(FY2016-2018) COMMUNITY HEALTH NEEDS ASSESSMENT
JUNE 30, 2016

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INTRODUCTION

Improving the health of a community is now widely understood to be a collaborative effort. The effort may begin with hospitals, public health officials and healthcare providers, but to achieve impact it must also engage community partners such as social service agencies, schools, medical providers and community organizations. The process of identifying community health issues and priorities and how best to address them must include active participation from the people who live, work and play there every day.

Broad community participation across organizations and individuals provides the benefit of collective thinking, which can open the door to new ideas for creating sustainable change. It is also a powerful means to align the community on its most pressing health issues and create a unified effort to address them. This community ownership is essential to the health assessment process and to successful implementation of long-term plans to improve the health of the community.

North Kansas City Hospital (NKCH) is a member of the Northland Health Alliance (NHA), which includes representatives from county and city health departments, hospitals and nonprofit organizations as well as healthcare providers, all who are focused on healthcare access. The group was established in August 2014 to bring together organizations and providers who serve the health needs of a unique geographic area.

The Northland, as locals refer to this area, is situated just north of downtown Kansas City, MO. It encompasses two counties, Clay and Platte. Approximately 30% of the Northland population resides within the city limits of Kansas City. The Northland also includes the cities of Platte City, Parkville, Gladstone, Riverside, North Kansas City, Liberty and others, resulting in a mix of urban, suburban and rural communities. It is one of the fastest-growing areas in the state. Since 2010, Clay and Platte Counties have experienced a combined growth rate of over 5.5%. While the Northland does not have an official governmental designation, the cities, towns, communities and people living there are interconnected in many ways.

In partnership with members of the NHA, North Kansas City Hospital gathered primary research on the current health status of the Northland community and secondary research on community perceptions about health issues and priorities. Meeting the requirements of the final section 501(c) IRS regulations was an important part of this effort, but it was also inspired by recognizing that improving health and preventing disease, illness and injury in Northland communities requires a collaborative effort. NKCH and NHA understand the road to improved health outcomes for the Northland begins with a comprehensive Community Health Needs Assessment followed by focused health improvement planning by all partners.

North Kansas City Hospital: Who We Are

NKCH is an acute-care facility with 451 licensed beds and 550 physicians representing 49 medical specialties. From a Level III neonatal intensive care unit to award-winning cardiovascular and orthopedic programs, to home health and hospice, NKCH provides a lifetime of care. It offers advanced treatment options, including world class cancer care through a partnership with the region’s only National Cancer Institute-designated program.

In addition to the main campus, the hospital has three off-campus locations: Tremont Imaging Center and the NKCH Diagnostic Sleep Center, both located in Platte County, and Medical Imaging, located in Clay County.

Through its Meritas Health subsidiary, North Kansas City Hospital offers the largest network of physician practices in the Northland, with more than 115 primary and specialty care physicians in 30 convenient locations, including two express care clinics.

In the 2015 Consumer Perception Survey, an independent market survey of people living in the NKCH service area, respondents ranked North Kansas City Hospital as having the best image/reputation of all Northland hospitals by a wide margin.
North Kansas City Hospital offers the following healthcare and community services:

- Emergency Room with Level II Trauma Services and a Cycle IV Chest Pain Center accredited by the Society of Cardiovascular Patient Care
- Full-service cardiac program
- Mother and Child Health Services, including a Level III neonatal intensive care nursery staffed in part by Children’s Mercy Hospital practitioners and neonatologists
- Imaging services with an accredited Breast Imaging Center of Excellence
- Physical, occupational and speech therapies (inpatient and outpatient)
- A comprehensive cancer program that, in partnership with The University of Kansas Cancer Center, a National Cancer Institute-designated center, provides on-site radiation oncology treatments and clinical trials
- Cancer Rehab and Wellness program
- Inpatient Hospice care provided by Northcare Hospice
- Robotic surgery
- Bariatric surgery accredited by Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program
- Diagnostic sleep health center

Home Health program recognized as a HomeCare Elite Top Agency Award recipient, which places it in the Top 25% of home healthcare providers in the U.S.

- Other specialties: allergy and asthma; alternative medicine; arthritis; cancer; cardiology and cardiovascular surgery; dentistry and oral surgery; dermatology; diabetes; ear, nose and throat; family practice; gastroenterology; hematology; home health; infectious disease; internal medicine; maternit; nephrology; neurology; neurosurgery; ophthalmology; orthopedics; pain management; pathology; pediatrics; plastic surgery; pulmonology; and urology
- Wound Healing and Hyperbaric Center
- Women’s Services
- Specialty Community Classes
  - CPR, land and water fitness, senior programs, pregnancy and childbirth, support groups, special interest classes (such as diabetes prevention), health fairs and community wellness events/ screenings, Club W women’s affinity program

NKCH is one of the top four busiest adult acute-care hospitals in Kansas City.
Community Health Needs Assessment: Process Overview

Assessing the health of a community requires the ongoing systematic collection, aggregation, analysis and distribution of both qualitative and quantitative information about the health needs of the community. It is the essential first step for identifying the factors affecting health in the community. With this information, NKCH can make informed decisions about how to prioritize health needs and determine where to invest resources most effectively. As a member of the NHA Community Health Assessment Subcommittee, North Kansas City Hospital participated in a nine-month process to assess the health of the Northland.

Understanding that examining community health and wellness requires more complex analysis than simply surveying health status, the subcommittee initiated efforts to explore the health of the Northland communities using surveys and forums involving Northland residents and hospitals, including North Kansas City City Hospital.

These activities complemented a statistical review of a variety of health indicators, including demographic characteristics, socioeconomic data, availability of healthcare, behavioral risk factors, social and mental health, mother and child health, communicable diseases and sentinel events. To facilitate this process, the subcommittee met regularly to collect, analyze and report data as outlined below.

- **Community Health Surveys.** Data on community health themes, perceptions about quality of life, and community assets gathered through community-wide surveys and health forums to gather feedback from residents across the Northland.

- **Community Health Status Assessment.** Data about health status, quality of life and risk factors in the community using the Core and Extended Indicator list from the National Association of County and City Health Officials (NACCHO) clearinghouse of resources.

Telling the story of the health status of the community North Kansas City Hospital serves requires weaving together information from the two counties and major metropolitan area that make up the larger Northland community. Therefore, for this report, wherever possible, statistical data gathered through the assessments are presented in distinct sets: data specific to North Kansas City Hospital patients, and broader data sets representing information about Clay County, Platte County and Kansas City, MO, to provide context.

It is important to note the overlap that exists in the data between the counties and Kansas City. The data gathered and reported about Clay and Platte Counties reflect information about all county residents, including those who live within the boundaries of Kansas City. The data gathered and reported by Kansas City reflects information about the entire population of that city, not just the portion that resides in the Northland.

Statistical data is most useful when comparisons are available to provide context to help understand how a community compares with a larger group of people and how health varies among different people within the community. The data from Kansas City provides insight into the health status of the general region. Where available, data points about the health status of the state of Missouri and the United States as a whole are also included for additional context and points of comparison as a way to deepen understanding of the health status of the communities served by North Kansas City Hospital.

NKCH has evaluated the impact of the actions the hospital took to address the significant health needs identified in its Cycle 1 Community Health Needs Assessment. This evaluation is reported in our Cycle 1 Implementation Report, which is available at nkch.org, and is incorporated by reference into this Community Health Needs Assessment.
North Kansas City Hospital Assessment Summary and Priorities

The North Kansas City Hospital Community Health Needs Assessment Committee was formed in 2012 and met quarterly to review status reports from the oversight committees guiding implementation of the hospital’s Cycle 1 initiatives and to discuss the CHNA timeline. (See CHNA Timeline, Appendix A.) The CHNA Committee considered the implications of the ongoing Cycle 1 status reports as it analyzed data gathered by the hospital and the NHA during the community health assessment process.

This review led to the selection of the following initiatives around which the North Kansas City Hospital Cycle 2 Implementation Plan was developed.

**Cycle 2 Initiatives**

It is not surprising that the health initiatives selected by North Kansas City Hospital align closely with the community health priorities identified by the Northland Health Alliance, which are access to care, mental health and chronic disease.

The NHA priorities will become the foundation of a community-wide health improvement plan (CHIP) undertaken by all members, including NKCH.

No. 1

**Increase comprehensive mental health resources and programs to support mental health stability and wellness for the Northland.**

(See Appendix B for the Cycle 2 CHNA Implementation Plan to address this health priority.)

**RATIONALE**

- In 2015, the U.S. Department of Health and Human Services, Health Resources and Services Administration identified Clay and Platte Counties as Designated Health Professional Shortage Areas for mental health. As a healthcare provider, NKCH is uniquely positioned to help address this concern.
- Thirty-one percent of respondents to the Northland Community Health Survey identified mental health as one of the top three health problems facing the community.
- Anxiety/depression disorder was one of the four most common chronic health conditions cited by respondents to the NKCH Consumer Perception Survey.
- Suicide is the third leading cause of death among 15–24 year-olds in the Northland.
- In 2015, NKCH saw 200 patients per month with a primary psychiatric diagnosis.

No. 2

**Improve the health outcomes of nonwhite infants born in Clay and Platte Counties.**

(See Appendix C for the Cycle 2 CHNA Implementation Plan to address this health priority.)

**RATIONALE**

- Low birth weights occur more frequently in nonwhite infants in the Northland. In Clay County, 6.3% of white children are born with low birth weights, while 11.6% of nonwhite children have low birth weights. In Platte County, 6.6% of babies are born with low birth weights compared with 9.1% of nonwhite babies.
- The mortality rate for nonwhite infants in Clay and Platte Counties is double the rate for white infants.
- In 2014, there were no OB/GYN physicians in Platte County accepting Medicaid patients, and only 27 in Clay County. As a healthcare provider, NKCH is uniquely positioned to continue to address this concern, as it did in Cycle 1 Implementation.
- Tactics rolled out during Cycle 1 Implementation helped the hospital maintain the goal rate of 5% or fewer women who delivered at NKCH with no prenatal care (4.86%). Building on this progress during Cycle 2 Implementation will enable NKCH to further impact access-to-care issues and health outcomes for this at-risk population.

No. 3

**Prevent chronic disease in teens and young adults, and minimize the progression of chronic disease in adults in the Northland.**

(See Appendix D for the Cycle 2 CHNA Implementation Plan to address this health priority.)

**RATIONALE**

- Chronic disease is the No. 1 killer in the communities NKCH serves. The most prevalent chronic diseases are cancer, heart disease, COPD and diabetes.
- In Clay County, 28% of residents and 30% of Platte County residents are obese. In 2013, 15% of Missouri high school students and 13.5% of children ages 10–17 were obese.
- High blood pressure and high cholesterol were the two most commonly cited chronic health conditions in the NKCH Consumer Perception Survey. Approximately 75% of Northland adults do not eat an adequate diet of fruits and vegetables.
- NKCH currently offers, and is expanding, services designed to minimize the progression of chronic diseases. Services include a diabetes prevention program, Heart Failure Clinic and enhanced case management for at-risk discharged patients. The hospital is well-positioned to make a positive impact.
- The Quarky smartphone app promotes healthy living among teens. It was developed as part of Cycle 1 implementation and will launch Summer 2016. The NKCH teen outreach effort is gaining momentum, and continuing this effort in Cycle 2 will enable NKCH to expand its impact.
COMMUNITY HEALTH ASSESSMENTS

ASSESSMENT DATA SOURCES

Behavioral Risk Factors Surveillance Survey (BRFSS)
Centers for Medicare and Medicaid Services
Clay County Public Health Center Data Sets
Community Commons
Kansas City Health Department
Kids Count
Liberty Hospital
Maternal and Child Health Task Force
Missouri Information for Community Assessment (MICA)
North Kansas City Hospital
Platte County Health Department
Robert Wood Johnson Foundation-County Health Rankings
Saint Luke’s North Hospital
Samuel U. Rodgers, FQHC
U.S. Census Track Data

The following report includes a summary of the data analyzed that led to the identification of the health initiatives North Kansas City Hospital will pursue over the course of the next three years. Although the North Kansas City Hospital Community Health Needs Assessment Committee reviewed all data available, for the purposes of this document the data focuses on information most relevant to the three health priorities identified by the committee. Additional data gathered during the assessment process can be found in documents appended to this report.

Community Health Surveys

To gain insight into the health issues facing the community, NKCH listened to members of the Northland community. As part of this effort, the hospital utilized information gathered through its ongoing Consumer Perception Survey and worked collaboratively with Northland Health Alliance members to develop a community survey.

In the NKCH Consumer Perception Survey and the Community Health Assessment Survey, participants were asked to consider/rate the overall health of the community, identify the health problems they believe are most important, identify/rate the risky behaviors they believe have the greatest impact on the community, and share where they typically receive healthcare and how they pay for it. Both surveys also included general demographic questions. The findings of these Community Health Surveys played a key role in the identification of the NKCH Cycle 2 initiatives.

The NKCH Consumer Perception Survey is an ongoing online healthcare survey conducted by the National Research Corporation that includes 100+ standardized questions that are not dependent on a recent healthcare encounter. For the purposes of this report, the results reflect responses received in calendar year 2015 and are referenced throughout this report.

The NHA Community Health Assessment Survey was made available in both online and paper versions between January 28–July 31, 2015. More than 1,000 members of the Northland community participated in the survey.

Survey Demographics

NKCH Consumer Perception Survey

The survey received 334 responses from Clay and Platte County residents in 2015. The average age of respondents was 48, with the majority of respondents falling into the 45–64 age range. They were predominately female and white (89%) and the majority (96 respondents) work full time. One-third of survey participants were married with an annual household income over $75,000. Twenty-eight percent of respondents had an annual household income between $25,000-$49,999. Slightly less than 14% of respondents had an annual household income under $25,000. Over 46% of respondents had completed some level of higher education (graduation from a two or four-year college, graduate school or post-graduate work). Slightly more than 17% were high school graduates.

NKCH Community Health Assessment Survey Demographics

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NHA COMMUNITY HEALTH SURVEY PARTNERS

Alzheimer’s Association
American Indian Council
CHIA Award Winners
Clay County Public Administrator
Clay County Public Health Center
Clay County Senior Services
Crossroads Hospice
Diversity Advisory Council for Health Equity
Family Promise
Gladstone, City of
Good Samaritan Center
HealthCare USA
Heartland Habitat for Humanity
Hillcrest Hope Clay Co.
Home State Health
Kansas City Missouri Health Department
KCP&L
Liberty, City of
Liberty Hospital
Linden Woods Village
Little Wolf Productions
Love Inc. of Clay County
Missouri City School District
Missouri Gas Energy
North Kansas City Business Council
North Kansas City, City of
North Kansas City Hospital
Northland Career Center
Northland Community Services Coalition
Northland Health Care Access

Northland Mother and Child Health Partnership
Northland Neighborhoods
Northland Shepherd’s Center
North Platte School District
Park Hill School District
Parkville, City of
Phoenix Housing
Platte City Area Chamber of Commerce
Platte City, City of
Platte County Back-to-School Fair Committee
Platte County Board of Services
Platte County Health Department
Platte County Public Administrator
Platte County R-3 School District
Platte County Senior Fair Committee
Platte County Senior Fund
Premrose Retirement
Rebuilding Together Clay County
Right at Home
Riverside, City of
Saint Luke’s Health System
St. Therese School
Seniors Blue Book
Shepherds Center – Kansas City
The Whole Person
Tri-County Mental Health
University of Missouri Extension
Vocational Rehabilitation
West Platte School District
Community Health Needs Assessment

NHA Community Health Assessment Survey
Survey respondents were asked to provide data on a number of demographic topics, including gender, race, age, relationship status, employment status, primary language spoken, educational attainment, household income and zip code location of residence.

The majority of respondents were female (72.5%), white (91%), married/living together (61%), employed full time (54%), and had a college degree or higher (63%). The majority of respondents fell into the 18-39 and 40-54 age ranges, 38% and 27%, respectively. Platte County had a higher percentage of younger respondents (40 years old or younger) and lower percentage of older survey respondents (65 and older) when compared with Clay County. Income levels were more evenly distributed, with 20% making more than $100,000 and 17% making less than $20,000. Approximately 23% had an annual household income between $20,000-$49,000, and 35% had an annual household income of $50,000-$100,000.

It is important to note these survey results cannot be generalized across the entire Northland community, as the survey was not conducted as a random sample.

NHA Community Health Assessment Survey Results
The Northland community is fairly evenly divided in its opinion about the health of its residents.

Nearly 72% of all survey respondents agreed or strongly agreed they are satisfied with the quality of life in the community, feel it is a safe place to live (75.9%) and feel it is a good place to grow old (61%).

Figure 4: What is my quality of life in the Northland?

I am satisfied with the quality of life in our community.
72%

I feel my community is a safe place to live and raise children.
76%

My community is a good place to grow old.
61%

Figure 3: How healthy is my community?

NORTHLAND

49% Very Healthy/Healthy

50% Somewhat Healthy/Unhealthy/Very Unhealthy

CLAY

45% Very Healthy/Healthy

PLATTE

58% Very Healthy/Healthy
Regarding the availability of health and wellness activities and healthcare in the community, 64.7% either agreed or strongly agreed with the statement “The community has enough health and wellness activities to meet my needs,” and 71% agreed with the statement “I am satisfied with the availability of healthcare in the community.” Opinion is divided on the subject of availability of medical care for low-income residents. While 33.2% agreed or strongly agreed there is enough access for low-income residents, 34.5% disagreed or strongly disagreed with the statement.

The majority of Northland residents have a medical home. More than 75% indicated they have their own doctor to see when sick. An important note is that respondents with a college degree or higher were more likely to agree or strongly agree with the statement they see their own doctor when ill than those with a high school diploma or less. The financial implications of healthcare are underscored by the 30% of all respondents who said they chose not to receive healthcare services in the last year because of cost.

Alcohol and drug abuse were identified as the top health problem in the community, followed by obesity and mental health problems. Cancer, diabetes, heart disease, stroke and high blood pressure also ranked highly, supporting the inclusion of chronic disease as a community health priority.

A higher proportion of Northland males than females identified obesity as one of the three most important health problems in the community. A higher proportion of Northland females than males identified mental health as one of the three most important health problems in the community.

Alcohol and drug abuse were two of the Top 5 risky behaviors cited by survey participants, followed closely by lack of exercise and poor eating habits, both directly correlate to obesity and chronic illness.

Figure 5: Is there adequate healthcare access in my community?

Figure 6: What are the most important health problems in my community?

Figure 7: What are the most important "risky behaviors" in my community?
COMMUNITY HEALTH STATUS

As a member of the NHA Community Health Status Assessment Task Force, North Kansas City Hospital played a role in gathering and analyzing data related to the health status of the Northland community. However, taking its cue from the issues and priorities identified in its Consumer Perception Survey, the Northland Health Alliance Community Health Assessment Survey, and the Community Health Forums, NKCH aligned the focus of the data collection was the Community Health Forums, the NHA recognized the potential value of community forums to gain a more in-depth understanding of the issues that were most important to the community. The forums were also viewed as an effective method for acquiring meaningful input from community members who may have been less likely to respond to surveys, were uncomfortable with the online format or possessed lower literacy levels. The discussions in the Community Health Forums were built around the questions asked in the NHA Community Health Assessment Survey. North Kansas City Hospital supported this effort by hosting one of the forums in March 2015. Forums also were conducted in Excelsior Springs, Gladstone, Kearney, Liberty and Smithville to gather feedback from residents representing urban, suburban and rural communities.

These indicators provide pertinent background about the three health priorities identified by the community and will profoundly impact the implementation strategies to address the NKCH Cycle 2 Initiatives.

Much of the statistical data presented in the Community Health Status Assessment comes through U.S. Census Tract data, Missouri Information for Community Assessment and the Behavioral Risk Factor Surveillance System (BRFSS). The Centers for Disease Control and Prevention, in collaboration with state and local health departments, carry out an annual population-based survey to measure health behaviors of the U.S. population annually.

Data collected through the BRFSS makes it possible to compare health behaviors across states and among counties within states. This surveillance enables health professionals to identify and track trends in health behaviors, making it a valuable system for informing the discussion about health policies and for providing evidence to guide health policy choices.

Health Indicators

Demographics and Social Indicators

The demographic characteristics of a community provide a snapshot of the people who live there. Some key demographic measures typically considered in a community health assessment are percent of total population by age group, gender, race and ethnicity, and how the population is distributed geographically.

The social determinants of health are the circumstances in which people are born, grow up, live, work and age. They also include the systems in place to deal with illness, including access to healthcare, as well as educational attainment, employment status and household income. These social determinants are further influenced by a variety of external forces, including economics, social policies and politics. The following is an overview of the demographics and social indicators of health for Clay and Platte Counties.

Population Size, Age and Diversity

According to the 2000 census, Clay County was home to 164,006 people and 73,781 people lived in Platte County. By 2010, both counties had experienced significant population growth, with an increase of 17% and 21%, respectively. This increase is significantly higher than the 4% growth rate experienced by Kansas City, MO. The population in the Northland is generally evenly split between males and females, with females comprising a slightly larger percentage of the population in both Clay (51.3%) and Platte (50.8%) Counties.

Figure 8: The Northland by the Numbers

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Source: US Census 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Group</td>
<td>Clay</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>&lt;5</td>
<td>3.7%</td>
</tr>
<tr>
<td>5-14</td>
<td>7.4%</td>
</tr>
<tr>
<td>15-24</td>
<td>6.1%</td>
</tr>
<tr>
<td>25-44</td>
<td>14.1%</td>
</tr>
<tr>
<td>45-64</td>
<td>12.7%</td>
</tr>
<tr>
<td>65-74</td>
<td>3.9%</td>
</tr>
<tr>
<td>75 and older</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

2000: 184,006; 2010: 211,939 17% increase
2000: 73,781; 2010: 89,322 21% increase
2000: 441,545; 2010: 459,787 4% increase

Community Health Forums

While the primary method of data collection was the Community Health Assessment Survey, the NHA recognized the potential value of community forums to gain a more in-depth understanding of the issues that were most important to the community. The forums were also viewed as an effective method for acquiring meaningful input from community members who may have been less likely to respond to surveys, were uncomfortable...
This aligns with general population trends in the U.S. The majority of the population in both counties falls between the ages of 15-64 (67% Clay County, 69% Platte County). Those aged 65 and older make up the smallest portion of the population of both counties, approximately 11%. Patient demographics for North Kansas City Hospital reflect the likely impact of mother and child health and aging on hospital outpatient visits and admissions. In 2015, females made up 60% of outpatient visits or admissions to North Kansas City Hospital. People age 65 and older accounted for 32% of all visits/admissions. The 25-44 age group accounted for 22% of visits/admissions, and the 55-64 age group accounted for 20% of visits/admissions.

While the Northland is less diverse than Kansas City and the state of Missouri as a whole, the demographics are changing. Between 2009-2014, the Hispanic and African American populations in Clay County increased by 31% and 75%, respectively. Platte County saw a 33% increase in its Hispanic population and a 43% increase in the African American population. During the same time period, the Asian population decreased by 11% in Clay County, but grew by 22% in Platte County. Currently, African Americans account for 6.2% of the Clay County population and 5.9% of the Platte County population. Residents of Hispanic or Latino descent comprise 5.9% of the Clay County population, 5.9% of the Platte County population. Hispanics or Latino or Other race or other Pacific (specify) Known to contribute to health issues compared with their urban and suburban counterparts. Rural residents are at higher risk for experiencing isolation, lower socioeconomic status, higher rates of health risk behaviors and limited job opportunities. Rural residents also tend to be older and have reduced access to healthcare. These issues will have significant implications for the creation of community health improvement plans.

**Urban and Rural**
The Northland is more urban than the state of Missouri and the United States in general. (U.S. Census, 2010). Platte County has a higher percentage of people residing in rural communities (15.8%) than Clay County (9.8%). When these totals are combined, it reveals that approximately 25% of the Northland residents live in rural communities, where they may experience unique risk factors known to contribute to health issues compared with their urban and suburban counterparts. Rural residents are at higher risk for experiencing isolation, lower socioeconomic status, higher rates of health risk behaviors and limited job opportunities. Rural residents also tend to be older and have reduced access to healthcare. These issues will have significant implications for the creation of community health improvement plans.

**Figure 10: Rural/Urban Population Distribution in Clay and Platte Counties**
Income/Poverty

The connection between income and health is inextricable. It has long been clear that people with a higher socioeconomic status and education live longer than people with a low socioeconomic status and basic education. Multiple studies have demonstrated mortality rates and morbidity – the proportion of sickness or of a specific disease in a particular population or geographic location – improve with higher socioeconomic status.

The median income in both Clay and Platte Counties is significantly above both the Missouri and national medians. The per capita income (overall income of the population divided by the number of people included in the population) of the communities is slightly higher in Platte County than in the state of Missouri as a whole and about $7,000 higher than the U.S. average of $52,520. Clay County’s per capita mirrors that of the state of Missouri and is about $2,000 higher than the figure for the U.S. as a whole.

It is important to note that a per capita figure does not always give an accurate representation of the quality of life in a community due to the function’s inability to account for skewed data. For instance, if there is an area where 50 people make $1 million per year and 1,000 people make $100 per year, the per capita income is $47,714, but that does not give a true picture of the living conditions of the entire population.

The poverty threshold, or Federal Poverty Level (FPL), is set by the federal government annually, using size of household and annual income before taxes. Households making less than this set amount are considered to be living in poverty. In 2014, the FPL was $24,008 for a family of four. Populations are affected by poverty disproportionately. Females, people living with disabilities, single parent households and ethnic minorities are more likely to live in poverty, and thus are more likely to experience healthcare inequalities than other groups.

### Figure 11: Median Household Income by Jurisdiction

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Platte</th>
<th>Clay</th>
<th>KC</th>
<th>MO</th>
<th>U.S.</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Household Income</td>
<td>$63,438</td>
<td>$60,541</td>
<td>$45,551</td>
<td>$46,931</td>
<td>$52,250</td>
<td>2013</td>
<td>County Health Rankings &amp; Roadmaps 2015 Report (ACS)</td>
</tr>
</tbody>
</table>

### Figure 12: Per Capita Income

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Platte</th>
<th>Clay</th>
<th>KC</th>
<th>MO</th>
<th>U.S.</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>$33,452</td>
<td>$27,937</td>
<td>$26,202</td>
<td>$27,937</td>
<td>$25,384</td>
<td>2013</td>
<td>U.S. Department of Commerce United States Census Bureau American Fact Finder, Clay County</td>
</tr>
</tbody>
</table>

### Figure 12: Percent of Persons in Poverty by Race and Ethnicity

Population below 100% FPL
American Community Survey via Community Commons, 2009-2013
Poverty data is collected primarily through the U.S. Census Bureau. Based upon the 2013 data collected, nearly 11% of Clay County residents and nearly 9% of Platte County residents were living below poverty level; both lower than the poverty rate experienced in Kansas City, MO (15.9%) and the U.S. (15.8%). However, nearly 20% of African Americans living in Platte County and slightly more than 23% of those living in Clay County live below the poverty line.

Households headed by females (no spouse present) are significantly more likely to live in poverty. In Platte County, 31.6% of such households and 29.4% in Clay County live on incomes less than 125% of the Federal Poverty Level. The picture is brighter for married couples, where 3.9% of such households in Platte County and 5.7% such households in Clay County live on incomes less than 125% of the Federal Poverty Level. The overall number of families living below the poverty level, (7.7% in Clay County and 5.4% in Platte County), are significantly lower than the state of Missouri (11.5%) and Kansas City (14.1%).

Households headed by females are at or below the Federal Poverty Level (Figure 13) Income inequality is a likely culprit. A 2013 study by the National Partnership for Women and Families found a wage gap exists in every state and in the country’s largest 50 metropolitan areas. An analysis of 2011 U.S. Census Bureau data found that, on average, a woman in the Kansas City metro area who holds a full-time job is paid $38,783 per year while a man who holds a full-time job is paid $50,422 per year. This means that women in the Kansas City area are paid 77 cents for every dollar paid to men, amounting to a yearly gap of $11,639 between men and women who work full time. This wage gap has major implications on the ability of women to purchase basic necessities and inevitably limits their access to healthcare.

Employment

Employment and health are closely linked. Individuals who deal with unemployment also frequently experience other socioeconomic-related challenges and are more likely to report poorer health outcomes. Both Clay and Platte Counties recorded unemployment rates lower than those posted by the U.S., the state of Missouri and Kansas City in April 2015. (Figure 13)

Education

Research draws a clear correlation between education and health status. A policy brief on education and health published by the National Poverty Center at the University of Michigan reported data indicating the more education people possess, the more positive health outcomes they are likely to enjoy, regardless of income, family background or labor market factors.

In the NHA Community Health Assessment Survey, 82% of respondents with a college degree or higher agreed/strongly agreed they have their own doctor to see when they are sick, compared with only 65% of respondents with a high school diploma or lower education level. These findings have serious implications for North Kansas City Hospital and the Northland as a whole, where 36.7% of Clay County residents age 25 and older have a high school diploma or less. In Platte County, the figure is 28.2%.
Household Demographics
As noted previously, single parent families, particularly those headed by females, are more likely to face economic struggles, which impacts their ability to access healthcare and, ultimately, their health outcomes. Speaking a language other than English can impact a family’s ability to navigate the healthcare system, leading to poorer health outcomes. People with disabilities also are in the poorest health. Over 25% of the children living in Clay and Platte Counties reside in homes headed by a single parent, significantly higher than the U.S. total of 18%, but less than the figures for both the state of Missouri and Kansas City, MO (Figure 15). In Clay County, about 11% of the population has a disability, in Platte County slightly less than 10% of the population does. The percentage of the population (age 5 and older) with limited English proficiency equals 2.7% in Clay County and 3% in Platte County.

Chronic Disease
Chronic diseases are the leading causes of death and disability in the U.S. They are associated with high healthcare costs, low productivity and diminished quality of life, yet they are the most preventable of all health problems. According to the Missouri Department of Health and Senior Services, nearly seven out of every 10 Missourians who die each year die of a chronic disease. In 2014, the chronic diseases with the highest mortality rates in the Northland were cancer, heart disease, chronic lower respiratory disease and cerebrovascular disease, followed by Alzheimer’s disease, kidney disease and diabetes.

Most of these diseases share common risk factors, including tobacco use, smoking, unhealthy diet, physical inactivity and overweight/obesity. The Missouri Department of Health and Senior Services estimates that 10,000 Missourians die each year from tobacco-related causes. While the number of smokers in Missouri has dropped considerably since 2011-2012, at 20.6% of adults and 14.9% of teenagers, the rate is still one of the highest in the nation.

Throughout this section, comparisons between the health status of Clay and Platte County residents and the goals of Healthy People 2020 are made. The Centers for Disease Control established Healthy People 2020 30 years ago “to provide science-based, national goals and objectives with 10-year targets designed to guide national health promotion and disease prevention efforts to improve the health of all people in the United States.” The health benchmarks established by

The data collected as part of the Community Health Assessment shows that chronic disease is the leading cause of death in the community served by North Kansas City Hospital.

The seriousness of this issue is recognized by the community at large as indicated by the high percentage of Northland survey respondents who listed obesity (36.9%), heart attack and stroke (18.2%) and high blood pressure (10.4%) as serious community health problems in the Northland Health Alliance Community Health Assessment Survey. Respondents to the NKCH Consumer Perception Survey cited high blood pressure and high cholesterol as the most common chronic health conditions they faced, followed by arthritis and depression/anxiety disorder. Obesity, directly linked to many chronic health issues, ranked as the second most important health problem in the Northland Health Alliance Community Health Assessment Survey. The following data provides insight into the impact of chronic diseases on Northland citizens and the health behaviors that may influence the health of the community.
Cancer is the leading cause of death in the Northland, followed closely by heart disease.

The mortality rate in Clay County is 51.1 deaths per 100,000 (which closely mirrors the mortality rate for the state of Missouri), versus 38.9 deaths per 100,000 in Platte County. Mortality rates for those with diabetes are higher for nonwhites in Clay County (18.7 deaths per 100,000) than for whites (15.5 deaths per 100,000).

The overall mortality rate for diabetes in the county is lower (15.5 deaths per 100,000) than in the state of Missouri (20.2 deaths per 100,000). Mortality rates for diabetes in Platte County are generally lower than those in Clay County, with the mortality rate for whites at 14 deaths per 100,000 (Figure 17). It is important to note that while the diabetes mortality rate for African Americans in both Clay and Platte Counties is higher than that of white residents, the data presented in the table is considered unstable. Instability in rate typically occurs when analyzing data for small areas, such as a single county, or for low frequency events, in this instance cause-specific mortality. Therefore, no true conclusions can or should be drawn from this data.

### Figure 17: Mortality Rates by Disease

<table>
<thead>
<tr>
<th>Disease</th>
<th>MICA, 2012</th>
<th>MICA, Chronic, 2012</th>
<th>MICA, 2011-2013</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>121.1</td>
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<td>165.2</td>
<td>191.5</td>
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<td>38.9</td>
<td>51.1</td>
<td>48.7</td>
<td>51.6</td>
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<td></td>
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</tr>
<tr>
<td>Diabetes</td>
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</tbody>
</table>

* @ symbol indicates an unstable rate with fewer than 20 events.
Behavioral Risk Factors

Obesity

According to the Robert Wood Johnson Foundation Report on the State of Obesity, at 30.4%, Missouri has the 16th highest rate of adult obesity (BMI of 30 or greater) in America. That figure reflects a steady increase from 30% in 2011, 23.9% in 2004 and 11.3% in 1990. With one exception, obesity rates for children and teens in Missouri are also on the rise. In 2013, 14.9% of high school students were obese, a slight increase from 2011, ranking the state 8th in the nation. In 2011, 13.5% of children between the ages of 10-17 were obese. The state has shown improvement in obesity rates for children between the ages of 2-4 from low-income families, down from 13.9% to 12.9% in 2011, a statistically significant improvement from the rate noted in 2008.

The obesity rate of adults in Clay and Platte Counties closely mirrors that of the state of Missouri. Obesity increases the risk of developing conditions such as diabetes and heart disease, and it is clear the drive to decrease chronic illness in the Northland will require significant focus to address the issue of obesity in the community.

Diet and Nutrition

Strong scientific evidence supports the idea that eating a healthy diet that includes whole grains, fruits, vegetables, low-fat or fat-free dairy products, lean meats and other protein sources, can help people improve their health status and reduce their risk for a variety of health conditions, including obesity and chronic disease. In 2009, it was estimated that just 27.3% of adults in Missouri ate two or more servings of fruit per day, and only 28% ate three or more servings of vegetables per day. These figures were comparable with the national average of 32.5% eating the recommended daily number of servings of fruit, and 26.3% eating the recommended number of servings of vegetables. In the Northland, the data indicates more than 75% of adults do not eat an adequate amount of fruits and vegetables.

Physical Activity

Physical activity is known to have direct correlation to health. Regular physical activity can improve the health status and quality of life for people of all ages, regardless of the presence of chronic disease or disability. For people who are inactive, even small increases in physical activity can be linked to positive health benefits and improvements. According to the 2015 Robert Wood Johnson Foundation County Health Rankings, more than 25% of adults in the Northland reported no leisure time physical activity.

Many factors have been positively associated with adult physical activity, including higher income, post-secondary education, social support from peers, family or spouse, and safe neighborhoods. Understanding the barriers to and facilitators of physical activity will be considered as part of the NKCH Cycle 2 Implementation Plan.
Social and Mental Health

Published studies report that about 25% of all U.S. adults have a mental illness, and nearly 50% of U.S. adults will develop at least one mental illness during their lifetime. The National Institute of Mental Health conservatively estimates the total costs associated with serious mental illness, meaning disorders that are severely debilitating and affect about 6% of the adult population, to be in excess of $300 billion per year. Individuals living with mental illness face an increased risk of chronic health conditions, and people living with a serious mental illness die, on average, 25 years earlier than other Americans, largely due to treatable medical conditions.

The Missouri Department of Mental Health estimates that nearly one in five Missouri adults suffers from mental illness and one in 13 suffers from substance use disorders. Data collected for years 2011 and 2012 by the National Survey on Drug Use and Health indicate an estimated 19%, or 855,000 Missouri adults ages 18 and older, had mental illness in the past year, and 8% of adults, or 367,000 people, had a substance use disorder in the past year. The 2012 National Survey on Drug Use and Health national data indicate that nearly 20% of adults with any mental illness have a co-occurring substance disorder, and over 40% of adults with a substance disorder have co-occurring mental illness. These numbers suggest 150,000-160,000 Missourians may have co-occurring mental illness.

The data is particularly significant to North Kansas City Hospital and the citizens of Clay and Platte Counties because in 2015 the U.S. Department of Health and Human Services, Health Resources and Services Administration identified the counties as Designated Health Professional Shortage Areas for Mental Health.

The lack of access to quality mental health services in Clay and Platte Counties was noted in NKHC's CHNA and identified as one of the initiatives in the Cycle 1 CHNA Implementation Plan. NKCH recognized it was uniquely positioned to address this as a healthcare provider. To that end, the hospital partnered with Signature Health Care in 2014 to open a 24-bed mental health unit on the NKCH campus and also introduced an intensive outpatient program.

Today, Signature Psychiatric Hospital is operating at full capacity, with seven admissions/discharges per day, 150 Emergency Room assessments per month and an average of 15 walk-ins per day. NKCH provides funding to support four beds for indigent patient care. Together, NKCH and Signature Psychiatric Hospital assisted 291 patients (127 NKCH, 164 SPH), on 675 occasions (207 NKCH, 468 SPH) in 2015. This partnership resulted in a dramatic increase in the number of inpatient psychiatric beds in the Kansas City area. (See Cycle 1 Implementation Impact Report.)

In the Northland Health Alliance Community Health Assessment Survey, mental health problems were identified by 31.3% of respondents as one of the top three health problems in the community. More than 42% identified substance abuse, frequently linked to mental health problems, as a top health priority for the community. In the NKCH Consumer Perception Survey, anxiety/depression disorder was the fourth most common chronic health condition cited by respondents. Female respondents in Clay County (65.1%) were more likely to agree/strongly agree that if they need help or assistance during times of stress, they have the support in the community compared with their male counterparts (59.4%).

Progress was made on addressing mental health needs in the Northland during NKCH's Cycle 1 Implementation, but it is clear there is more to be done. NKCH will build on the momentum established during Cycle 1 by focusing on a CHNA initiative to increase comprehensive mental health resources and programs to support mental health stability and wellness for the Northland during Cycle 2 Implementation.

Psychiatric Admissions and Emergency Room Visits

Mental illness accounts for more Emergency Room visits than alcohol and drug abuse. In 2012, mental disorders were the principal diagnosis among more than 82,000 Missouri Emergency Room episodes.

As part of the Northland Health Alliance Community Health Status Assessment, North Kansas City Hospital joined Liberty Hospital and Saint Luke's North Hospital to share primary data regarding mental health issues affecting residents. The hospitals provided data on diagnosis codes for inpatient hospitalizations, Emergency Rooms visits and mental health diagnosis. The following are highlights from the analysis of data related to mental health.

- Tobacco use disorder was the leading cited mental health diagnosis in Emergency Room visits in the Northland.
- Depressive disorder, anxiety, alcohol abuse, bipolar disorder, suicidal ideation, psychosis, attention deficit disorder with hyperactivity, dementia, and cannabis abuse also ranked in the top 10 ICD-9 codes related to Emergency Room visits due to mental health.
- In people between the ages of 1-14 in the Northland, the two leading causes of inpatient visits were related to depression. Depression was also the leading cause of inpatient hospitalizations in people between the ages of 15-24.
- Suicide

Suicide is the 11th leading cause of death in the U.S. accounting for the deaths of approximately 30,000 Americans each year. The suicide rate in Clay County is 15
deaths per 100,000 residents, which is slightly, but not significantly, higher than that in Platte County, and consistent with rates in Kansas City, MO, and the state of Missouri. It is higher than the Healthy People 2020 goal.

While the suicide rate for African Americans in both Clay and Platte Counties appears to be higher than the rates for the state of Missouri and Kansas City, MO, it is important to note the data presented in the table is considered unstable. Instability in rate typically occurs when analyzing data for small areas, such as a single county, or for low frequency events; in this instance cause-specific mortality. Therefore, no true conclusions can or should be drawn from this data.

Substance Use/Abuse
Statistical data on the county level on substance use and abuse is limited; however, the 2014 Status Report on Substance Abuse and Mental Health Problems in Missouri approximated the number of adults with primarily alcohol dependence or abuse disorder at 250,000 individuals.

People with primarily illicit drug dependence or abuse totaled approximately 77,000. Approximately 36,000 people are estimated to have both alcohol and illicit drug dependence or abuse. Young adults in Missouri have substantially higher rates of substance use disorders than older adults or adolescents. More than 17% of adults between the ages of 18-25 have had a past-year substance use disorder, compared with less than 7% of adults over age 25 and 6% of adolescents under age 18. They also have higher rates of past-year major depression than older adults.

The Missouri Student Survey, conducted by the Missouri Department of Mental Health in even numbered years, is administered to students in grades 6-12 in participating school districts and can provide insight into possible future substance abuse and mental health trends. In 2012, 38% of Clay County youth responding to the survey said marijuana is easy to get, and 18% believe it would be easy to get other drugs such as cocaine, methamphetamine and ecstasy.

In Platte County, 45.4% of students responding said marijuana is easy to get and 19% believe it would be easy to get other drugs, such as cocaine, methamphetamine and ecstasy.

In the 2015 NHA Community Health Assessment Survey, 42.3% of respondents identified drug and alcohol abuse as one of the three most important health problems in the community. When asked to identify the three most important risky behaviors in the community, 48.2% and 42% of respondents chose drug abuse and alcohol abuse, respectively.

Alcohol Consumption Rates
Excessive alcohol use is the third leading lifestyle-related cause of death for people in the U.S. each year. In Clay County, 17.2% of adults respondents age 18 and older self-reported having five or more drinks during a single occasion (for men) or four or more drinks (for women) during a single occasion in the last 30 days. In Platte County, the rate was 21.2%. These numbers align with national data indicating 17% of the population binge drank in the last 30 days (Figure 21).

Figure 21: Binge Drinking
BRFSS via Community Commons
2006-2012

In the 2015 NHA Community Health Assessment Survey, 42.3% of respondents identified drug and alcohol abuse as one of the three most important health problems in the community. When asked to identify the three most important risky behaviors in the community, 48.2% and 42% of respondents chose drug abuse and alcohol abuse, respectively.
Mother and Child Health

Ensuring healthy pregnancies, births and infancies protects adult health and plays a key role in determining the health of the next generation. Working with women during pregnancy can provide an opportunity to identify existing health risks and prevent future health problems for both women and their children. Moreover, healthy birth outcomes and early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential.

Social determinants such as poverty and racial disparities can impact the health status of a mother as well as her ability to access care. The data from Clay and Platte Counties suggests these issues may have negative implications for low-income mothers and their children.

Neither Clay County nor Platte County is in the highest performing quintile in Missouri for prenatal care beginning in the first trimester, and access to care may be one of the reasons. The Northland as a whole has very few providers who accept pregnant women covered by Medicaid. According to data from the Missouri Department of Social Services, in 2014 there were no OB/Gynecology physicians in Platte County accepting Medicaid patients and only 27 in Clay County who did. This information likely supported NKCH’s noted observance during Cycle 1 of an increase in the number of pregnant patients presenting to the NKCH Emergency Department or the Labor/Delivery Unit with no established physician and either no prenatal care or late entry to prenatal care. At the same time, an increase in women with multiple risk factors and social/case management issues also was noted.

North Kansas City Hospital is the largest provider of delivery services in the Northland, approaching 1,800 deliveries per year. A partnership with Samuel U. Rodgers Health Care Center, the expansion of OB physicians providing care to Medicaid patients, and the addition of Certified Nurse-Midwives — tactics rolled out during Cycle 1 Implementation — has helped the hospital achieve the goal of maintaining a rate of 5% or fewer of women delivered at NKCH with no prenatal care (4.86%).

However, there is broad recognition that no/limited prenatal care continues to be a significant issue for women in minority communities and leads to long-term negative health impacts for their infants. It is for this reason that the NKCH Cycle 2 Mother and Child Health Initiative will focus on improving the health outcomes of nonwhite infants born in Clay and Platte Counties.

Prenatal Care and Low Birth Weight

On average, only 1% of mothers giving birth in Clay or Platte County receive no prenatal care. The number is higher for women who wait and receive their first prenatal care during the third trimester of pregnancy: 4% of all live births in Clay County (which aligns with the state percentage) and 3.7% in Platte County. Low birth weight is a leading cause of neonatal mortality (death before 28 days of age). Low birth weight infants are more likely to experience physical and developmental health problems or die during the first year of life than are infants of normal weight. Nationally, the rate of low birth weight is higher among non-Hispanic black women than for women of other racial/ethnic groups. It is also linked to maternal age, where the rate of low birth weights is highest among mothers under the age of 15 and between the ages of 40–54.
These national disparities are reflected in the data in the Northland, where the disparity between white and nonwhite mothers and low birth weights is notable. In Clay County, 6.3% of white children are born with low birth weights, while 11.6% of nonwhite children have low birth weights. The disparity in Platte County is slightly lower, with 6.6% of white babies with low birth weights and 9.1% of nonwhite babies. (Figure 22)

**Neonatal/Post Neonatal Mortality**

Infant mortality can be correlated to the pre-pregnancy health status of the mother, her access to prenatal care and behavioral factors such as use of drugs or alcohol and smoking, which can negatively impact a pregnancy and the long-term health of a child. One of the largest disparities found in health research is racial and ethnic differences in infant mortality, particularly for African Americans.

In the Northland, the neonatal mortality rate for nonwhite infants in Clay and Platte Counties; Kansas City, MO; and the state of Missouri is double the rate for white infants.

In Clay County, the infant mortality rate for white infants is 3.1 per 1,000 live births. It is 6.7 per 1,000 live births for nonwhite infants. In Platte County, it is 3.5 per 1,000 live births for white infants and 7.2 per 1,000 live births for nonwhite infants. (Figure 23).

**Figure 23: Neonatal Mortality 2002-2012**


Clay Platte KC MO U.S.

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>U.S.: 3.8 per 1,000 live births</td>
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Teen Birth Rate
The birth rate for mothers between the ages of 15-17 was 1.2 per 100 live births in Platte County and 1.8 per 100 live births in Clay County. In 2013, the U.S. recorded a live birth rate of 26.5 per 1,000 women between the ages of 15-19. This number reflected a 10% drop from 2012. Birth rates for women between the ages of 15-17 dropped 13% in the same timeframe. Even with these changes, the U.S. teen pregnancy rate remains substantially higher than in other Western industrialized nations.

Poverty and Access to Care
The correlation between poverty and access to healthcare is well recognized. Low-income people are more likely to develop multiple illnesses, become injured or disabled, and die early. The reality of these issues is seen in the data gathered through the Community Health Assessment Survey. People with the lowest incomes tended to have a higher illness rate and have less access to health providers than the general population of the Northland.

Health Resource Availability
Access to healthcare services in the U.S. is regarded as unreliable; many people do not receive the appropriate and timely care they need. The U.S. healthcare system, which is already strained, faced an influx of patients in 2014 when 32 million Americans had health insurance for the first time through the Affordable Care Act. Access to care for low-income individuals and families is further complicated by the decision not to expand Medicaid eligibility.

According to an analysis completed by the Kaiser Family Foundation, 283,000 Missourians who would have been eligible for Medicaid under the ACA expansion have been excluded from receiving benefits. Many of them fall into what the Foundation describes as a coverage gap. People who fall into this gap have incomes above the eligibility threshold for Medicaid in Missouri, but below the lower limit for marketplace premium tax credits. As a result, these lower-income adults are ineligible for financial assistance to obtain health coverage under the ACA and are likely to remain uninsured.

These issues have direct impact on North Kansas City Hospital, specifically on the amount of charity care delivered annually. In 2015, 49% of NKCH patients had commercial insurance, 36.5% had Medicare coverage, 8% were covered through Medicaid and slightly more than 6% had no insurance coverage. NKCH provided approximately $33 million in financial assistance to eligible people who were uninsured, underinsured or indigent by waiving part or all of the charges for services provided by the hospital.

Responses to the 2015 NKCH Consumer Perception Survey revealed that households with annual income over $75,000 were almost twice as likely to have received a routine physical exam in the previous year than respondents who had annual income under $25,000. Further, people with annual income under $25,000 were more than twice as likely to have received no medical care/services in the previous year than those with annual income over $75,000.

Figure 24: Preventive Health Behaviors by Household Income
NKCH - PSA, 2015

- **Diabetes Screening**
- **Mammogram**
- **Mental Health Screening**
- **No Service or Test**
- **Routine Physical Exam**

In the NHA Community Health Assessment Survey, one-third of respondents disagreed or strongly disagreed with the statement “There is enough access to medical care for low-income residents in our community,” and more than 30% indicated they chose not to receive health services in the last year due to cost. The number of Northland females who chose not to receive healthcare services because of cost was higher than the number of males.

More than 17% of respondents disagreed or strongly disagreed with the statement, “I have my own doctor I see whenever I am sick.” About 11% of respondents in the Northland with annual income of less than $75,000, disagreed or strongly disagreed with the statement “I have access to the medical specialists I need.” For people who pay by cash only, this lack of access to medical specialists was noted by a larger percentage in Clay County, 15.8%, compared with 5.1% in Platte County and 11.4% in the Northland in general.

The data and the community at large agree access to healthcare has a significant impact on the health status of the communities North Kansas City Hospital serves.

Uninsured People
In 2015, 13% of the population in Clay County was uninsured compared with 11% in Platte County. This percentage was lower than the percentage of Missourians without health coverage, which stands at 16%, but generally in alignment with 2013 figures for the U.S. population, where 13.4% or 42 million people, were without health insurance coverage. Slightly more than 6% of patients seen by NKCH in 2015 had no health insurance. For those who pay cash for healthcare services, 37.1% of respondents in Clay County and 28.2% in Platte County agree/strongly agree that in the last year they chose not to receive healthcare services due to cost.

Uninsured People
In 2015, 13% of the population in Clay County was uninsured compared with 11% in Platte County. This percentage was lower than the percentage of Missourians without health coverage, which stands at 16%, but generally in alignment with 2013 figures for the U.S. population, where 13.4% or 42 million people, were without health insurance coverage. Slightly more than 6% of patients seen by NKCH in 2015 had no health insurance. For those who pay cash for healthcare services, 37.1% of respondents in Clay County and 28.2% in Platte County agree/strongly agree that in the last year they chose not to receive healthcare services due to cost.

Ratio of Clay and Platte County Patients to Primary Care Physicians
Having access to care, specifically care from a licensed primary care provider, is an essential component to improving health outcomes in a community. In 2014, Clay County had 515 physicians with general/family, internal medicine, OB/GYN or pediatric practices, resulting in a patient-to-primary care physician ratio of 1,656:1. Platte County had 81 such providers and a patient-to-provider ratio of 1,420:1. Neither ratio reflects the number of nurse practitioners or physician assistants, who provide additional primary care services in the county. The ratio of dentists to patients in both counties is higher, 1,792:1 in Clay County and 1,770:1 in Platte County.
Inpatient and Emergency Room Utilization

The NHA Community Health Status Assessment Task Force gathered primary data via three Northland hospitals, North Kansas City Hospital, Liberty Hospital and Saint Luke's North Hospital, to gain a deeper understanding of the health issues affecting residents. The hospitals provided data on diagnosis codes for inpatient hospitalizations and Emergency Room visits between January 1-December 31, 2014. The data was compiled into one group and analyzed. Highlighted findings from this analysis are to the right.

Inpatient Hospitalizations
- A majority of inpatient visits (by ICD-9 Codes) in the Northland were due to childbirth.
- Septicemia, rehabilitation, osteoarthritis of the leg, pneumonia, kidney failure, atrial fibrillation, obstructive chronic bronchitis with acute exacerbation, and urinary tract infections were also among the top 10 diagnoses for people in the Northland in 2014.
- By payor, the leading causes of inpatient hospitalizations relate to childbirth (with the exception of Medicare).
- With the Medicaid and Patient Self-Pay groups, the third leading cause of inpatient hospitalization is related to depression. This is not in the top 10 hospitalizations among clients with commercial insurance.
- Uncontrolled diabetes was a leading inpatient diagnosis in the Patient Pay population.

Emergency Room Visits
- A majority of Emergency Room visits in the Northland were due to chest pain or abdominal pain.
- The third leading cause of Emergency Room visits was headache, the fifth was urinary tract infection, and the seventh was back pain. Depending on other diagnoses, these causes may or may not be true emergencies.
- Among clients classified as Patient Pay, unspecified disorder of the teeth and supporting structures and dental caries were among the 10 leading diagnoses. Diagnoses due to dental problems were not among the 10 leading causes of Emergency Room visits for any other payor group.

Samuel U. Rodgers Health Center
- Additional data was gathered from Samuel U. Rodgers Health Center (SUR), one of three federally-qualified health centers in the Kansas City metro area. Two of the seven SUR clinics are located in the Northland. SUR provided data about the leading ICD-9 diagnosis codes for patients from Clay County, Platte County and the Northland who received outpatient services through one of its clinics.
- In 2014, the leading causes of visits to the Samuel U. Rodgers Health Center were due to:
  - Routine infant or child health check
  - Supervision of pregnancy
  - Type II diabetes
  - Hypertension
STRATEGIC ISSUE IDENTIFICATION

By analyzing the information revealed through the Community Health Status Assessment and Community Health Assessment Surveys, including the NKCH Consumer Perception Survey, NKCH gained profound insight into the overall health of the community. While the Northland, like every community, faces a wide variety of health concerns and issues, deeper exploration and discussion of the data collected led the NKCH Community Health Needs Assessment Committee to identify three serious and closely intertwined health issues.

No. 1
The community is concerned about mental health.

The Missouri Department of Mental Health estimates that nearly one in five Missouri adults suffers from mental illness and one in 13 suffers from substance use disorders. Recognition of the impact mental health issues and substance abuse has on the community is large and growing. As a healthcare provider, NKCH is uniquely positioned to help address this concern.

- Mental health problems were identified by 31% of the NHA Community Health Assessment Survey respondents as one of the top three health problems in the community.
- More than 42% of respondents identified substance abuse, frequently linked to mental health problems, as a top health priority for the community.
- In 2015, the U.S. Department of Health and Human Services, Health Resources and Services Administration identified Clay and Platte Counties as Designated Health Professional Shortage Areas (HPSA) for Mental Health.
- Youth in the Northland believe drugs and alcohol are easily accessible in their community as evidenced by their responses to the 2012 Missouri Student Survey conducted by the Missouri Department of Mental Health.

No. 2
Access to care is an issue in the Northland, especially for low income and minority communities.

Poverty and racial disparities can impact the health status of a mother and her ability to access care. That reality is reflected in the data gathered through the Community Health Needs Assessment, which suggest these issues may have negative implications for low-income mothers and children in Northland communities.

- Low birth weights occur more frequently in nonwhite infants in the Northland. In Clay County, 6.3% of white children are born with low birth weights, while 11.6% of nonwhite children have low birth weights. In Platte County, 6.6% of white babies are born with low birth weights compared to 9.1% of nonwhite babies.
- The neonatal mortality rate for nonwhite infants in Clay and Platte Counties is double the rate for white infants.
- Missouri did not expand Medicaid and made signing up for the health exchange difficult.
- Respondents to the 2015 NKCH Consumer Perception Survey cited high blood pressure and high cholesterol as the most common chronic health conditions they face, followed by arthritis and depression/ anxiety disorder.
- The seriousness of this issue is recognized by the community at large as indicated by the high percentage of Northland survey respondents who listed obesity (37%), heart attack and stroke (18%) and high blood pressure (10.4%) as serious community health problems in the 2015 NHA Community Health Assessment Survey.

No. 3
Chronic disease is the No. 1 killer in the Northland.

Chronic diseases are the leading cause of death and disability in the U.S., and yet they are also the most preventable of all health problems. The decisions people make about diet, exercise, smoking, alcohol and drug use can have a dramatic impact on their life expectancy and on the community as a whole.

- In 2014, the chronic diseases with the highest mortality rates in the Northland were cancer, heart disease, chronic lower respiratory disease and cerebrovascular disease, followed by Alzheimer’s disease, kidney disease and diabetes. Most of these diseases share common risk factors including tobacco use, smoking, unhealthy diet, physical inactivity and being overweight/obese.
- In 2015, more than 25% of adults in the Northland reported they did not participate in leisure time physical activity.
## Criteria for Initiative Selection

The inextricable connections among these issues were extensively discussed by the NKCH Community Health Needs Assessment Committee. The committee initially identified eight potential initiatives to address the health issues revealed during the Community Health Needs Assessment. To narrow the focus and position NKCH for deep impact, the committee undertook an exercise to rank the issues using weighted criteria. (See Appendix E for the ranking worksheet used to identify the initiatives.)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
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<tbody>
<tr>
<td>1</td>
<td><strong>Magnitude/Scale of the Problem</strong></td>
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<td>2</td>
<td><strong>Severity of the Problem</strong></td>
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<tr>
<td>3</td>
<td><strong>NKCH Internal Assets</strong></td>
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<tr>
<td>4</td>
<td><strong>Existing/Promising Approaches</strong></td>
</tr>
<tr>
<td>5</td>
<td><strong>Health Disparity</strong></td>
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<td>6</td>
<td><strong>Ability to Leverage Resources</strong></td>
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<tr>
<td>7</td>
<td><strong>Community Prioritization</strong></td>
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<tr>
<td>8</td>
<td><strong>NKCH Prioritization</strong></td>
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The discussions, and this ranking process, ultimately led North Kansas City Hospital to establish the following health initiatives around which the hospital’s Cycle 2 Implementation plan will be built:

**No. 1. Increase comprehensive behavioral health resources and programs to support mental health stability and wellness for the Northland.**

**No. 2. Improve the health outcomes of nonwhite infants born in Clay and Platte counties.**

**No. 3. Prevent chronic disease in teens and young adults, and minimize the progression of chronic disease in adults in the Northland.**

The initiatives were chosen for their interconnectedness, recognizing the close correlation between chronic disease (e.g. heart disease, diabetes, cancer), their medical risk factors such as obesity and nutrition; and for the monumental impact each has on the overall health of the community. It was clear to the North Kansas City Hospital CHNA Committee, members of the NHA and the community at large that these issues impact not just the lives of those affected, but the quality of life of the entire community.

It is evident that improving the health of Northland communities will require moving the needle on all three of these interconnected strategic health priorities and a focused effort. Appendix documents B, C and D include the Cycle 2 Implementation Plans that will guide NKCH’s efforts over the next three years as it works to improve the health of the patients and communities it serves. It will also require collaboration and communication.

North Kansas City Hospital will continue to engage with a wide range of organizations, including the Northland Health Alliance, public health systems, government agencies, schools, faith-based organizations, the business community, nonprofit entities and individual citizens as champions of health to move these efforts forward.
### APPENDICES

#### A | NORTH KANSAS CITY HOSPITAL COMMUNITY HEALTH NEEDS ASSESSMENT TIMELINE

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>JAN 15</td>
<td>Time Period 3 (July-Dec 2014) measurements/milestones and sub-committee meeting minutes due by 1/31.</td>
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<tr>
<td>FEB 15/MAR 15</td>
<td>Cycle 2 begins. Quarterly committee meeting. NKCH committee members participate in Local Public Health System Assessment Sessions &amp; Forums.</td>
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<tr>
<td>MAY 15</td>
<td>Quarterly committee meeting to review sub-committee minutes, goal attainment and timeline for FY2016.</td>
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<tr>
<td>JUL 15</td>
<td>Time Period 4 data (Jan-June 2015), measurements/milestones and sub-committee meeting minutes due by July 30.</td>
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<tr>
<td>AUG 15</td>
<td>Quarterly committee meeting to review NHA public health survey, data and executive summary. Committee Lead gathers and synthesizes other data sources.</td>
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<tr>
<td>SEP 15</td>
<td>Special committee meeting to present new data and other significant findings, and discuss the potential 2016-2018 initiatives.</td>
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<tr>
<td>OCT 15</td>
<td>Quarterly committee meeting to select final 2016 initiatives using the Prioritization Matrix, identify potential objectives and new sub-committee chairs. Committee Lead develops report/presentation for Board.</td>
</tr>
<tr>
<td>NOV 15/DEC 15</td>
<td>Committee Lead presents 2016 Initiatives to the Board for approval.</td>
</tr>
<tr>
<td>FEB 16/MAR 16</td>
<td>Early Feb. Quarterly meeting to review final sub-committee results. Develop charts &amp; graphs. Write and layout 2016 report. 2016 sub-committees meet to develop implementation plans, which are due to Lead by 3/15.</td>
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<tr>
<td>APR 16</td>
<td>Committee meeting to review drafts of CHNA Report including final 2013 Implementation Impact section and 2016 Implementation Plans. Review and revise as needed.</td>
</tr>
<tr>
<td>MAY 16</td>
<td>Lead presents final 2013-2016 Implementation Impact and FY2016 CHNA Report to Board for approval.</td>
</tr>
<tr>
<td>JUN 16</td>
<td>Post 2016 report to website by 6/30.</td>
</tr>
<tr>
<td>JUL 16</td>
<td>July 1: Benchmark for data on all 2016 initiatives.</td>
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<tr>
<td>OCT 16</td>
<td>Quarterly committee meeting.</td>
</tr>
<tr>
<td>JAN 17</td>
<td>Quarterly committee meeting. Time Period 1 measurements/milestones (Aug.-Dec. 2016) and sub-committee meeting minutes due 1/31/2017.</td>
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<tr>
<td>APR 17</td>
<td>Quarterly committee meeting.</td>
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<tr>
<td>JUL 17</td>
<td>Quarterly committee meeting. Time Period 2 (Jan-June 2017) measurements/milestones and meeting minutes due 7/31.</td>
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<tr>
<td>JAN 18</td>
<td>Time Period 3 (July - Dec 2017) measurements/milestones and meeting minutes due by 1/31.</td>
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<tr>
<td>JUL 18</td>
<td>Time Period 4 data (Jan-June 2018), measurements/milestones and sub-committee meeting minutes due by July 15.</td>
</tr>
<tr>
<td>JAN 19</td>
<td>Time Period 5 data (July-December 2018). Final measurements/milestones and sub-committee meeting minutes due by 1/31.</td>
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Sub-committee meeting as needed to develop and implement tactics. Meeting minutes are due at all quarterly committee meetings.
APPENDIX B | NKCH MENTAL HEALTH IMPLEMENTATION PLAN

CHNA INITIATIVE: MENTAL HEALTH

CHNA Sub-committee Chair: Jody Abbott, Senior Vice President and COO, NKCH

Sub-Committee Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Title</th>
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<tbody>
<tr>
<td>Becky Fisk</td>
<td>North Kansas City Hospital</td>
<td>Vice President, Revenue &amp; Business Development</td>
</tr>
<tr>
<td>Betty Sue Cliff</td>
<td>North Kansas City Hospital</td>
<td>NKCH Board of Trustees</td>
</tr>
<tr>
<td>Dr. Todd Hill</td>
<td>Meritas Health Psychiatry</td>
<td>Physician Liaison</td>
</tr>
<tr>
<td>Glynda Jacobson</td>
<td>North Kansas City Hospital</td>
<td>NKCH Board of Trustees</td>
</tr>
<tr>
<td>Michele Lane</td>
<td>North Kansas City Hospital</td>
<td>Sr. Director, Critical Care/Emergency Services</td>
</tr>
<tr>
<td>Dennis Anderson</td>
<td>Signature Psychiatric Hospital</td>
<td>CEO</td>
</tr>
<tr>
<td>Melanie Beard</td>
<td>North Kansas City Hospital</td>
<td>Coordinator, Community Benefit</td>
</tr>
<tr>
<td>Sarah Oakley</td>
<td>North Kansas City Hospital</td>
<td>Vice President, Nursing/CNO</td>
</tr>
<tr>
<td>Tom Petrizzo</td>
<td>Tri-County Mental Health Services</td>
<td>CEO</td>
</tr>
<tr>
<td>Kar Woo</td>
<td>Artists Helping the Homeless</td>
<td>Founder &amp; CEO</td>
</tr>
<tr>
<td>Jamie Wehmeyer</td>
<td>Tri-County Mental Health Services</td>
<td>Director of Assessment and Youth CPRC Svcs</td>
</tr>
<tr>
<td>Randee Gannon</td>
<td>North Kansas City Hospital</td>
<td>Vice President, Marketing</td>
</tr>
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AD HOC MEMBERS

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<tr>
<th>Name</th>
<th>Organization</th>
<th>Title</th>
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<tbody>
<tr>
<td>Kathryn Brewer</td>
<td>The Center for Healing and Recovery</td>
<td>Founder &amp; Owner</td>
</tr>
<tr>
<td>Rachelle Knolle</td>
<td>Novo Counseling</td>
<td></td>
</tr>
<tr>
<td>John Wubbenhorst</td>
<td>Madison Avenue Psychiatric Services</td>
<td></td>
</tr>
<tr>
<td>Darla Easley</td>
<td>North Kansas City Hospital</td>
<td>Director, Case Management</td>
</tr>
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</table>

Implementation Plan

**PRIMARY GOAL**: To increase comprehensive behavioral health resources and programs that will support mental health stability and wellness for the Northland Community.

**STRATEGY**: Work with Signature Psychiatric Hospital/Intensive Outpatient to develop additional programs that are focused on the specific needs of our patient population.

**OBJECTIVES**
- Identify the patient population that utilized the Emergency Department as primary care location for their mental health services.
- Develop population specific outpatient programs with Signature that meet our community’s needs.

**MEASUREMENTS**
- Track volumes of patients who have been identified as users of primary care ED for mental health services.
- Quarterly meeting with Signature to determine utilization of referral volumes and program measurements of success.

**TACTICS**
- Expand Intensive Outpatient Programs on the NKCH campus.
- Expand Partial Outpatient Programs on the NKCH campus.

**STRATEGY**: Provide support/resources to define and develop a city-wide crisis/sobering center.

**OBJECTIVES**
- To provide resources that go beyond the basic acute hospital services to support individuals and their mental health needs.
- To define measurements of success of the program to assure continued funding.

**MEASUREMENTS**
- Measure recidivism rate for individuals who have successfully gone through the KC-ATC center and have continued their road to recovery and independence.
- Monitor volumes of admissions directly from police that go to KC-ATC center instead of area Emergency Departments.

**TACTICS**
- Identify funding for the project through the KC area hospital association.
- Determine location for KC-ATC center within the greater KC area.
- Develop operational budget, management oversight and timeline for the KC-ATC Center.
- Define measurements of success for the program to assure continued funding.
- Collaborate with Saint Luke’s, Truman Medical Center, HCA and others.

**STRATEGY**: Collaborate with TriCounty Mental Health, Clay County Public Health, Platte County Public Health and other area facilities and organizations within the Northland to develop new acute and outpatient services.

**OBJECTIVE**
- To identify available community resources and create a referral/resource directory for primary care offices.
- To increase understanding of what resources are currently available and how to access as needed.
- To educate staff on availability and utilization of community resources.

**MEASUREMENTS**
- Track number of educated staff members.
- Track attendance of group/organizational representatives at the Mental Health CHNA meetings at NKCH.

**TACTICS**
- Review and define resources to identify options for services.
- Publish resources in a resource manual.
APPENDIX C  | NKCH MOTHER AND CHILD IMPLEMENTATION PLAN

CHNA INITIATIVE: MOTHER AND CHILD

CHNA Sub-committee Chair: Catherine Bonderer, Sr. Director, Maternal Child, NKCH

Sub-Committee Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Title</th>
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<tbody>
<tr>
<td>Becky Fisk</td>
<td>North Kansas City Hospital</td>
<td>Vice President, Revenue &amp; Business Development</td>
</tr>
<tr>
<td>Dr. Ian Rosbrugh</td>
<td>Meritas Health Pavilion for Women</td>
<td>Chair of Obstetrics and Gynecology</td>
</tr>
<tr>
<td>Jacki Witt</td>
<td>North Kansas City Hospital</td>
<td>Prenatal Education Coordinator</td>
</tr>
<tr>
<td>Jerry Husman</td>
<td>North Kansas City Hospital</td>
<td>Vice President, Facilities &amp; Support Services</td>
</tr>
<tr>
<td>Kimberly Anderson</td>
<td>Meritas Health Pavilion for Women</td>
<td>Certified Nurse Midwife</td>
</tr>
<tr>
<td>Linda Coventon</td>
<td>Meritas Health Corporation</td>
<td>Network Executive</td>
</tr>
<tr>
<td>Melanie Beard</td>
<td>North Kansas City Hospital</td>
<td>Coordinator, Community Benefit</td>
</tr>
<tr>
<td>Susan McLoughlin</td>
<td>Mother &amp; Child Health Coalition</td>
<td>Executive Director</td>
</tr>
<tr>
<td>Tamra Lewis</td>
<td>Meritas Health Pavilion for Women</td>
<td>Certified Nurse Midwife</td>
</tr>
<tr>
<td>Dr. Ximena Somoza</td>
<td>Clay County Health</td>
<td>Director</td>
</tr>
<tr>
<td>Teresa Turistill</td>
<td>Clay County Health</td>
<td>Community Development Specialist</td>
</tr>
</tbody>
</table>

Implementation Plan

**PRIMARY GOAL:** Improve the health outcomes of nonwhite infants born in Clay and Platte Counties.

**STRATEGY:** Collaborate with Samuel U. Rodgers and Meritas OB Physicians to develop a feasible model of care

**OBJECTIVES**
- Secure office space in the Northland for Samuel U. Rodgers clinic.
- Continue to offer prenatal care by Meritas Health physicians who will deliver babies at North Kansas City Hospital.
- Return patients to Samuel U. Rodgers after postpartum visit for routine care.

**MEASUREMENTS**
- Track number of patients supported in this model of care.

**TACTICS**
- Continue meeting with Samuel U. Rodgers.
- Identify potential clinical space in the Northland.

**PRIMARY GOAL:** Expand access to care for low income pregnant women.

**STRATEGY:** Expand access to care for low income pregnant women.

**OBJECTIVES**
- Support ACA navigators at health departments and emergency departments.
- Contract with Homestate, the third largest Medicaid managed care plan for the state.

**MEASUREMENTS**
- Continue to monitor Medicaid population at North Kansas City Hospital.

**TACTICS**
- Work with Clay County Health to offer ACA navigator once a week to help with Medicaid applications.
- Work to have health workers in our ED to help navigate the insurance open market.

**PRIMARY GOAL:** Develop a complete education program that includes prenatal to postpartum.

**STRATEGY:** Develop a complete education program that includes prenatal to postpartum.

**OBJECTIVE**
- Provide easy access to education materials to provide consistent education throughout the continuum of care.

**MEASUREMENTS**
- Use analytics of use of education materials and program to improve and develop continuing education.

**TACTICS**
- NKCH and Meritas Health are working together to develop a mobile app education program.
APPENDIX D | NKCH CHRONIC DISEASE IMPLEMENTATION PLAN

CHNA INITIATIVE: CHRONIC DISEASE PREVENTION AND WELLNESS

CHNA Sub-committee Chair: Judy Springer, Vice President, Quality/Case Management, NKCH

Sub-Committee Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Title</th>
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<tr>
<td>Brian Bechtel</td>
<td>Metropolitan Community College</td>
<td>Associate Dean</td>
</tr>
<tr>
<td>Courtney Klahn</td>
<td>North Kansas City Hospital</td>
<td>Director, Food &amp; Nutrition Services</td>
</tr>
<tr>
<td>Garry Linn</td>
<td>YMCA of Greater Kansas City</td>
<td>District Vice President</td>
</tr>
<tr>
<td>James Stewart, MD</td>
<td>North Kansas City Hospital</td>
<td>Medical Director, Case Management</td>
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<tr>
<td>Jana Longwith</td>
<td>North Kansas City Hospital</td>
<td>Director, Community Health &amp; Wellness</td>
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<td>Jody Abbott</td>
<td>North Kansas City Hospital</td>
<td>Senior Vice President/COO</td>
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<tr>
<td>Kathy Macken</td>
<td>Platte County Senior Fund</td>
<td>Executive Director</td>
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<tr>
<td>Mary Beth Fisher</td>
<td>North Kansas City Hospital</td>
<td>Diabetes Educator</td>
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<tr>
<td>Tina Uriddle</td>
<td>Clay County Senior Services</td>
<td>Executive Director</td>
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Implementation Plan

PRIMARY GOAL: Prevent chronic disease in teens and young adults, and minimize the progression of chronic disease in adults in the Northland.

STRATEGY: Educate students and adults about healthy eating habits and exercise.

OBJECTIVE: Collaborate with community colleges and others to develop educational classes.

MEASUREMENTS
- Number of registered participants for class
- Number of participants in attendance
- Class assessment survey results
- Class satisfaction results

TACTICS
- Offer affordable healthy eating classes, media and/or apps that include weekly menus, meal ideas, grocery lists and recipes.
- Create fun exercise apps, classes and promotions.

STRATEGY: Educate young adults about the risks of smoking.

OBJECTIVE: Collaborate with community colleges and others to develop educational classes.

MEASUREMENTS
- Number of registered participants for class
- Number of participants in attendance
- Class assessment survey results
- Class satisfaction results

TACTICS
- Create smoking cessation or Don’t Start educational program focused on pre-teens and teens.
- Develop a mobile app or provide content to existing teen app, Quarky.

STRATEGY: Increase access to diabetes prevention information and other chronic disease management services for the uninsured.

OBJECTIVE: Evaluate incorporating management services into existing NKCH programs and the development of a new program or clinic with a sliding scale payment option.

MEASUREMENTS
- Feasibility ROI

TACTICS
- Research feasibility for a sliding scale NKCH Diabetes/Chronic Disease Clinic.
- Evaluate incorporating eligibility with patients participating in NKCH’s Aging in Place program.
### Criteria for Initiative Selection Scoring Sheet

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Access to Dental Care (Uninsured)</th>
<th>Access to Primary Care (Single moms) (Rural)</th>
<th>Weight/Mortality of Non-white Infants</th>
<th>Mental Health (Services)</th>
<th>Youth Substance/Alcohol Abuse</th>
<th>Chronic Disease (Cancer)</th>
<th>Chronic Disease (Heart)</th>
<th>Adult Obesity</th>
<th>Diabetes</th>
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<tr>
<td>1. Magnitude/Scale of the Problem</td>
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Implementation Impact
Cycle 1 (FY2013-FY2015) Community Health Needs Assessment
BACKGROUND/INITIATIVE SELECTION

The first Community Health Needs Assessment conducted by North Kansas City Hospital began in 2011 and included engagement in a community initiative called Vision North. The goal of this effort was to develop a shared vision and to identify and address complex issues facing the unique community served by NKCH. The Northland, as locals refer to this area, is situated just north of downtown Kansas City, MO. It encompasses two counties, Clay and Platte, and a large portion of the Northland population (approximately 30%) resides within the city limits of Kansas City. The Vision North development process included healthcare surveys and focus groups that ultimately identified community health and wellness as a key community priority. Primary research to identify the healthcare needs of the community occurred during 2012-2013, with a final report issued in 2013.

To further inform the CHNA process, NKCH conducted secondary research using the following sources:

- The Missouri Hospital Association and its publication, “Assessing the Health of Our Communities”
- State of Missouri – Vital Statistics; Department of Health and Senior Services; Division of Alcohol and Drug Abuse; Substance Abuse and Mental Health Services Administration
- Robert Wood Johnson County Health Rankings
- Clay and Platte County Health Departments
- Behavioral Risk Factor Surveillance System
- Kids Count
- Other web-based data reporting sites
The data collected through these primary and secondary resources was submitted to the Community Health Needs Assessment Committee for review, analysis and prioritization. The committee initially outlined 14 health issues as possible areas of focus. Quickly recognizing it would be impossible to successfully tackle that number of issues, the Committee narrowed the list of priorities to the three it felt NKCH was best positioned to make a meaningful, measurable impact upon. Using a prioritization matrix that helped identify the availability of data and benchmarks, the number of people at risk and the ability to impact the issue, the Community Health Needs Assessment Committee selected Mental Health, Youth Health and Mother and Child Health as the hospital’s Cycle 1 areas of focus. Subcommittees were formed to address each area.

Summary of Impact
Implementation of Cycle 1 initiatives resulted in measurable impact on the health of Northland citizens, particularly in the areas of mother and child health and mental health. It also opened the door to new connections between NKCH and families and teens in the community. These new relationships will help drive long-term implementation of the Youth Health initiative. The following is an overview of each of the Cycle 1 initiatives, including some highlighted outcomes of the implementation process.

Initiative 1
Mother and Child Health
Goal: Improve the health of uninsured and underinsured pregnant mothers and their newborn infants in our community.

HIGHLIGHTED OUTCOMES
- Medicaid deliveries at NKCH increased 248% on average during the CHNA Cycle 1 time period.
- There was a significant decrease in the percentage of women who entered prenatal care after 12 weeks. The percentage declined from 18.64% to 5.51% during the CHNA Cycle 1 time period. The percentage of women who delivered at NKCH without receiving any prenatal care decreased from 1.69% to 1.57% over the CHNA Cycle 1 time period.

Initiative 2
Mental Health
Goal: Improve access to and the quality of mental health services within Clay and Platte Counties.

HIGHLIGHTED OUTCOMES
- NKCH recruited Signature Psychiatric Hospital, a 24-bed inpatient unit and provider of outpatient services, to its campus. The hospital made a significant financial investment by remodeling Health Center North to accommodate Signature Psychiatric Hospital.
- The number of inpatient psychiatric beds available in Kansas City increased by 7%.

HIGHLIGHTED OUTCOMES
- Signature Psychiatric Hospital now offers 10 outpatient programs five days per week.
- NKCH covers the cost of providing inpatient care for a number of uninsured patients at Signature Psychiatric Hospital. Through this program, NKCH contributed approximately $1 million in both calendar year 2014 and 2015.

Initiative 3
Youth Health
Goal: Create and maintain a community partnership to better facilitate and coordinate youth health information in Clay and Platte Counties.

HIGHLIGHTED OUTCOMES
- NKCH developed Quarky: Cheat Codes for Thriving Not Just Surviving smartphone app to help community youth find resources and information for improving their lives. A marketing/promotional plan was developed to launch the app in Summer 2016.
- Through the design and development of the Quarky app, NKCH further developed an ongoing collaborative relationship with high school students in the Northland CAPS (Center for Advanced Professional Studies) program. CAPS students will continue to be involved in the app’s maintenance through focus groups and internships.
- NKCH contributed $36,000 to develop the Quarky app.
- NKCH has committed $6,000 per year towards the ongoing management of the Quarky app.
Cycle 2 and Beyond

North Kansas City Hospital took the knowledge gained through Cycle 1 implementation and used it to refine the CHNA Cycle 2 process, as well as the structure, approach and reporting mechanisms of the implementation committees. Perhaps most importantly, it is using the insights gained while addressing these significant health needs over the past three years to inform the definition of the initiatives and strategies defined in the Cycle 2 implementation plans. While progress has been made in each of these areas, there is more still to do. North Kansas City Hospital is committed to continuous improvement in the health of the community it serves and in its approach to meeting those needs.
CYCLE 1 INITIATIVE: MENTAL HEALTH

Final Report

OPPORTUNITY IDENTIFIED AT THE BEGINNING OF CYCLE 1: NKCH houses 6-8 mental health patients in acute Med/Surg beds per day due to inability to find available care.

GOAL
• Improve access to and the quality of behavioral health services within Clay and Platte Counties.

NKCH STRATEGIES/INTERVENTIONS
• Recruit CenterPointe Hospital in St. Louis [dba Signature Psychiatric Hospital in Kansas City] to open an adult inpatient psychiatric hospital on the NKCH campus.
• Assist Signature with applying for and receiving a Certificate of Need from the state.

OBJECTIVES
• Increase the number of psychiatric inpatient beds in our community.
• Increase the number of NKCH psychiatric inpatient transfers.

OUTCOMES
• Certificate of Need approved with 12 months to complete the requirements and process. Increase: 24 beds.
• Signature Psychiatric Hospital opened an Intensive Outpatient Program for patients in crisis who don’t meet inpatient criteria; 10-15 patients participate in 3-hour sessions, three days per week; a physician sees the patients each week.
• Signature Psychiatric Hospital opened the inpatient unit on the NKCH campus to enhance mental health services in our community, increasing the number of psychiatric beds by 7%. NKCH covers the cost of providing inpatient care for a number of uninsured patients at Signature Psychiatric Hospital. Through this program, NKCH contributed approximately $1 million in both calendar year 2014 and 2015.
• November 2013: NKCH partnered with Artists Helping the Homeless (AHH). Its Be The Change program helps homeless individuals in the community identify and access appropriate providers. It also facilitates access and coordinates care.
• AHH now assists the homeless by providing rides to medical, legal, employment, educational or housing services; offering meals; arranging/providing shelter; assisting with enrollment in social detox and treatment programs; and arranging transitional housing and nursing home placement. Kar Woo, founder of AHH, is now involved in discharge planning at NKCH.

MENTAL HEALTH COMMITTEE
Becky Fisk
Vice President of Revenue and Business Development
North Kansas City Hospital
Betty Sue Cliff
North Kansas City Hospital Board of Trustees Member
Dr. Todd Hill
Physician Liaison
Glynda Jacobson
North Kansas City Hospital Board of Trustees Member
Jody Abbott
Sr. Vice President and COO
North Kansas City Hospital
Michelle Lane
Sr. Director of Critical Care, Trauma, Emergency and Education
North Kansas City Hospital
Dennis Anderson
Director of Nursing
Signature Psychiatric Hospital
Melanie Beard
Community Benefit Coordinator
North Kansas City Hospital
Sarah Oakley
Vice President Nursing/CNO
North Kansas City Hospital
Tom Petrizzo
CEO
Tri-County Mental Health Services
Kar Woo
Artists Helping the Homeless
Jamie Wehmeyer
Director of Assessment and Youth Services
Tri-County Mental Health Services
Randee Gannon
VP of Marketing
North Kansas City Hospital

OPPORTUNITY IDENTIFIED AT THE BEGINNING OF CYCLE 1: Patients are often discharged without follow-up care to prevent readmissions.

GOAL
• Improve the continuity of care through a comprehensive program that meets the critical needs as well as the chronic mental health needs of our patients.

NKCH STRATEGIES/INTERVENTIONS
• Work closer with Tri-County Mental Health Services to connect outpatient services and continuation of required medications.
• Work with community mental health services to provide access to a diversion program.

OBJECTIVE
• Increase the number of new outpatient programs in the community.

OUTCOMES
• October 2013: Signature began providing Emergency Department placement services for NKCH.
• NKCH is currently working with a community coalition on a Crisis Center proposal to provide comprehensive assessment, triage and referral for outpatient and inpatient treatment, and continuity of care within the community. NKCH will contribute approximately $110,000 per year during the initial two-year pilot for the center.

OPPORTUNITY IDENTIFIED AT THE BEGINNING OF CYCLE 1: Other opportunities identified and strategies accomplished.

OUTCOMES
• September 2013: Dr. Todd Hill presented CME on the rise of substance abuse due to availability of designer drugs.
• October 2013: Dr. Hill discussed designer drugs that have become more prevalent on the news.
Inpatient Psychiatric Beds in the Kansas City Area

<table>
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<tr>
<th>Reporting Quarter</th>
<th>Number of Beds</th>
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<tr>
<td>July 2012 (Benchmark)</td>
<td>310</td>
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<td>December 2013</td>
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Cycle 1 Initiative: Mother and Child

Final Report

Opportunity Identified at the Beginning of Cycle 1:
- The Northland has very few providers who accept pregnant women on Medicaid. This has resulted in a barrier to timely and adequate prenatal care.
- Neither Clay nor Platte County is in the highest performing quintile in Missouri for prenatal care beginning in the first trimester, late prenatal care and no prenatal care. Neither county is in the top quintile for preterm birth and low birth weight.
- Infant mortality, including fetal demise, is a concern for the patients we serve.
- NKCH’s subsidiary, Meritas Health, has two OB groups. Both accept Medicaid and have special financial programs in place for uninsured patients. However, this fact is not common knowledge among consumers who are pregnant and qualify for Medicaid or who lack insurance.

Goals
- Improve access to prenatal and ongoing obstetrical care for underinsured or uninsured at NKCH.

NKCH Strategies/Interventions
- Identify perceived barriers to access and utilization of prenatal care by low-income pregnant women in Clay and Platte Counties who present to NKCH.
- Expand the capacity of Meritas Health OB groups to provide prenatal and delivery care to Medicaid and uninsured women.

Objectives
- Increase the number of physicians who accept Medicaid at Meritas Health OB/GYN practices who are the only admitting physicians for labor and delivery at NKCH.
- Increase the number of Medicaid patients who deliver at NKCH.

Outcomes
- OB physicians and midwives who accept Medicaid patients were added to Meritas Health practices, resulting in a 248% average increase in Medicaid deliveries at NKCH in the CHNA Cycle 1 time period. (See chart on page 22.)

Mother and Child Committee

Michele Malone
Chair, Director of Maternal Child
North Kansas City Hospital

Melanie Beard
Community Benefit Coordinator
North Kansas City Hospital

Dr. Ximena Somoza
Director
Clay County Health Department

Dr. Ian Rebrugh
Chair of Maternal Child Subcommittee
Physician Liaison
Linda Coventon
Network Executive
Meritas Health Corporation

Jacki Witt
Coordinator, Prenatal Education
North Kansas City Hospital

Susan McLoughlin
Executive Director
Mother & Child Health Coalition

Betty Sue Cliff
North Kansas City Hospital Board of Trustees Member

Becky Fisk
Vice President of Revenue and Business Development
North Kansas City Hospital
| Percentage of Women Who Did Not Receive Any Prenatal Care (As Compared to the Total Number of Births: July 2012-December 2015) |
|---|---|
| July-12 | Dec-15 |
| 1.69% | 1.57% |

| Percentage of Women Who Entered Care Late: After 12 Weeks Gestation (As Compared to the Total Number of Births: July 2012-December 2015) |
|---|---|
| July-12 | Dec-15 |
| 18.64% | 5.51% |

| Percentage of Women Who Received Inadequate Prenatal Care: < 8 Visits (As Compared With the Total Number of Births: July 2012-December 2015) |
|---|---|
| July-12 | Dec-15 |
| 4.00% | 3.15% |
NKCH Medicaid Newborn Deliveries

Medicaid & Medicaid HMO

Number of Medicaid Newborn Deliveries

- 2013 (Total 16)
  - 40
- 2014 (Total 41)
  - 65
- 2015 (Total 38)
  - 95

Final Report

OPPORTUNITY IDENTIFIED AT THE BEGINNING OF CYCLE 1: There is no central location, database or clearinghouse for health information or other community services for teens in Clay and Platte Counties. Many agencies provide information, but there is no consistency in the information provided.

GOALS
• Create a master list of information and resources available for community youth.
• Present the master list in a format that is easily accessible to young people and their families.
• The Quarky app is set for release in Summer 2016.
• Northland CAPS students have been involved since the beginning of the design/build of the Quarky app, and they continue to be involved through focus groups and internships.
• August 2013: NKCH became the owner of Teen Yellow Pages, Parent Yellow Pages and Teen Info Cards (approximately 3,000 copies).
• Northland CAPS students have been involved since the beginning of the design/build of the Quarky app, and they continue to be involved through focus groups and internships.
• The Quarky app is set for release in Summer 2016.

NKCH STRATEGIES/INTERVENTIONS
• Use existing community resources to develop the master list.
• Decide the best format for making the information easily accessible to young people and their families.
• Organize the list into a database specific to age, resource, need, function and location.
• Evaluate the list for gaps in available services.
• Update and revise information, as needed.
• Ask school personnel and community groups to review the list and provide input on a regular basis.

OBJECTIVES
• Gain access and ownership to the last edition of the Teen Yellow Pages, Parent Yellow Pages and Teen Info Cards.
• Engage a broad spectrum of community partners, potential resources and experts for input.
• Engage Northland CAPS students via focus groups to provide feedback on the design and distribution channels of the master list to ensure its relevancy.

OUTCOMES
• The committee designed and developed Quarky, Cheat Codes for Thriving. Not Just Surviving smartphone app, which will be relevant to community youth as a resource to find information that can help improve their lives or the lives of their friends.
• August 2013: NKCH became the owner of Teen Yellow Pages, Parent Yellow Pages and Teen Info Cards (approximately 3,000 copies).
• Northland CAPS students have been involved since the beginning of the design/build of the Quarky app, and they continue to be involved through focus groups and internships.
• The Quarky app is set for release in Summer 2016.

YOUTH HEALTH COMMITTEE
Melanie Beard
Community Benefits
Coordinator
North Kansas City Hospital
Betty Sue Ciff
North Kansas City Hospital Board of Trustees
Member

Michelle Lane
Sr. Director of Critical Care, Trauma, Emergency and Education
North Kansas City Hospital
Karen Fournier
Youth Services Specialist
North Kansas City Hospital
Kathy Cole
Nurse
Park Hill South High School

Becky Fisk
Vice President of Revenue and Business Development
North Kansas City Hospital
Shannon Gilliland
cCareer Internship
North Kansas City School District
Diana Milne
Human Development Specialist
MU Extension

Karen Gettenger
Senior Impact Manager for Health
United Way

Melissa Wright
Director of Community Education Services
North Kansas City School District

Nancy Mense
4H Specialist
MU Extension
Shannan Garcia
Associate Executive Director
YMCA
Cindy Mason
County Manager/Clay County Department of Social Services
Leonard Pittala
Executive Director
Meritas Health Pediatrics

Melissa Wright
Director of Community Education Services
North Kansas City School District

Cindy Mason
County Manager/Clay County Department of Social Services
Leonard Pittala
Executive Director
Meritas Health Pediatrics

OPPORTUNITY IDENTIFIED AT THE BEGINNING OF CYCLE 1: There is no central location, database or clearinghouse for health information or other community services for teens in Clay and Platte Counties. Many agencies provide information, but there is no consistency in the information provided.

GOAL
• Effectively market and distribute the information to people who need it.

NKCH STRATEGIES/INTERVENTIONS
• Ask school counselors and other personnel, committee members and their related agencies, community groups, service agencies, and youth ministers to review the list and recommend ways to promote the Quarky app to people who will need, use and appreciate it.
• Establish a youth council that will review the resource list and provide ideas to market the Quarky app.
• Use personal meetings with schools, community partners and agencies as well as Facebook, QRCS, school websites, United Way 2-1-1, a web address, Twitter and other communication methods to present information.
• Print information about how to access the Quarky app in school, community and other publications.
• Present information about the Quarky app to the community via physician offices, schools, community agencies, service groups and the Internet.

OBJECTIVE
• Make the Quarky app available to the entire Kansas City metropolitan community.
• Identify at-risk user groups and help them gain access to community partners, agencies and other resources.

OUTCOMES
• Focus groups and metropolitan Kansas City agency members have vetted the Quarky app, whose release is highly anticipated.
• A broader scope of coverage than was originally anticipated and the involvement of Northland CAPS students and other youth focus groups increased awareness of the app and will help in its launch. A marketing and promotional plan was developed for the launch. NKCH has contributed $36,000 to fund the development of the Quarky app. NKCH pledged $6,000 per year to support the app. The developer will maintain it.

Mary Jo Vernon
Executive Director
Platte County Health Department
Gary Zaborac
Executive Director
Platte County Health Department
Chris (Christine) Evans
Executive Director
Northland Childhood Hunger Initiative
Kathy Cole
Nurse
Park Hill South High School

Mary Jo Vernon
Executive Director
Platte County
Health Department
Gary Zaborac
Executive Director
Platte County Health Department
Kathy Ellermeier, MD
Director of Health Services
Liberty School District
Sandra Ferguson
Clay/Platte Levy Board
Beverly Sue Ryan
Teen Yellow Pages
Quarky App Screenshots