ST. VINCENT CHARITY MEDICAL CENTER

A Ministry of the Sisters of Charity Health System

2016 Community Health Needs Assessment (CHNA)

Introduction

St. Vincent Charity Medical Center is Cleveland's faith-based, high-quality healthcare provider. As a teaching hospital, it is home to the renowned Spine and Orthopedic Institute, the Center for Bariatric Surgery as well as complete services in cardiovascular, emergency medicine, primary care, behavioral health, occupational health and addiction medicine. In 1865, eight Sisters of Charity of St. Augustine started the hospital in reaction to the need to care for the returned wounded Civil War soldiers. Over 150 years later, St. Vincent Charity Medical Center continues its vision to: "be a leading model for healthcare delivery in Northeast Ohio based on its faith-based mission, dedication to education, commitment to the communities it serves, excellence in the patient experience it provides, focus on surgical services, and partnerships with physicians and other constituencies."

The hospital's commitment to the community it serves is sharpened through its deepened understanding of the breadth and type of health needs in the community. The current Community Health Needs Assessment (CHNA) was completed by The Center for Health Affairs working with St. Vincent Charity Medical Center and includes both quantitative and qualitative data.

The data captured through the CHNA process identified the greatest health needs within our community. Through this we can focus our efforts where the need is greatest and where the hospital can have the greatest impact.

Adopted by the St. Vincent Charity Medical Center Board of Directors on December 7, 2016.

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Introduction to Report

This report identifies and assesses community health needs in the areas served by St. Vincent Charity Medical Center in accordance with regulations promulgated by the Internal Revenue Service pursuant to the Patient Protection and Affordable Care Act (ACA), 2010. This is the second CHNA for the hospital in response to that federal government regulation.

The 2016 St. Vincent Charity 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 market area.

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 report provides the following information:

- A demographic profile of the hospital's primary and secondary market areas;
- Description of the economic status of the population, as a whole, within the hospital's primary and second market areas (e.g. poverty, unemployment);
- Community issues which are either related to health and/or access to health care;
- 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);
- An outline of the types of health issues related to hospitalization, both in St. Vincent Charity Medical Center and in other area hospitals;
- Availability of community-based health care facilities and resources.

Written Comments

Any person wishing to submit written comments on this Community Health Needs Assessment may submit comments to Wendy Hoke, Vice President, Marketing and Communications at wendy.hoke@stvincentcharity.com.

Executive Summary

St. Vincent Charity Medical Center by the Numbers

- 16 primary market area municipalities in Cuyahoga County and one municipality (Ashtabula) located in Ashtabula County
- 20 secondary market area municipalities in seven counties: Cuyahoga, Ashtabula, Erie, Lake, Lorain, Medina and Summit
- Market Area Population, 2013, 852,600
- 74.3% of patient discharges were residents of its primary market area; 10.0% were residents of its secondary market area
- In the primary market area, 43.2% of patient discharges were Medicaid patients; 42.4% were Medicare patients
- Population Trends:
    - Cuyahoga County had a 1.1% reduction in population from 2010 to 2013.
    - Cuyahoga County is growing older, on average.
    - Cuyahoga County is majority White (63.9%), but the percentage of the population that is White decreased by 1.0% from 2010 to 2013. Almost 30% of the population in Cuyahoga County is Black or African American.
- 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 St. Vincent Charity Medical Center. The majority of St. Vincent Charity Medical Center's primary market area is contained within Cuyahoga County. Key findings are as follows.

Poverty and transportation barriers impact access (to health services, healthy food and other necessities) and thus contribute to poor health.

- Over 14% of all families in Cuyahoga County were living under the poverty line in 2013.
- The unemployment rate in Cuyahoga County in January 2016 was 4.9%, which was lower than the state rate of 5.7%.
- From 2010 to 2013, the percentage of Cuyahoga County residents with private health insurance decreased from 67.6% to 65.6%, while the percentage of those with public coverage increased by 2.3%.

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. For St. Vincent Charity Medical Center, 13.3% of discharges were ACS discharges of residents within the primary and secondary market areas combined. The most common primary ACS diagnoses for St. Vincent Medical Center's discharged patients were congestive heart failure, cellulitis, chronic obstructive pulmonary disease (COPD) and diabetes. Almost 60% of discharged patients in 2014 had hypertension.

Priority Health Needs

After a thorough analysis of both qualitative and quantitative data, St. Vincent Charity Medical Center identified the following health needs that impact the community served by the hospital as its priorities for the 2017-2019 period. These include:

- Access to mental health services
- Obesity
- Quality of care (focusing on culturally appropriate care and access)

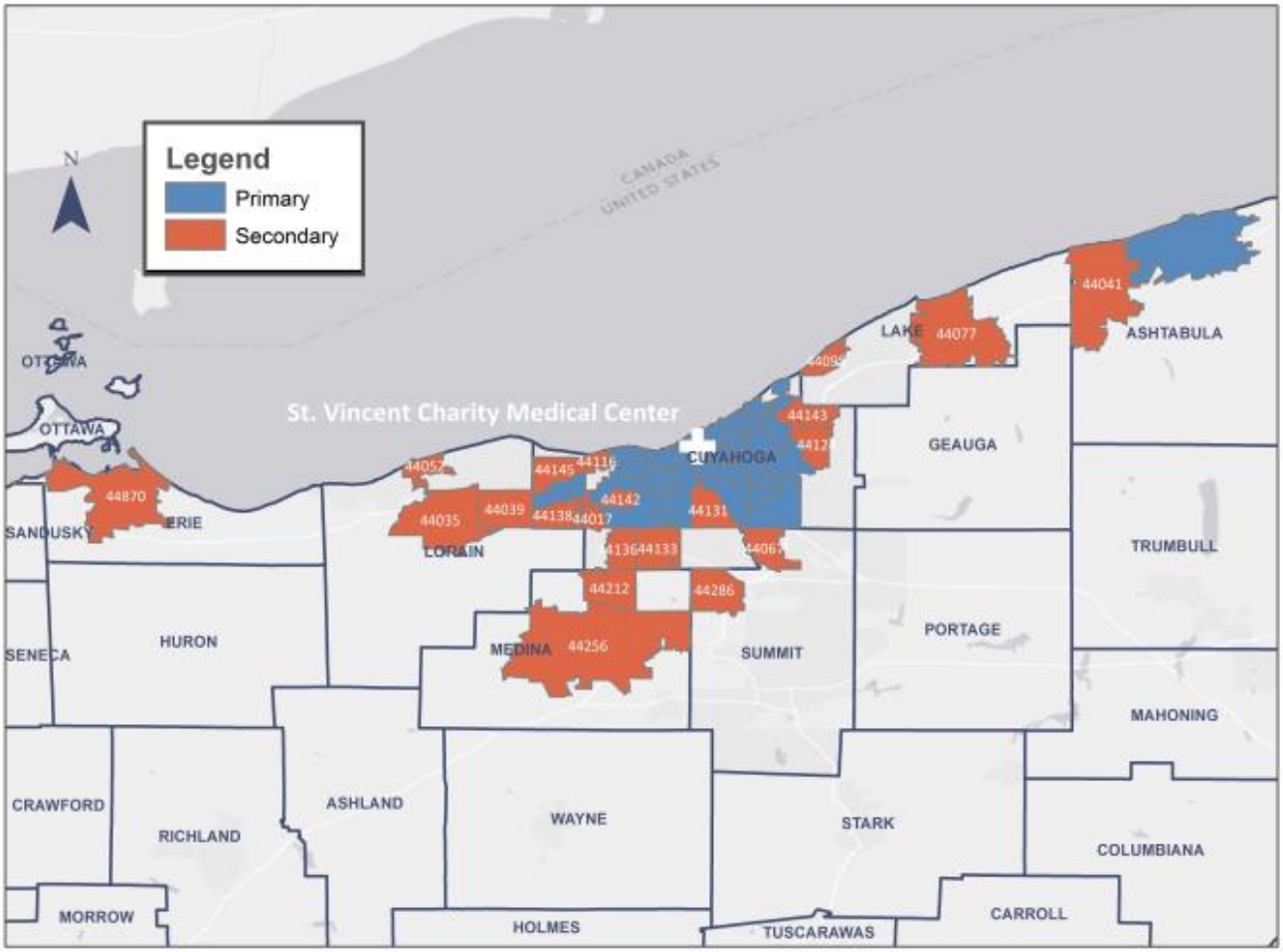
CHNA Collaboration

St. Vincent Charity Medical Center worked closely with The Center for Health Affairs, the leading advocate for Northeast Ohio hospitals, to complete the 2016 CHNA. The Center advocates on behalf of 36 hospitals in six counties. St. Vincent Charity Medical Center retained The Center for Health Affairs to assist in quantitative data collection, analysis of quantitative and qualitative data and to ensure the entire community served by the hospital was captured. More information about The Center for Health Affairs can be found in the Appendix.

Description of Process and Methods

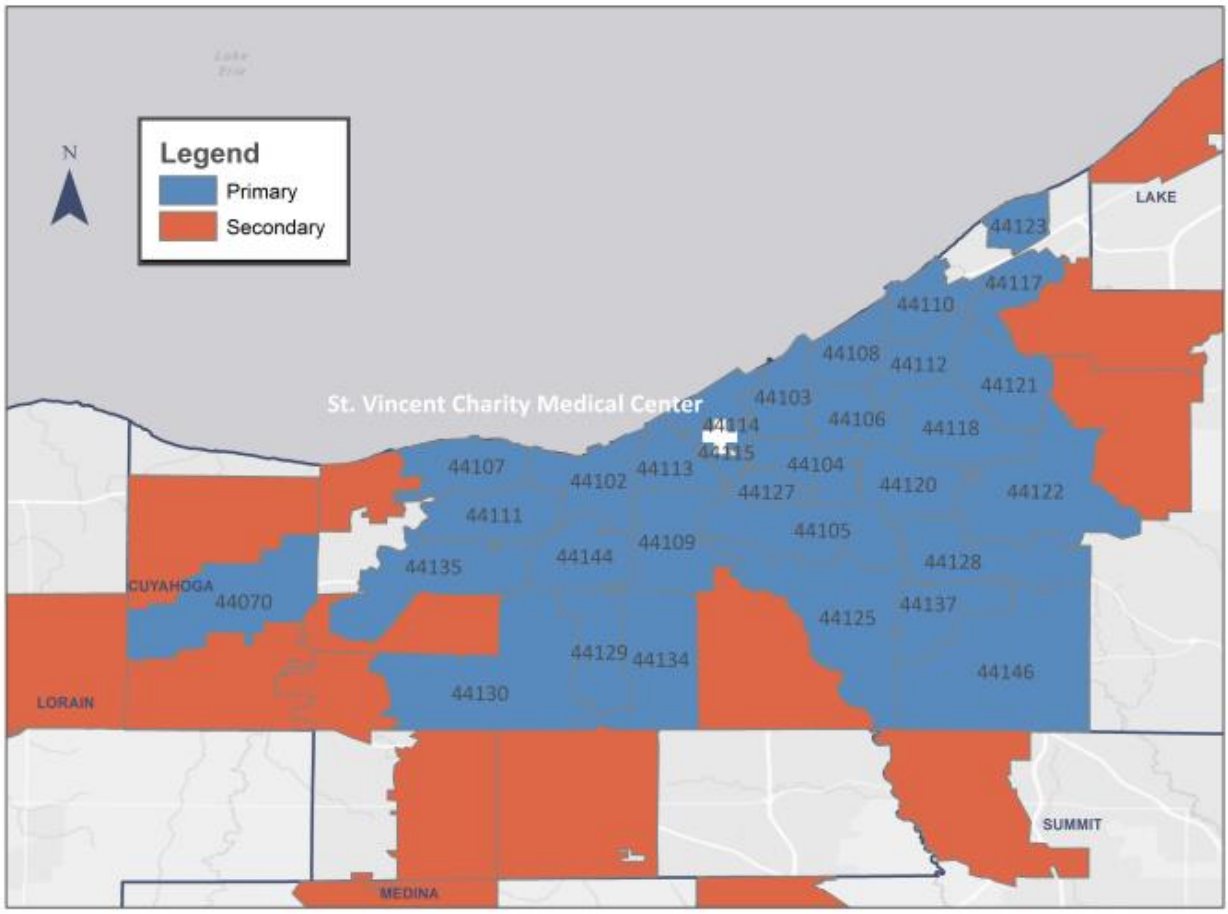
A. Definition of Market Area

Figure 1: St. Vincent Charity Medical Center: Primary and Secondary Market Areas



Prepared By: The Center for Health Affairs, June 2016

Figure 2: St. Vincent Charity Medical Center: Inset of Primary Market Area (excluding ZIP code in Ashtabula)



Prepared By: The Center for Health Affairs, June 2016

St. Vincent Charity Medical Center's market area includes many municipalities dispersed among seven counties. Most of the primary market area is contained within Cuyahoga County, with one municipality located in Ashtabula County. The secondary market area includes municipalities in Ashtabula, Cuyahoga, Erie, Lake, Lorain, Medina and Summit counties.

In 2014, St. Vincent Charity Medical Center had 7,565 discharged patients. Of those, 5,620 were in the hospital's primary or secondary market (74.3%).

Table 1: St. Vincent Charity Medical Center: Hospital Discharges - Primary and Secondary Market Areas

Municipalities/Neighborhood & ZIP Codes	ZIP Code	Number/percent of St. Vincent Charity Medical Center Discharges* (2014)		2013 Population (American Community Survey, U.S. Census Projection)**	
Primary Market Area		Number	Percent	Number	Percent of Total Market Areas
Cuyahoga County					
Cleveland	44104	524	6.9%	23,307	1.5%
Cleveland	44103	488	6.5%	17,990	1.2%
Garfield Heights	44105	490	6.5%	37,857	2.5%
Cleveland	44115	436	5.8%	7,502	0.5%
Cleveland	44102	360	4.8%	44,026	2.9%
Cleveland/Pearlbrook	44109	289	3.8%	41,372	2.7%
Cleveland Heights	44106	283	3.7%	26,373	1.8%
Shaker Heights	44120	272	3.6%	36,313	2.4%
Cleveland/Bratenahl	44108	207	2.7%	25,355	1.7%
Cleveland Heights	44112	192	2.5%	22,593	1.5%
Cleveland	44114	189	2.5%	5,130	0.3%
Parma	44128	187	2.5%	29,667	2.0%
Cleveland	44113	184	2.4%	18,933	1.3%
Cleveland/Westpark	44111	150	2.0%	40,321	2.7%
Cuyahoga Heights	44127	154	2.0%	4,581	0.3%
Lakewood	44107	139	1.8%	51,899	3.4%
East Cleveland	44110	135	1.8%	21,133	1.4%
Strongsville	44135	119	1.6%	28,131	1.9%
Cleveland/Puritas Park	44134	108	1.4%	37,945	2.5%
Shaker Heights	44122	87	1.2%	34,654	2.3%
Garfield Heights	44125	93	1.2%	28,633	1.9%
Parma Hts/ Middleburg Hts.	44129	91	1.2%	29,260	1.9%
Independence	44130	89	1.2%	50,416	3.3%
Cleveland Heights	44121	73	1.0%	33,252	2.2%
Cleveland Heights	44118	62	0.8%	39,767	2.6%
Maple Heights	44137	59	0.8%	23,080	1.5%
Euclid	44117	56	0.7%	10,367	0.7%
Garfield Heights	44123	55	0.7%	16,675	1.1%
North Olmsted	44070	53	0.7%	32,818	2.2%
Ashtabula County					
Ashtabula	44004	55	0.7%	33,250	1.4%
Primary Market Total:		5,620	74.3%	852,600	52.9%

Municipalities/Neighborhood & ZIP Codes	ZIP Code	Number/percent of St. Vincent Charity Medical Center Discharges* (2014)		2013 Population (American Community Survey, U.S. Census Projection)**	
Secondary Market Area		Number	Percent	Number	Percent of Total Market Areas
Cuyahoga County					
Westlake	44145	45	0.6%	32,552	1.4%
Independence	44131	44	0.6%	20,361	0.9%
Berea	44017	38	0.5%	19,266	0.8%
North Royalton	44133	30	0.4%	30,335	1.3%
Mayfield Heights	44124	35	0.5%	37,971	1.6%
Euclid	44143	32	0.4%	24,044	1.0%
Strongsville	44136	31	0.4%	25,775	1.1%
Rocky River	44116	30	0.4%	20,170	0.9%
Olmsted Falls	44138	29	0.4%	21,907	0.9%
Brooklyn	44142	37	0.5%	19,126	0.8%
Lake County					
Concord	44077	45	0.6%	56,334	2.4%
Eastlake	44095	38	0.5%	33,613	1.5%
Lorain County					
N. Ridgeville	44035	45	0.6%	63,911	2.8%
Lorain	44052	40	0.5%	29,946	1.3%
N. Ridgeville	44039	28	0.4%	30,216	1.3%
Summit County					
Richfield	44286	39	0.5%	5,942	0.3%
Northfield	44067	29	0.4%	20,457	0.9%
Medina County					
Medina	44256	38	0.5%	62,303	2.7%
Brunswick	44212	35	0.5%	43,937	1.9%
Erie County					
Sandusky	44870	37	0.5%	41,126	1.8%
Ashtabula County					
Geneva	44041	27	0.4%	14,766	0.6%
Secondary Market Total:		753	9.9%	654,058	47.1%
Remainder (out of market)		1,192	15.8%		
Total:		7,565	100%		100.0%

*Ohio Hospital Association hospital discharge data, 2014

**Source: U.S. Census, American Community Survey, 2010 Decennial projection to 2013. The Census Bureau uses 'ZTCAs' as proxies for U.S. Postal Service ZIP codes.

In 2013, 74.3 percent of St. Vincent Charity Medical Center's discharges were residents of its primary market area; 10.0 percent were residents of its secondary market area.

- Given its size, St. Vincent's inpatient population in 2014 lives in a very dispersed geographic area. Its primary market area includes twenty-nine different ZIP codes, most within Cuyahoga County, and includes 15 different municipalities. The secondary market is very geographically dispersed - including those communities rounds out Cuyahoga County. The secondary market also includes ten other municipalities within six surrounding counties.
- No ZIP code contains a significant proportion of St. Vincent Charity Medical Center discharged patients in 2014. The ZIP code with the highest concentration, which was within Cleveland (44104), contained only 6.9% of the total patient population in that year.

Table 2: St. Vincent Charity Medical Center: Emergency Room Visits - Primary and Secondary Market Areas

Municipalities/Neighborhood & ZIP Codes	ZIP Code	St. Vincent Charity Medical Center Emergency Room Visits (2014)		2013 Population (American Community Survey, U.S. Census Projection)**	
Primary Market Area		Number	Percent	Number	Percent of Total Market Areas
Cuyahoga County					
Cleveland	44104	4,811	18.9%	23,307	1.5%
Cleveland	44103	1,924	7.6%	17,990	1.2%
Garfield Heights	44105	2,353	9.2%	37,857	2.5%
Cleveland	44115	5,157	20.3%	7,502	0.5%
Cleveland	44102	741	2.9%	44,026	2.9%
Cleveland/Pearlbrook	44109	453	1.8%	41,372	2.7%
Cleveland Heights	44106	635	2.5%	26,373	1.8%
Shaker Heights	44120	1,368	5.4%	36,313	2.4%
Cleveland/Bratenahl	44108	782	3.1%	25,355	1.7%
Cleveland Heights	44112	439	1.7%	22,593	1.5%
Cleveland	44114	1,173	4.6%	5,130	0.3%
Parma	44128	470	1.8%	29,667	2.0%
Cleveland	44113	343	1.3%	18,933	1.3%
Cleveland/Westpark	44111	300	1.2%	40,321	2.7%
Cuyahoga Heights	44127	737	2.9%	4,581	0.3%
Lakewood	44107	214	0.8%	51,899	3.4%
East Cleveland	44110	430	1.7%	21,133	1.4%
Strongsville	44135	206	0.8%	28,131	1.9%
Cleveland/Puritas Park	44134	74	0.3%	37,945	2.5%
Shaker Heights	44122	115	0.5%	34,654	2.3%
Garfield Heights	44125	216	0.8%	28,633	1.9%
Parma Hts/ Middleburg Hts.	44129	69	0.3%	29,260	1.9%
Independence	44130	83	0.3%	50,416	3.3%
Cleveland Heights	44121	130	0.5%	33,252	2.2%
Cleveland Heights	44118	198	0.8%	39,767	2.6%
Maple Heights	44137	183	0.8%	23,080	1.5%

Euclid	44117	137	0.5%	10,367	0.7%
Garfield Heights	44123	95	0.4%	16,675	1.1%
North Olmsted	44070	51	0.2%	32,818	2.2%
Ashtabula County					
Ashtabula	44004	3	0.0%	33,250	1.4%
Primary Market Total:		23890	93.9%	852,600	52.9%
Secondary Market Area:					
Cuyahoga County					
Westlake	44145	38	0.1%	32,552	1.4%
Independence	44131	37	0.1%	20,361	0.9%
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Strongsville	44136	**21**	0.1%	25,775	1.1%
Rocky River	44116	28	0.1%	20,170	0.9%
Olmsted Falls	44138	18	0.1%	21,907	0.9%
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Summit County					
Richfield	44286	1	0.0%	5,942	0.3%
Northfield	44067	12	0.0%	20,457	0.9%
Medina County					
Medina	44256	**21**	0.1%	62,303	2.7%
Brunswick	44212	35	0.1%	43,937	1.9%
Erie County					
Sandusky	44870	6	0.0%	41,126	1.8%
Ashtabula County					
Geneva	44041	3	0.0%	14,766	0.6%
Secondary Market Total:		531	**2.1%**	654,058	47.1%
Remainder (out of market)		1,027	**4.0%**		
Total:		25,448	100.0%		100.0%

*St. Vincent Charity Medical Center
**Source: U.S. Census, American Community Survey, 2010 Decennial projection to 2013

In 2014, St. Vincent Charity Medical Center had 25,448 visits to the emergency room; 93.9 percent were residents of the hospital's primary market area and 2.1 percent were residents of its secondary market area.

Table 3: Patient Visits to St. Vincent Charity Medical Center's Psychiatric Emergency Department, 2014 to 2015

Psychiatric Emergency Department Visits	2014		2015	
	Number	Percent	Number	Percent
Inpatient	1,096	28.1%	1,225	31.3%
Outpatient	2,799	71.9%	2,695	68.8%
Total	3,895	100.0%	3,920	100.0%

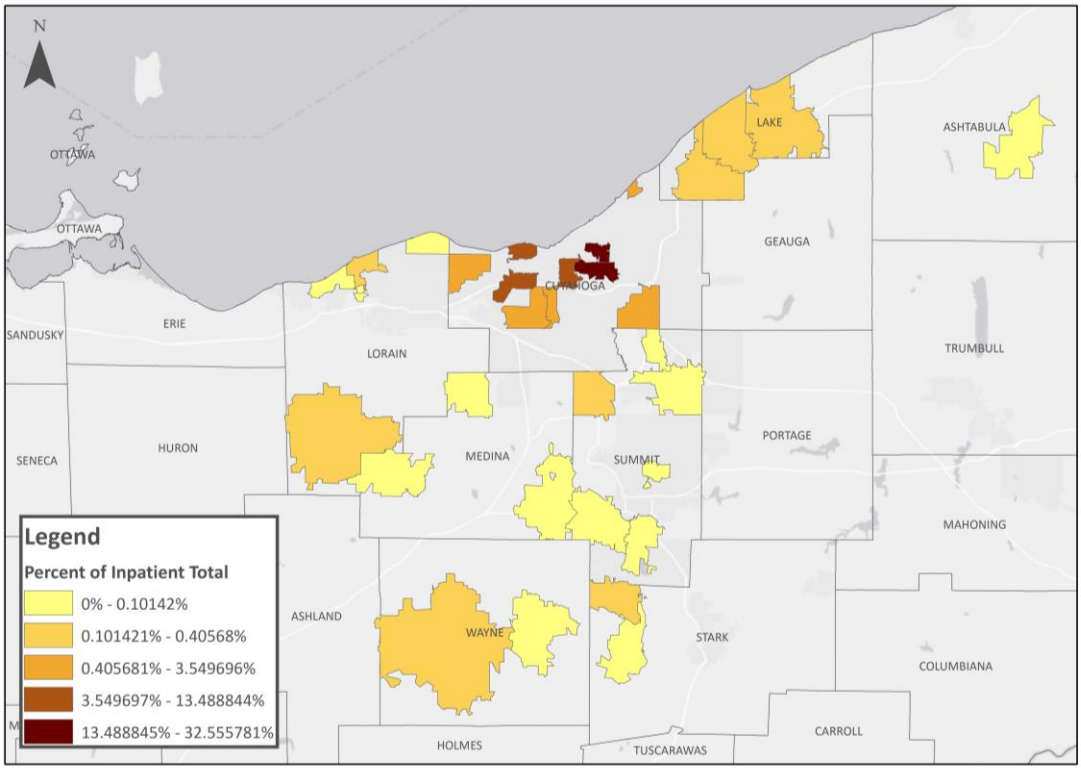
St. Vincent Charity Medical Center operates the only known emergency department in Northeast Ohio equipped to treat patients with psychiatric disorders. The total number of emergency department patient encounters was similar in 2014 and 2015 (3,895 and 3,920, respectively). However, the number and proportion of total inpatient encounters increased from 2014 to 2015 (by 129 visits or 3.3% of the 2014 total). Likewise, the number of outpatient visits decreased by 3.9% (from 2,799 to 2,695) during that same time period.

Table 4: Diagnosis of Psychiatric Patients Treated as Outpatients or Inpatients in 2014 and 2015

Diagnosis	Inpatient		Outpatient	
	2014	2015	2014	2015
Bipolar Disorders	10.8%	7.3%	8.3%	5.5%
Depression/Mood Disorders	10.1%	7.8%	13.7%	9.9%
Schizophrenia/Affective Psychoses	68.2%	53.3%	25.4%	21.8%
All Others	0.6%	25.3%	26.9%	29.8%
Chronic Mental Illness (Subtotal):	89.7%	93.7%	60.7%	67.0%
Substance Abuse	3.2%	2.2%	19.0%	15.6%
Adjustment Disorder – all types	0.7%	0.7%	14.2%	12.2%
Acute, Transient Episode	0.3%	0.1%	3.0%	2.5%
Developmental (Dementia, etc.)	2.7%	1.7%	0.7%	1.2%
Poisoning (psychotropic drugs)	0.5%	0.2%	0.1%	0.1%
Non-Psychiatric Issue	2.9%	1.3%	2.4%	1.3%
Total	100.0%	100.0%	100.0%	100.0%

In both 2014 and 2015, the vast majority of psychiatric patients treated (as outpatients or admitted as inpatients) had a primary diagnosis of a chronic mental illness. Among those admitted as an inpatient, most commonly patients presented with a psychosis (schizophrenia being the most common).

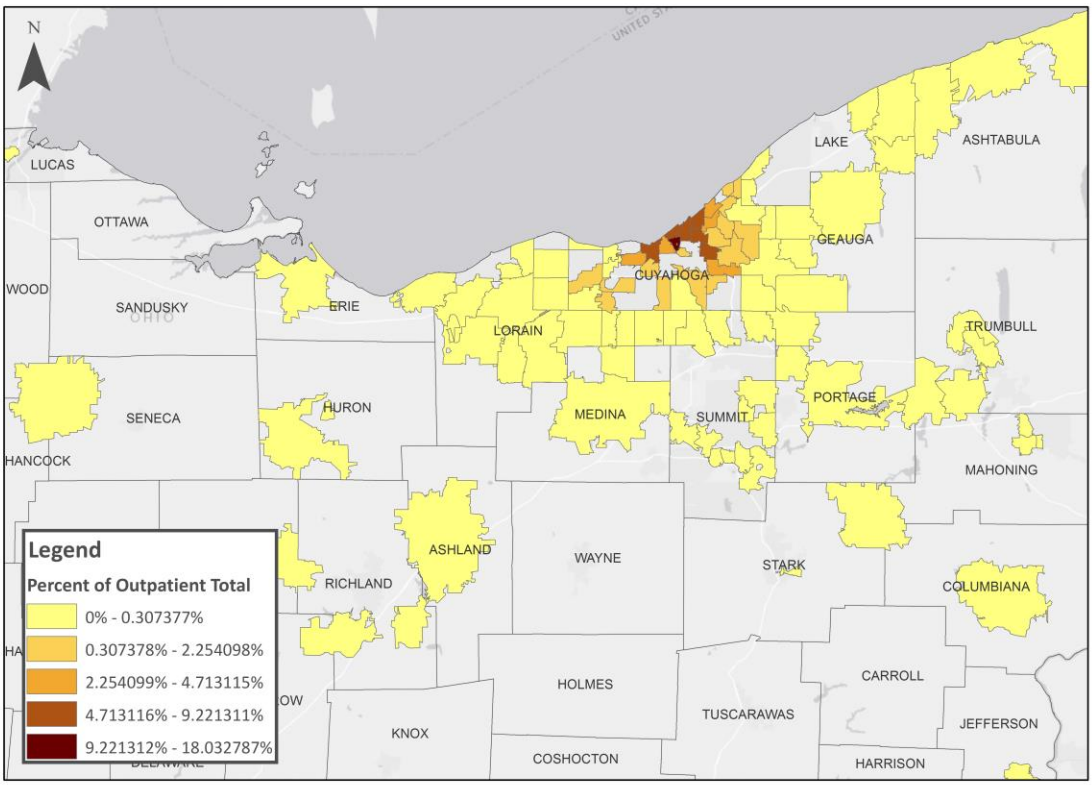
Figure 3: Source of Inpatients to the Psychiatry Unit, 2015
Proportion of All Inpatients



Prepared By: The Center for Health Affairs, September 2016

In this figure we show the density of patients admitted from the psychiatric emergency department and where they geographically reside. While the largest density of inpatients reside in the neighborhoods surrounding St. Vincent Charity Medical Center, many were residents of fairly distant counties.

Figure 4: Source of Outpatients Treated in the Psychiatric Emergency Department, 2014 and 2015
Proportion of All Outpatients



Prepared By: The Center for Health Affairs, September 2016

Examination of the geographic diversity of patients seen on an outpatient basis in the psychiatric emergency department in 2014 and 2015 shows an even greater geographic diversity.

B. Introduction to Data Analysis

This report incorporates analyses of both primary and secondary data, which are necessarily drawn from a variety of sources at the local, state and federal level.

Primary Data

There were two main sources of primary data:

1) Hospital Discharge Data
    - Discharge data from the Ohio Hospital Association was used to describe hospital admission patterns for St. Vincent Charity Medical Center from 2011 to 2014.

2) Qualitative Data
    - Interviews were conducted with 13 community leaders representing the health care, education, clergy, government and social service sectors.

Qualitative Data Analysis Summary

To help provide a complete understanding of the health needs and concerns in St. Vincent Charity Medical Center's market area, St. Vincent Charity Medical Center staff solicited the input of individuals who represent the broad interests of the community.

St. Vincent Charity Medical Center developed a comprehensive list of 22 leaders representing the health care, education, clergy, government and social service sectors. From that comprehensive list, a total of 13 interviews were completed from June 2016 to August 2016. All interviewees were told the purpose of the interviews. The Center for Health Affairs analyzed the 13 interview transcripts to summarize key themes that emerged. A copy of the interview questions can be found in the Appendix.

Community leaders from the organizations listed below were interviewed:

- Campus District, Inc.
- Cleveland Department of Public Health
- Cleveland Metropolitan School District
- Cleveland Public Library, Sterling Branch
- Friendly Inn Settlement, Inc.
- May Dugan Center
- Cleveland Central Promise Neighborhood
- St. Philip's Christian Church
- Cleveland City Council (Ward 5)
- Cuyahoga County Council (District 8)
- The Ohio House of Representatives (District 11)
- Marion-Sterling Elementary School
- Greater Cleveland Food Bank

Each of these organizations represent medically underserved, low-income or minority populations in the St. Vincent Charity Medical Center market area. While staff from St. Vincent Charity Medical Center interviewed leaders with a broad understanding of the communities in the hospital's entire market area, a particular focus was on the experience of residents living in the Central Neighborhood.

Generational Poverty

While the Central Neighborhood has a number of assets, the issue of generational poverty was raised by many community leaders in describing the experience of many, although not all, Central Neighborhood residents and undergirds much of the commentary provided by interviewees.

A lack of available jobs and residents with past felony convictions not being able to find employment were cited as barriers to economic stability. Some community leaders expressed a desire for more job training programs and partnerships in the community to boost the job skills of residents. A lack of stable, affordable housing also impacts residents' ability to have a stable home environment, according to community leaders.

Need for Additional Community Outreach

While there was a recognition that a lot of good work was being done in the community, there was consensus that there was a need for much more ongoing community outreach to maintain awareness of services available and to promote healthy habits. Community leaders feel there is simply not enough outreach to adequately address the needs of a community of the size of the Central Neighborhood with the level of health needs present in the community. One participant pointed out that outreach needs to be constant because the population turns over every couple of years. Furthermore, many neighborhood residents have a fear of healthcare providers and boosting community outreach can help minimize this fear.

Some community leaders suggested that there have been a lot of smaller scale initiatives that aim to boost the health and wellness of community residents, but that most initiatives come and go. A need for a long-range, continuous plan (with ownership by the people who live there) which is patiently implemented and continuously supported is necessary. As one interviewee said "people are sick of being asked the same questions and not seeing what the result is."

Tied to the issue of generational poverty, some interviewees expressed the need to help families in the area think about their health in the long-term, particularly given that many residents have witnessed their parents dying at a young age and thus maintain a belief that they will not live long either. One interviewee noted that residents need examples of people close to them who can help prove the link between education and economic success. Furthermore, any efforts to improve the health of residents in the area should have community engagement as a component. As one participant noted, residents need to not just be told what to do, they need to be included in developing the solutions.

A majority of community leaders also expressed the need to move community outreach efforts beyond simply passing out fliers and pamphlets to developing relationships with neighborhood residents and "meeting residents where they are." Some community leaders suggested a need to go door-to-door. Other interviewees suggested a need to have different types of medical professionals from the hospital out in the community making connections with residents, getting them excited about healthy living and offering them hope. One community leader advocated for targeted outreach to males aged 17 to 23. In sum, interviewees stressed the need to blanket the community with messages which promote health to compete with the environment which often does not promote healthy habits.

Chronic Disease / Nutrition / Hunger

A majority of community leaders expressed that chronic disease precipitated by an unhealthy diet was a key health concern in the neighborhood. Diabetes, obesity and high blood pressure were mentioned frequently as chronic diseases that are prevalent in the Central Neighborhood. There are numerous factors impeding residents' ability to make healthy choices including hunger, insufficient availability of low-cost healthy options and a lack of awareness about what comprises a healthy diet. Furthermore, ensuring that healthcare providers fully appreciate how difficult it is for many poor patients to be compliant with treatment protocols given their life circumstances, and making it easier for patients to be compliant, was cited as a key health need. It was suggested that healthcare providers must not too-easily dismiss patients who are being non-compliant and instead develop a greater understanding of and empathy for those who face barriers to compliance.

For some individuals in the community, simply having access to sufficient food was identified as a struggle. Community leaders expressed that there was an excess of inexpensive, fast food in the neighborhood, which hampers residents' ability to have access to fresh produce necessary for a healthy diet.

Numerous solutions were identified by community leaders to impact healthy eating. Educating individuals in the neighborhood about healthy eating on a budget was something that a majority of participants expressed as being a key health-promoting tactic. Bringing fresh produce to individuals was also mentioned as being a key element for success. Cooking demonstrations to show residents how to cook many of the vegetables they receive through food pantries was also highlighted as a strategy that would be useful.

Peer groups were identified as a very effective way to potentially impact the nutrition choices that neighborhood participants make. Rather than having someone preach to residents, hearing from a peer that "I lost 15 pounds and boy do my knees feel better," would be incredibly effective.

One community leader recommended considering a reward system for children who make healthy choices at corner stores. Another leader recommended diversifying the type of information that is distributed to community residents and mentioned the Cleveland Clinic's quarterly publication that describes workshops on different health and wellness topics as being a helpful model. Ensuring that publications are written in plain language was also identified as important.

Education about how to manage various chronic diseases was also identified as a health need and a need to focus on health literacy was also suggested. Some community leaders voiced a desire to see more exercise programs for adults in the community. One participant noted that it isn't enough to simply tell residents that they need to go to the gym. Residents would benefit from being shown how to properly and safely exercise at the gym. Another participant noted that a walking club could be beneficial. Furthermore, social service agencies are looking to hospitals for guidance on how to help meet community health needs.

Mental Health / Chronic Stress / Addiction and Substance Abuse

Many community residents described chronic stress, stemming from poverty, illegal activity in the neighborhood, and other stressors as being a factor impacting the lives of many residents in the Central Neighborhood. One participant suggested that the mental and emotional exhaustion that many residents in the Central Neighborhood experienced was sometimes mischaracterized as laziness. Furthermore, counseling to help patients with behavioral health needs, in addition to other behavioral health services, was cited as important.

Many residents in the Central Neighborhood have experienced trauma. Therefore, ensuring healthcare workers that serve residents of the Central Neighborhood are well-trained in trauma-informed care is important.

Abuse of alcohol was mentioned as being a frequent concern for many individuals living in the Central Neighborhood. Shifting certain residents' coping mechanisms away from use of alcohol to more healthy options was suggested as a way to improve health in the community.

Transportation

Transportation and the cost of public transportation was raised by many community leaders as a barrier to people accessing needed healthcare and other needed services to maintain a healthy lifestyle. Many people in the neighborhood walk as their mode of transportation and this creates challenges, for example, when the weather is bad and young mothers have children who are sick.

Given the transportation constraints faced by many residents in the neighborhood, community leaders suggested that having healthcare providers come to where individuals in the community already are would be beneficial. For example, providing ongoing healthcare services in the school and at community events is more convenient.

Access to Care

Community leaders expressed differing opinions about whether or not residents of the Central Neighborhood have sufficient access to healthcare. While some community leaders suggested that there were adequate healthcare facilities in the area, certain interviewees were concerned about whether or not residents had access and/or awareness that they had access to existing healthcare services. Furthermore, some interviewees suggested that the issue of access may have more to do with the lack of a long-standing ecosystem for care which is trusted and therefore used by the population.

Many community leaders wondered how consistent of a relationship neighborhood residents have with a primary care doctor. Waiting until health problems escalate was cited as a key experience for many Central Neighborhood residents who typically frequent the emergency room at that point. Community leaders also suggested that a lack of financial security likely creates a disincentive for residents in the community to seek healthcare services until they reach a point of crisis.

For some residents, care is accessed in the same way that they have witnessed their parents or other important people in their lives accessing the healthcare system. A traditional doctor's office may not be as effective at providing access to care for many residents, but rather a drop-in clinic may be more effective to boost access to primary care.

Secondary Data

There were several sources of secondary data:

- U.S Census. 2010 Decennial Census, American Community Survey (projections to 2014) (demographic data; poverty data);
- U.S. Bureau of Labor Statistics, 2016 (unemployment data);
- U.S. Health Resources and Services Administration (HRSA) (medically underserved areas and populations; food deserts);
- Health status and access indicators available from:
    - County Health Rankings & Roadmaps; Robert Wood Johnson Foundation program, 2015;
    - Ohio Department of Health, 2015;
    - U.S. Centers for Disease Control and Prevention, CHSI Information for Improving Community Health, Community Health Status Indicators Project, 2015;
    - Community Commons, 2015
- Care Alliance Health Center, Central Neighborhood Clinic, April 2015 – August 2016

Information Gaps

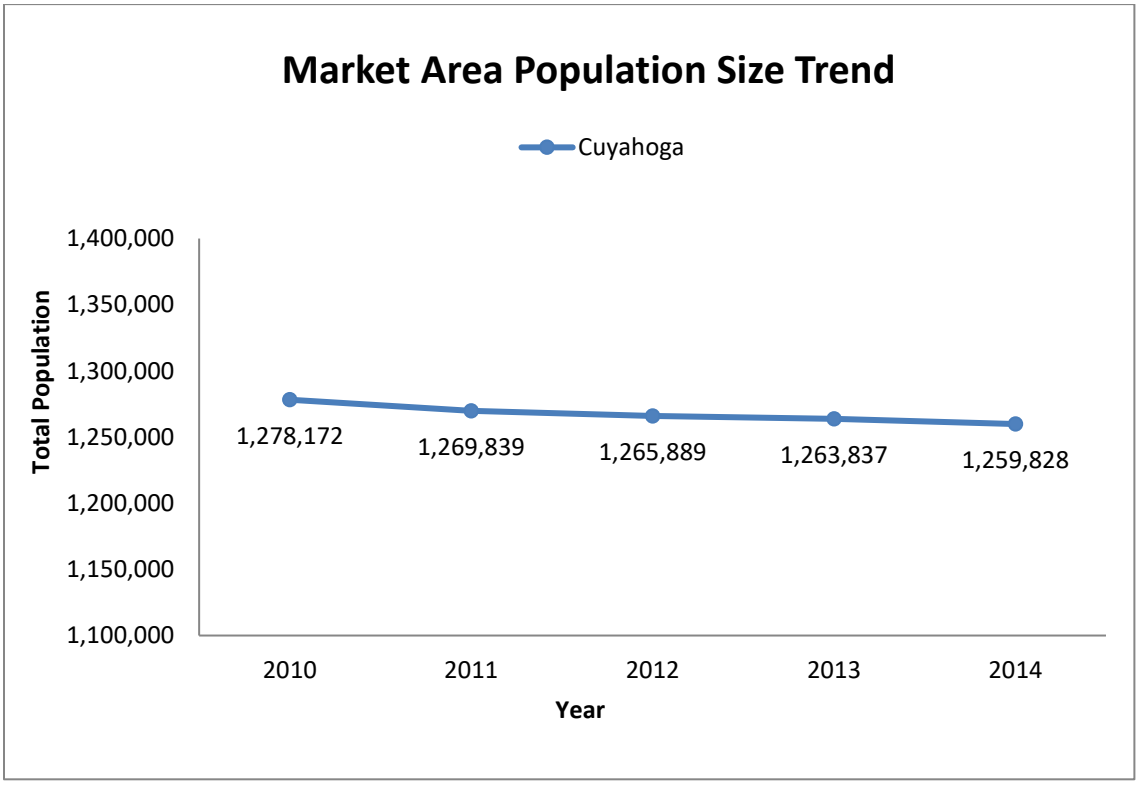
To the best of The Center for Health Affairs' knowledge, no information gaps have affected St. Vincent Charity Medical Center's ability to reach reasonable conclusions regarding community health needs.

C. Demographic Characteristics of St. Vincent Charity Medical Center's Market Area

While St. Vincent Charity Medical Center's primary market does contain one ZIP code that is outside of Cuyahoga County, the proportion of residents in that particular community compared to the total population in St. Vincent Charity Medical Center's market area is very small (1.4%). Therefore, herein when county-level data are presented, we include Cuyahoga County only, as the single ZIP code in Ashtabula County which is part of St. Vincent Charity Medical Center's primary market area cannot be presumed to be reflective of the population within that county.

Cuyahoga County is the largest county in Ohio based on population size (1,259,828 residents in 2014). St. Vincent Charity Medical Center's primary market area covers 67% percent of Cuyahoga County's population.

Figure 5: Cuyahoga County Population Trends



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

Looking at only 2010 to 2013, the time period with full statistics available, we see that Cuyahoga County had a 1.1 percent reduction in population.

- The eight ZIP codes (44102, 44103, 44104, 44108, 44113, 44114, 44115, 44134) which are in the City of Cleveland and which are in St. Vincent Charity Medical Center's market area show a slightly faster population decline (-2.2%) from 2010 to 2013 than Cuyahoga County as a whole (-1.1%).

Trends in demography at the ZIP code (ZCTA) are not available; however, we can see only small changes in the demography of Cuyahoga County from 2010 to 2013.

Table 5: Demographic Trends in Cuyahoga County: By Gender, Age and Race

	Cuyahoga County		
	2010	2013	Percent Change
Total Population	1,278,172	1,263,837	-1.1%
By Gender			
Males	47.4%	47.5%	+0.1%
Females	52.6%	52.5%	-0.1%
By Age Group			
0-19	25.6%	24.6%	-1.0%
20-44	31.0%	31.0%	0.0%
45-64	27.8%	28.3%	+0.5%
65+	15.4%	15.8%	+0.4%
By Race			
White	64.9%	63.9%	-1.0%
Black or African American	29.6%	29.7%	+0.1%
American Indian and Alaska Native	0.2%	0.2%	0.0%
Asian	2.6%	2.7%	+0.1%
Native Hawaiian and Other Pacific Islander	0%	0%	0%
Some other race	0.9%	1.2%	+0.3%

Cuyahoga County, like its neighboring counties, is growing older, on average. In 2013, the proportion of senior citizens increased by 0.4 percentage points in Cuyahoga 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 1.0 percent from 2010 to 2013. Black is the dominant minority race (29.7% of the total population).

While the basic demography in Cuyahoga County did not see significant changes from 2010 to 2013, the economic situations for many residents did.

Table 6: Economic Trends in Cuyahoga County: Income and Poverty from 2010-2013

	Cuyahoga County		
	2010	2013	Percent Change
Total Households	534,653	532,702	-0.4%
Less than $10,000	10.2%	11.2%	+1.0%
$10,000 to $14,999	6.5%	6.9%	+0.4%
$15,000 to $24,999	12.1%	12.6%	+0.5%
$25,000 to $34,999	11.2%	11.3%	+0.1%
$35,000 to $49,999	14.3%	13.7%	-0.6%
$50,000 to $74,999	16.9%	16.6%	-0.3%
$75,000 to $99,999	10.9%	10.3%	-0.6%
$100,000 to $149,999	10.8%	10.2%	-0.6%
$150,000 to $199,999	3.6%	3.4%	-0.2%
$200,000 or more	3.6%	3.7%	+0.1%
Median household income (dollars)	$45,184	$43,112	-4.6%
Mean household income (dollars)	$64,552	$63,340	-1.9%
Percent of households with Social Security	29.0%	30.4%	+1.4%
Mean Social Security income (dollars)	$16,127	$15,921	-1.3%
Percent with retirement income	18.5%	18.8%	+0.3%
Mean retirement income (dollars)	$21,612	$21,819	+1.0%
Percent with Supplemental Security income	5.3%	6.8%	+1.5%
Mean Supplemental Security income (dollars)	8,406	8,860	+5.4%
Percent with cash public assistance income	3.7%	4.3%	+0.6%
Mean cash public assistance income (dollars)	3,142	2,925	-6.9%
With Food Stamp/SNAP benefits in the past 12 months	14.5%	18.3%	+3.8%

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

- As the population decreased in Cuyahoga County from 2010 to 2013, the number of households also decreased slightly (-0.4%)
- The average (median) income decreased from 2010 to 2013 by 4.6 percent. Mean household income decreased by 1.9 percent from 2010 to 2013.
    - The proportion of households with Social Security income increased from 2010 to 2013 (1.4%). However, the average (mean) income from Social Security decreased by 1.3 percent in Cuyahoga County to $15,921 in 2013.
- There were more households receiving cash public assistance income in 2013 compared to 2010 in Cuyahoga County (an increase of 0.6%). The size of cash public assistance decreased by 6.9 percent in those three years. Likewise, the proportion of households receiving Food Stamp/SNAP benefits increased by 3.8 percent in Cuyahoga County from 2010 to 2013.

Table 7: Most Economically Vulnerable County Residents

	Cuyahoga County		
	2010	2013	Percent Change
Percent of families under the poverty line	13.1%	14.4%	+1.3%
Percent of households with related children under 18 years under the poverty line	21.2%	23.9%	+2.7%
Percent of households with related children under 5 years (no older children) under the poverty line	21.5%	26.1%	+4.6%
Percent of married couple families under the poverty line	4.3%	5.1%	+0.8%
Percent of married couple families with related children under 18 years under the poverty line	5.6%	7.7%	+2.1%
Percent of married couple families with related children under 5 years (no older children) under the poverty line	4.5%	8.4%	+3.9%
Percent of families with female householder, no husband present, under the poverty line	33.1%	34.2%	+1.1%
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%
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%
Percent of all people in the county under the poverty line:	17.3%	18.7%	+1.4%
Of those under 18 years	26.1%	28.1%	+2.0%
Of those with related children under 18 years	25.8%	27.8%	+2.0%
Of those with related children under 5 years	30.4%	31.7%	+1.3%
Of those with related children 5 to 17 years	24.2%	26.3%	+2.1%
Living under the poverty line, by age:			
Of those 18 years and older	14.6%	16.0%	+1.4%
18 to 64 years	15.6%	17.2%	+1.6%
65 years and over	10.8%	11.2%	+0.4%
Percent with health insurance coverage	88.2%	88.7%	+0.5%
Percent with private health insurance	67.6%	65.6%	-2.0%
Percent with public coverage	32.9%	35.2%	+2.3%
Percent with no health insurance coverage	11.8%	11.3%	-0.5%

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

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 percent (from 13.1% to 14.4%) from 2010 to 2013. Almost 1 in 4 Cuyahoga County households with children under age 18 lived below the poverty line in 2013 (23.9%), an increase of 2.7 percent.

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. 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.

From 2010 to 2013, fewer residents in Cuyahoga had private health insurance (a reduction of 2%), but more had public health coverage (an increase of 2.3%). On a net basis, there were fewer uninsured people in Cuyahoga County in 2013 compared to 2010 (a decrease of 0.5%).

Finally, the unemployment rate (people actively seeking employment) in Cuyahoga County is the 71th lowest (strongest) in Ohio and was 4.9 percent in January of 2016. The comparable unemployment rate for Ohio was 5.7 percent (Source: U.S. Bureau of Labor Statistics 2016).

Table 8: Demographic Patterns in Key Neighborhoods: By Gender, Age and Race, 2010*

	Central	Fairfax	Goodrich-Kirtland Park	Broadway-Slavic Village	Downtown
Total Population	12,306	6,239	4,238	22,432	9,464**
Households	4,494	2,707	2,012	9,024	4,094
Percent of Households with Children Headed by Females (no husband present)	90%	71%	43%	61%	66%
Percent of 1-Person households	34%	46%	50%	35%	71%
Percent of Households with children (under age 18)	52%	28%	19%	34%	4%
Percent of Renter Occupied Housing	88%	64%	73%	59%	95%
Percent with no high school diploma (of adults)	33%	28%	38%	30%	16%
Percent non-White	96%	98%	61%	59%	56%
Percent of Hispanic/Latino descent	2%	1%	10%	5%	3%
Percent of Households with member age 60+	19%	45%	35%	27%	14%
Percent of households With Social Security Income	36%	55%	34%	37%	19%
Unemployment Rate (people actively seeking employment)	36%	24%	18%	23%	18%
Percent Working	49%	50%	61%	58%	60%
Median Household Income	$9,418	$20,449	$24,418	$26,304	$36,760
Percent Below Poverty Level	70%	38%	32%	35%	24%
Percent of Children Below Poverty Level	79%	68%	56%	45%	78%
Percent of Elderly Below Poverty Level	40%	22%	39%	28%	30%

*Source: City of Cleveland, 2015

**The Downtown Neighborhood in Cleveland has experienced high population growth since 2010. The Downtown Cleveland Alliance estimates that 3,000 additional residents have been added to this neighborhood since 2010 (the most recent Decennial Census).

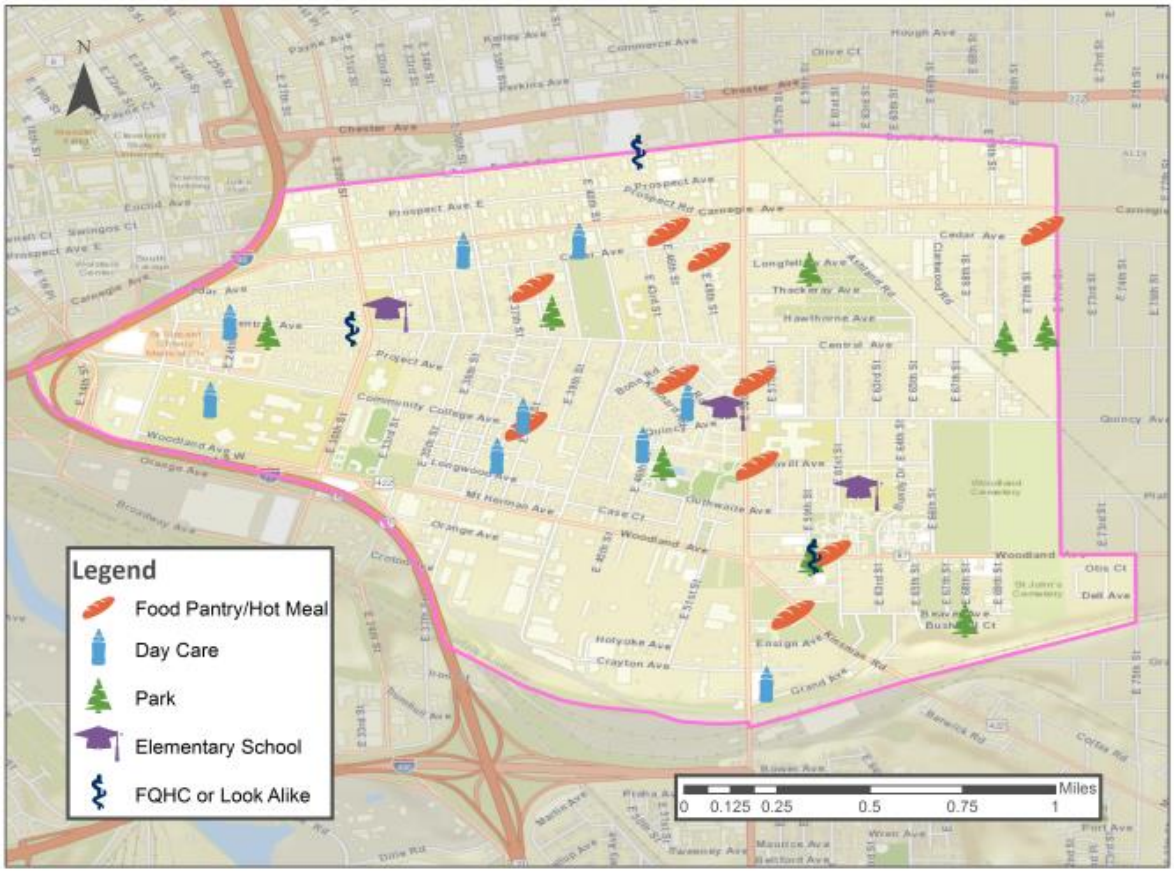
The five Cleveland neighborhoods which surround St. Vincent Charity Medical Center's location are fairly diverse, demographically, and this presents a challenge to the hospital. The hospital is located in the Central Neighborhood, and it houses the population which is most economically challenged. Just over half of the households contain children (52%) but a strong majority of the households with children are headed by females with no male/husband present (90%). The median household income was $9,418 in 2010 and 70% of the residents live in poverty (79% of the children lived below the poverty line in 2010). Over one-third of the adult residents (36%) were unemployed in 2010.

The Downtown Neighborhood was the strongest economically in 2010 and most evidence suggests that has improved significantly by 2016. In response to a large amount of residential development, by mid-2015 the Downtown Neighborhood added 3,000 residents (an increase of 32%). Most of this growth is among those aged 25 to 34 and 55 to 64. (Source: Downtown Cleveland Alliance)

Hence, St. Vincent Charity Medical Center is challenged by serving both neighborhoods struggling with deep and widespread poverty, those with high proportions of families with children who are living in poverty, and a large elderly population and a very urban neighborhood which is gentrifying and experiencing very rapid population influxes of households without resident children which are highly employed.

St. Vincent Charity Medical Center sits on the western boundary of the Central Neighborhood. The Central Neighborhood is bound by a major highway on the south, major commuter roads which house mainly retail and commercial entities on the north, and the Cuyahoga River on the west. Within its bounds, the Central Neighborhood contains not only St. Vincent Charity Medical Center, but the downtown campus of the county's community college (Cuyahoga Community College). The neighborhood includes three elementary schools. The neighborhood also includes three Federally Qualified Health Centers (FQHCs). There are nine day care programs within the neighborhood and several parks. To support the neighborhood's food needs, there are ten food pantry/hot meal delivery sites. Interspersed within the neighborhood are single family homes and several public housing complexes.

Figure 6: Central Neighborhood Map



Prepared By: The Center for Health Affairs, August 2016

D. St. Vincent Charity Medical Center Patients Served

Table 9: St. Vincent Charity Medical Center, Percent of Payers for Discharges, By Market Area, 2015

	Primary Market Area	Secondary Market Area
Medicare	30.2%	29.9%
Medicare Managed Care	12.2%	10.8%
Medicaid	13.0%	8.0%
Medicaid Managed Care	30.2%	19.1%
Commercial	8.3%	25.7%
Self-Pay	2.2%	1.3%
Other	3.9%	5.2%

Source: Ohio Hospital Association discharge data

- Of all discharges in 2014, within the primary market area the payers were an even mix of Medicare and Medicaid. However, Medicaid managed care was more common than Medicare managed care.
- The proportion of those covered by commercially available insurance was much higher within the secondary market area.

In 2014, all discharged patients from St. Vincent Charity Medical Center market areas were adults (ages 16 and older). The median age for primary market patient discharges in 2014 was 55; the median age for secondary market patient discharges was slightly older at 56 years.

E. Ambulatory Care Sensitive Discharges

Adults

Using discharge data from St. Vincent Charity Medical Center, which includes the reason for patient admission into the hospital, we can identify "ambulatory care sensitive discharges." 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.

The table below shows the number of adult discharges for St. Vincent Charity Medical Center in 2014 and the percent that were ACS cases. For all discharges, there are both primary and non-primary diagnoses ("secondary" diagnoses), and both are shown in the table below. Patients can have up to 14 different secondary diagnoses.

For St. Vincent Charity Medical Center, 13.3 percent of discharges were ACS discharges of residents within the primary and secondary market areas combined. **As shown below, this is a relatively low ACS rate, therefore *not* a signal of lower availability or access to primary care within the total market area overall.**

Table 10: St. Vincent Charity Medical Center, Primary and Secondary Diagnoses of Adult (Age 16+) ACS Discharges in 2014

	Primary ACS Diagnosis % of Cases	Secondary ACS Diagnosis % of Cases
No ACS Primary Diagnosis	**86.7%**	
Congestive Heart Failure (CHF)	2.8%	23.6%
Cellulitis	2.1%	5.0%
Chronic Obstructive Pulmonary Disease (COPD)	1.7%	14.6%
Diabetes	1.7%	10.5%
Bacterial Pneumonia	1.4%	4.3%
Asthma	1.3%	16.1%
Hypertension	0.7%	59.6%
Kidney/Urinary Infections	0.7%	4.9%
Epilepsy	0.4%	4.8%
Convulsions	0.1%	0.8%
Gastroenteritis	0.1%	0.3%
Dehydration/Volume Depletion	0.1%	5.8%
Iron Deficiency Anemia	0.1%	5.8%
Angina	0.0%	3.1%
Hypoglycemia	0.0%	0.1%
Nutritional Deficiencies	0.0%	0.6%
Pelvic Inflammatory Disease	0.0%	0.1%
Dental Conditions	0.0%	1.1%
Failure to Thrive	0.0%	0.3%
Total	100%	

Source: Ohio Hospital Association discharge data, 2014.
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.

- The most common primary ACS diagnoses for St. Vincent Charity Medical Center's discharged patients were congestive heart failure (2.8%) and cellulitis (2.1%). Chronic obstructive pulmonary disease (COPD) (1.7%) and diabetes were almost as common (1.7%).
- What is perhaps more enlightening is the patterns of secondary diagnoses. Hypertension, while rarely a primary diagnosis, was a secondary diagnosis for almost 60 percent of inpatients in 2014. This highlights the coincidence of hypertension with ultimate serious medical issues which do require hospitalization.

The incidence of ACS primary diagnoses differs by patients' age groups.

Table 11: St. Vincent Charity Medical Center, Most Common Primary ACS Discharges in 2014, by Age Group

	< Age 40	Age 40 to 64	Age 65+
No ACS Condition	**93.9%**	**86.2%**	**81.2%**
Congestive Heart Failure (CHF)	0.3%	2.0%	4.9%
Chronic Obstructive Pulmonary Disease (COPD)	0.0%	1.4%	2.8%
Bacterial Pneumonia	0.4%	0.9%	2.3%
Cellulitis	1.4%	2.8%	2.5%
Diabetes	1.8%	2.3%	1.6%
Asthma	0.6%	2.2%	1.4%

- Patients under age 40 were less likely to have a primary ACS diagnosis than their older counterparts in 2014 among St. Vincent Charity Medical Center discharges (6.1% vs. 13.8% or 18.8%).
- All of the ACS conditions were associated with advanced age, except for diabetes and cellulitis, which crossed age groups somewhat equally.

The table below displays the number of adult discharges with ACS conditions as a primary diagnosis for St. Vincent Charity Medical Center in 2014 compared to the ACS discharge rate for those who live in St. Vincent Charity Medical Center's market areas, regardless of which hospital they were admitted to. Those who were inpatients for St. Vincent Charity Medical Center were less likely to be ACS cases than those who went to other hospitals.

Table 12: St. Vincent Charity Medical Center Market Areas Versus Other Hospital Inpatients, Primary Diagnosis of Adult (Age 18+) ACS Discharges in 2014

	St. Vincent Charity Medical Center Inpatient	All Inpatients (Any Ohio Hospital), Residents of St. Vincent Medical Center Primary Market Area
No ACS Primary Diagnosis	**86.7%**	**82.7%**
Congestive Heart Failure (CHF)	2.8%	3.3%
Cellulitis	2.1%	2.0%
Chronic Obstructive Pulmonary Disease (COPD)	1.7%	2.2%
Diabetes	1.7%	1.4%
Bacterial Pneumonia	1.4%	2.3%
Asthma	1.3%	1.7%

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

Table 13: St. Vincent Charity Medical Center, Primary Diagnosis of Adult (Age 18+) ACS Versus Non-ACS Discharges in 2015, by Primary Payer

	Medicare	Medicare Managed Care	Medicaid	Medicaid Managed Care	Commercial
No ACS Primary Diagnosis	83.1%	79.1%	85.4%	87.7%	89.3%

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

Those with commercial health insurance were the least likely to be hospitalized due to an ACS condition in 2014 among St. Vincent Charity Medical Center's inpatients. There was a higher tendency for those with Medicare to have an ACS condition than among those with Medicaid. Because Medicare is generally for those above age 65, this suggests a potential lack of primary care for seniors within the hospital's market area.

F. Cuyahoga County Health Rankings, Mortality and Morbidity

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). While St. Vincent Charity Medical Center does not include all of Cuyahoga County, it does include a substantial portion of it. Therefore, understanding where this county as a whole ranks in Ohio, in terms of health, is useful.

On the whole, Cuyahoga County achieves moderately low ranks, compared to other Ohio counties, in terms of health outcomes (64 out of 88 counties) or health factors (53 out of 88 counties). In terms of health outcomes, Cuyahoga ranks more positively for length of life (rank of 54) than quality of life (rank of 73). In terms of health factors, Cuyahoga County ranks the highest in clinical care (rank of 5) and to a lesser degree health behaviors (rank of 39). Cuyahoga County is among the lowest ranking counties in Ohio in terms of social and economic factors (rank of 79) and physical environment (rank of 61).

Table 14: Health Factor Rankings, Cuyahoga County Rank Within Ohio, 2016

	Cuyahoga County, 2016	Sub-Factors
Health Outcomes	64 out of 88 counties	Length of Life: 54 out of 88 counties Quality of Life: 73 out of 88 counties
Health Factors	53 out of 88 counties	Clinical Care: 5 out of 88 counties Health Behaviors: 39 out of 88 counties Social & Economic Factors: 79 out of 88 counties Physical Environment: 61 out of 88 counties

Source: County Health Rankings & Roadmaps; Robert Wood Johnson Foundation program, 2016.

Within the above rankings are several factors related to health and well-being in which Cuyahoga County lags behind 1) other counties in Ohio or 2) counties in the U.S. that score within the top 10% in terms of performance on those factors:

- Cuyahoga County has slightly lower proportions of adults smoking (18%) than Ohio overall (19%), but has more smoking adults compared to the strongest counties in the U.S. (14%). Likewise, Cuyahoga County is comparable to Ohio overall in terms of adult obesity (29% vs. 30%), but lower rates are seen elsewhere in the U.S. (25%).
- A higher proportion of driving deaths in Cuyahoga County are related to alcohol (45%) than in Ohio overall (35%).
- The sexually-transmitted disease chlamydia is much higher in Cuyahoga County (792.4 per 100,000 annually) than in Ohio (460.2). Likewise, the teen birth rate is also higher in the county (38 per 1,000 female teenagers vs. 34 for Ohio overall).
- Geographic access to primary care physicians, dentists and mental health providers is higher in Cuyahoga County than in Ohio overall; however, the proportion of preventable hospitalizations for seniors is comparable in Cuyahoga County and Ohio overall. The best counties in the U.S. have almost half as many preventable hospitalizations among seniors.

- Cuyahoga County residents experience violent crimes almost 10 times as frequently as those in the best performing counties in the U.S., and almost twice as often as residents of Ohio overall.
- The proportion of residents who have inadequate housing, in terms of its relation to health, is higher in Cuyahoga County (19%) than in Ohio overall (15%).

Table 15: Specific Health Factors, Cuyahoga County vs. Ohio and Top Counties in U.S., 2016

	Cuyahoga County	Ohio	Top Counties (10th Percentile) in U.S.
Premature Death Rate	7.9%	7.5%	5.2%
Percent of adults in fair or poor health	17%	16%	12%
Number of poor physical health days in recent month	3.9	3.8	2.9
Number of poor mental health days in recent month	4.0	4.0	2.8
Low birthweight newborns	10%	9%	6%
Adult smoking	18%	19%	14%
Adult obesity	29%	25%	30%
Food environment index (0=poorest, 10=best)	6.6	6.9	8.3
Adult physical inactivity	26%	26%	20%
Access to exercise opportunities	96%	83%	91%
Excessive drinking	18%	18%	12%
Percent of driving deaths due to alcohol impairment	45%	35%	14%
Number of annual newly diagnosed chlamydia per 100,000	792.4	460.2	134.1
Teen births (per 1,000 females aged 15-19)	38	34	19
Uninsured (adults under 65)	13%	13%	11%
Primary care physicians	880:1	1300:1	1040:1
Dentists	1030:1	1710:1	1340:1
Mental health providers	400:1	640:1	370:1
Preventable hospital stays (per 1,000 Medicare enrollees)	65	65	38
Violent crime (per 100,000 population annually)	560	307	59
Injury deaths (per 100,000 population annually)	59	63	51
Severe housing problems	19%	15%	9%

The Centers for Disease Control and Prevention (CDC, U.S. Department of Health and Human Services) also compiles health-related population statistics. The CDC identified several areas in which Cuyahoga County compares unfavorably to its peer counties (which closely match Cuyahoga County in terms of demographic and physical factors). 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.

Table 16: Cuyahoga County: Higher Compared To Peer Counties' Mortality & Morbidity, 2015

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

G. Secondary Analysis of Population Health and Safety Events

Cancer is the leading cause of death for adults in Cuyahoga County, followed by coronary heart disease. Strokes, accidents, diabetes, and kidney disease combined account for far fewer deaths than cancer and/or coronary heart disease deaths. Note that annually approximately 560 per 100,000 Cuyahoga County citizens are victims of violent crime.

Table 17: Most Prevalent Causes of Death or Impaired Health, 2013

	Cuyahoga County	
	Annual, Per 100,000 adults	Centers for Disease Control and Prevention's Comparison to Peer Counties
Cancer Deaths	196.1	Rate is higher than average**
Coronary Heart Disease Deaths	151.3	Rate is higher than average**
Stroke Deaths	38.7	
Accidental Deaths (including motor vehicle)	32.1	
Motor Vehicle Deaths	5.7	
Diabetes Deaths	23.1	
Kidney Disease Deaths	15	
Violent Crime (homicide, rape, assault)	559.7	

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

**Compared to peer counties.

Linked to the most common death rates are common habitual behaviors. About one-fourth of Cuyahoga residents are obese (BMI > 30); 1 in 5 are tobacco smokers.

Table 18: Most Prevalent Morbidity - Adults and Youth

	Cuyahoga County	
Obesity	26.4%	
Smokers	19.3%	
Adult Diabetes	7.7%	
Older Adult Depression	14.0%	
Older Adult Asthma	5.2%	Rate is higher than average**
Alzheimer's Disease (among older adults)	14.4%	Rate is higher than average**
Teen Births (of females ages 15 to 19)	39.3% (per 1,000 births)	
Pre-term Births	14.4%	Rate is higher than average**

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

**Compared to peer counties.

The Centers for Disease Control and Prevention 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).

Finally, many adults in St. Vincent Charity Medical Center's market areas are subject to major life stressors:

- Twenty-five percent of adults lack a support system such as child care back-up, financial assistance, etc.
- Sixty-seven percent 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).

H. Cancer Incidence by Cancer Type

Prostate and breast are the two most common cancer diagnoses in Cuyahoga County. 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.

Table 19: Cancer Incidence by Cancer Type

Cancer Type	Report Area	Total Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Population)
Prostate Cancer (total population, male only)	Cuyahoga County	609,670	1,076	156
	Ohio	5,624,513	8,272	135.8
	United States	150,740,224	220,000	142.3
Breast Cancer (total population, female only)	Cuyahoga County	675,609	1,107	129.7
	Ohio	5,901,023	8,435	120
	United States	155,863,552	216,052	122.7
Lung Cancer	Cuyahoga County	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 Cancer	Cuyahoga County	1,285,279	709	44.2
	Ohio	11,525,536	5,862	44.5
	United States	306,603,776	142,173	43.3
Cervical Cancer (total population, female only)	Cuyahoga County	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

I. Lead Poisoning

The neighborhoods surrounding St. Vincent Charity Medical Center showed among the highest levels of positive blood lead tests compared to other neighborhoods in Cleveland. The Broadway-Slavic Village and Central neighborhoods both showed at least 10% of children (under age 6) with positive lead tests in 2014.

Table 20: Cuyahoga County Confirmed Elevated Blood Lead Levels (EBLs)
for Children Under 6 Years of Age, 2014

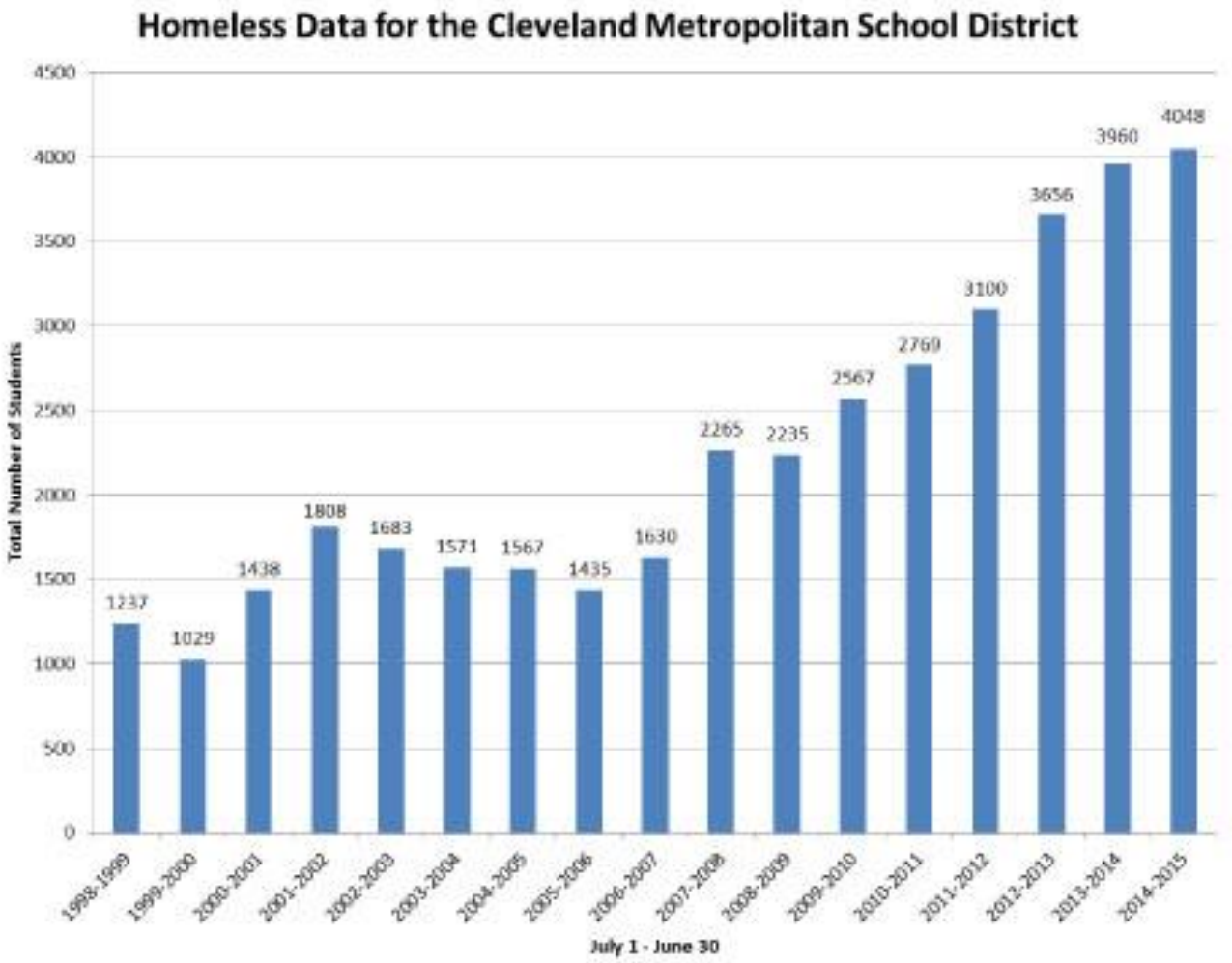
Neighborhood	Number Tested	5-9	10-14	15-19	20-24	25-34	35-44	45-69	70+	Non-Zero Rate*
Bellaire-Puritas	340	4.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%
Broadway-Slavic Village	**704**	**12.6%**	**1.7%**	**1.3%**	**0.0%**	**0.4%**	**0.0%**	**0.0%**	**0.1%**	**14.3%**
Brooklyn Centre	331	4.4%	1.7%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%
Buckeye-Shaker Square	321	5.5%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%
Buckeye-Woodhill	306	3.6%	1.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	4.8%
Central	**783**	**8.4%**	**2.1%**	**0.1%**	**0.3%**	**0.0%**	**0.1%**	**0.0%**	**0.0%**	**10.5%**
Clark-Fulton	370	4.7%	2.3%	0.0%	0.7%	0.1%	0.4%	0.1%	0.1%	7.0%
Collinwood-Nottingham	385	7.5%	1.7%	0.9%	0.6%	0.4%	0.0%	0.0%	0.0%	9.2%
Cudell	364	4.4%	1.6%	0.3%	0.3%	0.3%	0.1%	0.0%	0.0%	6.0%
Detroit Shoreway	356	5.4%	1.1%	0.6%	0.4%	0.4%	0.0%	0.0%	0.0%	6.5%
Edgewater	102	1.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%
Euclid-Green	183	3.8%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	4.0%
Fairfax	**187**	**3.1%**	**0.9%**	**0.3%**	**0.1%**	**0.3%**	**0.0%**	**0.0%**	**0.0%**	**4.0%**
Glenville	1,078	29.8%	6.7%	2.6%	0.4%	0.7%	0.1%	0.3%	0.0%	36.5%
Goodrick-Kirtland Park	**303**	**4.4%**	**0.6%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**5.0%**
Hough	460	8.7%	1.8%	0.3%	0.7%	0.1%	0.0%	0.0%	0.0%	10.5%
Jefferson	433	2.0%	0.9%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	2.8%
Kamms	455	1.6%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%
Kinsman	340	5.7%	0.6%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	6.3%
Lee-Harvard	180	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%
Lee-Seville	108	1.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%
Mount Pleasant	547	8.7%	3.1%	0.7%	0.6%	0.3%	0.0%	0.3%	0.0%	11.8%
North Shore Collinwood	402	7.2%	1.8%	0.6%	0.3%	0.1%	0.3%	0.0%	0.0%	9.1%
Ohio City	280	2.0%	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	2.4%
Old Brooklyn	720	6.0%	0.7%	0.4%	0.7%	0.1%	0.0%	0.0%	0.0%	6.7%
St. Clair-Superior	256	5.8%	1.4%	0.4%	0.6%	0.1%	0.0%	0.1%	0.0%	7.2%
Stockyards	424	6.3%	2.0%	0.7%	0.0%	0.1%	0.0%	0.0%	0.0%	8.2%
Tremont	195	2.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%
Union-Miles	535	9.4%	2.0%	0.7%	0.6%	0.4%	0.0%	0.0%	0.0%	11.4%
West Boulevard	676	7.8%	1.7%	0.9%	0.3%	0.4%	0.0%	0.0%	0.0%	9.5%

*Non-zero rate indicates the proportion which had at least some lead detected.
Source: Cuyahoga County Board of Health, 2015

J. Homelessness

The Central Neighborhood has three elementary schools within its boundaries. The number of homeless students within the Cleveland Metropolitan School District has been steadily increasing since the 2006-2007 school year. It is likely that many students within schools close to St. Vincent Charity Medical Center are homeless.

Figure 7: Homeless Data for the Cleveland Metropolitan School District



Source: Northeast Ohio Coalition for the Homeless

K. 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.

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).

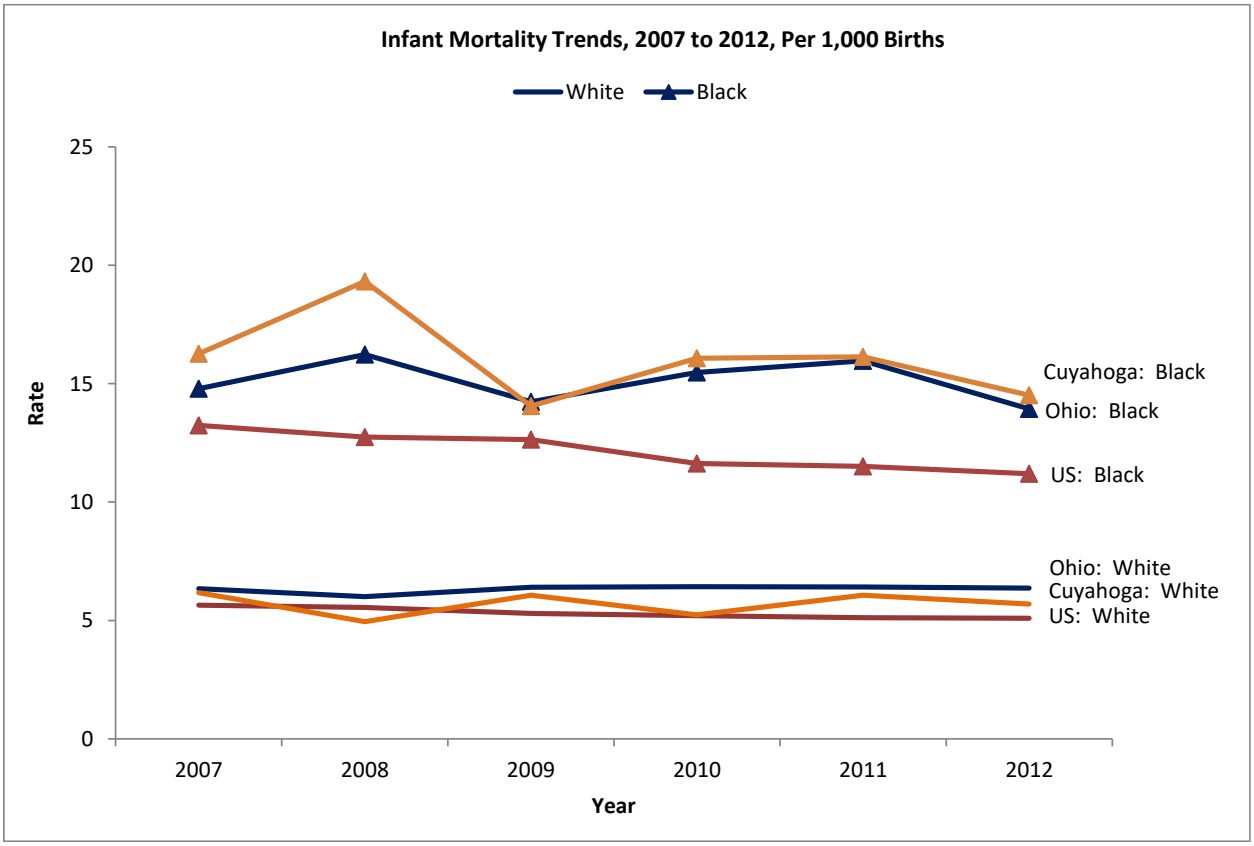
Historically, infant mortality rates for Blacks have been significantly higher in the U.S. In fact, according to the most recently available data, infant mortality rates for Blacks were almost twice as high as infant mortality rates for Whites in 2012. This disparity is also true for Cuyahoga County. In 2012, the infant mortality rate for Blacks was 64 percent higher than for Whites in Cuyahoga County.

Table 21: Infant Mortality Trends, 2007 to 2012, U.S., Cuyahoga and Surrounding 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
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

Figure 8: Infant Mortality Trends



L. Vulnerable Populations

Medically Underserved Areas, Federally Qualified Health Centers and Food Desserts

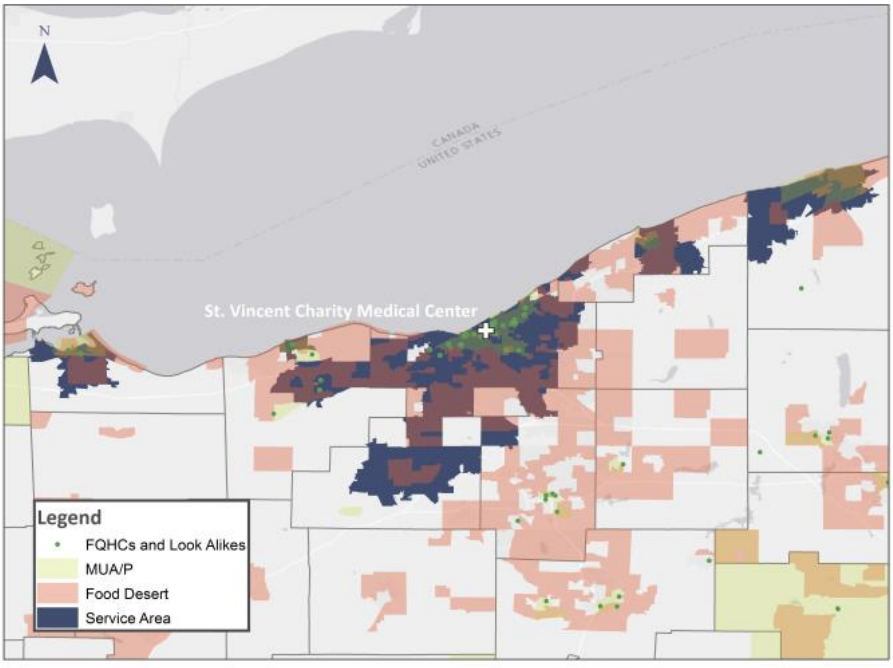
In this map we overlay medically underserved areas and food deserts in St. Vincent Charity Medical Center's market areas and beyond to determine areas that may have the highest need for services. To provide further context, the map also pinpoints the location of FQHCs.

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 St. Vincent Charity 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 33 FQHCs within St. Vincent Charity Medical Center's market area.

In addition, pinpointing food desert locations in a hospital's market 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 St. Vincent Charity Medical Center's market area which are designated as food deserts.

Figure 9: Medically Underserved Areas/Populations, FQHCs and Food Deserts: St. Vincent Charity Medical Center



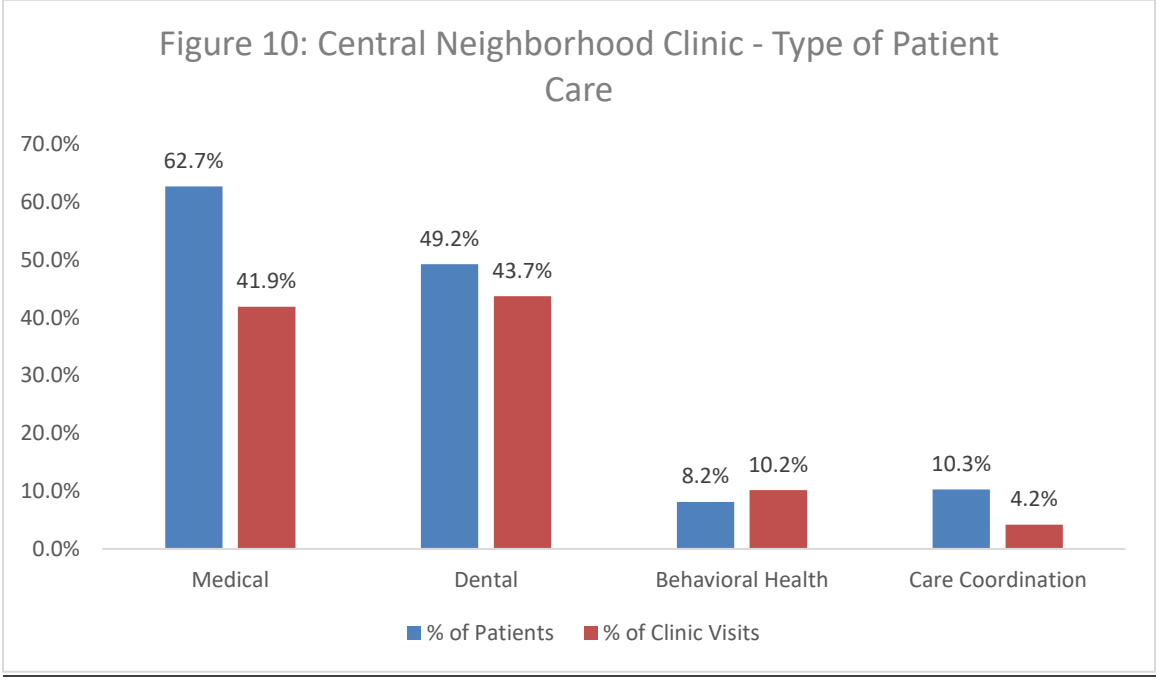
Prepared By: The Center for Health Affairs, June 2016

Access to Primary Care

Care Alliance Health Center's Central Neighborhood Clinic opened in April of 2015. It is located approximately one-half mile from St. Vincent Charity Medical Center. It was established to address the health disparities in the Central Neighborhood of Cleveland by implementing a patient-centered medical home that integrates primary health care, dental care, behavioral health and care coordination.

In the Central Neighborhood Clinic's first 16 months of operation (April 2015 to August 2016), 5,975 individual patients (non-duplicated count) were served. Those patients had 20,863 encounters (average of 3.5 visits per patient). The Central Neighborhood Clinic has the capacity to serve approximately 13,000 patients per year. Its ability to attract almost half that number within its first 16 months of operation suggests that it is located in an area of high demand for primary care and is doing well in being sensitive to and focusing on the neighborhood's unique needs.

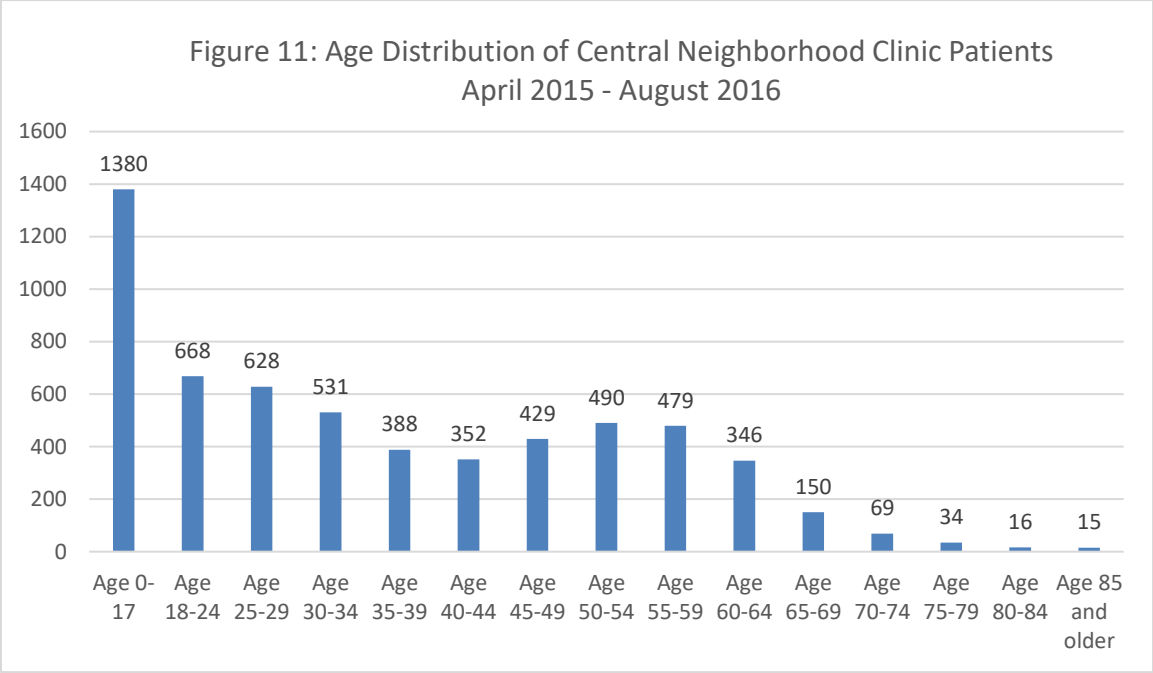
As shown in Figure 10 below, almost two-in-three (62.7%) of the patients seen at the Clinic received medical care. Almost half (49.2%) received dental care. Behavioral health care was less common (8.2% of patients). One-in-ten patients benefitted from care coordination (10.3%).

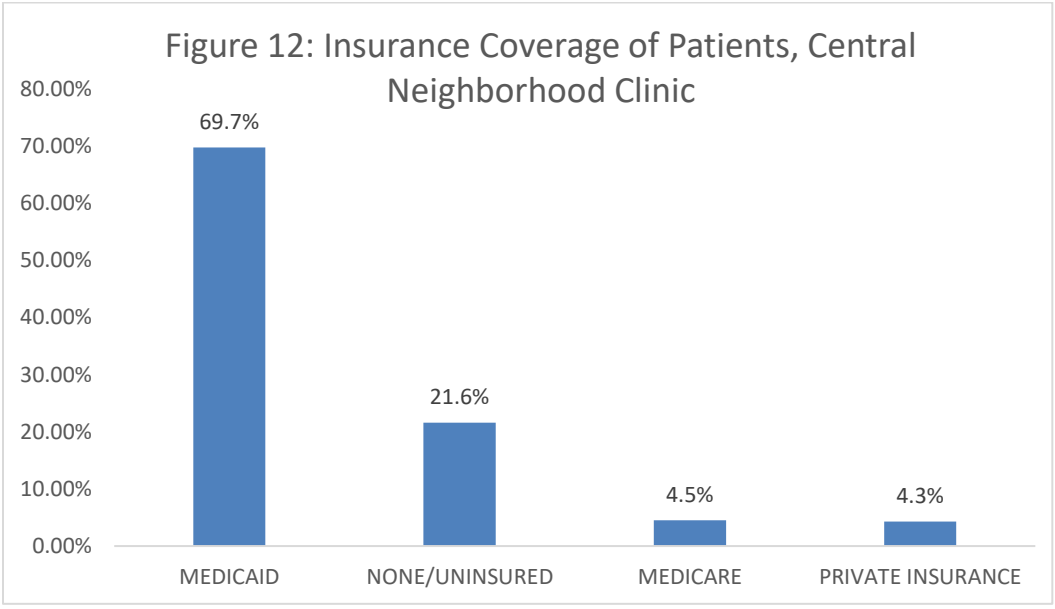


Almost half (45%) of the Central Neighborhood Clinic's medical patients have a designated primary care physician. The most common patient diagnoses at the Central Neighborhood Clinic reflected very common secondary diagnoses of inpatients during that time period at St. Vincent Charity Medical Center:

- Hypertension
- Type 2 diabetes mellitus
- Hyperlipidemia
- Vitamin D deficiency/insufficiency
- Asthma

Most of the patients seen in the Central Neighborhood Clinic during the first 16 months of operation were under age 65 (Figure 11). And, as shown in Figure 12, the majority were either covered by Medicaid (69.7%) or were uninsured at the time they were treated at the Central Neighborhood Clinic (21.6%). This suggests that the Central Neighborhood Clinic is aligned with and serving those in the community who have barriers to care. Those with Medicare (senior citizens) are visiting the Central Neighborhood Clinic at low levels because they are able to obtain care elsewhere. Instead, the heavy concentration of Central Neighborhood Clinic patients are those who are uninsured or covered by Medicaid.





Conclusions

A. Priority Health Needs

The following health needs were identified through the CHNA process:

Health Disparities

- Chronic Stress
- Generational Poverty
- Infant Mortality
- Lead Poisoning
- Homelessness
- Unemployment
- Violence/Safety

Access

- Access to Prevention and Wellness Services
- Access to Primary and Specialty Services
- Cost of Care
- Food Insecurity
- Quality of Care
- Transportation

Conditions

- Asthma
- Cancer
- COPD
- Diabetes
- Heart Failure
- Hypertension
- Obesity

Mental Health/Addiction

Access to Mental Health Services (Inpatient, Outpatient and Residential)

Alcoholism

Heroin Epidemic

Healthy Lifestyle

Nutrition

Physical Activity

The health needs identified above were determined based on the qualitative data gathered from community leaders and quantitative data from hospital discharges. The needs were placed under broader categories to facilitate the prioritization process.

The prioritization process included input from hospital employees who work in administration and those who interact with patients and residents in the community. In addition, the Medical Director of Community Outreach is a board member of the Cuyahoga County Board of Health and chairman of the Ohio Commission on Minority Health and brings those perspectives as well. The group reviewed the CHNA report and brought their own personal experiences working with patients and residents in the community to the discussion as well. The group included:

Leslie Andrews, Diabetes Coordinator

Gregory Hall, MD, Medical Director of Community Outreach

Wendy Hoke, Vice President Marketing and Communications

Cathy Kopinsky, Outreach Coordinator Mission and Ministry

Sister Miriam Erb, Vice President Mission and Ministry

John Rusnaczyk, Chief Financial Officer

Ashley Stainbrook, Health Care Navigator

The group met in November 2016 to determine health needs based on the:

- Scope of the issue
- Health disparities associated with the need
- Severity and urgency of the health need
- Alignment with strategic plans of the hospital
- Feasibility of possible interventions

These criteria provided a sound structure in order to address the health needs in a sustainable and effective model.

The discussion focused on addressing needs in the Central Neighborhood where the hospital is located. The primary service area of the hospital encompasses 29 ZIP codes. Due to the diverse geographic area it was decided to focus on the neighborhood surrounding the hospital, due to the greatest needs being identified right outside the hospital's walls. The Central neighborhood has 12,306 residents. 90 percent of households with children are headed by females, 96% of households are non-white, household income is an average of $9,418

and 70% live in poverty. Community interviews, in which many spoke to the challenges in the Central Neighborhood, identified generational poverty as an overarching theme that affects every aspect of life. In regard to healthcare, a lack of trust of healthcare providers, care that is often accessed at a point of crisis, and a lack of provider-patient relationships to promote preventive services were identified. Chronic stress was a powerful theme impacting the management of chronic conditions and mental health. The physical environment also plays a role in health. The Central Neighborhood is considered a food desert and many residents do not feel safe in their neighborhood leading to a lack of physical activity and poor food choices.

The group discussed needs based on hospital data, Cuyahoga County data, and efforts underway in the region:

1) St. Vincent Ambulatory Care Sensitive data identified the following as the most common diagnoses: heart failure, cellulitis, COPD, diabetes, bacterial pneumonia and asthma, hypertension, and kidney infection. Hypertension was a secondary diagnosis for nearly 60% of admissions.
2) Cuyahoga County data showed the most prevalent causes of death as: cancer, coronary heart disease, stroke, accidental deaths, diabetes, kidney disease, and violent crime.
3) Cuyahoga County's most prevalent morbidity included: obesity, smoking, diabetes, depression, asthma, Alzheimer's disease, teen births and pre-term births.
4) Health Improvement Partnership–Cuyahoga encompasses 50 organizations led by the Cuyahoga County Board of Health to develop the Community Health Improvement Plan. In order to have the greatest impact on the health and well-being of the community HIP-Cuyahoga coordinates work and resources around well-defined priorities and goals:
    1) Eliminate structural racism as a social determinant of health
    2) Increase access and opportunity for improved nutrition and physical activity
    3) Improve coordination between clinical care and public health to improve population health
    4) Improve chronic disease management through the engagement of various sectors
5) State Health Assessment/State Health Improvement Plan (SHIP)
   The Ohio Department of Health has six core public health "pillars" that align with the SHIP including chronic disease, access, infectious disease, injury and violence, infant mortality /preterm birth, and integrated care.
6) The Center for Health Affairs' is developing a regional initiative to tackle obesity.

St. Vincent collaborates with many organizations to improve the health of community. It is the hope of the hospital that working together can provide greater success and improved outcomes. It was decided that quality of care (focusing on culturally appropriate care and access), access to mental health services, and obesity would be focus areas for the implementation plan. These areas align with the SHIP and HIP-Cuyahoga's focus. St. Vincent is also part of the regional health initiative through The Center for Health Affairs. The three areas are in alignment with the hospital's strategic plan and are areas of expertise in the institution. Through collaboration these areas can improve the health of the community and put in place systems that can impact generations to come.

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

There are numerous resources that exist to meet the health needs identified in St. Vincent Charity Medical Center's CHNA. Resources both inside the hospital and in the community that assist in meeting identified health needs are listed below:

St. Vincent Charity Medical Center

Art Therapy

Center for Bariatric Surgery

Diabetes Education Program

Financial Counselor

Garden Boyz Market Garden

Health Care Center

Health Literacy Program

Health Navigator

Mission and Ministry Office

Outpatient Pharmacy

Patient Advocates

Patient Transportation Assistance

Pharmaceutical Assistance Program

Psychiatric Emergency Department/Inpatient

Rosary Hall

Support Groups for Chronic Disease Management

Community Resources

Alcohol, Drug Addiction, and Mental Health Services of Cuyahoga County

American Diabetes Association

American Heart Association

Beech Brook

Benjamin Rose

Boys & Girls Clubs of Cleveland

Bridgeway, Inc.

Burton, Bell, Car Development, Inc.

Buckeye

Campus District

Care Alliance

CareSource

Case Western Reserve University

Catholic Charities

Center for Community Solutions

Center for Families & Children

City Mission

Cleveland Department of Public Health

Cleveland Housing Network

Cleveland Metropolitan Housing Authority

Cleveland Public Libraries

Cleveland State University

Cleveland Sight Center

Cleveland UMADAOP

Community Assessment and Treatment Services

Community Gardens

Connections

Court of Common Please Corrections Planning Board

Cuyahoga County Board of Health

Cuyahoga Health Access Partnership

Diabetes Partnership of Cleveland

Fairhill Partners

Farmer's Markets

Free Clinic of Greater Cleveland

Friendly Inn

Greater Cleveland Food Bank

Health Improvement Partnership – Cuyahoga

Hispanic UMADAOP

Hitchcock Center of Women

Hunger Network of Greater Cleveland

Jewish Family Service Association

Joseph's Home

Legal Aid Society

Lutheran Metropolitan Ministry

Marion Sterling School

May Dugan Center

Molina Healthcare

Moore Counseling and Meditation, Inc.

Murtis Taylor Human Services System

NAMI of Greater Cleveland

New Directions

Northcoast Behavioral Healthcare

Northern Ohio Recovery Services

North Coast Health Ministry

Ohio Benefit Bank

OhioGuidestone

ORCA House

Oriana House

Paramount Health Care

Prevention Research Center

Recovery Resources

Saint Augustine Health Ministries

Salvation Army

Stella Maris

The Center for Health Affairs

Tri-C

United Way

YMCA

C. Evaluation of Impact

St. Vincent Charity Medical Center identified three key priority issues in its immediately preceding CHNA that it would address over the past three years:

- Decrease the number of adults who are overweight or obese
- Increase access and awareness to substance abuse and mental health services
- Increase healthcare access

This section evaluates how impactful the hospital's strategies were in terms of addressing the three identified priority health issues.

Decrease the Number of Adults who are Overweight or Obese

St. Vincent Charity Medical Center has developed several strategies to address adult overweight and obesity.

Increasing Healthier Food Options for Staff, Patients and Visitors
St. Vincent Charity Medical Center implemented Wellness Wednesdays in the cafeteria to provide healthy food options for caregivers, patients and visitors. On Wellness Wednesdays there are only healthy options for main dishes and sides, no fried foods are available. Each week a new food is introduced or prepared differently to give people the opportunity to try something they might not cook at home.

Increasing Awareness and Availability of Healthy Food in the Community
Another strategy to address overweight and obesity was to increase awareness and availability of healthy food in the community. St. Vincent Charity Medical Center now has an interactive nutritional kiosk and education literature rack which launched in May 2015 in the cafeteria and St. Vincent DePaul Room. The kiosk uses iPad technology that allows visitors, caregivers and patients to:

- Connect to local farmers' markets and have locations sent via text to their smartphone
- Learn how to read a food label
- View food myths and facts
- Discover how food affects overall health

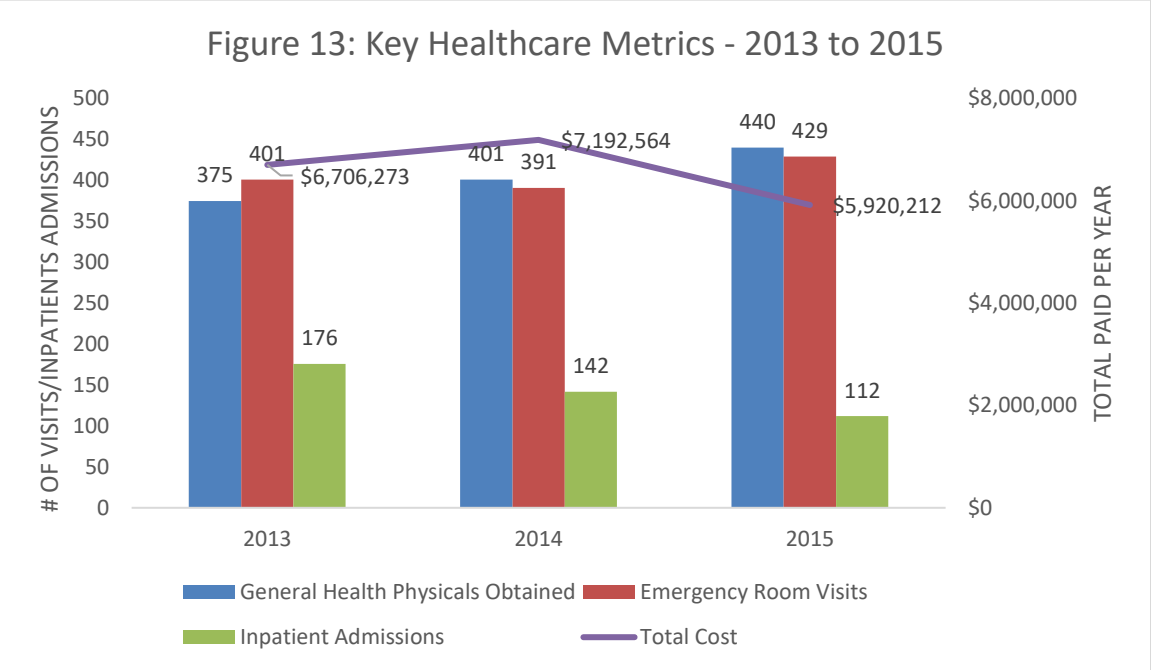
Employee Wellness
St. Vincent Medical Center formalized the Wellness Committee in early 2013 to establish and maintain a workplace that encourages a healthy lifestyle. The Wellness Committee is dedicated to supporting caregivers in making healthy choices in their work and home lives. The goals of the committee are to:

- Increase awareness of factors and resources which contribute to overall health and well being
- Encourage habits of wellness
- Inspire and empower individuals to take control of their own health
- Support a sense of community
- Monthly health and wellness focus and annual health fair

The Wellness Committee, in addition to the annual health fair, has been active on a monthly basis with health-related emails, articles in the caregiver newsletter, smoothie stations for promotion of getting your fruits and vegetables every day, mammography awareness day with giveaways and scheduling assistance, photo fitness contest (caregivers take a picture of themselves being active and submit for quarterly drawings), walking club, stress relief day with chair massages, learn at lunch programs on nutrition, behavior change and spirituality, and Weight Watchers®.

All employees who choose to obtain their health insurance as a benefit of their employment at St. Vincent Charity Medical Center are covered via Medical Mutual health insurance. The number of beneficiaries for that health insurance coverage has been stable from 2013 to 2015 (increased by 1.4% from 2013 to 2015).

In Figure 13 below we show that from 2013 to 2015, the number of general physicals ("well visits") increased from 375 to 440. The number of ER visits also increased, although not as dramatically (401 to 429). The number of inpatient visits decreased from 176 to 112. Likewise, the amount of spending on employee healthcare (who are covered by Medical Mutual) decreased by 12 percent from 2013 to 2015. We can't attribute a cause-and-effect relationship as other factors may have led to these changes; however, the trend for just these three years suggests that the wellness program is associated with improved employee health overall. **The cost-per-covered-life in 2013 was $7,297; that decreased to $6,352 in 2015.**



Increase Access and Awareness of Substance Abuse and Mental Health Services

St. Vincent Charity Medical Center continues to develop educational programming and increase access to behavioral health services in response to the results of its immediately preceding CHNA.

Increasing Education on Substance Abuse and Mental Health Issues
Sometimes patients with behavioral health issues can be confused, unpredictable and aggressive. To help educate caregivers about how to best handle patients when they exhibit these behaviors, St. Vincent Charity Medical Center trained 316 caregivers using the Non-Abusive Psychological and Physical Intervention (NAPPI) from January 2014 to December 2015.

The aim of NAPPI is to focus on the assessment, prevention and management of confused, unpredictable, and aggressive patients. Courses are specifically designed to train staff how to:

- Assess the potential for difficult behavior.
- Be prepared at all times.
- Prevent confused and 'unpredictable' behavior.
- Deliver high quality care to even the most difficult clients.

The hospital also conducted Project DAWN training for staff on August 31, 2016. Rosary Hall manager Orlando Howard took note of the fact that five employees had visited his office within one month with concerns of a loved one using heroin or who had died from an unintentional overdose. This prompted Mr. Howard to reach out to Emily Metz from Project DAWN and ask her to visit the hospital and supply Narcan kits to any hospital employee who wished to have one for personal reasons. Project DAWN distributed 35 Narcan kits to employees of the hospital that day.

Beyond trainings developed specifically to increase staff education on substance abuse and mental health issues, St. Vincent Charity Medical Center also hosted U.S. Surgeon General VADM Vivek H. Murthy on July 12, 2016 as part of his national Turn the Tide campaign. Dr. Murthy visited Rosary Hall, spoke with patients and spoke to media about the importance of addressing addiction as a chronic disease.

In addition, the hospital held an opiate conference for the public and offered Continuing Medical Education credit for practitioners on September 29, 2016 with 140 people in attendance.

Expanding the Geriatric Psychiatry Unit
In its immediately preceding CHNA, St. Vincent Charity Medical Center prioritized conducting a feasibility study regarding creating an expanded geriatric psychiatric unit. Based on the identified need in the community, St. Vincent Charity was able to open a 16-bed dedicated unit for those 55 years of age and older.

Located on the third floor of the hospital's main campus, the geriatric psychiatry (or geropsych) unit is already nearing capacity as it responds to the community's need for elderly psychiatric patient care. Since opening in April 2015, the Geriatric Inpatient Behavioral Health Unit has helped more than 300 patients achieve psychiatric and medical stability. The dedicated unit is designed to treat elderly patients in a safe and soothing environment. The new unit is helping to address a critical need for additional behavioral health service in Greater Cleveland, particularly for those living in underserved communities.

Now fully staffed with a unique team of board-certified geriatric psychiatrists, nurse specialists, geriatric social workers, occupational, art, and music therapists, the psychiatric patient receives simultaneous treatment of chronic medical issues and help with activities of daily living. The team works collaboratively to deliver clinical, occupational, and creative art therapy and returns the patient home or back to the nursing home with significantly improved emotional and physical health based on an individualized goal-oriented treatment and after-care plans. In addition, St. Vincent's Geriatric Unit serves as one of only a handful of clinical rotation sites for nursing students from Cleveland State University and other local schools as they prepare to work with the growing elderly population.

Sixty percent of the patients come through St. Vincent's Psychiatric Emergency Department from their home, nursing home, other healthcare facility, the courts, or they may be homeless. Another 20 percent are admitted from St. Vincent's medical emergency room. Others are transferred directly from skilled nursing facilities. The average length of stay in 2016 to-date is 11.12 days.

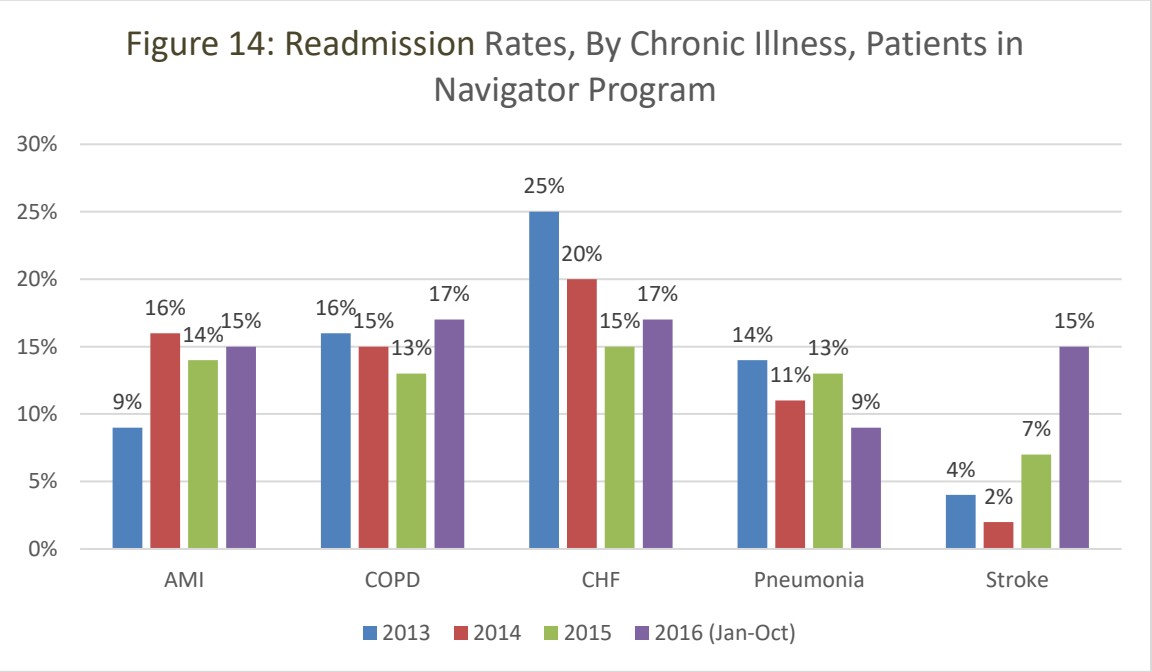
Increase Healthcare Access

St. Vincent Charity Medical Center has been working on several initiatives to increase healthcare access. For example, since the opening of Care Alliance's Central Neighborhood Clinic, St. Vincent Charity Medical Center has been collaborating with the FQHC to facilitate specialty services and inpatient care.

Patient Navigator Program
In 2013, a Health Care Navigator program was initiated at St. Vincent Charity Medical Center for adult patients with five chronic conditions related to high readmission rates: acute myocardial infarction (AMI), chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), pneumonia and stroke.

The ultimate goal of the program is to prevent hospital readmissions for patients through follow-up support and patient resources. The health care navigator is an integral member of the care coordination team and works to decrease readmission rates in two ways: the health care navigator visits patients in the hospital with certain primary diagnoses to ensure they have a primary care physician and the appropriate post-hospitalization follow-up; the navigator also connects those patients with transportation (if necessary) and to beneficial community resources. The health care navigator provides care coordination and the direct provision of care to assure that all inpatients within the disease specific population who are discharged to home or non-institutional care are seen for a follow-up, post hospitalization no longer than 7 to 10-day post discharge date.

As shown below in Figure 14, the readmission rates for patients with AMI, COPD, pneumonia, and stroke do not seem to be impacted by the patient navigator program. However, the readmission rates for those with CHF appear to trending down throughout the program's four years.



Hispanic Community Outreach

To better address the needs of the Hispanic community, a St. Vincent Charity Medical Center doctor moved her office, which employs bilingual staff, to the St. Ignatius Medical Building to have closer proximity to this patient population. In addition, health screenings have been conducted at LaSagrada Familia Church quarterly since 2013 and health screenings have been held at May Dugan on a monthly basis since 2012. Both of these locations serve a large number of Hispanic residents in the area.

APPENDIX

A. Qualifications of Consulting Company

The Center for Health Affairs
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 36 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 2016 CHNA prepared for St. Vincent Charity Medical Center was directed by The Center's vice president of corporate communications and vice president of initiatives and analytics, managed by The Center's community outreach director and supported by a project manager. More information about The Center for Health Affairs and its involvement in CHNAs can be found at neohospitals.org.

B. Qualitative Data Interview Questions

Warm-up questions:

1. Tell me a little bit about how you engage with or serve our patients regarding their healthcare.
2. Tell me a bit about the population you serve. Are there certain target populations?
3. What are the biggest issues faced by the people you serve?

Health of the community questions:

1. What are the biggest *healthcare* issues faced by the people you serve?
2. What are the biggest barriers your organization faces in serving your consumers?
3. Do you think the healthcare needs of our community members are being adequately met? (If not) Why not?
4. What are the things in our community that most get in the way of our community members' good health? [Probe, if necessary, on this question.]
5. What are the biggest barriers to the people you serve receiving healthcare they need, if any?
6. Is there anything different now compared to say, 10 years ago?

Hospital questions:

7. Do you believe our community:
    a. Has an adequate supply of primary care providers? Specialists?
    b. Adequate access for urgent care? Emergency/life threatened care?
    c. Care for those who cannot pay? (primary, on-going, emergency)
    d. Supportive services for those with chronic diseases?
    e. Proactive detection/screening, especially of vulnerable populations?

8. Do you believe our community has the environment and services it needs in order to maximize the health of all of its residents? (If not) What is missing?
9. What should hospitals be doing more or less of in order to improve the health of our community members?
10. What health issues should MOST be focused on it order to improve our community members' health first?
11. Is there anything I haven't asked that you'd like to share?

C. 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, and 528.