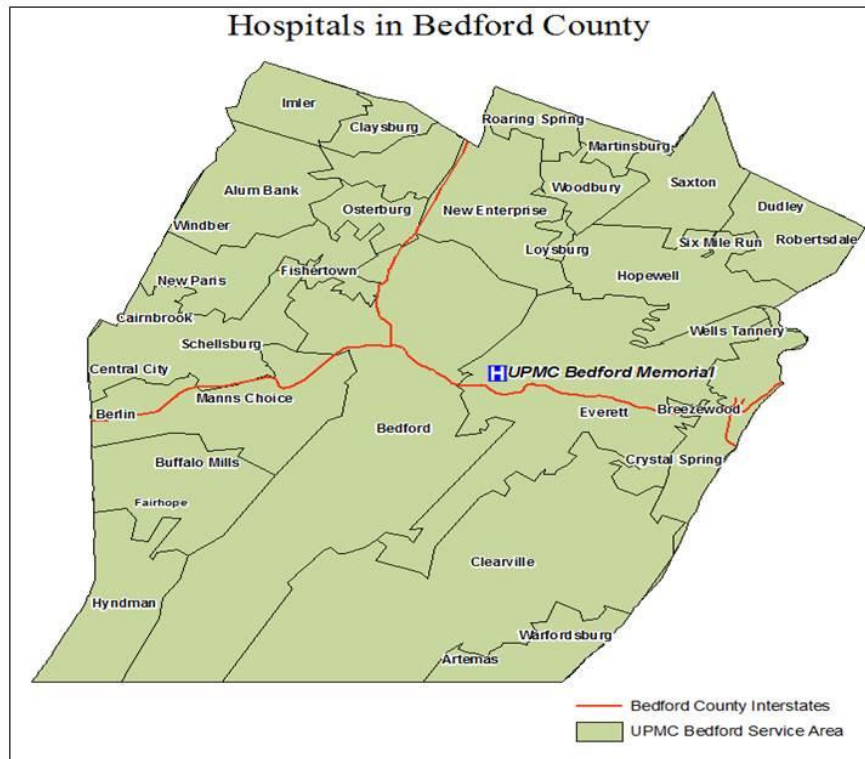
### Most Patients Treated at UPMC Bedford Memorial Live in Bedford County

County	UPMC Bedford Memorial %	Medical Surgical Discharges
Bedford County	86.3%	1,648
All Other Regions	13.7%	261
Total Hospital Discharges	100%	1,909

Source: Pennsylvania Health Care Cost Containment Council, FY2012

The hospital is situated centrally in Bedford County, Pennsylvania. This area is known for being rural, with only 49.2 persons per square mile as compared with 283.9 persons per square mile in Pennsylvania.

### Existing Healthcare Resources in the Area:



UPMC Bedford Memorial is the only licensed hospital in Bedford County.

In the immediate service area, UPMC Bedford Memorial is supported by 14 UPMC outpatient offices and other UPMC facilities located in the county. These facilities include an imaging center and 13 primary and specialty care doctor's offices.



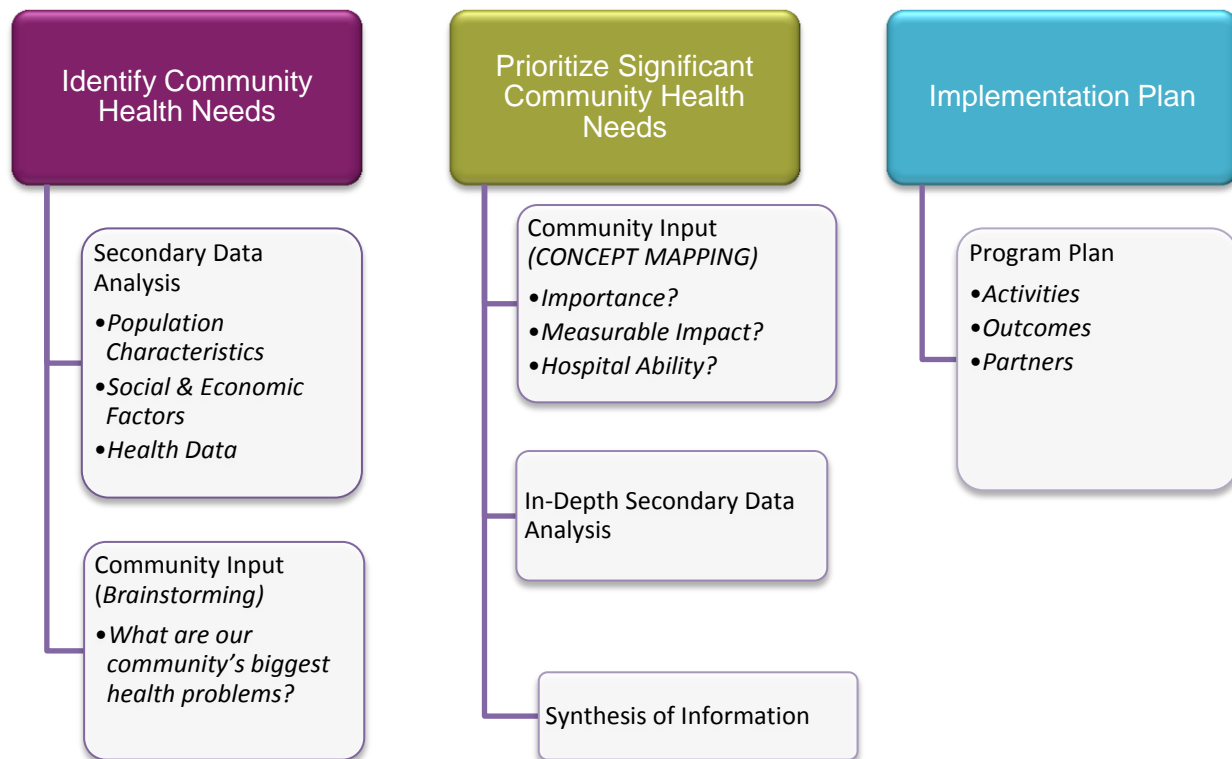
## III. Methods Used to Conduct the Community Health Needs Assessment

### Overview

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

### Framework for Conducting the CHNA:

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



## Secondary Data Sources and Analysis:

To identify the health needs of a community, UPMC — with assistance of faculty from Pitt Public Health — conducted an analysis of publicly available data. Secondary data — including population demographics, mortality, morbidity, health behavior, clinical care, and physical 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	2007 - 2009 data collected and compared by county, state and nation.	PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics.
	Cancer		
	Mental Health		
	Asthma (Childhood)		
	Birth Outcomes		
Health Behaviors Data	Obesity (Childhood and Adult)	2007 - 2009 data collected and compared by county, state and nation. 2011 County Health Rankings by County.	U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System.
	Alcohol Use		National Center for Health Statistics.
	Tobacco Use		
	Sexually Transmitted Disease		
Clinical Care Data	Immunization	2007 - 2009 data collected and compared by county, state and nation. 2011 County Health Rankings by County.	PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics.
	Cancer Screening (breast/colorectal)		U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System.
	Primary Care Physician Data		
			National Center for Health Statistics.
Benchmark Data	Mortality Rates, Morbidity Rates, Health Behaviors and Clinical Care Data	National benchmark goal measures on various topics for the purpose of comparison with current measures for neighborhood, county, state and nation.	Healthy People 2020.
Physical Environment Data	Access to Healthy Foods	2011 County Health Rankings by County.	Robert Wood Johnson Foundation County Health Rankings.
	Access to Recreational Facilities		

### *Information Gaps Impacting Ability to Assess Needs Described:*

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

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

## *Community Input:*

Community input on the perceived health needs of the region was used to complement analysis of publicly available data. The CHNA used an inclusive and systematic process to collect information pertaining to the community's perceptions of its greatest needs, as well as its expectations of what the hospital's role should be in meeting those needs. Pitt Public Health facilitated this process and employed "Concept Mapping," a participatory, qualitative research method with a proven track record for gaining stakeholder input and consensus. (See Appendix C for more information on Concept Mapping.)

To gather community input, the hospital convened a community advisory council to provide broad-based input on health needs present in the hospital's surrounding community. UPMC also convened a community focus group for the purpose of discussing the overarching needs of the larger region served by UPMC's 13 licensed Pennsylvania hospitals. These groups were made up of:

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

The Concept Mapping process consisted of two stages:

- **Brainstorming on Health Problems:** During brainstorming, the hospital's community advisory council met to gather input on the question, "What are our community's biggest health care problems?" Brainstorming resulted in the development of a 50-item list of health problems.
- **Rating and Sorting Health Problems to Identify Significant Health Needs:** Community members participated in the rating and sorting process via the Internet in order to prioritize the 50 health problems and identify significant health needs according to their perceptions of the community health needs. Each participant sorted the list into overarching themes, and then rated the problems using a 1 to 5 Likert scale (1 = not important; 5 = most important), according to the following criteria:
  - » How important is the problem to our community?
  - » What is the likelihood of being able to make a measurable impact on the problem?
  - » Does the hospital have the ability to address this problem?

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

The Concept Mapping results were merged with results gathered from the analysis of publicly available data. In the final phase of the process, UPMC hospital leadership consulted with experts from Pitt Public Health, as well as the community advisory council, to identify a set of significant health needs that are critical, addressable, and have high levels of urgency in the community. The process then matched those needs to:

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



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

### *Characteristics of the Community:*

**Bedford County is Rural:** With a population of 49,762, and a population density of 49.2 residents per square mile, Bedford County is a rural area.

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

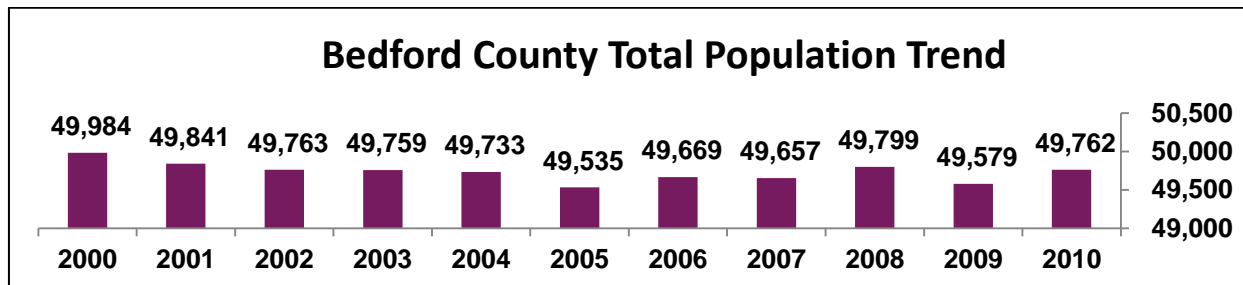
### *Bedford County Has a Sizable Elderly Population*

Age Distribution - 2010			
	Bedford County	Pennsylvania	United States
Median Age	43.9	40.1	37.2
% Children (<18)	21.6%	22.0%	24.0%
% 18-64	59.4%	62.6%	63.0%
% 20-49	35.4%	39.0%	41.0%
% 50-64	21.8%	20.6%	19.0%
% 65+	19.0%	15.4%	13.0%
% 65-74	10.2%	7.8%	7.0%
% 75-84	6.3%	5.4%	4.3%
% 85+	2.4%	2.4%	1.8%
% Elderly Living Alone	12.5%	11.4%	9.4%

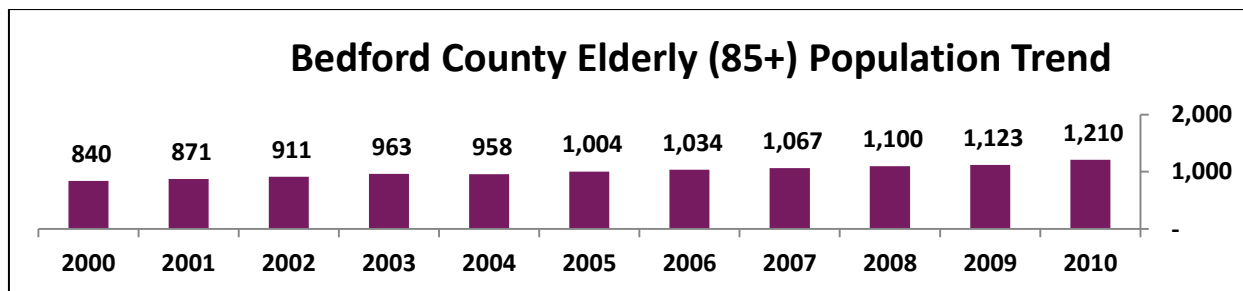
*Source: U.S. Census*

**Total Population Stable in Bedford County but Aging Population Increasing:** Although the population has remained stable since 2000, the county's most elderly (age 85 and over) population increased significantly (see figure below).

*Bedford County's total population has seen a decrease of less than 1 percent from 2000 to 2010*



*However the most elderly population in Bedford County (85+) has seen a 44 percent increase from 2000 to 2010.*



Source: U.S. Census

**Socioeconomic challenges in Bedford County:** When compared to the Commonwealth of Pennsylvania or the nation, the overall population of Bedford County faces some economic challenges. Bedford County tends to have:

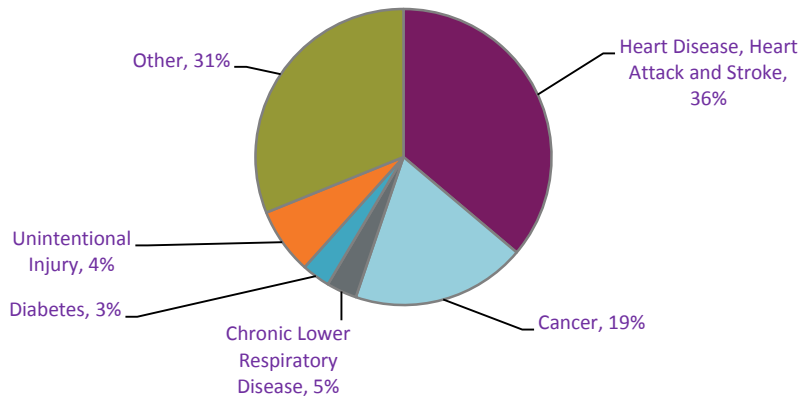
- A lower median household income
- More residents with no high school diploma
- More recipients of the income-based Medicaid health insurance program and uninsured (see Appendix B)

Social and Economic Population Demographics			
	Bedford County	Pennsylvania	United States
Median Household Income	\$40,313	\$49,288	\$50,046
% in Poverty (among families)	12.8%	13.4%	15.3%
% with No High School Diploma (among those 25+)	15.4%	11.6%	14.4%
% Unemployed (among total labor force)	7.6%	9.6%	10.8%
Racial Groups			
% White	98.0%	81.9%	72.4%
% African-American	0.5%	10.8%	12.6%
% Other Race	1.5%	7.3%	15.0%

Source: U.S. Census

## *Chronic Disease and Mortality:*

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



*Source: Pennsylvania Department of Health, 2009*

## *Significant Health Needs for UPMC Bedford Memorial'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:

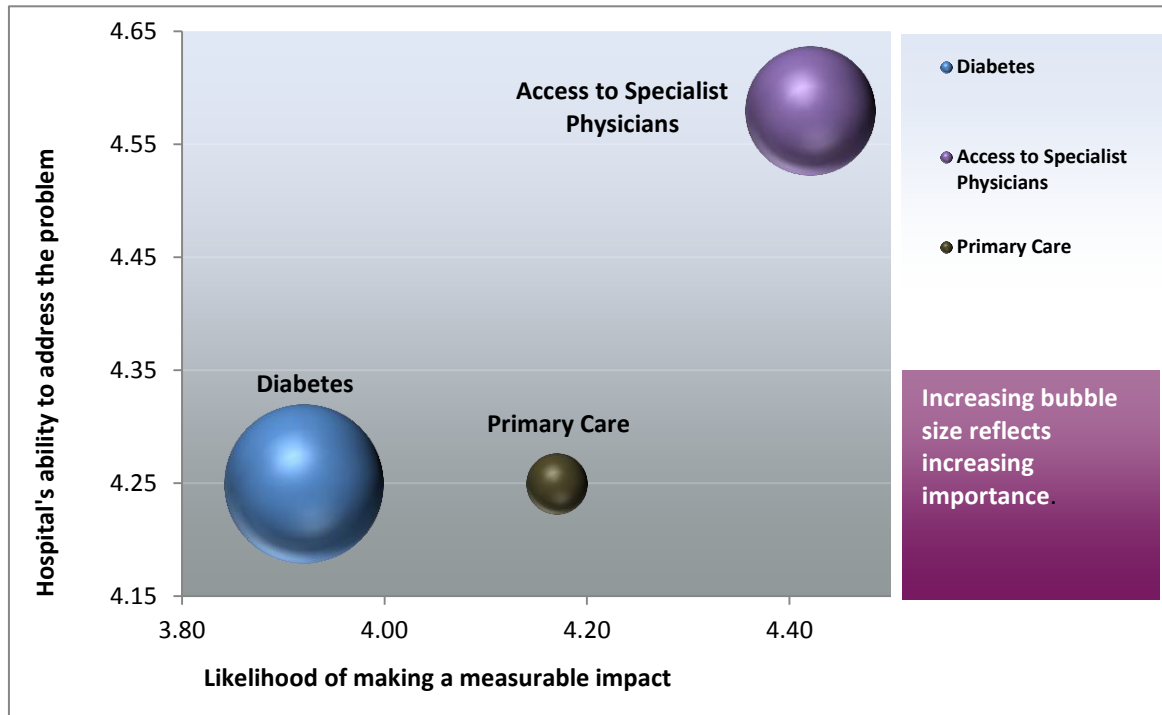
- **Chronic Disease**
- **Prevention and Healthy Living**
- **Navigating Resources**

For UPMC Bedford Memorial'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:

- **Diabetes**
- **Primary Care and Access to Specialists**

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.

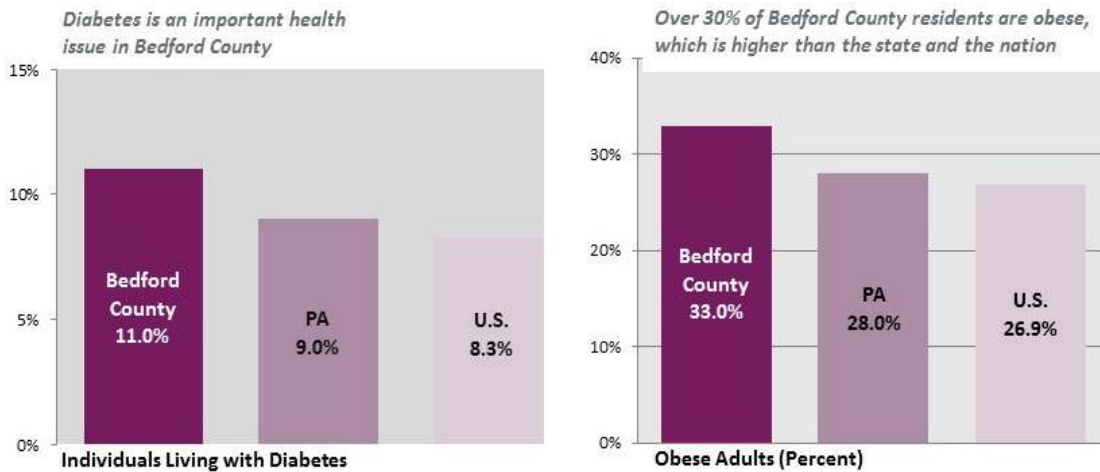
## UPMC Bedford Memorial Significant Health Needs



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

### Diabetes – Importance to the Community

- Diabetes is a leading cause of death in Bedford County and is associated with heart disease, the #1 leading cause of death.
- A high percentage of individuals in Bedford County are living with diabetes.
- Obesity, a risk factor associated with diabetes, is high in Bedford County.



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

**Diabetes affects many people:** Nationally, 8.3 percent of the total U.S. population has been diagnosed with diabetes, and it is estimated that almost one-third of people with the disease have not been diagnosed. Diabetes is a leading cause of death in the Bedford County. Two-thirds of deaths in Bedford County are due to chronic disease, and diabetes is a major cause of many of them, including heart disease and stroke. Unmanaged diabetes can lead to hypertension, blindness, kidney disease, and lower-limb amputations. In Bedford County, 11 percent of residents reported having diabetes, which was higher than the state and the nation. UPMC Bedford Memorial has existing programs that address diabetes. There is potential to leverage strong community partnerships to enhance these efforts.

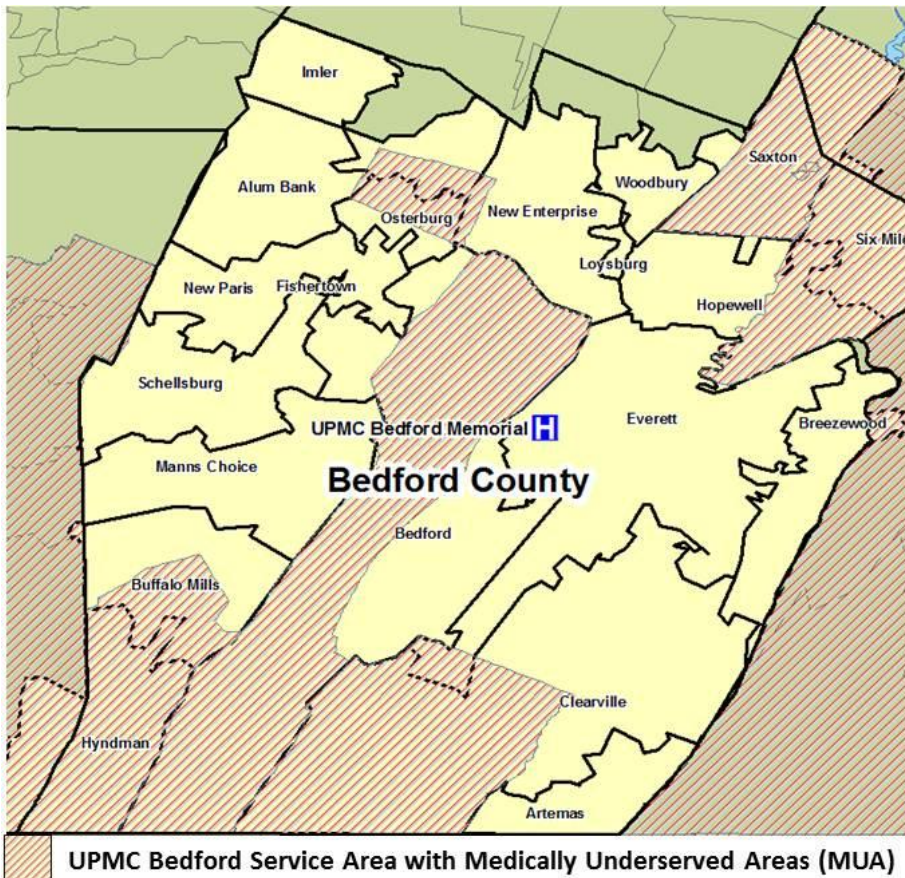
**Diabetes is particularly problematic for sub-populations, including low-income and underserved minorities:** Within Bedford County, specific sub-populations had higher prevalence of diabetes, compared to the total population, specifically older individuals (65+, 20 percent) and those earning less than \$25,000 (17 percent). Due to small sample sizes, results by race/ethnicity, other than White, are not reported.

### *Primary Care and Access to Specialists – Importance to the Community*

- **Characteristics of Bedford County reflect the many health care challenges that rural areas across the nation experience.**
- **The whole of Bedford County is designated by the federal government as a Health Professional Shortage Area – there are fewer people per square mile and fewer primary care doctors per person as compared to the state of Pennsylvania.**
- **Areas within Bedford County are also federally designated as Medically Underserved Areas.**
- **UPMC’s virtual care capabilities offer the potential to offset these geographic constraints.**



Many areas within Bedford County are federally designated as Medically Underserved Areas.



**Rural areas experience different health care challenges.** National reports show that rural residents may have challenges in accessing health care services, including the services of primary care providers and specialists. Augmenting these access issues are that rural areas—in comparison to urban areas—tend to have a larger proportion of elderly residents and residents living in poverty.

**Provider supply in Bedford County is similar to rural areas.** One of the challenges in rural areas is provider supply. Bedford County is federally designated as a Health Professional Short Area (HPSA), which is based on the ratio of the population to the number of primary care providers. The provider-to-population supply in Bedford County is 1:3,112 which is much lower than the 1:1,067 ratio for Pennsylvania.

**Medically Underserved Areas within Bedford County:** Areas in Bedford County are also designated by the federal government 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

## V. Overview of the Implementation Plan

### *Overview:*

UPMC Bedford Memorial 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 March 28, 2013 the UPMC Bedford Memorial Board of Directors adopted an implementation plan to address the identified significant health needs:

- **Diabetes**
- **Primary Care and Access to Specialists**

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

### *High-Level Overview of UPMC Bedford Memorial Implementation Plan*

Topic	Goal	Community Partners Opportunities
<b>Diabetes</b>	Increase community participation in diabetes education, prevention, detection and management programs held at UPMC Bedford Memorial. Programs to include weight maintenance, exercise, and education on nutrition as well as cooking classes, and medication management to address diabetes along the whole continuum of the disease.	Area gyms, Bedford County Cooperative Extension Office, Penn State University, Chestnut Ridge Medical Center, St. Francis University Homewood Spring House Estates, Chamber Foundation, Penwood Medical Center
<b>Access to Providers (Primary Care and Specialty Care)</b>	Provide access to specialists, such as Breast Surgery, Colorectal Surgery, Gastroenterology, Pre-operative Anesthesia, Thoracic, Gastrointestinal Surgery, Hepatobiliary, Plastic Surgery, Surgical Oncology, Endocrine Surgery, Genetic Counseling, Neurosurgery, through virtual care services and maintain and enhance existing primary care services within Bedford county.	UPMC System Hyndman Area Health Center PA Department of Health Area Agency on Aging and other local agencies and organizations

The UPMC Bedford Memorial 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 Chronic Disease - Diabetes*

**Diabetes is an important priority in UPMC Bedford Memorial’s community:** Diabetes is the sixth-leading cause of mortality in Bedford County, where there is a much larger percentage of people living with diabetes (11.0 percent) than the state (9.0 percent) and nation (8.3 percent). Diabetes is also associated with other leading causes of death, including heart disease, which is the number one cause of death. A major risk factor for diabetes is obesity, which can be prevented through increased physical activity and a healthy diet. For those living with diabetes, education about the disease and the best way to manage it can greatly improve wellness and quality of life.

**UPMC Bedford Memorial is addressing this issue:** UPMC Bedford Memorial endocrinologists have provided specialty care for patients with diabetes for many years. Dietary Services have also played an important role in preventing and controlling the disease through individualized counseling by registered dietitians, nutritional assessment and support groups, and weight control classes in the hospital as well as in community and local employer settings. UPMC Bedford Memorial’s Diabetes Self-Management Education program is certified by the American Diabetes Association and includes a certified diabetes educator.

**UPMC Bedford Memorial plans to do more to focus on this priority:** In addition to UPMC Bedford Memorial’s already strong suite of diabetes programs, the hospital plans to expand these programs and provide more resources to the individuals that they serve by including the use of virtual care with endocrine specialists in Pittsburgh available to the hospital’s physicians.

Chronic Disease: Diabetes				
Program	Activities	Outcomes	Target Population	Partners
		Goal-Year 3		
<b>Chestnut Ridge Medical Center Diabetes Education</b>	Provide education at Chestnut Ridge Medical Center, a physician practice site. Provide consultations with registered dietitians and a certified diabetes educator for diabetes management and obesity/weight loss plans.	Increase the number of current patients scheduling return visits.	Patients at Chestnut Ridge Medical Center.	Chestnut Ridge Medical Center.
<b>Glucose Management Program</b>	Perform HbA1c testing for patients at Chestnut Ridge Medical Center, Pennwood Medical Center and Bedford Internal Medicine physician practice sites. Identify patients with level of 8 or higher and refer to UPMC Bedford Memorial’s certified diabetes educator. Encourage patients to decrease HbA1c by 1.5.	Track patients receiving education. Monitor participants’ HbA1c levels.	Pre-diabetic outpatients.	Chestnut Ridge Medical Center, Pennwood Medical Center, Bedford Internal Medicine.

Chronic Disease: Diabetes				
Program	Activities	Outcomes	Target Population	Partners
		Goal-Year 3		
<b>National Diabetes Day Health Fair</b>	Host health fair on national diabetes day. Offer free screenings of eyes and feet, carotid dopplers, cooking demonstrations, vendors, HbA1c and glucose testing.	Increase education and awareness in the population.	General population.	Area Gyms, Bedford County Cooperative Extension Office, Penn State University, St. Francis University, Homewood Spring House Estates.
<b>Community Presentations</b>	Provide staff who can present information at public speaking opportunities in the community. Present education about diabetes and how it affects the body.	Increase public awareness of diabetes.	General population.	
<b>Multi-Phasic Screening (whole blood panel)</b>	Offer multi-phasic screening in many locations including outlying areas as a way for residents to get lab work on a regular basis (fee is \$25, which is less expensive than screenings in a doctor's office). Send results to patient's PCP.	Offer screening service.	General population.	
<b>Leadership Bedford County</b>	Provide nutritionist to attend annual health care session and discuss obesity and impact on health care costs to two audiences: - Sophomores in high school. - Adults.	Increase participation.	High school sophomores. Adults.	Chamber Foundation – Leadership Bedford County class.
<b>DSME (Diabetes Self-management education) Program</b>	Offer monthly class taught by a certified diabetes educator and registered dietitian to all patients. Include an overview of diabetes, hypo/hyperglycemic signs and symptoms, treatment, exercise, nutrition, complication review, and tips on self-management of disease.	Increase referrals to program.	Individuals with diabetes.	
<b>Dining with Diabetes</b>	Offer 5-week program to help diabetics and their families learn about diabetic diet. Educate participants about what and when to eat. Provide networking opportunities.	Increase participation in program.	Patients with diabetes and their families.	Bedford County Cooperative Extension Office, Penn State University.
<b>HbA1c Protocol Program</b>	Perform HbA1c testing for all diabetic inpatients that have not had one in past 90 days. Refer patients with an HbA1c >7 for diabetic education from nursing and nutrition departments. Refer patients with an HbA1c >9 for a consult.	All diabetic inpatients have up-to-date (within past 90 days) HbA1c results.	Hospital inpatients.	

## *Priority Health Issue: Addressing Access to Providers*

**Access to specialty and primary care physicians is an important priority in UPMC Bedford Memorial's community:** To enhance its efforts to provide care in this rural community, UPMC Bedford Memorial is pursuing a strategic program for expanding access to specialty care via virtual care. Bedford County's status as a Health Professional Shortage Area (HPSA) represents a challenge to community health; however, the technological support afforded to UPMC Bedford Memorial by the larger UPMC system, which has made virtual care a particular focus, represents an opportunity to address the issue. While it is difficult to recruit physicians to rural areas in general, and Bedford County's population base may not support sub-specialists, virtual care is a promising, practical, and relatively quick approach to providing high level specialty services.

**UPMC Bedford Memorial is addressing this issue:** Leveraging UPMC's Pittsburgh-based physician resources, UPMC Bedford Memorial had already launched successful programs in virtual care for patients with several medical and surgical conditions. For example, research has indicated that emergency stroke treatment at rural hospitals is more likely to follow the latest treatment guidelines and produce better outcomes when local physicians have the option of consulting with specialists via electronic means. UPMC's own experience has supported these results. Similar data support the usefulness of virtual care to local physicians in other specialties. UPMC Bedford Memorial has also been heavily invested in primary care through its UPMC Family Health Services location in Everett, Pennsylvania, and through strong relationships with local private practice physicians.

**UPMC Bedford Memorial plans to do more to focus on this priority:** A centerpiece of UPMC Bedford Memorial's strategic plan will be a new Teleconsult Center. The Center will help organize and direct existing virtual care programs and will provide guidance in launching new virtual care services. The center, the creation of which will be an early goal for the strategic plan, will address two major components of enhancing and expanding UPMC Bedford Memorial's virtual care services. First, the hospital will improve, enhance, and expand the operations of its current virtual care programs. Second, the center will expand to other specialties through an updated version of the hospital's medical staffing plan, which is based on a survey of local physicians.

UPMC Bedford Memorial's 2013 medical staffing plan includes new goals for the education and the hiring of primary care physicians (PCPs) who are willing to relocate and/or return to the county to practice. Strategies to achieve these goals include offering incentives (such as scholarships to medical students born in and willing to return to Bedford County) to physicians during the primary care training process, providing continued opportunities for primary care residents to train and work in the county, and directly hiring more PCPs. The hospital will also improve access to its PCPs by setting new time goals for scheduling patient appointments and providing education and support to PCPs who need to refer patients to allied health services such as dentistry. Efforts will also be made to better integrate PCPs into their patients' hospital care. UPMC Bedford Memorial will hire hospitalists, specialty physicians who monitor patients' progress through hospital care, to keep patients' PCPs fully informed and ready to take over care after patients leave the hospital. In addition, the hospital has set new goals for ensuring that discharged patients have appointments with PCPs as well as any necessary specialists for post-hospital care. This effort will help ease patients' transitions from the hospital to home and will decrease readmissions to the hospital.



Access to Physician Specialists				
Program	Activities	Outcomes Goal-Year 3	Target Population	Partners
<b>Teleconsult Center</b>	<p>Open new Teleconsult Center (currently have surgical virtual care and pre-op anesthesia clinic on OPU).</p> <p>Offer patients access to new specialists who will be included in Teleconsult Center.</p> <p>If services are successful, evaluate feasibility of offering teleconsult services for neurosurgery, infectious diseases, pulmonary, behavioral health, maternal and fetal service lines.</p>	Add additional specialties including tele-rheumatology and tele-endocrinology.	All ages.	UPMC physician services, corporate virtual care, UPMC Arthritis and Autoimmunity Center, UPMC Diabetes Institute.
<b>Primary Care Provider Assessment</b>	<p>Evaluate and adjust the number of primary care physicians in Bedford County on an ongoing basis.</p> <p>Complete revised staffing plan.</p> <p>Continue working with St. Margaret's primary care residents rotating in the UPMC Bedford Memorial area.</p>	Maintain adequate PCP staffing per updated staffing plan and nationally accepted ratio.	Primary care physicians and residents.	CMI, St. Margaret's Family Medicine Residency Program.
<b>Medical School Scholarship Program</b>	<p>Monitor local students accepted to medical school.</p> <p>Offer medical school scholarships through UPMC Bedford Memorial.</p>	Monitor local students who are offered and accept medical scholarships from UPMC Bedford Memorial.	Medical students from the local area.	
<b>Improved Scheduling Initiative</b>	<p>Schedule intake appointment for new patients within one month.</p> <p>Schedule acute care visit for existing patients within 72 hours.</p> <p>Schedule sick care visit for existing patients within 24 hours.</p>	Maintain or improve timeliness of scheduling an appointment.	All patients.	CMI.
<b>Transition to Home Care Initiative</b>	<p>Enhance existing hospitalist program to improve care transitions for the patient.</p> <p>Hire additional full-time hospitalists.</p>	Maintain hospitalist staffing.	Adult inpatient population.	Clinical colleagues.

Access to Physician Specialists				
Program	Activities	Outcomes	Target Population	Partners
		Goal-Year 3		
<b>PCP Follow-Up After Discharge Initiative</b>	Schedule all appropriate appointments with PCPs and specialists prior to patient discharge. Ensure appointments are scheduled within 5-7 days post discharge, or sooner if ordered. Improve existing internal discharge communication policies.	Track data and evaluate success of the program.	All inpatients.	CMI and local specialists.
<b>Dental Care at Hyndman Area Health Services (FQHC)</b>	Educate PCPs and public on dental care, including dental services available at Hyndman Area Health Services. Collaborate with Hyndman Dental Clinic to increase awareness of dental clinic.	Increase awareness of the dental clinic. Increase the number of individuals receiving dental care (or receiving care from Hyndman Area Health Services).	2 years – elderly, low income population.	Hyndman Health Center, UPMC Bedford Memorial social workers and case managers, CMI, PA DOH, MHMR, UFSS, C&Y, AAA, and other community agencies.

## Outcomes and Evaluation of Hospital Implementation Plans

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

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

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

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

	Process Outcomes (Hospital/Partner Delivery of Services)	Health Impact Outcomes (Changes in Population Health)
<b>Diabetes</b>	Increase-- <ul style="list-style-type: none"> <li>• <b>Classes in prevention (diet, weight, nutrition, exercise)</b></li> <li>• <b>Access to monitoring and screening exams (eyes, feet, HbA1c, glucose)</b></li> <li>• <b>Completion rate in diabetes self-management classes</b></li> <li>• <b>Number of community partners offering programs</b></li> <li>• <b>Number of discharged patients using diabetes programs</b></li> <li>• <b>Media efforts to promote diabetes awareness</b></li> <li>• <b>Telemedicine management and access to specialists in rural hospitals</b></li> <li>• <b>Access to primary care providers</b></li> </ul>	Decrease-- <ul style="list-style-type: none"> <li>• <b>Community prevalence of diabetes</b></li> <li>• <b>Disparities in prevalence among minorities</b></li> <li>• <b>Prevalence of related chronic conditions (stroke, heart disease)</b></li> <li>• <b>Prevalence of undiagnosed patients without appropriate treatment</b></li> </ul>

## APPENDIX B: Community Health Needs Profile

### Population Demographics

Characteristics	Bedford County	Pennsylvania	United States
Area (sq miles)	1,012.30	44,742.70	3,531,905.43
Density (persons per square mile)	49.2	283.9	87.4
Total Population, 2010	49,762	12,702,379	308,745,538
Total Population, 2000	49,984	12,281,054	281,424,600
Population Change ('00-'10)	-222	421,325	27,320,938
Population % Change ('00-'10)	-0.4%	3.4%	9.7%
Age			
Median Age	43.9	40.1	37.2
%<18	21.6%	22.0%	24.0%
%18-44	30.1%	34.3%	36.5%
%45-64	29.4%	28.1%	26.4%
% >65+	19.0%	15.4%	13.0%
% >85+	2.4%	2.4%	1.8%
Gender			
% Male	49.6%	48.7%	49.2%
% Female	50.4%	51.3%	50.8%
Race/Ethnicity			
% White*	98.0%	81.9%	72.4%
% African-American*	0.5%	10.8%	12.6%
% American Indian and Alaska Native*	0.2%	0.2%	0.9%
% Asian*	0.2%	2.7%	4.8%
% Native Hawaiian/Other Pacific Islander*	0.0%	0.0%	0.2%
% Hispanic or Latino**	0.9%	5.7%	16.3%
Disability	16.4%	13.1%	11.9%

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

Source: US Census

## Social and Economic Factors

Characteristics	Bedford County	Pennsylvania	United States
Income, Median Household	\$40,313	\$49,288	\$50,046
Home Value, Median	\$117,300	\$165,500	\$179,900
% No High School Diploma*	15.4%	11.6%	14.4%
% Unemployed**	7.6%	9.6%	10.8%
% of People in Poverty	12.8%	13.4%	15.3%
% Elderly Living Alone	12.5%	11.4%	9.4%
% Female-headed households with own children <18	4.2%	6.5%	7.2%
Health Insurance			
% Uninsured	11.9	10.2	15.5
% Medicaid	14.3	13.1	14.4
% Medicare	13.7	11.2	9.3

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

Source: US Census

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

Causes of Death	Bedford County	Pennsylvania	United States
	Percent of Total Deaths	Percent of Total Deaths	Percent of Total Deaths
All Causes	100.0	100.0	100.0
Diseases of Heart	25.6	25.9	24.6
Malignant Neoplasms	19.0	23.1	23.3
Chronic Lower Respiratory Diseases	3.3	5.2	5.6
Cerebrovascular Diseases	10.4	5.5	5.3
Unintentional Injuries	7.2	4.4	4.8
Alzheimer's Disease	1.8	2.9	2.8
Diabetes Mellitus	3.1	2.6	2.2
Influenza and Pneumonia	2.0	2.0	2.0
Nephritis, Nephrotic Syndrome and nephrosis	3.3	2.4	1.5
Intentional Self-Harm (Suicide)	1.8	1.3	1.5

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

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

Characteristics	Bedford County	Pennsylvania	United States	Healthy People 2020
<b>Morbidity</b>				
Diabetes (%)	11.0	9.0	8.0	NA
Mental Health (Mental health not good ≥1 day in past month) (%)	33.0	35.0	NA	NA
Low Birthweight (% of live births)	5.5	8.4	8.2	7.8
<b>Health Behaviors</b>				
Obesity (Adult) (%)	33.0	28.0	26.9	30.6
Excessive Alcohol Use (%)	13.0	17.0	15.8	24.4
Current Tobacco Use (%)	22.0	20.0	17.9	12.0
STDs (Gonorrhea per 100,000)*	NA	103.8	285	257
<b>Clinical Care</b>				
Immunization: Ever had a Pneumonia Vaccination (65+) (%)	67.0	70	68.6	90
<b>Cancer Screening</b>				
Mammography(%)	NA	63.0	75.0	81.1
Colorectal Screening(%)	NA	63.0	65.0	70.5
Primary Care Physician: Population (Ratio)	1:3,112	1:1,067	NA	NA
Receive Prenatal Care in First Trimester (%)	72.0	70.9	71.0	77.9
<b>Physical Environment</b>				
Access to Healthy Foods (%)	38	57	NA	NA
Access to Recreational Facilities	4	12	NA	NA

**Sources:**

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

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

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

### *Application of Concept Mapping for UPMC Bedford Memorial:*

UPMC Bedford Memorial 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 Bedford Memorial 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 Bedford Memorial community.

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

### ***Importance:***

How important is the problem to our community?

(1 = not important; 5 = most important)

### ***Measurable Impact:***

What is the likelihood of being able to make a measurable impact on the problem?

(1 = not likely to make an impact; 5 = highly likely to make an impact)

### ***Hospital Ability to Address:***

Does the Hospital have the ability to address this problem?

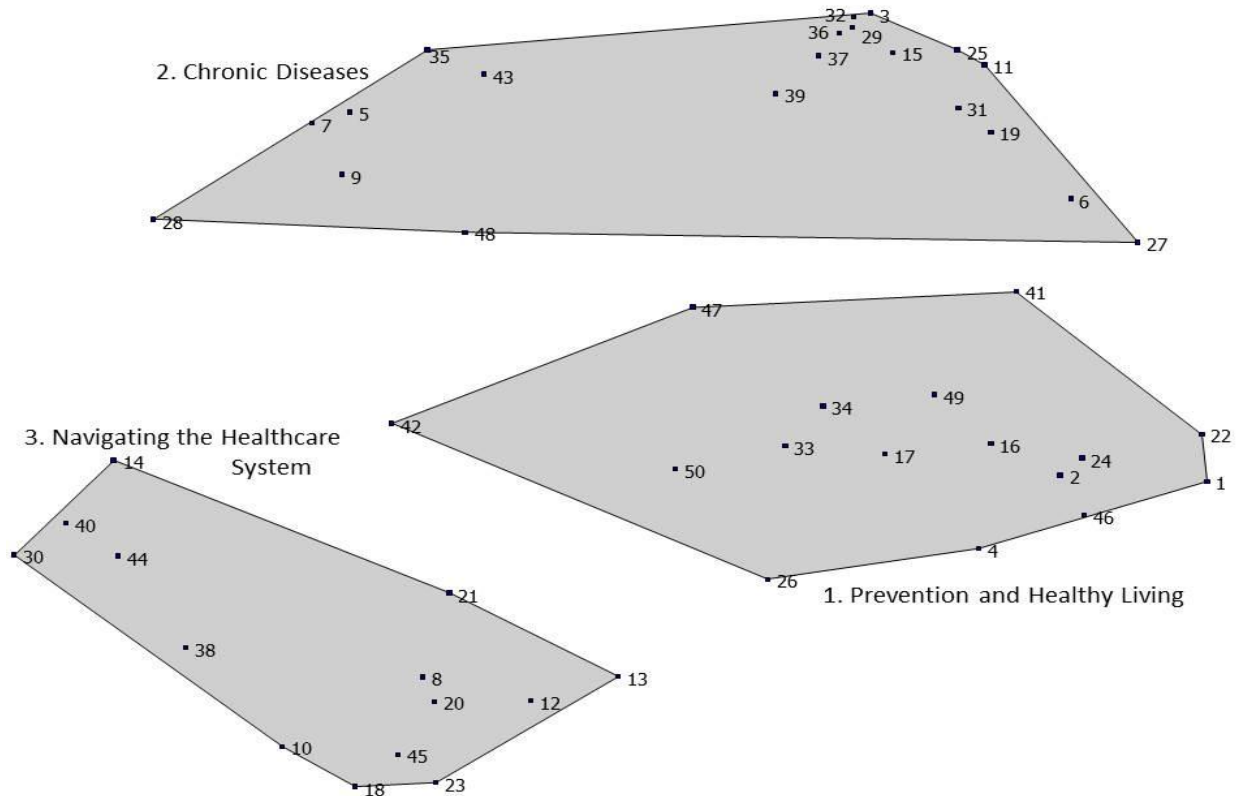
(1 = no ability; 5 = great ability)

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

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

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

*Final Cluster Map:*



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

**Importance:**

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

**Measurable Impact:**

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

**Hospital Ability to Address:**

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

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

The rating categories results were then combined with results from secondary data analyses and used to identify high priority community health problems for UPMC Bedford Memorial. UPMC Bedford Memorial 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: Input from Persons Representing the Broad Interests of the Community**

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 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 Bedford Memorial Community Advisory Council included representatives from the following organizations:

- **Bedford County Area Agency on Aging, Bedford, PA**
- **Bedford County Development Association, Bedford, PA**
- **Bedford Memorial Hospital Auxiliary, Bedford, PA**
- **Blackburn-Russell Co., Bedford, PA**
- **Hyndman Area Health Center, Bedford, PA**
- **Penn State Cooperative Extension, Ebensburg, PA**
- **Personal Solutions, Inc., Bedford, PA**
- **Somerset Mental Health Mental Retardation Services**
- **State Health Center, Bedford County, Bedford, PA**
- **Unified Family Services System, Everett, PA**

**The UPMC Bedford Memorial Community Advisory Council was also supported by members of the hospital's Board of Directors and physicians, as well as hospital leadership.**

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

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

UPMC also invited representatives of the following to participate:

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