engage | discover
participar descubrir

HDR

CONTENTS

RESEARCH TEAM MEMBERS:

Sheila Elijah-Barnwell, PhD, AIA, EDAC, LEED AP
Director, Healthcare Consulting, Research and
University Education
HDR Architecture
Principal Investigator

Wayne Drummond, FAIA
Professor
University of Nebraska-Lincoln, College of Architecture
Secondary Investigator

Terry Huang, PhD, MPH, CPH
Professor and Chair, Health Promotion
University of Nebraska Medical Center, College of
Public Health

Yunwoo Nam, PhD
Assistant Professor, Community and Regional Planning
University of Nebraska-Lincoln

Ozgur Araz, PhD
Assistant Professor, Health Promotion
University of Nebraska Medical Center, College of
Public Health

Andrew Jameton, PhD
Professor, Health Promotion
University of Nebraska Medical Center, College of
Public Health

Jeri Brittin, MM, Associate IIDA
Doctoral Student, Health Promotion,
University of Nebraska Medical Center, College of
Public Health

Ernesto Sanchez-Andrade
Research Assistant
HDR Architecture

Bethany Friedow, MS, EDAC
Research Assistant
HDR Architecture

Abbie Clary, AIA, ACHA, LEED AP
Central Region Director of Healthcare
HDR Architecture

EXECUTIVE SUMMARY

In partnership with the University of Nebraska Medical Center, College of Public Health and the University of Nebraska–Lincoln, College of Architecture, HDR Architecture sponsored and conducted a community needs and visioning study in Chicago to gain a thorough understanding of stakeholder expectations for U.S. healthcare provision and education in lower socioeconomic communities. HDR has identified the community-centric hospital as an emerging model of healthcare, and as such, desires to develop research and strategies to best inform the design of facilities that support this model. Saint Anthony Hospital was asked to participate because of its current commitment to the betterment of its community, as evidenced by its existing service programs and vision to bring an improved, viable healthcare delivery model to its community. This study will support the Hospital's mission by helping to inform plans for the relocation and building of a new Saint Anthony Hospital, with a view of assisting the hospital further its community-centric mission while ensuring its sustainability.

This research follows the framework of evidence-based design, which has increasingly elucidated the important role of the architectural environment on organizational and health outcomes. However, the current research is one of the first attempts to bring evidence-based design to the community scale, fully integrating a healthcare institution into the community context.

Mixed research methods were used in this study, including interviews, focus groups, and population surveys (sample size of 722 residents) in both current service areas, such as North Lawndale and South Lawndale (Little Village), as well as potentially new communities, spanning from Berwyn to West Lawn to New City. The study occurred from late 2011 to early 2012. Study results show generally positive perceptions of Saint Anthony Hospital by local residents, and general support for the relocation of Saint Anthony Hospital from its current location at 19th Avenue and Marshall to the potential new location at 31st Street and Kedzie Avenue.

Residents perceive health as much more than healthcare, encompassing wellness, self-sufficiency, and overall quality of life at both the individual and community levels. As such, residents are inspired by the possibility for a community-oriented hospital such as Saint Anthony to offer educational, cultural and community development opportunities in addition to the provision of healthcare treatment services.

Concerns about the potential new location of Saint Anthony include the move away from African-American neighborhoods and the lack of current transportation access to the new site. However, the relocation can also present new opportunities such as the expansion of Saint Anthony's service area and the possibility to develop new social and economic activities that stimulate, enrich, and connect local communities. These findings point to design options that can include decentralized or mobile services in different communities as well as a hospital that is much more aligned with the concept of a comprehensive community center or campus versus a solitary medical facility. It is clear also that the planning of the hospital will need to take into account broader urban planning issues to ensure an integrated approach to the development of the communities served.

In conclusion, this study informs both the design of Saint Anthony as well as solutions for community development. It confirms Saint Anthony's standing as a trusted member of the community. It offers insights that can help Saint Anthony sustain its leadership by contributing further to community health and development in novel and innovative ways. This study also establishes benchmark indicators that can be tracked over time to assess Saint Anthony's long-term impact on the communities it serves. The relocation of Saint Anthony Hospital represents new social, economic, education and wellness opportunities that can significantly improve the health and quality of life of local residents.

BACKGROUND

Saint Anthony Hospital is a mid-sized, short-term, acute care community hospital in an underserved area of Chicago. It has approximately 1,000 employees, and its licensed bed capacity is 153. Saint Anthony Hospital has faced significant financial hurdles. In 2007, it was on the verge of closing its doors, with an operating margin at a loss of 17.6%. New management saw potential there, however, and began to turn Saint Anthony's future around. Since that time, Saint Anthony Hospital has become more effective and efficient in offering its much-needed services to the community. It posted a positive operating margin of 1.9% in 2008, and a slight improvement to 2.4% in 2009. In the meantime, the City of Chicago has offered to provide the hospital with an 11-acre parcel in an industrial area some distance southwest of the site of the current, aging structure.

As Saint Anthony Hospital's leaders look toward potentially building on this new site, they want assurance that the project serves community needs and successfully engages with its key target markets in a financially viable and sustainable way. They want to better understand community and stakeholder perceptions, cultures, and needs as related to healthcare and perceived community health overall. Rather than simply assuming that a new

facility will attract and positively impact local communities, Saint Anthony Hospital leadership wants the project to be deeply connected with community groups and their needs from its inception. They are open to the designed result being much different than, and possibly much more than, what we typically associate with the word, "hospital." Because the potential relocation of Saint Anthony Hospital is a critical strategic decision that will impact the entity's long-term goals and performance measures, an assessment of community (i.e., customer) needs via scientific research tools was essential.

HDR recognized the potential in Saint Anthony's "hospital without walls" concept to achieve both improved community health outcomes and sustainable financial viability. HDR's leadership sees great potential in community engagement to inform and evolve existing processes and standards in the field of healthcare architecture. To that end, HDR has funded this research project as part of its continuing leadership at the forefront of design for health.

HDR formed a team including faculty and students from the University of Nebraska-Lincoln (UNL), College of Architecture and the University of Nebraska Medical

Center (UNMC), College of Public Health to formulate and participate in the community research study. UNMC participants on the collaborative team focused on creation of the research design and methodology, instrument development, and descriptive data analysis and reporting. UNL participants advised and provided input on the process based on their areas of expertise. HDR personnel took the overall lead on the project, and handled research execution and data collection.

The research team includes the following individuals:

Sheila Elijah-Barnwell, PhD, AIA, EDAC, LEED AP, Vice President, HDR Architecture. With a doctorate in Architecture Education, Elijah-Barnwell leads HDR's Consulting Practices, Research, and University Educational programs. She is a 19-year veteran of the healthcare design field, with extensive experience as a project designer, project architect and project manager. Elijah-Barnwell is known for being a sensitive and collaborative designer. In all, she has worked on more than 50 healthcare projects throughout the United States, ranging from small community facilities to larger academic hospitals. This experience has proved vital in her efforts to grow the industry's collective intellectual and design capital in the creation of knowledge that supports evidence-based design efforts. Her passion for teaching and giving back to the profession led her to help found the HDR-sponsored Graduate Program in Healthcare Design at the University of Nebraska-Lincoln, a program designed to better educate a whole new generation of healthcare design leaders. She is proud to be a part of this avant-garde approach to 21st-century education that partners industry with academia. She is currently working to refine the program model, forging partnerships with academic institutions and programs within the Environmental Design, Public Health, and Medical fields. Elijah-Barnwell also advocates for the value and necessity of Post-Occupancy Evaluations, during which she works directly with end-users of the hospital in order to analyze the benchmarks set forth by the design, as well as the future possibilities for the hospital. Finally, she leads the firm-wide committee responsible for leaning HDR's internal design processes.

R. Wayne Drummond, FAIA, Professor, University of Nebraska-Lincoln. A fellow of the American Institute of Architects since 1996, Drummond has nearly 40 years' experience in architecture at both the professional and academic levels. His administrative experience includes eight years as department head at Auburn University (1979-87) and 20 years as dean of colleges of architecture at major universities, including Texas Tech (1987-90),

Florida (1990-99) and UNL (2000-11). He has served as the national president of the Association of Collegiate Schools of Architecture and the National Architectural Accreditation Board, and Tau Sigma Delta, the honor society for architecture and related professions. Drummond has dedicated interests in both healthcare design and healthcare design research. He continues to provide leadership in the College's public/private healthcare initiative, teaches an interdisciplinary college-wide required course in Professional Practice, and mentors M.Arch Design Thesis students.

Terry T-K Huang, PhD, MPH, CPH, Professor and Chair, Health Promotion, University of Nebraska Medical Center College of Public Health. Huang has been at the forefront of "green health convergence," a new line of scientific inquiry that aims to develop an evidence base for architectural impacts on health and environmental sustainability. He is a nationally renowned obesity scientist and is currently engaged in research that connects school architecture and design with diet and physical activity promotion in children. He is also engaged in academic and policy discussions at the local and national levels that aim to merge the fields of architecture and public health.

Yunwoo Nam, PhD, Assistant Professor, Community and Regional Planning, University of Nebraska-Lincoln; Faculty Fellow, Center for Advanced Land Management Information Technologies (CALMIT). Nam is the recipient of

UCGIS (University Consortium of Geographic Information Science) Junior Faculty Award. He received his PhD degree in City and Regional planning at the University of Pennsylvania.

Ozgur Araz, PhD, Assistant Professor, Health Promotion, University of Nebraska Medical Center, College of Public Health. Araz is an expert on system dynamics modeling with a background in industrial engineering and public health. He uses complex systems science framework for modeling and measuring built projects' viability and sustainability.

Andrew Jameton, PhD, Professor, Health Promotion, University of Nebraska Medical Center, College of Public Health. Jameton is an expert on the philosophy of health and environmental sustainability. He has published numerous papers on this topic and is particularly interested in how individuals in the community view their built environment and how individuals can be motivated to shape it.

Jeri Brittin, MM, Associate IIDA, Doctoral Student, Health Promotion, University of Nebraska Medical Center, College of Public Health. Brittin is interested in research at the crossroads of built environment design and public health. She previously held senior-level marketing management positions, and is a professional interior designer.

Ernesto Sanchez-Andrade, Research Assistant, HDR Architecture. Sanchez-Andrade is a graduate of Facultad de Arquitectura, UNAM in Mexico City. He holds a license to practice architecture in Mexico. Sanchez-Andrade has spent the past five years in the United States practicing architecture and serving as a visiting lecturer and undergraduate architecture design studio instructor. He brings a keen sensitivity and astute listening skills to research focused in multi-cultural domains.

Bethany Friedow, MS, EDAC, Research Assistant, HDR Architecture. Friedow's specialties include developing survey methodologies and frameworks for conducting various types of architectural research evaluations. She has also worked extensively in the technological domains of architecture and design, including laser scanning and BIM. Her research interests lie in cultivating a greater understanding of how design impacts health, wellness and human relationships.

Abbie Clary, AIA, ACHA, LEED AP, Central Region Director of Healthcare, HDR Architecture. Clary leads HDR's healthcare program in the Midwest. She brings more than 15 years of experience in healthcare architecture and is recognized for her management skills and comprehensive approach to project delivery of complex medical facilities. She is an advocate for balancing operations, technology, and patient-centered care models to create environments that best support patients' healing process while equally supporting those providing care. Clary is an expert in creating collaborative teams and provides dynamic leadership for the myriad participants involved in a project team.

This project report presents the final findings of six months of planning and research that began in September 2011. The human subjects research protocol was reviewed and approved by the Institutional Review Board of the University of Nebraska-Lincoln. The report is intended to help Saint Anthony Hospital's leadership better understand the perceived needs of their constituent and target communities and to assess both the opportunities and the challenges that may result from a potential move from its current location at 19th and Marshall to the new site at 31st and Kedzie in Chicago.

LITERATURE REVIEW

A review of the existing literature revealed a significant gap in knowledge about how a hospital might become more "community-centric" (i.e., defining itself and its services around community needs to improve community health and further community development), while being financially sustainable in a predominantly low-income urban area.

PUBLIC HEALTH AND COMMUNITY ENGAGEMENT

There is a long history of public health research engagement and intervention to improve health in underserved urban areas. However, community collaboration in public health programs and research can be challenging, partly because community health has historically been defined in ambiguous and contradictory ways (MacQueen, et al., 2001). Thus, public health programs have varied considerably in their goals and methods over the past 30 years. Baker and Brownson began to define the necessary characteristics of community-based health programs in 1998. Specifically, the authors stated that effective programs need to use ecological frameworks that attend to individual, interpersonal, community (including social and economic factors), organizational, and governmental factors; to be tailored to meet the needs of individuals and communities; and to provide the opportunity for those affected by programs to participate

in program development, implementation, and evaluation (Baker & Brownson, 1998). Building upon this and other work, Lindau of the University of Chicago has recently defined seven key steps to building community healthcare programs. These steps include: continuous community engagement and relationship building; identifying community priorities; identifying community assets; leveraging community assets; conducting research; sharing knowledge; and informing action (Lindau, et al., 2011).

While some flexibility in definition and goals is critical to the effectiveness of any community engaged program, it is also important to determine a set of defining characteristics in order to distinguish community-based programs from other types of health promotion activities (MacQueen, et al., 2001). Thus, a basis exists for achieving consensus on the definition and processes of community-based health-related services. This attainment of perceived community consensus is essential to build and support communities in ways that enhance the health of their members. This type of consensus does not necessarily mean that all constituents want the exact same things, but that there is overall balance of alignment on a range of issues. Engagement and consensus also provide a sound theoretical basis for building successful community collaborations in public health through the systematic evaluation of who participates, why they participate, and how participants are connected to each other and to their constituencies (MacQueen, et al., 2001).

THE BUILT ENVIRONMENT'S IMPACT ON COMMUNITY HEALTH

As the relocation decision presents an opportunity for the hospital to redesign its physical presence in the community via a new facility/campus, we also investigated existing research on the impact of the environments of health service providers on healthcare outcomes. This area of research has been growing rapidly in recent years. Many studies have collected empirical evidence demonstrating connections between the environmental design of healthcare facilities and outcomes that are important for patients, families, healthcare staff, and healthcare organizations (Ulrich, et al., 2008).

A discipline known as evidence-based design (EBD) has emerged in response to this growth in environment and health advocacy and research. Evidence-based design is defined as the process of basing decisions about the built environment on credible research to achieve the best possible outcomes (The Center for Health Design, 2008). Ulrich's and Zimring's work shows that EBD can improve healthcare environments in three key ways: enhancing patient safety, eliminating environmental stressors, and promoting patient healing. (Rollins, 2004) The benefits of implementation of EBD in healthcare organizations includes benefits such as enhanced quality and safety, decrease in staffing turnover, decreased rate of infections, and increased patient and staff satisfaction are worthwhile (Spikes & Aduddell, 2010).

However, despite the rapid increase in EBD research over the past decade, the impact of EBD in a community-centric context—a far less controlled environment—has received little attention and requires significant further examination.

Current analyses have repeatedly emphasized the need for future studies to integrate built environment characteristics in public health-related research. Given the complexity of the built environment, understanding its influence on human health requires a community-based, multilevel, transdisciplinary research approach (Srinivasan, 2003). Community and university collaborators working with shared vision and institutional support will need to engage to build mutually beneficial community-based health research infrastructures.

THE IMPORTANCE OF COMMUNITY-BASED HEALTHCARE

Health in the United States is often, though not invariably, correlated along both socioeconomic and ethnic lines, suggesting links between hierarchies of social advantage and healthcare (Braveman, Cubbin, Egerter, Williams & Pamuk, 2010). Current research into socioeconomically disadvantaged neighborhoods supports this notion that health disparities do, in fact, exist based upon ethnicity (Parrill & Roberts, 2011). The disparities related to race and ethnicity are attributed to the complex interaction of social, economic, and physical environments, which influence minority health. A better understanding of these environments in addition to a better understanding of minority groups' value and belief systems about healthcare and its utilization are necessary to reducing health disparities and developing more culturally competent healthcare services for ethnic minority groups (Rogers, 2010).

Research suggests that characteristics of the local population, including language and nativity, play an important role in access to healthcare among U.S. Hispanics (Carole, Jeannette, & Escarce, 2009). This research points to the need for further analyses of other racial and ethnic groups using different geographic constructs for describing the local population, as well as for more specific exploration of the mechanisms through which these characteristics may influence access to care. According to Lindau et al. (2011), health centers located within the community can use studies to inform investments responding to community priorities. These investments will create linkages to best practices, community member access to health data and data support, and training, health workforce development, and entrepreneurship opportunities.

In a study conducted by Matthews and Yang (2010), neighborhood environment was found to have both direct and indirect associations with health. It was emphasized that there is a need for future studies to advance knowledge by untangling the intertwined relationship between built and social environments, stress, and health (Matthews & Yang, 2010). One way this knowledge can be advanced is through the use of community-based participatory research (CBPR). CBPR defines ways community members should be involved in the creation of health. The principles of CBPR include: 1) prioritizing community needs, health issues, and assets, 2) cooperative development of research and research ethics infrastructure,

including participation and co-learning for mutual benefit, and 3) using data to inform and engage community members (Lindau, et al., 2011). Lindau and her colleagues at the University of Chicago conclude that community and university collaborators working with shared vision and institutional support can engage to build mutually beneficial community-based health research infrastructure. Unlike the University of Chicago, Saint Anthony Hospital does not intend to operate as a research institution. However, an ongoing community-engaged research program will likely be necessary to model, measure, evolve, and achieve community health and financial objectives over time.

Health researchers have explored how different aspects of neighborhood characteristics contribute to health and well-being, but current understanding of built environment factors is still limited. Studies have found that a community health orientation and a community-based quality orientation lead to greater provision of health promotion services (Ginn, 2006). Specifically, Ginn states that "community health and community-based quality orientations were positively and significantly related to both the direct provision of health promotion services by hospitals and the collaborative provision of health promotion services through systems, joint ventures, and networks." However, very few research studies which have been able to document these processes and outcomes and translate them into a real-world setting. These gaps in research have important implications for future health-related work on the built environment and other

core public health activities. (Lopez, 2009) With a solid community engagement infrastructure in place, there is opportunity for a health research and development infrastructure that will benefit community members and medical providers alike (Lindau, et al., 2011).

Saint Anthony is taking a bold step, forging new territory in community/market-engaged architecture that is intended both to improve community health and ensure sustainability of health services—and possibly other services—offered in a low-income community. Its work may likely inform future similar efforts by other community-based hospitals in multi-cultural urban areas.

The current report summarizes research undertaken to reach out to Saint Anthony's current and potential constituent communities and to reach out to Saint Anthony's current and potential constituent communities and to characterize the experiences and needs of these residents as well as their perceptions of health and healthcare and vision for a community-centric hospital. This research is intended to inform the design and service offerings of the new Saint Anthony Hospital, taking into account community aspirations as well as community deficiencies that can potentially be transformed into Saint Anthony Hospital opportunities.

METHODS

This community study used a mixed-method approach, employing a community cross-sectional survey, key informant interviews, and community member focus groups. Because of the short timeline of the study, all research efforts and instruments were developed simultaneously, with the intention of using qualitative input to add depth and complement learning from the quantitative findings. This research "package" was intended to maximize potential actionable learning from the community within limited time and budget parameters.

KEY INFORMANT INTERVIEWS

Nine individual key informant interviews were con-ducted between December 5 and 8, 2011.

The interviewees were leaders of churches and community organizations representing the Saint Anthony Hospital service area in Chicago. Generally, the interviews were one- to 1 ½-hour conversations that occurred at the participants' office locations. The participants included both male and female, African-American and Hispanic, church, parish, and community organization leaders from the area.

SAMPLING METHODOLOGY

The participants were contacted via Saint Anthony Hospital's community outreach staff. Nine of the individuals contacted were willing and available to meet for interviews during the designated date range. They received no compensation for their input.

COMMUNITY CROSS-SECTIONAL SURVEY

Development of the community cross-sectional survey instrument drew on work by the following scientists: research team member Terry T-K Huang, PhD, MPH, CPH; James F. Sallis, PhD, who specializes in environment and health research; and Li-Wu Chen, MHSA, PhD, a specialist in health services research and healthcare utilization. The survey included questions about sociodemographics, healthcare access and use, availability and use of community assets and transportation, neighborhood walkability (Sallis, NEWS Survey), as well as questions intended to assess intention for future use of potential neighborhood services.

Surveys were mailed on December 20, 2011. Follow-up postcards with a link to an online survey were mailed subsequently later in January. The online survey was available from 2/1/2012 to 2/19/2012. In addition, community survey collection events took place from 9 a.m. until 7:30 p.m. on 2/8/2012 and 2/10 at Rauner YMCA, 2700 Western Avenue. Survey collection also took place from 8 a.m. until 7 p.m. on 2/8/2012 and 2/10/2012 at Better Boys Foundation, 1512 S. Pulaski Road. A third day of collection took place from 11 a.m. until 1 p.m. at Rauner YMCA and from 2 until 4 p.m. at Lawndale Christian Development Corp., 3842 W. Ogden Avenue on 2/11/2012.

Paper survey data entry occurred in mid to late March 2012, followed by a thorough process of data cleaning and cross-checking. Initial frequencies for all variables were run, and all data entry errors corrected. No uncontrolled data errors due to the online survey were identified. Final frequencies for all variables were run, and the codebook updated accordingly.

SAMPLING

Since we knew from census data that Internet- and phone-based survey methods would ineffectively reach a representation of the entire area population, we developed a paper survey. The survey mailing targeted a probability sample of 3,497 adult heads of households (age 18+) in the Saint Anthony Hospital service area, stratified by four neighborhood area groupings based on existing neighborhood boundaries and directional location from the hospital's current site. A raffle for 16 iPads (determined based on budget and logistical barriers of offering cash incentive for response within the time frame) generated an insufficient sample quantity of 124.

In order to supplement responses from the initial mailed paper surveys, a follow-up postcard was sent to direct those with Internet access to an identical online version of the survey. We received 49 online completed surveys.

In addition, four on-site survey collection events were communicated via community organizations, fliers posted in the neighborhoods, and word of mouth. These were held at three local community locations: Rauner YMCA, Better Boys Foundation, and Lawndale Christian Development Corp. An additional 582 completed surveys were collected through this community convenience sampling method.

Of the total 755 surveys received, 733 included sufficient data to be coded to a neighborhood area. Eleven of these were identified as far flung outliers from the neighborhood areas of interest. The total final sample size was therefore 722. The number of iPads available for the drawing was subsequently reduced from 16 to 7 to maintain the IRB

required ratio of winners to participants at 1:100. Although not originally part of the study design, an incentive of $5, provided by Saint Anthony Hospital, was offered to anyone completing the survey either in paper form or online.

In this work, we grouped 31 neighborhoods into four neighborhood groups, as shown in Figure 1: Map of Four Neighborhood Groups Used for Analysis.

FIGURE 1: FOUR NEIGHBORHOOD GROUPS USED FOR ANALYSIS
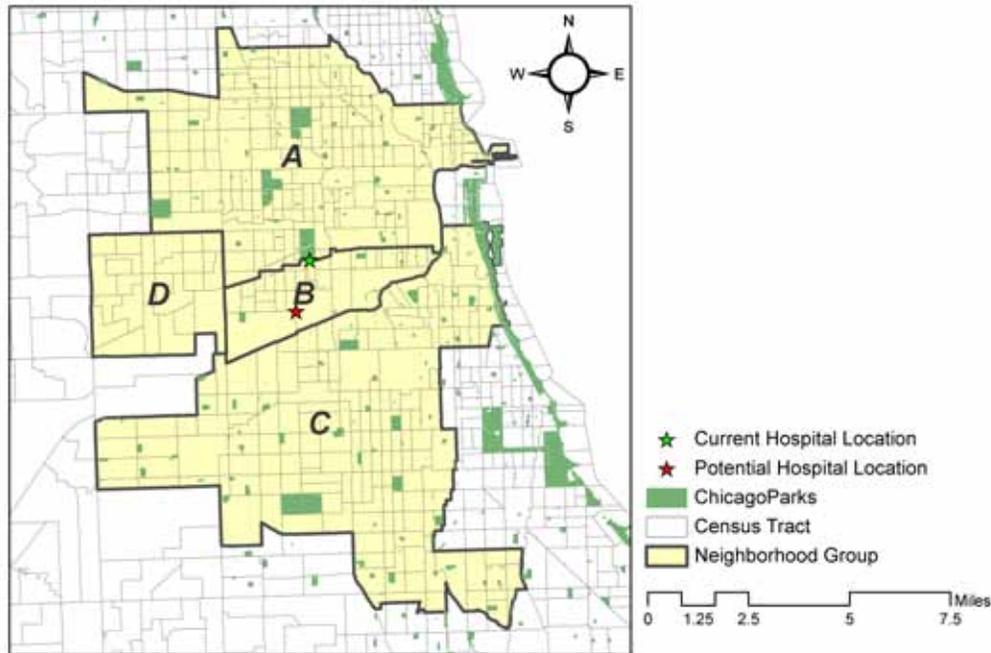
CHICAGO COMMUNITY AREAS AND SURVEY RESPONSE COUNTS BY NEIGHBORHOOD GROUP							
GROUP A		**GROUP B**		**GROUP C**		**GROUP D**	
NORTHERN NEIGHBORHOODS		MIDDLE NEIGHBORHOODS		SOUTHERN AND EASTERN NEIGHBORHOODS		CICERO AND BERWYN (SUBURBS)	
336	North Lawndale	69	South Lawndale	32	Brighton Park	23	Berwyn
23	East Garfield Park	57	Lower West Side	22	Gage Park	17	Cicero
19	Austin			15	McKinley Park		
18	West Garfield Park			14	West Lawn		
10	Near West Side			13	Chicago Lawn		
7	Humboldt Park			12	New City		
2	Logan Square			9	Garfield Ridge		
2	Near North Side			6	West Englewood		
1	Hermosa			5	West Elsdon		
				5	Bridgeport		
				3	Auburn Gresham		
				2	Near South Side		
				1	Englewood		
				1	Douglas		
				1	Clearing		
				1	Armour Square		
				1	Archer Heights		
				3	Auburn Gresham		

FIGURE 2: LOCATION OF SURVEY RESPONDENTS WITH FOUR NEIGHBORHOOD GROUPS USED FOR ANALYSIS
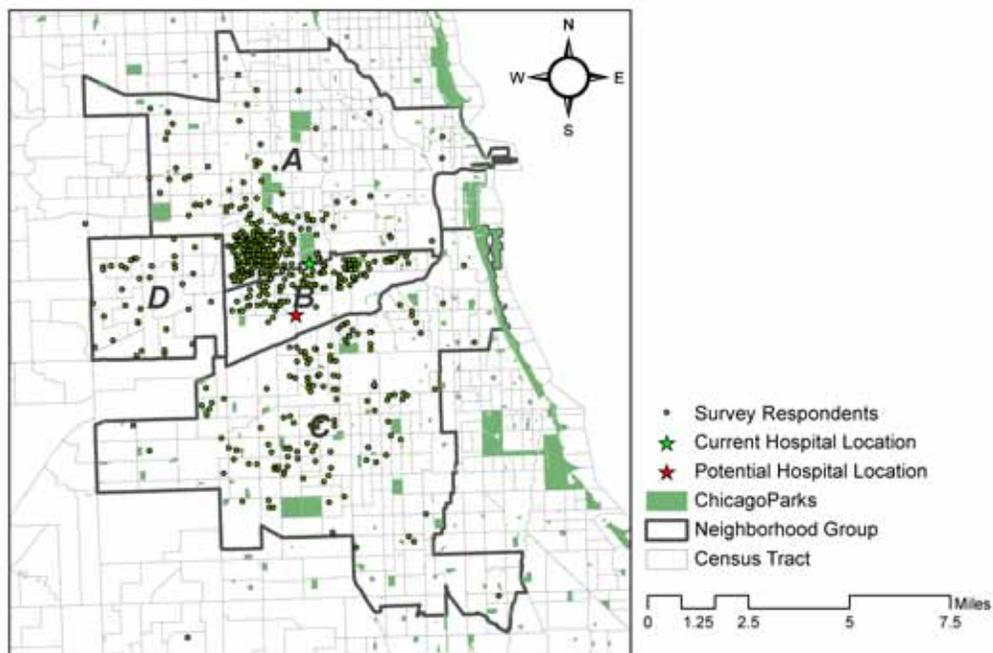
It is noted that survey responses are not randomly or equally distributed across the analysis area. Group A has 57%, Group B has 17%, Group C has 20%, and Group D has 5% of total responses. As shown in Figure 2: Location of Survey Respondents with Four Neighborhood Groups used for Analysis, a large portion of responses are located in the south part of Group A and the north part of Group B.

FOCUS GROUPS

Four community focus groups were conducted as follows:
1. Thursday, February 9, 2012, 1-2:30 p.m., Rauner YMCA, 2700 Western Avenue.

2. Thursday, February 9, 2012, 7-8:30 p.m., Rauner YMCA, 2700 Western Avenue.

3. Friday, February 9, 2012, 7-8:30 p.m., Better Boys Foundation, 1512 S. Pulaski Road.

4. Saturday, February 11, 2012, 9-10:30 a.m., Rauner YMCA, 2700 Western Avenue.

SAMPLING

Community members were recruited through community organizations with whom Saint Anthony Hospital has relationships.

The participant demographics represented a reasonable cross-section of the community: 16 women and 23 men, a mix of Spanish and English speakers, and individuals of both African-American and Hispanic/Latino or Mexican-American ethnicity.

QUANTITATIVE ANALYSIS

The final survey data was analyzed using SPSS v.20 statistical software. Initially, we performed basic descriptive statistical analyses to understand the profiles of survey respondents. Variables were recoded based on attaining sufficient cell sizes for neighborhood group stratified analysis (defined by Saint Anthony Hospital as communities in current and potential service areas), and cross-tabs run based on the four neighborhood groups. Comparison tests using Pearson Chi-Square, Fisher Exact Test, or Analysis of Variance (ANOVA) were run to generate initial unadjusted p-values (not included in this report). Based on additional testing of the effects of various variables on comparisons using multinomial logistic regression, three key demographic variables were identified as having significant effects. These variables were age, gender, and ethnicity, which can typically play confounding roles in

data analysis if not adjusted for. Subsequent multinomial logistic regression analysis was run to determine two sets of p-values: one removing the effects of (adjusting for) age and gender, and one removing the effects of ethnicity. Thus there were two Base Models, one model including Age (continuous variable), Gender and Neighborhood Groups, and one model including those variables plus Ethnicity Groups.

Since ethnicity is very closely correlated with neighborhood area groups in this part of Chicago, the comparison of the two p-values allows us to identify the degree of effect of ethnicity in differences between the areas where applicable.

A p-value less than .05 means that we are 95% confident that there is a significant difference between the neighborhood areas. Variables without a significant difference by area may also provide informative trends.

Following are some examples intended to help interpret the data in the results tables in this report:

1. Marital Status (an example found in Table 1 in Appendix) is significantly different between the neighborhood areas (p-value < .001) when adjusted for age and gender. The percentages show that the proportion of "never married" people in the Northern Neighborhood Area is significantly higher than in the other areas. However, when adjusted for age, gender, and ethnicity, the neighborhoods are not significantly different, i.e. p-value = .359. This means that ethnicity is correlated with marital status, and that it more likely explains the differences than the neighborhood locations themselves.

2. Having Internet access at home (an example found in Table 2) is significantly different between the neighborhood areas, adjusting for age and gender in one model, and adjusting for age, gender, and ethnicity in a separate model (both p-values < .001). Since the two p-values are equivalent, ethnicity is not playing a role in the difference between neighborhood areas. This neighborhood difference is likely due to varying education levels.

3. All neighborhood areas indicate that having public transportation near a healthcare facility is important. The adjusted p-values in this case (.658 and .491) indicate a lack of difference between the areas. However, this information may still be quite useful to Saint Anthony Hospital.

SAMPLE CHARACTERISTICS FROM THE QUANTITATIVE DATA

Although the cross-sectional survey was primarily constructed through convenience sampling, based on a comparison of key census characteristics (with the exception of gender, which is weighted more heavily toward males in the sample, but adjusted for in analysis), it is a reasonable representation of the four neighborhood groups. Because of the prominent location of the survey collection site in North Lawndale, the overall sample is weighted toward North Lawndale residents. In addition, the sample size from the suburbs of Berwyn and Cicero is relatively small, placing some limitations on statistical comparisons with other neighborhoods. However, for the purposes of the current analysis, the methods used are sufficient to reasonably extrapolate findings from comparisons to these neighborhood areas of Chicago. The findings would not be generalizable beyond these unique areas of Chicago.

GI* statistics confirm the findings from our research data.

FIGURE 3: CLUSTER OF AFRICAN AMERICAN POPULATION – GI* STATISTICS
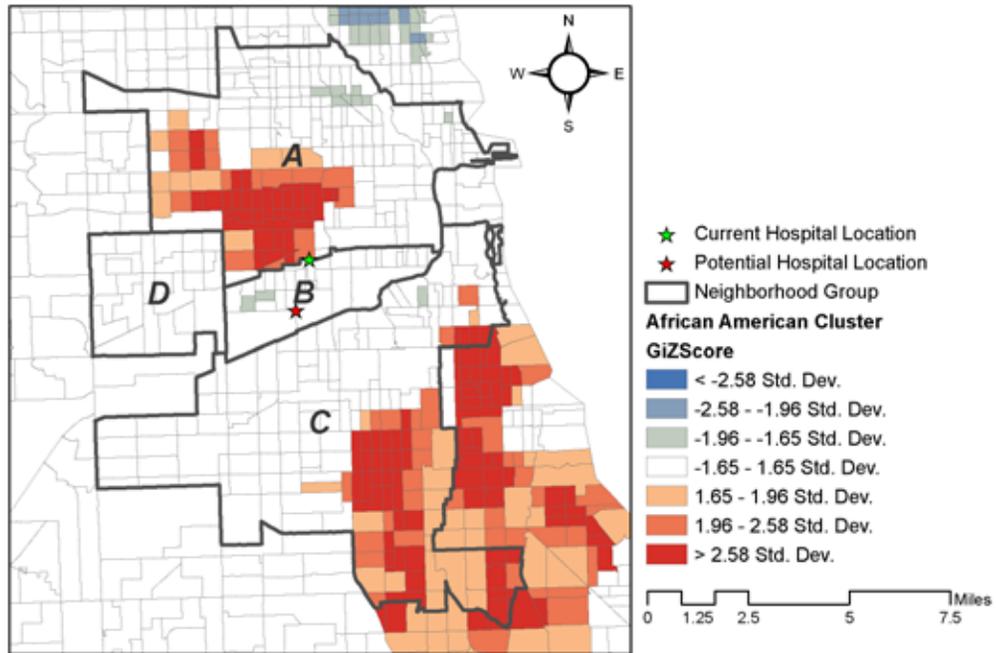
FIGURE 4: CLUSTER OF HISPANIC POPULATION – GI* STATISTICS
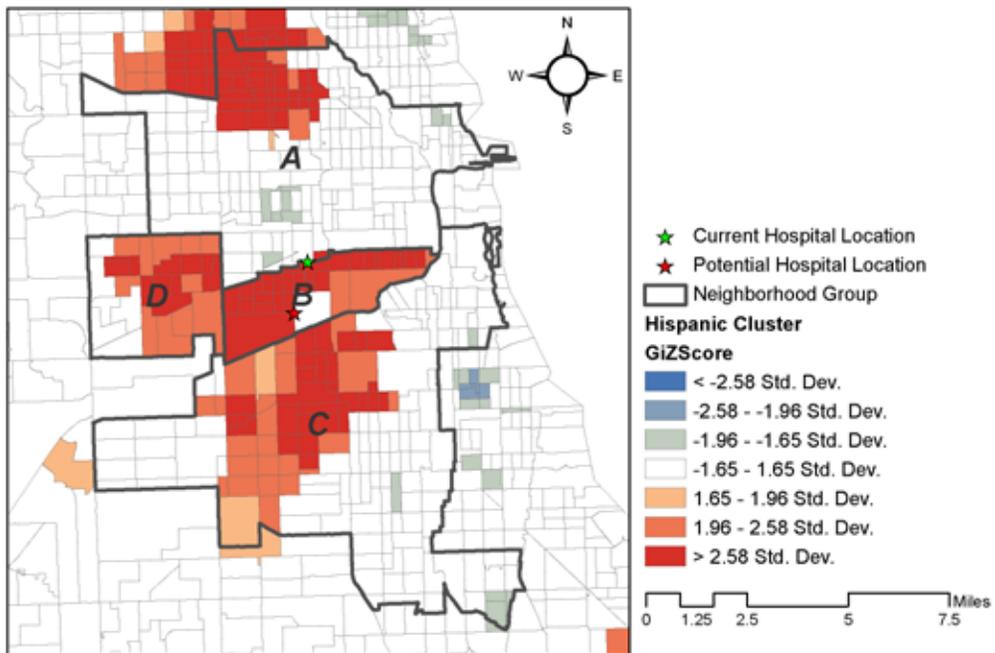
The four neighborhood groups used for this analysis show interesting community characteristics. GI* statistics identify the location of clusters and test the statistical significance of clustering. Areas where high values cluster are located are called hot spots, and areas where low values cluster are located are called cold spots. Zscore shows statistical significance of the clustering. The cluster map of Hispanic population clearly shows that Hispanic population is dominant and forms statistically significant clustering in Groups B,C, and D. Interestingly, African-American populations have clusters in the south part of Group A and the south part of Group C.

FIGURE 5: EDUCATION LEVEL – RATIO OF HIGH SCHOOL OR HIGHER
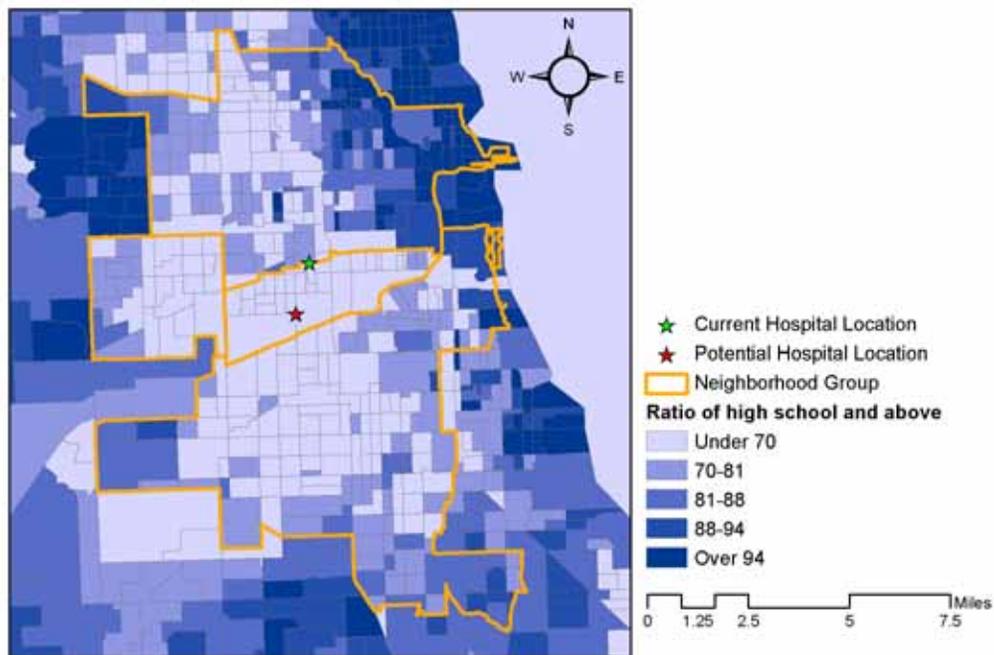
The map of education presents the ratio of population with a high school degree or higher. This clearly indicates that the neighborhood groups for this analysis have relatively low education levels compared to Cook County, Illinois.

Graphic 1 (full associated table in Appendix) summarizes key demographic descriptive statistics of the Saint Anthony Hospital service areas based on the cross-sectional survey. Here we see a predominance of low income and unemployment, as well as some prominent differences between the neighborhood areas. It is important to note the very strong correlation of ethnicity to neighborhood areas. Because of this close correlation, the analysis includes p-values that do and do not adjust for ethnicity, so that we can see its effect when the values are different. For example, religious affiliation is highly associated with ethnicity. Saint Anthony Hospital will need to consider the demographic characteristics of the community areas as it formulates its plans.

GRAPHIC 1

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP

GENDER

64.1%	35.9%		64.1%	35.9%		64.1%	35.9%		64.1%	35.9%
NORTHERN			**MIDDLE**			**SOUTH & EAST**			**CICERO/BERWYN**	

AGE RANGES

<30   30-54   55+

11.6%	68%	20.4%		21.7%	58.3%	20%		23.4%	53.3%	23.4%		8.1%	35.1%	56.8%
NORTHERN				**MIDDLE**				**SOUTH & EAST**				**CICERO/BERWYN**		

NORTHERN — 5.2% / 5.7% / 89.2%
MIDDLE — 9.7% / 15.3% / 75%
SOUTH & EAST — 15.6% / 14.9% / 69.5%
CICERO/BERWYN — 12.8% / 53.8% / 33.3%

■ AFRICAN AMERICAN/BLACK
■ HISPANIC/LATINO/MEXICAN
□ WHITE & OTHER

ETHNICITY GROUPS

| **NORTHERN** | **MIDDLE** | **SOUTH & EAST** | **CICERO/BERWYN** |

GRAPHIC 1 CONTINUED

22%
55.5%
22.5%

NORTHERN

23.2%
23.2%
53.6%

MIDDLE

27.3%
22.3%
50.4%

SOUTH & EAST

30%
30%
40%

CICERO/BERWYN

■ RETIRED, HOMEMAKER OR STUDENT
□ UNEMPLOYED OR ON STRIKE
▮▮ EMPLOYED FULL OR PART TIME

EMPLOYMENT STATUS

31%
69%

NORTHERN

73.7%
26.3%

MIDDLE

66.9%
33.1%

SOUTH & EAST

62.5%
37.5%

CICERO/BERWYN

▮ > $15K
▮▮ $15K OR LESS

TOTAL HOUSEHOLD INCOME

QUALITATIVE ANALYSIS

Qualitative data was input and coded, queried, and managed using NVIVO software. It was analyzed based on expected and emergent themes in the data. Themes included the following:

- » Defining Health
- » Community Member Health and Wellness (Health of Individuals, Access to Care, Impact of Immigration)
- » Health of Community Overall (Economic Environment, Social & Political Environment, Community Involvement)
- » Educational Environment
- » Physical Environment
- » Defining Quality of Care/Hospital Quality
- » Vision for Future—Health and Community
- » Saint Anthony Hospital Vision and Potential Move

Generally, all of the qualitative data (as a group, including key informant interviews and focus groups) was internally consistent. In addition, the qualitative data generally supports and enhances the quantitative findings shown in the next section.

SPATIAL ANALYSIS WITH GIS

This section introduces the application of Geographic Information Systems (GIS) as an analytical tool for the health field. GIS is a rapidly developing field, which has been widely accepted by health care, community planning and many other disciplines (Cope and Elwood 2009; Koch 2005; Lang 2000; Longley et.al 2011). GIS clearly has much to offer to researchers and decision makers who deal with the challenges of the urban and rural environments.

GIS manages spatial information and data that is linked to a specific location. GIS analysis is a process for analyzing geographic patterns in your data and spatial relationships among features. Capturing the location information is useful for conducting more targeted analyses, understanding the social context pertaining to a particular geographic area, or understanding characteristics of an area that might influence the socioeconomic situation. This work used GIS to analyze community background information which is location specific features.

GIS is an excellent data exploration tool. Since GIS can integrate data from a variety of sources, researchers can develop a holistic view of the many different contextual variables that may be important to addressing a particular issue. It provides a methodology for drawing out useful information from data. The findings from exploratory analysis also provide another input into spatial modeling (Haining 2003). Exploratory spatial data analysis is to describe spatial distributions, discover patterns of spatial

association and spatial clustering, and detect outliers and anomalies. (Anselin 1993). In this report, GIS is mainly used as an exploratory approach.

Visualization is one of the basic GIS functions. This work used pin mapping to display the location of a dot or symbols at the coordinates of some features such as locations of hospitals, public facilities, parks or survey respondents. By looking at the locations of features, a researcher can begin to explore causes for the patterns identified. Good visual display of analytic results is also a powerful aid to both understanding and remembering. While discussions may be expressed in words or statistical output, visual images are an important aid to thought (Legates 2005). This report produced thematic maps to facilitate discussion.

Spatial statistical analysis is another important GIS function. Visually detected geographic patterns could be tested statistically. Clusters occur in a geographic distribution when features are found in close proximity or when groups of features with similarly high or low values are found together. By comparing the locations of clusters to the other features, you can start to identify possible contributing factors.

By looking at a map, you can draw conclusions about where there are clusters of features. Statistics let you test those conclusions and validate them by measuring features are closer than would occur by chance. Using statistics takes much of the guesswork out of identifying clusters. This work used Gi* statistic to detect clusters of ethnic groups both of African American population and Hispanic population.

RESULTS

COMMUNICATION NETWORKS

Graphic 2 (full associated table in Appendix) shows significant differences in Internet and email access between the various community areas. In addition, the qualitative research indicates a strong word-of-mouth component of communication and social networking in these neighborhoods. Internet information access is quite limited. This finding has implications for modes of communication, social network patterns, and civic engagement, relevant to Saint Anthony Hospital's communication and outreach to its target markets. In addition, much community involvement revolves around church-related activities.

GRAPHIC 2

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP

	NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN	
Home internet	38.7%	71%	68.1%	82.1%	**HAVE HOME INTERNET ACCESS**
E-mail	37.7%	70.6%	66.9%	67.5%	**HAVE E-MAIL ADDRESS**

	NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN	
Use social media	32.8%	56.8%	48.6%	47.5%	**USE SOCIAL MEDIA**
Frequency	53.4% WEEKLY OR LESS / 46.6% DAILY	37.5% WEEKLY OR LESS / 62.5% DAILY	56.8% WEEKLY OR LESS / 43.2% DAILY	60% WEEKLY OR LESS / 40% DAILY	**FREQUENCY OF SOCIAL MEDIA USE**
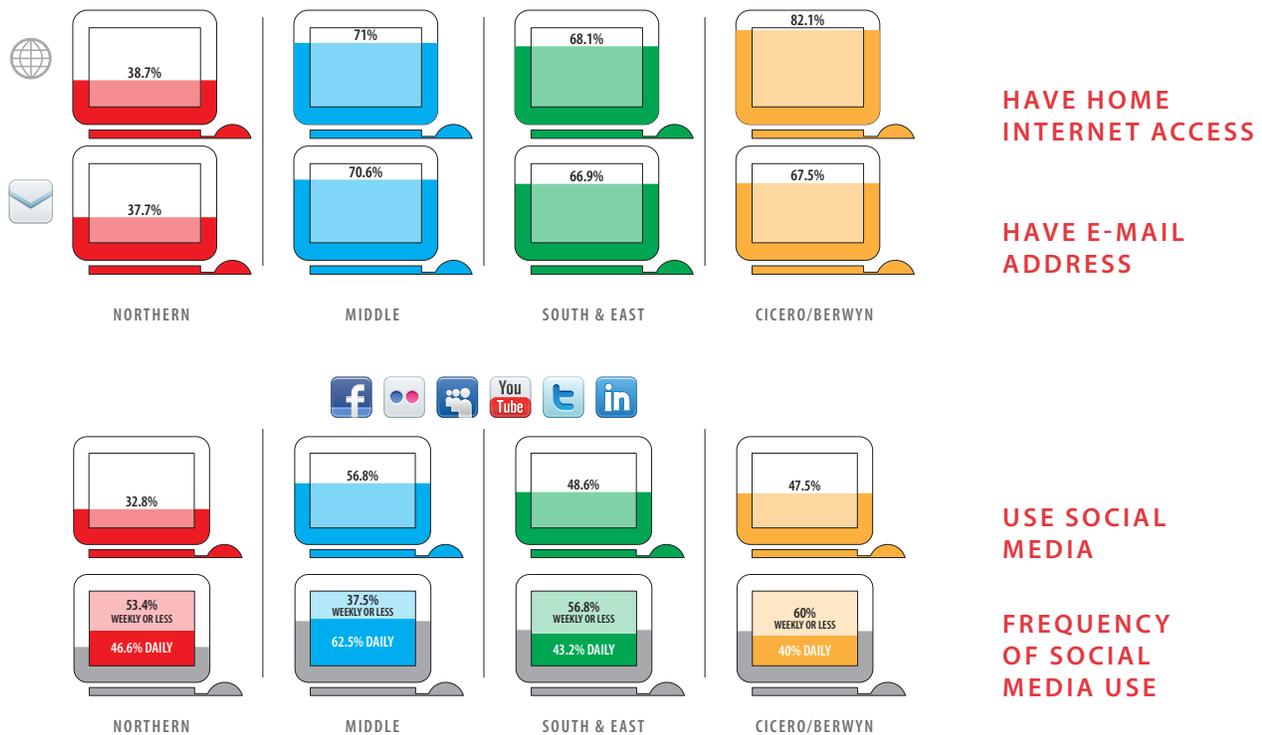
DEFINING A COMMUNITY-CENTRIC HOSPITAL— COMMUNITY NEEDS AND DESIRES RELATED TO OVERALL HEALTH AND WELLNESS

Based on input from both qualitative efforts, participants view health broadly as "balance," "self-sufficiency," "vitality," etc. Health is much more than healthcare. Health is integrated with values.

Despite well-known problems in area neighborhoods, many people are hopeful about improving education trends in elementary schools, and believe there are strengths in the community despite difficulties exacerbated by the recent economic downturn. It was noted that the work ethic in the Mexican/Latino community is particularly strong. Elders and multi-generations of women in the African-American community was identified as a strength. Saint Anthony Hospital has an opportunity to engage actively in some of these perceived assets. The importance of educating children is a unifying factor across ethnic groups.

Interview participants are very aware of health challenges in the community, e.g., diabetes, obesity, heart problems, overweight kids, etc. Some speak in terms (e.g., "food desert") that indicate a high level of knowledge about the problems, due to existing and past intervention efforts. The kids' café is one highly regarded example of an intervention.

Park/green space is seen as critical, so that children in the community have outdoor places to recreate. Some in the community are already actively working on increasing the number and quality of parks in the area.

TRANSPORTATION

Graphic 3 summarizes how people say they generally travel to various everyday destinations. Consistently significant differences exist between car ownership and primary mode of transportation between the neighborhood groups, as illustrated in Graphic 3. In particular, the Northern neighborhoods have a low level of car ownership and a high level of public transportation use. It will be important for Saint Anthony Hospital to consider these findings, especially if it intends to maintain and grow its northern constituency after its potential move.

Both qualitative and quantitative data include community need for (Graphic 3) and interest in (Graphic 4) (full associated tables in Appendix) the availability of transportation for health service. Qualitative participants specifically suggested the idea of some sort of shuttle service.

GRAPHIC 3

FREQUENCY AND PERCENTAGE OF TOTAL USAGE BY NEIGHBORHOOD GROUP

NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
13.9%	36.9%	54.8%	41.7%
24.9%	20.7%	13.7%	19.4%
8%	9.9%	2.4%	0%
53.1%	32.4%	29%	38.9%

DRIVE | PUBLIC TRANPO | WALK | OTHER/DON'T GO

TRANSPORTATION TO WORK

GRAPHIC 3 CONTINUED

16.7% 🚗	48.2% 🚗	62% 🚗	53.8% 🚗
42.4% 🚌	22.3% 🚌	12.4% 🚌	23.1% 🚌
14.6% 👟	8% 👟	4.7% 👟	5.1% 👟
26.3% 🚫	21.4% 🚫	20.9% 🚫	17.9% 🚫
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN

DRIVE **PUBLIC TRANPO** **WALK** **OTHER/ DON'T GO**

TRANSPORTATION TO HEALTHCARE

8.4% 🚗	26.2% 🚗	36% 🚗	21.2% 🚗
21.7% 🚌	11.2% 🚌	7% 🚌	3% 🚌
7.4% 👟	7.5% 👟	0% 👟	0% 👟
62.5% 🚫	55.1% 🚫	57% 🚫	75.8% 🚫
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
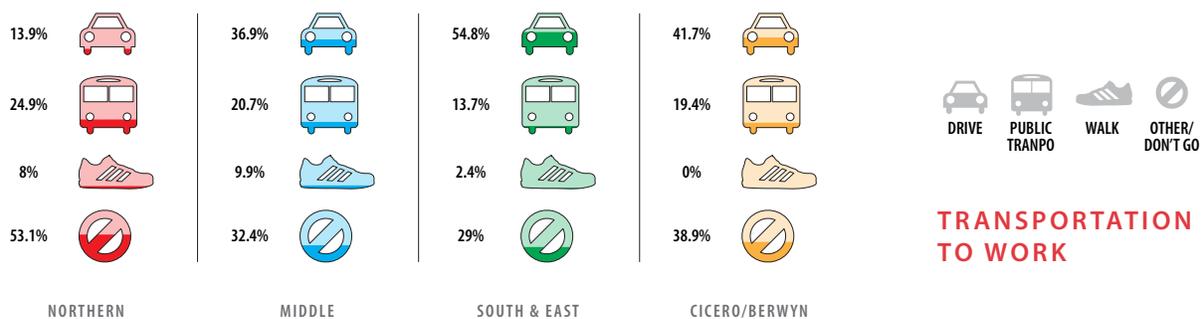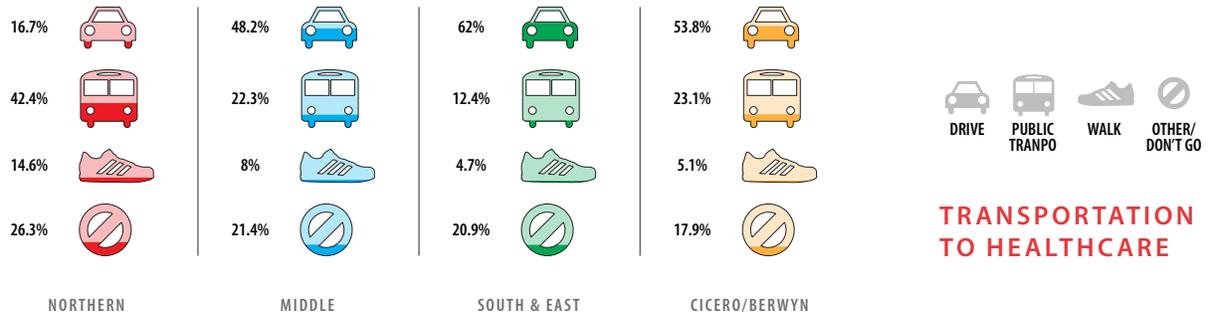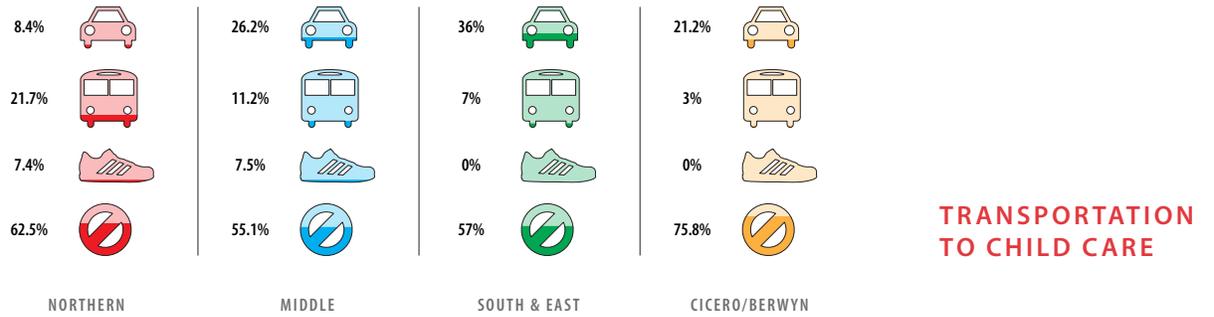
TRANSPORTATION TO CHILD CARE

17.9% 🚗	48.3% 🚗	66.4% 🚗	60% 🚗
31.9% 🚌	10.8% 🚌	9% 🚌	15% 🚌
15.4% 👟	19.2% 👟	9% 👟	5% 👟
34.8% 🚫	21.7% 🚫	15.7% 🚫	20% 🚫
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
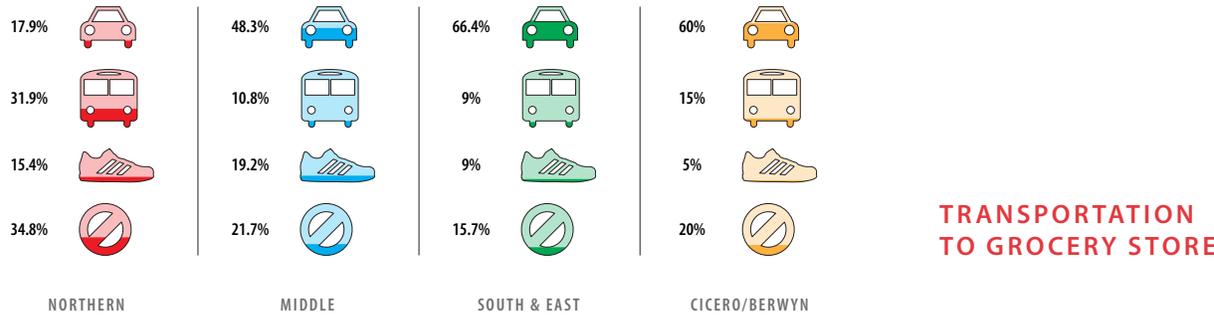
TRANSPORTATION TO GROCERY STORE

19.2% 🚗	48.3% 🚗	68.3% 🚗	62.5% 🚗
37.1% 🚌	19% 🚌	14.3% 🚌	15% 🚌
12.6% 👟	12.9% 👟	4.8% 👟	5% 👟
31.1% 🚫	19.8% 🚫	12.7% 🚫	17.5% 🚫
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
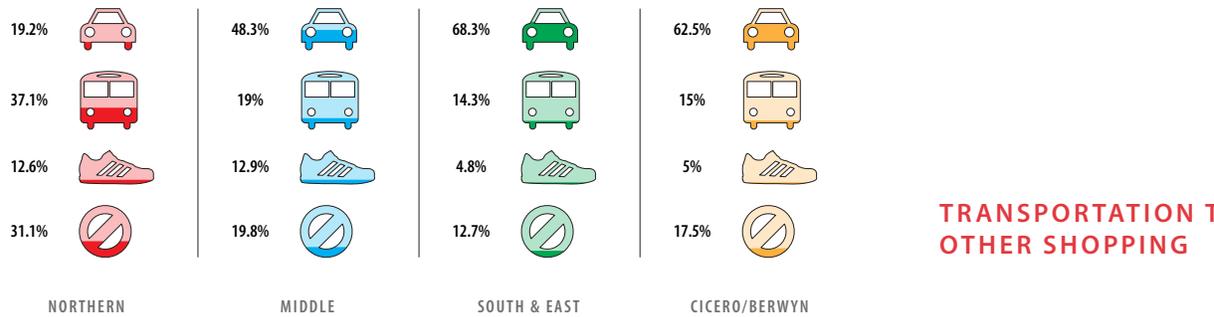
TRANSPORTATION TO OTHER SHOPPING

DESIRE FOR OTHER SERVICES

The survey included questions about what services people would use if available in their area. Strong interest exists in many services as indicated by the high percentages in Graphic 4 (full associated table in Appendix). A significant difference also exists between neighborhood groups in their intention to use the following potential services: a fitness center, an arts facility with a program for children, a learning center for health information, child care and elder care, community garden, and shopping and eating establishments at 31st and Kedzie. Overall, the numbers indicate that Saint Anthony Hospital may have a greater challenge attracting suburban constituents to a potential new facility/campus vs. the surrounding city neighborhoods.

GRAPHIC 4

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP

NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
70.1%	70.6%	71.3%	30%
68.6%	74.6%	75.7%	32.5%
66.8%	61%	69.9%	32.5%

RESTAURANT   GROCERY   RETAIL

FUTURE OF NEIGHBORHOOD AT/NEAR 31ST & KEDZIE

NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
75.9%	86.7%	87.8%	53.8%
80.7%	83.6%	75.7%	61.5%
80.9%	87.1%	84.2%	59.0%
76.7%	75.0%	74.8%	51.3%

LOW-COST FITNESS FACILITY   LOW-COST TRANSORTATION TO HEALTH CARE APPOINTMENTS

LEARNING CENTER WITH COURCES TO ADVANCE MY CAREER   FACILITY FOR COMMUNITY GROUP MEETINGS OR EVENTS
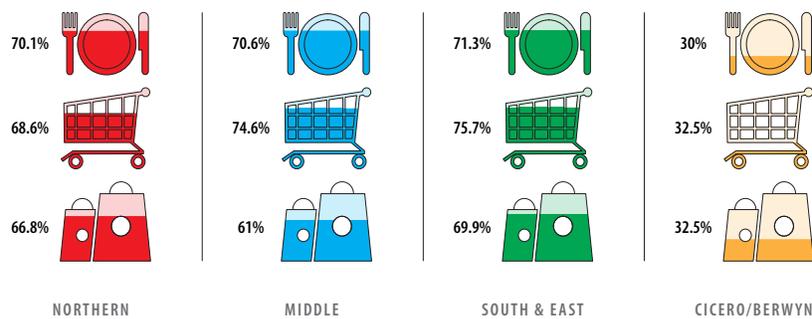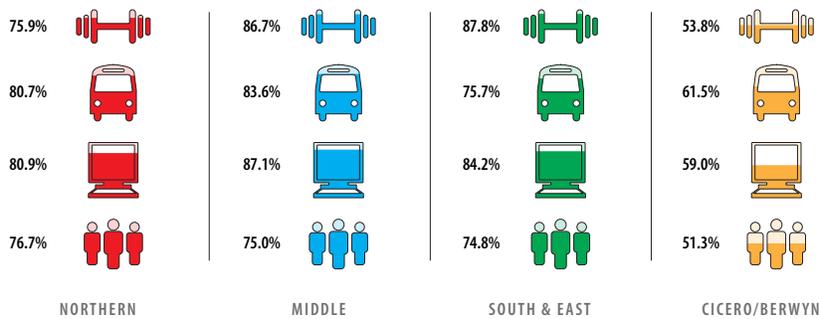
FUTURE OF NEIGHBORHOOD AT/NEAR 31ST & KEDZIE

FEEDBACK ON SAINT ANTHONY HOSPITAL AND ITS POTENTIAL RELOCATION

The survey specifically asked whether participants would be likely to use a hospital at the current vs. the potential new location; Graphic 5 illustrates the responses. Although a drop in likelihood of use of the new location is indicated by the Northern neighborhood group, the drop is perhaps not as severe as might be expected. Increases in anticipated use for the Middle, South and East neighborhood groups are reported. Suburban anticipated use is relatively low by comparison.

GRAPHIC 5

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP

NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN
67.8%	67.5%	75%	35%

NEW HOSPITAL & CLINIC
NEAR 31ST & KEDZIE
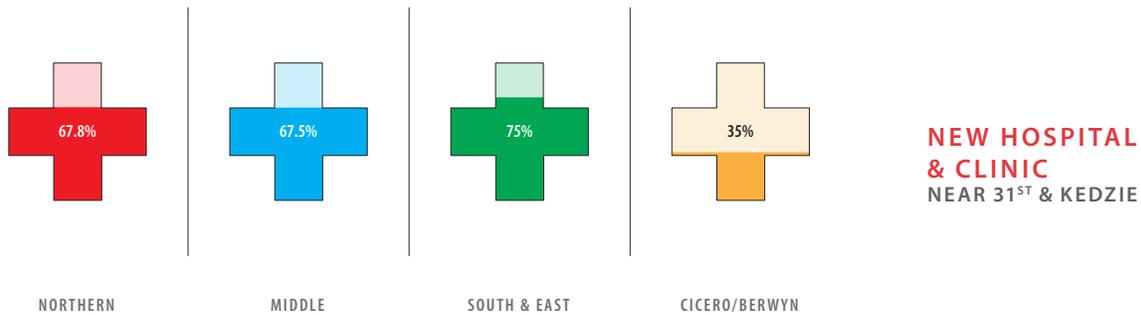
In addition, the qualitative work revealed that Saint Anthony Hospital's outreach to and interaction with community leaders to date has been very effective. Overall, the participants speak highly of the hospital, and are aware of the community issues and opportunities around its potential move. Several mentioned specific interactions with Guy Medaglia and Jim Sifuentes on the topic.

Long-standing issues at the city level have resulted in competition for resources between Hispanic and African Americans. Especially if it relocates, Saint Anthony will need to address actively the African-American community so that it continues to feel engaged and supported.

Overall, based on the qualitative input, community leaders and community members are generally supportive of Saint Anthony's potential move.

Importantly, Saint Anthony Hospital has developed a reputation among the many participants as a hospital that cares. Based on qualitative input, this is not the case for a number of Saint Anthony's competitors.

COMMUNITY ACCESS TO AND USE OF HEALTHCARE

Graphic 6 (full associated table in Appendix) shows that access to care is comparable across the neighborhood groups, except in the case of prescription access. The Northern neighborhoods report lower access to needed prescriptions. The perceived lack of access may be an opportunity for Saint Anthony Hospital to engage with this community.

The Northern neighborhoods also report higher Emergency Room usage than the other neighborhoods. This difference appears to be associated with ethnicity.

GRAPHIC 6

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP

.96 .5 .46 .55

1.52 1.37 1.51 1.68

.75 .66 .8 .95

NORTHERN MIDDLE SOUTH & EAST CICERO/BERWYN
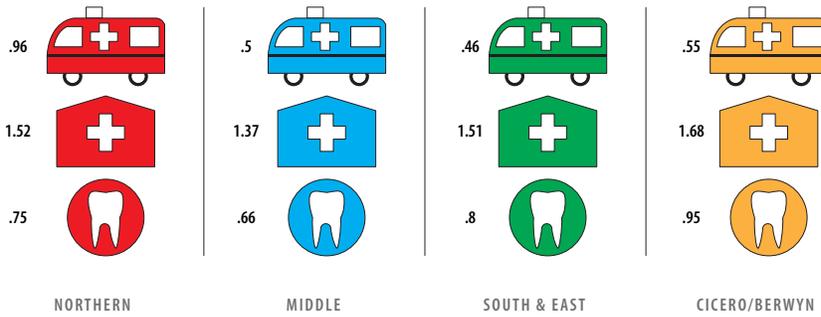
AVERAGE NUMBER OF VISITS
IN LAST 6 MONTHS

49.4% 60.2% 69% 82.5%

NORTHERN MIDDLE SOUTH & EAST CICERO/BERWYN

HAVE A PERSONAL DOCTOR

1.89 1.68 1.47 1.36

NORTHERN MIDDLE SOUTH & EAST CICERO/BERWYN
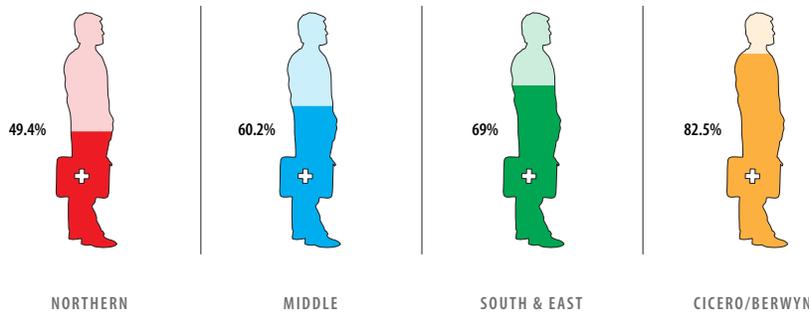
AVERAGE NUMBER OF PERSON DOCTOR VISITS
IN LAST 6 MONTHS

2.82 3.11 3.05 3

NORTHERN MIDDLE SOUTH & EAST CICERO/BERWYN
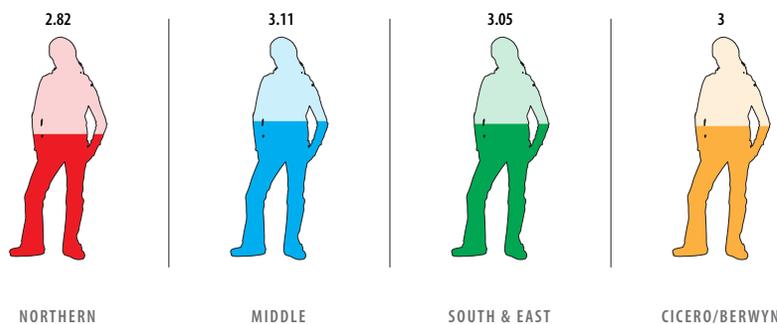
SELF-RATING OF HEALTH STATUS
0=WORST, 10=BEST

Based on feedback from the qualitative efforts, immigration has a significant impact on access to health services in the Hispanic community. However, a low percentage of respondents to the survey identified this as a major obstacle to healthcare. Qualitative data also reveals that mental health is a "taboo" subject in the African-American community. In addition to asking about perceived obstacles to healthcare in the community, the survey also inquired about factors important when seeking healthcare or choosing a healthcare facility.

GRAPHIC 6 CONTINUED

62.9%	65.1%	69.1%	66.7%
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN

SEEK HEALTHCARE WHEN NEEDED DESPITE COST CONCERNS
STRONGLY TO SOMEWHAT AGREE

58.5%	68.5%	79.7%	82.1%
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN

HAVE TRANSPORTATION TO HEALTHCARE
STRONGLY TO SOMEWHAT AGREE

21.8%	21.6%	18.2%	16.7%
NORTHERN	MIDDLE	SOUTH & EAST	CICERO/BERWYN

CHILD CARE IS AN OBSTACLE TO HEALTHCARE
STRONGLY TO SOMEWHAT AGREE

19.5% | **18.8%** | **16.2%** | **14.3%**

NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN

IMMIGRATION STATUS IS OBSTACLE TO HEALTHCARE
STRONGLY TO SOMEWHAT AGREE

63.4% | **80.8%** | **79.9%** | **87.2%**

NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN

PROXIMITY TO HOME
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

51.4% | **66.1%** | **64.3%** | **45.5%**

NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN

PROXIMITY TO WORK
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

42.5% | **34.8%** | **33.1%** | **32.4%**
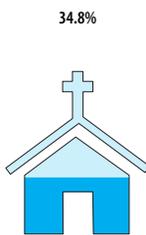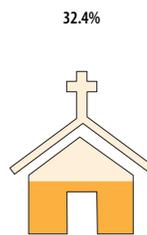
NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN

RELIGIOUS AFFILIATION
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

60.8%   73%   65%   63.2%

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
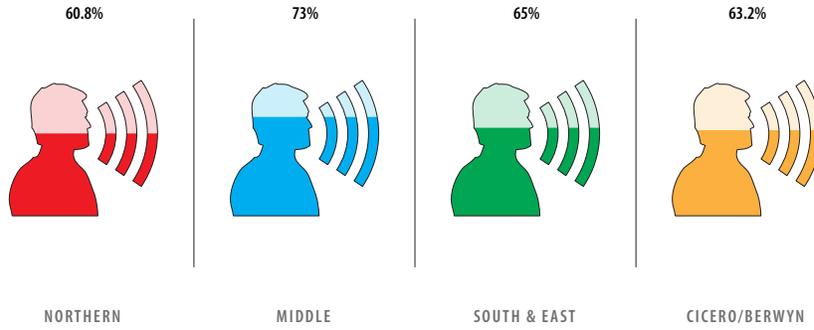
LANGUAGES SPOKEN
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE

63.7%   80.2%   81.3%   82.1%

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
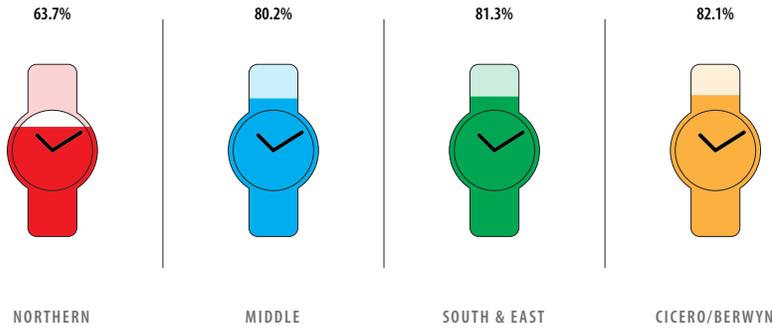
REASONABLE WAITING TIME
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

66.6%   72.4%   77%   82.1%

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
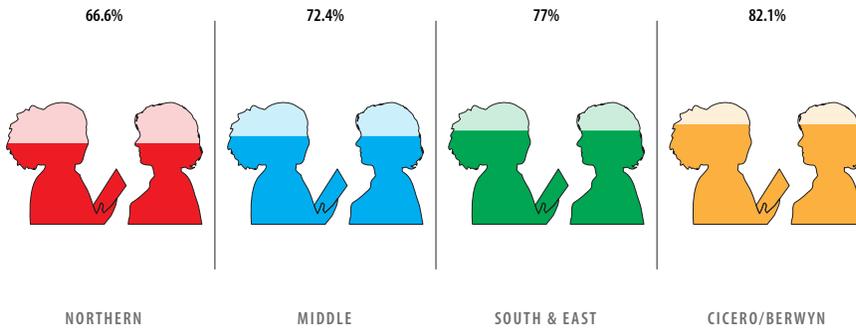
STAFF/PROFESSIONALS KNOW ME
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

76.6%   88.4%   91.4%   94.9%

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
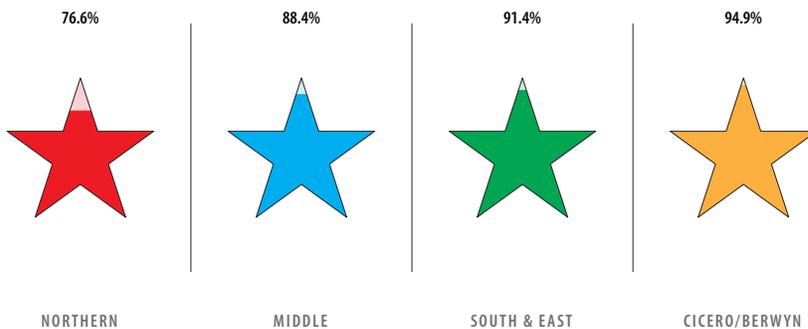
GOOD SERVICE
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

60.7%   **73.9%**   **72.1%**   **74.4%**

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
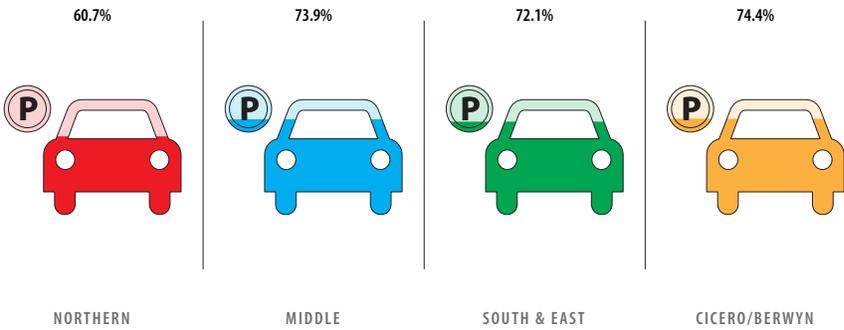
EASE OF PARKING
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

73.9%   **80.8%**   **76.1%**   **70.3%**

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN

NEARBY PUBLIC TRANSPORTATION
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

73.4%   **82.4%**   **79.1%**   **82.1%**

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
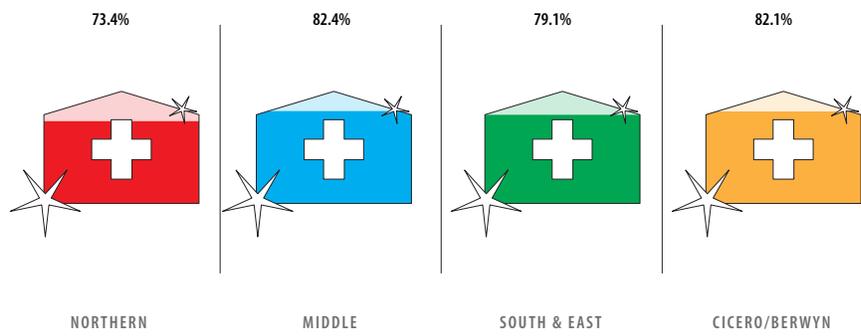
PHYSICAL APPEARANCE OF FACILITY
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

62.5%   **64.5%**   **72.1%**   **65.8%**

N   N   N   N

NORTHERN   MIDDLE   SOUTH & EAST   CICERO/BERWYN
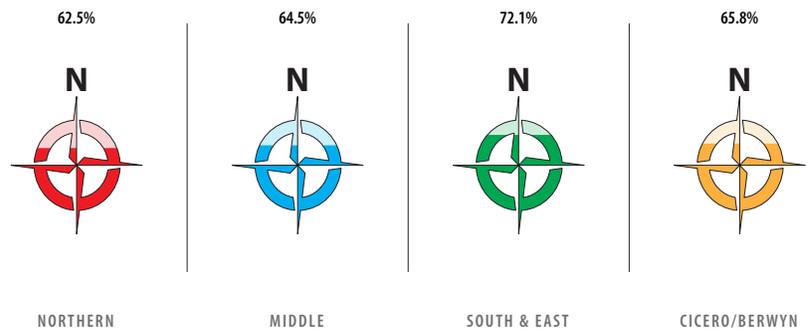
PROXIMITY TO BUSINESSES & OTHER SERVICES
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

69.7%　　　　**77.7%**　　　　**80%**　　　　**65.8%**

NORTHERN　　　MIDDLE　　　SOUTH & EAST　　　CICERO/BERWYN
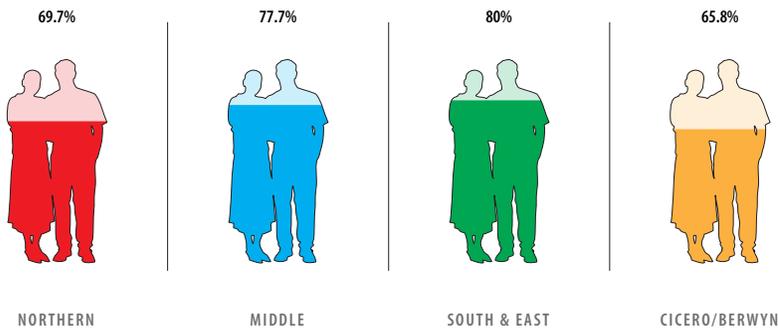
REFERRAL FROM FAMILY/FRIEND
STRONGLY TO SOMEWHAT AGREE THESE FACTORS ARE IMPORTANT WHEN CHOOSING HEALTHCARE FACILITY

PERCEIVED QUALITY OF THE NEIGHBORHOOD ENVIRONMENT

Based on qualitative input, physical environment is important and has meaning to people. Boarded up buildings and vacant lots signify lack of hope. A new building can be a "psychic boost," although its impact depends upon what is done with it over the longer term.

Restaurants and churches were often mentioned by interview and focus group participants as favorite neighborhood places. These places share common communities of and connections with people.

Much work in public health is drawing connections between neighborhood environments and community health. James F. Sallis, PhD, has been particularly active

in this research area, and developed and validated the Neighborhood Environment Walkability Survey (Sallis, NEWS Survey), much of which was incorporated into the cross-sectional survey of the Saint Anthony Hospital service area.

Graphic 7 (full associated table in Appendix) includes feedback on the neighborhood environments, with particular emphasis on factors that may be associated with health of communities. These factors are associated with access, mobility, and exercise.

Table 8 in Appendix summarizes the scores on the Neighborhood Environment Walkability Survey. Generally, the neighborhood areas are similar, and show room for improvement, in walkability.

GRAPHIC 7

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP

56.9%　　　　**78.4%**　　　　**74.8%**　　　　**64.1%**

NORTHERN　　　MIDDLE　　　SOUTH & EAST　　　CICERO/BERWYN

DO MOST SHOPPING AT LOCAL STORES
STRONGLY TO SOMEWHAT AGREE
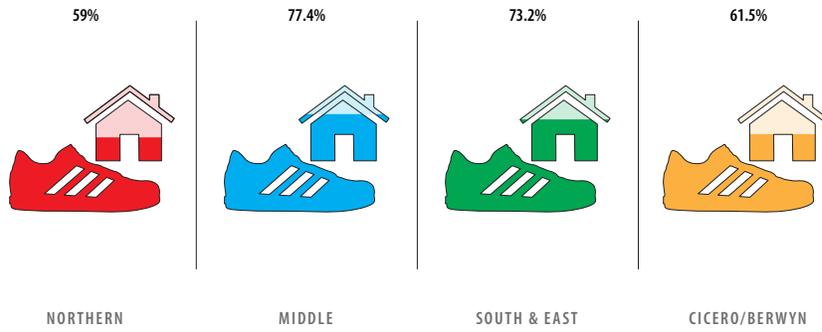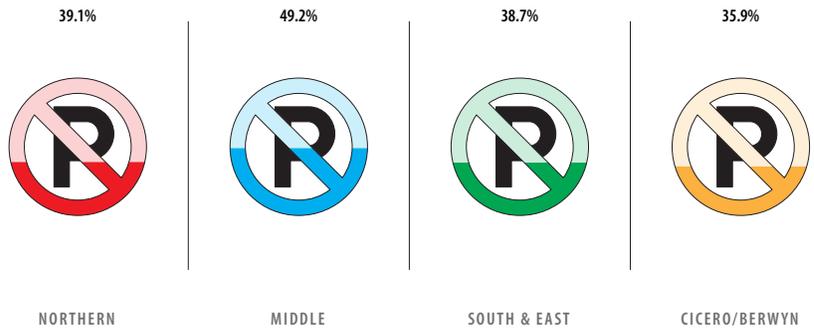
| 59% | 77.4% | 73.2% | 61.5% | **STORES ARE WITHIN EASY WALKING DISTANCE FROM HOME** STRONGLY TO SOMEWHAT AGREE |
| NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN | |

| 39.1% | 49.2% | 38.7% | 35.9% | **PARKING IS DIFFICULT IN LOCAL SHOPPING AREAS** STRONGLY TO SOMEWHAT AGREE |
| NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN | |

| 59.5% | 69.4% | 66.2% | 64.1% | **MANY PLACES TO GO WITHIN EASY WALKING DISTANCE FROM HOME** STRONGLY TO SOMEWHAT AGREE |
| NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN | |

| 76% | 84.7% | 82.4% | 82.1% | **EASY TO WALK TO A TRANSIT STOP** STRONGLY TO SOMEWHAT AGREE |
| NORTHERN | MIDDLE | SOUTH & EAST | CICERO/BERWYN | |
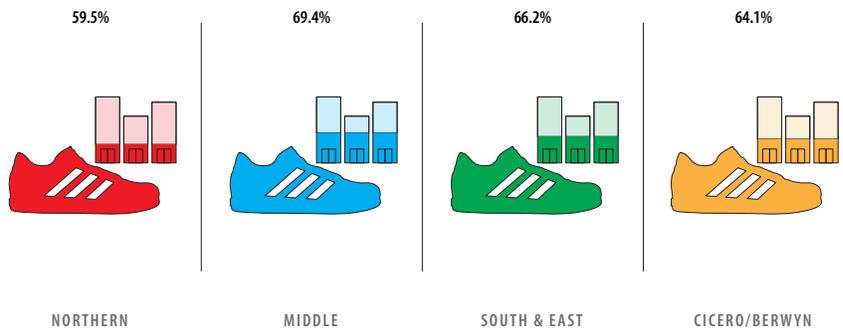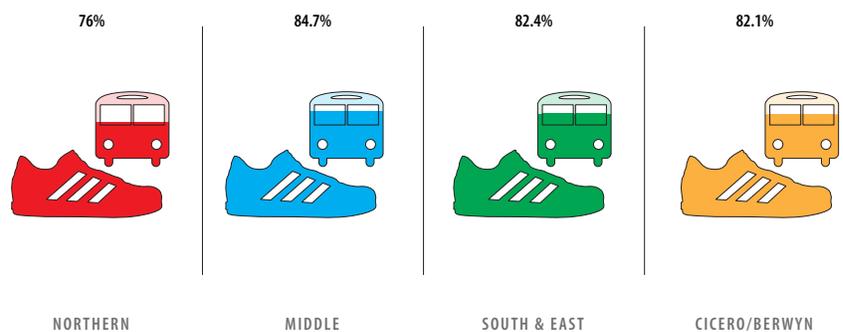
CONCLUSIONS

Based on compiled findings from this research, "health" as people perceive it (very broadly) is a powerful mission for a community-centric hospital. A hospital does not have to be just a place for healthcare services (i.e., primarily for treating illness). It can potentially be engaged on many levels in improving and sustaining the overall well-being of a diverse community.

Saint Anthony Hospital has already done significant and effective work in improving its image and broadening its perceived mission in the surrounding community areas. It is already becoming a "community-centric hospital." Its potential move to a new location represents an opportunity to further strengthen and develop and integrate its mission spatially, while considering the multiple existing strengths and potential issues among factions of the community. Saint Anthony should continue and build upon its active engagement with community leaders and community organizations such as parishes and churches where many people belong and congregate.

Education is one opportunity for the hospital to bridge the gaps between the Hispanic and African-American communities. In addition, programs that capitalize on intergenerational linkage could leverage existing community strengths.

Space for arts/music/culture is desirable and perceived as lacking in the area.

Given the issues of transportation consistently raised in the research, and given Saint Anthony's potential move away from the predominantly African-American neighborhood, deploying some sort of mobile presence and/or transportation service may serve to strengthen engagement with this community. In addition, "on the street" presence would align with the predominant word-of-mouth communication networks in the area.

Saint Anthony Hospital should clearly define key metrics to measure the success over time of its potential new business/service model. This initial phase of research provides some baseline measurements for a potential future methodologically based research strategy to define and measure Saint Anthony Hospital's impact and success over time in terms of community impact as well as profitability.

BIBLIOGRAPHY

Anselin, L. (1993). Exploratory Spatial Data Analysis and Geographic Information Systems, Research Paper 9329. Regional Research Institute, West Virginia University.

Baker, E. A., & Brownson, C. A. (1998). Defining Characteristics of Community-Based Health Promotion Programs. Journal of Publcih Health Management and Practice, 1-9.

Braveman, P., Cubbin, C., Egerter, S., Williams, D., & Pamuk, E. (2010). Socio-economic Disparities in Health in the Unite States: What the Patterns Tel Us. American Journal of Public Health, 186-196.

Carole, R., Jeannette, R., & Escarce, J. (2009). Community Demographics and Access to Health Care among U.S. Hispanics. Health Reserach and Educational Trust .

Collins, & Perdue, W. (2003). The Built Environment and its Relationship to the Public's Health: The Legal Framework. American Journal of Public Health, 1390-1394.

Comber, A., Brunsdon, C., & Radburn, R. (2011). A Spatial Analysis of Variations in Health Access: Linking Geography, Socio-economic Status and Access Perceptions. International Journal of Health Geographics, 10-44.

Cope, M. & Elwood, S. (2009). Qualitative GIS: A Mixed Methods Approach. Sage publication.

Ginn, G. (2006). Community Health Orientation, Community-based Quality Improvement, and Health Promotion Services in Hospitals. Journal of Healthcare Management, 293=306.

Hawthorne, T., & Kwan, M. Using GIS and Perceived Distance to Understand the Unequal Geographies of Healthcare in Lower-Income Urban Neighbourhoods. The Geographical Journal, 178 (1), 18-33.

Koch, T. (2005). Cartographies of Disease: Maps, Mapping, and Medicine. ESRI Press.

Lang, L.(2000). GIS for Health Organizations. ESRI Press.

LeCook, B., & Manning, W. (n.d.). Measuring Racial/Ethnic Disparities across the Distribution of Health Care Expenditures. Health Services Research, 44:5.

Legates, R. (2005). Think Globally, Act Regionally: GIS and Data visualization for social science and public policy research. ESRI Press.

Lindau, S., Makelarski, J. A., Chin, M. H., Desautels, S., Johnson, D., Johnson, W. E., et al. (2011). Building community-engaged health research and discovery infrastructure on the South Side of Chicago: Science in service to community priorities. Preventative Medicine , 200-207.

Lindau, S., Makelarski, J. A., Chin, M. H., Desautels, S., Johnson, D., Johnson, W. E., et al. (2011). Building community-engaged health research and discovery infrastructure on the South Side of Chicago: Science in service to community priorities. Preventative Medicine , 200-207.

Longley, P., Goodchild, M., Macguire, D., & Rhind, D. (2011). Geographic Information Systems & Science. 3rd edition. John Wiley & Sons, Inc.

Lopez, R. (2009). Public Health, the APHA, and Urban Renewal. American Journal of Public Health, 1603-1611.

MacQueen, K. M., McLellan, E., Metzger, D. S., Kegeles, S., Strauss, R. P., Scotti, R., et al. (2001). What is Community? An Evidence-Based Definition for Participatory Public Health. American Journal of Public Health, 1929-1938.

Matthews, S. A., & Yang, T. C. (2010). Exploring the Role of the Built and Social Neighborhood Environment in Moderating Stress and Health. ann.behav.med., 170-183.

Parrill, R., & Roberts, K. B. (2011). Partnerships for Health in the African American Community: Moving Toward Community-Based Participatory Research. Journal of Cultural Diversity, 18 (4).

Rogers, A. (2010). Exploring health beliefs and care-seeking behaviors of older USA-dwelling Mexicans and Mexican-Americans. Ethnicity and Health, 15 (6), 581-599.

Rollins, J. (2004). Evidence-Based Hospital Design Improves Healthcare Outcomes for Patients, Families, and Staff. Pediatric Nursing, 30 (4).

Spikes, T., & Aduddell, K. (2010). Utilizing Evidence-Based Design in a Community Hospital ICU. Nursing Economics, 28 (4).

Srinivasan, S. (2003). Creating Healthy Communities, Healthy Homes, Healthy People: Initiating a Research Agenda on the Built Environment and Public Health. American Journal of Public Health, 1446-1450.

Ulrich, R. S., Zimring, C., Xuemei, Z., DuBose, J., Seo, H.-B., Choi, Y.-S., et al. (2008). Healthcare Leadership. Concord: The Center for Health Design.

Wen, M., Kandual, N., & Lauderdale, D. (2007). Walking for Transportation or Leisure: What Difference Does the Neighborhood Make?". Journal of General Internal Medicine, 22 (12), 1674-80.

APPENDIX

TABLE 1

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									P-VALUE (ADJUSTED FOR AGE AND GENDER)	P-VALUE (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
RESPONSES BY NEIGHBORHOOD AREA GROUPS	**NORTHERN**		**MIDDLE**		**SOUTH & EAST**		**CICERO/ BERWYN**			
Mode of Response									<.001	<.001
Mail	9.7%	40	17.5%	22	21.7%	31	67.5%	27		
Online	2.4%	10	13.5%	17	11.2%	16	10.0%	4		
In Person/Community Site	87.9%	363	69.0%	87	67.1%	96	22.5%	9		
Total	100.0%	413	100.0%	126	100.0%	143	100.0%	40		
Saint Anthony Hospital Target Market									n/a	n/a
Current	81.4%	336	100.0%	126	42.0%	60	100.0%	40		
Future	8.2%	34	0.0%	0	21.7%	31	0.0%	0		
Potential	0.0%	0	0.0%	0	26.6%	38	0.0%	0		
Not in Target	10.4%	43	0.0%	0	9.8%	14	0.0%	0		
Total	100.0%	413	100.0%	126	100.0%	143	100.0%	40		
Target Priority (based on Saint Anthony Hospital's stated prioritization of specific neighborhoods as its current, future, and potential markets)									n/a	n/a
1st Priority	90.8%	336	100.0%	126	46.5%	60	100.0%	40		
2nd Priority	9.2%	34	0.0%	0	17.1%	22	0.0%	0		
3rd Priority	0.0%	0	0.0%	0	36.4%	47	0.0%	0		
Total	100.0%	370	100.0%	126	100.0%	129	100.0%	40		
Ethnicity Groups									<.001	<.001 (adj. age, gender)
African American/Black	89.2%	363	9.7%	12	15.6%	22	12.8%	5		
Hispanic/Latino/Mexican	5.2%	21	75.0%	93	69.5%	98	33.3%	39		
White and Other	5.7%	15	15.3%	91	14.9%	21	53.8%	21		
Total	100.0%	407	100.0%	124	100.0%	141	100.0%	39		
Gender									<.001 (adj. age)	.010 (adj. age/ ethnicity)
Female	35.9%	147	55.2%	69	60.6%	86	50.0%	20		
Male	64.1%	262	44.8%	56	39.4%	56	50.0%	20		
Total	100.0%	409	100.0%	125	100.0%	142	100.0%	40		
Age Ranges									<.001 (adj. gender)	.090 (adj. gender/ ethnicity)
<30	11.6%	44	21.7%	26	23.4%	32	8.1%	3		
30-54	68.0%	257	58.3%	70	53.3%	73	35.1%	13		
55+	20.4%	77	20.0%	24	23.4%	32	56.8%	21		
Total	100.0%	378	100.0%	120	100.0%	137	100.0%	37		
Average Age		45.09 years		41.63 years		42.85 years		51.65 years	.001 (adj. gender)	.001 (adj. gender/ ethnicity)
Marital Status									<.001	.359
Never Married	59.4%	241	25.6%	32	33.6%	47	22.5%	9		
Married	13.1%	53	39.2%	49	37.9%	53	40.0%	16		
Separated, Divorced, Widowed, or Other	27.6%	112	35.2%	44	28.6%	40	37.5%	15		
Total	100.0%	406	100.0%	125	100.0%	140	100.0%	40		

TABLE 1 CONTINUED

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	NORTHERN		MIDDLE		SOUTH & EAST		CICERO/ BERWYN		P-VALUE (ADJUSTED FOR AGE AND GENDER)	P-VALUE (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
Employment Status									<.001	.205
Employed Full or Part Time	22.5%	90	53.6%	67	50.4%	70	40.0%	16		
Unemployed or on Strike	55.5%	222	23.2%	29	22.3%	31	30.0%	12		
Retired, Homemaker or Student	22.0%	88	23.2%	29	27.3%	38	30.0%	12		
Total	100.0%	400	100.0%	125	100.0%	139	100.0%	40		
Number of Jobs (if employed)									.258	.220
1	78.4%	109	86.5%	64	87.2%	68	90.5%	19		
2 or more	21.6%	30	13.5%	10	12.8%	10	9.5%	2		
Total	100.0%	139	100.0%	74	100.0%	78	100.0%	21		
Work Shift (if employed)									.255	.142
Day shift only	63.0%	87	68.9%	51	62.2%	51	76.2%	16		
Evening Shift or Night Shift only	26.8%	37	17.6%	13	23.2%	19	23.8%	5		
2 or more Shifts	10.1%	14	13.5%	10	14.6%	12	0.0%	0		
Education									<.001	.019
Les than High School	35.3%	143	19.0%	23	28.1%	39	15.0%	6		
High School Diploma or GED	48.1%	195	43.0%	52	42.4%	59	40.0%	16		
Associates or Higher Degree	16.5%	67	38.0%	46	29.5%	41	45.0%	6		
Total	100.0%	405	100.0%	121	100.0%	139	100.0%	40		
Ave. # Adults in Household		mean 2.41		mean 2.35		mean 2.37		mean 2.23	.394	.640
Ave. # Children in Household		mean 1.08		mean 1.44		mean 1.32		mean 1.14	.374	.244
Have Dependent Elder(s) in Household	24.0%	95	9.6%	12	15.1%	21	7.9%	3	.008	.200
Own Home	14.1%	55	26.2%	32	48.6%	67	55.3%	21	<.001	<.001
Primary Language Spoken at Home									<.001	.206
English	93.3%	377	45.6%	57	46.5%	66	75.0%	30		
Spanish	4.2%	17	48.8%	61	47.9%	68	22.5%	9		
Other	2.5%	10	5.6%	7	5.6%	8	2.5%	1		
Religion									<.001	.573
Catholic	14.8%	59	66.1%	82	64.1%	91	52.5%	21		
Protestant, Baptist, or Other Christian	44.5%	177	16.9%	21	21.1%	30	15.0%	6		
Other Religion	20.9%	83	3.2%	4	5.6%	8	5.0%	2		
No religion	19.8%	79	13.7%	17	9.2%	13	27.5%	11		
# Incomes in HH									.123	.057
Single Income Household	76.4%	288	69.9%	86	70.6%	96	74.4%	29		
Multiple Income Household	23.6%	89	30.1%	37	29.4%	40	25.6%	10		
Total HH Income									<.001	.001
$15K or less	69.0%	265	26.3%	31	33.1%	44	37.5%	15		
More than $15K	31.0%	119	73.7%	87	66.9%	89	62.5%	25		
Total	100.0%	384	100.0%	118	100.0%	133	100.0%	40		

TABLE 2

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	**NORTHERN**		**MIDDLE**		**SOUTH & EAST**		**CICERO/ BERWYN**		**P-VALUE** (ADJUSTED FOR AGE AND GENDER)	**P-VALUE** (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
Have Home Internet Access	38.7%	145	71.0%	88	68.1%	94	82.1%	32	<.001	<.001
Have e-Mail Address	37.7%	152	70.6%	89	66.9%	93	67.5%	27	<.001	<.001
Use Social Media	32.8%	130	56.8%	71	48.6%	67	47.5%	19	.001	.040
Frequency of Social Media Use if Applicable									.087	.095
Daily	46.6%	69	62.5%	45	43.2%	32	40.0%	8		
Weekly or less often	53.4%	79	37.5%	27	56.8%	42	60.0%	12		
COMMUNITY INVOLVEMENT										
Strongly to Somewhat Agree:										
Actively Involved in Community	52.4%	205	41.5%	51	41.8%	59	28.2%	11	.004	.130
Member of Church or Religious Organization	57.3%	224	48.8%	60	63.0%	87	48.7%	19	.068	.126
Regular (2 or more times per month) Churchgoer	55.4%	216	59.0%	72	69.6%	96	51.3%	20	.003	.051

TABLE 3

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	**NORTHERN**		**MIDDLE**		**SOUTH & EAST**		**CICERO/ BERWYN**		**P-VALUE** (ADJUSTED FOR AGE AND GENDER)	**P-VALUE** (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
Own Car/Vehicle	22.4%	90	57.1%	72	71.6%	101	65.0%	26	<.001	<.001
Transportation to Work									<.001	.001
Drive myself	13.9%	47	36.9%	41	54.8%	68	41.7%	15		
Take public transportation	24.9%	84	20.7%	23	13.7%	17	19.4%	7		
Walk	8.0%	27	9.9%	11	2.4%	3	0.0%	0		
Other or do not go there	53.1%	179	32.4%	36	29.0%	36	38.9%	14		
Transportation to School									<.001	.038
Drive myself	7.9%	24	23.1%	24	33.3%	39	15.6%	5		
Take public transportation	24.2%	73	16.3%	17	14.5%	17	12.5%	4		
Walk	10.3%	31	10.6%	11	1.7%	2	0.0%	0		
Other or do not go there	57.6%	174	50.0%	52	50.4%	59	71.9%	23		
Health Care									<.001	.004
Drive myself	16.7%	57	48.2%	54	62.0%	80	53.8%	21		
Take public transportation	42.4%	145	22.3%	25	12.4%	16	23.1%	9		
Walk	14.6%	50	8.0%	9	4.7%	6	5.1%	2		
Other or do not go there	26.3%	90	21.4%	24	20.9%	27	17.9%	7		
Grocery Shopping									<.001	.001
Drive myself	17.9%	63	48.3%	58	66.4%	89	60.0%	24		
Take public transportation	31.9%	112	10.8%	13	9.0%	12	15.0%	6		
Walk	15.4%	54	19.2%	23	9.0%	12	5.0%	2		
Other or do not go there	34.8%	122	21.7%	26	15.7%	21	20.0%	8		
Other Shopping									<.001	.001
Drive myself	19.2%	61	48.3%	56	68.3%	86	62.5%	25		
Take public transportation	37.1%	118	19.0%	22	14.3%	18	15.0%	6		
Walk	12.6%	40	12.9%	15	4.8%	6	5.0%	2		
Other or do not go there	31.1%	99	19.8%	23	12.7%	16	17.5%	7		
Child Care									<.001	<.001
Drive myself	8.4%	25	26.2%	28	36.0%	41	21.2%	7		
Take public transportation	21.7%	65	11.2%	12	7.0%	8	3.0%	1		
Walk	7.4%	22	7.5%	8	0.0%	0	0.0%	0		
Other or do not go there	62.5%	187	55.1%	59	57.0%	65	75.8%	25		
Entertainment									<.001	.001
Drive myself	17.6%	57	45.6%	52	61.1%	77	51.3%	20		
Take public transportation	34.1%	110	16.7%	19	14.3%	18	12.8%	5		
Walk	9.9%	32	7.9%	9	0.8%	1	2.6%	1		
Other or do not go there	38.4%	124	29.8%	34	23.8%	30	33.3%	13		
Community Activities/Church									<.001	<.001
Drive myself	16.3%	56	35.6%	42	63.9%	85	57.5%	23		
Take public transportation	30.0%	103	13.6%	16	7.5%	10	10.0%	4		
Walk	20.7%	71	27.1%	32	7.5%	10	10.0%	4		
Walk Frequency Every Day or Nearly Every Day	66.1%	263	53.2%	67	34.8%	49	37.5%	15	<.001	.002
Usual Length of Walk is 30 Minutes or More	40.2%	159	28.6%	36	23.0%	32	28.9%	11	.002	.393

TABLE 4

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	**NORTHERN**		**MIDDLE**		**SOUTH & EAST**		**CICERO/ BERWYN**		**P-VALUE** (ADJUSTED FOR AGE AND GENDER)	**P-VALUE** (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
	%	N	%	N	%	N	%	N		
ENVISIONING FUTURE OF NEIGHBORHOOD										
Definitely of Likely Would Use if Available in or Near Neighborhood…										
Park with playground and trails	78.9%	310	84.2%	101	89.1%	122	81.1%	30	.086	.599
Low-cost fitness facility	75.9%	296	86.7%	104	87.8%	122	53.8%	21	<.001	.026
Sports facility with after-school kids' program	68.4%	270	80.2%	97	74.8%	101	40.5%	15	.003	.118
Arts facility with kids' program	69.5%	273	80.5%	99	70.5%	98	47.4%	18	.024	.032
Health care clinic within walking distance	82.9%	329	89.4%	110	81.3%	113	67.5%	27	.147	.142
Low-cost transportation to health care appointments	80.7%	318	83.6%	102	75.7%	106	61.5%	24	.045	.254
Learning center with courses/information on health topics	82.1%	325	89.4%	110	79.9%	111	57.5%	23	.001	.032
Learning center with courses to advance my career	80.9%	322	87.1%	108	84.2%	117	59.0%	23	.047	.358
Library with health and community information	82.7%	329	89.5%	111	89.3%	125	76.3%	29	.217	.409
Place where people help me navigate the healthcare system	78.4%	313	81.3%	100	83.6%	117	56.4%	22	.013	.101
Facility for community group meetings or events	76.7%	303	75.0%	93	74.8%	104	51.3%	20	.030	.155
Childcare center	62.0%	240	64.8%	79	59.3%	83	25.6%	10	.003	.019
Daycare for elders	62.6%	243	47.1%	56	44.9%	62	35.0%	14	<.001	.019
Assisted living facility	63.2%	249	49.2%	59	47.8%	66	36.8%	14	.001	.098
Community garden	70.6%	283	77.0%	94	67.1%	94	52.5%	21	.073	.037
Grocery at 31st and Kedzie	70.1%	274	70.6%	84	71.3%	97	30.0%	12	<.001	.002
New retail area near 31st and Kedzie	68.6%	267	74.6%	88	75.7%	103	32.5%	13	<.001	.003
Restaurant at 31st and Kedzie	66.8%	260	61.0%	72	69.9%	95	32.5%	13	.001	.002

TABLE 5

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP										
RESPONSES BY NEIGHBORHOOD AREA GROUPS	NORTHERN		MIDDLE		SOUTH & EAST		CICERO/ BERWYN		P-VALUE (ADJUSTED FOR AGE AND GENDER)	P-VALUE (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
	%	N	%	N	%	N	%	N		
Definitely of Likely Would Use if Available in or Near Neighborhood…										
New hospital and clinic near 19th and Marshall Blvd.	73.4%	287	60.8%	73	57.9%	77	25.6%	10	<.001	<.001
New hospital and clinic near 31st and Kedzie	67.8%	263	67.5%	81	75.0%	102	35.0%	14	.001	.002

TABLE 6

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	NORTHERN		MIDDLE		SOUTH & EAST		CICERO/ BERWYN		P-VALUE (ADJUSTED FOR AGE AND GENDER)	P-VALUE (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
	%	N	%	N	%	N	%	N		
HEALTH CARE ACCESS AND USE										
Always Have Access to…										
Health care needed right away	29.1%	118	20.8%	26	23.8%	34	37.5%	15	.348	.528
Appointment at doctor's office or clinic	24.8%	99	24.2%	30	25.7%	36	35.0%	14	.818	.753
A health care interpreter when needed	5.5%	22	7.3%	9	5.0%	7	2.5%	1	.344	.850
After hours care	13.2%	53	6.5%	8	6.4%	9	10.0%	4	.142	.371
Behavioral care/counseling	10.4%	42	6.6%	8	7.2%	10	10.0%	4	.036	.483
Specialist care	15.9%	64	18.2%	22	15.0%	21	27.5%	11	.668	.900
Prescriptions	27.5%	111	36.3%	45	37.9%	53	41.0%	16	.001	.005
Preventive care	25.2%	102	21.0%	26	24.5%	34	27.5%	11	.132	.704
Average # Visits in Last 6 Months…	(does not include "outliers")									
Emergency Room		mean 0.96		mean 0.50		mean 0.46		mean .55	<.001	.061
Doctor's Office or Medical Clinic		mean 1.52		mean 1.37		mean 1.51		mean 1.68	.646	.404
Dental Clinic		mean 0.75		mean 0.66		mean 0.80		mean 0.95	.035	.283
Have a Personal Doctor	49.4%	192	60.2%	74	69.0%	98	82.5%	33	<.001	.020
Average # Personal Doctor Visits in Last 6 Months		mean 1.89		mean 1.68		mean 1.47		mean 1.36	.028	.292
Overall Health Care Rating (0=worst, 10=best)		mean 5.50		mean 6.54		mean 6.70		mean 8.18	.001	.482
Self-Rating of Health Status (1=poor, 5=excellent)		mean 2.82		mean 3.11		mean 3.05		mean 3.00	.045	.171
All Members of Household Have Health Insurance	31.5%	125	39.7%	48	46.4%	65	52.5%	21	<.001	.254
Strongly to Somewhat Agree:										
Seek Health Care When Needed Despite Cost Concerns	62.9%	254	65.1%	82	69.1%	96	66.7%	26	.784	.578
Have Transportation to Health Care	58.5%	231	68.5%	85	79.7%	110	82.1%	32	<.001	.064
Child Care is Obstacle to Health Care	21.8%	82	21.6%	25	18.2%	24	16.7%	6	.464	.683
Immigration Status is Obstacle to Health Care	19.5%	74	18.8%	22	16.2%	22	14.3%	5	.660	.161
Strongly to Somewhat Agree These Factors are Important When Choosing a Health Care Facility…										
Proximity to Home	63.4%	253	80.8%	101	79.9%	111	87.2%	34	<.001	.365
Proximity to Work	51.4%	181	66.1%	74	64.3%	81	45.5%	15	.016	.303
Religious Affiliation	42.5%	151	34.8%	40	33.1%	44	32.4%	12	.178	.672
Languages Spoken	60.8%	231	73.0%	89	65.0%	89	63.2%	24	.238	.506
Reasonable Waiting Time	63.7%	244	80.2%	97	81.3%	113	82.1%	32	.001	.751
Staff/Professionals Know Me	66.6%	259	72.4%	89	77.0%	107	82.1%	32	.144	.673
Good Service	76.6%	298	88.4%	107	91.4%	127	94.9%	37	.001	.303
Ease of Parking	60.7%	224	73.9%	88	72.1%	98	74.4%	29	.041	.458

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	NORTHERN		MIDDLE		SOUTH & EAST		CICERO/ BERWYN		P-VALUE (ADJUSTED FOR AGE AND GENDER)	P-VALUE (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
Nearby Public Transportation	73.9%	278	80.8%	97	76.1%	105	70.3%	26	.658	.491
Physical Appearance of Facility	73.4%	276	82.4%	98	79.1%	110	82.1%	32	.360	.577
Proximity to Businesses and Other Services	62.5%	242	64.5%	78	72.1%	101	65.8%	25	.342	.459
Referral from Family/Friend	69.7%	269	77.7%	94	80.0%	112	65.8%	25	.196	.541
Saint Anthony Hospital or Clinic Patient (Past or Current)	31.3%	126	43.5%	54	42.6%	60	20.5%	8	.006	.291
Rating of Saint Anthony Hospital Care (0=Worst, 10=Best)		mean 5.70		mean 6.90		mean 7.41		mean 7.18	.397	.540
Hospitals Used in Last 12 Months										
Saint Anthony Hospital ONLY	n/a	16	n/a	14	n/a	10	n/a	0	n/a	n/a
Mt. Sinai Hospital ONLY	n/a	75	n/a	11	n/a	9	n/a	0	n/a	n/a
Saint Anthony and Mt. Sinai BOTH (no other hospitals)	n/a	9	n/a	7	n/a	1	n/a	0	n/a	n/a
Counts by hospital including multi-hospital use:										
Children's Memorial Hospital	n/a	16	n/a	9	n/a	7	n/a	0	n/a	n/a
Hartgrove Hospital	n/a	2	n/a	0	n/a	0	n/a	0	n/a	n/a
Holy Cross Hospital	n/a	7	n/a	1	n/a	14	n/a	0	n/a	n/a
John H. Stroger Jr. (Cook County) Hospital	n/a	137	n/a	18	n/a	17	n/a	4	n/a	n/a
Loretto Hospital	n/a	20	n/a	0	n/a	1	n/a	0	n/a	n/a
MacNeal Hospital	n/a	7	n/a	9	n/a	10	n/a	14	n/a	n/a
Mercy Hospital and Medical Center	n/a	11	n/a	7	n/a	16	n/a	0	n/a	n/a
Mt. Sinai Hospital	n/a	138	n/a	24	n/a	18	n/a	4	n/a	n/a
Northwestern Memorial Hospital	n/a	10	n/a	8	n/a	6	n/a	2	n/a	n/a
Norwegian American Hospital	n/a	5	n/a	3	n/a	3	n/a	0	n/a	n/a
Rush University Medical Center	n/a	27	n/a	21	n/a	14	n/a	3	n/a	n/a
Sacred Heart Hospital	n/a	3	n/a	1	n/a	1	n/a	0	n/a	n/a
Saint Anthony Hospital	n/a	47	n/a	32	n/a	22	n/a	3	n/a	n/a
St. Bernard Hospital	n/a	2	n/a	0	n/a	0	n/a	0	n/a	n/a
St. Mary and Elizabeth Medical Center	n/a	9	n/a	3	n/a	3	n/a	1	n/a	n/a
University of Chicago Medical Center	n/a	14	n/a	9	n/a	9	n/a	3	n/a	n/a
None	n/a	80	n/a	30	n/a	42	n/a	13	n/a	n/a
Saint Anthony Hospital or Clinic Patient (Past or Current)	31.3%	126	43.5%	54	42.6%	60	20.5%	8	.006	.291

TABLE 7

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	**NORTHERN**		**MIDDLE**		**SOUTH & EAST**		**CICERO/ BERWYN**		**P-VALUE** (ADJUSTED FOR AGE AND GENDER)	**P-VALUE** (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
	%	N	%	N	%	N	%	N		
Strongly to Somewhat Agree:										
Do Most Shopping at Local Stores	56.9%	230	78.4%	98	74.8%	104	64.1%	25	<.001	.152
Stores are within Easy Walking Distance of Home	59.0%	240	77.4%	96	73.2%	104	61.5%	24	.003	.845
Parking is Difficult in Local Shopping Areas	39.1%	155	49.2%	60	38.7%	53	35.9%	14	.168	.384
Many Places to Go within Easy Walking Distance of Home	59.5%	239	69.4%	86	66.2%	94	64.1%	25	.375	.566
Easy Walk to a Transit Stop	76.0%	308	84.7%	105	82.4%	117	82.1%	32	.374	.461
Ave. Walking Distance in Minutes from Home to Nearest…										
Convenience/Small Grocery Store		mean 10.02		mean 15.58		mean 17.12		mean 16.74	.089	.082
Supermarket		mean 15.58		mean 15.11		mean 13.13		mean 16.41	.235	.480
Hardware Store		mean 17.12		mean 14.32		mean 15.64		mean 15.84	.411	.996
Fruit/Vegetable Market		mean 16.74		mean 13.51		mean 12.71		mean 14.00	.001	.724
Laundry/Dry Cleaners		mean 13.65		mean 10.37		mean 12.22		mean 11.51	.156	.626
Clothing Store		mean 17.84		mean 19.86		mean 19.70		mean 20.44	.315	.797
Post Office		mean 17.49		mean 17.35		mean 18.06		mean 20.29	.367	.043
Library		mean 17.22		mean 16.97		mean 15.04		mean 19.56	.114	.032
Elementary School		mean 10.40		mean 9.17		mean 9.12		mean 11.09	.622	.571
Other School		mean 14.80		mean 15.12		mean 14.12		mean 15.20	.641	.349
Book Store		mean 18.69		mean 18.49		mean 18.74		mean 22.46	.636	.977
Fast Food Restaurant		mean 11.34		mean 13.72		mean 10.41		mean 12.15	.058	.116
Coffee Shop		mean 14.74		mean 15.47		mean 12.27		mean 15.62	.022	.060
Bank/Credit Union		mean 17.11		mean 14.43		mean 13.04		mean 14.70	.007	.229
Non-Fast Food Restaurant		mean 15.56		mean 15.79		mean 13.62		mean 14.23	.343	.603
Electronic Store		mean 19.55		mean 20.42		mean 19.73		mean 20.63	.576	.612
Pharmacy/Drug Store		mean 15.96		mean 15.03		mean 13.03		mean 16.16	.174	.155
Salon/Barber Shop		mean 12.54		mean 10.97		mean 10.88		mean 13.26	.379	.903
Your Job or School		mean 18.06		mean 22.72		mean 22.05		mean 23.76	.012	.611
Bus or Train Stop		mean 7.51		mean 8.91		mean 7.90		mean 8.02	.664	.804
Park		mean 10.34		mean 12.09		mean 10.85		mean 10.46	.275	.465

TABLE 7 CONTINUED

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	NORTHERN		MIDDLE		SOUTH & EAST		CICERO/ BERWYN		P-VALUE (ADJUSTED FOR AGE AND GENDER)	P-VALUE (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
Recreation Center/Field House		mean 12.52		mean 15.38		mean 14.50		mean 15.58	.053	.240
Gym/Fitness Facility		mean 14.65		mean 17.57		mean 17.61		mean 19.17	<.001	.400
Health Care Clinic		mean 15.00		mean 15.80		mean 18.82		mean 19.80	.002	.009
Hospital		mean 18.11		mean 22.43		mean 23.59		mean 23.55	<.001	.025
Strongly or Somewhat Agree that in My Neighborhood…										
Distance between intersections usually short	53.7%	218	73.6%	92	70.9%	100	74.4%	29	.001	.390
There are many alternative routes for getting from place to place	67.0%	272	84.8%	106	81.0%	115	74.4%	29	.003	.314
Major barriers make it hard to get from place to place	38.4%	155	30.4%	38	26.1%	37	20.5%	8	.022	.208
Sidewalks on most streets	74.0%	302	92.0%	115	89.9%	125	94.9%	37	<.001	.006
Sidewalks are well-maintained	49.4%	200	56.8%	71	61.3%	87	71.8%	28	.005	.012
Bicycle and pedestrian trails are nearby	40.0%	163	47.6%	59	48.6%	69	35.9%	14	.100	.104
Sidewalks are separated from traffic by parked cars	64.8%	263	74.4%	93	64.8%	92	84.6%	33	.062	.155
Grass/dirt strip separates streets from sidewalks	57.7%	235	59.2%	74	63.1%	89	84.6%	33	.066	.130
Trees along the streets	65.6%	256	71.8%	89	85.8%	121	94.4%	34	<.001	<.001
Interesting things to look at while walking	47.6%	186	50.4%	63	57.7%	82	56.8%	21	.283	.190
Neighborhood generally well-maintained	35.2%	137	37.1%	46	48.2%	68	73.0%	27	<.001	.001
Many attractive natural sights such as landscaping, views	35.8%	139	31.5%	39	45.8%	65	43.2%	16	.194	.202
Attractive buildings/homes	49.4%	194	39.2%	49	53.2%	75	56.8%	21	.078	.084
Traffic makes walking difficult or unpleasant	42.1%	163	52.0%	65	44.7%	63	62.2%	23	.117	.372
Speed of traffic on nearby streets usually slow	53.4%	207	68.0%	85	67.6%	96	73.0%	27	.014	.366
Most drivers exceed posted speed limits	59.2%	231	64.8%	81	65.5%	93	83.8%	31	.023	.029
Crosswalks and pedestrian signals to help walkers cross busy streets	62.6%	246	68.0%	85	70.4%	100	73.0%	27	.397	.322
There are a lot of exhaust fumes when walking	54.5%	213	66.4%	83	55.6%	79	62.2%	23	.292	.234
Streets are well lit at night	50.4%	199	54.0%	67	70.2%	99	79.5%	31	<.001	<.001
Walkers/bikers on streets are easily seen by people in homes	54.4%	212	50.0%	62	61.7%	87	71.8%	28	.214	.041
I see and speak to people when walking	73.6%	287	64.5%	80	66.9%	95	69.2%	27	.108	.984
The crime rate is high	67.6%	263	69.4%	86	53.6%	75	51.3%	20	.001	.002
Crime rate makes it unsafe to walk during the day	47.3%	185	50.8%	62	45.4%	64	38.5%	15	.709	.655
Crime rate makes it unsafe to walk during at night	64.0%	252	71.8%	89	59.6%	84	51.3%	20	.140	.112

TABLE 8

FREQUENCY AND PERCENTAGE OF TOTAL BY NEIGHBORHOOD GROUP									
RESPONSES BY NEIGHBORHOOD AREA GROUPS	**NORTHERN**		**MIDDLE**		**SOUTH & EAST**		**CICERO/ BERWYN**		**P-VALUE** (ADJUSTED FOR AGE AND GENDER)	**P-VALUE** (ADJUSTED FOR AGE, GENDER AND ETHNICITY)
	%	N	%	N	%	N	%	N		
NEIGHBORHOOD ENVIRONMENT WALKABILITY SCORES										
NEWS Subscale B: Land use mix – diversity (range 1-5; higher score denotes higher walkability)		mean 3.34		mean 3.24		mean 3.61		mean 3.52	.138	.228
NEWS Subscale C: Land use mix – access (range 1-4; higher score denotes higher walkability)		mean 2.74		mean 3.23		mean 3.11		mean 2.90	.003	.378
NEWS Subscale D: Street connectivity (range 1-4; higher score denotes higher walkability)		mean 2.67		mean 3.10		mean 2.98		mean 3.04	.007	.425
NEWS Subscale E: Infrastructure/safety for walking (range 1-4; higher score denotes higher walkability)		mean 2.63		mean 2.77		mean 2.91		mean 3.07	.006	.021
NEWS Subscale F: Aesthetics (range 1-4; higher score denotes higher walkability)		mean 2.34		mean 2.39		mean 2.67		mean 2.84	.515	.552
NEWS Subscale G: Traffic hazards (range 1-4; higher score denotes lower walkability)		mean 2.51		mean 2.74		mean 2.67		mean 2.87	.042	.062
NEWS Subscale H: Crime (range 1-4; higher score denotes lower walkability)		mean 2.75		mean 2.84		mean 2.60		mean 2.38	.095	.052
NEWS Subscale I: Lack of parking (range 1-4; higher score denotes higher walkability)		mean 2.19		mean 2.32		mean 2.17		mean 2.18	.211	.229
NEWS Subscale L: Physical barriers (range 1-4; higher score denotes lower walkability)		mean 2.17		mean 1.97		mean 1.84		mean 1.74	.038	.474
NEWS Subscale N: Social interaction while walking (range 1-4; higher score denotes higher walkability)		mean 2.98		mean 2.69		mean 2.75		mean 2.97	.013	.330

to do exceeding abundantly above all that we ask or thi