University Hospitals
Bedford Medical Center

A Campus of UH Regional Hospitals





2015 COMMUNITY HEALTH NEEDS ASSESSMENT

University Hospitals' (UH) long-standing commitment to the community spans more than 145 years. This commitment has grown and evolved through significant thought and care in considering our community's most pressing health needs. One way we do this is by conducting a periodic, comprehensive Community Health Needs Assessment (CHNA) for each UH hospital facility.

Through our CHNA, UH has identified the greatest health needs among each of our hospital's communities, enabling UH to ensure our resources are appropriately directed toward outreach, prevention, education and wellness opportunities where the greatest impact can be realized.

The following document is a detailed CHNA for University Hospitals Bedford Medical Center, a campus of UH Regional Hospitals (UH Bedford Medical Center). UH Bedford Medical Center is a 110-bed, full-service acute-care community hospital that offers invasive and noninvasive procedures, an MRI Suite, and a Wound Care & Hyperbaric Medicine Center.

UH Bedford Medical Center offers myriad programs and activities to address the surrounding community health needs. These range from health education and health screenings to EMS training programs and a senior emergency department.

UH Bedford Medical Center continually strives to meet the health needs of its community. Please read the document's introduction below to better understand the health needs that have been identified.

Adopted by the UH Board of Directors
September 24, 2015.

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INTRODUCTION TO REPORT

This report identifies and assesses community health needs in the areas served by UH Bedford Medical Center in accordance with regulations promulgated by the Internal Revenue Service. This CHNA was adopted by the UH Board of Directors on September 24, 2015.

This is the second UH Bedford Medical Center CHNA in response to that federal government regulation.[1] The 2015 UH Bedford Medical Center CHNA will serve as a foundation for developing an implementation strategy to address those needs that (a) the hospital determines it is able to meet in whole or in part; (b) are otherwise part of its mission; and (c) are not met (or are not adequately met) by other programs and services in the hospital's service area.

Objectives: CHNAs seek to identify priority health status and access issues for particular geographic areas and populations by focusing on the following questions:

- **Who** in the community is most vulnerable in terms of health status or access to care?
- **What** are the unique health status and/or access needs for these populations?
- **Where** do these people live in the community?
- **Why** are these problems present?

The question of how the hospital can best use its limited charitable resources to assist communities in need will be the subject of the hospital's implementation strategy.

To answer these questions, this assessment considered multiple data sources, some primary (survey of market area residents, hospital discharge data) and some secondary (regarding demographics, health status indicators, and measures of health care access).

This UH Bedford Medical Center CHNA took into account input from persons representing the broad interests of the community through both a randomized mail survey of households in Cuyahoga County, and series of mail surveys and in-person interviews with community leaders. Community leaders from the Cuyahoga County Board of Health offered their analysis based on their work as a local governmental public health agency. Participating community leaders provided input into the prioritization of significant health needs.

This report addresses the following broad topics:

- Demographics of UH Bedford Medical Center's primary and secondary market areas;
- Economic issues facing the hospital's primary and second market areas (e.g., poverty, unemployment);
- Community issues (e.g., environmental concerns and crime);
- Health status indicators (e.g., morbidity rates for various diseases and conditions, and mortality rates for leading causes of death);
- Health access indicators (e.g., uninsured rates, ambulatory care sensitive (ACS) discharges, and use of emergency departments);
- Health disparities indicators and;
- Availability of health care facilities and resources.

[1]UH Bedford Medical Center followed the 2013 Proposed Regulations, published by the Treasury Department and IRS on April 5, 2013, in the Federal Register (REG-106499-12, 2013-21 I.R.B. 1111, [78 FR 20523]), in accordance with Notice 2014-2 that confirms that hospital organizations can rely on proposed regulations under section 501(r) of the Internal Revenue Code issued on June 26, 2012, and April 5, 2013, pending the publication of final regulations or other applicable guidance. The final rule entitled "Additional Requirements for Charitable Hospitals; Community Health Needs Assessments for Charitable Hospitals"; Requirement of a Section 4959 Excise Tax Return and Time for Filing the Return, was published by the IRS on December 31, 2014, and requires compliance after December 29, 2015.

EXECUTIVE SUMMARY

UH Bedford Medical Center by the Numbers

- Two service area counties: Cuyahoga, Summit
- Population, 2013: 187,023
- 64.3% of patient discharges were residents of its primary market area; 17.7% of its secondary market area
- 9 % of patient discharges were Medicaid patients; 3.8% were uninsured; 73% were Medicare
- 30.7% of Cuyahoga County households with incomes <$25,000
- Population Trends:
  - Cuyahoga County decreased in population size by 1.1% from 2010 to 2013.
  - Cuyahoga County is growing older, on average.
  - Cuyahoga County is majority White, but the percentage of the population that is White decreased by 1% from 2010 to 2013.
- There exists a wide range of health status and access challenges across the community

This assessment focuses on the priority problems that impact the overall health of the community that surrounds UH Bedford Medical Center. UH Bedford Medical Center's service area extends into two counties: Cuyahoga and Summit. Key findings are as follows.

Poverty and unemployment in the area create barriers to access (to health services, healthy food and other necessities) and thus contribute to poor health. Racial and ethnic minorities are more likely to lack economic and social resources and be at risk for poor health.

Many of these issues are most prominent in Cuyahoga County:

- Nearly 19% of all residents of Cuyahoga County were living under the poverty line in 2014
- The unemployment rate in Cuyahoga County in 2014 was 5.5%, which was slightly higher than the national rate of 5.3%
- From 2010 to 2013, fewer residents in Cuyahoga and Summit counties had private health insurance, but more had public health coverage

For UH Bedford Medical Center, 33.9% of discharges in 2013 were ACS discharges of residents within the primary and secondary market areas combined. This may signal lower availability or access to primary care within the total market area.

The most common primary ACS diagnoses for UH Bedford Medical Center's discharged patients were congestive heart failure, bacterial pneumonia and chronic obstructive pulmonary disease (COPD). One-third of discharged patients were diabetic and half had a primary or secondary diagnosis of hypertension in 2013.

Priority Health Needs

Poor health status results if a complex interaction of challenging social, economic, environmental and behavioral factors combined with a lack of access to care is present. Addressing these "root" causes is an important way to improve a community's quality of life and to reduce mortality and morbidity.

After careful analysis of both qualitative and quantitative data, UH Bedford Medical Center identified four categories of health needs that impact the community served by the hospital. These include (not listed in a specific order):

Health Disparities

- Poverty
- Unemployment
- Aging Population
- Infant Mortality

Chronic Disease Conditions

- Heart Disease
- Alzheimer's
- Respiratory Diseases
- Cancer
- Diabetes
- Mental Illness

Lifestyle Barriers

- Substance Abuse (Tobacco/Drug/Alcohol)
- Obesity

Access Barriers

- Cost of Care
- Lack of Primary Care Providers
- Transportation

From this list, UH Bedford Medical Center has selected three categories of priority health needs, which are:

1. Chronic Disease Conditions
2. Access Barriers
3. Lifestyle Barriers

Significant portions of the community served by UH Bedford Medical Center are seniors. The health needs associated with an aging population have become increasingly important considerations for the hospital.

The intersection of a focus on increasing health care access and focus on the aging population will promote an emphasis on diagnosing and treating chronic disease conditions and reducing the prevalence of lifestyle factors like obesity and smoking.

CHNA Collaboration

UH Bedford Medical Center worked closely with The Center for Health Affairs and Cypress Research Group to complete the data assessment and summary portions of the 2015 CHNA. University Hospitals Health System, Inc. retained The Center for Health Affairs to assist in data collection and analysis to ensure the entire community served by the hospital was captured. The Center for Health Affairs is the leading advocate for Northeast Ohio hospitals. The Center advocates on behalf of 34 hospitals in six counties. Cypress Research Group provides custom research services to meet various market and business research needs. More information about The Center for Health Affairs and Cypress Research Group is provided in the Appendix.

A. Definition of Market Area (Community Served by the Hospital)

UH Bedford Medical Center is located in the city of Bedford, Ohio, an eastern suburb of Cleveland, in Cuyahoga County. Shown in Figure 1: UH Bedford Medical Center Market Areas, UH Bedford Medical Center's market area includes eight municipalities (three in its primary market area and five in its secondary market area). All of UH Bedford Medical Center's primary market area is contained within Cuyahoga County or, to a lesser degree, Summit County.

Table 1: UH Bedford Medical Center: Hospital Discharges – Primary and Secondary Market Areas shows UH Bedford Medical Center's patient discharges. In 2013, UH Bedford Medical Center had 2,300 discharged patients. Of those, 1,888 were from the hospital's primary (64.3%) or secondary market (17.7%).

Most (79.8%) of UH Bedford Medical Center's discharges in 2013 were residents of Cuyahoga County.

Of the three ZIP code areas which comprise UH Bedford Medical Center's primary market area, Bedford (44146) has the largest population (15.9% of the hospital's total market area). Bedford also was the municipality (ZIP code) with the largest number of discharges from UH Bedford Medical Center in 2013 (1,033 discharges, or 44.9%).

Shown in Table 2: UH Bedford Medical Center: Emergency Room Visits – Primary and Secondary Market Areas, in 2014, UH Bedford Medical Center had 21,584 visits to the emergency room; 68% were residents of the hospital's primary market area, and 14% were residents of its secondary market area.

The largest number of emergency room visits from a single ZIP code were for residents of Bedford (44146) (9,517, or 44.1% of all emergency room visits) and Maple Heights (44137) (4,643, or 21.5% of all emergency room visits); 65.6% of UH Bedford Medical Center's emergency room visits in 2013 were for patients who live in those two ZIP codes.

Cuyahoga County and Summit County Health Rankings

The Robert Wood Johnson Foundation produces an annual report that ranks counties in Ohio based on two major indices of population health: health outcomes (length and quality of life) and health factors (clinical care, health behaviors/alcohol and drug use, social/environmental factors and physical environment). A rank of "1" is the best, "88" is the worst in the state of Ohio. Table 3: Summit County and Cuyahoga County Health Rankings identifies Cuyahoga County and Summit County's rank. While UH Bedford Medical Center does not include all of Cuyahoga County or Summit County, it does include a significant portion of them. Therefore, understanding where these counties as a whole rank in Ohio, in terms of health, is useful. It is important to note that in many of Ohio's counties, the differential between health outcomes and health factors is relatively small.

On the whole, Cuyahoga County achieves moderately low ranks, compared to other Ohio counties, in terms of health outcomes (65 out of 88 counties) or health factors (50 out of 88 counties). In terms of health outcomes, Cuyahoga ranks more positively for length of life (rank of 51) than quality of life (rank of 72). In terms of health factors, Cuyahoga County ranks the highest in clinical care (rank of 6) and to a lesser degree health behaviors (rank of 36). Cuyahoga County is among the lowest ranking counties in Ohio in terms of social and economic factors (rank of 78) and physical environment (rank of 68).

Summit County, relative to Cuyahoga County, rates better on health factors. Summit County ranks 42 out of 88 counties in terms of health outcomes, and 36 out of 88 counties in terms of health factors. Regarding length of life (rank of 40) and quality of life (rank of 53), Summit County compares favorably to Cuyahoga County. In terms of health factors, Summit County ranks the highest in health behaviors (21 out of 88 counties) and clinical care (24 out of 88 counties), and only moderately well in terms of social and economic factors (rank of 48). Summit County ranks lower than Cuyahoga County regarding physical environment (82 out of 88 counties) and is among the lowest ranking counties in Ohio. Summit County is among the weakest counties in the state in terms of air pollution and drinking water violations.

To better identify areas of greatest need within Cuyahoga and Summit counties, health rankings were further explored through data available at the Centers for Disease Control and Prevention (CDC, U.S. Department of Health and Human Services), which also compiles health-related population statistics. The CDC identified several areas in which Cuyahoga and Summit counties compare unfavorably to their peer counties (which closely match each county in terms of demographic and physical factors), shown in Table 4: Cuyahoga County and Summit County: Higher Compared to Peer Counties' Mortality and Morbidity Rates.

Cuyahoga County compares unfavorably to its peer counties in terms of coronary heart disease deaths and cancer deaths. Cuyahoga County also has higher-than-expected incidences of Alzheimer's disease, gonorrhea, older adult asthma and preterm births.

Summit County is either on par or doing better than its peer counties in terms of all mortalities reported by the CDC. Summit County does have higher-than-expected incidences of Alzheimer's disease, older adult asthma, older adult depression and preterm births.

The CDC also found that both Cuyahoga and Summit counties compare unfavorably to their peer counties in the U.S. in terms of the incidence of preventable hospitalizations for older adults.

FIGURE 1: UH BEDFORD MEDICAL CENTER MARKET AREAS

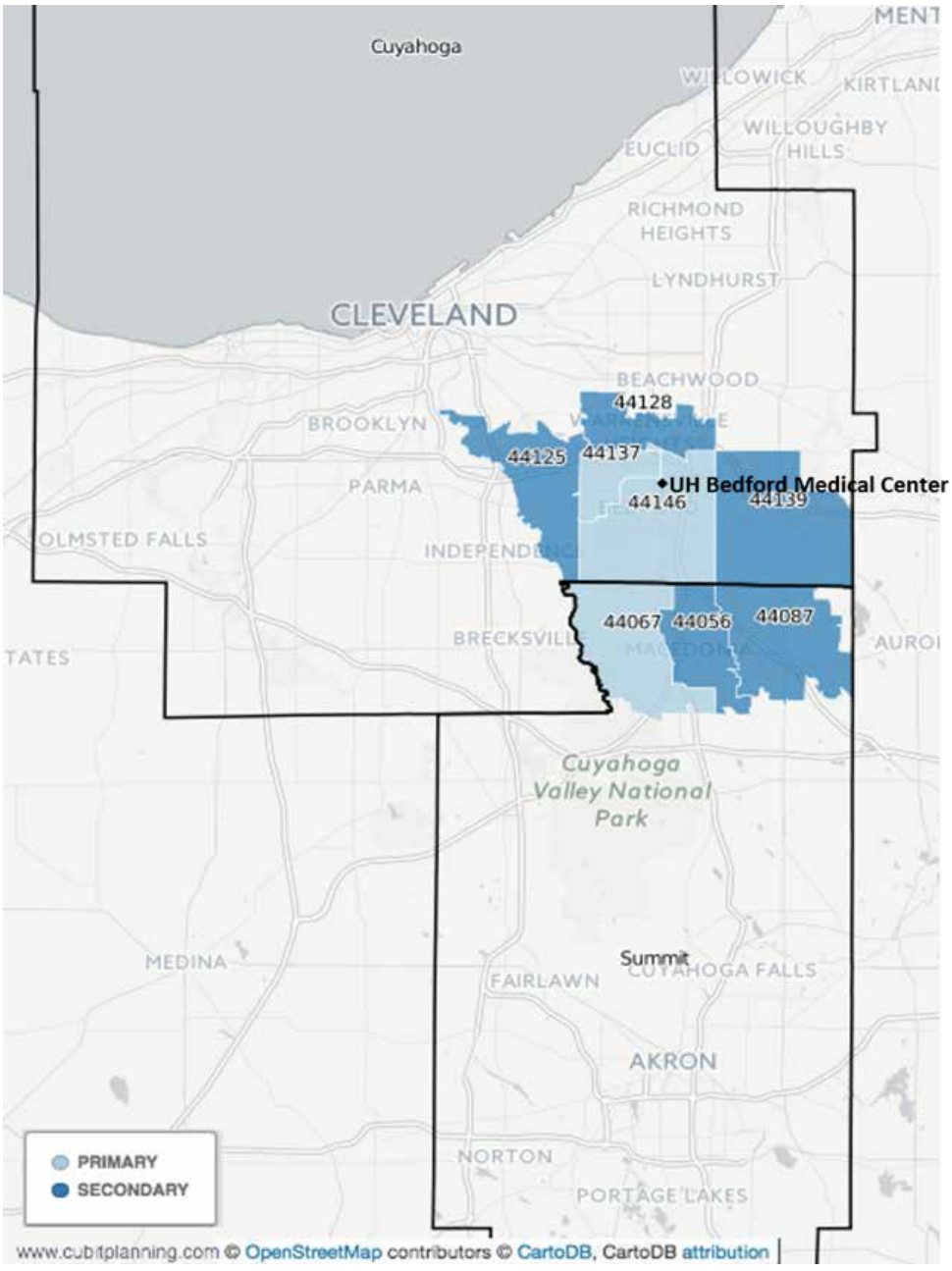


TABLE 1: UH BEDFORD MEDICAL CENTER: HOSPITAL DISCHARGES – PRIMARY AND SECONDARY MARKET AREAS

	Municipalities & ZIP Codes	Number/percent of UH Bedford Medical Center Discharges* (2013)		2013 Population (American Community Survey, U.S. Census Projection)**	
		Number	Percent	Number	Percent
Primary Market Area					
Summit County	Northfield (44067)	169	7.3%	20,457	10.9%
Cuyahoga County	Maple Heights (44137)	278	12.1%	23,080	12.3%
	Bedford (44146)	1,033	44.9%	29,676	15.9%
Subtotal Primary Market		**1,480**	**64.3%**	**73,213**	**39.1%**
Secondary Market Area					
Summit County	Macedonia (44056)	49	2.1%	11,326	6.1%
	Twinsburg (44087)	88	3.8%	20,030	10.7%
Cuyahoga County	Cranwood Station (44128)	91	4.0%	29,667	15.9%
	Solon (44139)	104	4.5%	24,154	12.9%
	Garfield Heights (44125)	76	3.3%	28,633	15.3%
Subtotal Secondary Market		**408**	**17.7%**	**113,810**	**60.9%**
Total Market		**1,888**	**82.0%**	**187,023**	**100%**
Out of Market		**412**	**17.9%**		
Total		**2,300**	**100%**	**187,023**	

** Ohio Hospital Association hospital discharge data, 2013*
*** Source: U.S. Census, American Community Survey, 2010 Decennial projection to 2013*

TABLE 2: UH BEDFORD MEDICAL CENTER: EMERGENCY ROOM VISITS – PRIMARY AND SECONDARY MARKET AREAS

	Municipalities & ZIP Codes	Number of UH Bedford Medical Center Emergency Room Visits (2014)*		2013 Population **	
		Number	Percent	Number	Percent
Primary Market Area					
Summit County	Northfield (44067)	507	2.3%	20,457	10.9%
Cuyahoga County	Maple Heights (44137)	4,643	21.5%	23,080	12.3%
	Bedford (44146)	9,517	44.1%	29,676	15.9%
Subtotal Primary Market		**14,667**	**68.0%**	**73,213**	**39.1%**
Secondary Market Area					
Summit County	Macedonia (44056)	153	0.7%	11,326	6.1%
	Twinsburg (44087)	214	1.0%	20,030	10.7%
Cuyahoga County	Cranwood Station (44128)	1,131	5.2%	29,667	15.9%
	Solon (44139)	390	1.8%	24,154	12.9%
	Garfield Heights (44125)	1,125	5.2%	28,633	15.3%
Subtotal Secondary Market		**3,013**	**14.0%**	**113,810**	**60.9%**
Other Market		**3,904**	**18.1%**		
Total		**21,584**	**100%**	**187,023**	

**UH Bedford Medical Center*
***Source: U.S. Census, American Community Survey, 2010 Decennial projection to 2013*

TABLE 3: SUMMIT COUNTY AND CUYAHOGA COUNTY HEALTH RANKINGS

	Cuyahoga County, 2015		Summit County, 2015	Subcomponents
Health Outcomes	65 out of 88 counties	Length of Life: 51 out of 88 counties Quality of Life: 72 out of 88 counties	42 out of 88 counties	Length of Life: 40 out of 88 counties Quality of Life: 53 out of 88 counties
Health Factors	50 out of 88 counties	Clinical Care: 6 out of 88 counties Health Behaviors: 36 out of 88 counties Social & Economic Factors: 78 out of 88 counties Physical Environment: 68 out of 88 counties	36 out of 88 counties	Clinical Care: 24 out of 88 counties Health Behaviors: 21 out of 88 counties Social & Economic Factors: 48 out of 88 counties Physical Environment: 82 out of 88 counties

Source: County Health Rankings & Roadmaps; Robert Wood Johnson Foundation program, 2015.

TABLE 4: CUYAHOGA COUNTY AND SUMMIT COUNTY: HIGHER COMPARED TO PEER COUNTIES' MORTALITY AND MORBIDITY RATES

Cuyahoga County	Summit County
Mortality	
• Coronary heart disease deaths	
• Cancer deaths	
Morbidity	
• Alzheimer's disease/dementia	• Alzheimer's disease/dementia
• Older adult asthma	• Older adult asthma
• Preterm births	• Preterm births
• Gonorrhea	
	• Older adult depression
Health care access	
• Older adult preventable hospitalizations	• Older adult preventable hospitalizations

B. Introduction to Data Analysis

This report analyzed both primary and secondary data to draw conclusions regarding the priority health needs of the population within the UH Bedford Medical Center community.

Primary Data

There were three main sources of primary data:

A. Survey Data

- UH Bedford Medical Center's market area is contained mostly within Cuyahoga County (68.8% of its 2013 discharges) and Summit County (13.2% of 2013 discharges). A random survey of households in Cuyahoga County was conducted in 2012. A total of 602 surveys were completed of which only 67 (11.1%) were in UH Bedford Medical Center's primary or secondary market areas. This sample size is too small to adequately represent the total adult population in UH Bedford Medical Center's market area; however, the findings from that study are reported by isolating those who live in the medical center's market area with the caveat that the findings are directional in nature only. Surveys were commissioned by Cuyahoga County Health Partners and conducted by the Hospital Council for Northwest Ohio to capture a comprehensive picture of Cuyahoga County residents' health status.

B. Hospital Discharge Data

- Discharge data from the Ohio Hospital Association was used to describe hospital admission patterns for UH Bedford Medical Center from 2011 to 2013.

C. Qualitative Data

- A survey was sent to five community leaders from organizations that serve the populations in the hospital's service area. Two responses to the survey were received.
- UH Bedford Medical Center conducted interviews with five community leaders from public health, local government and social service agencies.

Qualitative Data Analysis Summary

From January 2015 – July 2015, UH Regional Hospitals solicited the input of individuals who represent the broad interests of the community and individuals in leadership roles in public health, both in the form of mail surveys and in-person interviews.

Surveys

Surveys were sent to five community leaders from local government organizations that serve the populations in the hospital's service area. Two responses to the survey were received. A copy of the survey can be found in the Appendix.

The organizations solicited are listed below, those in bold responded.

City of Bedford

City of Richmond Heights

Walton Hills

Oakwood Village

Glenwillow

The top health issues identified by those surveyed were: Cancer, Diabetes and Heart Disease. Access to health care and insurance, Obesity and Substance Abuse were also noted as key health issues in local communities. Respondents felt that the primary access issues faced by their communities are access to mental health services and access to transportation.

Respondents also agreed that significant barriers that keep people in the community from accessing health care when they need it include the following: (1) availability of providers/appointments, (2) inability to pay out-of-pocket expenses (copays, prescriptions, etc.), (3) lack of transportation, and (4) time limitations.

Respondents predominantly agreed that there are specific populations in the UH Bedford Medical Center service area that are not being adequately served by local health services. The most commonly identified populations included the poor and uninsured. There was a consensus that the majority of those uninsured and underinsured individuals in this community use urgent care centers as their primary point of care when in need of medical care. Individuals will also visit the emergency department frequently.

Survey respondents identified a number of resources and services related to health and quality of life that are lacking in the community. These included free/low-cost providers of primary care, specialty care and dental care; transportation services; and services to assist with prescription medication coverage.

Interviews

UH Bedford Medical Center, in collaboration with UH Case Medical Center, UH Parma Medical Center and UH Ahuja Medical Center, further conducted interviews with community leaders that represent the broad interests of the community and public health. A copy of the interview guide can be found in the Appendix. Individuals interviewed included:

June 19 (UH Richmond Medical Center):

1. Rozita Davis, Western Reserve Agency on Aging
2. Rob David, UH Regional Hospitals President
3. Roy Longfellow, UH Regional Hospitals Nursing
4. Annie O'Neill, UH Regional Hospitals Community Outreach
5. Angela Payne, UH Richmond Senior ER Social Work

June 23:

1. Terry Allan, Commissioner, Cuyahoga County Board of Health
2. Joanne Mraz, Educational Program Director, American Diabetes Association (ADA)
3. Jeffrey Lox, Chief Clinical Officer, Bellefaire JCB

July 8 (UH Bedford Medical Center)

1. Stan Koci, Mayor, City of Bedford
2. Roy Longfellow, UH Regional Hospitals Nursing
3. Annie O'Neill, UH Regional Hospitals Community Outreach
4. Mary Hamilton, UH Regional Hospitals Marketing
5. Carol Huszai, UH Bedford Medical Center Social Work
6. Mary Jo Deely, UH Bedford Medical Center Social Work

Public Health

Cuyahoga County Board of Health (CCBH) Commissioner, Terry Allan, was interviewed on June 23, 2015. CCBH serves 855,000 people in Cuyahoga County and provides supplemental services regionally for seven counties. While CCBH serves this robust population, services are generally targeted to low-income, high need and often minority communities.

Mr. Allan believes that the biggest driver impacting health status in the community is poverty and education. He stated that social determinants of health have a vast impact across all age groups. Among the youth/young adult age group the biggest issues driven by the social determinants of health are infant mortality, healthy eating/active living, tobacco use, violence, asthma, teen pregnancy and childhood vaccination.

Mr. Allan believes that many of these issues drive health issues as people age. In the age group of adults age 18 – 44, he identified the biggest health issues as preventive health, healthy eating/active living, chronic disease management, housing and employment.

As the population continues to age, Mr. Allan believes that chronic disease management continues to play an important role in population health. Employment among 45- to 65-year-olds is also a critical health indicator because it provides access to care, as well as family stabilization.

In the senior population, Mr. Allan cited senior fall prevention, preventive screenings and pneumonia vaccines as primary health concerns.

Demographic trends have played a significant role in the health status of Cuyahoga County residents. In the past 10 years, the population of the City of Cleveland has shrunk considerably. Following that trend, first-ring communities have become higher need (more aligned with the city). The first-ring school districts are facing challenges that hadn't been seen in the suburbs previously because of a rise in poverty.

There has been an increase in the concentrations of immigrants and minority populations (upward of 50% in the City of Cleveland) that face their own unique health challenges. Importantly, care needs to become much more culturally competent to address these challenges.

Mr. Allan described several public health indicators that show challenges faced by the community. Overall, Cuyahoga County has decreased rates of lead poisoning among children. However, there remains a subset of neighborhoods in the most impoverished parts of the community that consistently have high rates of poisoning.

Similarly, trends in infant mortality remain deplorable among the minority populations in certain hotspots throughout the city. There are also negative trends in teen pregnancy disparities by race, even though the rate of teen pregnancy is going down overall. Diabetes-related health issues are also a big concern among the minority community.

Mr. Allan explained that while residents don't often find a need to leave the community to receive health services, they often migrate out of the community to meet other needs, which further drives the challenges associated with poverty for those who are left behind. He explains several reasons the population of Cuyahoga County has migrated out of the county in recent years:

- It is less expensive to live in counties further from the City of Cleveland, and people are worried about living wage
- Taxes outside of Cuyahoga County are lower
- People hunt for school systems they believe are best for their children
- Some have perceptions about safety and space in outer communities (race-related)

Challenges related to access to health care, mental and behavioral health, and social services for community members are largely driven by poverty. Lack of transportation is a major barrier to access. Additionally, a variety of social determinants of health impact access, including stress, employment and housing. Mr. Allan believes that communities that are more integrated, over time, fare better. The racial polarity that is a reality in Cuyahoga County is a huge problem.

Mr. Allan suggests that a variety of stakeholders in the health care and social services sector must work together in a new way, in order to really drive change in the social determinants of health. He suggests that anchor agencies can play the role of facilitation, by managing the big issues in their areas of expertise. It is important to build a plan in an integrated way that provides collective impact and shared measurement and evaluation. If this doesn't happen, the community will continue to have organizations tripping over each other, because everyone tries to address the same issues without communication. Resources should be targeted based on data to address disparities and engage the community. Infant Mortality would be a great starting point to demonstrate how such collaboration could succeed.

Social Services

On June 23, 2015, interviews were conducted with Joanne Mraz, Educational Program Director at the American Diabetes Association (ADA), and Jeffrey Lox, Chief Clinical Officer at Bellefaire JCB (Bellefaire).

The Northeast Ohio office of ADA works primarily with diabetic populations in need in the Cleveland area, working to close the resource gap for those that have the least access to resources. The organization primarily reaches its target population through work at community centers, senior centers, county facilities, libraries and hospitals. They provide fundamental diabetes education, including biometric measurements, blood sugar screenings, blood pressure screenings and body mass index screenings. They couple screenings with fundamental, baseline education, such as food groups, mapping resources in the community, and how to access healthy options at local stores, like a dollar store.

Joanne explained that the majority of her low-income, diabetic population does not go to specialists like endocrinologists for care. At best, they work with primary care physicians to treat their disease, but often report to emergency room visits for emergent care only.

Bellefaire JCB serves 22,000 children and families each year. It is the largest behavioral health provider between Chicago and New York City. The organization treats kids with behavioral health issues, mental health issues and substance abuse issues. Bellefaire has a residential treatment facility on its Cleveland Heights campus, which houses approximately 100 young people. That includes a locked intensive treatment facility that treats kids ages 11 – 18; a four-bed crisis stabilization unit for kids who need help but won't qualify to be in a psychiatric unit at a hospital; and a residential program for 40 kids, age 6 – 22 on the autism spectrum. Bellefaire also houses the Monarch School, a day school for 150 students with autism, and recently spun off an adult program for those with autism, which treats those who age out of Bellefaire's childhood programs.

Outside of these on-campus programs, Bellefaire has a robust school based program that serves kids in 180 Northeast Ohio schools; an in-home family therapy program; a foster care program; an adoption program; traditional outpatient therapy; and several other social services programs for local children.

The children seen through Bellefaire's programs are generally multineed kids with multisystem, complex medical needs.

Ms. Mraz and Mr. Lox expressed robust needs faced by their target audiences in the Cleveland area. To summarize, Ms. Mraz identified three primary issues: (1) health literacy, (2) lack of access to resources, and (3) lack of education. Mr. Lox identified: (1) a fundamental need for education, (2) issues of poverty and disenfranchisement, and (3) a lack of care coordination.

While Bellefaire and ADA primarily work with populations at the opposite ends of the age spectrum, their target audiences are impacted by similar trends and significant challenges associated with poverty. Mr. Lox noted that the children his organization works with appear more ill, come from more poverty and more abuse and neglect. They have not seen any appreciable growth in circumstances based on the Affordable Care Act.

Mr. Lox also noted that for children with autism, there is a national epidemic, which is the result of a growing population with services/technologies that can't keep pace. They see more children diagnosed with autism spectrum disorders and are in turn seeing an aging population with related problems.

Bellefaire has not traditionally had a large population of uninsured children because kids have traditionally qualified for Medicaid. However, the organization is seeing a new problem that has resulted from families that cannot qualify for Medicaid, but cannot afford the expenses associated with private insurance.

Finally, Mr. Lox noted that there is a growing crises related to heroin/opiate addiction. He stated that the problem is huge and his organization is seeing younger and younger children with addiction problems – they currently have an 11-year-old girl in their residential program for treatment of heroin addiction.

Poverty is also an underlying, growing issue for the populations Ms. Mraz works with through ADA. She noted that lifestyle is, both literally and figuratively, a killer for her patients. They do not have access to healthy food and do not properly exercise, and as such, contribute to the impact of their disease. There is also a significant population treated by ADA's programs that are underinsured and cannot afford copays associated with their insurance coverage. These patients do not visit their physicians regularly, do not receive the necessary durable goods to properly manage their disease, and are not properly educated on diabetes management.

Both leaders expressed that the community has a lack of mental health resources available for treatment of all ages. This is particularly a problem for kids on the autism spectrum, as there are no psych hospitals in town that will admit kids with a primary autism diagnosis. There was consensus that community members have several challenges related to access to health care. These primarily stem from a lack of access to primary care physicians and specialists that are willing to treat low-income individuals. There is also a lack of mental health providers that accept Medicaid (most have waiting lists) and a shortage of psych beds.

Mr. Lox and Ms. Mraz agreed that there is opportunity to improve circumstances for both of their target populations by bringing together community resources in creative, collaborative ways. The current challenge is that there is not a current, active, navigational hub to coordinate such efforts. There is a need to organize resources by health population and help individuals and families navigate through them.

UH Richmond Medical Center

On June 19, 2015, UH Richmond Medical Center convened a group of internal leaders to hold a discussion with Rozita Davis from the Western Reserve Agency on Aging. Themes from this meeting focused on the needs of seniors in Cuyahoga County and surrounding areas. Key issues that were identified included:

1. A lack of affordable, appropriate housing for seniors
2. Transportation barriers for seniors that cause challenges with accessing health care
3. Issues related to health literacy and system navigation upon hospital discharge for seniors
4. Obesity related to lack of nutrition and wellness education

UH Bedford Medical Center

On July 8, 2015, UH Bedford Medical Center convened a group of internal leaders to host a discussion about community health needs with Mayor Stan Koci, from the City of Bedford. The conversation during this meeting focused around the needs of seniors, as a significant portion of the population served by this hospital falls into that category.

The key issues identified through this discussion largely echoed those discussed during the June 19 meeting at UH Richmond Medical Center. These included:

1. Insufficient living arrangements for an aging population that requires assistance
2. A reduction in available community services to support this aging population
3. Lack of transportation options for seniors needing to access health care and lifestyle amenities
4. Issues related to health literacy and system navigation
5. Challenges with health care access resulting from costs associated with care
6. Lack of healthy, accessible food options

Secondary Data

There were several sources of secondary data:

- U.S. Census, 2010 Decennial Census, American Community Survey (projections to 2013) (demographic data; poverty data);
- U.S. Bureau of Labor Statistics, 2015 (unemployment data);
- U.S. Health Resources and Services Administration (HRSA) (medically underserved areas and populations and food deserts);
- Health status and access indicators available from:
  - County Health Rankings & Roadmaps; Robert Wood Johnson Foundation program, 2014;
  - Ohio Department of Health, 2014;
  - U.S. Centers for Disease Control and Prevention, CHSI Information for Improving Community Health, Community Health Status Indicators Project, 2015;
  - Community Commons, 2015

Information Gaps

To the best of The Center for Health Affairs' and Cypress Research Group's knowledge, no information gaps have affected UH Bedford Medical Center's ability to reach reasonable conclusions regarding community health needs.

C. Demographic Characteristics of UH Bedford Medical Center's Market Area

As illustrated in Figure 2: Cuyahoga County and Summit County Population Trends, approximately one-tenth (11.7%) of Cuyahoga County's total population resides within UH Bedford Medical Center's market area. A somewhat smaller proportion (9.6%) of Summit County's total population resides within UH Bedford Medical Center's market area. Below the five-year population trends for those counties are shown.

Cuyahoga County is the largest county in Ohio based on population size (1,259,828 residents in 2014). Cuyahoga County as a whole had a 1.4% reduction in population from 2010 to 2014. Summit County saw a very small increase in total population during that time period (+0.06%).

Looking at only 2010 to 2013, the time period with full statistics available, Cuyahoga County had a 1.1% reduction in population, shown in Table 5: Demographic Trends in Cuyahoga and Summit Counties: By Gender, Age and Race. Summit County had a very small increase in population (0.03%). The demographic composition of the population was mostly stable from 2010 to 2013, with two exceptions noted below.

Cuyahoga and Summit counties, like their neighboring counties, are growing older, on average. In 2013, the proportion of senior citizens increased by 0.4 percentage points in Cuyahoga County and 0.9 percentage points in Summit County. Given that the use of health care increases substantially with age, especially after age 65, the aging of the population will have significant impacts on the demand for health care in regions where the proportion of older citizens is increasing.

Cuyahoga County is majority White, but the percentage of the population that is White decreased by 1% from 2010 to 2013. Black is the dominant minority race in Cuyahoga County (29.7% of the total population). Summit County is more majority White, but that majority percentage decreased by 0.8 points from 2010 to 2013.

While the basic demography in Cuyahoga County did not see significant changes from 2010 to 2013, the economic situations for many residents did, as illustrated in Table 6: Economic Trends in Cuyahoga County and Summit County: Income and Poverty.

The average (median) income decreased by 4.6% in Cuyahoga County and 2% in Summit County from 2010 to 2013. Mean household income decreased by 1.9% in Cuyahoga County and 1.3% in Summit County during that same time period.

The proportion of households with Social Security income increased in Cuyahoga County (+1.4%) and Summit County (+2.5%) from 2010 to 2013. However, the average (mean) income from Social Security decreased by 1.3% in Cuyahoga County to $15,921 in 2013, and decreased by 0.4% in Summit County to $16,856 in 2013. Retirement income (from pensions, 401(k) disbursements) increased by 1% (Cuyahoga County) and 2.5% (Summit County) from 2010 to 2013.

There were more households receiving cash public assistance income in 2013 compared to 2010 in Cuyahoga County (+0.6%) and Summit County (+0.5%). The size of cash public assistance decreased by 6.9% in those three years in Cuyahoga County, but increased in Summit County by a similar proportion (6.5%). The proportion of households receiving Food Stamp/SNAP benefits increased by 3.8% in Cuyahoga County from 2010 to 2013, and by 3.1% in Summit County. Note that in both counties, far more residents received Food Stamp/SNAP benefits in 2013 (18.3% in Cuyahoga County and 14.9% in Summit County) than received cash public assistance (4.3% and 5.1%, respectively).

Shown in Table 7: Most Economically Vulnerable County Residents, Cuyahoga County saw modest increases in the proportion of economically vulnerable citizens and families from 2010 to 2013.

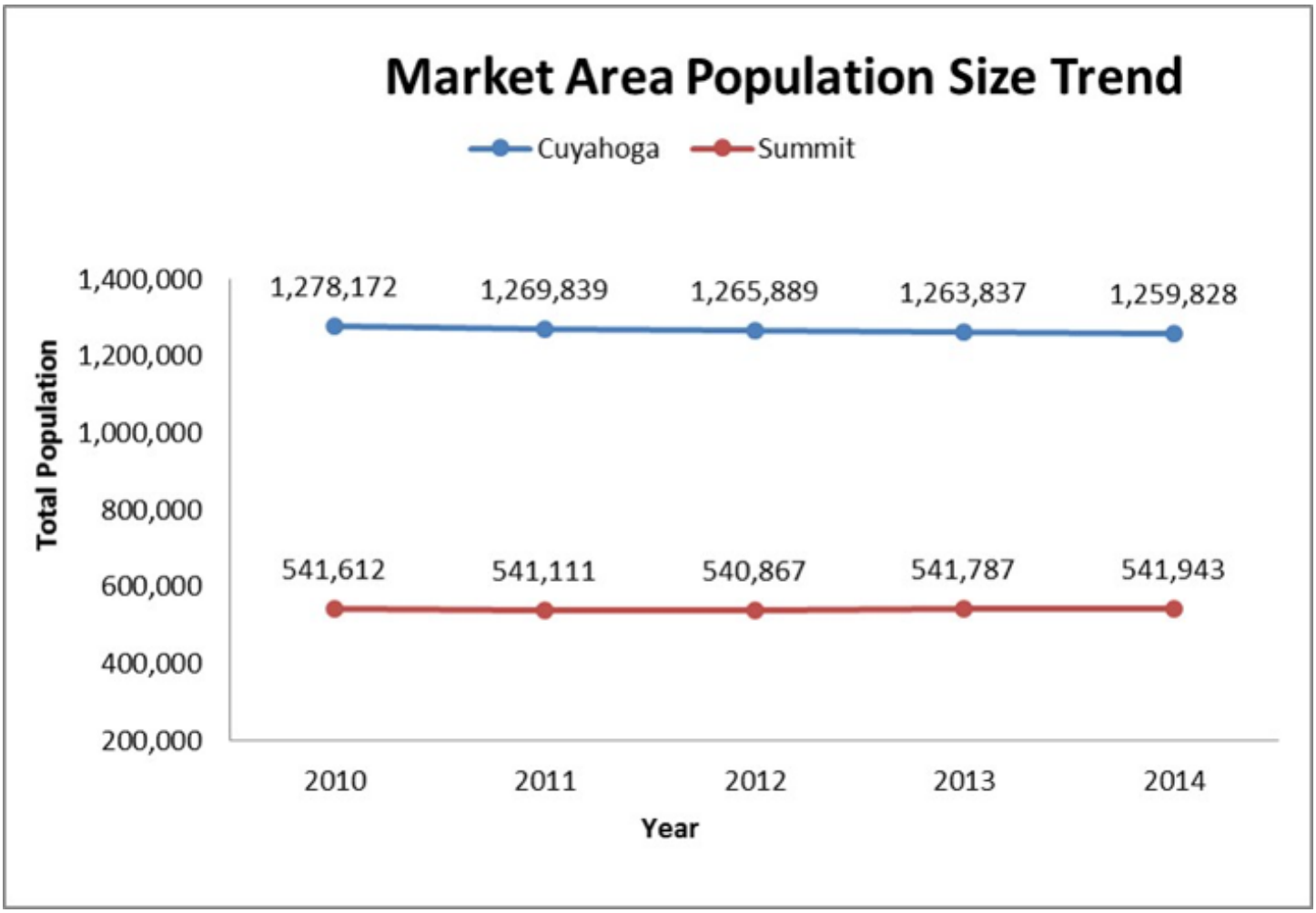
The proportion of Cuyahoga County households living below the poverty line increased by 1.3 percentage points (from 13.1% to 14.4%) from 2010 to 2013 and by 1.2 percentage points (from 10.1% to 11.3%) in Summit County. Almost one in four Cuyahoga County households with children under age 18 lived below the poverty line in 2013 (23.9%), an increase of 2.7%. Roughly one in five households with children lived below the poverty line in Summit County in 2013 (19.4%, an increase of 1.6% since 2010).

Roughly one-fourth of Cuyahoga County households with children under age five (but no older children) lived under the poverty line in 2013 (26.1%), a 4.6 percentage point increase from 2010 levels. However, such households in Summit County, as a group, fared better in 2013 than 2010, showing a 6.1% decrease to 23.5% of households with young children only living beneath the poverty line. Single-mother households fared worse: approximately half (52.9%) of single mothers with young children under age five (and no older children) were living under the poverty line in Cuyahoga County in 2013, as were 61.5% of female-headed single parent households with only young children in Summit County. In 2013, 28.1% of children in Cuyahoga County were living under the poverty line, as were 22.8% of children in Summit County.

From 2010 to 2013, the proportion of residents in both counties with health insurance was fairly stable. However fewer residents in Cuyahoga had private health insurance (a reduction of 2.0%) between 2010 and 2013, but more had public health coverage (an increase of 2.3%) from 2010 to 2013. There was a similar pattern in Summit County during that time period: while 2.8% fewer had private health insurance in 2013 compared to 2010, 3.1% more had public coverage during that time period.

Finally, the unemployment rate* in Cuyahoga County is the 30th highest in Ohio and was 5.5% in April of 2015. Summit County's unemployment rate was lower (4.6%, 47th highest in the state) than Cuyahoga County's. The comparable unemployment rate for Ohio overall was 4.6% (*Source: U.S. Bureau of Labor Statistics 2015).

FIGURE 2: CUYAHOGA COUNTY AND SUMMIT COUNTY POPULATION TRENDS



Source: U.S. Decennial Census, American Community Survey projections to 2014

TABLE 5: DEMOGRAPHIC TRENDS IN CUYAHOGA AND SUMMIT COUNTIES: BY GENDER, AGE AND RACE

	Cuyahoga County			Summit County		
	2010	2013	Percent Change	2010	2013	Percent Change
Total Population	1,278,172	1,263,837	-1.1%	541,612	541,787	+0.03%
By Gender						
Males	47.4%	47.5%	+0.1%	48.3%	48.4%	+0.1%
Females	52.6%	52.5%	-0.1%	51.7%	51.6%	-0.1%
By Age Group						
0 – 19	25.6%	24.6%	-1.0%	25.8%	24.7%	-1.1%
20 – 44	31.0%	31.0%	0.0%	31.3%	31.0%	-0.3%
45 – 64	27.8%	28.3%	+0.5%	28.3%	28.8%	+0.5%
65+	15.4%	15.8%	+0.4%	14.4%	15.3%	+0.9%
By Race						
White	64.9%	63.9%	-1.0%	81.0%	80.2%	-0.8%
Black or African-American	29.6%	29.7%	+0.1%	14.4%	14.2%	-0.2%
American Indian and Alaska Native	0.2%	0.2%	0.0%	0.1%	0.2%	+0.1%
Asian	2.6%	2.7%	+0.1%	2.1%	2.3%	+0.2%
Native Hawaiian and Other Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Some other race	0.9%	1.2%	+0.3%	0.4%	0.4%	0.0%

TABLE 6: ECONOMIC TRENDS IN CUYAHOGA COUNTY AND SUMMIT COUNTY: INCOME AND POVERTY

	Cuyahoga County			Summit County		
	2010	2013	Percent Change	2010	2013	Percent Change
Total Households	534,653	532,702	-0.4%	222,330	219,214	-1.4%
Less than $10,000	10.2%	11.2%	+1.0%	7.9%	8.2%	+.3%
$10,000 to $14,999	6.5%	6.9%	+0.4%	5.4%	6.1%	+.7%
$15,000 to $24,999	12.1%	12.6%	+0.5%	10.4%	11.4%	+1.0%
$25,000 to $34,999	11.2%	11.3%	+0.1%	11.1%	10.8%	-0.3%
$35,000 to $49,999	14.3%	13.7%	-0.6%	15.1%	14.3%	-0.8%
$50,000 to $74,999	16.9%	16.6%	-0.3%	18.8%	18.8%	0.0%
$75,000 to $99,999	10.9%	10.3%	-0.6%	11.7%	11.7%	0.0%
$100,000 to $149,999	10.8%	10.2%	-0.6%	11.7%	11.3%	-0.4%
$150,000 to $199,999	3.6%	3.4%	-0.2%	4.5%	3.5%	-1.0%
$200,000 or more	3.6%	3.7%	+0.1%	3.5%	3.8%	+0.3%
Median household income (dollars)	$45,184	$43,112	-4.6%	$50,138	$49,146	-2.0%
Mean household income (dollars)	$64,552	$63,340	-1.9%	$67,534	$66,648	-1.3%
Percent of households with Social Security	29.0%	30.4%	+1.4%	27.9%	30.4%	+2.5%
Mean Social Security income (dollars)	$16,127	$15,921	-1.3%	$16,927	$16,856	-0.4%
Percent with retirement income	18.5%	18.8%	+0.3	19.6%	20.9%	+1.3%
Mean retirement income (dollars)	$21,612	$21,819	+1.0%	$21,998	$22,560	+2.5%
Percent with Supplemental Security income	5.3%	6.8%	+1.5%	3.9%	5.5%	+1.6%
Mean Supplemental Security income (dollars)	$8,406	$8,860	+5.4%	$8,760	$9,288	+5.7%
Percent with cash public assistance income	3.7%	4.3%	+0.6%	4.6%	5.1%	+0.5%
Mean cash public assistance income (dollars)	$3,142	$2,925	-6.9%	$3,458	$3,700	+6.5%
With Food Stamp/SNAP benefits in the past 12 months	14.5%	18.3%	+3.8%	11.8%	14.9%	+3.1%

Source: U.S. Decennial Census, American Community survey projections to 2013

TABLE 7: MOST ECONOMICALLY VULNERABLE COUNTY RESIDENTS

	Cuyahoga County			Summit County		
	2010	2013	Percent Change	2010	2013	Percent Change
Percent of families under the poverty line	13.1%	14.4%	+1.3%	10.1%	11.3%	+1.2%
Percent of households with related children under 18 years under the poverty line	21.2%	23.9%	+2.7%	17.8%	19.4%	+1.6%
Percent of households with related children under 5 years (no older children) under the poverty line	21.5%	26.1%	+4.6%	29.6%	23.5%	-6.1%
Percent of married couple families under the poverty line	4.3%	5.1%	+0.8%	3.6%	3.8%	+0.2%
Percent of married couple families with related children under 18 years under the poverty line	5.6%	7.7%	+2.1%	6.0%	5.1%	-0.9%
Percent of married couple families with related children under 5 years (no older children) under the poverty line	4.5%	8.4%	+3.9%	5.9%	3.8%	-2.1%
Percent of families with female householder, no husband present, under the poverty line	33.1%	34.2%	+1.1%	30.7%	33.9%	+3.2%
Percent of families with female householder, no husband present, with related children under 18 years, under the poverty line	43.2%	45.7%	+2.5%	43.2%	45.3%	+2.1%
Percent of families with female householder, no husband present, with related children under 5 years (no older children), under the poverty line	46.7%	52.9%	+6.2%	61.4%	61.5%	+0.1%
Percent of all people in county under the poverty line:	17.3%	18.7%	+1.4%	14.0%	15.6%	+1.6%
Of those under 18 years	26.1%	28.1%	+2.0%	20.4%	22.8%	+2.4%
Of those with related children under 18 years	25.8%	27.8%	+2.0%	20.1%	22.5%	+2.4%
Of those with related children under 5 years	30.4%	31.7%	+1.3%	27.3%	27.8%	+0.5%
Of those with related children 5 to 17 years	24.2%	26.3%	+2.1%	17.6%	20.6%	+3.0%
Living under poverty line, by age:						
Of those 18 years and over	14.6%	16.0%	+1.4%	12.1%	13.5%	+1.4%
18 to 64 years	15.6%	17.2%	+1.6%	13.0%	15.0%	+2.0%
65 years and over	10.8%	11.2%	+0.4%	7.8%	7.5%	-0.3%
Percent with health insurance coverage	88.2%	88.7%	+0.5%	88.7%	88.9%	+0.2%
Percent with private health insurance	67.6%	65.6%	-2.0%	72.9%	70.1%	-2.8%
Percent with public coverage	32.9%	35.2%	+2.3%	28.0%	31.1%	+3.1%
Percent with no health insurance coverage	11.8%	11.3%	-0.5%	11.3%	11.1%	-0.2%

Source: U.S. Decennial Census, American Community Survey projections to 2013

D. UH Bedford Medical Center Patients Served

Table 8: Hospitalizations, UH Bedford Medical Center Market Area Residents 2011 to 2013 shows that between 2011 and 2013, the number of patient discharges decreased for UH Bedford Medical Center by 27.8% within the primary market area and 44.9% in the secondary market area, thus 32.4% overall. This substantial decline in hospitalizations does not appear to be reflective of a similar level of decreased hospitalization rates for the population within the hospital's footprint overall, as the number of hospitalizations for the total market area (regardless of hospital) declined by 2.8% from 2011 to 2013.

Of all discharges in 2013, three-fourths (73.0%) were Medicare patients and 9% were Medicaid patients, shown in Table 9: UH Bedford Medical Center, 2013 Discharges, by Payer. These percentages were similar within the primary and secondary markets, but some differences exist across ZIP code areas within those markets, most notably Solon (44139) from which 91.3% of the discharged patients in 2013 were Medicare patients (compared to no more than 85.7% from any other municipality/ZIP code). In contrast, the municipalities/ZIP codes with the lowest Medicare discharges instead had the highest Medicaid support for health care: Maple Heights (16.5% Medicaid) and Garfield Heights (13.2% Medicaid).

The proportion of those covered by commercially available insurance was almost identical between the primary and secondary market areas (9.7% and 9.3%, respectively).

Illustrated in Figure 3: Age of UH Bedford Medical Center's Discharged Patients, 2013, by Market, in 2013, all discharged patients from UH Bedford Medical Center market areas were adults (ages 18 and older). The median age for primary market patient discharges in 2013 was 72; the median age for secondary market patient discharges was slightly older at 76 years of age.

TABLE 8: HOSPITALIZATIONS, UH BEDFORD MEDICAL CENTER MARKET AREA RESIDENTS

2011 TO 2013 UH BEDFORD MEDICAL CENTER'S DISCHARGES VERSUS ALL OTHER OHIO HOSPITALS' DISCHARGES

		UH Bedford Medical Center's Primary Market	UH Bedford Medical Center's Secondary Market	Total UH Bedford Medical Center Market Area Residents
2011	Discharges from Other Hospital	9,297	15,712	25,009
	Discharges from UH Bedford Medical Center	2,051	740	2,791
	Total Discharges, Market Area	11,348	16,452	27,800
2012	Discharges from Other Hospital	9,818	15,590	25,408
	Discharges from UH Bedford Medical Center	1,703	488	2,191
	Total Discharges, Market Area	11,521	16,078	27,599
2013	Discharges from Other Hospital	9,544	15,592	25,136
	Discharges from UH Bedford Medical Center	1,480	408	1,888
	Total Discharges, Market Area	11,024	16,000	27,024
Change in Discharges from Other Hospitals, 2011 to 2013		2.7%	-0.8%	0.5%
Change in Discharges from UH Bedford Medical Center, 2011 to 2013		-27.8%	-44.9%	-32.4%
Change in Discharges from Any Area Hospital, Total Market Area		-2.9%	-2.7%	-2.8%

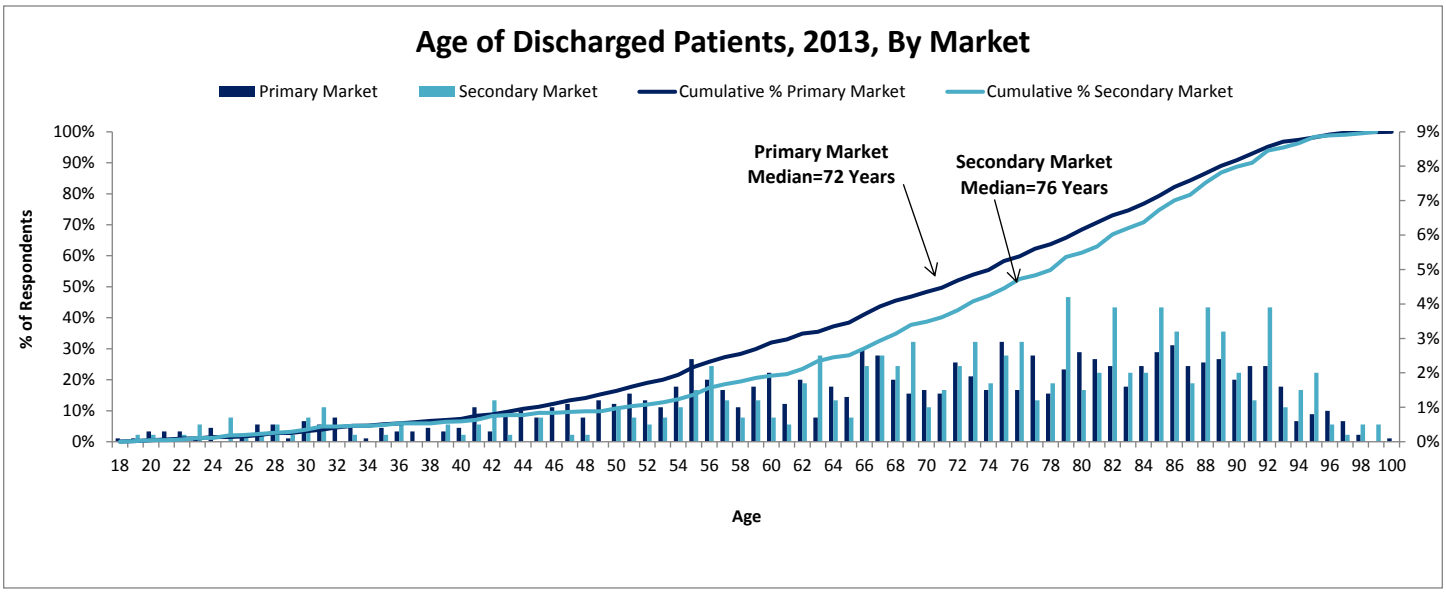
Source: Ohio Hospital Association discharge data

TABLE 9: UH BEDFORD MEDICAL CENTER, 2013 DISCHARGES, BY PAYER

			Percent in ZIP Code By Payer				
		Number of Discharges	Medicare	Medicaid	Commercial	Other	Self-Pay
Primary Market Area							
Summit County	Northfield (44067)	169	76.3%	5.3%	8.9%	4.7%	4.7%
Cuyahoga County	Maple Heights (44137)	278	61.9%	16.5%	10.8%	5.8%	5.0%
	Bedford (44146)	1,033	74.4%	7.6%	9.6%	4.7%	3.7%
Subtotal Primary Market		**1,480**	**72.3%**	**9.0%**	**9.7%**	**4.9%**	**4.1%**
Secondary Market Area							
Summit County	Macedonia (44056)	49	85.7%	2.0%	12.2%	0.0%	0.0%
	Twinsburg (44087)	88	83.0%	6.8%	5.7%	1.1%	3.4%
Cuyahoga County	Cranwood Station (44128)	91	72.5%	9.9%	11.0%	3.3%	3.3%
	Solon (44139)	104	91.3%	1.0%	3.8%	1.9%	1.9%
	Garfield Heights (44125)	76	60.5%	13.2%	17.1%	6.6%	2.6%
Subtotal Secondary Market		**408**	**78.9%**	**6.6%**	**9.3%**	**2.7%**	**2.5%**
Total Market		**1,888**	**73.7%**	**8.5%**	**9.6%**	**4.4%**	**3.7%**
Out of Market		**412**	**69.7%**	**11.2%**	**9.5%**	**5.6%**	**4.1%**
Total		**2,300**	**73.0%**	**9.0%**	**9.6%**	**4.7%**	**3.8%**

Source: Ohio Hospital Association discharge data

FIGURE 3: AGE OF UH BEDFORD MEDICAL CENTER'S DISCHARGED PATIENTS, 2013, BY MARKET



Source: Ohio Hospital Association discharge data

E. Ambulatory Care Sensitive Discharges

ADULTS

Using discharge data from UH Bedford Medical Center, which includes the reason for patient admission into the hospital, "ambulatory care sensitive discharges" can be identified. Ambulatory care sensitive (ACS) conditions are conditions for which "good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease," according to the Agency for Healthcare Research and Quality. The incidence of ambulatory care sensitive discharges has been used as an index of adequate primary care in a market area. The diagnostic categories (and associated ICD-9-CM codes) can be found in the Appendix.

Table 10: UH Bedford Medical Center, Primary and Secondary Diagnoses of Adult (Age 16+) ACS Discharges in 2013 shows the number of adult discharges for UH Bedford Medical Center in 2013 and the percent that were ACS cases. For all discharges, there are both primary and nonprimary diagnoses ("secondary" diagnoses), and both are shown in the table below. Patients can have up to 14 different secondary diagnoses.

For UH Bedford Medical Center, 33.9% of discharges in 2013 were ACS discharges of residents within the primary and secondary market areas combined. This may signal lower availability or access to primary care within the total market area.

The most common primary ACS diagnoses for UH Bedford Medical Center's discharged patients in 2013 were congestive heart failure (6.9%), bacterial pneumonia (6.5%) and chronic obstructive pulmonary disease (COPD) (5.7%).

In terms of secondary diagnoses in 2013, congestive heart failure comprised an additional 32% of discharges and COPD comprised an additional 22.1% of discharges. Likewise, kidney/urinary infections were both fairly common primary (5.1%) and secondary (14.2%) diagnoses.

One-third (34.0%) of discharged patients were diabetic and half (48.4%) had a primary or secondary diagnosis of hypertension in 2013.

The incidence of ACS primary diagnoses differs by patients' age groups, shown in Table 11: UH Bedford Medical Center, Primary Diagnosis, ACS Discharges in 2013, by Age Group. Patients under age 40 were less likely to have a primary ACS diagnosis (28.5%) than their older counterparts in 2013 among UH Bedford Medical Center discharges. Congestive heart failure, COPD and bacterial pneumonia were far more common ACS conditions among older (age 40+) patients than among those under age 40. Cellulitis, diabetes and asthma were more common among those under age 40 than among patients ages 40 and older.

TABLE 10: UH BEDFORD MEDICAL CENTER, PRIMARY AND SECONDARY DIAGNOSES OF ADULT (AGE 16+) ACS DISCHARGES IN 2013

		Primary Diagnosis		Secondary Diagnosis
No ACS Condition	1,248	66.1%		
Specific ACS Conditions:				
Congestive Heart Failure (CHF)	131	6.9%	604	32.0%
Bacterial Pneumonia	123	6.5%	132	7.0%
Chronic Obstructive Pulmonary Disease (COPD)	108	5.7%	418	22.1%
Kidney/Urinary Infections	97	5.1%	268	14.2%
Cellulitis	56	3.0%	65	3.4%
Diabetes	36	1.9%	642	34.0%
Epilepsy	27	1.4%	105	5.6%
Dehydration/Volume Depletion	17	0.9%	248	13.1%
Asthma	17	0.9%	72	3.8%
Gastroenteritis	6	0.3%	10	0.5%
Hypertension	6	0.3%	908	48.1%
Iron Deficiency Anemia	6	0.3%	40	2.1%
Angina	5	0.3%	20	1.1%
Severe ENT Infections	1	0.1%	6	0.3%
Nutritional Deficiencies	1	0.1%	30	1.6%
Pelvic Inflammatory Disease	1	0.1%	1	0.1%

Source: Ohio Hospital Association discharge data.
Source: Definition of ACS conditions: Billings J, Zeitel L, Lukomnik J, Carey TS, Blank AE, Newman L. Impact of socio-economic status on hospital use in New York City. Health Affairs (Millwood) 1993; 12(1):172-173.

TABLE 11: UH BEDFORD MEDICAL CENTER, PRIMARY DIAGNOSIS, ACS DISCHARGES IN 2013, BY AGE GROUP

	< Age 40 (848 Discharges)	Ages 40 to 64 (2,534 Discharges)	Age 65+ (7,258 Discharges)
No ACS Condition	71.5%	63.7%	66.6%
Congestive Heart Failure (CHF)	0.0%	6.4%	7.9%
Chronic Obstructive Pulmonary Disease (COPD)	0.8%	8.5%	5.1%
Bacterial Pneumonia	3.1%	6.0%	7.1%
Kidney/Urinary Tract Infections	3.1%	2.3%	6.6%
Cellulitis	5.4%	4.5%	2.0%
Diabetes	7.7%	2.1%	1.2%
Asthma	2.3%	1.9%	0.3%

Source: Ohio Hospital Association discharge data.

Table 11: UH Bedford Medical Center, Primary Diagnosis, ACS Discharges in 2013, by Age Group shows the incidence of ACS cases among discharged patients for UH Bedford Medical Center in 2013, and that is useful to point out the proportion of discharged patients who may have avoided hospitalization if, for example, they had increased access to primary medical care.

Table 12: UH Bedford Medical Center Market Areas Versus Contiguous Counties, Primary Diagnosis of Adult (Age 18+) ACS Discharges in 2013 displays the number of adult discharges with ACS conditions as a primary diagnosis for UH Bedford Medical Center in 2013 compared to Cuyahoga County, Summit County (hospitalizations for UH Bedford Medical Center and other hospitals, combined) and nearby Northeast Ohio counties. This table also isolates the ACS discharge rate for those who live in UH Bedford Medical Center's market areas, regardless of which hospital they were admitted to.

UH Bedford Medical Center had higher rates of ACS discharges compared to each of the four comparison counties (33.9% versus 18.7%, at worst). Another way to examine the data is to look at the incidence of ACS cases within UH Bedford Medical Center's market area, regardless of which hospital patients were discharged from. This may provide a clearer picture of the relative need for primary care in this area. In UH Bedford Medical Center's market area, 18.2% of discharges are ACS cases, which is comparable to the ACS discharge level in surrounding counties.

A review of the more common ACS conditions by payer may shed light on particular primary care-related issues that are more or less common within certain subpopulations, shown in Table 13: UH Bedford Medical Center, Primary Diagnosis of Adult (Age 18+) ACS Versus Non-ACS Discharges in 2013, by Primary Payer.

Congestive heart failure (7.3%) and kidney/urinary infections (6.3%) were more common among Medicare patients than among those with other sources of health coverage; this is likely associated with age.

TABLE 12: UH BEDFORD MEDICAL CENTER MARKET AREAS VERSUS CONTIGUOUS COUNTIES, PRIMARY DIAGNOSIS OF ADULT (AGE 18+) ACS DISCHARGES IN 2013

	UH Bedford Medical Center	UH Bedford Medical Center Market Area (Discharge from All Area Hospitals)	Cuyahoga County	Summit County	Medina County	Lorain County
No ACS Condition	66.1%	81.8%	81.3%	81.9%	83.2%	84.3%
ACS Condition, Total	33.9%	18.2%	18.7%	18.1%	16.8%	15.7%
Specific ACS Conditions:						
Congestive Heart Failure (CHF)	6.9%	3.8%	3.8%	3.5%	2.9%	3.4%
Chronic Obstructive Pulmonary Disease (COPD)	5.7%	2.2%	2.5%	2.4%	2.1%	1.9%
Bacterial Pneumonia	6.5%	2.8%	2.6%	2.9%	3.4%	2.4%
Kidney/Urinary Infections	5.1%	1.7%	1.9%	2.1%	2.1%	1.9%
Cellulitis	3.0%	1.7%	2.1%	2.4%	2.2%	2.3%
Diabetes	1.9%	1.3%	1.4%	1.4%	1.0%	0.8%
Asthma	0.9%	1.8%	1.7%	1.0%	0.9%	0.7%
Dehydration/Volume Depletion	0.9%	0.6%	0.5%	0.7%	0.6%	0.6%
Iron Deficiency Anemia	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%
Hypertension	0.3%	0.3%	0.4%	0.3%	0.2%	0.2%
Angina	0.3%	0.1%	0.1%	0.1%	0.1%	0.1%
Epilepsy	1.4%	0.9%	0.7%	0.5%	0.4%	0.5%
Nutritional Deficiencies	0.1%	0.0%	0.02%	0.03%	0.01%	0.01%
Gastroenteritis	0.3%	0.2%	0.3%	0.3%	0.3%	0.2%
Severe ENT Infections	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Dental Conditions	0.0%	0.1%	0.1%	0.1%	0.01%	0.02%
Convulsions	0.0%	0.4%	0.2%	0.2%	0.2%	0.2%
Pelvic Inflammatory Disease	0.1%	0.1%	0.1%	0.04%	0.01%	0.02%
Hypoglycemia	0.0%	0.01%	0.02%	0.01%	0.01%	0.02%
Immunization-Related and Preventable Conditions	0.0%	0.001%	0.001%	0.0%	0.01%	0.01%

Source: Ohio Hospital Association discharge data.
Source: Definition of ACS conditions: Billings et al. 1993.

TABLE 13: UH BEDFORD MEDICAL CENTER, PRIMARY DIAGNOSIS OF ADULT (AGE 18+) ACS VERSUS NON-ACS DISCHARGES IN 2013, BY PRIMARY PAYER

MORE COMMON ACS CONDITIONS

	Medicare	Medicaid	Commercial	Other*	Self-Pay	Total
Number of Discharges	1,392	160	182	84	70	1,888
No ACS Primary Diagnosis	65.9%	68.8%	62.1%	65.5%	75.7%	66.1%
Specific ACS Conditions:						
Congestive Heart Failure (CHF)	7.3%	3.8%	6.6%	9.5%	4.3%	6.9%
Bacterial Pneumonia	7.0%	5.0%	7.1%	3.6%	2.9%	6.5%
Chronic Obstructive Pulmonary Disease (COPD)	5.4%	5.6%	9.3%	7.1%	1.4%	5.7%
Kidney/Urinary Infections	6.3%	3.1%	1.1%	3.6%	0.0%	5.1%
Cellulitis	2.7%	2.5%	4.9%	2.4%	4.3%	3.0%
Diabetes	1.7%	1.3%	3.3%	1.2%	5.7%	1.9%
Asthma	0.3%	1.3%	2.7%	3.6%	4.3%	0.9%

**Number of discharges is too small to reliably draw conclusions; not considered in analysis.*
Source: Ohio Hospital Association discharge data.
Source: Definition of ACS conditions: Billings et al. 1993.

UH Bedford Medical Center Discharges

This section again examines UH Bedford Medical Center's discharge data from 2013. These data provide primary and secondary diagnosis information for each patient discharged in 2013. This data evaluation seeks to identify particular diagnoses or diagnostic categories that can shed light on how public health or preventive care initiatives could impact the overall health of Cuyahoga County residents.

Table 14: UH Bedford Medical Center, Primary and Secondary Diagnosis of Adults (Age 18+) Discharged in 2013 shows the number and percentage of discharges based on the major diagnostic category of adult patients' primary diagnoses. There are more than 17,000 different medical diagnostic codes. For specific diagnoses, only those that were relatively common are shown.

In 2013, the most common primary diagnostic category (21.4%) was diseases of the circulatory system. Heart failure was the most common primary diagnosis within that category (6.9%), but 32.3% of discharges had a secondary diagnosis of heart failure.

Diseases of the respiratory system were also very common as primary diagnoses (18.1%). Pneumonia and chronic bronchitis were the two most common specific diagnoses in this category. Also common were digestive system diseases (11.1%), and while no specific digestive disease primary diagnosis was very common, 14.7% of discharged patients had a secondary diagnosis of diseases of the esophagus.

Almost half of all discharges (48.7%) had a secondary diagnosis of essential hypertension; 13.5% had a secondary diagnosis of acute renal failure, but 22.1% were in chronic renal failure.

One in five (20.5%) adults discharged in 2013 had a secondary diagnosis of obesity and over one-third (39.7%) were diabetic.

While very few discharged patients in 2013 had a mental disorder as a primary diagnosis, mental disorders were very common secondary diagnoses. One in five (21.9%) patients had a secondary diagnosis of nondependent drug abuse.

TABLE 14: UH BEDFORD MEDICAL CENTER, PRIMARY AND SECONDARY DIAGNOSIS OF ADULTS (AGE 18+) DISCHARGED IN 2013

	Primary Diagnosis		Secondary Diagnoses	
	Number of Cases With Diagnosis*	Percent of All Adult Cases*	Number of Cases With Diagnosis*	Percent of All Adult Cases**
Diseases of the circulatory system	404	21.4%		
Most common specific diagnoses in category:				
Heart failure	130	6.9%	602	32.3%
Cardiac dysrhythmias	72	3.8%	539	28.9%
Acute myocardial infarction	53	2.8%	53	2.8%
Cerebral artery occlusion	40	2.1%	5	0.3%
Essential hypertension			909	48.7%
Other chronic ischemic heart disease			492	26.4%
Hypertensive renal disease			460	24.7%
Hypotension			180	9.6%
Diseases of the respiratory system	341	18.1%		
Most common specific diagnoses in category:				
Pneumonia, organism unspecified	122	6.5%	129	6.9%
Chronic bronchitis	107	5.7%	97	5.2%
Chronic airway obstruction, not elsewhere classified			313	16.8%
Other lung diseases			166	8.9%
Asthma			72	3.9%
Diseases of the digestive system	209	11.1%		
Most common specific diagnoses in category:				
Diseases of esophagus			275	14.7%
Diseases of the genitourinary system	196	10.4%		
Most common specific diagnoses in category:				
Other urinary tract disorder	94	5.0%	302	16.2%
Acute renal failure	66	3.5%	252	13.5%
Chronic renal failure			413	22.1%
Hyperplasia of prostate			97	5.2%
Injury and poisoning	144	7.6%		

	Primary Diagnosis		Secondary Diagnoses	
	Number of Cases With Diagnosis*	Percent of All Adult Cases*	Number of Cases With Diagnosis*	Percent of All Adult Cases**
Most common specific diagnoses in category:				
Replace and graft complications	40	2.1%	16	.9%
Infectious and parasitic diseases	140	7.4%		
Most common specific diagnoses in category:				
Septicemia	114	6.0%	21	1.1%
Bacterial infection in other disease, not elsewhere classified			128	6.9%
Symptoms, signs and ill-defined conditions	126	6.7%		
Most common specific diagnoses in category:				
General symptoms	53	2.8%	349	18.7%
Gastrointestinal system symptoms			246	13.2%
Respiratory system, other chest symptoms			145	7.8%
Cardiovascular system symptoms			104	5.6%
Endocrine, nutritional and metabolic diseases and immunity disorders	93	4.9%		
Most common specific diagnoses in category:				
Diabetes mellitus	45	2.4%	740	39.7%
Fluid/electrolyte diseases	43	2.3%	1,030	55.2%
Diseases of lipoid metabolism			662	35.5%
Obesity/ hyperalimentation			261	20.5%
Acquired hypothyroidism			230	12.9%
Diseases of mineral metabolism			147	7.9%
Diseases of the skin and subcutaneous tissue	65	3.4%		
Most common specific diagnoses in category:				
Other cellulitis/abscess	52	2.8%	57	3.1%

	Primary Diagnosis		Secondary Diagnoses	
	Number of Cases With Diagnosis*	Percent of All Adult Cases*	Number of Cases With Diagnosis*	Percent of All Adult Cases**
Chronic ulcer of skin			286	15.3%
Diseases of the nervous system	39	2.1%		
Most common specific diagnoses in category:				
Epilepsy			105	5.6%
Diseases of the musculoskeletal system and connective tissue	38	2.0%		
Most common specific diagnoses in category:				
Osteoarthrosis			233	12.5%
Diseases of the blood and blood-forming organs	31	1.6%		
Most common specific diagnoses in category:				
Anemia not otherwise classified			605	32.4%
White blood cell disorders			170	9.1%
Neoplasms-malignant	24	1.3%		
Mental disorders	24	1.3%		
Most common specific diagnoses in category:				
Nondependent drug abuse			408	21.9%
Other organic psychiatric conditions			403	21.6%
Depressive disorder, not elsewhere classified			174	9.3%
Neurotic disorders			162	8.7%
Neoplasms-benign	9	0.5%		
Complications of pregnancy, childbirth and the puerperium	3	0.2%		
Diseases of the sense organs	1	0.1%		

**Total includes all diagnoses within this category, not just those shown.*
***These are duplicated counts; patients may have more than one secondary diagnosis.*
Source: Ohio Hospital Association discharge data.

F. Market Area Mortality and Morbidity

Table 15: Most Prevalent Causes of Death or Impaired Health (per 100,000 adults) and Table 16: Most Prevalent Morbidity – Adults and Youth show the most prevalent types of mortality and morbidity of chronic diseases and other health-impacting events in the UH Bedford Medical Center market area.

Cancer is the leading cause of death for adults in Cuyahoga County, followed by coronary heart disease. CDC data show that the prevalence of these are higher in Cuyahoga County than in peer counties. While the mortality rates for both cancer and coronary heart disease are lower in Summit County, those conditions are the leading causes of death in Summit County also.

Strokes, accidents, diabetes and kidney disease combined account for far fewer deaths than cancer deaths in both counties. Stroke mortality is higher in Summit County than in Cuyahoga County.

The diabetes mortality rate in Cuyahoga County, while among the less prevalent fatal conditions in Cuyahoga County, is higher than average when compared to peer counties. In contrast, Cuyahoga County has a lower-than-expected prevalence of motor vehicle deaths.

Note that annually approximately 559.7 per 100,000 Cuyahoga County residents are victims of violent crime. The prevalence of violent crime is somewhat lower in Summit County (405.6 per 100,000 Summit County residents).

Linked to the most common death rates are common habitual behaviors. About one-fourth of Cuyahoga residents are obese (BMI > 30); one in five are tobacco smokers. The obesity rate is slightly higher in Summit County (28.4%) but smoking prevalence is almost identical (19.0%) to Cuyahoga County's smoking rate.

Finally, the CDC also designates Cuyahoga County as one with lower-than-average access to primary care providers in that the county has a higher-than-average hospitalization rate for older adults (74.5 per 1,000 Medicare enrollees).

Summit County fares better than its peer counties in terms of prevalence of smoking and teen births. Summit County compares unfavorably to its peer counties in terms of older adult depression, older adult asthma, Alzheimer's disease and preterm births.

TABLE 15: MOST PREVALENT CAUSES OF DEATH OR IMPAIRED HEALTH (PER 100,000 ADULTS)

	Cuyahoga County	Summit County	U.S. Median, of All Counties
	Annual, Per 100,000 adults		
Cancer Deaths	196.1	190.8	185.0
Coronary Heart Disease Deaths	151.3	113.6	126.7
Stroke Deaths	38.7	44.8	46.0
Accidental Deaths (including motor vehicle)	32.1	34.1	50.8
Motor Vehicle Deaths	5.7	7.7	19.2
Diabetes Deaths	23.1	24.2	24.7
Kidney Disease Deaths	15	14.9	17.5
Violent Crime (homicide, rape, assault)	559.7	405.6	199.2

Source: U.S. Centers for Disease Control and Prevention, 2015

TABLE 16: MOST PREVALENT MORBIDITY – ADULTS AND YOUTH

	Cuyahoga County	Summit County	U.S. Median, of All Counties
	Percent Morbidity		
Adults:			
Obesity	26.4%	28.4%	30.4%
Smokers	19.3%	19.0%	21.7%
Adult Diabetes	7.7%		
Older Adult Depression	14.0%	17.2%	12.4%
Older Adult Asthma	5.2%	5.4%	3.6%
Alzheimer's Disease (among older adults)	14.4%	14.6%	10.3%
Preterm Births	14.4%	13.6%	12.1%
Youth:			
Teen Births (of females ages 15 to 19)	3.9%	3.3%	4.2%

Source: U.S. Centers for Disease Control and Prevention, 2015

G. Primary Analysis of Representative Sample of Market Area Population

The ACS analysis section provided evidence from UH Bedford Medical Center's discharge data that market area residents may lack full access to primary care. To further understand market area health needs, the following section presents the results of a mail survey of Cuyahoga and Summit county adults (who reside in UH Bedford Medical Center's market areas) regarding their health and access to health care.

A random mail survey of households in Cuyahoga County was conducted in 2012. A total of 602 surveys were completed of which only 67 (11.1%) were in UH Bedford Medical Center's primary or secondary market areas. This sample size is too small to adequately represent the total adult population in UH Bedford Medical Center's market area; however, the findings from that study are reported isolating those who live in the medical center's market area with the caveat that the findings are directional in nature only. Surveys were commissioned by Cuyahoga County Health Partners and conducted by the Hospital Council for Northwest Ohio to capture a comprehensive picture of Cuyahoga County residents' health status. There was no survey like this conducted in Summit County and therefore, no data for that portion of UH Bedford Medical Center's market area is available. There also were no similar studies commissioned to capture data for children or youth.

Population Health Status

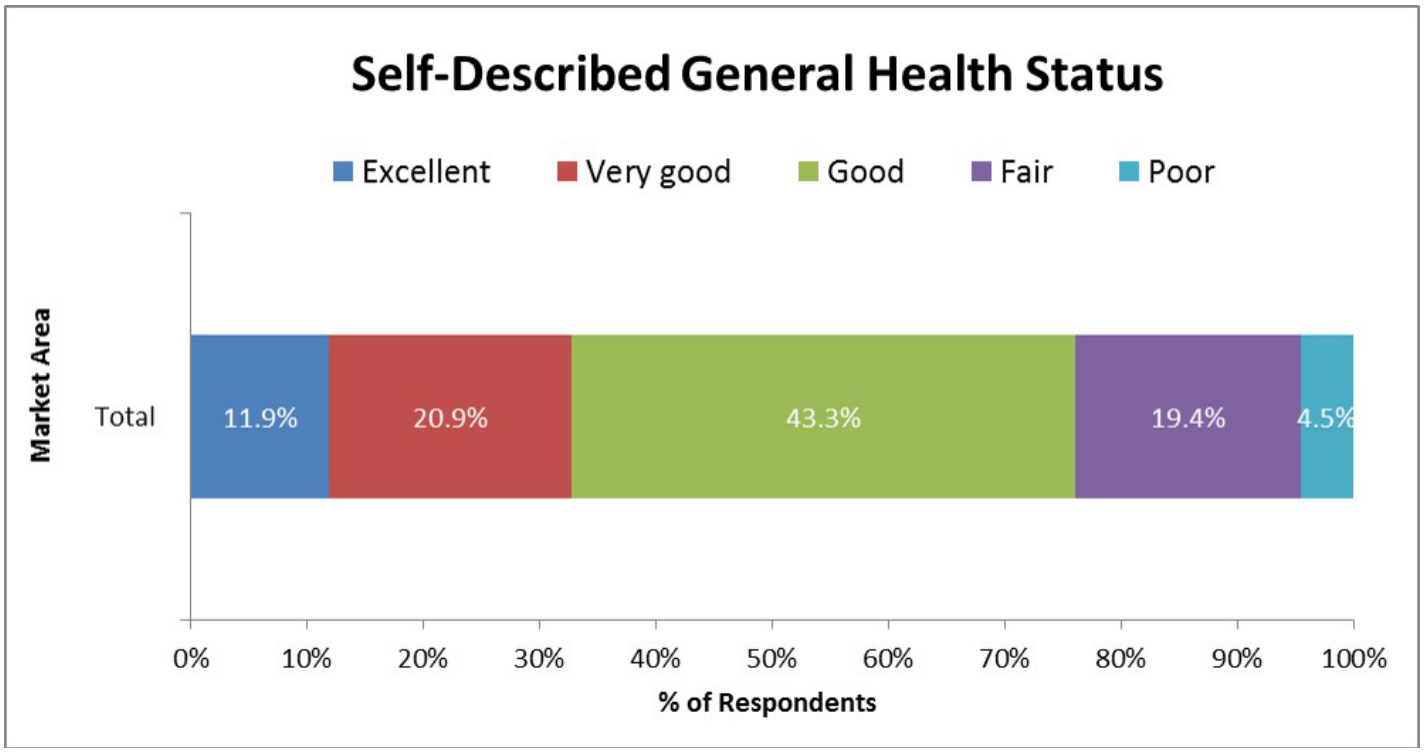
This section describes the self-reported health status of the population within UH Bedford Medical Center's market area. Survey respondents for the county-wide data were designated as residents of UH Bedford Medical Center's market area via their residential ZIP code. Keep in mind that the sample size for the survey data for those who live within UH Bedford Medical Center's market area in Cuyahoga County is very small (n=67) and is below industry standards for survey data. The results should be interpreted with care as they are only directional and not representative of the total adult population in the hospital's market area in Cuyahoga County.

Seeking medical care outside of the county was uncommon for Cuyahoga County adults (within UH Bedford Medical Center's market areas) in 2012: only 10.8% sought any type of medical care outside of the county within the year prior to the survey; only 1.5% of those adults surveyed sought primary care outside of the county.

Likewise, most (76.1%) report their 'overall health care' as at least good, illustrated in Figure 4: Ratings of Overall Health Care. About one in four (23.9%) felt their overall health was 'fair' or 'poor.'

Table 17: Self-Described Physical and Mental Health Status: Past 30 Days shows that residents within UH Bedford Medical Center's market area reported that their physical health was 'not good' an average (mean) of 4.2 days during the previous 30 days. On average, this group reported that their mental health was 'not good' an average (mean) of 4.5 days. For them, these less-than-optimal health days prevented them from doing their normal activities (work, school) an average of 3.0 days within that 30-day period. Note that most (64.5%) reported zero days with physical health problems within the 30-day period, and 64.5% reported zero days with any mental health issues during that time. Three in four (75.9%) reported that their health didn't keep them from any of their normal activities within the past 30 days.

FIGURE 4: RATINGS OF OVERALL HEALTH CARE



Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

TABLE 17: SELF-DESCRIBED PHYSICAL AND MENTAL HEALTH STATUS: PAST 30 DAYS (MEAN NUMBER OF DAYS)

	Physical health 'not good'	Mental health 'not good'	Poor physical or mental health prevented normal activities
Total UH Bedford Medical Center Market			
Mean Number of Days	4.2 days	4.5 days	3.0 days
Proportion With At Least One Day	35.5%	35.5%	24.1%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

Health Care Coverage

Figure 5: Percent of Adults with Health Coverage shows the percent of adults in UH Bedford Medical Center's market area that self-reported health coverage. A majority of adults in UH Bedford Medical Center's primary and secondary market areas have health coverage (82.5%).

The U.S. Census Bureau (American Community Survey) found that 11.3% of adults in Cuyahoga County, overall, were without health insurance in 2013, which is approximately what the survey data showed.

Lack of access to health coverage is a common occurrence during some point in the adult lives of many of UH Bedford Medical Center's market area adult residents: 55.4% of those in the market area always had health coverage, meaning roughly one in two were without health coverage at some point in their adult lives.

Figure 6: Access to Health Care illustrates that a majority of adults in UH Bedford Medical Center's market area reported having a primary care provider (87.7%). More than one in three (39.4%) reported that their financial situation, combined with their level of health coverage, could prevent them from seeking needed medical care because of cost. More than one in five (21.2%) adults in UH Bedford Medical Center's market area reported transportation as a barrier to obtaining health care.

In Figure 7: Specific Sources of Care, all survey respondents (100%) were able to name a location or source from which they primarily seek health care services or information. The most common specific location where health care or information was primarily sought was a physician's office (61.2%). The second most common source for health care services or information was a public health clinic or community health center (9%). Some (9%) reported not having one specific location or type of location which they go to for health care services or information.

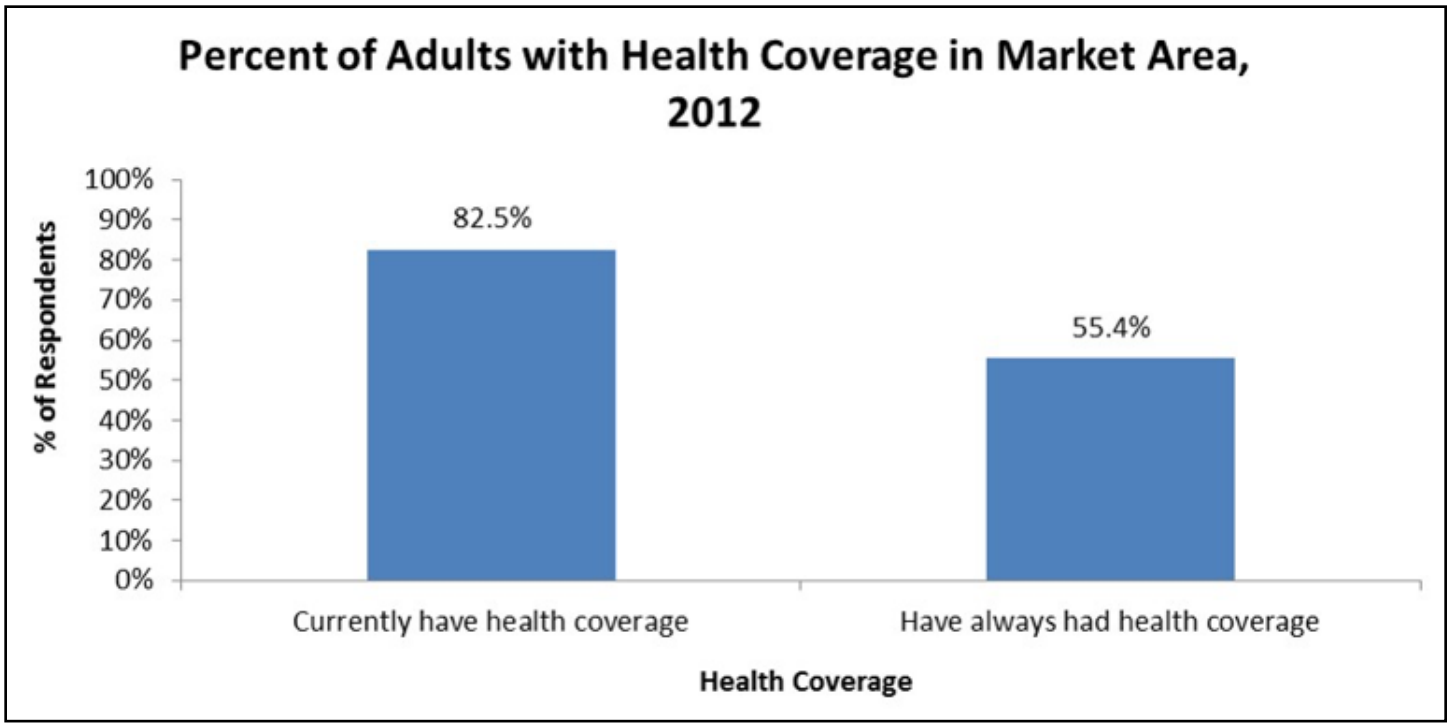
Few reported a hospital emergency room as the primary place where they seek medical care (1.5%). However, 32.8% reported seeking care from a hospital emergency department at least once in the year prior to the survey (not shown).

For those with health insurance coverage, almost two-thirds (61.3%) have a private source of insurance, shown in Figure 8: Source of Health Care Coverage. Over one-third of those with health care coverage obtain it through their own employer (38.8%) and many obtain it through another person's employer-provided coverage (14.3%). A substantial portion (34.7%) obtain their coverage through a publicly funded source, mostly Medicare (24.5%) or Medicaid/ Medical Assistance (8.2%).

About half (45%) of adults reported that at some point they have been without health care coverage as adults. Shown in Table 18: Reason for No Health Care Coverage, the reasons for loss of coverage are varied, and no reason dominates. Note that the figures below are of the total survey respondent base. Because employers were the most common source of payment for health care coverage, loss of coverage is most commonly related to a change in employment (job loss, employers not offering coverage, or loss of coverage due to reduction in work hours/status).

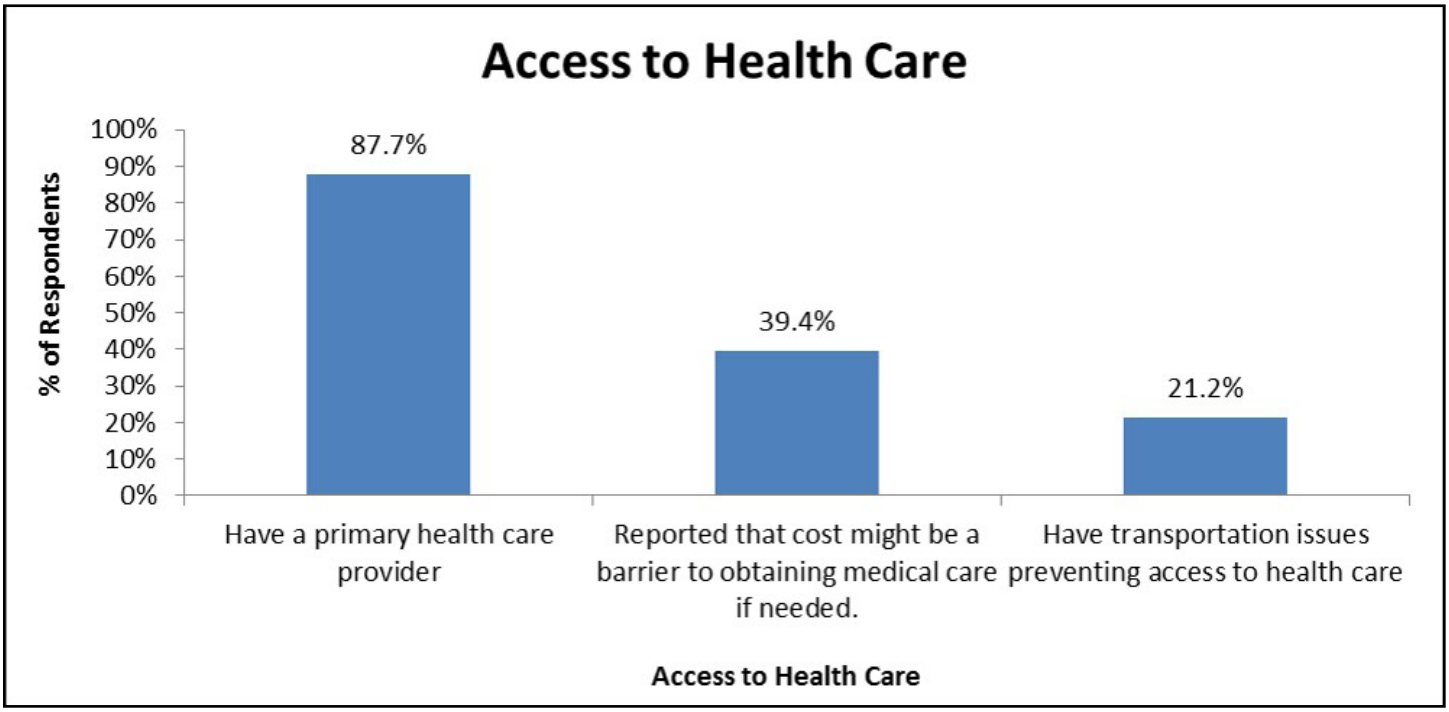
While almost all health coverage includes medical care, other types of health care are not covered for residents within UH Bedford Medical Center's market areas, shown in Figure 9: Types of Care and Coverage. Health care coverage includes medical care, and a great majority of those with coverage have a prescription plan as part of their coverage (98.1%). Only roughly three in four of those covered have plans that include mental health (83.0%), immunizations (76.6%), vision (74.0%), preventive care (66.2%) and/or dental (77.1%). Half of those covered are aware that they have plans that cover alcohol and drug treatment (45.7%), and about one-third of plans cover home care (34.1%), hospice (27.3%), and/or skilled nursing (37.8%). Many (46.7%) of those with health care coverage say their plans can also include their spouses. Fewer (40%) say their children can be or are covered under their own plan.

FIGURE 5: PERCENT OF ADULTS WITH HEALTH COVERAGE



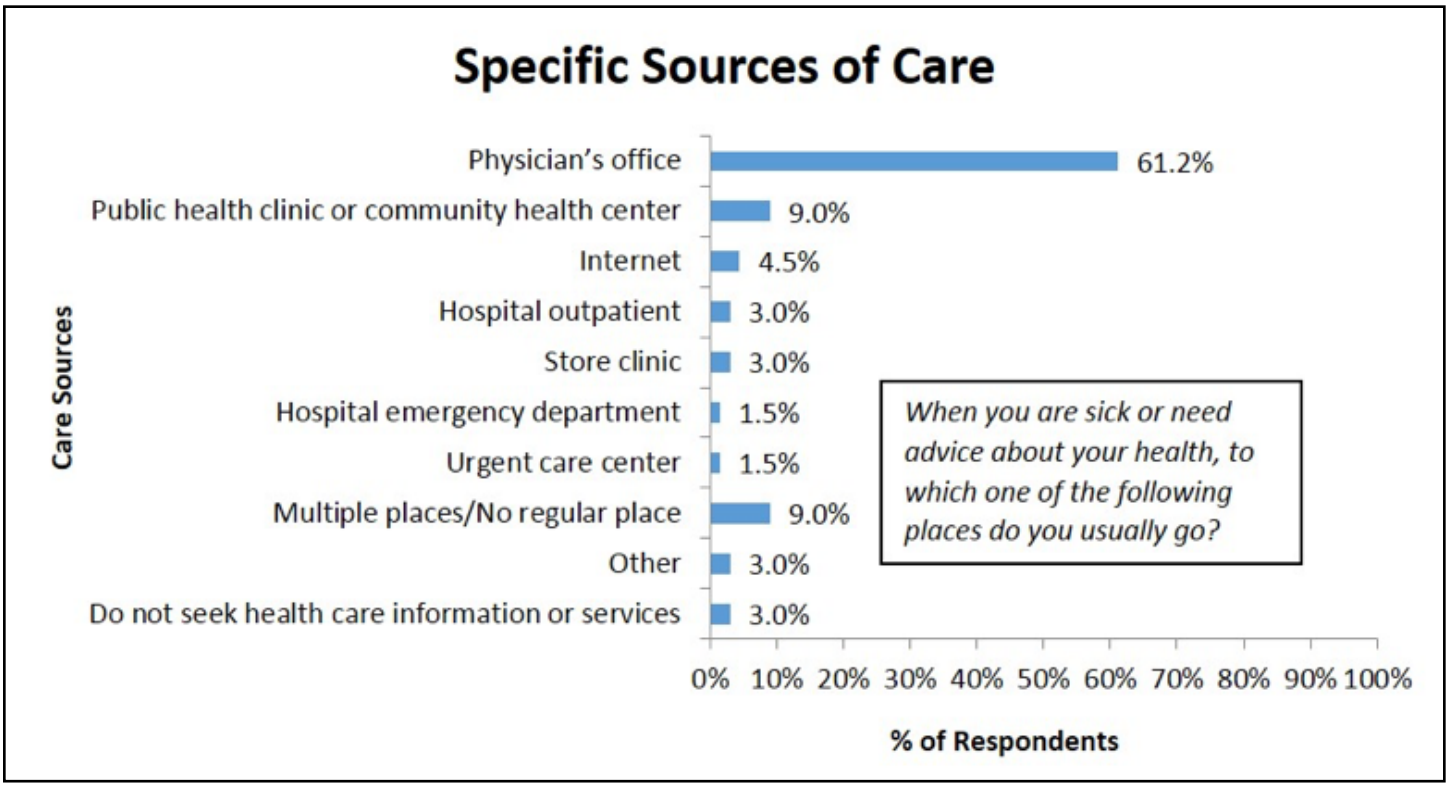
Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

FIGURE 6: ACCESS TO HEALTH CARE



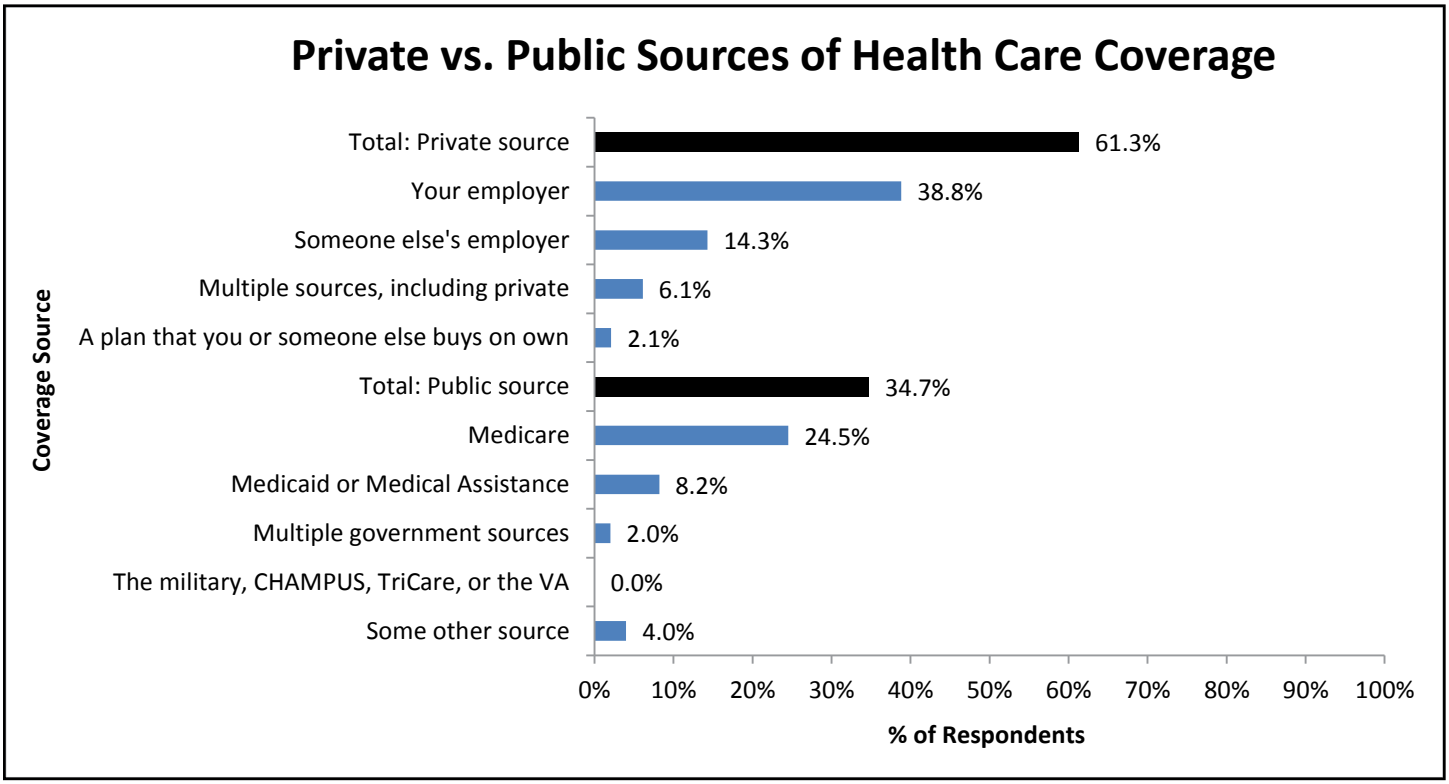
Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

FIGURE 7: SPECIFIC SOURCES OF CARE



Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

FIGURE 8: SOURCE OF HEALTH CARE COVERAGE



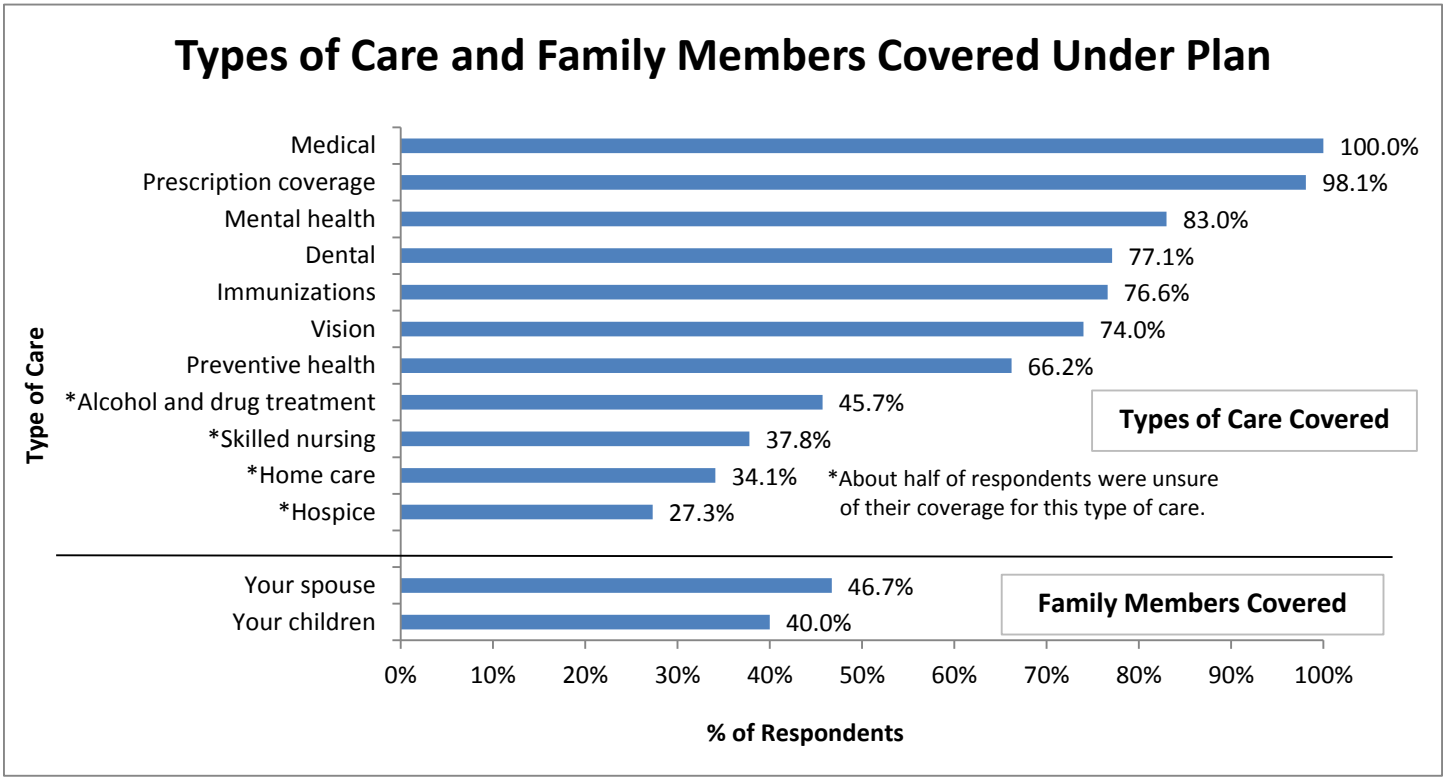
Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

TABLE 18: REASON FOR NO HEALTH CARE COVERAGE

	Of All in UH Bedford Medical Center's Market Area (n=67)
Lost job or changed employers	15.4%
Couldn't afford to pay the premiums	13.8%
Became ineligible (aged out or left school)	6.2%
Became a part-time or temporary employee	4.6%
Lost Medicaid eligibility	4.6%
Spouse or parent died	4.6%
Employer doesn't/stopped offering coverage	3.1%
Benefits from employer/former employer ran out	3.1%
Spouse or parent lost job	3.1%
Insurance company refused coverage	0.0%
Became divorced or separated	0.0%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

FIGURE 9: TYPES OF CARE AND COVERAGE



Source: Hospital Council of Northwest Ohio Community Health Needs Assessment
**About half of respondents were unsure of their coverage for this type of care.*

Health Care Utilization

Cost is often a barrier to obtaining care, and this is true for those with health care coverage. Shown in Table 19: Percent of Adults Who Have Not Obtained Preventive Care Procedures or Other Medical Services Because of Cost, more than one-third (39.4%) of all respondents (who mostly had health care insurance) reported that cost might prevent them from receiving health care if needed. Deductibles and copays are often a barrier to seeking care.

Many reported that cost has been a barrier to seeking various specific preventive care or medical services. 32% (not shown) reported that cost has been a barrier to receiving at least one of the types of medical services listed below.

In addition, having health care coverage does not equate to having a primary care physician. While most of our survey respondents had health care coverage, not all of them (91.2%) had a primary care provider, shown in Table 20: Percent of Adults with Primary Care Physician(s).

Seeking and obtaining preventive care (general medical or dental checkup) was completed by a majority of adults in UH Bedford Medical Center's market area, shown in Table 21: Incidence of Receiving Routine Health Care: UH Bedford Medical Center Primary and Secondary Market. Males were less likely to obtain prostate cancer screenings than females were to obtain breast screenings. Many preventive tests are routinely obtained by fewer than half of survey respondents.

Certain unhealthy or risky behaviors are fairly prevalent among adults in UH Bedford Medical Center's market area, illustrated in Table 22: Incidence of Unhealthy/ Risky Behaviors: UH Bedford Medical Center Primary and Secondary Market.

The survey found that 20.9% of those within UH Bedford Medical Center's market area were smokers at the time of the survey in 2012. The CDC reported that about one in five adults in Cuyahoga County were smokers in 2014. In addition, 9.1% reported using illicit drugs recreationally and 7.6% reported using medications (prescribed for others) recreationally. Recall that a large percentage of UH Bedford Medical Center patients (21.9% of adults) had a secondary diagnosis of nondependent drug abuse.

A significant proportion of households in UH Bedford Medical Center's market area either store a firearm which is not locked (7.5%), is loaded (7.5%), or is both unlocked and loaded (3.0%). About one in four (27.8%) adults in UH Bedford Medical Center's market area do not always wear a seat belt while driving in a vehicle.

Among the adult population, unhealthy consumption of alcohol (binge drinking) occurred two or more times for 35.7% of the adult population in the 30 days prior to being surveyed. 7% reported binge drinking (five or more drinks) at least once a week.

Shown in Table 23: Health Care Providers' Communication of Key Health Supporting Behaviors, UH Bedford Medical Center Primary and Secondary Market Areas, although eight in 10 surveyed adults had obtained a medical checkup within the two years prior to the survey, for many that checkup did not include discussions about diet, exercise, injury prevention or healthy sexual practices. Likewise, most were not counseled on the importance of family history as it relates to health or their immunization status.

While obesity was very common among those hospitalized at UH Bedford Medical Center in 2013 (20%), not all have had discussions with a health care provider about that health condition.

Recall that almost one in five of UH Bedford Medical Center's adult discharged patients in 2013 had a primary diagnosis of coronary heart disease. Another 59% had a secondary diagnosis of coronary heart disease. 18% had a primary diagnosis of lung diseases, which is often tied to smoking. These and related conditions are strongly tied to lifestyle choices.

TABLE 19: PERCENT OF ADULTS WHO HAVE NOT OBTAINED PREVENTIVE CARE PROCEDURES OR OTHER MEDICAL SERVICES BECAUSE OF COST

Mammogram (females)	33.4%
Pap smear test (females)	30.4%
Medications	16.7%
Colonoscopy	13.6%
Mental health treatment	9.1%
Immunizations	9.1%
Weight loss program	7.6%
Surgery	6.1%
PSA test (males)	6.0%
Smoking cessation	3.0%
Alcohol and drug treatment	3.0%
Family Planning	3.0%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

TABLE 20: PERCENT OF ADULTS WITH PRIMARY CARE PHYSICIAN(S)

	Total Market
Of All Respondents (Those With And Without Coverage)	87.7%
Of Respondents With Health Insurance Coverage	91.2%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

TABLE 21: INCIDENCE OF RECEIVING ROUTINE HEALTH CARE: UH BEDFORD MEDICAL CENTER PRIMARY AND SECONDARY MARKET

Type of Routine Health Care Service	Percent
Obtained routine checkup within past two years	78.8%
Visited a dentist for a routine checkup within past two years	81.5%
Recent blood pressure check (within past year)	94.0%
Recent cholesterol check (within past year)	68.2%
Received flu vaccine (within past year)	60.3%
Recent clinical breast exam (females only, within past year)	45.7%
Recent mammogram (females only, within past year)	38.9%
Recent Prostate-Specific Antigen test (males only, within past year)	33.3%
Recent digital exam of prostate gland (males only, within past year)	27.3%
Recent Pap smear (females only, within past year)	22.9%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

TABLE 22: INCIDENCE OF UNHEALTHY/RISKY BEHAVIORS: UH BEDFORD MEDICAL CENTER PRIMARY AND SECONDARY MARKET

Type of Unhealthy/Risky Behavior	Percent
Smoke cigarettes	20.9%
Used recreational drugs within past six months	9.1%
Have firearm(s) in home which is unlocked/loaded	7.5%/7.5%; 3.0% have firearm(s) both unlocked and loaded
Do not always wear seat belt while in vehicle	27.8%
Binge drinking, two or more times a month (within past 30 days)	35.7%
Binge drinking once a week or more	7.1%
Driving a vehicle after consuming alcohol (within past 30 days)	9.4%
Recreational use of medications prescribed for others or obtained illegally	7.6%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

TABLE 23: HEALTH CARE PROVIDERS' COMMUNICATION OF KEY HEALTH SUPPORTING BEHAVIORS, UH BEDFORD MEDICAL CENTER PRIMARY AND SECONDARY MARKET AREAS

	Within Past Year	Before Past Year	Never
Your diet or eating habits	46.9%	23.0%	31.1%
Physical activity or exercise	44.8%	15.5%	39.7%
Injury prevention such as safety belt use, helmet use or smoke detectors	10.5%	10.5%	78.9%
Sexual practices, including family planning, sexually transmitted diseases, AIDS or the use of condoms	12.1%	8.6%	79.3%
Depression, anxiety or emotional problems	23.7%	13.6%	62.7%
Significance of family health history	27.6%	22.4%	50.0%
Immunizations	32.8%	17.2%	50.0%
Quitting tobacco use (current smokers only)	78.2%	7.3%	14.5%

Source: Hospital Council of Northwest Ohio Community Health Needs Assessment

H. Infant Mortality

This indicator reports the rate of deaths to infants less than one year of age per 1,000 births. This indicator is relevant because high rates of infant mortality indicate the existence of broader issues pertaining to access to care and maternal and child health. Data at the ZIP code level (and hence hospital market area) are not available; only data at the county level are available.

Historically, infant mortality rates for Blacks have been significantly higher in the U.S. In fact, according to the most recently available data, infant mortality rates for Blacks were almost twice as high as infant mortality rates for Whites in 2012. This disparity is also true for Cuyahoga and Summit counties. In 2012, the infant mortality rate for Blacks was 64% higher than for Whites in Cuyahoga County, and 94% higher for Blacks in Summit County compared to Whites, shown in Figure 10: Infant Mortality Trends.

The infant mortality rate per 1,000 births in Cuyahoga County (8.86) was somewhat higher than Ohio overall (7.57) in 2012, but significantly higher than that in the United States overall (5.98). Infant mortality rates in Summit County (6.67) were lower than those in Cuyahoga County.

FIGURE 10: INFANT MORTALITY TRENDS

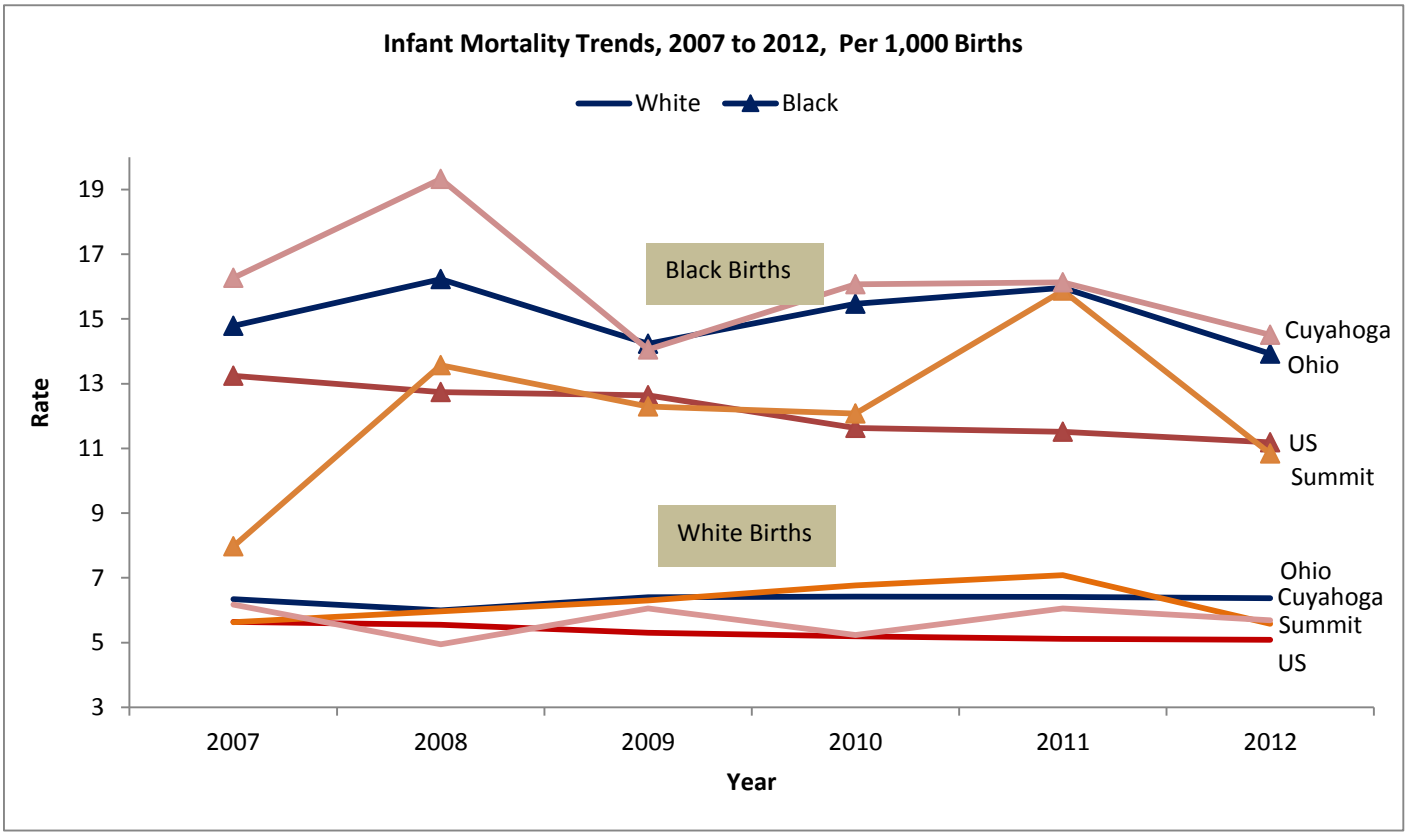


TABLE 24: INFANT MORTALITY TRENDS, 2007 TO 2012, U.S., CUYAHOGA AND SUMMIT COUNTIES, PER 1,000 BIRTHS*

Geography	Race	Infant Mortality Rate						Number of Births					
		'07	'08	'09	'10	'11	'12	'07	'08	'09	'10	'11	'12
United States Overall	Total	6.75	6.61	6.39	6.15	6.07	5.98	4,316,233	4,247,694	4,130,665	3,999,386	3,953,590	3,952,841
	White	5.64	5.55	5.3	5.2	5.12	5.09	3,336,626	3,274,163	3,173,293	3,069,315	3,020,355	2,999,820
	Black	13.24	12.74	12.64	11.63	11.51	11.19	675,676	670,809	657,618	636,425	632,901	634,126
Ohio Overall	Total	7.71	7.7	7.67	7.68	7.87	7.57	150,784	148,592	144,569	139,034	138,024	138,284
	White	6.34	6	6.4	6.42	6.41	6.37	121,267	118,901	115,328	107,189	104,906	106,004
	Black	14.79	16.23	14.23	15.47	15.96	13.93	25,959	26,131	25,433	23,469	23,252	23,696
Summit County	Total	6.23	7.49	7.57	8.04	8.91	6.67	6,738	6,279	6,342	6,096	6,174	6,145
	White	5.63	5.97	6.3	6.77	7.08	5.58	5,152	4,688	4,746	4,429	4,520	4,482
	Black	7.97	13.57	12.29	12.08	15.87	10.84	1,380	1,400	1,383	1,342	1,323	1,292
Cuyahoga County	Total	9.97	10.59	9.08	9.07	9.47	8.86	16,450	16,249	15,525	15,108	14,993	14,787
	White	6.17	4.95	6.06	5.23	6.06	5.69	9,233	9,092	8,746	7,842	7,750	7,554
	Black	16.27	19.32	14.05	16.07	16.13	14.51	6,576	6,573	6,192	5,912	5,829	5,789

**Source: Ohio Department of Health*

I. Incidence of Health Issues

Many adults within UH Bedford Medical Center's market area who were surveyed have been diagnosed with a chronic disease.

Of surveyed adults in UH Bedford Medical Center's market area, 11.9% have been diagnosed with asthma, 32.8% have been diagnosed with arthritis and 20.9% have been diagnosed with diabetes. Also, 17.9% of adults in UH Bedford Medical Center's market area have a known circulatory disease (heart attack/myocardial infarction, angina, stroke). Previous diagnosis and/or treatment for mental health issues was reported by 13.8% of adults in UH Bedford Medical Center's market area in 2012. Many (15.4%) reported a bout of depression (lasting two or more weeks) within the year prior to the survey.

High blood pressure impacts about half (52.2%) of those in UH Bedford Medical Center's market area, as do high blood cholesterol levels (56.1%). One in five (19.8%) adults within UH Bedford Medical Center's market area have both high blood pressure and high cholesterol levels.

Many adults within UH Bedford Medical Center's market area have also been impacted by these serious health events. About 2% (1.6%) have been a victim of some type of abuse (physical, sexual, financial and/or emotional) within the past year; and 17.9% have had a cancer diagnosis at some point.

Prostate and breast cancer are the two most common cancer diagnoses in Cuyahoga and Summit counties, shown in Table 25: Cancer Incidence by Cancer Type. Note that prostate cancer and cervical cancer rates in Cuyahoga County are higher than rates in the U.S. and in Ohio. Lung cancer rates are low in Cuyahoga County compared to Ohio, but higher than U.S. rates. Summit County has the lowest rates for all cancers shown below in comparison to Cuyahoga County, Ohio and the United States overall, with one exception: Summit County shows slightly higher lung cancer rates than the U.S. overall.

Finally, many adults in UH Bedford Medical Center's market areas are subject to major life stressors:

- 25% of adults lack a support system such as child care back-up, financial assistance, etc.
- 67% experienced some type of major stressful event within the past year (household member death, hospitalized or jailed; job loss; homelessness; changed residences; self or child was slapped or hit; household member abused drugs or alcohol).

TABLE 25: CANCER INCIDENCE BY CANCER TYPE

Cancer Type	Report Area	Total Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Population)
Prostate (total population Male only)	Summit County, OH	261,864	361	122.5
	Cuyahoga County, OH	609,670	1,076	156
	Ohio	5,624,513	8,272	135.8
	United States	150,740,224	220,000	142.3
Breast (total population Female only)	Summit County, OH	280,305	392	114.1
	Cuyahoga County, OH	675,609	1,107	129.7
	Ohio	5,901,023	8,435	120
	United States	155,863,552	216,052	122.7
Lung	Summit County, OH	542,169	458	70.6
	Cuyahoga County, OH	1,285,279	1,143	71.5
	Ohio	11,525,536	9,551	72.4
	United States	306,603,776	212,768	64.9
Colon and Rectum	Summit County, OH	542,169	269	41.4
	Cuyahoga County, OH	1,285,279	709	44.2
	Ohio	11,525,536	5,862	44.5
	United States	306,603,776	142,173	43.3
Cervical (total population Female only)	Summit County, OH	280,305	15	5.3
	Cuyahoga County, OH	675,609	61	8.3
	Ohio	5,901,023	471	7.7
	United States	155,863,552	12,530	7.8

Data Source: National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Profiles. Source geography: County

J. Vulnerable Populations

Medically Underserved Areas, Federally Qualified Health Centers and Food Deserts

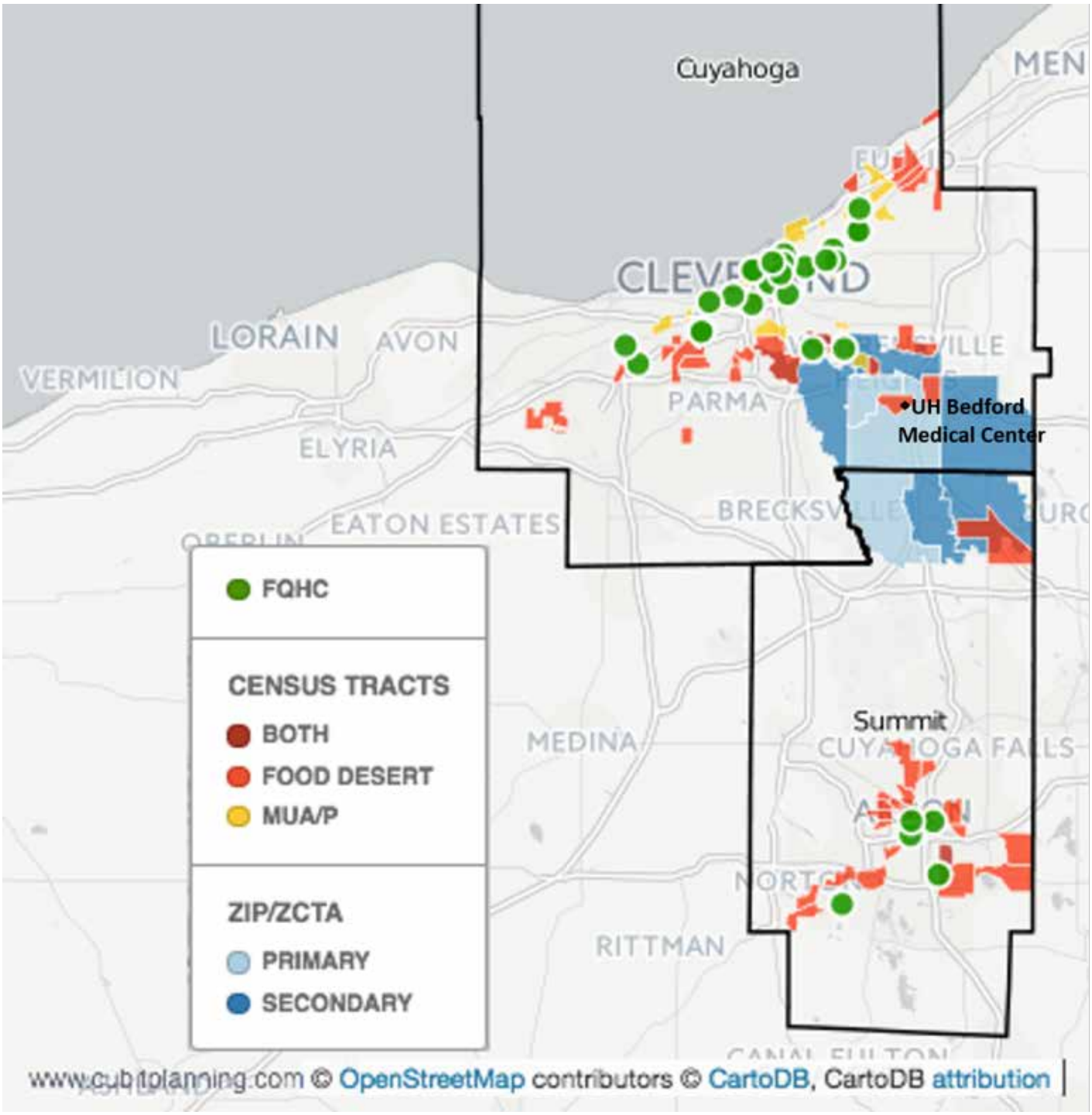
Medically underserved areas/populations (MUAs/MUPs) are areas or populations designated by the U.S. Department of Health and Human Services' Health Resources and Services Administration (HRSA) as having insufficient primary care providers, a high infant mortality rate, high poverty or a high elderly population. Within UH Bedford Medical Center's market areas, there are several MUA/MUPs designated by HRSA.

Federally Qualified Health Centers (FQHCs) are community-based organizations that provide comprehensive primary care and preventive care, including health, oral, and mental health/substance abuse services to persons of all ages, regardless of their ability to pay or health insurance status. There are no FQHCs located within UH Bedford Medical Center's market areas.

In addition, pinpointing food desert locations in a hospital's service area can help to identify areas with insufficient access to healthy and affordable food. According to the U.S. Department of Agriculture, food deserts are defined as "urban neighborhoods and rural towns without ready access to fresh, healthy and affordable food." Rather than having grocery stores in these communities, there may be no food access or limited access to healthy, affordable food options. The Food Desert Locator, created by the U.S. Department of Agriculture's Economic Research Service, is a web-based mapping tool that pinpoints food desert locations in the U.S. There are multiple census tracts within UH Bedford Medical Center's market area that are designated as food deserts.

Figure 11: Medically Underserved Areas/Populations, FQHCs and Food Deserts: UH Bedford Medical Center overlays medically underserved areas and food deserts in UH Bedford Medical Center's market areas and beyond to determine areas that may have the highest need for services. To provide further context, the map also pinpoints the location of FQHCs, all of which are outside of UH Bedford Medical Center's market area.

FIGURE 11: MEDICALLY UNDERSERVED AREAS/POPULATIONS, FQHCS AND FOOD DESERTS:
UH BEDFORD MEDICAL CENTER



ACS Analysis of Vulnerable Populations

Revisiting the ACS data can provide further insight into the level of access to health care for vulnerable populations. Details of this analysis can be found in the Appendix. In sum, there was a higher incidence of ACS conditions among residents of UH Bedford Medical Center's market area (from all area hospitals) among Blacks (18.3%) than Whites (17.0%). This suggests a potential racial disparity for access to primary care among Blacks compared to Whites in UH Bedford Medical Center's market area.

However, this varies by specific ACS diagnoses for residents of UH Bedford Medical Center's market area. The ACS diagnoses of congestive heart failure, diabetes, epilepsy and asthma were higher among Blacks. The ACS diagnoses of COPD, cellulitis, bacterial pneumonia, and kidney/urinary infections were higher among Whites.

CONCLUSIONS

A. Priority Health Needs

The list that follows describes the health issues identified through this CHNA.

Health Disparities

- Poverty
- Unemployment
- Aging Population
- Infant Mortality

Chronic Disease Conditions

- Heart Disease
- Alzheimer's
- Respiratory Diseases
- Cancer
- Diabetes
- Mental Illness

Lifestyle Barriers

- Substance Abuse (Tobacco/Drug/Alcohol)
- Obesity

Access Barriers

- Cost of Care
- Lack of Primary Care Providers
- Transportation

This list of health needs was compiled based on the variety of data assessed throughout this report. For example, issues like heart disease and diabetes were found prevalently throughout the data sets; including in hospital discharge data Hospital Council of Northwest Ohio Community Health Needs Assessment data, and qualitative data collected through surveys and public health interviews. Health needs were categorized into four categories of health needs, which encompassed a broader list of specific, related needs.

UH Bedford Medical Center has prioritized three primary categories of health needs for this CHNA:

1. Access Factors
2. Chronic Disease Conditions
3. Lifestyle Factors

Within these three categories of needs fall numerous health needs that were identified through this CHNA, which UH Bedford Medical Center will prioritize.

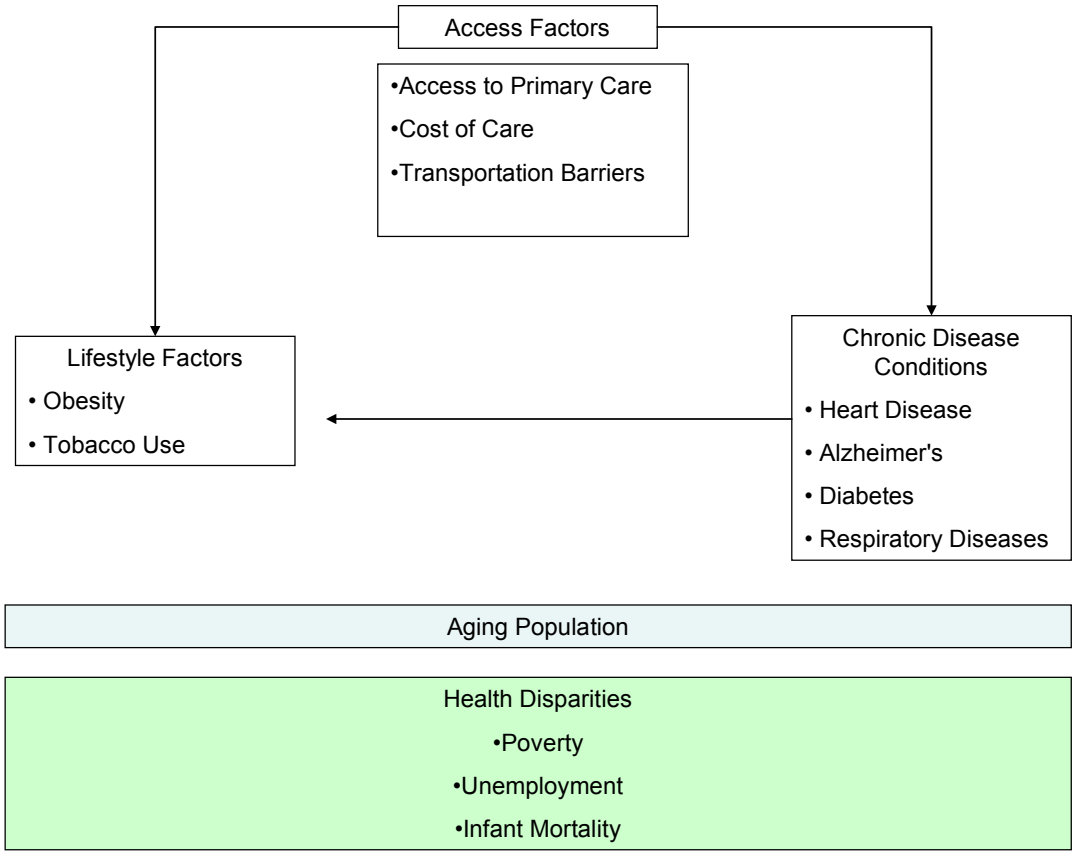
The prioritization process included input from hospital leaders who work closely with the community and have an in-depth understanding of community needs. After reviewing the primary and secondary data analysis for the UH Bedford Medical Center service area, a team of leaders from the hospital assembled to determine priority health needs. This team included:

- Robert David, President, UH Regional Hospitals
- William Aiken, Director, Hospital Support Services
- Anne O'Neill, Manager, Center for Healthy Aging
- Michelle Giltner, Director, Clinical and Support Services
- Vetella Camper, Community Outreach

The team met in July 2015 and together determined that the CHNA data indicated a need for prioritization of these three categories of needs, especially with a focus on the senior population, as significant portions of the community served by UH Bedford Medical Center are seniors. The health needs associated with an aging population have become increasingly important considerations.

Priorities were determined based on specific criteria, including (1) magnitude of the problem, (2) alignment of the problem with organizational strengths and priorities, and (3) existing resources to address the problem. Feedback from external community leaders, as described in the Qualitative Data Analysis section of this report, was a driving factor in this prioritization process as well.

Additionally, the intersection of a focus on increasing health care access and focus on the aging population will promote an emphasis on diagnosing and treating chronic disease conditions and reducing the prevalence of lifestyle barriers like obesity and smoking. The chart below illustrates UH Bedford Medical Center's approach to prioritization, with Access Barriers as the focal point, influencing Lifestyle Barriers and Chronic Disease Conditions, with an emphasis on the aging population. Health Disparities are root causes of all of these priorities.


Access Factors
•Access to Primary Care
•Cost of Care
•Transportation Barriers
Lifestyle Factors
• Obesity
• Tobacco Use
Chronic Disease Conditions
• Heart Disease
• Alzheimer's
• Diabetes
• Respiratory Diseases
Aging Population
Health Disparities
•Poverty
•Unemployment
•Infant Mortality

B. Resources Available to Address Priority Health Needs within the Community Served by the Hospital

The following is a list of available facilities and resources that the Hospital uses to assist in meeting identified community health needs:

Health Disparities

Aging Population

- University Hospitals Center for Lifelong Health
- Western Reserve Area Agency on Aging
- Community Partnership on Aging, serves South Euclid, Lyndhurst, Highland Heights, Mayfield Village and Mayfield Heights
- Cleveland Heights Office on Aging

High Rate of Poverty

- The City Mission, homeless shelter and nonprofit charity
- Council for Economic Opportunities in Greater Cleveland
- Cleveland Housing Network
- Hunger Network of Greater Cleveland
- The HARP Mission, based in Broadview Heights
- Housing Research and Advocacy Center

High Rate of Unemployment

- Cuyahoga County Department of Job and Family Services

Lifestyle Barriers

Obesity

- Cuyahoga County Board of Health
- St. Luke's Foundation
- Warrensville Heights YMCA
- Cuyahoga Child and Family Health Services Executive Committee

Substance Abuse

- Recovery Resources
- Partnership for Prevention Coalition
- Cuyahoga County Board of Alcohol, Drug Addiction, and Mental Health Services
- Northern Ohio Recovery Association

Chronic Disease Conditions

- UH Ahuja Medical Center (inpatient care)
- Alzheimer's Association
- American Diabetes Association
- Diabetes Partnership of Cleveland
- American Heart Association
- Bellefaire JCB

Access Barriers

- UH Ahuja Medical Center (inpatient care)
- Free Clinic of Greater Cleveland
- Cuyahoga County Health Care Council/Joint Advisory Committee
- Health Improvement Partnership – Cuyahoga
- Universal Health Care Action Network

A. Qualifications of Consulting Companies

The Center for Health Affairs, Cleveland, Ohio

The Center for Health Affairs is the leading advocate for Northeast Ohio hospitals. With a rich history as the Northeast Ohio hospital association, dating back to 1916, The Center serves as the collective voice of 34 hospitals spanning six counties.

The Center recognizes the importance of analyzing the top health needs in each community while ensuring hospitals are compliant with IRS regulations governing nonprofit hospitals. Since 2010, The Center has helped hospitals fulfill the CHNA requirements contained within the Affordable Care Act. The Center offers a variety of CHNA services to help hospitals produce robust and meaningful CHNA reports that can guide a hospital's community health improvement activities. Beyond helping hospitals with the completion of timely CHNA reports, The Center spearheads the Northeast Ohio CHNA Roundtable, which brings member hospitals and other essential stakeholders together to spur opportunities for shared learning and collaboration in the region.

The 2015 CHNA prepared for UH Bedford Medical Center was directed by The Center's vice president of corporate communications, managed by The Center's community outreach director and supported by a project manager. The Center engaged Cypress Research Group to provide expertise in data analysis and statistical methods.

More information about The Center for Health Affairs and its involvement in CHNAs can be found at www.chanet.org.

Cypress Research Group, Cleveland, Ohio

Founded in 1997, Cypress Research Group focuses on quantitative analysis of primary and secondary market and industry data. Industry specialties include health care, hi-tech and higher education. Since 2002, Cypress Research Group has partnered with The Center for Health Affairs to conduct a range of studies including building forecast models for nurses and most recently to analyze data for CHNAs.

UH Bedford Medical Center's CHNA was directed by the company's president and supported by the work of associates and research analysts. The company's president, as well as all associates and research analysts, hold graduate degrees in relevant fields.

B. ACS Conditions and ICD-9-CM Codes

Below are the general categories of ACS conditions and their associated ICD-9-CM codes.

1. Congenital Syphilis: ICD-9-CM code 090 (newborns only).
2. Immunization-Related and Preventable Conditions: ICD-9-CM codes 033, 037, 045, 390, 391; (also including haemophilus meningitis for children ages 1-5 only, ICD-9-CM code 320.0; ICD-10-CA code G00.0).
3. Epilepsy: ICD-9-CM code 345.
4. Convulsions: ICD-9-CM code 780.3.
5. Severe ENT Infections: ICD-9-CM codes 382, 462, 463, 465, 472.1; (cases of otitis media, ICD-9-CM code 382).
6. Pulmonary Tuberculosis: ICD-9-CM code 011.
7. Other Tuberculosis: ICD-9-CM codes 012-018.
8. Chronic Obstructive Pulmonary Disease (COPD): ICD-9-CM codes 491, 492, 494, 496.
9. Acute Bronchitis: (only included if a secondary diagnosis of COPD is also present, diagnosis codes as above), ICD-9-CM code 466.0.
10. Bacterial Pneumonia: ICD-9-CM codes 481, 482.2, 482.3, 482.9, 483, 485, 486; (patients with a secondary diagnosis of sickle-cell anemia, ICD-9-CM code 282.6; and patients less than two months of age are excluded).
11. Asthma: ICD-9-CM code 493.
12. Congestive Heart Failure (CHF): ICD-9-CM codes 402.01, 402.11, 402.91, 428, 518.4.
13. Hypertension: ICD-9-CM codes 401.0, 401.9, 402.00, 402.10, 402.90.
14. Angina: ICD-9-CM codes 411.1, 411.8, 413 (patients with any surgical procedure coded are excluded).
15. Cellulitis: ICD-9-CM codes 681, 682, 683, 686 (patients with any surgical procedure coded are excluded, except for incisions of skin and subcutaneous tissue, ICD-9-CM procedure code 86.0).
16. Diabetes: ICD-9-CM codes 250.0, 250.1, 250.2, 250.3, 250.8, 250.9.
17. Hypoglycemia: ICD-9-CM code 251.2.
18. Gastroenteritis: ICD-9-CM code 558.9.
19. Kidney/Urinary Infections: ICD-9-CM codes 590, 599.0, 599.9.
20. Dehydration/Volume Depletion: ICD-9-CM code 276.5.
21. Iron Deficiency Anemia: ICD-9-CM codes 280.1, 280.8, 280.9.
22. Nutritional Deficiencies: ICD-9-CM codes 260, 261, 262, 268.0, 268.1.
23. Failure to Thrive: ICD-9-CM code 783.4; ICD-10-CA code R62 (patients less than one year of age only).
24. Pelvic Inflammatory Disease: ICD-9-CM code 614; ICD-10-CA codes N70, N73, N99.4 (female patients only, patients with a hysterectomy procedure coded are excluded, ICD-9-CM procedure codes 68.3-68.8).
25. Dental Conditions: ICD-9-CM codes 521, 522, 523, 525, 528.

C. Vulnerable Populations Analysis

It is well established that access to medical care and health outcomes are weaker in the lowest income areas throughout the U.S. To shine a light on this problem and help policymakers properly allocate resources, HRSA identified Medically Underserved Areas/Populations (MUA/Ps). Currently there are several MUA/Ps identified within UH Bedford Medical Center's market area (see body of report).

However, all area hospitals' discharge data can also be examined, including UH Bedford Medical Center's, to look for potential health care access issues among economically vulnerable populations in terms of ambulatory care sensitive (ACS) cases. An earlier analysis showed that UH Bedford Medical Center's inpatient discharges, as a group, had a fairly high prevalence of ACS cases in 2013 (33.9%). For Cuyahoga County and Summit County, however, there were significantly lower levels of ACS cases (18.7% and 18.1%, respectively). Race can be used as a proxy for socioeconomic status in the hospital's market area. It is known that socioeconomic status is related to race in the area surrounding UH Bedford Medical Center.

Table 26: Poverty Levels, by Race, Cuyahoga and Summit Counties, 2013 shows that In Cuyahoga and Summit counties, Blacks are about three times more likely to live in poverty than Whites.

There are not socioeconomic indicators associated with hospital discharge data, but the association between race and hospital discharge findings can be evaluated to illuminate possible health care access issues within the economically vulnerable areas UH Bedford Medical Center serves.

Table 27: Most Common ACS Conditions, by County, White versus Black Discharges, 2014 shows the prevalence of ACS conditions by race for those admitted to any hospital for those who live in UH Bedford Medical Center's market area. Only at those discharged from UH Bedford Medical Center cannot be evaluated because the number of racial minorities is too low for reliable analysis. For comparison the ACS discharge rates overall and primary diagnoses for those in Cuyahoga and Summit counties in 2014 are shown.

Overall, there was a slightly higher prevalence of ACS conditions among residents of UH Bedford Medical Center's market area (from all area hospitals) among Blacks (18.3%) than Whites (17.0%). This difference is small, but does warrant concern that there is a racial disparity between Blacks and Whites in terms of access to primary care in UH Bedford Medical Center's market area.

However, this varies by specific ACS diagnoses among residents of UH Bedford Medical Center's market area. The ACS diagnoses of congestive heart failure, diabetes, epilepsy and asthma were higher among Blacks. The ACS diagnoses of bacterial pneumonia, COPD, cellulitis and kidney/urinary infections were higher among Whites.

TABLE 26: POVERTY LEVELS, BY RACE, CUYAHOGA AND SUMMIT COUNTIES, 2013*

	Percent Below Poverty Level	
Geography	**White**	**Black**
Cuyahoga County, Ohio	11%	33.5%
Summit County, Ohio	11.4%	33.8%

Source: U.S. Census Bureau, American Community Survey 2013 5-year Estimates (Table: S1701)

TABLE 27: MOST COMMON* ACS CONDITIONS, BY COUNTY, WHITE VERSUS BLACK DISCHARGES, 2014

Discharges from All Hospitals

	UH Bedford Medical Center Market Area		Cuyahoga County		Summit County	
	White	**Black**	**White**	**Black**	**White**	**Black**
Number of discharges:	12,415	12,950	110,424	68,358	36,986	9,715
No ACS Condition as Primary Diagnosis*	83.0%	81.7%	83.5%	81.1%	85.4%	84.1%
ACS Condition as Primary Diagnosis, Total	17.0%	18.3%	16.5%	18.9%	14.6%	15.9%
Congestive Heart Failure (CHF)	3.6%	3.9%	3.1%	3.7%	2.8%	3.7%
Bacterial Pneumonia	2.7%	2.1%	2.3%	2.0%	2.2%	1.8%
Chronic Obstructive Pulmonary Disease (COPD)	2.4%	1.8%	2.2%	1.9%	1.8%	1.3%
Asthma	1.3%	2.7%	1.2%	3.2%	0.8%	1.3%
Cellulitis	2.2%	1.3%	2.5%	1.3%	2.1%	1.4%
Diabetes	0.8%	1.9%	1. 0%	2.0%	1.0%	2.1%
Epilepsy	0.6%	0.9%	0.6%	1.0%	0.5%	0.8%
Kidney/Urinary Infections	2.0%	1.5%	1.9%	1.3%	1.9%	1.5%

**This refers to any ACS condition. Only the most prevalent ACS conditions are shown in the table.*

D. 2015 Implementation Strategy Objectives

1. Continue to provide access to care through the UH Hospital Financial Assistance Program. (STATUS: Ongoing)

2. Address diet- and exercise-related conditions and the prevalence of cardiovascular issues by establishing a community outreach team.

    a. Develop free educational program on diabetes and congestive heart failure modeled after programs at UH Conneaut and Geneva medical centers. (STATUS: Ongoing educational events and screenings)

    b. Establish tracking and goal setting mechanisms for those individuals who participate in the programs. (STATUS: Ongoing through "Age Well Be Well" program)

3. Improve community outreach and positively impact mortality rates through health education programming.

    a. Offer community education on topics such as cancer, obesity, nutrition, chronic liver disease and cirrhosis. (STATUS: Ongoing – ex: Stroke Prevention Day, Diabetes Minifair)

    b. Establish specific cancer screening days that will be open to the public for the screening of breast, prostate and colorectal cancers. (STATUS: Ongoing)

    c. Engage UH Rainbow Babies & Children's Hospital and the UH MacDonald Women's Hospital Department of Obstetrics and Gynecology to present educational programming about infant and maternal care issues at the Bedford Campus' free Health Speak Series. (STATUS: Ongoing)

4. Assure that family and social support services are available for geriatric patients who present to the Bedford Campus' Senior Emergency Department in order to reduce future emergency room use for nonemergent reasons. (STATUS: Ongoing through "Age Well Be Well" program)

    a. Collaborate with the Bedford Campus Department of Social Work/Case Management to lead this initiative.

    b. Collaborate with the Senior Emergency Department at the Richmond Campus to establish a protocol to enhance outreach to encourage appropriate emergency department usage for both Hospital campuses.

E. 2015 CHNA Community Leader Survey

KEY HEALTH ISSUES

1. What are the top five (5) health issues you see in your community?

☐ Access to Care/Uninsured
☐ Cancer
☐ Dental Health
☐ Diabetes
☐ Heart Disease
☐ Maternal/Infant Health
☐ Mental Health/Suicide
☐ Overweight/Obesity
☐ Sexually Transmitted Diseases
☐ Stroke
☐ Substance Abuse/Alcohol Use
☐ Tobacco
☐ Other (specify):

2. Of those health issues mentioned, which one (1) is the most significant?

☐ Access to Care/Uninsured
☐ Cancer
☐ Dental Health
☐ Diabetes
☐ Heart Disease
☐ Maternal/Infant Health
☐ Mental Health/Suicide
☐ Overweight/Obesity
☐ Sexually Transmitted Diseases
☐ Stroke
☐ Substance Abuse/Alcohol Use
☐ Tobacco
☐ Other (specify):

3. Please share any additional information regarding these health issues and your reasons for ranking them this way below:

ACCESS TO CARE

4. On a scale of 1 (strongly disagree) through 5 (strongly agree), please rate each of the following statements about Health Care Access in the area.

Residents in the area are able to access a primary care provider when needed (Family Doctor, Pediatrician, General Practitioner)	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Residents in the area are able to access a medical specialist when needed (Cardiologist, Dermatologist, Neurologist, etc.)	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Residents in the area are able to access a dentist when needed	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
There is a sufficient number of providers accepting Medicaid in the area	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
There is a sufficient number of bilingual providers in the area	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
There is a sufficient number of mental/behavioral health providers in the area	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Transportation for medical appointments is available to area residents when needed	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

5. What are the most significant barriers that keep people in the community from accessing health care when they need it? (Select all that apply)

☐ Availability of Providers/Appointments
☐ Basic Needs Not Met (Food/Shelter)
☐ Inability to Navigate Health Care System
☐ Inability to Pay Out-of-Pocket Expenses (Copays, Prescriptions, etc.)
☐ Lack of Child Care
☐ Lack of Health Insurance Coverage
☐ Lack of Transportation
☐ Lack of Trust
☐ Language/Cultural Barriers
☐ Time Limitations (Long Wait Times, Limited Offices Hours, Time off Work)
☐ Non/No Barriers
☐ Other (specify):

6. Of those barriers mentioned, which one (1) is the most significant?

☐ Availability of Providers/Appointments
☐ Basic Needs Not Met (Food/Shelter)
☐ Inability to Navigate Health Care System
☐ Inability to Pay Out-of-Pocket Expenses (Copays, Prescriptions, etc.)
☐ Lack of Child Care
☐ Lack of Health Insurance Coverage
☐ Lack of Transportation
☐ Lack of Trust
☐ Language/Cultural Barriers
☐ Time Limitations (Long Wait Times, Limited Offices Hours, Time off Work)
☐ Non/No Barriers
☐ Other (specify):

7. Please share any additional information regarding barriers to health care below:

8. Are there specific populations in this community that you think are not being adequately served by local health services?

___ Yes ___ No

9. If yes, which populations are underserved? (Select all that apply)

☐ Uninsured/Underinsured
☐ Low-income/Poor
☐ Hispanic/Latino
☐ Black/African-American
☐ Immigrant/Refugee
☐ Disabled
☐ Children/Youth
☐ Young Adults
☐ Seniors/Aging/Elderly
☐ Homeless
☐ None
☐ Other (specify):

10. In general, where do you think MOST uninsured and underinsured individuals living in the area go when they are in need of medical care? (Choose one)

☐ Doctor's Office
☐ Health Clinic/FQHC
☐ Hospital Emergency Department
☐ Walk-in/Urgent Care Center
☐ Don't Know
☐ Other (specify):

11. Please share any additional information regarding uninsured/underinsured individuals and underserved populations below:

12. Related to health and quality of life, what resources or services do you think are missing in the community? (Select all that apply)

☐ Free/Low-Cost Medical Care
☐ Free/Low-Cost Dental Care
☐ Primary Care Providers
☐ Medical Specialists
☐ Mental Health Services
☐ Substance Abuse Services
☐ Bilingual Services
☐ Transportation
☐ Prescription Assistance
☐ Health Education/Information/Outreach
☐ Health Screenings
☐ None
☐ Other (specify):

CHALLENGES & SOLUTIONS

13. What challenges do people in the community face in trying to maintain healthy lifestyles like exercising and eating healthy and/or trying to manage chronic conditions like diabetes or heart disease?

14. In your opinion, what is being done well in the community in terms of health and quality of life?

15. What recommendations or suggestions do you have to improve health and quality of life in the community?

CLOSING

Please answer the following demographic questions.

16. Name and Contact Information

Name: _____

Title: _____

Organization: _____

Email Address: _____

Phone Number: _____

17. Which one of these categories would you say BEST represents your community affiliation (Choose one):

☐ Health Care/Public Health Organization
☐ Mental/Behavioral Health Organization
☐ Nonprofit/Social Services/Aging Services
☐ Faith-Based/Cultural Organization
☐ Education/Youth Services
☐ Government/Housing/Transportation Sector
☐ Business Sector
☐ Community Member
☐ Other (specify):

18. What is your gender? ___ Male ___ Female

19. Which one of these groups would you say BEST represents your race/ethnicity?

☐ White/Caucasian
☐ Black/African-American
☐ Hispanic/Latino
☐ Asian/Pacific Islander
☐ Other (specify):

20. University Hospitals will be using the information gathered through these surveys to develop a community health implementation plan. Please share any other feedback you may have for them below:

F. 2015 CHNA Community Leader Interview Guide

Community Health Needs Assessment Survey Questions

Name: _____

Organization: _____

Title: _____

Date: _____

Do we have your permission to list your name in the report? _____

Questions:

1. Briefly describe the services your organization offers, and the population you serve.

2. Are your services targeted toward a particular geographical area (city, ZIP code, school, etc.)? Are they county-wide?

3. In your opinion, what is the biggest issue or concern facing the people served by your agency/in your community? In surrounding counties? Particular age groups (0 – 17, 18 – 44, 45 – 65, 65+)?
(Note: If not health care related, what is biggest health care related issue or concern?)

4. Please share any trends seen in the following areas (and where, geographically they are occurring):

a. Demographic – changes in the size, age, racial/ethnic diversity, or other characteristics of the population (particularly those who are "vulnerable")

b. Economic variables – their impact on health

c. Provider community – physicians, hospitals – who is taking care of the poor?

d. Health status/public health indicators (what illnesses/needs/issues are getting worse or better? Why?)

e. Access to care – why?

5. If residents are leaving the community to receive certain services, what services are not accessible locally? Why do residents need to travel for care? Are people entering the county for services? Why/from where? Particular age groups (0 – 17, 18 – 44, 45 – 65, 65+)?

6. Please discuss the kinds of problems that the people served by your agency (by community agencies) have in accessing health care, mental and behavioral health, and/or social services for themselves and/or their families?
(Prompt: In answering this question you may wish to consider the following problems – language barriers, transportation, no health insurance, lack of information on available resources, delays in getting needed care, economic constraints, and/or dissatisfaction with treatment.)

7. What are the community organizations/assets that are or could be working to address these needs?

8. Is there capacity within your organization to serve additional clients? If not, what are the biggest barrier(s) impacting your ability to increase capacity?

9. What role do you see the hospital(s) in your area currently playing to help address the community health issues faced by the low-income people who live here?

What role do you think the hospitals in your area should play?

10. If resources were not a concern, what specific initiative(s) would you recommend to address the most pressing access or health status problems in the community? Why?