Community Health Needs Assessment
And
Community Health Strategic Plan

June 30, 2016

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EXECUTIVE SUMMARY

Kane Community Hospital Plays a Major Role in its Community:

Kane Community Hospital is a nonprofit, 31-bed acute-care hospital located in McKean County, Pennsylvania. As one of two hospitals in McKean County, Kane Community Hospital provides quality medical services to area residents.

Kane Community Hospital maintains a historically strong connection with its community, and offers an array of programs and services to improve the health of local residents. One notable example is *Ladies Night Out*, a breast cancer awareness event held at the hospital where women can sign up for mammograms and receive education and screenings related to breast cancer.

Kane Community Hospital in the Community

31-bed hospital serving a rural population

Employs more than 200 area residents

Generated $34 million in economic impact to the region

Kane Community Hospital is affiliated with UPMC, a leading Integrated Delivery and Finance System (IDFS) headquartered in Pittsburgh, Pennsylvania.

Identifying the Community's Significant Health Needs:

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

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

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

Addressing the Community's Significant Health Needs:

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

• **Cancer**

• **Heart Disease**

• **Access to Specialists**

Three years later, when the Fiscal Year 2016 CHNA was conducted, Kane Community Hospital affirmed the previously identified significant health needs, expanding the scope of one:

- **Cancer**

- **Heart Disease**

- **Access to Specialists and Primary Care**

On May 31, 2016, the Kane Community Hospital Board of Directors adopted an implementation plan to address the significant health needs identified in the Fiscal Year 2016 CHNA, and to set measurable targets for continued improvement. The plan drew support from an array of community partners, as well as from the larger UPMC system. This plan builds upon the Fiscal Year 2013 plan, recognizing that significant health issues will generally need more than two to three years to show meaningful improvement.
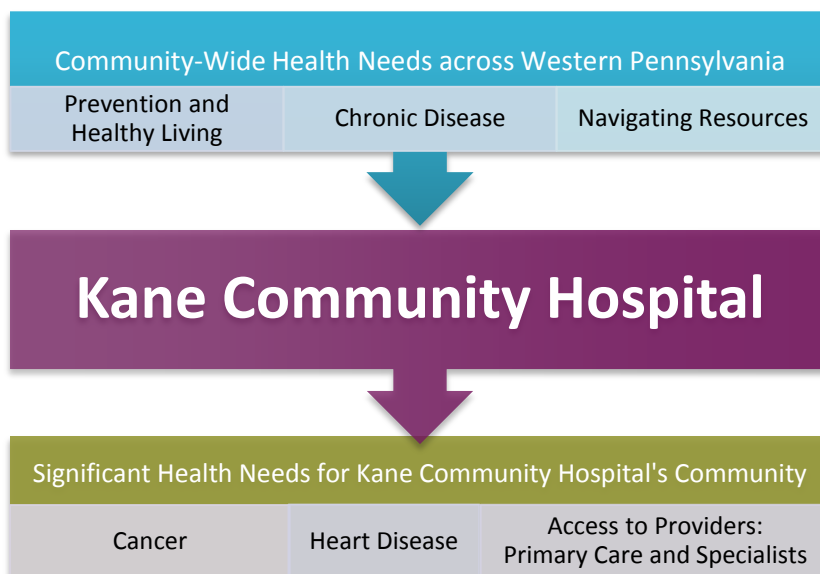
Topic	Importance to the Community
Cancer and Heart Disease	Cancer and heart disease are leading causes of death in McKean County. Healthy behaviors, such as screenings and maintaining a healthy weight, can help reduce one's risk for these diseases.
Access to Specialists and Primary Care	Areas within McKean County are designated by the federal government as either Health Professional Shortage Areas or Medically Underserved Areas. 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. Primary care practices allow patients to access a wide spectrum of health services, including preventive care/screenings, care for chronic conditions, and acute care. Regular primary care visits are beneficial to an individual's overall health and wellness.

Collective Impact Across Western Pennsylvania:

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

- **Focus on a Few High-Urgency Issues and Follow-Through:** The hospital is concentrating on a limited number of significant community health needs, and has developed concrete plans to chart measurable improvements.

- **Chronic Disease Prevention and Care:** Nearly two-thirds of deaths in the community are attributable to chronic disease. Kane Community Hospital is planning a wide range of prevention and chronic disease support activities.

- **Navigating Available Resources:** Established health care programs in Kane Community Hospital's community are often untapped due, in part, to social and logistical challenges faced among populations and individuals lacking social support systems.

- **Community Partnerships:** Kane Community Hospital is collaborating successfully with local organizations on improving community health. The hospital will also leverage resources and synergies within the UPMC system, which include population-focused health insurance products and comprehensive programs, and resources targeted at areas including seniors and children.

Community-Wide Health Needs across Western Pennsylvania		
Prevention and Healthy Living	Chronic Disease	Navigating Resources

Kane Community Hospital

Significant Health Needs for Kane Community Hospital's Community		
Cancer	Heart Disease	Access to Providers: Primary Care and Specialists

GOAL: Kane Community Hospital is increasing awareness of prevention, detection, and management of chronic disease.

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

To achieve this goal, the hospital is targeting all individuals to promote awareness of heart disease, and is targeting women to address the issue of breast cancer. Kane Community Hospital's chronic disease initiatives are aimed at prevention, screening, and support. Community-wide efforts include:

» Raising awareness and improving cardiac health throughout the community

» Promoting breast cancer prevention and management throughout the community

Community Need

In McKean County, cancer and heart disease are the leading causes of death.

47%
of deaths due to cancer and heart disease

(PADOH, 2012)

PROGRESS:
Kane Community Hospital is documenting measurable impact in community health.

Promoting early detection and cardiac rehabilitation

Offering a variety of community wide events to help detect heart disease

In 2015, the hospital hosted the Annual Health Forum, as well as seven different Wellness events. At these events, the hospital offered a full panel of screenings that measured glucose, cholesterol, and triglyceride levels to help raise individuals' awareness of heart disease and other related conditions.

215 **patients completed the cardiac rehabilitation program**

The hospital focused its cardiac rehab program on encouraging healthy behaviors among patients who have experienced cardiac episodes.

Promoting breast cancer prevention, education, and management

More than **1,000** *mammogram postcard reminders were distributed this past year*

The hospital developed and implemented a mammogram screening reminder system to communicate with area women about scheduling annual breast exams.

More than **200** *guests were educated about breast cancer at annual Ladies Night Out event*

The hospital hosts *Ladies Night Out* to educate the community about breast cancer. Topics include discussion of technologies to detect and treat cancer, the importance of breast self exams, and ways to promote healthy lifestyles and nutrition. Attendees may also schedule mammogram screenings — in 2015, 53 women scheduled mammograms.

Leveraging the power of the UPMC network to help women receive support and care

A Breast Center of Excellence, Kane Community Hospital provides quality breast care to residents. To enhance support for women who are undergoing treatment for breast cancer, the hospital has partnered with UPMC Hamot to implement the Nurse Navigation Program.
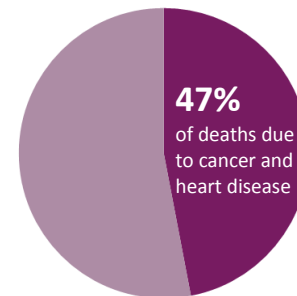
GOAL: Kane Community Hospital is increasing community access to specialty care.

> **Community Need**
>
> McKean County is designated a **Health Professional Shortage Area** by the federal government.

STRATEGY:
The hospital is leveraging UPMC's extensive provider network.

To achieve this goal, the hospital is targeting all individuals. It is also leveraging UPMC resources to improve access to specialists for the residents of McKean County. Efforts include:

» Using telemedicine to connect patients in McKean County with UPMC specialists in Erie and Pittsburgh

» Recruiting physicians to expand local services

PROGRESS:
Kane Community Hospital is making a difference in community health.

Making telemedicine visits available to McKean County residents

Filling a gap in rural McKean County, where subspecialty care is limited, Kane Community Hospital is providing telemedicine consults to residents. Telemedicine allows patients to use advances in technology to connect with specialists. In particular, the hospital offers patients improved access to cardiologists at UPMC Hamot, and neurology and stroke specialists at UPMC facilities in Pittsburgh. Telemedicine helps community members take advantage of UPMC's world-class clinical care while remaining close to home. In addition, it reduces costs and time burdens created by travel.

Recruited physicians from 5 specialties

The hospital is advancing patient care through improved access to specialists in a rural setting. Since 2013, Kane Community Hospital has recruited additional physicians to offer McKean County residents access to expanded services, including: gynecology, surgery, gastroenterology, urology, and oncology. In addition to recruiting providers, the hospital also developed a successful pain management program to serve local residents suffering from chronic pain.

COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) REPORT

I. Objectives of a Community Health Needs Assessment

CHNA Goals and Purpose:

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

Kane Community Hospital 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 Kane Community Hospital:

Kane Community Hospital is a nonprofit, 31-bed acute-care hospital located in McKean County, Pennsylvania. As one of two hospitals serving McKean County, the hospital offers quality medical services to area residents, who may otherwise have to travel long distances for care. Kane Community Hospital provides access to medical, surgical, rehabilitation, and transitional care, as well as specialized services, which include virtual care, diagnostic imaging, gastroenterology, cardiopulmonary services, cardiac rehabilitation, and cancer care. Primary and specialty care services are also delivered at community-based clinics in Kane, Mt. Jewett, Bradford, Johnsonburg, Ridgway, and Sheffield, covering a three-county region (McKean, Elk, and Warren) in northwestern Pennsylvania.

VITAL STATISTICS Fiscal Year 2015	
Licensed Beds	**31**
Hospital Patients	**1,084**
Emergency Dept. Visits	**7,433**

JOBS AND STRENGTHENING THE LOCAL ECONOMY	
Kane Community Hospital Employees	**225**
Community Benefits Contributions	**$1.5 million**
Free and Reduced Cost Care	**$1.3 million**
Total Economic Impact of Hospital Operations	**$34 million**

During the Fiscal Year ended June 30, 2015, Kane Community Hospital had a total of 1,084 admissions and observations, 7,433 emergency room visits, and 1,369 surgeries.

Kane Community Hospital is supported by an active medical staff representing many disciplines. Kane Community Hospital is affiliated with 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 Kane Community Hospital medical staff is augmented by specialists who travel to McKean County from UPMC Hamot in Erie to hold regular office hours and provide inpatient consultations.

II. Definition of the Kane Community Hospital Community

For the purpose of this CHNA, the Kane Community Hospital community is defined as McKean County. With 68 percent of patients treated at Kane Community Hospital residing in McKean County, the hospital primarily serves residents of this geographic region. By concentrating on the county, Kane Community Hospital 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 Kane Community Hospital Live in McKean County

County	Kane Community Hospital %	Medical Surgical Discharges
McKean County	68.2%	427
All Other Regions	31.8%	199
Total Hospital Discharges	100%	626

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

The hospital is situated in the southwestern region of McKean County, Pennsylvania. This area is known for being rural, with only 44.4 persons per square mile as compared with 283.9 persons per square mile in Pennsylvania.

Existing Health Care Resources in the Area:

Kane Community Hospital is one of 2 licensed hospitals in McKean County.

Hospitals in McKean County

★ Kane Community Hospital
H Other Hospitals
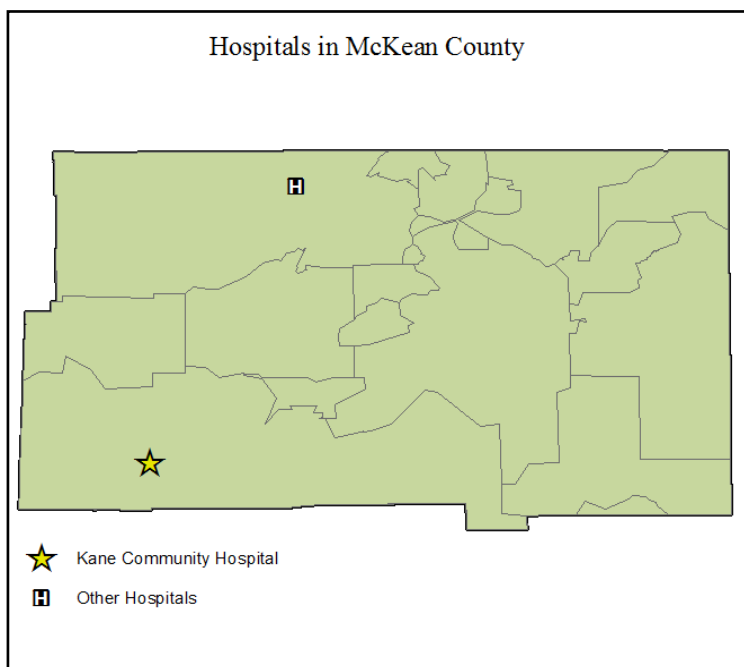
III. Methods Used to Conduct the Community Health Needs Assessment

Overview:

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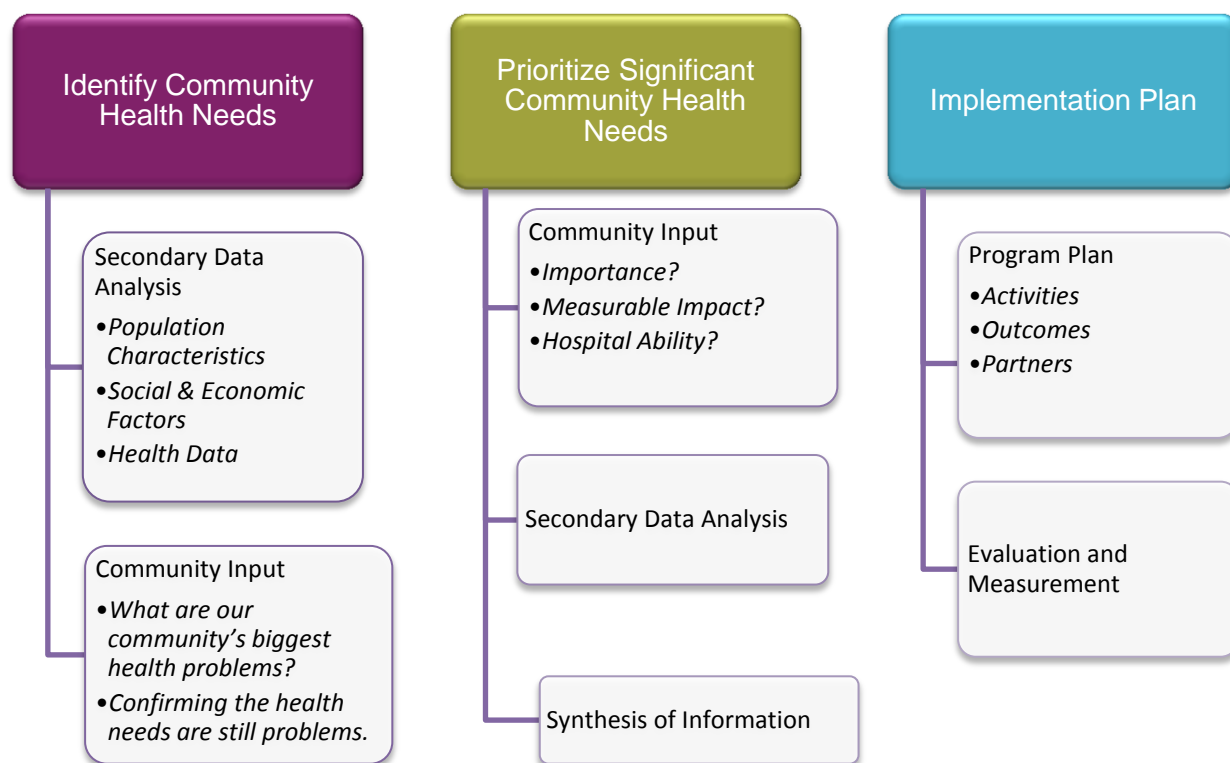ty's perspective on health care needs. To conduct the CHNA in a manner that reflects best practices, UPMC partnered with the University of Pittsburgh Graduate School of Public Health (Pitt Public Health). Pitt Public Health's mission is to provide leadership in health promotion, disease prevention, and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

Framework for Conducting the CHNA:

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

Identify Community Health Needs

Secondary Data Analysis
- *Population Characteristics*
- *Social & Economic Factors*
- *Health Data*

Community Input
- *What are our community's biggest health problems?*
- *Confirming the health needs are still problems.*

Prioritize Significant Community Health Needs

Community Input
- *Importance?*
- *Measurable Impact?*
- *Hospital Ability?*

Secondary Data Analysis

Synthesis of Information

Implementation Plan

Program Plan
- *Activities*
- *Outcomes*
- *Partners*

Evaluation and Measurement

Secondary Data Sources and Analysis:

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

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

Publicly Available Data and Sources Used for Community Health Needs Assessment

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

Data Category	Data Items	Description	Source
Morbidity Data	Adult Diabetes	2010-2013 data collected and compared by county, state, and nation.	PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics.

U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System.

National Center for Health Statistics. |
	Cancer		
	Mental Health		
	Asthma (Childhood)		
	Birth Outcomes		
Health Behaviors Data	Obesity (Childhood and Adult)		
	Alcohol Use		
	Tobacco Use		
	Sexually Transmitted Disease		
Clinical Care Data	Immunization	2010-2015 data collected and compared by county, state, and nation.	PA Department of Health Behavioral Risk Factors Surveillance System; Birth, Death, and Other Vital Statistics; Cancer Statistics.

U.S. Centers for Disease Control and Prevention Behavioral Risk Factors Surveillance System.

Health Resources and Services Administration (HRSA).

National Center for Health Statistics. |
	Cancer Screening (breast/colorectal)		
	Primary Care Physician Data		
Benchmark Data	Mortality Rates, Morbidity Rates, Health Behaviors, and Clinical Care Data	National benchmark goal measures on various topics for the purpose of comparison with current measures for neighborhood, county, state, and nation.	Healthy People 2020.

Information Gaps Impacting Ability to Assess Needs Described:

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

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

Community Input:

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

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

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

- **Persons with special knowledge or expertise in public health**

- **Representatives from health departments or governmental agencies serving community health**

- **Leaders or members of medically underserved, low-income, minority populations, and populations with chronic disease**

- **Other stakeholders in community health** *(see Appendices C and D for more information on Concept Mapping and for a complete list and description of community participants)*

The full community input survey process consisted of multiple stages:

- **Brainstorming on Health Problems:** During brainstorming, the hospital's community advisory council met to gather input on the question, "What are our community's biggest health care problems?" Brainstorming resulted in the development of a 50-item list of health problems.

- **Rating and Sorting Health Problems to Identify Significant Health Needs:** Community members participated in the rating and sorting process via the Internet to prioritize the 50 health problems and identify significant health needs according to their perceptions of the community health needs. Each participant sorted the list into overarching themes, and then rated the problems using a 1 to 5 Likert scale (1 = not important; 5 = most important), according to the following criteria:

  » How important is the problem to our community?

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

  » Does the hospital have the ability to address this problem?

- **Confirming Topics:** In Fiscal Year 2016, community advisory panels were again surveyed about the continuing importance of the identified health needs. Advisory panel members participated in an online Qualtrics survey that solicited feedback on new health problems and asked participants to rate whether the health problem "remains a major problem," "is somewhat of a problem," or "is no longer a problem."

Synthesis of Information and Development of Implementation Plan:

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

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

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

Characteristics of the Community:

Parts of McKean County are Rural: With a population of 43,450, and a population density of 44.4 residents per square mile, McKean County is a rural area.

Sizable Elderly Population with High Social Needs: A notable characteristic of McKean County is the large and increasing percentage of elderly residents (age 65 and over). McKean County has a large elderly population (17 percent), compared to Pennsylvania (15 percent) and the United States (13 percent). A higher percentage of elderly in McKean 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 nation.

McKean County Has a Sizable Elderly Population

	McKean County	Pennsylvania	National
Median Age	41.5	40.1	37.2
% Children (<18)	21.1%	22.0%	24.0%
% 18-64	61.9%	62.6%	63.0%
% 20-49	37.7%	39.0%	41.0%
% 50-64	21.0%	20.6%	19.0%
% 65+	17.0%	15.4%	13.0%
% 65-74	8.5%	7.8%	7.0%
% 75-84	5.9%	5.4%	4.3%
% 85+	2.6%	2.4%	1.8%
% Elderly Living Alone	12.9%	11.4%	9.4%

Source: U.S. Census, 2010

Medically Underserved Areas in McKean County: When compared to the Commonwealth of Pennsylvania, the overall population of McKean County faces some economic challenges. McKean County tends to have a:

- **Lower median household income**
- **Higher percentage of residents in poverty**
- **Slightly higher percentage of residents unemployed**

Social and Economic Population Demographics			
	McKean County	Pennsylvania	United States
Median Household Income	$39,717	$49,288	$50,046
Percent in Poverty	15.0%	13.4%	15.3%
Percent with No High School Diploma (among those 25+)	10.6%	11.6%	14.4%
Percent Unemployed (among those 16+ in labor force)	10.6%	9.6%	10.8%

Source: U.S. Census, 2010

Chronic Disease and Mortality:

Nearly two-thirds of deaths in McKean County are attributable to chronic disease.
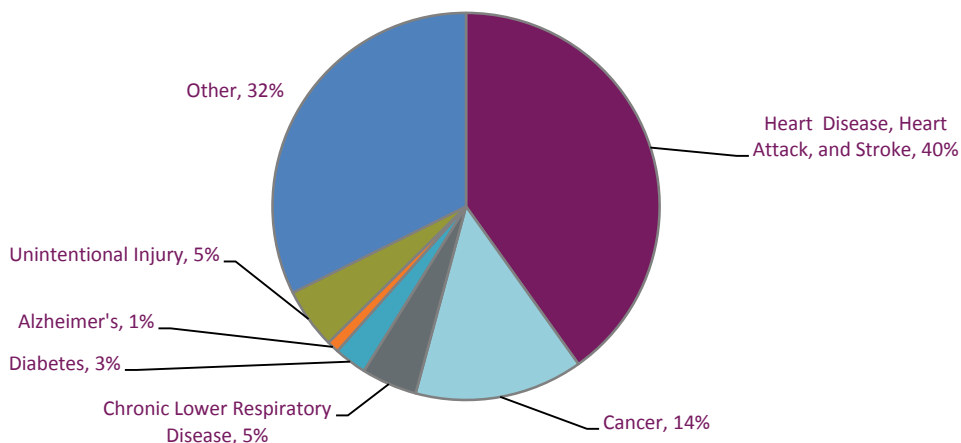
Source: Pennsylvania Department of Health, 2012

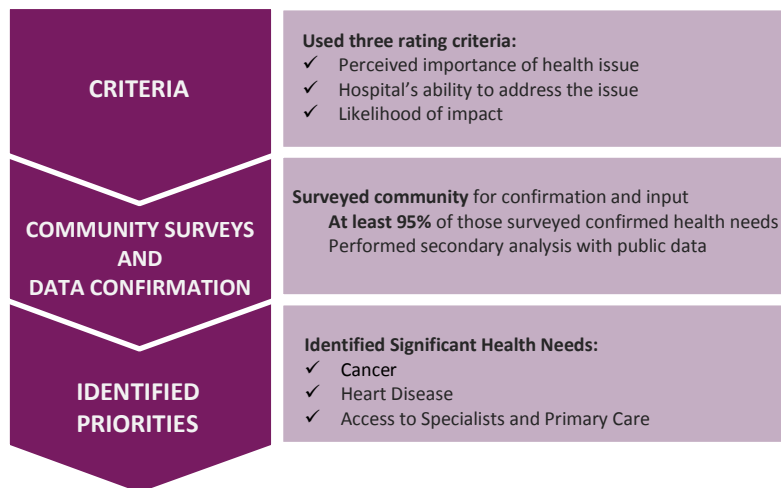## Significant Health Needs for Kane Community Hospital's Community:

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 Kane Community Hospital'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:

- **Cancer**
- **Heart Disease**
- **Access to Specialists and Primary Care**

Prioritizing Community Health Needs

CRITERIA

Used three rating criteria:
- ✓ Perceived importance of health issue
- ✓ Hospital's ability to address the issue
- ✓ Likelihood of impact

COMMUNITY SURVEYS AND DATA CONFIRMATION

Surveyed community for confirmation and input
   At least 95% of those surveyed confirmed health needs
   Performed secondary analysis with public data

IDENTIFIED PRIORITIES

Identified Significant Health Needs:
- ✓ Cancer
- ✓ Heart Disease
- ✓ Access to Specialists and Primary Care

Kane Community Hospital Significant Health Needs:

In-depth secondary data analysis reinforced that these health topics were areas of concern for the Kane Community Hospital community.

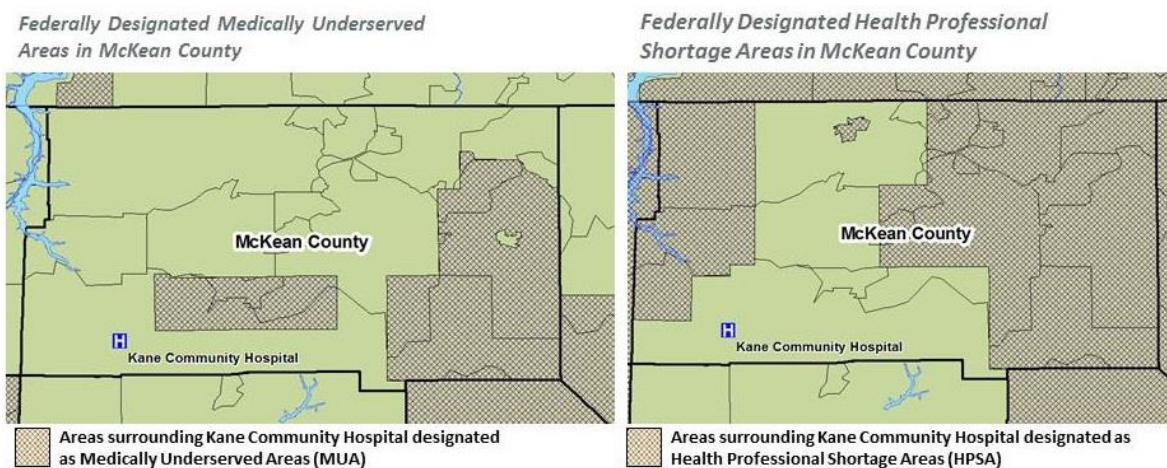*Cancer and Heart Disease – Importance to the Community:*

- **Cancer and heart disease are leading causes of death in McKean County, as well as in the state and nation.**
- **In McKean County, 50 percent of deaths are due to cancer or heart disease.**
- **Healthy behaviors, such as screenings and maintaining a healthy weight, can help reduce one's risk for these diseases.**

Cancer and heart disease affect many people: Both cancer and heart disease are leading causes of death in the United States and in McKean County. In McKean County in 2012, half of deaths were due to cancer or heart disease, which is reflective of national and state trends. Being aware of and attending prevention education classes and disease management support groups can be more challenging in rural areas. Kane Community Hospital has a suite of programs addressing cancer and heart disease and specific efforts to help McKean County residents in navigating existing health care resources.

Healthy behaviors, such as screenings and a healthy weight can help reduce one's risk for these diseases, but these behaviors are lower in some sub-populations within McKean County: Healthy behaviors, such as preventive screenings and maintaining a healthy weight, can reduce cancer and heart disease risk. In McKean County, a high percentage of residents were overweight or obese (67 percent), and a disproportionately higher percentage was observed in those ages 45-64 (76 percent). Due to small sample sizes, data are not reported by racial groups, other than White.

Access to Specialists and Primary Care – Importance to the Community:

- **Access to and availability of health care services can be challenging, especially in rural areas.**
- **Areas within McKean County are designated by the federal government as either Health Professional Shortage Areas or Medically Underserved Areas.**
- **Kane Community Hospital has efforts to help improve awareness of health care resources in McKean County.**

Federally Designated Medically Underserved Areas in McKean County

Federally Designated Health Professional Shortage Areas in McKean County

Areas surrounding Kane Community Hospital designated as Medically Underserved Areas (MUA)

Areas surrounding Kane Community Hospital designated as Health Professional Shortage Areas (HPSA)

Source: Health Resources Services Administration, 2015

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 specialists and primary care physicians. Augmenting these access issues is the fact 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 McKean County is similar to rural areas: One of the challenges in rural areas is provider supply. Areas within McKean County are federally designated as Health Professional Shortage Areas (HPSAs), which is based on the ratio of the population to the number of primary care providers (see figure above). In McKean County, the ratio of primary care physicians to the population (48.9 per 100,000) was lower, compared to the state (82.0 per 100,000).

Medically Underserved Areas within McKean County: Areas in McKean County are also designated by the federal government as Medically Underserved Areas (MUAs). 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**

Opportunities to address health care challenges in McKean County: Characteristics of McKean County reflect the many health care challenges that rural areas across the nation experience. Efforts at Kane Community Hospital aim to improve awareness of existing health care resources throughout the county. In addition, Kane Community Hospital's affiliation with UPMC provides opportunities to deliver the best care to McKean County residents.

V. Overview of the Implementation Plan

Overview:

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

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

Adoption of the Implementation Plan:

On May 31, 2016, the Kane Community Hospital Board of Directors adopted an implementation plan to address the identified significant health needs:

- **Cancer**
- **Heart Disease**
- **Access to Specialists and Primary Care**

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

High-Level Overview of Kane Community Hospital Implementation Plan

Topic	Programs	Anticipated Impact ——— Goal-Year 3	Planned Collaborations
Cancer	Breast Cancer Prevention, Management, and Support Initiatives	Improve breast cancer prevention, management, and support	Local hospital-based primary care practices, Family Health Council, and other community organizations
Heart Disease	Heart Disease Prevention, Management, and Support	Increased community participation in these programs to help prevent, detect, and manage heart disease	UPMC Health Plan, Johnsonburg and Kane School Districts, local Rotary Clubs
Access to Specialists and Primary Care	Primary Care and Specialty Care Offered at Kane Community Hospital	Expanded access to primary care and specialist physicians in McKean County	UPMC System/ UPMC Hamot Physicians, UPMC Northwest

The Kane Community Hospital 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.

I. APPENDICES

APPENDIX A:

Detailed Implementation Plan

Significant Health Issue: Addressing Cancer

Cancer is a priority in Kane Community Hospital's community: Cancer is the second leading cause of death in McKean County. For women, breast cancer death rates are higher than any other cancer with the exception of lung cancer. The good news is that women who develop breast cancer are living longer, on average, due to early detection and breakthroughs in treatment. Early detection of breast cancer is important, and can contribute greatly to better outcomes.

Kane Community Hospital is leveraging UPMC and community resources to address breast cancer: Kane Community Hospital is addressing the health issue of breast cancer through a number of programs, ranging from early detection and education to treatment options for those with breast cancer. This is significant in McKean County, since it is a rural area and the provision of these services spares cancer patients from having to travel long distances to receive care.

Cancer					
Program	**Intended Actions**	**Anticipated Impact** **Goal-Year 3**	**Target Population**	**Planned Collaborations**
Breast Cancer Prevention, Management, and Support Initiatives	Provide mammogram screenings, including monthly mammogram reminders Promote breast cancer prevention education and mammogram awareness, such as at *Ladies Night Out* and through collaboration with Family Health Council of Central PA Continue to provide quality breast cancer care through the hospital's Breast Center of Excellence	Improved breast cancer prevention, management, and support	All women	Local hospital-based primary care practices, Family Health Council, and other community organizations.

Priority Health Issue: Addressing Heart Disease

Heart disease is a priority in Kane Community Hospital's community: Heart disease is the leading cause of death in the community, as well as in the state and nation, and accounts for more than 36 percent of total deaths.

Kane Community Hospital is leveraging UPMC and community resources to address heart disease: Kane Community Hospital is addressing this health issue through services such as cardiac rehabilitation and nutrition, education programs, and programs centered on early detection. In addition to its existing suite of programs, Kane Community Hospital plans to leverage its partnerships with community organizations. The hospital also plans to implement a smoking cessation program, as smoking is a major cause of heart disease. In addition, Kane Community Hospital programs are complemented by UPMC Insurance Services' efforts to provide members with disease-specific care management.

Heart Disease				
Program	Intended Actions	Anticipated Impact ——— Goal-Year 3	Target Population	Planned Collaborations
Heart Disease Prevention, Management, and Support	Implement the Silver Fit Program (New Initiative), an exercise program tailored to seniors Expand *Ladies Night Out* event to include information about heart disease prevention, including access to primary care Promote screenings, including lung and cardiac disease screening, at community events (including multi-phasic screenings and vascular screens) Continue to provide smoking cessation program, including exploring approaches to expand to outpatient/community setting Work with schools to provide nutrition education	Improved heart disease prevention, management, and support	General population, including targeting children, women, and seniors.	UPMC Health Plan, Johnsonburg and Kane School Districts, Local Rotaries

Priority Health Issue: Addressing Access to Specialists and Primary Care

Access to specialists and primary care is a priority in Kane Community Hospital's community: Access to primary and specialty care can be a challenge in rural areas, such as in McKean County. However, partnerships and virtual care are promising, practical, and relatively quick approaches to providing specialty care in the community.

Kane Community Hospital is leveraging UPMC and community resources to address access to specialists and primary care: To expand access to primary care and physician specialists in this rural community, Kane Community Hospital is leveraging its partnership with UPMC Hamot and the larger UPMC system. Efforts include improved access points to care through opening of a new Express Care, opening up a telemedicine suite to provide teleconsult services, and continued offering of specialty care at the hospital, such as gastroenterology and pain management.

Access to Specialist Physicians and Primary Care				
Program	**Intended Actions**	**Anticipated Impact** ———————— **Goal-Year 3**	**Target Population**	**Planned Collaborations**
Primary Care and Specialty Care Offered at Kane Community Hospital	Opening of Express Care—New Initiative Opening of telemedicine suite—New Initiative Continue to offer specialty services, including GI Clinic, pain management, Cardiac Clinic, telemedicine for cardiac visits, Urology services, eye surgery, Gynecology, Surgery, Urology, Oncology	Improve access to primary and specialty care in the area	General Population	UPMC System/ UPMC Hamot Physicians, UPMC Northwest

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 a number of sites for delivery of programs.

- **Health Impact Outcomes (applies to changes in population health for which the hospital's efforts are only indirectly responsible):**
  Health impact outcomes are changes in population health related to a broad array of factors of which hospital and community partner efforts are only one contributing part. These outcomes include reductions in the prevalence of disease, risk factors, and health behaviors associated with disease. Benchmarks for progress in population indicators are available from *Healthy People 2020* and Robert Wood Johnson Foundation county health rankings.

APPENDIX B:

Detailed Community Health Needs Profile

Population Demographics

Characteristics	McKean County	Pennsylvania	United States
Area (sq miles)	979.2	44,742.70	3,531,905.43
Density (persons per square mile)	44.4	283.9	87.4
Total Population, 2010	43,450	12,702,379	308,745,538
Total Population, 2000	45,936	12,281,054	281,424,600
Population Change ('00-'10)	-2,486	421,325	27,320,938
Population % Change ('00-'10)	-5.4%	3.4%	9.7%
Age			
Median Age	41.5	40.1	37.2
%<18	21.1%	22.0%	24.0%
%18-44	33.7%	34.3%	36.5%
%45-64	28.2%	28.1%	26.4%
% >65+	17.0%	15.4%	13.0%
% >85+	2.6%	2.4%	1.8%
Gender			
% Male	51.0%	48.7%	49.2%
% Female	49.0%	51.3%	50.8%
Race/Ethnicity			
% White*	95.9%	81.9%	72.4%
% African-American*	2.4%	10.8%	12.6%
% American Indian and Alaska Native*	0.2%	0.2%	0.9%
% Asian*	0.4%	2.7%	4.8%
% Native Hawaiian/Other Pacific Islander*	0.0%	0.0%	0.2%
% Hispanic or Latino**	1.7%	5.7%	16.3%
Disability	17.5%	13.1%	11.9%

*Reported as single race; **Reported as any race*
Source: US Census, 2010

Social and Economic Factors

Characteristics	McKean County	Pennsylvania	United States
Income, Median Household	$39,717	$49,288	$50,046
Home Value, Median	$72,100	$165,500	$179,900
% No High School Diploma*	10.6%	11.6%	14.4%
% Unemployed**	10.6%	9.6%	10.8%
% of People in Poverty	15.0%	13.4%	15.3%
% Elderly Living Alone	12.9%	11.4%	9.4%
% Female-headed households with own children <18	6.5%	6.5%	7.2%
Health Insurance			
% Uninsured	10.0	10.2	15.5
% Medicaid	15.8	13.1	14.4
% Medicare	10.3	11.2	9.3

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

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

Causes of Death	McKean County Percent of Total Deaths	Pennsylvania Percent of Total Deaths	United States Percent of Total Deaths
All Causes	100.0	100.0	100.0
Diseases of Heart	36.1	24.3	23.5
Malignant Neoplasms	13.9	22.8	22.5
Chronic Lower Respiratory Diseases	4.6	5.2	5.7
Cerebrovascular Diseases	3.6	5.1	5.0
Unintentional Injuries	5.0	4.9	5.0
Alzheimer's Disease	1.0	2.8	3.3
Diabetes Mellitus	2.7	2.9	2.9
Influenza and Pneumonia	2.5	1.9	2.2
Nephritis, Nephrotic Syndrome and nephrosis	2.9	2.2	1.8
Intentional Self-Harm (Suicide)	1.1	1.3	1.6

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

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

Characteristics	McKean County	Pennsylvania	United States	Healthy People 2020
Morbidity				
Diabetes (%)	12.0	10.0	8.7	NA
Mental Health (Mental health not good ≥1 day in past month) (%)	32.0	35.0	NA	NA
Low Birthweight (% of live births)	7.9	8.1	8.0	7.8
Health Behaviors				
Obesity (Adult) (%)	30.0	30.0	29.4	30.5
Excessive Alcohol Use (%)	17.0	17.0	16.8	24.4
Current Tobacco Use (%)	23.0	21.0	19.0	12.0
STDs (Gonorrhea per 100,000)*	28.3	150.5	250.6	251.9
Clinical Care				
Immunization: Ever had a Pneumonia Vaccination (65+) (%)	68.0	69.0	69.5	90.0
Cancer Screening				
Mammography (%)	NA	60.0	74.0	81.1
Colorectal Screening (%)	NA	69.0	67.3	70.5
Primary Care Physician: Population (PCP Physicians/100K Population)	48.9	82.0	75.8	NA
Receive Prenatal Care in First Trimester (%)	82.8	72.4	71.0	77.9

Sources:

McKean County Data: Pennsylvania Department of Health, 2010-2012; Data from Behavioral Risk Factor Surveillance System, 2011-2013; Health Resources and Services Administration (HRSA), 2014-2015

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

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

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

APPENDIX C:

Input from Persons Representing the Broad Interests of the Community

Overview:

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

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

- Developing a framework to itemize and prioritize community health needs

- Developing a survey tool for obtaining structured input from community leaders and community members

- Administering the online survey using Qualtrics web software (and also in paper format upon request)

- Analyzing survey results

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

Stakeholder Input

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

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

Confirming Community Health Needs

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

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

Community Representation and Rationale for Approach

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

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

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

- It explicitly assesses stability/change of community health needs, while allowing participants an opportunity to consider new health priorities

- It uses the same measures to assess importance, impact, and hospital ability to address health priorities, which will allow tracking over time

- It elicits perceptions of a broad and inclusive list of hospital and community leaders who in turn represent a broad group of constituents

- It allows assessment of consensus across different kinds of stakeholders

Kane Community Hospital invited representatives from the following organizations to participate in the community needs survey conducted in June 2015:

- **Community Leaders, Kane, PA**
- **Community Leaders, Johnsonburg, PA**
- **Community Leaders, Mt. Jewett, PA**
- **Community Leaders, Sheffield, PA**
- **Department of Public Welfare, Wilcox, PA**
- **Harris Chiropractic Offices, Kane, PA**
- **Kane Area Family Center, Kane, PA**

- **Kane Chamber of Commerce, Kane, PA**
- **Office of Human Services, Inc., Area Agency on Aging, Ridgeway, PA**
- **St. Mary's Pharmacy, St. Mary's PA**
- **The Kane Republican, Kane, PA**
- **University of Pittsburgh at Bradford, Bradford, PA**
- **UPMC Hamot, Erie, PA**

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

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

- **Achieva, Pittsburgh, PA**
- **Action Housing, Inc., Pittsburgh, PA**
- **Allegheny County Area Agency on Aging, Pittsburgh, PA**
- **Allegheny County Department of Human Services, Pittsburgh, PA**
- **Allegheny County Office of Children, Youth, and Families, Pittsburgh, PA**
- **Allegheny Intermediate Unit, Homestead, PA**

- **Bethlehem Haven, Pittsburgh, PA**
- **Big Brothers Big Sisters of Greater Pittsburgh, Pittsburgh, PA**
- **Carlow University, Pittsburgh, PA**
- **Catholic Charities Free Health Care Center, Pittsburgh, PA**
- **Center for Engagement and Inclusion, UPMC, Pittsburgh, PA**
- **City of Pittsburgh Bureau of Police, Pittsburgh, PA**
- **Community College of Allegheny County, Monroeville, PA**

- Consumer Health Coalition, Pittsburgh, PA
- Coro Center for Civic Leadership, Pittsburgh, PA
- EDSI Solutions, Pittsburgh, PA
- Erie Regional Chamber and Growth Partnership, Erie, PA
- Expanding Minds, LLC, Pittsburgh, PA
- Goodwill of Southwestern Pennsylvania, Pittsburgh, PA
- Greater Pittsburgh Community Food Bank, Duquesne, PA
- Healthy Lungs Pennsylvania, Cranberry Township, PA
- Higher Achievement, Pittsburgh, PA
- Hosanna House, Inc., Wilkinsburg, PA
- iGate Corporation, Pittsburgh, PA
- Imani Christian Academy, Pittsburgh, PA
- Jewish Family and Children's Service of Pittsburgh, Pittsburgh, PA
- Josh Gibson Foundation, Pittsburgh, PA
- Junior Achievement of Western Pennsylvania, Pittsburgh, PA
- Kaplan Career Institute, Pittsburgh, PA
- Kingsley Association, Pittsburgh, PA
- LEAD Pittsburgh, Pittsburgh, PA
- Let's Move Pittsburgh, Pittsburgh, PA
- Mainstay Life Services, Pittsburgh, PA
- The Mentoring Partnership of Southwestern PA, Pittsburgh, PA
- NAMI Southwest Pennsylvania, Pittsburgh, PA
- Neighborhood Learning Alliance, Pittsburgh, PA
- Office of Human Services, Allegheny County Department of Human Services, Pittsburgh, PA
- Operation StrongVet Western Pennsylvania, Wexford, PA

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

APPENDIX D:

Concept Mapping Methodology

Overview:

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

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

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

Application of Concept Mapping for Kane Community Hospital:

Kane Community Hospital 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 Kane Community Hospital Community Advisory Council met in person to solicit members' input on the focal question, "What are our community's biggest health problems?"

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

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

Final Master List of 50 Community Health Problems				
Nutrition and healthy eating (1)	Diabetes (11)	Medication management and compliance (21)	High blood pressure/ Hypertension (31)	Smoking and tobacco use (41)
Immunizations/ Vaccinations (2)	Health literacy – ability to understand health information and make decisions (12)	Exercise (22)	Breast cancer (32)	Adolescent health and social needs (42)
Lung cancer (3)	Urgent care for non-emergencies (13)	Navigating existing health care 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 Kane Community Hospital 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 Health Care System (14 items)**

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

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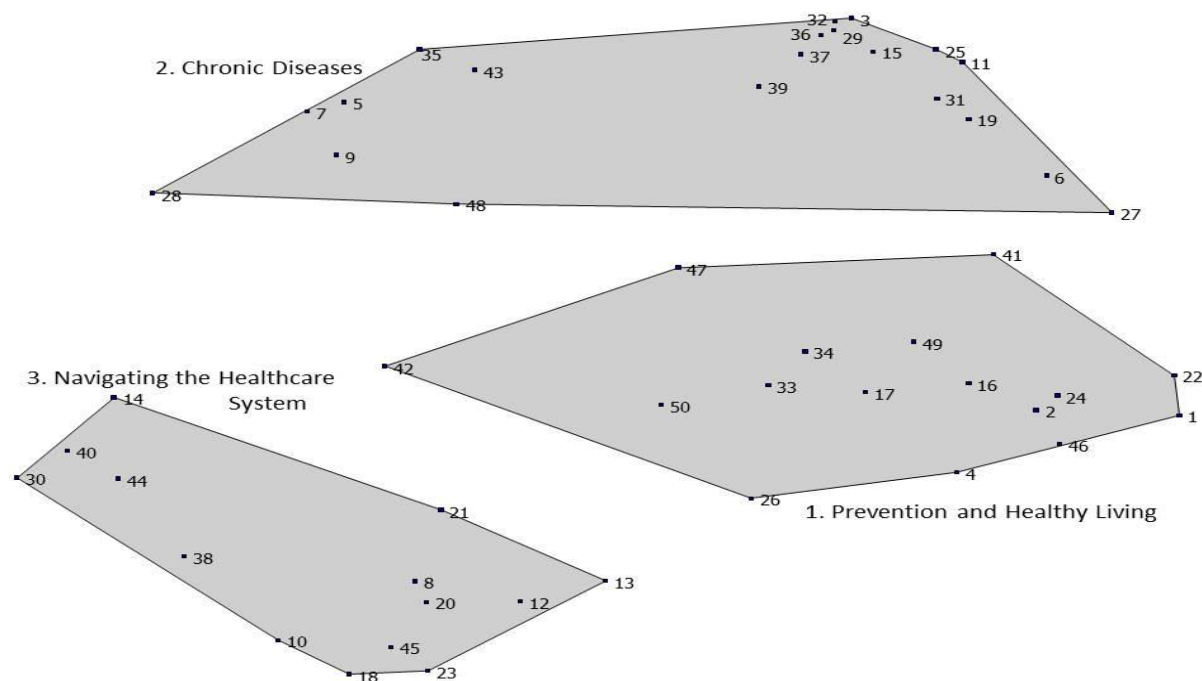
For each of the rating criteria, the rating levels were broken into three equal distributions (tertiles) representing high, moderate, and low priority. The cut points for each rating criteria are as follows:

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

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

Hospital Ability to Address:
Low (1-3.20); Moderate (3.21-3.85); High (3.86-5.0)

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

The rating categories results were then combined with results from secondary data analyses and used to identify high priority community health problems for Kane Community Hospital. Kane Community Hospital 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.