Community Health Needs Assessment 2015

BKD LLP
CPAs & Advisors

Contents

Introduction **1**
Summary of Community Health Needs Assessment 2
General Description of the Health Center/Mission Statement 3
Evaluation of Prior Implementation Strategy 3
Summary of Findings – 2015 Tax Year CHNA 5
Community Served by the Hospital **6**
Defined Community 6
Community Details **7**
Identification and Description of Geographical Community 7
Community Population and Demographics 8
Socioeconomic Characteristics of the Community **10**
Income and Employment 10
Unemployment Rate 11
Poverty 11
Uninsured 12
Medicaid 12
Education 13
Physical Environment of the Community **14**
Grocery Store Access 14
Food Access/Food Deserts 15
Recreation and Fitness Facility Access 15
Clinical Care of the Community **17**
Access to Primary Care 17
Preventable Hospital Events 17
Health Status of the Community **18**
Leading Causes of Death and Health Outcomes **20**
Health Outcomes and Factors **21**
Diabetes (Adult) 24
High Blood Pressure (Adult) 24
Obesity 25
Low Birth Weight 25
Community Input – Key Stakeholder Interviews **26**

Methodology ... 26
Key Informant Profiles ... 26
Key Stakeholder Interview Results ... 27
Key Findings ... 29
Health Issues of Vulnerable Populations ... 30
Information Gaps ... 31
Prioritization of Identified Health Needs ... 32
Resources Available to Address Significant Health Needs ... 36
Health Care Resources ... 36
Hospitals ... 36
Other Health Care Facilities ... 36
Health Departments ... 37
Appendices
Appendix A: Analysis of Data ... 38
Appendix B: Sources ... 40
Appendix C: Dignity Health CNI Report ... 41
Appendix D: County Health Rankings ... 42
Appendix E: Key Stakeholder Interview Protocol & Acknowledgements ... 43

Introduction

Internal Revenue Code (IRC) Section 501(r) requires health care organizations to assess the health needs of their communities and adopt implementation strategies to address identified needs. Per IRC Section 501(r), a byproduct of the *Affordable Care Act*, to comply with federal tax-exemption requirements, a tax-exempt hospital facility must:

- ✓ Conduct a community health needs assessment (CHNA) every three years.
- ✓ Adopt an implementation strategy to meet the community health needs identified through the assessment.
- ✓ Report how it is addressing the needs identified in the CHNA and a description of needs that are not being addressed with the reasons why such needs are not being addressed.

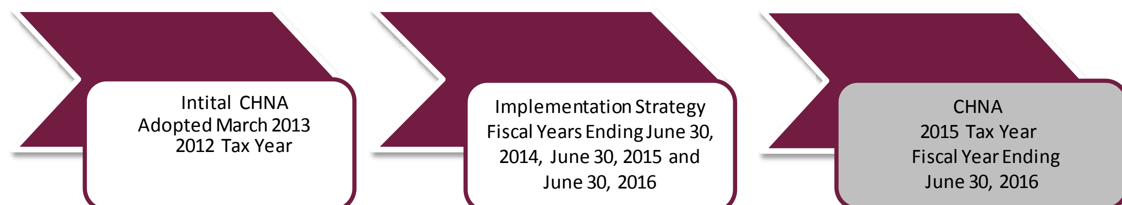
The CHNA must take into account input from persons including those with special knowledge of or expertise in public health, those who serve or interact with vulnerable populations and those who represent the broad interest of the community served by the hospital facility. The hospital facility must make the CHNA widely available to the public.

This CHNA, which describes both a process and a document, is intended to document Cumberland County Hospital's (CCH or Hospital) compliance with IRC Section 501(r)(3). Health needs of the community have been identified and prioritized so that the Hospital may adopt an implementation strategy to address specific needs of the community.

The *process* involved:

- ✓ An evaluation of the implementation strategy for fiscal years ending June 30, 2014, through June 30, 2016, which was adopted by the Hospital's board of directors in 2013.
- ✓ Collection and analysis of a large range of data, including demographic, socioeconomic and health statistics, health care resources and hospital data.
- ✓ Obtaining community input through:
  - o Interviews with key stakeholders who represent a) persons with specialized knowledge in public health, b) populations of need or c) broad interests of the community.

This *document* is a summary of all the available evidence collected during the CHNA conducted in tax year 2015. It will serve as a compliance document, as well as a resource, until the next assessment cycle. Both the *process* and *document* serve as the basis for prioritizing the community's health needs and will aid in planning to meet those needs.



Summary of Community Health Needs Assessment

The purpose of the CHNA is to understand the unique health needs of the community served by the Hospital and to document compliance with new federal laws outlined above.

The Hospital engaged **BKD, LLP** to assist with conducting a formal CHNA. **BKD, LLP** is one of the largest CPA and advisory firms in the United States, with approximately 2,000 partners and employees in 34 offices. BKD serves more than 900 hospitals and health care systems across the country. The CHNA was conducted from November 2015 through February 2016.

Based on current literature and other guidance from the treasury and the IRS, the following steps were conducted as part of the Hospital's CHNA:

- An evaluation of the impact of actions taken to address the significant health needs identified in the tax year 2013 CHNA was completed to understand the effectiveness of the Hospital's current strategies and programs.
- The "community" served by the Hospital was defined by utilizing inpatient data regarding patient origin. This process is further described in Community Served by the Hospital.
- Population demographics and socioeconomic characteristics of the community were gathered and reported utilizing various third parties (see references in *Appendices*). The health status of the community was then reviewed. Information on the leading causes of death and morbidity information was analyzed in conjunction with health outcomes and factors reported for the community by CountyHealthrankings.org. Health factors with significant opportunity for improvement were noted.
- Community input was provided through key stakeholder interviews of 7 stakeholders. Results and findings are described in the Key Stakeholder Interview Results section of this report.
- Information gathered in the above steps was analyzed and reviewed to identify health issues of uninsured persons, low-income persons and minority groups and the community as a whole. Health needs were ranked utilizing a weighting method that weighs 1) the size of the problem, 2) the seriousness of the problem, 3) the impact of the issues on vulnerable populations, 4) the prevalence of common themes and 5) how important the issue is to the community.
- An inventory of health care facilities and other community resources potentially available to address the significant health needs identified through the CHNA was prepared and collaborative efforts were identified.

Health needs were then prioritized taking into account the perceived degree of influence the Hospital has to impact the need and the health needs impact on overall health for the community. Information gaps identified during the prioritization process have been reported.

General Description of the Hospital

The Hospital is a Kentucky, nonprofit organization, located in Burkesville, Kentucky. A board of directors governs the Hospital and ensures that the strategic direction of the hospital consistently meets the health care needs of the people which it serves.

Cumberland County Hospital strives to provide high quality outpatient and inpatient healthcare services to the Cumberland County communities. The Hospital is governed by 11 board members.

Mission Statement

To provide high quality outpatient and inpatient healthcare services to the Cumberland County communities.

Evaluation of Prior Implementation Strategy

The implementation strategy for fiscal years ending June 30, 2014 – June 30, 2016, focused on three strategies to address identified health needs. Action plans for each of the strategies are summarized below. Based on the Health Center's evaluation for the fiscal year ending June 30, 2013, the Health Center has either met their goals or is still in the process of meeting their goals for each strategy listed.

Prevention and Management of Chronic Diseases

- Heart Disease
    - Cumberland County Hospital provides community education regarding heart disease at the Hospital sponsored Community Health Fair in September. Literature, information and patient education is provided on heart health and heart disease processes such as atrial fibrillation, arrhythmia, high cholesterol, high blood pressure, and warning signs of heart attack. Tools are also available to help monitor blood pressure and cholesterol. Free blood pressure checks are offered. Screening lab draws for Complete blood count, lipid profile, and comprehensive metabolic panel is offered at a nominal fee of $15 for more than $400 in tests. This past year 175 persons took advantage of this screening blood draw at the health fare conducted on September 21, 2015.
- Cancer
    - Cumberland County Hospital provides educational information and literature on a variety of different cancers. Informational booths are set up on skin cancer, breast cancer, and colon cancer. Facial sun damage detection is available as well as self-breast exam reference guides.
    - At the hospital sponsored Community health fair the screening lab draws, listed above, are also available with the option for male participants to have a PSA test for a nominal fee of $5.

- The Cumberland County Hospital Community Health Fair hosted 13 different health care providers from the community along with 11 different booths provided by the hospital. 24 booths

were set up along with literature at the welcome table on advanced directives, and patient portal access.

- The hospital supports Relay for Life and sponsors an Annual 5K for breast cancer awareness called Pacin' in Pink. The hospital is a long time sponsor of many Relay for Life and WE Care activities that cancer victims and bring awareness to the community.

Access to Care

- Updates regarding preventive care for elderly:
    - Home visits for elderly or disabled patients that are not able to travel to physician's office has been implemented

- We have weekly cardiology clinic with Dr. Frank Schwender and also offer Echocardiograms and cardiac stress tests for our patients locally. We also offer orthopedic clinic biweekly and pulmonary clinic weekly.

- Recruitment of primary care physicians: Dr. Robert Flowers Jr.

- FY 2015 an ultrasound technician was hired to allow for the expansion of services in radiology

- Sleep Study tests were added during FY 2015 due to the increased need for the test in the community and allowing local availability

Healthy Living

- Community Health fair reached out to over 200 persons with 175 taking advantage of screening blood draws. 24 booths were set up with a vast amount of health care and preventative activities including, blood pressure screening, glucometer checks, oxygen saturation monitoring, balance testing, body fat analysis, and facial sun damage detection.

- Educational information about smoking and the risks are provided at the Community Health Fair. Each inpatients and outpatients are screened for smoking and smoking cessation education is given as indicated.

Summary of Findings – 2015 Tax Year CHNA

Health needs were identified based on information gathered and analyzed through the 2015 CHNA conducted by the Hospital.

Based on the information gathered through this Community Health Needs Assessment and the prioritization process described on pages 32-35, the health needs below have been identified as significant health needs in the community.

- Lack of Health Knowledge/Education
- Good Employment Opportunities/Poverty
- Healthy Behaviors/Lifestyle Choices
- Heart Disease
- Adult Smoking/Tobacco Use
- Cost of Healthcare Services
- Lack of Primary Care Physicians/Hours
- Cancer
- Obesity
- Uninsured/Limited Insurance
- Prescription Drug Use
- Transportation
- Services for the Elderly
- Physical Inactivity

The Hospital's next steps include developing an implementation strategy to address these priority areas.

Community Served by the Hospital

The Hospital is located in the city of Burkesville, KY in Cumberland County. Burkesville is approximately one and a half hours east of Bowling Green, KY. Burkesville and the surrounding geographic area is not close to any metropolitan area and is only accessible by secondary roads.

Defined Community

A community is defined as the geographic area from which a significant number of the patients utilizing hospital services reside. While the CHNA considers other types of health care providers, the Hospital is the single largest provider of acute care services. For this reason, the utilization of hospital services provides the clearest definition of the community.

Based on the patient origin of acute care inpatient and outpatient discharges from July 1, 2014, through June 30, 2015, management has identified Cumberland County as the defined community. Cumberland County represents nearly 85% of the discharges as reflected in *Exhibit 1* below.

Exhibit 1
Cumberland County Hospital
Summary of Discharges by Zip Code (Inpatient & Outpatient)
7/1/2014 - 6/30/2015

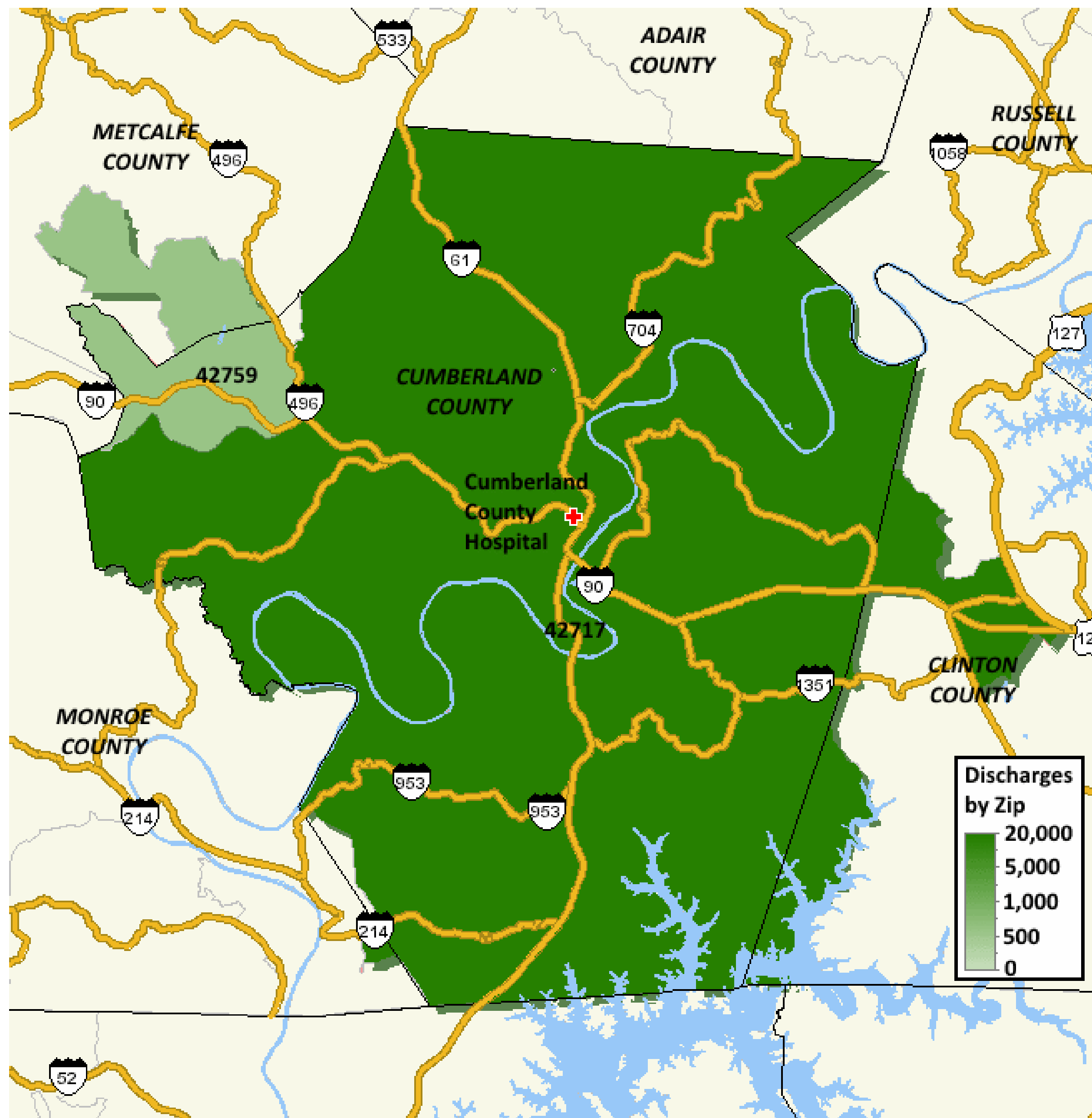
Zip Code	City	Discharges	Percent of Total Discharges
Cumberland County:			
42717	Burkesville	19,586	82.5%
42731	Dubre	63	0.3%
42759	Marrowbone	577	2.4%
	Total Cumberland	20,226	85.2%
	Total Other Discharges	3,524	14.8%
	Total	23,750	100.0%

Source: Cumberland County Hospital

Community Details

Identification and Description of Geographical Community

The following map geographically illustrates the Hospital's community by showing the community zip codes shaded by number of inpatient and outpatient discharges. The map below displays the Hospital's geographic relationship to the community, as well as significant roads and highways.



Community Population and Demographics

The U.S. Bureau of Census has compiled population and demographic data. *Exhibit 2* below shows the total population of the community. It also provides the breakout of the community between the male and female population, age distribution, race/ethnicity and the Hispanic population.

Exhibit 2
Demographic Snapshot
Cumberland County Hospital

DEMOGRAPHIC CHARACTERISTICS

	Total Population		Cumberland
Cumberland County	6,842	Total Male Population	3,323
Kentucky	4,361,333	Total Female Population	3,519
United States	311,536,591		

POPULATION DISTRIBUTION

			Age Distribution			
Age Group	Cumberland	Percent of Total	Kentucky	Percent of Total KY	United States	Percent of Total US
0 - 4	401	5.86%	278,866	6.39%	20,052,112	6.44%
5 - 17	1,119	16.35%	741,764	17.01%	53,825,364	17.28%
18 - 24	560	8.18%	420,124	9.63%	31,071,264	9.97%
25 - 34	549	8.02%	564,269	12.94%	41,711,276	13.39%
35 - 44	916	13.39%	572,542	13.13%	40,874,160	13.12%
45 - 54	1,012	14.79%	633,063	14.52%	44,506,268	14.29%
55 - 64	959	14.02%	552,830	12.68%	37,645,104	12.08%
65+	1,326	19.38%	597,875	13.71%	41,851,040	13.43%
Total	**6,842**	**100%**	**4,361,333**	**100%**	**311,536,588**	**100%**

RACE/ETHNICITY

	Race/Ethnicity Distribution	
Race/Ethnicity	Cumberland County	Percent of Total Community
White Non-Hispanic	6,519	95.28%
Black Non-Hispanic	217	3.17%
Asian and Pacific Island Non-Hispanic	0	0.00%
All Others	106	1.55%
Total	**6,842**	**100%**

HISPANIC POPULATION

County	Cumberland	Percent of Total Community	Kentucky	Percent of Total Kentucky	United States	Percent of Total US
Hispanic	32	0.47%	136,340	3.13%	51,786,591	16.62%
Non-Hispanic	6,810	99.53%	4,224,993	96.87%	259,750,000	83.38%
Total	**6,842**	**100%**	**4,361,333**	**100%**	**311,536,591**	**100%**

Source: Community Commons (ACS 2009-2013 data sets)

While the relative age of the community population can impact community health needs, so can the ethnicity and race of a population. The population of the community by race illustrates different categories of race, such as white, black, Asian, other and multiple races. White non-Hispanics make up 95% of the community.

Exhibit 3 reports the percentage of population living in urban and rural areas. Urban areas are identified using population density, count and size thresholds. Urban areas also include territory with a high degree of impervious surface (development). Rural areas are all areas that are not urban. This table helps to understand why transportation may or may not be one of the top needs within the community.

Exhibit 3
Cumberland County Hospital
Rural/Urban Population

County	Percent Urban	Percent Rural
Cumberland	0.00%	100.00%
Kentucky	58.38%	41.62%
UNITED STATES	80.89%	19.11%

Source: Community Commons

Socioeconomic Characteristics of the Community

The socioeconomic characteristics of a geographic area influence the way residents access health care services and perceive the need for health care services within society. The economic status of an area may be assessed by examining multiple variables within the community. The following exhibits are a compilation of data that includes household per capita income, unemployment rates, poverty, uninsured population and educational attainment for the community. These standard measures will be used to compare the socioeconomic status of the community to the state of Kentucky and the United States.

Income and Employment

Exhibit 4 presents the per capita income for the CHNA community. This includes all reported income from wages and salaries, as well as income from self-employment, interest or dividends, public assistance, retirement and other sources. The per capita income in this exhibit is the average (mean) income computed for every man, woman and child in the specified area. Per the table below, Cumberland County has a per capita income that is below the state of Kentucky.

Exhibit 4
Cumberland County Hospital
Per Capita Income

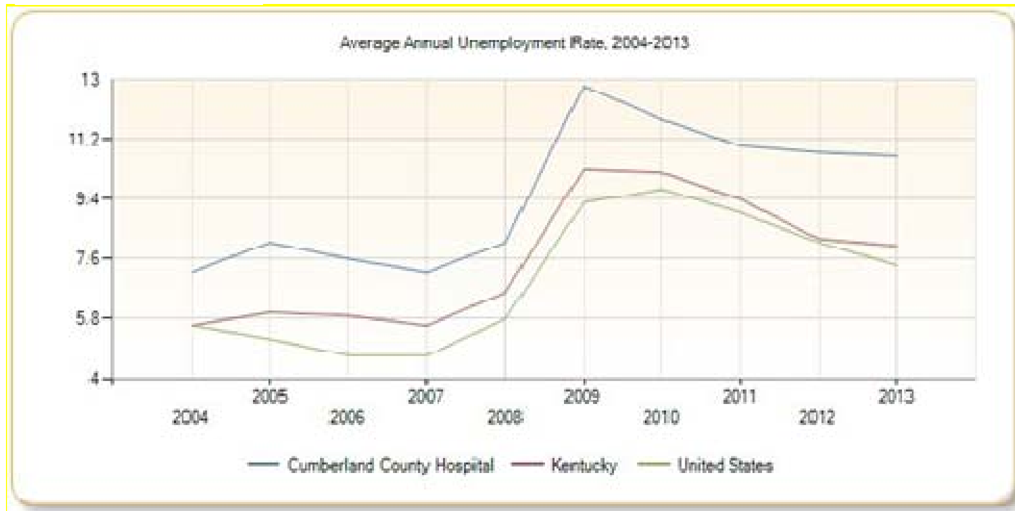
County	Total Population	Total Income ($)	Per Capita Income ($)
Cumberland	6,842	$ 121,081,000	$ 17,696
Kentucky	4,361,333	$ 102,325,174,272	$ 23,461
UNITED STATES	311,536,608	$ 8,771,308,355,584	$ 28,154

Source: Community Commons

Unemployment Rate

Exhibit 5 presents the average annual unemployment rate from 2004 - 2013 for the community defined as the community, as well as the trend for Kentucky and the United States. On average, the unemployment rate for the community is higher than both the United States and the state of Kentucky; however it has been steadily declining since 2009.

Exhibit 5



Data Source: U.S. Department of Labor, Bureau of Labor Statistics. 2015 – September. Source geography: County

Poverty

Exhibit 6 presents the percentage of total population below 100% Federal Poverty Level (FPL). Poverty is a key driver of health status and is relevant because poverty creates barriers to access, including health services, healthy food choices and other factors that contribute to poor health. Cumberland County's poverty rate is higher than both the United States and the state of Kentucky.

Exhibit 6	Total Population	Population in Poverty	Percent Population in Poverty
Cumberland County, KY	6,728	1,588	**23.6%**
Kentucky	4,230,912	796,202	18.82%
United States	303,692,064	46,663,432	15.37%

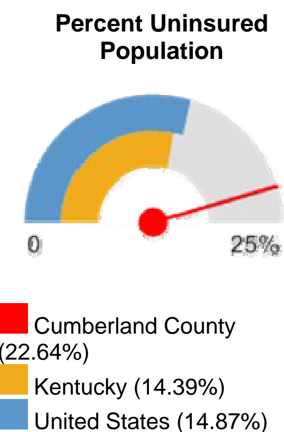
Data Source: US Census Bureau, American Community Survey. 2009-13. Source geography: Tract

Uninsured

Exhibit 7 reports the percentage of the total civilian non-institutionalized population without health insurance coverage. This indicator is relevant because lack of insurance is a primary barrier to health care access, including regular primary care, specialty care and other health services that contribute to poor health status. *Table 7* shows over 1,500 persons are uninsured in the CHNA community based on 5-year estimates produced by the U.S. Census Bureau, 2010-2014 American Community Survey. However, the 2015 uninsured rate for Cumberland County reported at www.enrollamerica.com is estimated to be **11%** which indicates the uninsured population has significantly decreased in Cumberland County since 2013; primarily the result of the Affordable Care Act.

Exhibit 7	Total Population (For Whom Insurance Status is Determined)	Total Uninsured Population	Percent Uninsured Population
Cumberland County, KY	6,754	1,529	**22.64%**
Kentucky	4,273,751	614,786	14.39%
United States	306,448,480	45,569,668	14.87%

Data Source: U.S. Census Bureau, American Community Survey. 2009-13. Source geography: Tract

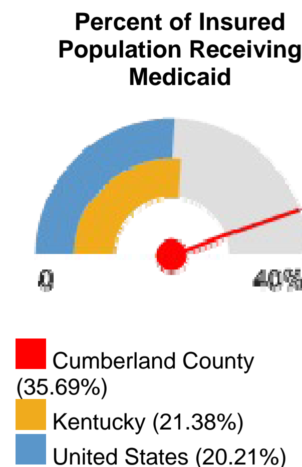


Medicaid

The Medicaid indicator reports the percentage of the population with insurance enrolled in Medicaid (or other means-tested public health insurance). This is relevant because it assesses vulnerable populations, which are more likely to have multiple health access, health status and social support needs; when combined with poverty data, providers can use this measure to identify gaps in eligibility and enrollment. *Exhibit 8* shows the Medicaid rate in Cumberland County is higher than both the state of Kentucky and the United States.

Exhibit 8	Total Population (For Whom Insurance Status is Determined)	Population With Any Health Insurance	Population Receiving Medicaid	Percent of Insured Population Receiving Medicaid
Cumberland County, KY	6,754	5,225	1,865	**35.69%**
Kentucky	4,273,751	3,658,965	782,301	21.38%
United States	306,448,480	260,878,816	52,714,280	20.21%

Data Source: U.S. Census Bureau, American Community Survey. 2009-13. Source geography: Tract



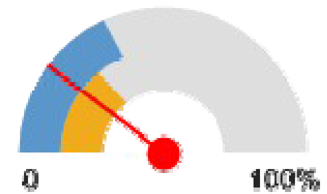
Education

Exhibit 9 presents the population with an Associate's level degree or higher in Cumberland County versus Kentucky and the United States.

Exhibit 9	Total Population Age 25	Population Age 25 With Associate's Degree or Higher	Percent Population Age 25 With Associate's Degree or Higher
Cumberland County, KY	4,762	981	20.6%
Kentucky	2,920,579	835,463	28.61%
United States	206,587,856	75,718,936	36.65%

Data Source: U.S. Census Bureau, American Community Survey. 2009-13. Source geography: Tract

Percent Population Age 25 With Associate's Degree or Higher



Education levels obtained by community residents may impact the local economy. Higher levels of education generally lead to higher wages, less unemployment and job stability. These factors may indirectly influence community health. As noted in *Exhibit 9*, the percent of residents within the CHNA community obtaining an Associate's degree or higher is below the state and national percentages.

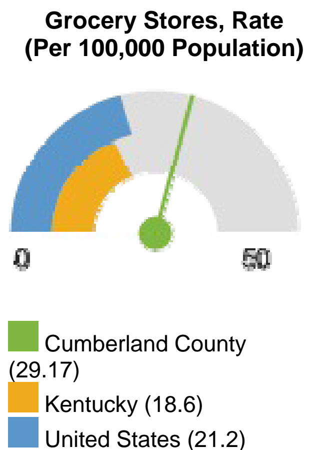
Physical Environment of the Community

A community's health is also affected by the physical environment. A safe, clean environment that provides access to healthy food and recreational opportunities is important to maintaining and improving community health. This section will touch on a few of the elements that relate to some needs mentioned throughout the report.

Grocery Store Access

Exhibit 10 reports the number of grocery stores per 100,000-population. Grocery stores are defined as supermarkets and smaller grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods, fresh fruits and vegetables and fresh and prepared meats, fish and poultry. Included are delicatessen-type establishments. Convenience stores and large general merchandise stores that also retail food, such as supercenters and warehouse club stores, are excluded. This indicator is relevant because it provides a measure of healthy food access and environmental influences on dietary behaviors.

Exhibit 10	Total Population	Number of Establishments	Establishments, Rate per 100,000 Population
Cumberland County, KY	6,856	2	**29.17**
Kentucky	4,339,367	806	18.6
United States	312,732,537	66,286	21.2



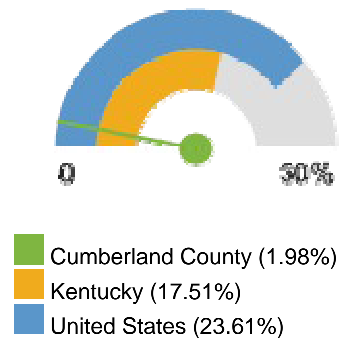
Data Source: U.S. Census Bureau, County Business Patterns. Additional data analysis by CARES. 2013.
Source geography: County

Food Access/Food Deserts

This indicator reports the percentage of the population living in census tracts designated as food deserts. A food desert is defined as a low-income census tract where a substantial number or share of residents has low access to a supermarket or large grocery stores. The information in *Exhibit 11* below is relevant because it highlights populations and geographies facing food insecurity.

Exhibit 11	Total Population	Population With Low Food Access	Percent Population With Low Food Access
Cumberland County, KY	6,856	136	1.98%
Kentucky	4,339,367	759,659	17.51%
United States	308,745,538	72,905,540	23.61%

Data Source: U.S. Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas. 2010. Source geography: Tract

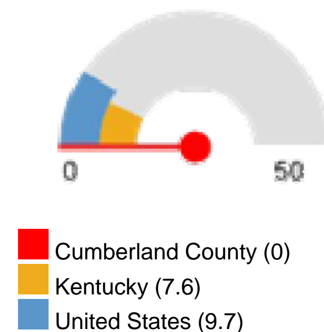


Recreation and Fitness Facility Access

This indicator reports the number per 100,000-population of recreation and fitness facilities as defined by North American Industry Classification System (NAICS) Code 713940. It is relevant because access to recreation and fitness facilities encourages physical activity and other healthy behaviors. *Exhibit 12* shows that Cumberland County does not have any fitness establishments available to the residents.

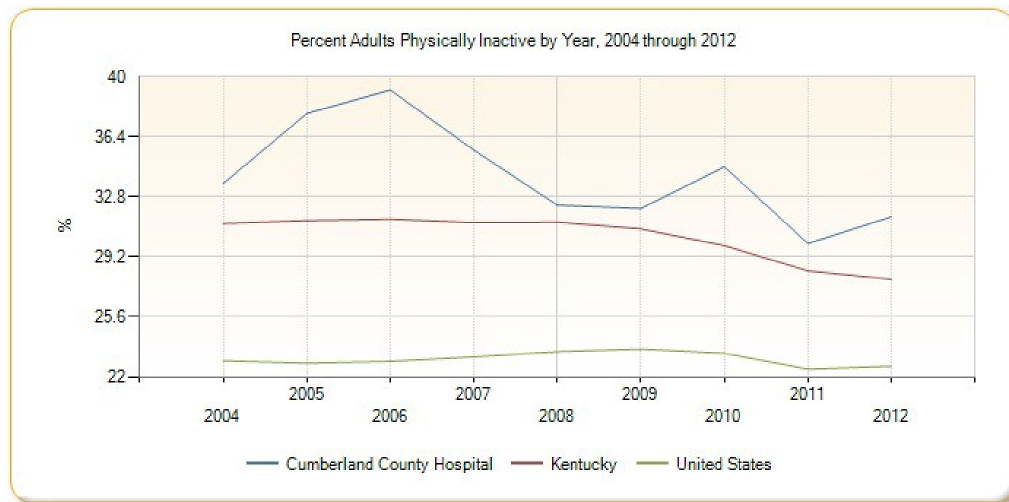
Exhibit 12	Total Population	Number of Establishments	Establishments, Rate per 100,000 Population
Cumberland County, KY	6,856	0	0
Kentucky	4,339,367	328	7.6
United States	312,732,537	30,393	9.7

Data Source: U.S. Census Bureau, County Business Patterns. Additional data analysis by CARES. 2013. Source geography: County



The trend graph below (*Exhibit 13)* shows the percentage of adults who are physically inactive by year for the community and compared to Kentucky and the United States. Since 2004, the CHNA community has had a higher percentage of adults who are physically inactive compared to both the state of Kentucky and the United States. Although the trend saw a decrease in 2006, the percentage of adults physically inactive within the community has slightly increased between 2009 and 2010 and 2011 and 2012 and is higher than the state rate.

Exhibit 13



Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2012.
Source geography: County

Clinical Care of the Community

A lack of access to care presents barriers to good health. The supply and accessibility of facilities and physicians, the rate of un-insurance, financial hardship, transportation barriers, cultural competency and coverage limitations affect access.

Rates of morbidity, mortality and emergency hospitalizations can be reduced if community residents access services such as health screenings, routine tests and vaccinations. Prevention indicators can call attention to a lack of access or knowledge regarding one or more health issues and can inform program interventions.

Access to Primary Care

Exhibit 14 shows the number of primary care physicians per 100,000-population. Doctors classified as "primary care physicians" by the American Medical Association include general family medicine MDs and DOs, general practice MDs and DOs, general internal medicine MDs and general pediatrics MDs. Physicians age 75 and over and physicians practicing sub-specialties within the listed specialties are excluded. This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

Exhibit 14	Total Population, 2012	Primary Care Physicians, 2012	Primary Care Physicians, Rate per 100,000 Pop.
Cumberland County, KY	6,819	4	**58.7**
Kentucky	4,380,415	2,824	64.5
United States	313,914,040	233,862	74.5

Data Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Area Health Resource File. 2012. Source geography: County

Preventable Hospital Events

Exhibit 15 reports the discharge rate (per 1,000 Medicare enrollees) for conditions that are ambulatory care sensitive (ACS). ACS conditions include pneumonia, dehydration, asthma, diabetes and other conditions which could have been prevented if adequate primary care resources were available and accessed by those patients. This indicator is relevant because analysis of ACS discharges allows demonstrating a possible "return on investment" from interventions that reduce admissions (for example, for uninsured or Medicaid patients) through better access to primary care resources.

Exhibit 15	Total Medicare Part A Enrollees	Ambulatory Care Sensitive Condition Hospital Discharges	Ambulatory Care Sensitive Condition Discharge Rate
Cumberland County, KY	1,043	204	**195.7**
Kentucky	474,007	44,747	94.4
United States	58,209,898	3,448,111	59.2

Data Source: Dartmouth College Institute for Health Policy, Clinical Practice, Dartmouth Atlas of Health Care. 2012. Source geography: County

Health Status of the Community

This section of the assessment reviews the health status of Cumberland County residents. As in the previous section, comparisons are provided with the state of Kentucky and the United States. This in-depth assessment of the mortality and morbidity data, health outcomes, health factors and mental health indicators of the county residents that make up the CHNA community will enable the Hospital to identify priority health issues related to the health status of its residents.

Good health can be defined as a state of physical, mental and social well-being, rather than the absence of disease or infirmity. According to *Healthy People 2020*, the national health objectives released by the U.S. Department of Health and Human Services, individual health is closely linked to community health. Community health, which includes both the physical and social environment in which individuals live, work and play, is profoundly affected by the collective behaviors, attitudes and beliefs of everyone who lives in the community. Healthy people are among a community's most essential resources.

Numerous factors have a significant impact on an individual's health status: lifestyle and behavior, human biology, environmental and socioeconomic conditions, as well as access to adequate and appropriate health care and medical services.

Studies by the American Society of Internal Medicine conclude that up to 70% of an individual's health status is directly attributable to personal lifestyle decisions and attitudes. Persons who do not smoke, drink in moderation (if at all), use automobile seat belts (car seats for infants and small children), maintain a nutritious low-fat, high-fiber diet, reduce excess stress in daily living and exercise regularly have a significantly greater potential of avoiding debilitating diseases, infirmities and premature death.

The interrelationship among lifestyle/behavior, personal health attitude and poor health status is gaining recognition and acceptance by both the general public and health care providers. Some examples of lifestyle/behavior and related health care problems include the following:

Lifestyle	Primary Disease Factor
Smoking	Lung cancer Cardiovascular disease Emphysema Chronic bronchitis
Alcohol/drug abuse	Cirrhosis of liver Motor vehicle crashes Unintentional injuries Malnutrition Suicide Homicide Mental illness
Poor nutrition	Obesity Digestive disease Depression

Lifestyle	Primary Disease Factor
Driving at excessive speeds	Trauma Motor vehicle crashes
Lack of exercise	Cardiovascular disease Depression
Overstressed	Mental illness Alcohol/drug abuse Cardiovascular disease

Health problems should be examined in terms of morbidity as well as mortality. Morbidity is defined as the incidence of illness or injury, and mortality is defined as the incidence of death. Such information provides useful indicators of health status trends and permits an assessment of the impact of changes in health services on a resident population during an established period of time. Community attention and health care resources may then be directed to those areas of greatest impact and concern.

Leading Causes of Death and Health Outcomes

Exhibit 16 reflects the leading causes of death for the community and compares the rates to the state of Kentucky and the United States.

Exhibit 16
Cumberland County Hospital
Selected Causes of Resident Deaths: Crude Rate

	Cumberland	Kentucky	United States
Cancer	275.20	226.60	185.40
Coronary Heart Disease	503.65	226.09	192.95
Ischaemic Heart Disease	366.00	133.50	120.90
Lung Disease	102.49	68.53	45.66
Stroke	76.10	46.70	41.40
Unintentional Injury	122.98	59.12	40.05
Motor Vehicle Accident	61.50	17.10	11.00

Source: Community Commons

The table above shows leading causes of death within Cumberland County as compared to the state of Kentucky and also to the United States. The crude rate is shown per 100,000 residents. The rates highlighted in gray represent the county and corresponding leading cause of death that is greater than the state rate. As the table indicates, all of the leading causes of death above are greater than the Kentucky rate.

Health Outcomes and Factors

An analysis of various health outcomes and factors for a particular community can, if improved, help make the community a healthier place to live, learn, work and play. A better understanding of the factors that affect the health of the community will assist with how to improve the community's habits, culture and environment. This portion of the CHNA utilizes information from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

The County Health Rankings model is grounded in the belief that programs and policies implemented at the local, state and federal levels have an impact on the variety of factors that, in turn, determine the health outcomes for communities across the nation. The model provides a ranking method that ranks all 50 states and the counties within each state, based on the measurement of two types of health outcomes for each county: how long people live (mortality) and how healthy people feel (morbidity). These outcomes are the result of a collection of health factors and are influenced by programs and policies at the local, state and federal levels.

Counties in each of the 50 states are ranked according to summaries of a variety of health measures. Those having high ranks, *e.g.*, 1 or 2, are considered to be the "healthiest." Counties are ranked relative to the health of other counties in the same state on the following summary measures:

- ✓ Health outcomes – rankings are based on an equal weighting of one length of life (mortality) measure and four quality of life (morbidity) measures.
- ✓ Health factors – rankings are based on weighted scores of four types of factors:
  - Health behaviors (nine measures)
  - Clinical care (seven measures)
  - Social and economic (nine measures)
  - Physical environment (five measures)

A more detailed discussion about the ranking system, data sources and measures, data quality and calculating scores and ranks can be found at the website for County Health Rankings (www.countyhealthrankings.org).

As seen in *Exhibit 17,* the relative health status of Cumberland County will be compared to the state of Kentucky as well as to a national benchmark. The current year information is compared to the health outcomes reported on the prior community health needs assessment and the change in measures is indicated. A better understanding of the factors that affect the health of the community will assist with how to improve the community's habits, culture and environment.

Exhibit 17
Cumberland County Hospital
County Health Rankings - Health Outcomes (2015)

	Cumberland County 2012	Cumberland County 2015	Change	Kentucky 2015	Top US Performers 2015
Mortality	**111**	**110**	↓		
Premature death - Years of potential life lost before age 75 per 100,000 population (age-adjusted)	13,094	13,644	↑	8,900	5,200
Morbidity	**85**	**92**	↑		
Poor or fair health - Percent of adults reporting fair or poor health (age-adjusted)	26%	29%	↑	21%	10%
Poor physical health days - Average number of physically unhealthy days reported in past 30 days (age-adjusted)	5.9	6.4	↑	4.8	2.5
Poor mental health days - Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.3	5.0	↑	4.3	2.3
Low birthweight - Percent of live births with low birthweight (<2500 grams)	10.1%	10.3%	↑	9.1%	5.9%

* Rank out of 120 Kentucky counties
Note: N/A indicates unreliable or missing data
Source: Countyhealthrankings.org

The above tables show Cumberland County's overall mortality outcome ranking has improved slightly while the overall morbidity outcome ranking has declined from prior year.

A number of different health factors shape a community's health outcomes. The County Health Rankings model includes four types of health factors: health behaviors, clinical care, social and economic and the physical environment. The following summary shows some of the major improvements from 2012 to current year and challenges faced by each county in the Health Center's community. The improvements/challenges shown below in *Exhibit 18* were determined using a process of comparing the rankings of each county's health outcomes in the current year to the rankings in the prior CHNA. If the current year rankings showed an improvement or decline of 3% or three points, they were included in the charts below. Please refer to Appendix D for the full list of health factor findings and comparisons between prior year information reported and current year information.

Exhibit 18

Cumberland County:

Improvements	Challenges
Sexually transmitted infections - Chlamydia rate per 100K population decreased from 161 to 117	Adult obesity - Percent of adults that report a BMI >= 30 increased from 33% to 36%
Teen Birth Rate – number of births per 1,000 female population decreased from 66 to 55	Mammography screening - Percent of female Medicare enrollees that receive mammography screening decreased from 52.7% to 40.7%
Primary care physicians - Ratio of population to primary care physicians decreased from 2,254:1 to 1,705:1	Children in single-parent households - Percent of children that live in household headed by single parent increased from 28% to 49%
Preventable hospital stays - Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees decreased from 211 to 196	Violent crime rate - Violent crime rate per 100,000 population increased 42 to 58
Diabetic screening - Percent of diabetic Medicare enrollees that receive HbA1c screening increased from 78% to 84%	
High school graduation - Percent of ninth grade cohort that graduates in four years increased from 70% to 95%	
Some college - Percent of adults aged 25-44 years with some post-secondary education increased from 30.6% to 49.2%	

As can be seen from the summarized table above, there are several areas of the community that have room for improvement when compared to the state statistics; however, there are also many significant improvements made within Cumberland County from the prior year CHNA report.

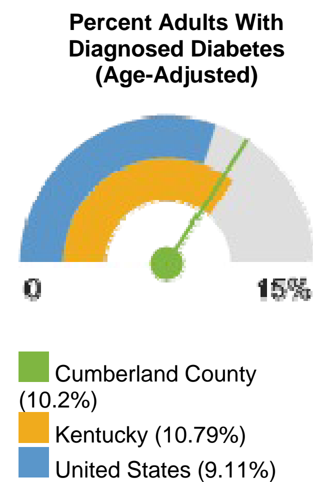
The following exhibits show a more detailed view of certain health outcomes and factors. The percentages for Cumberland County are compared to the state of Kentucky.

Diabetes (Adult)

Exhibit 19 reports the percentage of adults aged 20 and older who have ever been told by a doctor that they have diabetes. This indicator is relevant because diabetes is a prevalent problem in the U.S.; it may indicate an unhealthy lifestyle and puts individuals at risk for further health issues.

Exhibit 19	Total Population Age 20	Population With Diagnosed Diabetes	Population With Diagnosed Diabetes, Crude Rate	Population With Diagnosed Diabetes, Age-Adjusted Rate
Cumberland County, KY	5,190	654	12.6	10.2%
Kentucky	3,250,667	383,077	11.78	10.79%
United States	234,058,710	23,059,940	9.85	9.11%

Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2012. Source geography: County

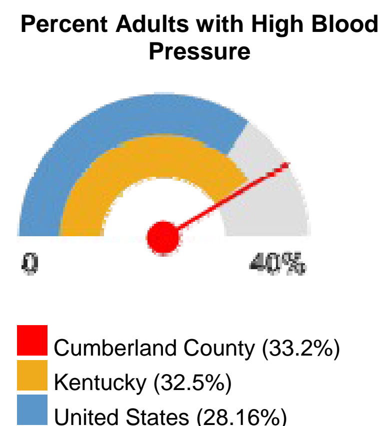


High Blood Pressure (Adult)

Per *Exhibit 20* below, 1,767 or 33.2% of adults aged 18 and older have ever been told by a doctor that they have high blood pressure or hypertension. The community percentage of high blood pressure among adults is more than the percentage of Kentucky and the United States.

Exhibit 20	Total Population (Age 18)	Total Adults With High Blood Pressure	Percent Adults With High Blood Pressure
Cumberland County, KY	5,323	1,767	33.2%
Kentucky	3,294,652	1,070,762	32.5%
United States	232,556,016	65,476,522	28.16%

Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2006-12. Source geography: County



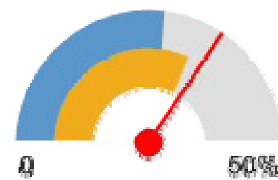
Obesity

Of adults aged 20 and older, 34.4% self-report that they have a body mass index (BMI) greater than 30.0 (obese) in the community per *Exhibit 21*. Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. Cumberland County has a BMI percentage greater than the state and national rates.

Exhibit 21	Total Population Age 20	Adults With BMI > 30.0 (Obese)	Percent Adults With BMI > 30.0 (Obese)
Cumberland County, KY	5,188	1,769	**34.4%**
Kentucky	3,248,518	1,048,808	32.1%
United States	231,417,834	63,336,403	27.1%

Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2012. Source geography: County

Percent Adults With BMI > 30.0 (Obese)



Cumberland County (34.4%)
Kentucky (32.1%)
United States (27.1%)

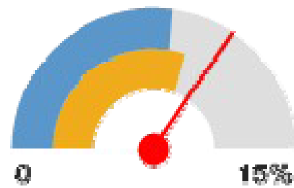
Low Birth Weight

Exhibit 22 reports the percentage of total births that are low birth weight (under 2500g). This indicator is relevant because low birth weight infants are at high risk for health problems. This indicator can also highlight the existence of health disparities.

Exhibit 22	Total Live Births	Low Weight Births (Under 2500g)	Low Weight Births, Percent of Total
Cumberland County, KY	574	59	**10.3%**
Kentucky	400,946	36,486	9.1%
United States	29,300,495	2,402,641	8.2%
HP 2020 Target			<= 7.8%

Data Source: U.S. Department of Health and Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2006-12. Source geography: County

Percent Low Birth Weight Births



Cumberland County (10.3%)
Kentucky (9.1%)
United States (8.2%)

Community Input – Key Stakeholder Interviews

Obtaining input from key stakeholders (persons with knowledge of or expertise in public health, persons representing vulnerable populations, or community members who represent the broad interest of the community, or) is a technique employed to assess public perceptions of the county's health status and unmet needs. These interviews are intended to ascertain opinions among individuals likely to be knowledgeable about the community and influential over the opinions of others about health concerns in the community.

Methodology

Interviews were performed with 7 key stakeholders. Stakeholders were determined based on a) their specialized knowledge or expertise in public health, b) their involvement with underserved and minority populations or c) their affiliation with local government, schools and industry.

All interviews were conducted by Hospital personnel. Participants provided comments on the following issues:

- ✓ Health and quality of life for residents of the primary community
- ✓ Underserved populations and communities of need
- ✓ Barriers to improving health and quality of life for residents of the community
- ✓ Opinions regarding the important health issues that affect community residents and the types of services that are important for addressing these issues

Interview data was initially recorded in narrative form asking participants a series of twelve questions. Please refer to *Appendix E* for a copy of the interview instrument. This technique does not provide a quantitative analysis of the stakeholders' opinions but reveals community input for some of the factors affecting the views and sentiments about overall health and quality of life within the community.

Key Stakeholder Profiles

Key stakeholders from the community (see *Appendix E* for a list of key stakeholders) worked for the following types of organizations and agencies:

- ✓ Cumberland County Hospital
- ✓ Social service agencies
- ✓ Public health agencies
- ✓ Local government officials
- ✓ Local school system

Key Stakeholder Interview Results

The questions on the interview instrument are grouped into four major categories for discussion. The interview questions for each key stakeholder were identical. A summary of the stakeholders' responses by each of the categories follows. Paraphrased quotes are included to reflect some commonly held opinions and direct quotes are employed to emphasize strong feelings associated with the statements. This section of the report summarizes what the key stakeholders said without assessing the credibility of their comments.

1. General opinions regarding health and quality of life in the community

The key stakeholders were asked to rate the health and quality of life in Cumberland County. They were also asked to provide their opinion whether the health and quality of life had improved, declined or stayed the same over the past few years. Lastly, key stakeholders were asked to provide support for their answers.

Over seventy percent (5 out of 7) of the key stakeholders rated the health and quality of life in the county as "good", "average" or "fair". Two of the key stakeholders rated the health and quality of life as "less than average" or "poor". Key stakeholders repeatedly noted that the high rate of poverty negatively impacts the health and quality of life in the community. Stakeholders noted that unhealthy habits such as smoking, lack of exercise and poor nutrition contribute to poor health in the community.

When asked whether the health and quality of life had improved, declined or stayed the same, responses were mixed; 2 of the 7 stakeholders expressed they thought the health and quality of life had improved over the last three years and 4stated it had stayed the same/declined. When asked why they thought the health and quality of life had improved, key stakeholders attributed the improvements to the hospital. Stakeholders cited renovations to hospital facilities and an increase in health care routine visits as positively impacting the health of the community. They also noted that people are generally more conscientious about their overall health and weight and stated the city park promotes physical activity.

Stakeholders who felt health and quality of life had stayed the same stated there have not been any new services added and the population has remained the same. They also noted that lack of health education and healthy lifestyles affect the health and quality of life in the community.

"Hospital renovations have helped in improving health."

"Dr. Loy's mobile medical unit is great."

2. Underserved populations and communities of need

Key stakeholders were asked to provide their opinions regarding specific populations or groups of people whose health or quality of life may not be as good as others. The key stakeholders were also asked to provide their opinions as to why they thought these populations were underserved or in need.

Respondents noted that persons living with low-incomes or in poverty are most likely to be underserved due to lack of financial resources. Lack of financial resources prevents persons with low-income from seeking and being able to afford medical care. When forced to choose, they often

choose to spend what little income they have on items other than health care. Motivation was also noted within the interviews as a reason why some individuals are in need. People have a certain mindset and are not motivated to help themselves get the care they need.

The elderly was also identified as a population that is faced with challenges accessing care due to limited transportation, isolation and fixed incomes.

"This is a rural area without many health care options."

"The elderly are trying to stay in home longer and their needs are not being met."

3. *Barriers*

The key stakeholders were asked what barriers or problems keep community residents from obtaining necessary health services and improving health in their community. Responses to this were varied. Some of the key stakeholders noted that transportation was a barrier to access health care and a lack of employment opportunities has negatively impacted the rate of poverty in the community.

It was also noted that drugs and/or alcohol (particularly prescription drug abuse) were a priority over healthcare for persons dealing with substance abuse.

Lack of participation in wellness plans/healthy lifestyles were also seen as barriers. Some individuals, as mentioned above, are not motivated to fix the unhealthy habits they have formed. Health education can help teach individuals about the adverse effects of unhealthy behaviors. Key stakeholders stated the health fairs are effective and seem to get good participation. One stakeholder indicated he had heard of an individual attending the health fair and had discovered he/she had a health issue and was able to seek appropriate care.

"The public needs more education on risky lifestyle choices."

"Health fairs are definitely effective and help raise awareness."

4. *Most important health and quality of life issues*

Key stakeholders were asked to provide their opinion as to the most critical health and quality of life issues facing the county. The majority of the key stakeholders cited economics and a lack of industry as being some of the most important issues impacting health of the community. Financial resources, the ability to pay and access healthcare services and lifestyle choices were other issues impacting the health and quality of life within the community.

Drug abuse was identified as an important issue that should be addressed within the community, specifically prescription drug abuse. Many stakeholders noted individuals do not make the effort to care for their own personal health and there is a cyclical nature within the family structure and culture that leads to the detriment of health.

It was also noted that chronic diseases such as heart disease, diabetes and cancer are health conditions that impact the community.

Stakeholders felt the best way to address these needs was to continue to increase education and outreach to community members regarding healthy living, preventative care and risky lifestyle choices. They also stated that while the health fair seems very effective, more communication is needed to promote the services that are available.

The key stakeholders were also asked to identify the most critical issue the hospital should address over the next three to five years. Responses included:

- More education and awareness regarding resources and preventive programs.
- Continue education outreach in schools and to youth.
- Continue to expand programs and services including hours and locations of clinics.
- Increase collaboration with county health department.
- Address prescription drug abuse.
- Expand services for the elderly.
- Continue to recruit new doctors.

"Outreach to young people to teach adverse effects of unhealthy behaviors will go a long way."

"Tobacco use is not improving – the schools are not tobacco free."

"New clinics are helping to improve the health in the community."

Key Findings

A summary of themes and key findings provided by the key informants follows:

- Education on health issues, preventative care and nutritional information is limited. There is a significant need for community outreach programs aimed to educate patients.
- Alcohol and drug abuse, particularly prescription drug abuse, were noted as critical health issues within the community.
- Cancer and heart disease were noted health conditions negatively impacting the community due to the overall negative impact it has on one's health.
- Lack of employment opportunities and industry were mentioned as barriers to improving health and quality of life.
- Almost every key stakeholder indicated the health fair was effective and a great way to get health information and health care to the community. Cumberland County Hospital should continue its outreach and education efforts on health and wellness.

Health Issues of Vulnerable Populations

According to Dignity Health's Community Need Index (see Appendices), the Hospital's community has a moderate level of need. The CNI score is an average of five different barrier scores that measure socioeconomic indicators of each community (income, cultural, education, insurance and housing). There is one zip code within the CHNA community that has a CNI score of 3.6 (Burkesville).

Certain key stakeholders were selected due to their positions working with low-income and uninsured populations. Several key stakeholders were selected due to their work with minority populations. Based on information obtained through key stakeholder interviews and the community health survey, the following populations are considered to be vulnerable or underserved in the community and the identified needs are listed:

- Uninsured/Working Poor Population
    - Transportation
    - High cost of health care prevents needs from being met
    - Healthy lifestyle and nutrition education
- Elderly
    - Transportation
    - Lack of health knowledge
    - Lack of services for in-home care

Information Gaps

This assessment was designed to provide a comprehensive and broad picture of the health in the overall community served by the Hospital; however, there may be a number of medical conditions that are not specifically addressed in this report due to various factors, including but not limited to, publically available information or limited community input.

In addition, certain population groups might not be identifiable or might not be represented in numbers sufficient for independent analysis. Examples include homeless, institutionalized persons, undocumented residents and members of certain ethnic groups who do not speak English or Spanish. Efforts were made to obtain input from these specific populations through key stakeholder interviews.

Prioritization of Identified Health Needs

Priority setting is a required step in the community benefit planning process. The IRS regulations indicate that the CHNA must provide a prioritized description of the community health needs identified through the CHNA and include a description of the process and criteria used in prioritizing the health needs.

Using findings obtained through the collection of primary and secondary data, the Hospital completed an analysis of these inputs (see *Appendices*) to identify community health needs. The following data was analyzed to identify health needs for the community:

Leading Causes of Death

Leading causes of death for the community and the death rates for the leading causes of death for each county within the Hospital's CHNA community were compared to U.S. adjusted death rates. Causes of death in which the county rate compared unfavorably to the U.S. adjusted death rate resulted in a health need for the Hospital CHNA community.

Health Outcomes and Factors

An analysis of the County Health Rankings health outcomes and factors data was prepared for each county within CCH's CHNA community. County rates and measurements for health behaviors, clinical care, social and economic factors and the physical environment were compared to state benchmarks. County rankings in which the county rate compared unfavorably (by greater than 30% of the national benchmark) resulted in an identified health need.

Primary Data

Health needs identified through key informant interviews were included as health needs. Needs for vulnerable populations were separately reported on the analysis in order to facilitate the prioritization process.

Health Needs of Vulnerable Populations

Health needs of vulnerable populations were included for ranking purposes.

To facilitate prioritization of identified health needs, a ranking process was used. Health needs were ranked based on the following five factors. Each factor received a score between 0 and 5.

1) **How many people are affected by the issue or size of the issue?** For this factor, ratings were based on the percentage of the community who are impacted by the identified need. The following scale was utilized: >25% of the community= 5; >15% and <25%=4; >10% and <15%=3; >5% and <10%=2 and <5%=1.
2) **What are the consequences of not addressing this problem?** Identified health needs which have a high death rate or have a high impact on chronic diseases received a higher rating.
3) **The impact of the problem on vulnerable populations.** Needs identified which pertained to vulnerable populations were rated for this factor.
4) **How important the problem is to the community.** Needs identified through community interviews and/or focus groups were rated for this factor.
5) **Prevalence of common themes.** The rating for this factor was determined by how many sources of data (leading causes of death, primary causes for inpatient hospitalization, health outcomes and factors and primary data) identified the need.

Each need was ranked based on the five prioritization metrics. As a result, the following summary list of needs was identified:

Exhibit 23
Cumberland County Hospital
Prioritization of Health Needs

	How Many People Are Affected by the Issue?	What Are the Consequences of Not Addressing This Problem?	What is the Impact on Vulnerable Populations?	How Important is it to the Community?	How Many Sources Identified the Need?	Total Score *
Lack of Health Knowledge/Education	5	4	4	4	3	**20**
Good Employment Opportunities/Poverty	5	3	5	4	3	**20**
Healthy Behaviors/Lifestyle Choices	5	4	4	4	2	**19**
Heart Disease	4	5	0	4	2	**15**
Adult Smoking/Tobacco Use	5	4	0	4	2	**15**
Cost of Healthcare Services	4	3	3	3	2	**15**
Lack of Primary Care Physicians/Hours	3	4	3	3	2	**15**
Cancer	4	4	0	4	2	**14**
Obesity	5	4	0	3	2	**14**
Uninsured/Limited Insurance	4	3	0	4	3	**14**
Prescription Drug Use	3	3	0	5	2	**13**
Transportation	3	1	4	3	2	**13**
Services for the Elderly	2	3	4	3	1	**13**
Physical Inactivity	5	3	0	3	2	**13**
Lung Disease	4	4	0	2	1	**11**
Stroke	3	3	0	1	1	**8**
Lack of Dental Services	2	3	0	1	1	**7**
Lack of Mental Health Services	1	2	0	2	1	**6**
Alcohol Impaired Driving Deaths	2	2	0	0	1	**5**
Lack of Mammography Screenings	2	2	0	0	1	**5**
Preventable Hospital Stays	2	1	0	0	1	**4**
Teen Birth Rate	1	1	0	0	1	**3**

*Highest potential score = 25

Based on the information gathered through this Community Health Needs Assessment and the prioritization process described above, the health needs below have been identified as the most significant health needs in the community. Opportunities for health improvement exist in each area. Cumberland County Hospital's leadership will work to identify areas where the Hospital can most effectively focus its resources to have significant impact and develop an Implementation Strategy for 2017-2019.

- Lack of Health Knowledge/Education
- Healthy Behaviors/Lifestyle Choices
- Adult Smoking/Tobacco Use
- Lack of Primary Care Physicians/Hours
- Obesity
- Prescription Drug Use
- Services for the Elderly
- Good Employment Opportunities/Poverty
- Heart Disease
- Cost of Healthcare Services
- Cancer
- Uninsured/Limited Insurance
- Transportation
- Physical Inactivity

Resources Available to Address Significant Health Needs

Health Care Resources

The availability of health care resources is a critical component to the health of a county's residents and a measure of the soundness of the area's health care delivery system. An adequate number of health care facilities and health care providers are vital for sustaining a community's health status. Fewer health care facilities and health care providers can impact the timely delivery of services. A limited supply of health resources, especially providers, results in the limited capacity of the health care delivery system to absorb charity and indigent care as there are fewer providers upon which to distribute the burden of indigent care.

Hospitals

The Hospital has 25 acute beds and is the only hospital facility located within the CHNA community. Residents of the community also take advantage of services provided by hospitals in neighboring counties, as well as services offered by other facilities and providers.

Exhibit 24 summarizes hospitals available to the residents of the Cumberland County in which the community resides. The facilities with an asterisk (*) next to their name in the table below are not located in the CHNA community; however, they represent hospital facilities that are within 30 miles of Burkesville, Kentucky.

Exhibit 24
Cumberland County Hospital
Summary of Area Hospitals and Health Centers

Hospital	Address	County
* Monroe County Medical Center	529 Capp Harlan Road, Tompkinsville, KY 42167	Monroe
* Clinton County Hospital, Inc.	723 Burkesville Road, Albany, KY 42602	Clinton

Source: US Hospital Finder

Other Health Care Facilities

Short-term acute care hospital services are not the only health services available to members of the Hospital's community. *Exhibit 25* provides a listing of community health centers and rural health clinics within the Hospital's community.

Exhibit 25
Cumberland County Hospital
Summary of Other Health Care Facilities

Facility	Facility Type	Address	County
B F Taylor Medical Arts Clinic	Rural Health Clinic	299-A Glasgow Road, Burkesville, KY 42717	Cumberland
Flowers Rural Health Care	Rural Health Clinic	333 Keen Street Burkesville, KY 42717	Cumberland
Wellness on Wheels Medical Center	Federally Qualified Health Center	360 Keen St, Burkesville, KY 42717	Cumberland
Cumberland Family Medical Center	Federally Qualified Health Center	360 Keen St, Burkesville, KY 42717	Cumberland

Source: CMS.gov, Health Resources & Services Administration (HRSA)

The Hospital's CHNA community also has a number of clinics inside various retail facilities, including Walgreens and CVS. These clinics are expanding past providing only flu shots to providing checkups and treatments to a growing list of ailments.

Health Departments

Within the Hospital's CHNA community resides Lake Cumberland District Health Department, which offers a large array of services to patients, including assessments and screenings, as well as education and wellness resources for children, personal, teen and in the workplace in order to help individuals take a proactive approach toward healthy living.

Some of these services include child and adult immunizations, well child exams, fluoride varnishing, family planning (birth control), prenatal care (limited service areas), Women, Infants & Children food program (WIC), medical nutrition therapy, diabetes screening and counseling, HIV and STD screenings and breast and cervical cancer screenings. They also offer non-clinical services such as disaster preparedness and environmental services.

Services are provided by medical professionals - physicians, nurse practitioners, registered nurses, LPNs, and registered dieticians- who adhere to the guidelines set forth by the Department of Public Health, ensuring that care is provided at the highest professional standard.

Many of the services are covered by Medicare, Medicaid and other insurances. In the case individuals are uninsured or their insurance doesn't pay for the service, the majority of the services are offered on a sliding fee scale basis.

APPENDICES

APPENDIX A

ANALYSIS OF DATA

Cumberland County Hospital
Analysis of CHNA Data

Analysis of Health Status-Leading Causes of Death

	U.S. Crude Rates	(A) 10% of U.S. Crude Rate	County Rate	(B) County Rate Less U.S. Adjusted	If (B)>(A), then "Health Need"
Cumberland County:					
Cancer	185.4	18.5	275.2	89.8	Health Need
Heart Disease	193.0	19.3	503.7	310.7	Health Need
Lung Disease	45.7	4.6	102.5	56.8	Health Need
Stroke	41.4	4.1	76.1	34.7	Health Need
Unintentional Injury	40.1	4.0	123.0	82.9	
Motor Vehicle Accident	11.0	1.1	61.5	50.5	

*** The crude rate is shown per 100,000 residents. Please refer to Exhibit 18 for more information.

Analysis of Health Outcomes and Factors

	National Benchmark	(A) 30% of National Benchmark	County Rate	(B) County Rate Less National Benchmark	If (B)>(A), then "Health Need"
Cumberland County:					
Adult Smoking	14.0%	4.2%	27.0%	13.0%	Health Need
Adult Obesity	25.0%	7.5%	36.0%	11.0%	Health Need
Food Environment Index	8.4	3	7.2	-1	
Physical Inactivity	20.0%	6.0%	32.0%	12.0%	Health Need
Access to Exercise Opportunities	92.0%	27.6%	32.0%	-60.0%	
Excessive Drinking	10.0%	3.0%	N/A		
Alcohol-Impaired Driving Deaths	14.0%	4.2%	33.0%	19.0%	Health Need
Sexually Transmitted Infections	138	41	117	-21	
Teen Birth Rate	20	6	55	35	Health Need
Uninsured	11.0%	3.3%	20.0%	9.0%	Health Need
Primary Care Physicians	1045	314	1705	660	Health Need
Dentists	1377	413	3395.0	2018	Health Need
Mental Health Providers	386	116	617.0	231	Health Need
Preventable Hospital Stays	41	12	196	155	Health Need
Diabetic Screen Rate	90.0%	27.0%	84.0%	6.0%	
Mammography Screening	70.7%	21.2%	40.7%	30.0%	Health Need
Violent Crime Rate	59	18	58	-1	
Children in Poverty	13.0%	3.9%	40.0%	27.0%	Health Need
Children in Single-Parent Households	20.0%	6.0%	49.0%	29.0%	Health Need

Analysis of Primary Data - Key Informant Interviews

- Cost of Healthcare
- Good employment opportunities
- Lack of Health Knowledge/Education
- Healthy Behaviors/Lifestyle Choices
- Cancer
- Heart Disease
- Prescription drug abuse
- Transportation

Issues of Uninsured Persons, Low-Income Persons and Minority/Vulnerable Populations

Population	Issues
Uninsured/Working Poor Population	Transportation High cost of health care prevents needs from being met Healthy lifestyle and health nutrition education
Elderly	Transportation Lack of health knowledge Lack of services for in-home care

APPENDIX B

SOURCES

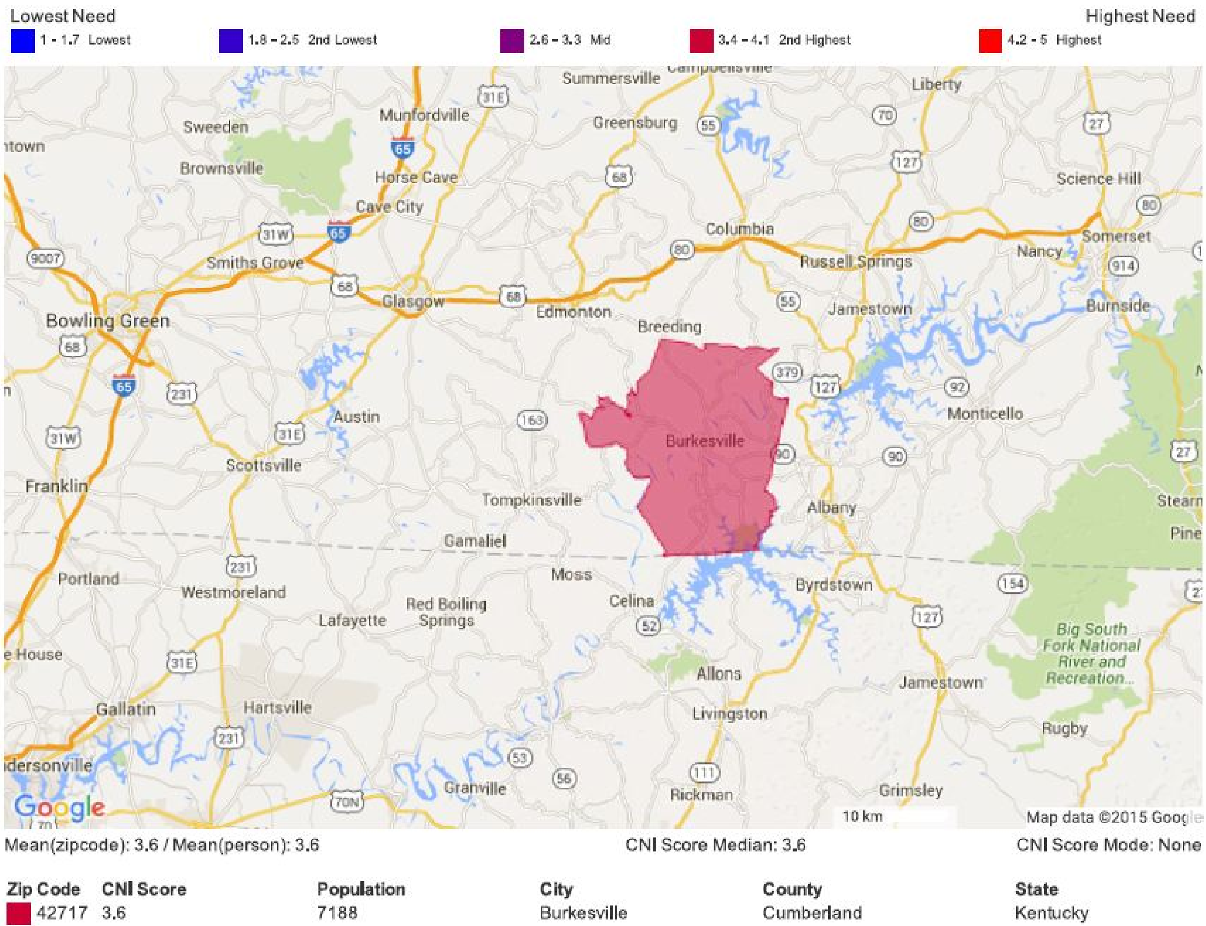
DATA TYPE	SOURCE	YEAR(S)
Discharges by Zip Code	Hospital	FY 2015
Population Estimates	Community Commons via American Community Survey http://www.communitycommons.org/	2009 - 2013
Demographics -Race/Ethnicity	Community Commons via American Community Survey http://www.communitycommons.org/	2009 - 2013
Demographics - Income	Community Commons via American Community Survey http://www.communitycommons.org/	2009 - 2013
Unemployment	Community Commons via US Department of Labor http://www.communitycommons.org/	2015
Poverty	Community Commons via US Census Bureau, Small Areas Estimates Branch http://www.census.gov	2009 - 2013
Uninsured Status	Community Commons via US Census Bureau, Small area Helath Insurance Estimates http://www.communitycommons.org/	2009 - 2013
Medicaid	Community Commons via American Community Survey http://www.communitycommons.org/	2009 - 2013
Education	Community Commons via American Community Survey http://www.communitycommons.org/	2009 - 2013
Physical Environment - Grocery Store Access	Community Commons via US Cenus Bureau, County Business Patterns http://www.communitycommons.org/	2013
Physical Environment - Food Access/Food Deserts	Community Commons via US Department of Agriculture http://www.communitycommons.org/	2010
Physical Environment - Recreation and Fitness Facilities	Community Commons via US Cenus Bureau, County Business Patterns http://www.communitycommons.org/	2013
Physical Environment - Phsyically Inactive	Community Commons via US Centers for Disease control and Prevention http://www.communitycommons.org/	2012
Clinical Care - Access to Primary Care	Community Commons via US Department of Health & Human Services http://www.communitycommons.org/	2012
Clinical Care - Lack of a Consistent Source of Primary Care	Community Commons via US Department of Health & Human Services http://www.communitycommons.org/	2011 - 2012
Clinical Care - Population Living in a Health Professional Shortage Area	Community Commons via US Department of Health & Human Services http://www.communitycommons.org/	2015
Clinical Care - Preventable Hospital Events	Community Commons via Dartmouth College Institute for Health Policy & Clinical Practice http://www.communitycommons.org/	2012
Leading Causes of Death	Community Commons via CDC national Bital Statistics System http://www.communitycommons.org/	2009 - 2013
Health Outcomes and Factors	County Health Rankings http://www.countyhealthrankings.org/ & Community Commons http://www.communitycommons.org/	2015 & 2006 - 2012
Health Care Resources	Community Commons, CMS.gov, HRSA	

APPENDIX C

DIGNITY HEALTH COMMUNITY NEED INDEX

(CNI) REPORT

Map of Community Needs Index Scores for CHNA Community Based on Dignity Health's Community Need Index (CNI)



Zip Code	CNI Score	Population	City	County	State
42717	3.6	7188	Burkesville	Cumberland	Kentucky

Source: http://cni.chw-interactive.org

APPENDIX D

COUNTY HEALTH RANKINGS

Cumberland County Hospital
County Health Rankings - Health Factors (2015)

	Cumberland County 2012	Cumberland County 2015	Change	Kentucky 2015	Top US Performers 2015**
Health Behaviors	57	66	↑		
Adult smoking - Percent of adults that report smoking at least 100 cigarettes and that they currently smoke	N/A	27%		26%	14%
Adult obesity - Percent of adults that report a BMI >= 30	33%	36%	↑	32%	25%
Food environment index - Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	N/A	7.2		7.2	8.4
Physical inactivity - Percentage of adults age 20 and over reporting no leisure-time physical activity	34%	32%	↓	29%	20%
Access to exercise opportunities - Percentage of population with adequate access to locations for physical activity	N/A	32%		72%	92%
Excessive drinking - Percent of adults that report excessive drinking in the past 30 days	3%	N/A		12%	10%
Alcohol-impaired driving deaths - Percentage of driving deaths with alcohol involvement	N/A	33%		29%	14%
Sexually transmitted infections - Chlamydia rate per 100K population	161	117	↓	394	138
Teen birth rate - Per 1,000 female population, ages 15-19	66	55	↓	48	20
Clinical Care	108	113	↑		
Uninsured adults - Percent of population under age 65 without health insurance	21%	20%	↓	16%	11%
Primary care physicians - Ratio of population to primary care physicians	2,254:1	1,705:1	↓	1,551:1	1.045:1
Dentists - Ratio of population to dentists	N/A	3,395:1		1,683:1	1.377:1
Mental health providers - Ratio of population to mental health providers	N/A	617:1		621:1	386:1
Preventable hospital stays - Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	211	196	↓	94	41
Diabetic screening - Percent of diabetic Medicare enrollees that receive HbA1c screening	78%	84%	↑	85%	90%
Mammography screening - Percent of female Medicare enrollees that receive mammography screening	52.7%	40.7%	↓	60.1%	70.7%
Social and Economic Factors	96	96			
High school graduation - Percent of ninth grade cohort that graduates in four years	70%	95%	↑	86%	N/A
Some college - Percent of adults aged 25-44 years with some post-secondary education	30.6%	49.2%	↑	58.1%	71.0%
Unemployment - Percentage of population ages 16 and older unemployed but seeking work	12.3%	11.1%	↓	8.3%	4.0%
Children in poverty - Percent of children under age 18 in poverty	40%	40%		26%	13%
Income inequality - Ratio of household income at the 80th percentile to income at the 20th percentile	N/A	4.9		5.1	3.7
Children in single-parent households - Percent of children that live in household headed by single parent					
Social associations - Number of membership associations per 10,000 population	N/A	5.9		10.8	22.0
Violent crime rate - Violent crime rate per 100,000 population	42	58	↑	235	59
Injury deaths - Number of deaths due to injury per 100,000	N/A	155		81	50
Physical Environment	27	18	↓		
Air pollution-particulate matter days - Annual number of unhealthy air quality days due to fine particulate matter	-	13.6		13.5	9.5
Drinking water violations - Percentage of population potentially exposed to water exceeding a violation limit during the past year	N/A	0%		9%	0%
Severe housing problems - Percentage of household with at least 1 of 4 housing problems: overcrowding, high housing costs or lack of kitchen or plumbing facilities	N/A	11%		14%	9%
Driving alone to work - Percentage of the workforce that drive alone to work	N/A	81%		83%	71%
Long commute driving alone - Among workers who commute in their car alone, the percentage that commute more than 30 minutes	N/A	23%		28%	15%

* Rank out of 120 Kentucky counties
** 90th percentile, i.e., only 10% are better
Note: N/A indicates unreliable or missing data
Source: Countyhealthrankings.org

APPENDIX E

KEY STAKEHOLDER INTERVIEW PROTOCOL

& ACKNOWLEDGEMENTS

KEY INFORMANT INTERVIEW

Community Health Needs Assessment for:

Cumberland County Hospital

Interviewer's Initials: ____________

Date: ____ Start Time: _ End Time: ____________

Name: ______ Title: __________________

Agency/Organization:)

# of years living in Cumberland County: # of years in current position:

E-mail address: ______

Introduction: Good morning/afternoon. My name is **Beth Cash.** Thank you for taking time out of your busy day to speak with me. I'll try to keep our time to approximately 40 minutes, but we may find that we run over – up to 50 minutes total - once we get into the interview. **(Check to see if this is okay).**

Cumberland County Hospital is gathering local data as part of developing a plan to improve health and quality of life in Cumberland County. Community input is essential to this process. A combination of surveys and key informant interviews are being used to engage community members. You have been selected for a key informant interview because of your knowledge, insight, and familiarity with the community. The themes that emerge from these interviews will be summarized and made available to the public; however, individual interviews will be kept strictly confidential.

To get us started, can you tell me briefly about the work that you and your organization do in the community?

Thank you. Next I'll be asking you a series of questions about health and quality of life in Cumberland_County. As you consider these questions, keep in mind the broad definition of health adopted by the World Health Organization: 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity,' while sharing the local perspectives you have from your current position and from experiences in this community.

Questions:

1. In general, how would you rate health and quality of life in Cumberland_County?

2. In your opinion, has health and quality of life in Cumberland County improved, stayed the same, or declined over the past few years?

3. Why do you think it has (based on answer from previous question: improved, declined, or stayed the same)?

4. What other factors have contributed to the (based on answer to question 2: improvement, decline **or** to health and quality of life staying the same)?

5. Are there people or groups of people in Cumberland County whose health or quality of life may not be as good as others?

a. Who are these persons or groups (whose health or quality of life is not as good as others)?

b. Why do you think their health/quality of life is not as good as others?

6. What barriers, if any, exist to improving health and quality of life in Cumberland County?

7. In your opinion, what are the most critical health and quality of life issues in Cumberland County?

8. What needs to be done to address these issues?

9. Do you think access to Health Services has improved over the last 3 years? Why or why not?

10. What is your familiarity with various outreach efforts of Cumberland County Hospital regarding Heart Disease, Cancer and Stroke? Do you think the outreach is helpful and effective? Do you have any suggestions for additional outreach opportunities?

11. Please provide insight and observations regarding certain health behaviors in the community surrounding obesity, physical inactivity, drug abuse and tobacco use. Have any noticeable improvements been made in these areas during the last three years?

What organizations are addressing these issues and what are they doing? What do you think is the best way to change behaviors in these areas?

12. What is the most important issue the hospital should address in the next 3-5 years?

Close: Thanks so much for sharing your concerns and perspectives on these issues. The information you have provided will contribute to develop a better understanding about factors impacting health and quality of life in ______Cumberland___ County. Before we conclude the interview,

Is there anything you would like to add?

As a reminder, summary results will be made available by the **Cumberland County Hospital** and used to develop a community-wide health improvement plan. Should you have any questions, please feel free to contact Beth Cash or Rick Capps at **Cumberland County Hospital**. You can reach either of us at 864-2511 and my extension is 249 and Rick's extension is 251. Thanks once more for your time. It's been a pleasure to meet you.

Key Stakeholders

Thank you to the following individuals who participated in our key informant interview process:

Ashley Bridgeman, Health Educator, Lake Cumberland Health Department

Steve Burns, COO & Employee Board Member, Cumberland County Hospital

Greg Cary, Emergency Management Director/91 Coordinator, Cumberland County Fiscal Court

Keith Riddle, Mayor, City of Burkesville

Rodney Schwartz, Director of Pupil Personnel, Cumberland County Schools

Mary Beth Shelton, Assistant Administrator, Cumberland Valley Manor

Judy Thrasher, Occupancy Specialist, Burkesville Housing Authority